



वसुधैव कुटुम्बकम्

ONE EARTH • ONE FAMILY • ONE FUTURE

THINK20@G20

TOWARDS A RESILIENT
SOUTH ASIA

EDITORS

SUJAN CHINOY

GULBIN SULTANA



MANOHAR PARRIKAR INSTITUTE FOR
DEFENCE STUDIES AND ANALYSES

महाराष्ट्र शासन, मुंबई

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Preface

India assumed the annual Presidency of G20 in November 2022. Its motto ‘*Vasudhaiva Kutumbakam* - One Earth, One Family, One Future’ was inspired by the ancient Indian ethos which considers the world as one family. This is also the guiding principle for India’s ‘Neighbourhood First policy’, ‘Security and Growth for All in the Region’ (SAGAR), ‘Vaccine *Maitri*’ and collaborative approaches in the extended neighbourhood.

As the G20 President, India played a significant role in formulating policies related to macroeconomics, trade and livelihood; open, accessible and inclusive digital public infrastructure; sustainable consumption; clean and green energy; reassessing the global financial order; accelerating the sustainable development goals and to create a roadmap for a reformed and more effective multilateralism. The Think20 engagement group (T20), which served as the ‘Ideas Bank’ for the G20, provided insightful policy proposals under its seven task forces.

One of the aims of the Think20 group during India’s Presidency was to connect scholars and academicians from the G20 countries and the special invitee nations to harness ideas that would enrich the G20 agenda and benefit the larger global community. It was an inclusive grouping, committed to the principle of ‘leaving none behind’, which gave due emphasis to the viewpoints of the most representative segments of the international community. Gender equality and the priorities of the Global South were given great importance.

Since India is the only South Asian country in the G20, its Presidency was a unique opportunity to infuse South Asian narratives into the efforts, aimed at generating a broader consensus on issues of common concern. MP-IDSA’s flagship event – the annual South Asia Conference – has been providing a valuable platform since 2007 for South Asian countries to discuss the common challenges they face at a multi-track level. The 14th edition of the conference, organised in January 2023 coincided with India’s G20

Presidency. Hence, it was structured in a manner that could harvest the views of the South Asian countries, particularly their expectations of India's Presidency. It sought to address the most pressing developmental issues in each of the countries as well as in the region. The recommendations from the collective brainstorming at the conference were channelised through the Think20 into the G20 leadership track.

It is in this context that a cross-section of experts, analysts and policymakers participated in the 14th South Asia Conference titled, "Think20@G20: Towards a Resilient South Asia" on 17-18 January 2023, to discuss the economic and non-traditional security issues faced by the South Asian countries. It explored how India's G20 Presidency can be leveraged to make the forum more productive and relevant for South Asian countries. Appreciating India's vision for its G20 Presidency and acknowledging its efforts to include the South Asian neighbourhood, the participants put forth a host of suggestions. These included strengthening institutional architecture and governance for non-traditional security threats, enhancing regional integration and connectivity, debt relief mechanisms, dealing with the issues of climate change and sea level rise and so on. It was expected that India would continue to play a crucial role in addressing some of these pressing issues in the region beyond its Presidency. This volume is a collection of the speeches and select papers presented during the conference which are expected to be a rich source of information and suggestions for academics and policymakers alike.

Sujan Chinoy, the T20 Chair and the Director General, MP-IDSAs, in his thoughtful deliberation titled "Think20@G20: Towards a Resilient South Asia", points out that India's G20 Presidency, in a way, was a South Asian presidency. Therefore, as the 'Ideas Bank' of the G20, the T20 while discussing issues of global concern, must proceed hand in hand with the issues confronting the South Asian neighbourhood and take stock of the corrections necessary for the future. He emphasises that a broad consensus on the way forward among the regional partners would put the region in a better position to collectively address the common concerns.

Harsh Vardhan Shringla, Chief Coordinator for India's G20 Presidency highlights India's strong commitment towards its South Asian neighbours,

the Global South and the global commons in his chapter “G20 and India: The Message of ‘One Earth, One Family, One Future’.” He stresses upon India’s methodology to work with a human-centric approach within the ambit of the ancient dictum and the theme of its Presidency – ‘*Vasudhaiva Kutumbakam* – One Earth, One Family, One Future’.

Dil B. Rahut, Raja Rajendra Timilsina, Bhagirath Behera and Jyothika Easwaran in their chapter “Non-Traditional Security Threats for Bhutan: Policy Options” provide a thought-provoking analysis of the current state of global security. They explore the implications of globalisation for addressing transnational non-traditional security threats, their origins and effects in the 21st century for Asia and beyond. The chapter looks at these challenges from the perspective of Bhutan, a small Asian developing country that does not receive much attention in the global discourse. India, of course, has a close and supportive developmental partnership with Bhutan. The chapter emphasises the need for collaboration, information-sharing and resource mobilisation among all the stakeholders for addressing the interconnected and complex non-security threats of the 21st century with a multi-lateral and multi-level approach.

Zaw Naing in his chapter “Myanmar at the Crossroads: Implications for India, South Asia and the G20” offers insights into Myanmar, post the February 2021 military takeover, examining its current state and future prospects. According to Naing, the military takeover has significantly impacted political, social and economic progress, and is also likely to have a far-reaching impact in the region. As Myanmar finds itself at a critical juncture, the chapter argues that it requires concerted efforts from regional actors and the G20 to promote stability, peace and respect for human rights in Myanmar. The transformative role of India in shaping Myanmar’s destiny has been specifically mentioned in the chapter.

Anushka Wijesinha in his chapter “Sri Lanka’s Economic Crisis and Wider Implications” reviews key elements of Sri Lanka’s economic crisis and puts forward the possible wider implications for South Asia and global governance platforms like the G20. He argues that while the tipping point for the crisis was the flawed policy decisions in the immediate years preceding the economic crisis of 2022, the roots of the crisis lie in the faulty post-war

growth model adopted by Colombo. As Sri Lanka attempts to chart a course of recovery, Wijesinha argues that the country's experience has brought to the fore some critical elements which similar economies should consider. The chapter recommends that the G20 focuses on the debt distress and climate finance agenda in a holistic manner in order to address the issues of low- and middle-income countries.

Aishath Shina, Aishath Reesha and Dheebea Moosa in their chapter "Women in Higher Education in the Maldives" write about women's roles and contributions to the Maldives' socio-economic development. The chapter argues that women's representation at various levels of government has begun gradually; however, the progress is slow. Despite the fact that women outnumber men in the labour field, women aspiring to positions of leadership face a bunch of hurdles. The chapter recommends enabling policies that take into account the disproportionate burden women undertake when trying to attain a work-life balance, to help them maintain a healthy relationship with work.

Ramani Gunatilaka in her chapter "Achieving Gender Equality and Decent Work through Sri Lanka's Economic Crisis" delves into the impact of the economic crisis on women in Sri Lanka's labour market. She argues that Sri Lankan women have to navigate at least three ring fences of obstacles imposed by macroeconomic conditions, socio-cultural conditions in the local environment, individual and household level characteristics and social norms. As Sri Lanka implements painful stabilisation measures to deal with its crises, Gunatilaka recommends the implementation of structural adjustment measures to encourage inclusive, job-rich, recovery and regeneration.

G. M. Tarekul Islam and Syed Labib Ul Islam in their chapter "Nature-Based Solutions for Coastal Disaster Management in Bangladesh" present an efficient and cost-effective way forward for coastal disaster management in resource-constrained countries. Citing the example of Bangladesh, the chapter argues that natural or artificially elongated mangrove strips can be used as a nature-based solution to significantly reduce the destructive effects of cyclones and storm surges.

Ajaya Dixit in his chapter "Adaptation Challenges in Small Transboundary River Basins in the North Ganga Basin: A Reflection"

discusses the unique characteristics and challenges faced by the small transboundary rivers. Factors responsible for this are rapid urbanisation, riverine floods, border inundation, groundwater overdraft, surface and groundwater pollution, sand and aggregate extraction and drought. Dixit argues that climate change adds to these problems and creates a cascade of difficulties that cross boundaries and adversely affect local socioeconomic conditions and livelihoods. The chapter suggests that strategic in-country actions as well as collaborative efforts between Nepal and India are needed to align policy and harmonise measures to conserve these rivers.

Dinanath Bhandari in his chapter “Upscaling Cross-border Flood Early Warning for a Resilient South Asia” highlights the importance of engagement and roles of the community and civil society organisations (CSOs) in managing flood risks across political borders and building resilience to climate change. The chapter argues that the engagement of concerned communities and the CSOs in flood risk management is efficient, effective and provides evidence and insights to national governments, bilateral institutions and regional cooperation mechanisms for proper policy-making and adopting innovative approaches. Emphasising the importance of regional collaboration in weather monitoring and meteorological forecasting, Bhandari recommends India’s leadership role and initiative in this regard.

Ganeshan Wignaraja in his chapter “South Asia’s Economic Challenges and Priorities in an Uncertain Global Economy” analyses economic challenges and policy priorities for South Asia focusing on the Russia-Ukraine conflict, Sri Lanka’s debt crisis and Indian aid, and trade integration within Asia. Wignaraja highlights three research findings in his chapter. First, South Asian economies will continue to be adversely impacted by the Russia-Ukraine conflict. In this case macroeconomic stabilisation and early recourse to the International Monetary Fund (IMF) are pragmatic approaches. Second, economic mismanagement was the main cause of Sri Lanka’s economic crisis and that Indian aid and investment coupled with the IMF programme offers a valuable opportunity for recovery. Finally, regional trade integration across Asia is increasing and can be supported by trade liberalisation, free trade agreements and strengthened regional institutions.

Mahfooz Kabir in his chapter “Resilient Growth in Turbulent Times:

Lessons from South Asian Good Practices for Deepening Regional Economic Integration” explores from Bangladesh’s perspective the current challenges faced by the South Asian economies due to the cumulative effects of COVID-19 and the Ukraine war. It draws lessons from good practices in the region for deepening economic integration.

We extend our sincere gratitude to the invaluable contributors whose perspectives have enriched this volume. Special thanks are due to Ashok Behuria, Coordinator of the South Asia Centre for his persistent efforts and support in bringing out this volume. We are thankful to Vivek Kaushik, Associate Editor of *Strategic Analysis* for his editorial support, and to Priya Singh for the copy editing. Our appreciation goes to Rajan Arya and his team of Pentagon Press LLP for bringing this book to fruition.

This volume aims to offer various national perspectives on some of the crucial non-traditional security challenges of South Asian countries and well-researched ideas to effectively deal with those challenges. It is our belief that it will serve as a valuable resource for scholars, students, academics and policymakers.

April 2023

Sujan Chinoy
Gulbin Sultana

About the Editors

Amb. Sujan Chinoy is the Director General of the Manohar Parrikar Institute for Defence Studies and Analyses (MP-IDS), New Delhi since 2019. A career diplomat from 1981-2018, he was Ambassador to Japan and Mexico and the Consul General of India in Shanghai and Sydney. A specialist on China, East Asia and politico-security issues, he anchored confidence-building measures (CBMs) with China on the boundary dispute from 1996-2000. At the National Security Council Secretariat (NSCS) from 2008-2012, he handled external and internal security policy, including in the extended neighbourhood of the Indo-Pacific. During his public service of over four decades, he has dealt with political, security, defence, technology as well as trade and economic issues. His diverse Foreign Service career included postings at the UN and in Saudi Arabia. He was the Chair of the Think20 engagement group for India's G20 Presidency and a Member of the high-powered DRDO Review Committee of the Government of India. He is also a Member of the Selection Committee for India's highest civilian awards (Padma Awards). He contributes to newspapers and journals, besides lecturing on diverse subjects. He is the author of *World Upside Down: India Recalibrates its Geopolitics* (Harper Collins, July 2023) and *Global Tumult: India As A Pole Star* (Rupa Publications, July 2024).

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List of Abbreviations

ADB	Asian Development Bank
AH	Asian Highway
AI	Artificial Intelligence
AMR	Antimicrobial Resistance
ASEAN	Association of Southeast Asian Nations
AU	African Union
BBIN	Bangladesh, Bhutan, India and Nepal
BEZA	Bangladesh Economic Zones Authority
BIMSTEC	Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation
BMD	Bangladesh Meteorological Department
BRI	Belt and Road Initiative
BRICS	Brazil, Russia, India, China, and South Africa
BURMA	Burma Unified through Rigorous Military Accountability
CB	Chure Basin
CRPP	Committee Representing the People's Parliament
CSO	Civil Society Organisations
DEE	Developing and Emerging Economies
DHM	Department of Hydrology and Meteorology
EAO	Ethnic Armed Organisation
ECNEC	Executive Committee of the National Economic Council
EPZ	Export Processing Zone
EU	European Union
EWS	Early Warning System
FATF	Financial Action Task Force
FDI	Foreign Direct Investment
FEWS	Flood Early Warning System
FRP	Fiber-Reinforced Polymers

FTA	Free Trade Agreement
GBM	Ganges-Brahmaputra-Meghna
GDACS	Global Disaster Alert and Coordination System
GDP	Gross Domestic Product
GEST	Geopolitical, Economic, Environmental, Societal, and Technological
GFCC	Ganga Flood Control Commission
GIS	Geographic Information Systems
GNH	Gross National Happiness
GoI	Government of India
GoN	Government of Nepal
HCP	Human Capital Project
HDI	Human Development Index
HEI	Higher Education Institution
IBP	India-Bangladesh Protocol
ICT	Information and Communications Technology
IDP	Internally Displaced People
IMD	India's Meteorological Department
IMF	International Monetary Fund
INGO	International Non-Governmental Organisations
IPCC	Intergovernmental Panel on Climate Change
IUCN	International Union for Conservation of Nature
IUM	Islamic University of Maldives
JCIFM	Joint Committee on Inundation and Flood Management
JCKGP	Joint Committee on the Kosi and Gandak Projects
JCWR	Joint Committee on Water Resources
JICA	Japan International Cooperation Agency
JMCWR	Joint Ministerial Level Commission on Water Resources
JSTC	Joint Standing Technical Committee
KV	Kilovolt
LCS	Land Customs Station
LDC	Least Developed Country
LiFE	Lifestyle for Environment
LNG	Liquefied Natural Gas
LoC	Line of Credit

MEA	Ministry of External Affairs
MENA	Middle East and North Africa
MIC	Middle Income Country
MNU	Maldives National University
MoHE	Ministry of Higher Education
MoU	Memorandum of Understanding
MW	Megawatt
NAM	Non-Aligned Movement
NBS	Nature-Based Solutions
NDAA	National Defence Authorisation Act
NDMA	National Disaster Management Authority
NEPAD	New Partnership for Africa's Development
NGO	Non-Governmental Organisation
NLD	National League for Democracy
NRC	National Registration Cards
NTB	Non-Tariff Barriers
NTS	Non-Traditional Security
NUG	National Unity Government
NW	National Waterway
ODA	Official Development Assistance
OECD	Organisation for Economic Cooperation and Development
PDF	People Defence Force
PIWT&T	Protocol on Inland Water Transit and Trade
PPP	Purchasing Power Parity
RCEP	Regional Comprehensive Economic Partnership
RMG	Readymade Garments
SAARC	South Asian Association for Regional Cooperation
SAC	State Administrative Council
SAGAR	Security and Growth for All in the Region
SAM	South Asia Monsoon
SASCOF	South Asian Climate Outlook Forum
SDG	Sustainable Development Goals
SEZ	Special Economic Zone
SLORC	State Law and Order Restoration Council
SOE	State-Owned Enterprises

SPDC	State Peace and Development Council
TAR	Trans-Asian Railway
TVET	Technical and Vocational Education and Training
UN	United Nations
UNICEF	United Nations Children's Fund
UNSC	United Nations Security Council
UP	Uttar Pradesh
UPI	Unified Payments Interface
US	United States
USA	United States of America
USDP	Union Solidarity and Development Party
WTO	World Trade Organisation

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1

Think20@G20: Towards a Resilient South Asia

Sujan Chinoy

India's G20 is a mass movement that has caught the imagination of its millions. The Think20 Engagement Group is the real 'Ideas Bank' of the G20. We have engaged countries, institutions and individuals in India as well as around the world. This is in keeping with the motto of 'One Earth, One Family, One Future'.

MP-IDSA's flagship event, the South Asia Conference series, which commenced in 2007, has acquired a unique stature as an important Track II initiative, bringing together academics, experts, policymakers, practitioners and media representatives from India's neighbouring countries in a common endeavour to deepen mutual understanding and cooperation on issues of mutual interest and concern. The 14th edition of the South Asia Conference has been given a new identity as a Think20 (T20) Side Event of India's G20 Presidency. This T20 side event is seen as an opportunity to seek views and suggestions on all the key issues before the G20, especially macroeconomics and developmental issues, climate change, green transitions, healthcare, digital economy, and reform of the global financial institutions and multilateral institutions.

In previous editions of the South Asia Conference, the participants have dealt with a number of themes ranging from growth and stability, economic and non-traditional issues, cooperative security, culture, role of media and

connectivity. MP-IDSAs fostered an atmosphere in which discussions are frank and candid. We value the ideas that the participants contribute. It is encouraging to see broad consensus among participants over the years that South Asian States ought to set aside legacy issues and work to enhance peace and prosperity for all. We are also encouraged by the huge reservoir of goodwill among the people of the region towards one another.

The theme chosen for discussion in the 14th South Asia Conference is “Think20@G20: Towards a Resilient South Asia”. Prime Minister (PM) Narendra Modi’s vision is to make the G20 action-oriented, decisive and ambitious. From the very first day, Indian leadership has sought to shape India’s G20 Presidency as an inclusive and all-encompassing one. We have also focussed on ensuring gender equality, in keeping with the Prime Minister’s vision. Our Think20 group has already conducted a successful Handover Event with T20 of Indonesia, the immediate past President. We also held the Inception Conference in which more than 250 people participated, including more than 50 foreign experts.

As the main ‘Ideas Bank’ of the G20, the T20 aims to discuss issues of global concern but this must proceed hand in hand with issues confronting our neighbourhood. Our region of South Asia has a population of almost 2 billion people with a combined gross domestic product (GDP) of about US\$ 4.4 trillion, of which a very large part, about US\$ 3.4 trillion, is that of India.

The global economic downturn due to the COVID-19 pandemic, the impact of the Russia-Ukraine war and economic challenges in several countries of the region have exacerbated regional economic challenges. Many countries around the world are in debt. There is speculation that many developed nations may face recession.

In the post-pandemic period, India has emerged as a resilient economy with the highest growth rate among the large economies. But that does not mean that India is the only one with the potential to grow. We have seen how Bangladesh until recently was doing even better than India, especially in some sectors.

As a country accounting for about 70 per cent of the region’s area, population, GDP and defence expenditure, India has a special role to play

in the region's growth and development. This impulse can be stronger if we share the vision of common prosperity. Prime Minister Modi has emphasised this in his statement at the recent Voice of Global South Summit by saying that “your voice is India's voice and your priorities are India's priorities”.

The greatest challenge before South Asia is the fight against poverty, climate change, natural disasters, and food and energy security. These are indivisible and transcend borders. Cooperation on these issues will ensure the achievement of Sustainable Development Goals (SDGs). We are at the halfway mark in regard to the achievement of the SDGs. This is the right moment to take stock, especially after the ravages of the pandemic, to see what course corrections are necessary.

On some of these SDGs, South Asian countries have made some progress, but clearly, much more needs to be done. If we develop a broad consensus on the way forward, we may be in a better position to collectively address our common challenges.

India's recent announcement of the National Green Hydrogen Mission is a huge step forward in the quest for decarbonisation of our economy. PM Modi's concept of 'Lifestyle for the Environment' (LiFE)—essentially espouses a human-centric approach, as also an individual-centric approach, to resolving many of our problems which stem from unbridled and irresponsible human activity and consumption. The idea is to ignite a people's movement in which every human being feels that he or she can make a difference. If billions around the world feel the same responsibility and moderate their lifestyles accordingly, there is every chance that we can influence the decisions taken by governments and trans-national corporations. It is time that we gave greater weightage to ethics and values, not just country-specific interests and the profit principle.

India's youth have also embraced digital transformation like in no other country, not even in the developed West. This is anchored to the importance which India places on inclusive, accessible and affordable digital infrastructure. Today, the fast evolving digital world has made education and health more accessible for all. We wish to share the lessons we have learnt and together develop new ideas for the common problems plaguing our planet.

It is evident that the current structure of international institutions does not reflect the aspirations of developing countries. India has long been an advocate of reformed multilateralism including that of the United Nations (UN). The Think20 must come up with ways to address the stasis in multilateralism and to nudge forward the reforms in a manner through the power of conviction.

The G20 has a genuine opportunity to work alongside the existing system and provide an opportunity to all major nations and economies to step away from the gridlock. The Think20 looks forward to working with the Think7 of the G7.

At COP27, India had emphasised climate justice and called for just and equitable transitions. The developing countries cannot be made to pay the historical burden of global warming when they have done little to create that problem.

India's G20 Presidency, in a way, is a South Asian presidency; it highlights the importance which India attaches to its immediate neighbourhood. India's initiatives to build regional cooperation are anchored in its 'Neighbourhood First policy'. India has always been the first off the block to provide relief in the wake of tsunamis, earthquakes and other natural disasters, be it in Bhutan, Bangladesh, Nepal, Sri Lanka or the Maldives.

Importantly, India does not seek reciprocity in the implementation of its 'Neighbourhood First policy'. This was evident during the pandemic when India offered vaccines and other medical assistance to countries around the world, including in South Asia.

Regional economic integration can provide the binding glue for structures that ensure regional peace and collective prosperity. Currently, intra-South Asian trade is abysmally low. If the economic complementarities of different states were to be aligned, we could change that in favour of a better future for all of us especially at a time when growth is no longer the monopoly of just a few.

We are keen to use the potential of South Asian countries to strengthen other regional groupings and partnerships such as Bangladesh, Bhutan, India,

Nepal (BBIN) initiative and Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC). India is also committed to greater connectivity and cooperation with the Association of Southeast Asian Nations (ASEAN) region through its 'Act East policy'.

We have a special friendship with Bhutan. Bangladesh is a key pillar of India's regional engagement with which we have positively resolved long-pending maritime and boundary issues. We have an open border with Nepal in keeping with our ancient ties and our mutual trust and confidence. Our security cooperation with a close and friendly neighbour like Myanmar has deepened in recent years. India is cooperating closely with the Maldives and Sri Lanka, which are close and friendly maritime neighbours of long standing.

Our shared maritime interests in the extended neighbourhood remain anchored in developing a blue economy, particularly in the context of what PM Modi has termed 'SAGAR' ('Security and Growth for All in the Region'). It is in our common interest to ensure unimpeded commerce, protection of key sea lanes of communication and freedom of navigation and over-flight. It is also in our common interest to fight the scourge of terrorism which remains a major threat to the impulse of peace and development in our region.

We breathe the same air, we drink the same water and we live in a shared space. The two-day 14th South Asia Conference provided an excellent opportunity to discuss country perspectives on climate, economic, gender and energy concerns, and delve into the sharing of best practices in matters related to energy transition, climate adaptability, agricultural produce, water resources and disaster management, apart from boosting resilience and regional growth. It is hoped that contributions in this volume will add to the process of deepening mutual understanding, friendship and cooperation among countries in the region.

2

G20 and India: The Message of ‘One Earth, One Family, One Future’

Harsh Vardhan Shringla

What does G20 mean for India? First, of course, India has never been President of the G20 before. So, for India, this is the first opportunity to preside over this influential grouping. Second, this is perhaps the most significant international event that India has ever hosted in recent years. India was the chair of the Non-Aligned Movement (NAM) and had hosted the 7th NAM Summit and the Commonwealth Heads of Government Meeting (both in 1983), and the India-Africa Forum Summit in 2015. But those were one-off events. The G20 Presidency is a far more elaborate process, and India has had to host about 200 meetings until the Summit in September 2023. It has also meant hosting hundreds of side events. It has been a very major exercise.

How are we intending to deal with it? One is that we intend to broaden it. In other words, we intend to hold meetings of the G20 outside of Delhi, in different parts of our country. Prime Minister (PM) Modi’s vision has been that we should make the G20 comprehensible to our citizens. In order to do so, we need to take the G20 out into as many different parts of our country as possible, and so we will be hosting G20 meetings in as many as 56 locations across the country. I do not think any other G20 Presidency has had so many broad-based meetings to the extent that we have. It also has to do with the fact that many such international events are usually held in Delhi. So, for most of our citizens, this becomes some remote event in the

capital city. What we want to do is to take such an event right to people's doorstep, to take it to places from Kashmir to Kanyakumari and from Kutch to Kohima. In other words, we want to cover all parts of our country in presenting the G20.

The other part of what we are doing is really to make the G20 comprehensible to our citizens. PM Modi's view is that this is not just an event of the Central Government. It is very important to integrally involve the States, the Union Territories and every citizen of India, and make them stakeholders in the process. Thus, we use these events as an outreach to universities, schools, festivals, quiz competitions, marathons or any mass event that can be used to convey a message about the G20, about India's Presidency, and what it means for India and Indians.

From our point of view, the G20 is a very representative grouping that includes all members of the G7, all members of BRICS and all the permanent members of the Security Council. All the geographies and different ideological groupings are represented in the G20. Thus, when the G20 takes decisions, they tend to have a resonance across the board and are implemented almost by consensus. The United Nations (UN), International Monetary Fund (IMF), World Bank, Organisation for Economic Cooperation and Development (OECD) are all participants in the G20 process and so are already integrally involved with the G20.

India, under its Presidency, has invited a number of countries including Bangladesh, Mauritius, the United Arab Emirates (UAE), Oman, Nigeria and Egypt, among others. We have invited the Asian Development Bank (ADB), the International Solar Agency and the Coalition for Disaster Resilient Infrastructure, etc. On the climate change side of things also, we have had a very good representation.

What does this mean? India has a limitation on the number of countries it can invite from the neighbourhood. For any Presidency, as is the norm, the President can invite three or four countries. There are a number of countries that are already part of the process. There are 19 G20 countries and the European Union (EU) that are members; Spain is a permanent invitee; Netherlands and Singapore are almost always invited; the UN, IMF,

World Bank, OECD, Financial Stability Board, the Association of Southeast Asian Nations (ASEAN) and the African Union (AU) are also regularly invited. The African representation is also ensured by inviting New Partnership for Africa's Development (NEPAD) headed by Rwanda. Thus, a very large number of countries and international organisations are part of a G20 meeting. In addition, 3–4 members are usually invited. However, this time round, we have invited six countries and three organisations. India's effort is to make the G20 as inclusive as possible. In this regard, India makes sure that as many meetings as possible are organised which are of interest to our friends in the neighbourhood and that they are made accessible to them.

This 14th South Asia Conference being organised by MP-IDSA is one such example. There is a T20 process in which there are a certain number of members; but we also have to have other processes that are complementary and feed into that process as well as involve other partners and other stakeholders who have to have a voice in this effort. India recently hosted the Voice of the Global South Summit in which PM Modi delivered the inaugural address. It was attended by many Heads of State and Government and over 150 developing countries.

The reason India took this initiative is because it is important to understand and listen to the views of the developing world, and try and get a sense of the concerns, ideas and proposals that can come forth from the Global South as inputs to India's Presidency. We intend to factor these in and articulate those issues that have arisen during this Summit in our G20 Presidency process. Thus, we will take into account much of the extensive feedback that has come from this process. It needs to be emphasised that we intend our Presidency to be a consultative process. India also wants it to be an inclusive process. PM Modi has already mentioned that India's Presidency would be bold, inclusive and result-oriented. From this perspective, inclusivity is an important factor.

When we talk about the G20 process, it is important also to link the broad priorities we have identified with those which are global priorities today. These broad priorities have been identified by taking into account today's situation and today's needs. How can we respond to what neighbours are saying? Or, what the G20 countries are saying? Obviously, as the President

of the G20, we have to take into account the views of the developed world, the developing world, the views of our neighbours and the views of everybody concerned. This is how we have arrived at certain broad priorities. Everybody wants to see accelerated, resilient and inclusive growth. As the Sustainable Development Growth (SDG) process is stalled right in the middle, we want to see how we can give it momentum. We want to see how we can use the digital platform and the IT sector to bridge the digital divide and to work with the developing world to provide services that are very important for all of us. We want to see how we can reform the multilateral process and work with the multilateral financial institutions to give them a stronger mandate to be able to deliver what we need. After all, there are as many as 90 developing countries that are today either indebted or close to indebtedness.

In our own neighbourhood, we have difficulties. COVID-19 has been devastating. On top of that the Ukraine conflict has exacerbated the situation. The costs of fuel and food that we import have gone up, the demand for our goods has gone down and remittances have slowed down. All these impact our economies; there are no exceptions to this. We are all facing the pinch of a situation where growth on a global basis is contracting, demand is slowing down, and countries like ours have to make that extra effort to ensure that we stay afloat.

Thus, what can the institutions that have been set up to address these issues—such as the Bretton Woods institutions and the UN—do to address such crises? COVID has shown the limitations of the system and also the fact that today the IMF and the World Bank need a stronger mandate to be able to garner more resources, including from the private sector, blended financing, private-public partnerships, etc. How can they respond to the increased and enhanced demands on their lending abilities? We intend to work with these institutions and with our partners to try and address some of these issues. I have dwelt a bit at length on this because it is relevant to you as representatives of countries from the developing world and from our neighbourhood. All of us face similar issues. So, how do we work within the G20 to make this a more responsive system?

From our point of view, the environment is important. What we are saying is that climate action is critical, and India is committed to addressing

this issue. PM Modi talked about the ‘*Panch Amrit*’ at the Glasgow COP-26 Summit the year before last. India made some very strong commitments and all of us have made commitments. But we need the means to enable our commitments to be realised and to fulfil our ambitions. Climate financing and climate technology are the means by which we can secure these commitments.

India believes that it is not enough to only focus on climate actions. The UN Secretary-General was in India a few months ago, and he said that the world is living at 1.6 times its ability to be sustainable. In other words, we are consuming far more than the world can sustain. Thus, sustainable consumption and sustainable production are part of the SDGs (SDG-12). We all need to lead sustainable lifestyles. We are using too much energy. We have economies that are based on waste. India and many other countries have been traditionally used to living far more in harmony with natural processes and are consuming less. We believe in a circular economy in which we do not waste products but utilise them. How can we get some of these ideas out into the world? How can we ensure that, along with climate actions, there is also the issue of lifestyle changes? ‘Lifestyle for the Environment’ (LiFE), an initiative launched by PM Modi, is something that we want to work with along with our friends, especially in the G20. How can these ideas resonate and be subsequently utilised extensively across the globe? How can we put our broad priorities in context? And, how can we put some of these priorities into action?

When we come to South Asia itself, the integration of our neighbourhood is an important issue. South Asia is believed to be one of the least integrated regions in the world. Intra-South Asian trade is believed to be at a level that is far lower than in other regions. We have many other paradigms that we can look at, but everything seems to be changing very fast today. What you are seeing today is a very different scenario from what it was 8–10 years ago. Today, South Asia is on the move. Despite many difficulties, the rate of growth in our countries is far higher than in the rest of the world. And of course, the efforts that we have made at integrating our region are far greater than what we have seen even a decade ago.

When we talk about integrations, it is not just about connectivity—

road, air and waterways. It is also about energy, people-to-people contacts and internet connectivity. Connectivity integration today is much more comprehensive. We have to have a more holistic approach to the issue. In 2014, India spent US\$ 3 billion on lines of credit. These are soft loans given to countries in our neighbourhood, and are focused primarily on infrastructure development for connectivity and integration. In 2022, these loans amounted to over US\$ 15 billion. In the last 7–8 years, India has tripled its lines of credit. India is now running about 162 projects in its neighbourhood, which are focused on building connectivity—rail, road, air, shipping, ports and infrastructure. Such loans are an integral part of much of the key foreign policy frameworks of the Ministry of External Affairs (MEA). India's 'Act East policy', the 'Neighbourhood First policy' and even its 'Indo-Pacific policy' start with its neighbourhood.

When we look at integrative processes, we take a leap of imagination by thinking of the possibility that we can move from Delhi through Bangladesh into the rest of the countries towards the east connected through the Asian railway network. We have roads that similarly link up through our neighbouring countries with the Asian highway; we have pipelines that connect gas and transmission lines that integrate us into one grid. Such leaps of imagination are not very far-fetched because today we are in the process of achieving levels of integration hardly dreamt of ten years ago. Today, much of these are coming to be seen as a reality.

The blueprints for such projects are already there. For example, a Detailed Project Report (DPR) is being prepared for the railway line from Raxaul to Kathmandu. In a few years, there will be a train that will go from Delhi to Kathmandu in a short time. Another train will take us from Delhi to Dhaka and from Dhaka to Agartala in Tripura. We have the elements of pipelines that can move high-speed diesel from Northeast India into Bangladesh, or from Motihari in Uttar Pradesh to Amletganj in Nepal. A 760 kv transmission line will go from Bongaigaon in Assam through Bangladesh into Katihar in Bihar, through Parvatipur. Today, we already have the basis for a lot of such integrations.

Many of our neighbours, Bangladesh in particular, have been saying that India must also be part of their efforts to tap their hydroelectric power

potential. India has many hydroelectric projects in the Northeast, for instance, in Sikkim, and can share this hydroelectric capacity with our neighbours. It is not possible today because of want of infrastructure. If we can evacuate surplus power to Bangladesh and through it to other states, Bangladesh can benefit immensely by securing the power it needs. There is a certain amount of integration there already. Also, India has had a very serious plan (for the last 10 years) to put in place an undersea cable between India and Sri Lanka that can provide an exchange of electricity. Today, this plan can become a reality because costs have come down significantly. Sri Lanka is an island. If we have surplus power, there is no way to send it to Sri Lanka, especially when it is short of power, as was experienced recently. An undersea cable will enable the exchange of electricity and will work very well because India and Sri Lanka do not have the same peak hours. During peak hours in Sri Lanka, India has lower requirements and it can export power. Similarly, during India's peak hours, Sri Lanka can export power.

Similarly, power trade has been talked about in Nepal for a long time and is now becoming a reality. India exports 760 MW of power to Nepal; but now, it is also importing over 1100 MW from Nepal in peak seasons. Under the power trade policy that the Government of India has introduced recently, it is possible to import and export power commercially between the two countries. The Indian government is facilitating such trade even to a third country. For example, Nepal can now export power to Bangladesh and vice versa; or, even Bhutan can export power to Bangladesh through Indian territory, which can act as a connecting point for power, making power exchange more fungible. The ability to use power wherever and whenever needed acts as a game changer.

It is important to ask how India is getting 1100 MW from Nepal. This is because many private-sector power projects have now come to fruition. Some of them are Government of Nepal projects; others have been done with Indian assistance. Some of the Indian investments are joint ventures and some are purely private power players. However, the basic fact is that, today, the power generated by Nepal can be exported, and the only viable market is population centres and industries in India. Thus, Nepal has a readymade market in India. At the same time, Nepal needs power from India as well. While Nepal has a surplus of power in the west, it requires

power in the east. Kathmandu, and all the major cities, need power. Instead of constructing very expensive power transmission lines from west to east, Nepal can easily access power from India located in the south, at a lesser cost. The benefits of establishing such connectivity are huge. Building broader infrastructure, integrated check posts, for example at Dawki on the Meghalaya-Bangladesh border, on the Moreh-Tamu border with Myanmar and on the Raxaul-Birgunj border with Nepal, will allow for the seamless movement of goods and people across countries.

India has also worked on non-tariff barriers (NTB) and on evolving and implementing sounder trade policies. Trade between India and its neighbours has undergone a very significant change. Bangladesh is today India's 5th largest trading partner and Nepal has emerged as India's 10th largest trading partner. What should have been done decades ago is being realised today, resulting in South Asian integration. This is really going to change the lives of the people in the region in a way that we had not really envisaged earlier.

Moreover, new technologies are changing the face of the region. Today, there is far greater internet connectivity between Bangladesh, Bhutan, Nepal and India than ever before. There is much greater emphasis on newer technologies, like 5G and artificial intelligence. It is now imperative for countries to cooperate among themselves to make the region an area of seamless connectivity, as also of the seamless movement of goods, services and people. The movement of people is very important. A lot of Indians visit Nepal, Sri Lanka and Maldives as tourists; a lot of people from Bangladesh and Nepal visit India. We must encourage this flow of people. The restructuring of our visa policies has facilitated an increase in the issuance of visas per annum in Bangladesh from 5 lakhs to 18 lakhs within a year and a half. This has had a very positive resonance in tourism. Tourist inflows to the state of Sikkim increased by 90 per cent in the year 2019 due to a more liberal visa policy. The region should see more of this.

India is trying to make sure that the integration of the region through better connectivity is developed to an extent that its countries can realise the fullest potential of growth and development to meet the aspirations of the people. India is investing in the Greater Male Connectivity Project in the Maldives. It is a very unique infrastructure development project that has never been attempted on such a scale by India overseas.

Demographically also, the countries in the region are on the same page. The region has a very young population and the youth in different countries have the same concerns and the need for opportunities. As countries integrate, build infrastructure, trade more among themselves and become more efficient economies, this aspirational generation is presented with opportunities to excel, and bring prosperity to themselves and the region if countries provide them with better skilling and training opportunities. Here, people-to-people connection across countries is very important and it is the most critical factor in all our relationships. The flow of people and ideas will generate integrative impulses in the region and bring the countries together.

Education can lead to integration. People cross borders to receive education, and this also helps build people-to-people contact. Medical tourism is also important. A lot of people from our neighbourhood come to India for medical treatment which generates a tremendous sense of goodwill. India is willing to facilitate it and make it easier and better. Many people from Myanmar cross the border and come for treatment to Kohima or Imphal. Not much is known about this because it is an informal arrangement. They are allowed to cross over, get treatment and go back. It is far more practical to come this side and get treatment than to go all the way to Yangon or some of the larger cities. Similarly, many of our neighbours have similar reasons to come to India and get treatment.

When PM Modi speaks about “*sab ka saath, sab ka vikas, sab ka vishwas*”, we believe that this applies not only to our own country but to the entire neighbourhood, with the premise that unless we all develop, we all grow, we all have the opportunities to integrate and to expand our infrastructure in a manner that is mutually beneficial to all countries, it will not help any of us. Clearly, we are so interdependent and interlinked that if India were to say that we would go ahead and not worry about anybody else, it would be counterproductive.

For too long, we have displayed such a negative mindset. Today, it is different. PM Modi and his government accord the entire region the utmost priority. When it comes to the neighbourhood, India has an important policy framework to respond to it with the seriousness that it deserves. COVID was a very good example. Through ‘Vaccine *Maitri*’, India made sure that

all its neighbours had the vaccines that were required in the first six months. India needed to administer over 2 billion vaccines to its own citizens; but despite this, it managed to make sure that most of its neighbours got the vaccines that they required. India also provided therapeutics and medicines. There was a time when the 'oxygen express trains' (as they were called) carrying containers full of liquid medical oxygen were sent into Bangladesh. Incidentally, because of these containers, the container traffic between India and Bangladesh has worked very well. During the COVID crisis, it was found that it was a far cheaper mode of transporting goods, besides being more environment-friendly. Moreover, it is also much quicker to transport goods through trains rather than through trucks, which has been the traditional means of transport.

PM Modi convened a meeting of all South Asian leaders at the beginning of the COVID crisis. This was a very useful opportunity to exchange practices and to see what sort of mutual self-help we could give each other. PM Modi also proposed that the G20 discuss the COVID crisis. Saudi Arabia, which was the President at the time, responded and convened an extraordinary meeting in which the Indian Prime Minister pointed that this was the first time that the G20 was meeting on an issue which was not financial or economic in nature.

PM Modi also expounded the theory of human-centric globalisation, which means that today we must work for the benefit of others. When we talk about working for the global common good, which has been the most important plank of India's foreign policy, we work for the global community. This includes vaccines, medicines, therapeutics or specialised teams responding to requirements in the Maldives, Mauritius, Seychelles, Comoros, Madagascar and Mozambique in the wake of the COVID crisis. Our CoWin platform was used successfully to administer 220 crore vaccines to our people. We had a global CoWin Conference in which 142 countries participated. We said, "we give it to you, you can scale it up or you can scale it down." Many countries actually used this successfully.

Last but not the least, while working for the global common good, financial inclusion is important. We have found that in India, financial inclusion through bank accounts has served the interests of the most

vulnerable sections of its population. We have been able to administer assistance directly to people in their bank accounts by removing the middleman and corruption and made such help far more efficient. Women are more directly involved today in the financial process and are getting government benefits directly. PM Modi spoke at the Bali G20 Summit about the fact that 40 per cent of total digital transactions in the world were through the UPI.

In other words, India is contributing extraordinarily towards a digital economy on a global basis. India wants to take this to the rest of the world. India's experiences can be leveraged to provide identity cards to the four billion people in the world who do not have ID cards, and thus provide financial inclusion to those who may need it. These are examples of how India intends to work for the global common good. The human-centric globalisation that India emphasises fits in with the theme of the G20, which is a very ancient dictum of ours: '*Vasudhaiva Kutumbakam* – One Earth, One Family, One Future.'

3

Non-Traditional Security Threats for Bhutan: Policy Options

*Dil B. Rahut, Raja Rajendra Timilsina,
Bhagirath Behera and Jyothika Easwaran*

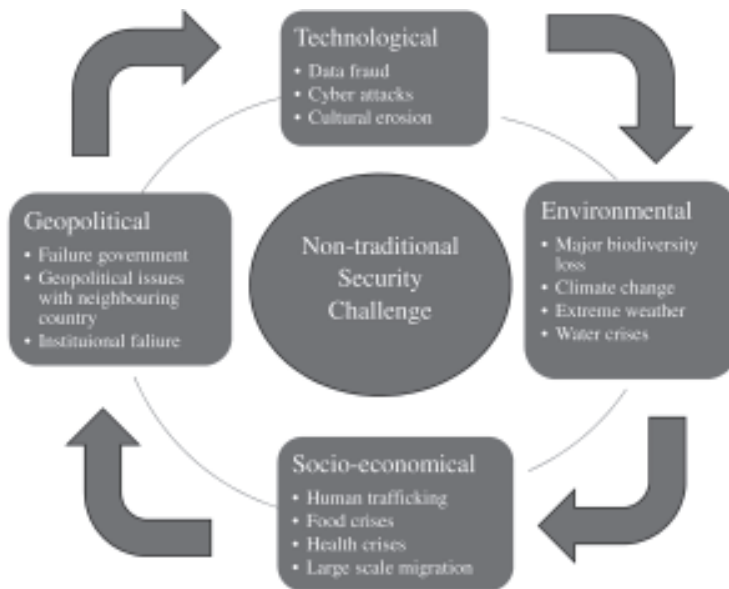
Introduction

Global communities continue to face several interconnected challenges that hinder development despite strong economic growth and prosperity. Security threats or challenges that shift from inter-state wars to non-state actors, such as demographic changes, cyber warfare, poverty, hunger, environmental degradation, alienation of youth, rejection of traditional values, pandemics, irregular migrations, natural disasters, scarcity of resources, climate change and civil war, are known as non-traditional security (NTS) threats.¹ These threats are considered non-traditional because they do not involve direct military confrontation between States.

Since 1950, the human population has grown exponentially, increasing more than three times. As of 2020, the total global population reached a staggering 7.8 billion and is projected to surpass 8.5 billion by 2030.² Rapid population growth, along with ongoing inflation, economic disruptions and environmental degradation is making many developing Asian countries strongly commit to building capacity to deal with trans-border threats, whose impact is severe.³ In 2020, the prevalence of undernourishment increased to 9.9 per cent from 8.5 per cent in the previous year.⁴ *The Global Report on Food Crises, 2022* states that in 2021, 193 million individuals across 53

countries suffered from acute food insecurity and required humanitarian assistance. Extreme weather has been responsible for displacing 23 million people in eight countries, while economic shocks affected 30 million people in 21 countries. NTS threats, such as climate change, are difficult to reverse or repair. Therefore, it is very important for South Asian countries to think about policy options to address these threats through a multilateral approach, involving regional cooperation and partnership.

Figure 3.1: Interconnectedness of Non-traditional Security Threats



Source: Authors' Compilation.

The South Asian region, encompassing eight countries, including Afghanistan, Bangladesh, Bhutan, India, the Maldives, Nepal, Pakistan and Sri Lanka, is home to roughly one-fifth of the world's population, making it the most populated region in the world.⁵ South Asia is a diverse region with a rich history and culture, home to some of the most diverse nations in the contemporary world. However, these regions also face several NTS threats that pose a significant challenge to security in the area and hinder the development process.⁶ These challenges are interconnected and emerge from five main sources: geopolitical, economic, environmental, societal and technological (GEST).

Given these circumstances, Bhutan has retained its rich cultural and natural legacy, and its rapid economic development has flowered under the guidance of a kind monarch. Bhutan also has a reputation of being a carbon-negative nation, with immaculate environmental conditions despite its size. However, the country is confronted with several issues, including the danger to its culture and value system, climate change, migration, brain drain, a modest human capital base, landlocked status, a tiny economy and limited competitiveness in the international market. Small and landlocked countries have a high potential for NTS threats, but also have a higher potential to mitigate them. The key to a successful policy is multilateral and regional collaboration to mitigate these NTS threats, which can bring enormous benefits to Bhutan and the South Asian region.

The first and most serious NTS threat is environmental degradation, which is caused by climate change which has lethal consequences, such that heat waves may displace 1.5 billion people who may also face food security issues in South Asia in the near future.⁷ Ecological problems, such as biodiversity loss, refer to the decrease in the number of genes, species and biological communities due to human activity, such as deforestation, habitat loss and pollution.⁸ Such problems are pervasive in South Asia. The widespread use of pesticides and fertilizers is leading to soil degradation and harming the health of people and animals. The pollution of water sources is also leading to water scarcity and threatening the health and livelihoods of communities that depend on these sources.⁹ This degradation leads to the loss of soil fertility, desertification and the loss of important ecosystem services, such as water purification, flood control and erosion prevention.¹⁰ Water scarcity is further exacerbated by climate change and the overuse of water resources. Extreme weather events, such as droughts and floods, make water more scarce, unpredictable and polluted.¹¹ Soil degradation is a major problem in South Asia, resulting from unsustainable land use practices, such as the overuse of fertilizers and pesticides.¹² These problems significantly impact human security, and can result in health problems, displacement, economic damage and social unrest.

Globalisation, which was initially perceived as a catalyst for reducing geopolitical tensions and promoting economic interdependence, has been subject to scepticism lately.¹³ This is due to increasing geopolitical fluidity

and intensifying strong-state policies that have led to the rise of NTS threats associated with economic interactions between countries.¹⁴ In South Asia, trade-related tensions could create distractions and divisions that impede the unity of regional responses, and thus, geopolitical threats might catalyse the evolving confluence of strong-state politics, major power tensions and small state disruptions in an increasingly disordered world.¹⁵ Although globalisation was once considered a source of mutual benefits, confidence in its ability to deliver such benefits has weakened due to the emergence of NTS threats, such as geological and geo-economical threats. Furthermore, the debt burden of the South Asian region has been a significant impediment in achieving the 2030 Sustainable Development Goals (SDG) targets and poses a challenge to fiscal sustainability. A majority of low-income countries, which account for about 60 per cent of the world, are currently facing either debt distress or high risk.¹⁶ Consequently, many low-income economies are now grappling with fiscal, currency and debt sustainability risks, with some being pushed to the verge of debt distress.¹⁷

NTS threats linked to technology is cyber warfare, which has grown in frequency, with the possibility of attacks on companies and the disruption of operations nearly doubling over the past several years. Social media and other digital channels can exacerbate political and social tensions, shape public opinion and erode confidence in institutions by disseminating propaganda, disinformation and misinformation.¹⁸

Information warfare can influence public opinion and spread discord, and thus, the Asian region is vulnerable to these NTS threats. Inadequate application of cyber laws in the region is boosting immoral activities like deception, identity theft, money laundering and online scams. The rapid advancement of technology can exacerbate economic disparities within and between Asian countries because cybercrime networks and syndicates can operate across borders, target individuals, businesses and governments for financial gain, and exploit vulnerabilities in technology infrastructure. Unequal capabilities and capacities in technology infrastructure development among regions can further exacerbate these issues. Automation, Artificial Intelligence (AI) and other technological developments have the potential to upend conventional industries and ways of life, resulting in job losses,

inequality and social unrest. Technology creation, use and disposal can also add to pollution, environmental deterioration and health risks due to e-waste and chemical pollution from industrial processes in South Asia.

NTS threats, like geological, environmental, economic and technological risks, further lead to societal, such as irregular migration, infectious diseases, pandemics, terrorism and insurgencies. Irregular migration often leads to human trafficking, smuggling and exploitation, while infectious diseases and pandemics pose a significant threat to public health. Terrorism and insurgencies have the potential to cause significant loss of life and property, as well as social unrest. These threats are far-reaching and include the scarcity of resources such as energy, natural disasters, depletion of traditional cultural value systems, socio-economic and demographic challenges, population explosion and unplanned urbanisation.¹⁹ Addressing these NTS threats requires effective enforcement of cyber laws, regional cooperation and sustainable technology practices to mitigate their negative impacts and promote regional security and stability. Therefore, it is imperative for Asian nations to prioritise addressing these NTS threats to safeguard their geological, economic, social and environmental well-being.

The Issues

Food and Nutrition Security

Food and nutrition security has not improved in South Asia. On the other hand, women's work, which is an integral part of the agricultural sector, is not recognised or supported adequately by public policy and social institutions despite the region's economic growth.²⁰ Hunger and poverty are on the rise, together with gender inequalities. This leads to greater inequality in the agri-food sector, underpins persistent food and nutrition insecurity in South Asia, and deserves greater policy and law enforcement attention. South Asia has the highest child stunting rate and by far the highest child wasting rate of any other region in the world.²¹ When people don't have enough food to eat, they suffer from malnutrition, which leads to a variety of health problems, including stunted growth, weakened immune systems and even death. In addition, people may experience psychological suffering as they struggle to find enough food to feed themselves and their families.

Climate Change

South Asia is one of the most environmentally vulnerable regions in the world, with the highest frequency of landslides and floods, causing enormous damage to lives, property, crops and infrastructure.²² The frequency of extreme floods, landslides and heavy rain is rising in Bangladesh, India, Pakistan, Nepal and Bhutan. As climate change worsens, more and more people may be forced to flee their homes due to environmental risks.²³ On the other hand, this extreme weather is directly affecting agricultural productivity in the South Asian region, where most of the population is dependent upon agriculture. On the other hand, hungry and desperate people turn to violence or other forms of civil unrest, in order to try and meet their basic needs. This can lead to conflict between different groups within a society, as well as between countries that are competing for limited resources.

Migration

South Asian countries have not complied with their obligations under the refugee legislation even though the severity of the climate change-related crisis in the region is paramount.²⁴ When people cannot find enough food to eat in their home countries, they are forced to migrate to other places in search of better opportunities. When people migrate and take refuge, they create legal challenges for countries that receive such refugees, as well as for the refugees themselves who face barriers while seeking asylum that increase the prospect of 'climate refugees'.²⁵ This leads to overcrowding in certain areas and puts a strain on resources in those places. Therefore, persistent food shortages and famines can greatly increase migration.

Poverty, Low Economic Growth, Economic Inequalities/Disparities

Due to the COVID-19 pandemic, the percentage of persons living in extreme poverty increased from 8.4 per cent in 2019 to 9.3 per cent in 2020.²⁶ According to World Bank projections, 600 million people will still be living in severe poverty worldwide in 2030, which amounts to a 7 per cent rate. South Asia will host the majority of them.²⁷ Amid slow economic growth, wealth disparities and economic inequalities are rising, and many people are being left behind.²⁸ Social solidarity might break down due to this perceived loss of local and national identity, which fuels an upsurge in identity politics

even in long-established democracies. Those in marginalised communities who do not have access to resources and opportunities frequently feel the effects of these issues. A holistic approach is needed to address these issues, including promoting inclusive economic development, reducing inequality, and ensuring access to basic needs such as food, water and energy. Policymakers in South Asian economies should seek to develop policies that promote equitable economic growth because only that will help them overcome social ills such as poverty and inequality.²⁹

Rapid Growth of Technology, Cyber Attacks and Crime

Cyber insecurity is a growing concern due to the increasing reliance on digital technologies. However, in economies with low internet penetration and few resources dedicated to combating cybercrime, formal organisations dealing with such crimes are often thinly staffed, and cybercriminals are less likely to be stigmatised.³⁰ Cyberattacks disrupt vital infrastructure, compromise sensitive data and erode public confidence in institutions. Furthermore, the technological and behavioural defence mechanisms of organisations and people are likely to be weaker. Because of high unemployment and low wages, many individuals in developing economies are drawn to cybercrime. Another issue connected with information technological advancement is the spread of “(dis)information.” The simplicity with which an abundance of information, misinformation and propaganda can be disseminated via digital platforms can erode popular trust in institutions, and lead to social polarisation. Promoting media literacy and critical thinking abilities is essential for addressing this problem. It is also important to improve the transparency and accountability of social media and information technology, as well as build cyber threat resilience through the effective implementation of cybercrime laws. Overall, cyber insecurity and the proliferation of “(dis)information” are very serious technological NTS threats that require prompt attention from policymakers in the South Asian region.

Water and Energy Crises

The demand for water is increasing due to population growth and changing consumption patterns, while the supply of fresh water is shrinking. Parts of South Asia are expected to face significant shortages. It is difficult to produce

enough food for the growing population due to constrained land resources, inadequate energy supply and increasing water stress in South Asian region.³¹ The concept of the food, water and energy nexus is especially pertinent in South Asia, which feeds two-thirds of the world's population (4.14 billion people) and consumes 59 per cent of the world's water. The scarcity of water could act as a conflict catalyst both within and between States, leading to possible water wars.³² The interconnections between the creation of food, energy and water are intended to be systematised in order to provide a framework for evaluating the use of all resources and managing trade-offs and synergies.³³ Climate change further exacerbates water demand, causing more frequent and severe droughts in some regions and flooding in others. There is also an energy crisis and dependency on fossil fuels has led to environmental degradation and climate change, which have turned into more frequent natural disasters such as hurricanes and wildfires.

The lack of access to clean water can lead to a range of health problems, including waterborne diseases, such as cholera and typhoid fever. In South Asia, where more than 40 per cent of the world's poor reside, and about 51 per cent of the population is food-energy insufficient, ensuring food security and providing access to clean drinking water and modern energy for all continues to be a top priority for resolving NTS threat.³⁴

Health Crises

Growth in international travel and commerce has made it easier for pandemics and global health crises, like COVID-19, SARS, H5N1, Ebola and Zika, to spread quickly across borders. Vulnerable groups without access to adequate healthcare often experience the effects of these diseases most severely. Economic repercussions from global health crises can be substantial. Trade and transport may be hampered, which could reduce economic activity. The cost of addressing these crises can be high in terms of both financial resources and human lives. It takes a coordinated international effort to address global health crises, including funding for the research and development of new drugs and vaccines and early detection and fast reaction systems. It also requires strengthening healthcare systems in developing countries to ensure that they are better equipped to respond to outbreaks.

Another significant issue affecting health is antimicrobial resistance (AMR), when bacteria, viruses, fungi, parasites and other micro-organisms develop a resistance to antibiotics and other antimicrobial medications. This may make treating infections difficult or impossible, which raises morbidity and mortality. There is a need for investment in research and development for new medications and vaccines, as well as in policies aimed at lowering the inappropriate use of antibiotics (which is highly common in South Asia) and promoting infection prevention and control measures. Overall, to overcome NTS threats like health crises in the South Asian region, major problems, such as poverty, inequality and lack of access to healthcare services, access to clean water and sanitation, should be addressed first.

Debt Sustainability

Debt sustainability is a critical economic and political issue, particularly for low-income countries and fragile states. Such nations dominate in South Asia. While it is not traditionally considered a security threat, high levels of debt can have significant implications for NTS threats due to instability in the state. Governments must carefully manage their debt burden to maintain economic stability and promote long-term growth.

Geological and Geopolitical Threats

Landlocked countries face unique challenges due to their lack of direct access to the ocean or the sea. These challenges can be both geological and geopolitical in nature. From a geological perspective, landlocked countries such as Nepal and Bhutan may be susceptible to natural disasters such as earthquakes, droughts and floods. These nations are highly susceptible to earthquakes due to their location on major fault lines. In addition to geological threats, landlocked countries face geopolitical challenges that stem from their lack of direct sea access and dependence on neighbours for transit in trade and commerce. Transit neighbours can impose high fees and tariffs, leading to increased costs for such countries. They may have limited access to ports and infrastructure necessary for trade and their goods may face longer transportation times and incur higher costs. Relying on transit neighbours can expose landlocked and neighbouring nations to political disputes and conflicts. Political instability in one country can affect its neighbours, leading

to an uptick in political asylum seekers and refugees. In conclusion, landlocked countries confront a distinctive array of challenges encompassing both geological and geopolitical threats.

Human Security

An important issue to be handled is how to ensure human security in South Asia, given the effects of NTS threats. Additionally, there is a strong case for a multilateral and multi-level strategy to address this problem and deepen our understanding of security, particularly in relation to human security issues, where non-state actors, like civil society organisations (CSOs), international non-governmental organisations (INGOs) and local communities play crucial roles. Climate change; food, water, nutrition insecurity; infectious diseases and irregular migration are some of the fundamental NTS threats in the South Asian region. For marginalised groups, like women, children and racial and ethnic minorities in particular, NTS threats can be particularly challenging as they already suffer from existing vulnerabilities and inequalities. Therefore, a comprehensive strategy that goes beyond conventional security steps is needed to address these threats.

There are opportunities for regional collaboration to solve NTS threats. For instance, Asian nations can collaborate to improve their disaster response and preparedness or create sustainable energy sources. Additionally, regional cooperation can foster regional stability by increasing confidence between nations. In general, solving NTS threats is essential for providing human security in South Asia and calls for a comprehensive approach that prioritises the needs of vulnerable populations by involving a range of actors at different levels.

NTS Threats for Bhutan

Thus far, we have discussed the five NTS threats: geopolitical, economic, environmental, societal and technological (GEST). Being uniquely located in the foothills of the Himalayas, Bhutan is prone to all of these NTS threats.

Aging Population in Rural Areas

For Bhutan, there is a threat of aging population in rural areas, and youth outbound migration, together with a changing climate, the changing

landscape of international governance, polarisation in societies and increasing income and wealth disparity. More precisely, in 2005, the youth comprised 23 per cent of the population; by 2017, that percentage had dropped to 19.8 per cent.³⁵ On the other hand, the proportion of young people in urban regions has climbed by 16.8 per cent since 2005, while it has decreased by 13 per cent in rural areas. In recent years, the youth unemployment rate rose from 20.9 per cent to 29 per cent in 2022, accelerating outbound youth migration.³⁶ With a higher youth unemployment rate and a declining youth population, the vulnerable rural areas need policy measures to promote inter-generational harmony and cultural transmission. Long-term efforts to improve the nation's fiscal and external balances may be hindered by labour shortages, which might cause hydro projects to advance much more slowly and, as a result, additional hydro income streams to flow more slowly.

Precarious Economic Environment

The macroeconomic environment is precarious and, consequently, downside risks to economic projection include delays in fiscal consolidation and financial sector weaknesses, which limit the government's capacity to support a strong recovery. These risks include ongoing global uncertainty and more hydro project delays. Public debt is anticipated to remain high as a proportion of GDP in the short- to medium-term due to significant fiscal deficits, notwithstanding a fall in hydroelectric debt.³⁷ As most of the debt is tied to hydro project loans from India (to be repaid from future hydro earnings) with minimal refinancing and exchange rate risks, risks to the sustainability of the debt are expected to remain mild.

Rapid Technological Changes

The growing presence of the internet and information technology might be eroding Bhutan's national identity and sovereignty, which the country has long cherished.³⁸ The internet has undoubtedly empowered people and provided access to the outside world. Still, it is also blurring their inner vision, causing a homogenisation of tradition and modernity which is happening too fast to allow for adaptation. Bhutan is undergoing a rapid social and cultural transformation, leading to weakened social solidarity, diluted culture, weak family values and a sterile spiritual plane. The reasoning

behind opening up to the internet and multimedia was based on the assumption that Bhutanese people are educated enough to sift through good and bad content, and that their own vibrant culture could prevail. Internet and social media undermine what Bhutan has been trying to promote and preserve as its national identity. As the country reaches modernity at a breakneck pace, social media is becoming more influential than traditional icons like the God of Wisdom, *Jambayang*, leading the nation toward self-obsession rather than self-discovery.

A Biodiversity Hotspot and Climate Change

The Himalayas, known as the ‘Third Pole’ due to their importance as a water supply and glacier ice repository for Asia, are also a biodiversity hotspot in South Asia. Bhutan is a biodiversity hotspot in the Eastern Himalayas, with over 70 per cent of its territory covered by forests and more than 50 per cent of its land protected.³⁹ Nevertheless, Bhutan’s hilly geography makes food production challenging, and the impact of climate change is only make farming more difficult. The socio-economic well-being of the inhabitants of the hills, especially the weak rural poor, is significantly impacted by the ongoing degradation of the ecosystem and the loss of agricultural production caused by environmental stresses.⁴⁰

Food and Nutritional Security Threats

Food production in Bhutan is difficult due to the country’s hilly geography and the effects of climate change are undoubtedly making farming much more difficult. The degradation of ecosystems and loss of agricultural production caused by environmental stress have significant impacts on the socio-economic well-being of the population in hilly areas, particularly the rural poor. Given the current situation, it is crucial to focus on projects that can help us understand and address the threats posed by climate change to ensure food security.

Conclusion and the Way Forward

Collaboration and cooperation are essential for addressing the complex challenges of today’s NTS threats in South Asia. Bhutan and other South Asian nations need a broad understanding of non-traditional security threats,

including human security issues, and should bring non-state actors, such as regional stakeholders, INGOs and local communities, to play important roles in addressing these challenges and threats. Bhutan is also known for its unique 'Gross National Happiness' (GNH) development philosophy. It has recently made significant strides in achieving economic growth and development while preserving its rich cultural heritage and natural environment. However, to continue on this path, Bhutan must tread carefully, and ensure that its economic prosperity is not at the expense of its environment, culture and value system.

Bhutan's economy relies heavily on the export of hydropower, contributing significantly to the country's GDP. However, developing hydropower projects can negatively impact the environment, such as disrupting river ecosystems and wildlife habitats. Bhutan's commitment to sustainable development has also led to preserving its natural environment. The country is known for its rich biodiversity and its commitment to conservation has resulted in protecting large areas of forests and wildlife habitats. However, with increasing economic development, there is a risk that these natural resources may be exploited for commercial gain. Bhutan must ensure that its natural resources are used sustainably, with a long-term view to protecting its environment for future generations.

The abundance of water resources in the valleys offers an ideal backdrop for hydropower production, which has fuelled economic expansion by providing nearly everyone with affordable electricity. Tourism and fiscal earnings from the sale of excess hydropower to India have allowed the nation to make large investments in its human capital. As a result, service delivery, education and health outcomes have significantly improved. Bhutan has made meaningful strides toward eradicating severe poverty and advancing gender equality and continues to focus on issues of social inequality and geographic disparities.

Bhutan's population is relatively young, with over 46 per cent below the age of 25, representing a positive force with enormous potential to contribute to the country's socio-economic, cultural and political environment. Educating and engaging young Bhutanese on climate change policy is therefore crucial in harnessing this potential to mitigate the impact of climate

change. Bhutan is one of the early adopters of the ‘Human Capital Project’ (HCP) as a worldwide initiative to speed up and increase investment in people for better equity and economic success. In June 2019, Bhutan and Nepal collaborated to host the HCP Forum. India can join hands to support such a noble cause initiated by these two small, landlocked countries. Multilateral and regional collaboration is crucial to mitigate these non-traditional security threats.

Climate change is a public issue and a global problem that requires collective effort to mitigate its impact. According to the United Nations Children’s Fund (UNICEF), Bhutanese children are among the world’s 111th most vulnerable to climate and environmental shocks, highlighting the urgent need for action to address the impact of climate change on the country’s population. Bhutan must ensure that development projects are implemented in an environmentally sustainable manner and that the benefits of these projects are shared equitably among all stakeholders. The country has a rich tradition of art, music, dance and literature, passed down from generation to generation. Bhutan must ensure that its economic development does not come at the expense of its cultural heritage. This means promoting and preserving traditional arts and crafts, languages and customs while embracing modernisation.

In conclusion, Bhutan must tread carefully on its path to economic prosperity, ensuring its sustainable and equitable development and preserving its cultural heritage and natural environment. This requires carefully balancing economic development and environmental protection while promoting and preserving Bhutan’s unique cultural identity. In these contexts, South Asian nations and Bhutan must have a broad understanding of NTS threats, including human security issues. Governments, regional stakeholders, INGOs and local communities can play critical roles in addressing these challenges.

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4

Myanmar at the Crossroads: Implications for India, South Asia and the G20

Zaw Naing

Introduction

After decades of dictatorship and socialist governments, the democratic period of 2011 to 2020 provided the country and the people of Myanmar with many opportunities and various aspects of development. The 2021 military take-over, on 1 February 2021, made so much impact on the political, social and economic development that Myanmar is now at a crossroads in political, social and economic aspects. The maximum constitutional duration of two years of emergency rule ended on 31 January 2023. However, Myanmar's military administration, the State Administrative Council (SAC), has extended its emergency rule six months at a time, again and again, as the country remains riven by internal fighting following the coup. The anticipated elections scheduled for August 2023 were postponed without an official announcement. Presently, a population census is planned for October 2024, with emerging indications suggesting that the elections may follow thereafter.

Meanwhile, the civil war has intensified. The United Nations Security Council (UNSC) adopted its first resolution on Myanmar in 74 years, which has demanded an end to the violence and has called on the country's military rulers to release all political prisoners, including Aung San Suu Kyi. Myanmar's economy has suffered severely since then, and facing escalating violence and an uncertain future, hundreds of thousands of people have fled

their homes. Many young people are also leaving the country for better opportunities abroad, with many saying their hopes are lost at home.

Myanmar at a Glance

Myanmar, also known as Burma, is a Southeast Asian country, with its administrative capital in Nay Pyi Taw. It has two other major cities: Yangon with a population of 7 million and Mandalay with a population of 1 million. Covering an area of 676,578 square kms, Myanmar occupies approximately 20 per cent of the size of India's landmass, which amounts to 3.287 million square kms. Myanmar is renowned for its diverse exports, including natural gas, beans, pulses, teak, minerals, gems and jewellery. As of 2015 estimates, the country's GDP per capita (PPP) stood at US\$ 1,800. Myanmar has a population of 54 million, making up around 4 per cent of the size of India's vast population of 1.41 billion.

Myanmar's Transitions from Military to Democracy to Military

After the military-led socialist era of 1962 to 1988, Myanmar underwent significant transitions from 1990 to 2020, fluctuating between military rule and attempts at establishing a democratic system. In 1990, Myanmar held its first multi-party elections in decades which resulted in a landslide victory for the National League for Democracy (NLD) led by Aung San Suu Kyi. However, the military government, known as the State Law and Order Restoration Council (SLORC), refused to recognise the election results and continued to exercise control. The SLORC changed its name to the State Peace and Development Council (SPDC) in 1997.

In 2010, the SPDC held general elections under a new constitution, known as the 2008 Constitution, by which the *Tatmadaw* (Myanmar Armed Forces) retained significant control of the government by taking 25 per cent of seats in the Parliament, appointing one of the two vice presidents, the union ministers of home affairs, border affairs and defence. The elections resulted in a nominally civilian government in 2011, led by U Thein Sein, an ex-military General, of the Union Solidarity and Development Party (USDP), a military-backed party. This partial democratisation, initiated in 2011, brought profound changes in the country and an extent of openness not seen for almost five decades. In 2015, Myanmar witnessed a significant turning

point when the NLD, led by Aung San Suu Kyi, won a landslide victory in the general elections. This marked the transition towards a more democratic government. Aung San Suu Kyi assumed the role of State Counsellor and became the de facto leader of the country. However, the military retained significant power through the 2008 constitutional arrangements.

On 1 February 2021, the military detained Aung San Suu Kyi, President Win Myint and other prominent NLD leaders, charging them with electoral fraud in the 2020 elections where the NLD had won again in a landslide victory. The military-appointed SAC took control, and the country once again came under military rule. The military takeover (coup) was met with widespread protests by the people in almost all of the cities and towns around the country as well as with international condemnation. The military's actions led to a violent crackdown on demonstrators, resulting in numerous casualties and human rights abuses.

The People Defence Force (PDF) and National Unity Government (NUG) were formed as a response to fight back the military administration. The PDFs, the armed resistance forces against the ruling Myanmar military, operate under joint command systems established by the NUG and the hosting ethnic armed organisations (EAOs), many of which have been fighting the Myanmar military for decades. The NUG, the shadow civilian government formed primarily by democratically elected lawmakers, has been trying to seek international recognition as the legitimate Government of Myanmar. It has been actively engaging with the international community, lobbying for support and assistance. However, the military administration (SAC) continues to hold power.

ASEAN's Efforts to Address Myanmar Crisis

The Association of Southeast Asian Nations (ASEAN) has made efforts to address the Myanmar crisis and tried to facilitate a peaceful resolution. In April 2021, ASEAN held a special Summit on Myanmar in Jakarta, Indonesia. The Summit provided a platform for ASEAN leaders to engage with the Myanmar military leader Senior General Min Aung Hlaing and express their concerns regarding the coup and its implications for Myanmar's stability and regional peace.

After the Summit, ASEAN announced a five-point consensus on Myanmar. The key points included: ending violence, engaging in constructive dialogue, appointing an ASEAN special envoy to facilitate mediation efforts, providing humanitarian assistance and allowing ASEAN's envoy to visit Myanmar. Following the Summit, ASEAN appointed Brunei's Second Foreign Minister Erywan Yusof as a Special Envoy to Myanmar. In October 2021, the Special Envoy cancelled his planned visit after he was informed by the SAC that he would not be able to meet with Aung San Suu Kyi and others that he had proposed, although his visit to Myanmar was allowed. ASEAN excluded Myanmar's military leaders from its annual Summit in a special Summit with China in mid-October 2021.

Following Cambodia's chairmanship of ASEAN for the year 2022, Cambodia's Foreign Minister Prak Sokhonn succeeded as ASEAN's new Special Envoy to Myanmar. In January 2022, Cambodian Prime Minister Hun Sen became the first foreign leader to travel to Myanmar and met with the Myanmar military leader Senior General Min Aung Hlaing in Nay Pyi Taw. The military administration gave him a red-carpet welcome, but he was unable to make any progress in dealing with the country's political crisis.

In April 2023, ASEAN made a strong condemnation statement upon the reported air strikes carried out by the Myanmar Armed Forces in Pa Zi Gyi Village, Kanbalu Township and the Sagaing Region of Myanmar, which claimed the lives of at least dozens of civilians.¹ It is to be noted that the military has increasingly used air strikes against the resistance forces (including the PDFs) since taking over power in February 2021.

At the 42nd ASEAN Summit in May 2023, President Joko Widodo, current Chair of the ASEAN, said that the bloc (ASEAN) must keep pushing for a peace plan to be implemented in Myanmar, and Indonesia was ready to talk to anyone with a stake in the conflict, adding that engagement did not mean endorsement or recognition. He also said violations of human rights in military-ruled Myanmar cannot be tolerated, violence should be immediately halted and people must be protected. In keeping with the ASEAN's policy, Myanmar's seat at the 42nd Summit remained vacant. In early May 2023, the Indonesian Foreign Minister mentioned that it had been quietly engaging key stakeholders in Myanmar's conflict as well as

neighbours—India, Thailand and China—for months, in an effort to kick-start a peace process as violence intensified.

Meanwhile, Singapore, the Philippines, Indonesia, Malaysia and Brunei have pursued a diplomatic disengagement with the military administration in Myanmar. This approach has been evident in their actions, such as refraining from appointing a new ambassador to Myanmar after the expiration of the previous ambassador's term, or their return to their home country for various reasons. Additionally, these countries have chosen not to engage with the union ministers appointed by the military administration. Their stance reflects an effort to create distance and limit interactions with the military-led government in Myanmar.

However, other ASEAN countries, namely Thailand, Vietnam, Laos and Cambodia have taken a different approach by re-engaging with the military administration. These countries have chosen to prioritise the ASEAN principle of non-interference. By re-engaging, they are maintaining communication and interaction with the military-led government while adhering to the principle of non-interference in the internal affairs of member states.

These contrasting approaches within ASEAN highlight the diversity of perspectives and strategies among its member countries regarding the situation in Myanmar. The differing approaches reflect the complexity of addressing the issue and the challenges of reaching a unified stance within the ASEAN.

Singapore's Central Bank has instructed the financial firms/banks to be vigilant to any suspicious transactions or fund flows between the city-state and Myanmar, citing concerns over the potential for financial crimes.²

In general, ASEAN's efforts have faced challenges and criticisms. ASEAN leaders have been losing patience with the Myanmar military regime over its ignorance to implement the five-point consensus and its continued attacks on opponents. The Myanmar issue has initiated a split within the ASEAN between mainland authoritarian governments and democratic maritime powers.

Reactions of the International Community

China and Russia have vetoed the UNSC resolution condemning the coup, two days after the coup in February 2021 and then again in May 2022. Western countries including the United States (US), the European Union (EU) and the United Kingdom (UK) have imposed economic sanctions.

On 23 December 2022, President Biden of the USA signed the National Defence Authorisation Act for the Fiscal Year 2023 (NDAA 2023) into law which incorporated a modified version of the Burma Unified through Rigorous Military Accountability Act (BURMA Act). The BURMA Act, included within the NDAA 2023, carries several key provisions.

- It expresses support for the people of Myanmar (Burma) in their pursuit of democracy, freedom, human rights and justice.
- The act specifically calls for backing those who are opposing the military government, with explicit mention of the NUG.
- The legislation advocates for a “credible process” to be established for the reinstatement of civilian rule, the reform of the Burmese military and the safeguarding of the rights of minority groups.
- The BURMA Act emphasises the need for accountability for those responsible for human rights violations in Myanmar. Furthermore, it highlights the alleged support of China and Russia for the Burmese military, suggesting that these countries should also be held accountable.
- The act acknowledges the importance of ongoing humanitarian assistance for individuals affected by violence, both within Myanmar and in the surrounding region.
- Lastly, the BURMA Act demands the unconditional release of all political prisoners in Myanmar.

Japan has taken steps to review and halt or suspend the provision of grants through the Japanese International Cooperation Agency (JICA) and suspend loans or financial assistance via Official Development Assistance (ODA). In addition, the Japanese Embassy in Myanmar has disengaged from the Myanmar military government, known as the SAC. These actions signify Japan’s decision to cease its financial support and diplomatic engagement with the military-led administration in Myanmar.

Since 1 February 2021, the Asian Development Bank (ADB) has suspended the disbursement of sovereign project funds and the initiation of new contracts in Myanmar.³

Meanwhile, Myanmar military leaders and Russia have stepped up strategic relationships. Russian Foreign Minister Lavrov visited Myanmar in July 2022 and declared that Russia was “in solidarity with the efforts aimed at stabilising the situation in the country”. The head of Myanmar’s SAC Senior General Min Aung Hlaing met with Russian President Vladimir Putin on the sidelines of an economic meeting in Eastern Russia in September 2022, on his third visit to Russia since leading the military coup of February 2021.⁴ The bilateral exchanges between Russia and Myanmar, encompassing government officials and business delegations, have witnessed a notable surge. This increase in engagement has subsequently facilitated enhanced trade and investment activities between the two countries.

Chinese Foreign Minister Wang Yi visited Myanmar on 3 July 2022 to attend the 7th Lancang-Mekong Cooperation Summit, co-chaired by China and Myanmar. According to the Chinese Foreign Ministry, Minister Wang met with Myanmar Foreign Minister Wunna Maung Lwin to discuss reconciliation in Myanmar and informed him that his country can only move forward when political and social stability are achieved. He called on Myanmar’s SAC to work with the opposition to resolve the country’s political crisis through a dialogue among the stakeholders.⁵

Despite efforts to advance the Chinese Belt and Road Projects in Myanmar, such as the construction of railroads, highways and electrical infrastructure, progress has been impeded due to ongoing local security issues, especially in Central Myanmar which is the spotlight area of the fights between the military and the PDFs. ISP-Myanmar, an independent research group, has reported that there are currently 35 active China-Myanmar economic corridor projects in Myanmar which include railways, roads, special economic zones, sea ports and urban planning projects.

On 21 December 2022, the UNSC adopted its first resolution on Myanmar since the military coup, by a vote of 12 in favour to none against, with 3 abstentions (China, India and the Russian Federation), calling for the immediate end to all forms of violence in Myanmar, urging restraint, the de-escalation of tensions and the release of all prisoners.⁶

India's Permanent Representative to the UN, Ruchira Kamboj, appealed for the release of political prisoners and the restoration of democracy, but said the complex situation in Myanmar requires "quiet and patient diplomacy". According to her, "an inclusive political dialogue" is desirable for the restoration of democracy.⁷

China's Permanent Representative Ambassador Zhang Jun expressed concern that the resolution infringed upon Myanmar's territorial integrity. He said:

"China has been following closely with great concern the developments in the country, and China doesn't want to see instability, even chaos in Myanmar. The military and various political parties all take up the historical responsibility of maintaining the country's stability and development. Relevant parties should act in the fundamental and long-term interests of Myanmar, and properly resolve differences through dialogue and consultation under the constitutional and legal framework, so as to maintain political and social stability. They should resolve problems peacefully, and continue to promote democratic transition in an orderly manner. Under the current circumstances, all parties should exercise utmost calm and restraint, refrain from intensifying tensions or using violence, and prevent any incident of bloodshed."

Ambassador Zhang Jun pointed out that the international community should help relevant parties in Myanmar to conduct dialogue and reconciliation in accordance with the wishes and interests of the people of Myanmar on the premise of respecting Myanmar's sovereignty, political independence, territorial integrity and national unity. The messages and measures of the international community should be conducive for the parties in Myanmar to bridge differences and resolve problems and avoid escalating tensions or further complicating the situation. He emphasised the significance of facilitating dialogue and allowing the ASEAN to address the situation in the country.⁸

China's Foreign Minister Qin Gang visited Myanmar. He met Senior General Min Aung Hlaing, the SAC's Prime Minister on 2 May 2023 and pledged to boost ties. Even though he was officially meeting only with Senior

General Min Aung Hlaing, the news says that he also met with Senior General Than Shwe, who brought him up to this top position in the *Tatmadaw* (Army) as well as General Than Sein (former Prime Minister of the government just before the NLD government). It implies that the Chinese government has been trying to engage not only with the SAC but with influential and powerful persons as well.

Economic Repercussions and Challenges

The military takeover has had severe economic repercussions, leading to significant challenges across various aspects of the country's economy. The following issues have emerged as key factors impacting Myanmar's economic landscape.

GDP

The political instability and unrest following the coup have negatively affected Myanmar's GDP. After a decade of steady growth, achieving above 7 per cent annual growth, reducing poverty and a significant increase in international investment, the economy contracted by 18 per cent in 2021.⁹ In 2022, there was 3 per cent growth of GDP in the fiscal year ending in September 2022. But, this was 13 per cent lower than in 2019. Then, for the year ending September 2023, the World Bank's GDP forecast of 3 per cent growth implies that per capita GDP will still be around 13 per cent lower than in 2019. This has resulted in a staggering 25 million people, accounting for 48.2 per cent of the population, living in poverty, with the urban poverty rate experiencing a threefold increase.¹⁰

Inflation

The country has witnessed a surge in inflation—16 per cent in 2022 and then forecasted at 10.5 per cent in 2023.¹¹ Instability, supply chain disruptions and the loss of investor confidence have contributed to the rising prices of essential goods and services, making it difficult for ordinary citizens to afford basic necessities. For instance, the price of rice has surged by an alarming 45 per cent to 150 per cent, while palm oil prices have tripled compared to the pre-military takeover period. Moreover, the country is grappling with frequent electricity blackouts, severely impacting daily life and economic activities.

Import Restrictions

The SAC has implemented import restrictions to control the balance of payments and manage its foreign exchange reserves. The import restrictions, together with other policies, such as foreign currency restrictions, the compulsory conversion of foreign currency balances of foreign currency holders, international sanctions and the withdrawals of major foreign direct investment projects, are leading to shortages of essential goods and increased reliance on domestic production. Trade has declined and so has the production capacity of the country in various economic sectors, such as manufacturing, agriculture and services and then leading to the slowdown of the economic engine.

Suspension of Operations by Investors and Fleeing Businesses

Political uncertainty and human rights concerns have prompted many foreign investors and businesses to exit Myanmar or suspend their operations. The number of both Western and Eastern multinational corporations and investors which have left the country has exceeded two dozen, significantly impacting job opportunities, economic growth and the overall business environment.¹²

US and EU Targeted Sanctions

The USA and the EU have imposed targeted sanctions on individuals, entities and military-owned companies in response to the coup and the subsequent human rights violations. These sanctions restrict trade, financial transactions and investments, further hampering Myanmar's economic prospects.

Financial Action Task Force (FATF) Listing

Myanmar's inclusion in the FATF's list of high-risk countries (Black List) has added to the economic challenges. It has resulted in increased scrutiny of financial transactions, limited access to international banking services and difficulty in attracting foreign investment.

Multiple Foreign Exchange Rates

Myanmar is experiencing a discrepancy in foreign exchange rates, creating complexities in currency transactions. The official central bank exchange rate, cash exchange rate in the market and unofficial remittance exchange

rate differ significantly, leading to volatility, uncertainty and challenges in foreign exchange management

These economic issues collectively create a challenging environment for Myanmar, impacting growth, stability and the well-being of its citizens.

Hardships Faced by the General Population

Ever since the military takeover, poverty has doubled when compared with March 2020. About 40 per cent of the population had been struggling to survive on less than US\$ 4 per day—the national poverty line.¹³

In addition to economic hardships, the people of Myanmar are encountering significant difficulties and challenges in their travels. The military administration has imposed new travel restrictions, effective from 1 April 2022. These require Myanmar citizens to possess national registration cards (NRCs), also known as citizenship scrutiny cards, for travel purposes. Moreover, those travelling from areas experiencing conflict between the military and PDFs are encountering further obstacles. These individuals face interrogation and heightened scrutiny at military checkpoints, subjecting them to delays, inconvenience and potential risks. Furthermore, government employees who are mandated to travel to conflict-affected regions also face significant challenges. These individuals find themselves caught in the crossfire and are at risk of being threatened or targeted by the PDFs, which further exacerbates the risks and difficulties faced by government workers. These travel restrictions, interrogations and threats pose serious obstacles to the freedom of movement for the people of Myanmar and impact their daily lives.

The security forces of the SAC also stop people randomly on streets, enter houses at night as routine checks and search through private phones for evidence of support for the resistance. There have also been incidents in which people have been fatally shot for driving through checkpoints without stopping. Other incidents include PDFs killing people on the ground of supporting the military government.

The Myanmar military government have arrested more than 200 people by means of the Anti-Terrorism Law and the Electronic Communications Law, both of which prohibit the online distribution of anti-military government propaganda. Authorities have begun to monitor Facebook for

posts in support of the shadow NUG, the Committee Representing the People's Parliament (CRPP) or the PDF paramilitaries. People are living in fear even while being at home, travelling and even for their social media posts.

People Leaving their Homes and the Country

The bleak situation in Myanmar has prompted a significant number of young people to seek better opportunities abroad, expressing a loss of hope for a promising future within their home country. This wave of emigration highlights the disillusionment and lack of opportunities that many young individuals face in Myanmar.

Furthermore, the ongoing conflicts and unrest have led to a staggering nearly two million internally displaced people (IDPs) within the country.¹⁴ Shockingly, a significant portion of this number—around 1.6 million individuals—have been newly displaced since the military takeover. These internally displaced people are forced to flee their homes due to violence, insecurity and the deteriorating humanitarian situation.

The departure of young people seeking better prospects abroad and the significant number of internally displaced individuals underscore the profound impact of the current crisis on the lives and aspirations of the people of Myanmar.

The Rohingya (also known as Bengali) Conflict

Following the military takeover in Myanmar, the situation regarding the Rohingya/Bengali conflict remains a matter of concern. The international community has consistently condemned the persecution of the Rohingyas and called for accountability for the human rights violations committed against them. However, the military takeover has raised concerns about the ability to address the crisis effectively, as the military now holds significant control and decision-making power.

Efforts to find a durable solution to the Rohingya/Bengali crisis, such as repatriation and the guarantee of their rights and safety, have faced significant challenges. The military coup has further complicated diplomatic efforts and raised questions about the government's commitment to resolving the conflict.

Armed Resistance and Clashes

After the military takeover, the country has experienced an escalation of violence and internal conflicts in various regions. While it is not accurate to categorise the situation as a full-scale civil war, there has been an increase in armed resistance and clashes between the military forces and various armed groups across Myanmar.

EAOs that have long been engaged in conflicts with the military have intensified their activities following the coup. These EAOs include groups representing ethnic minority populations, such as the Karen, Kachin, Shan and Chin. Some of these armed groups have been providing support to anti-military resistance forces including the PDFs and engaging in armed resistance against the military.

The military has responded to the resistance with force, launching military offensives, airstrikes and artillery attacks on areas controlled by these armed groups. This has resulted in civilian casualties, mass displacement and the destruction of infrastructure, exacerbating the humanitarian crisis in these conflict-affected regions.

Today, the situation in Myanmar is complex and dynamic, with multiple armed groups operating in different regions, each with its own agendas, motivations and objectives. While the conflicts are not uniform across the country, there has been an increase in armed confrontations and resistance against military rule.

Extension of Emergency Rule and Delay in Holding Elections

The SAC, which assumed power in February 2021, initially operated under the constitutional provision of a maximum two-year emergency rule which was set to conclude on 31 January 2023. According to the established timeline, an election was anticipated to be held in August 2023 to facilitate a transition of power.

However, on 1 February 2023, the SAC once again extended the rule by another six months, stating that the military does not control enough of the country to administer an election. This raised concerns about the postponement of the election plan. Again, on 1 August 2023, the military administration extended the state of emergency for another six months and officially postponed the election which was to be held by August 2023.

This extension of emergency rule and the delays in holding elections have raised significant questions about the SAC's commitment to democratic principles and a peaceful transition of power. It has been met with criticism from the international community and various stakeholders within Myanmar. This move is seen as a setback to the aspirations of the Myanmar people for genuine democratic governance and raises doubts about the SAC's intention to restore civilian rule.

The reasoning behind this extension can be attributed to several factors. The SAC argues that the extension is necessary to maintain stability and address the challenges facing the country, such as security concerns and socio-political tensions. Accordingly, it was claimed that additional time is needed to restore law and order and implement reforms that they believe are essential for the long-term stability and development of Myanmar.

However, this extension raises concerns about the SAC's commitment to upholding democratic principles and respecting the will of the people. It undermines the legitimacy of the military government, further entrenches the SAC's authority, prolongs the period of military rule and impedes a genuine transition towards democracy.

Implications for India, South Asia and the G20

The situation in Myanmar poses significant challenges to India's 'Act East' and 'Neighbourhood First' policies, the development projects in Myanmar and in the region as well as the overarching framework of 'Security and Growth for All in the Region' (SAGAR).

Another potential implication is the possible influx of refugees into India. The instability and human rights abuses in Myanmar may lead to an increased number of individuals seeking refuge in neighbouring countries, including India.

Furthermore, the ongoing unrest in Myanmar raises concerns about the creation of additional armed groups in the region. The proliferation of such groups can further exacerbate the security situation, destabilise neighbouring countries and pose threats to peace and stability in the region, including India and other South Asian countries. Moreover, the volatile conditions in Myanmar could have implications for regional peace. The unrest and potential

escalation of violence have the potential to disrupt the overall peace dynamics in South Asia, affecting not only Myanmar but also its neighbouring countries.

Additionally, the potential of nuclear power in Myanmar raises concerns about the proliferation of nuclear weapons and their impact on regional security. While the specific nature of Myanmar's plans regarding nuclear power and capability remain uncertain, the possibility of nuclear weapons in the region could have far-reaching consequences. It would necessitate careful attention from both South Asian regional countries as well as the international community, including the G20.

Addressing these challenges requires concerted efforts from regional actors, including India, South Asian nations and the G20, to promote stability, peace and respect for human rights in Myanmar. It is crucial to prioritise diplomatic initiatives, support peaceful resolution mechanisms and engage in constructive dialogue to mitigate potential risks and foster a conducive environment for regional cooperation and development.

Conclusion: Opportunity for India to Play a Transformative Role

During his journey to London to discuss Burmese independence with Prime Minister Clement Attlee in January 1947, Myanmar independence architect General Aung San had a significant meeting with Jawaharlal Nehru in Delhi. The purpose of their encounter was to discuss matters related to Burmese independence. In a gesture of friendship and support, Pandit Nehru presented General Aung San with a greatcoat and arranged for the creation of two tailor-made uniforms for him. This meeting not only symbolised the close relationship between the leaders but also demonstrated the solidarity and camaraderie shared between the peoples of India and Burma (now Myanmar) during their struggles for independence.

In conclusion, the support extended by India, both as a global power and as the President of G20, holds immense significance for Myanmar, especially in the current circumstances. India's long-standing friendship and support for Myanmar, evident from pivotal moments, such as the meeting between General Aung San and Pandit Nehru in 1947 cited above, have forged a strong bond between the two nations. As Myanmar faces a critical

junction in its history, India's continued backing can make a considerable difference in shaping the country's future. With its diplomatic influence and regional leadership, India has the potential to advocate peaceful resolutions, promote democratic values and foster economic development in Myanmar. As the President of the G20, India can leverage its position to mobilise international support, aid and resources to assist Myanmar in navigating its challenges and move towards a path of stability, peace and inclusive growth. By nurturing this friendship and extending support to Myanmar, India has the opportunity to play a transformative role in shaping the country's destiny and ushering in a brighter future for its people.

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5

Sri Lanka's Economic Crisis and Wider Implications

Anushka Wijesinha

Introduction

During the year 2022, the Sri Lankan economy underwent an unprecedented economic turmoil and political upheaval, with dwindling foreign reserves, critical shortages in essential goods and a popular people's uprising that lasted several months. While the tipping point for the crisis was the erroneous policy decisions in the immediate years preceding, the roots of the crisis lie in the flawed post-war growth model followed by the country. As Sri Lanka attempts to chart a course of economic stabilisation and recovery, the country's experience with sovereign debt, macroeconomic distress and restructuring has laid bare some critical elements that similar economies would need to consider. Emerging global economic risks (the protracted Ukraine-Russia war and impacts on commodity prices) as well as emerging international economic governance questions (China's role in resolving sovereign debt issues in developing countries) do get raised in the context of Sri Lanka's recent crisis. This chapter reviews some key elements of Sri Lanka's economic crisis and puts forward some thoughts on what the wider implications could be for South Asia and indeed the global governance platforms like the G20.

Tumultuous Years for the Sri Lankan Economy

2021 and 2022 were two tumultuous years for Sri Lanka, which saw an

unprecedented economic crisis on the back of the economic fallout of COVID-19.

The economic crisis had several triggers and had different features. Following the economic downturn due to COVID-19 (and its impacts on major export-earning sectors like tourism, and lockdowns affecting export production), the first sector to be impacted outside of these was agriculture. Sri Lanka's agriculture sector experienced a debilitating impact due to the poorly thought-out ban on agrochemicals implemented overnight. This triggered what many believe to be the start of public dissatisfaction with the government. Farmer protests were seen across the country, demonstrating against the ill-conceived policy and its impact on their livelihoods and on national food prices.

In addition to the tax revenue impacts due to depressed domestic economic activity on account of COVID-19 and associated lockdowns, government finances were under severe pressure because of income tax cuts introduced by the government. These tax cuts were an election promise of the then President Gotabaya Rajapaksa and were widely acknowledged by Sri Lankan economists and international organisations as being irresponsible. It immediately triggered sovereign rating downgrades which, in turn, locked Sri Lanka out of international capital markets—making external debt servicing highly problematic.

The fall in tourism earnings and the depressed demand for Sri Lanka's exports in the West, hurt foreign currency inflows. The government had to first restrict and then outright ban, nearly all imports except for essential items, in a bid to preserve foreign reserves. The balance of payments crisis was accompanied by a domestic fiscal crisis. There was no fiscal space to provide relief to firms and households when the crisis hit. Dwindling foreign currency reserves, a collapsing currency that was artificially held on to, caused a downward spiral.

Despite calls from a wide cross-section of society including civil society, opposition politicians and external experts, to the government to seek international assistance early, the government resisted it and favoured 'homegrown solutions' instead. The delay in seeking International Monetary Fund (IMF) assistance proved to be highly damaging to the economy, and

painful for people. Sri Lanka did not have any foreign reserves buffers and so eventually, it announced its first-ever sovereign debt default in April 2022.¹ In fact, this is the first Asian country to default on its external obligations in this century.

In contrast, around the same time, another South Asian country—Bangladesh—took pre-emptive action and sought an emergency funding facility from the IMF to provide an early buffer against possible deterioration of macroeconomic conditions.²

The default and the foreign reserves crisis led to an acute shortage of essential goods, like cooking gas and fuel, with days-long queues seen across the country. Medicines and medical equipment were in short supply in hospitals and treatments were being postponed or cancelled. Children were unable to get to school and nutrition was being compromised. The social impacts of the events between 2020 and 2022 will be felt for decades to come, as nutrition, health, sanitation and education outcomes deteriorated and hard-won human development gains got reversed. By the first quarter of 2023, reports showed families had reduced their food intake³ and child malnutrition was on the rise.⁴

Longer Roots of the Crisis

Even as many observers have pointed to the near-term factors that catalysed the Sri Lanka economic crisis of 2021–2022 (like COVID-19 and the Ukraine-Russia war), it is important to distinguish between these and the more fundamental roots of the crisis.

The seeds of the economic collapse were already sowed in Sri Lanka's post-war growth model. Sri Lanka followed a post-war growth model that relied on public debt-fuelled infrastructure construction and what the economists call the domestic non-tradable sector. For a small domestic economy where growth necessarily must rely on international trade, the economy became steadily more inward-looking.⁵

No doubt Sri Lanka had an infrastructure gap by the end of the war and new infrastructure was needed. The problem was that it was primarily debt-financed. Little attempts were made to forge private-public partnerships or

seek foreign direct investment to bridge the financing gap. In fact, there was a lot of debt taken for so-called ‘white elephant projects’—projects that were over-capitalised, had little to no commercial return in the short- to medium-term and had plenty of rent-seeking opportunities for corrupt political and business elites. Emblematic of this sort of investment was the ‘Colombo Lotus Tower’—ostensibly built as a communications tower and entertainment venue—which was financed with expensive Chinese loans. The design was overtly political since the lotus flower is the symbol of the Rajapaksa’s political party.

Meanwhile, there was little attempt to drive growth-enhancing, efficiency-improving reforms that would generate sustainable income to pay for the debt being taken on. There was little attempt to improve fiscal discipline, even as the country was taking on more and more external debt from both commercial as well as bilateral creditors. Sri Lanka’s external debt was increasingly becoming more complex and more expensive. Earlier, Sri Lanka enjoyed a lot of highly concessional debt from multilaterals. However, once it graduated to upper-middle-income status (mainly led by growth driven through consumption and construction), these funding sources dried out and the country quickly shifted to commercial debt.

Politicians and public authorities failed to install credible and robust governance mechanisms around project selection, project implementation, financial discipline and debt repayment. Alongside this, there was a stated policy ideology around expanding the State’s role in the economy, rather than encouraging private sector entrepreneurship. The type of private entrepreneurship that was being encouraged was in rent-seeking sectors, reliant on state excesses, like publicly-funded infrastructure projects. Overall, in the private sector, there was over-leveraging again in real estate and construction. Households also took on debt for consumption at low-interest rates.

Fast-forward to Early 2023

In the first month of 2023, consumer price inflation was running at over 60 per cent year-on-year,⁶ and households were struggling with the high cost of living. Poverty had risen from 13 per cent to 25 per cent over the last year.⁷

Around 6.2 million people were deemed food insecure.⁸ The economy shrank sharply by 7.8 per cent in 2022,⁹ and was forecast to shrink further by around 4.3 per cent in 2023.¹⁰ Fuel availability had improved, but was rationed per user. Fiscal consolidation efforts were underway with strict spending cuts across government and higher taxes on individuals and businesses. The sharp increase in personal income taxes, along with market lending rates of over 20 per cent, severely affected the spending power at the household level. Meanwhile, Sri Lanka was steadily moving towards securing an IMF bailout by way of an Extended Fund Facility,¹¹ as a first step towards completing debt restructuring talks with bilateral (official) and private (commercial) creditors.

Immediate Path Ahead

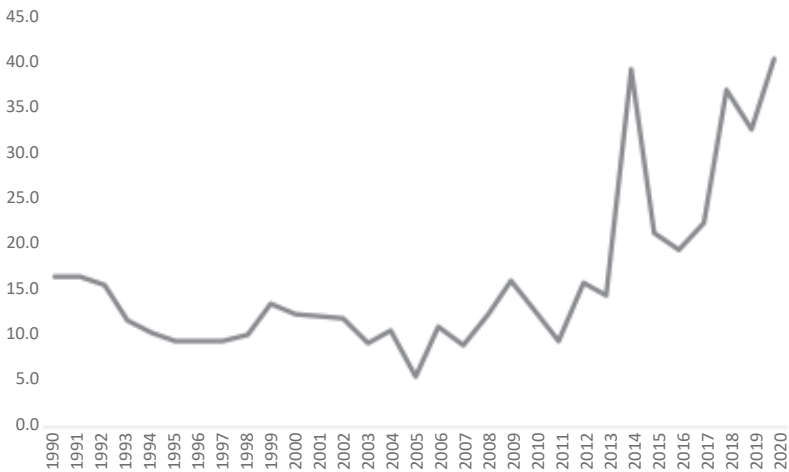
The public has become increasingly distrustful of politicians, but also economic fatigue has set in. There is also a heightened security apparatus around demonstrations and noticeable attempts to discourage protests and clamp down on activists. Nevertheless, there is greater public interest around public finance and an interest in parliamentary oversight committees that are looking into macroeconomic issues—this is unique to the Sri Lankan polity in recent years.

The economic reforms being rolled out during 2023 range from measures to strengthen Central Bank independence, curb corruption, privatise loss-making state-owned enterprises and improve the business regulatory environment. These can have medium-term benefits to strengthen economic governance, foreign investor confidence and domestic policy credibility, if properly implemented. However, political reforms (which were a big part of what led to the crisis and the public outcry that followed) have been slower. In fact, genuine corrections to governance structures may not happen, since those in government today were directly and indirectly involved in the problematic economic decision-making that led to the crisis. Perhaps it is at the next general and presidential elections that the public will have an opportunity to spur a course correction on the political front. However, these elections are not expected till at least 2024.

Key Cautionary Messages

A key message to other developing countries would be to watch out for a deteriorating economic growth model. As seen from Figure 5.1, Sri Lanka's debt servicing as a share of export earnings was increasing, resulting in fewer foreign currency resources to meet annual debt servicing needs. When external debt servicing is rising more than external income, it leads to balance of payments pressures that become hard to reverse quickly.

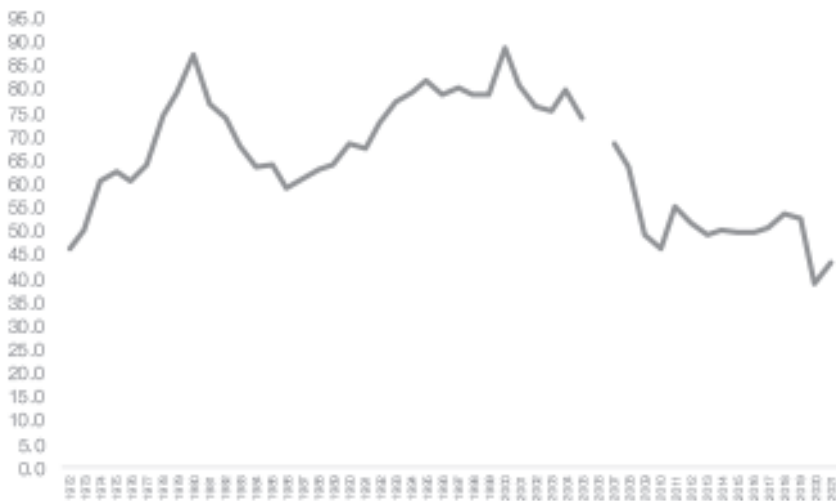
Figure 5.1: Debt Service to Exports Ratio (%), 1975–2020



Source: World Development Indicators, International Monetary Fund.

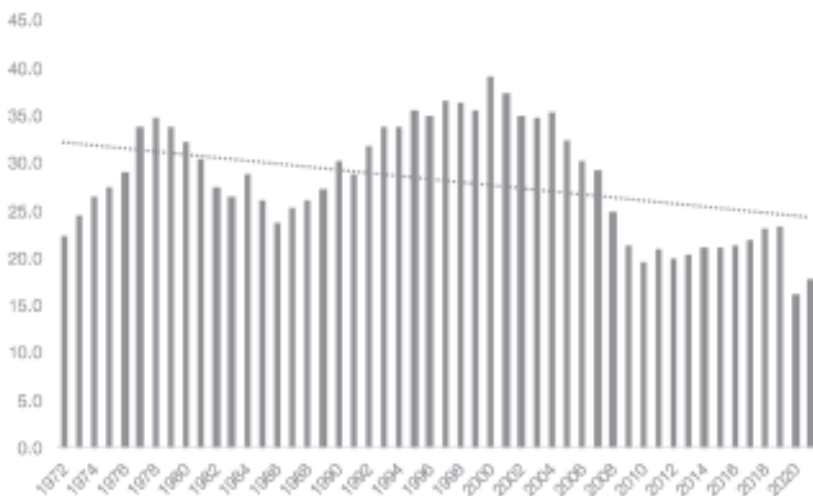
Alongside this, is watching out for the signs of an increasingly inward-looking economy. In Sri Lanka, with its small domestic economy that necessarily must rely on international trade, this international trade was forming a smaller and smaller part of the economy. As seen in Figure 5.2, trade to GDP was steadily declining and in fact, at reached levels not seen since 1970 when the country was markedly autarkic. The country was trading less with the world and relying more on domestic non-tradeable sectors, like construction. Export as a share of GDP was in secular decline (see Figure 5.3) and the export composition did not diversify over time.

Figure 5.2: Trade-to-GDP Ratio (%), 1972-2021



Source: World Development Indicators, International Monetary Fund.

Figure 5.3: Export-to-GDP Ratio (%), 1972-2021



Source: World Development Indicators, International Monetary Fund.

Foreign direct investment (FDI), which are non-debt creating inflows rather than loans, was weak in Sri Lanka. Manufacturing FDI was in decline, whereas FDI in domestic non-tradeable sectors, like housing, mixed property

development, shopping and office complexes—were sharply rising, until the crash towards the end.

Figure 5.4: FDI Inflows by Sector, 2005-2021



Source: Board of Investment of Sri Lanka.

Conclusion: Salient Lessons and Agenda for Action

For national stakeholders, what the Sri Lanka story tells us is that public dissatisfaction triggered by repeated policy missteps, macroeconomic mismanagement and livelihood loss, can quickly deteriorate into chaos if it is not addressed early with genuine and meaningful solutions. Moreover, not having necessary fiscal buffers during good economic times can severely hurt in the bad times because the government has no fiscal space to provide the people with relief and welfare.

For international stakeholders, particularly in the context of the G20 and global agenda, the main concern is around the need to rearchitect the frameworks around international finance. What Sri Lanka's case shows is that middle-income countries (MICs) in particular, require a specific framework for resolving sovereign debt challenges, given their unique circumstances. Such countries are no longer eligible for concessional finance, but do not have the macroeconomic discipline nor the buffers to manage

commercial debt capital influenced by sovereign ratings and US federal interest rates.

The 'G20 Common Framework Beyond the Debt Suspension Initiative' is primarily tailored to low-income countries and is not useful for MICs. The world does not yet have proper international coordination, response and resolution framework for MICs in times of financial and macroeconomic distress. MICs increasingly have not just bilateral (official) debt, and that too from countries beyond the Paris Club (for instance China and India), but increasingly from commercial creditors based in highly financialised business capitals in the West.

Importantly, commercial creditors are not part of these discussions. There is yet to emerge a framework in which they can be incorporated firmly and meaningfully. The UN Secretary General's tweet on 15 January 2023 summed this challenge up cogently: "The global financial system is broken; it favours wealthy nations and penalizes low- and middle-income countries."¹² He went on to urge leaders and international financial institutions to develop creative ways to ensure that developing countries can access financial help when they need it most.

Finally, it is important to consider bringing together the debt distress agenda, the climate finance agenda and making it a vital point for the G20 to carry forward. In Sri Lanka, the Centre for a Smart Future launched a series of knowledge products relating to sovereign debt instruments linked to nature, like debt-for-nature swaps and blue bonds.¹³ Most countries in our region know little about these new green financing instruments for strengthening public finances and this knowledge and implementation gap could be brought into the G20 agenda. Rather than seeing the resolution to the ongoing debt distress issue that is afflicting many countries around the world as separate from the climate financing challenge, there is an opportunity to bring them together. Perhaps the G20, under India's leadership and all of us in South Asia, could lead the way in demonstrating the practical deployment of these instruments, given our rich natural resources. Sri Lanka can aim to be the first in South Asia to issue a biodiversity bond or a blue bond in response to the debt crisis.

NOTES

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6

Women in Higher Education in the Maldives

Aishath Shina, Aishath Reesha and Dheeba Moosa

Introduction

The Republic of Maldives, a nation known worldwide for its magnificent natural beauty, is located in the Indian Ocean and is made up of 1,192 coral islands organised into 20 natural coral atolls (Map 6.1). Despite its small landmass of 298 square kilometres, the Maldives has a diversified topography, including gorgeous beaches, vivid coral reefs and blue lagoons. 199 of these islands are inhabited, while an additional 126 serve as tourist destinations, inviting tourists from all over the world to experience the Maldivian paradise.

The Maldives has a population of around 382,751 people, with 187,698 women and 195,053 men. Notably, the capital city of Male is home to more than 25 per cent of the population, reflecting its prominence as the nation's political, economic and cultural hub. Furthermore, the Maldives is distinguished by its uniform religious composition, with Islam being the only religion practised by its people.¹

In terms of economic development, the Maldives is one of the most prosperous countries in South Asia, with a middle-income level. This is reflected in the Maldives' Human Development Index (HDI) ranking, which is 90th out of 191 nations in 2021, making it the second-highest HDI in South Asia. Notably, the Maldives' gross domestic product (GDP) per capita

reached US\$ 10,366.3 in 2022, demonstrating its economic resiliency and development trajectory.²

The Maldivian economy is primarily supported by two major sectors: fishing and tourism. Fishing has long been a customary livelihood for Maldivians, and the country's abundant marine resources support a strong fishing industry. However, the tourist sector has a considerable impact on the nation's GDP, accounting for around 28 per cent of total economic production.³ The appeal of the Maldives' pristine beaches, luxury resorts and underwater wonders attracts millions of tourists each year, providing a significant source of money and job possibilities.

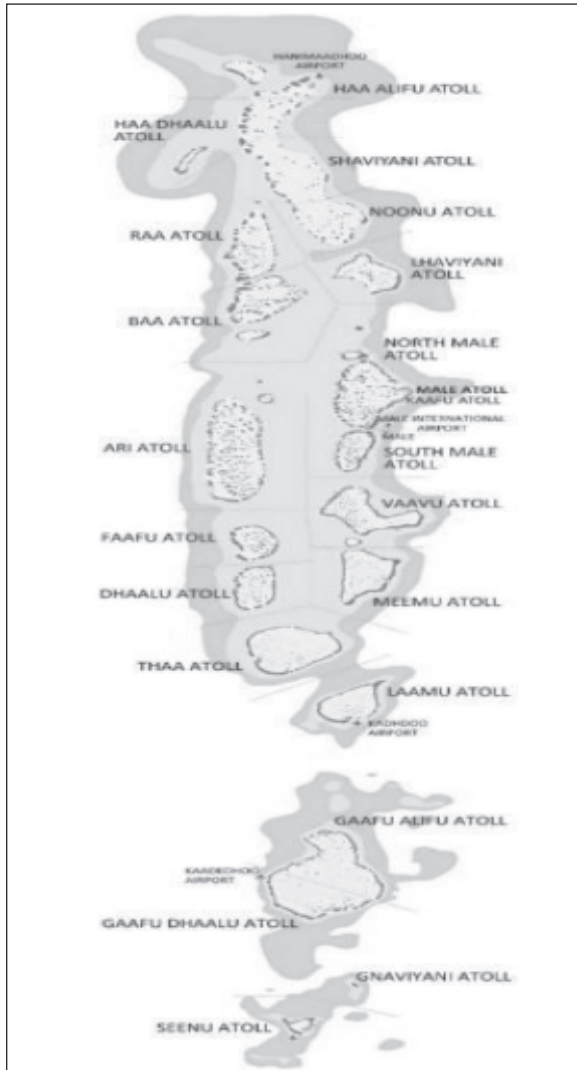
Within the Maldivian workforce, civil servants play a crucial role in governance, administration and providing public services. According to the most recent data available, there are 25,834 civil servants, with females accounting for 64 per cent of the total; the majority of these females work in the education sector. Notably, most civil servants fall within the age category of 30–34 years, indicating a tendency for young engagement in public sector employment.⁴

Higher Education in the Maldives

The founding and progression of higher education in the Maldives are major milestones on the country's path to human capital development and academic achievement. The first efforts in this direction began in 1973 with the establishment of the Allied Health Service Training Centre, which laid the groundwork for further advances in tertiary education. This first institution was soon joined by the Vocational Training Centre, the Institute for Teacher Education and the School of Hotel and Catering Services, all of which helped to diversify and expand higher education possibilities in the Maldives.⁵

In 1998, the aforementioned institutions merged to become the Maldives College of Higher Education, cementing its position as the country's main public Higher Education Institution (HEI). Over the years, the college has grown and expanded its academic offerings to meet the growing need for higher education in a variety of subjects. However, it was not until February 2011 that the university underwent a revolutionary makeover, culminating in its new name, Maldives National University (MNU). This rebranding

Map 6.1: Map of the Maldives



Source: Map of Maldives, at <https://medrecmv.wixsite.com/doctorsformaldives/maldives-map> (Accessed 5 February 2024).

reflected the university's elevated status and enlarged mandate to serve as a centre of academic excellence and research in the Maldives.⁶

Simultaneously, initiatives were underway to strengthen religious education, with the College of Islamic Studies being renamed the Islamic

University of Maldives (IUM) in 2015, emphasising the significance of Islamic scholarship and religious education in the Maldivian higher education environment. Along with these advancements, the Maldives Polytechnic has emerged as a prominent player in the country's technical and vocational education sector, providing specialised training programs to address the changing needs of the workforce.⁷

Individuals seeking higher education in the Maldives now have access to a wide range of programs offered by the country's institutions and colleges. These universities offer a wide range of academic disciplines, from certificate to PhD levels, to meet the diverse interests and goals of their students. Furthermore, the Ministry of Education has taken a proactive approach in improving the quality and accessibility of higher education through strategic initiatives and regulatory changes.

One such endeavour is the Ministry of Education's Master Plan for Higher Education from 2017 to 2022, which was launched in August 2017. This comprehensive roadmap provides strategic goals and action plans for raising higher education standards, encouraging research and innovation, and cultivating institutional excellence.⁸ Furthermore, the formation of the Ministry of Higher Education (MoHE) in November 2018 indicated a devoted focus on higher education issues, promoting improved coordination and synergy in policy formulation and implementation.

The Ministry of Education has championed the development of a free education system for students seeking degrees, which is particularly significant. This historic project seeks to reduce financial obstacles and improve access to higher education, enabling a broader segment of the population to pursue academic achievement and reach their full potential.

Women in Leadership Positions

Historical accounts of the Maldives highlight women assuming leadership roles as far back as in the fourteenth century.⁹ These records showcase the significant contributions made by women in influential positions, although this was confined to the time when Maldives was a *Sultanate*, and so it was mainly women from the nobility who were in leadership roles.¹⁰ The structural changes in the 1970s resulted in the decline of the role of women

in the economy. This was seen in the fisheries industry, especially in the processing of fish, in which the Maldivian women were traditionally involved to a large extent. The replacement of traditional fisheries with industrial methods during this time started taking a toll on women's role in the economy.¹¹ Due to this development, the Maldivian government actively endeavoured to empower women and promote their participation in national development. The sixth Constitution of Maldives, ratified in 2008, guarantees gender equality, equal rights and freedom, marking a substantial milestone in promoting women's empowerment in the country.¹²

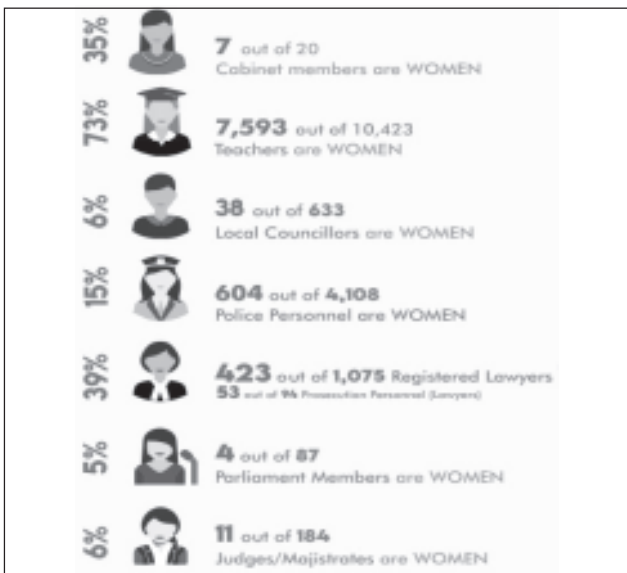
The need for women's participation in various levels of national development is evident in recent figures. The government is aware of this and has been working to address this issue. During the Professional and Career Women's Award 2021, the President of Maldives drew attention to the newly developed Gender Equality Action Plan (GEAP), emphasising its role in promoting gender equality and advancing women's economic empowerment. The President highlighted that the action plan aims to enhance women's participation in various state and national-level activities, thereby creating opportunities for their increased engagement and contribution. The implementation of this plan will play a significant role in fostering gender equality and empowering women in the Maldives.¹³

The social position of Muslim women in the Maldives has also changed dramatically over the last two decades, with a noticeable trend toward more empowerment and engagement in different aspects of society. Women today aspire to the highest levels of leadership in all areas, including higher education and actively participate in governmental and private decision-making processes. Despite these advances, gaps persist, highlighting the need for coordinated efforts to remove underlying barriers and promote gender equality.

Recent statistics by the National Bureau of Statistics¹⁴ indicate that most Maldivian women, approximately 80,000 individuals comprising 58 per cent of the female population, are not part of the labour force, unlike men in all age groups. Furthermore, the data reveals that nearly half of the women, specifically 49 per cent, abstain from seeking employment due to their responsibilities in care work, which primarily includes household chores

and childcare. The report also reveals a significant gender disparity in leadership positions within the country. To elaborate, out of the 20 cabinet members, only 7 (35 per cent) are women, while a mere 4 (5 per cent) out of 88 Parliament members and 38 (6 per cent) out of 633 local councillors are female. However, the education sector in general presents a more encouraging scenario as statistics demonstrate that women constitute a higher percentage, specifically 73 per cent, of the workforce in this field.¹⁵

Table 6.1: Women's Representations in Various Professions



Source: "Women Representations", National Bureau of Statistics, Ministry of National Planning and Infrastructure, Maldives, at <http://statisticsmaldives.gov.mv/nbs/wp-content/uploads/2020/03/Womens-Day-2020.pdf> (Accessed 5 February 2024).

Women in Higher Education in the Maldives

As mentioned, the Maldivian government prioritises gender equality in its policies. The status of Maldivian women is clearly described in the Asian Development Bank's 2007 report on gender and development assessment. The report highlights that Maldivian women are among the most emancipated in South Asia and the Islamic world. There is no institutional discrimination along gender lines in access to education and health services or for jobs in the public sector.¹⁶

In addition, the government calls on all agencies to make sure that their programs support the economic and political empowerment of women while reiterating its commitment to the women's empowerment policy. More specifically, the government pledges to (i) increase women's economic empowerment and (ii) guarantee that there is no violence or harassment of any kind directed at women. Other government priorities include (i) removing obstacles for women to enter the workforce, (ii) creating opportunities for greater political participation by women, (iii) preventing the negative effects of divorce on families and (iv) ensuring equal distribution of marital property following a divorce.¹⁷

Due to efforts by the government, the Maldives is considered to be one of the countries in South Asia that has achieved gender parity in primary education.¹⁸ Statistics reveal that more females (61 per cent) tend to go for further studies than males (39 per cent). On the occasion of International Women's Day 2023, the MoHE revealed that, from 2019 to 2022, government-free degree opportunities were awarded to 67 per cent of females, while scholarship opportunities were awarded to 61 per cent of females; student loans were given to 42 per cent females. The percentage of graduate output in higher education in 2019 was more females (63 per cent) than males (37 per cent). These statistics prove that women have a firm grip on attaining higher education in the Maldives.¹⁹

The availability of statistics on the participation of women in the higher education sector is quite limited. Based on the data from 2019, it is observed that while the overall representation of women in the education sector is relatively high, their presence in the tertiary education sector is comparatively lower. Specifically, there are 115 local women employed in full-time positions in HEIs, whereas the number of local men in full-time employment stands at 180. Additionally, the figures for part-time employment among locals reveal a significant gender disparity, with only 24 women employed, compared to 180 men in HEIs.²⁰

Despite the increasing presence of women in the business, men continue to dominate leadership positions in the country's two public universities. For instance, in the two public universities—the IUM and the MNU—women play a significant role in academia. However, in both the universities,

women leaders are represented starting from the second tier of leadership positions—the Deputy Vice Chancellors. The top tier—the Chancellor and Vice Chancellor positions—are political positions, and are occupied by men. It was only in 2023, the new administration, with its pledge to empower women, appointed a woman as the Vice Chancellor of the MNU.

The mismatch between the large number of women in higher education and their low representation in senior management positions highlights the importance of targeted policies and activities to address gender imbalances and promote inclusive leadership. Policymakers must work to implement changes that break down systemic barriers, such as gender stereotypes, cultural norms and institutional biases, that prevent women from advancing to leadership positions.

Furthermore, creating a supportive and enabling atmosphere that values diversity, inclusivity and gender equality is critical for empowering women to attain their full potential and participate meaningfully in decision-making processes across all sectors. This includes supporting mentorship programs, leadership development initiatives and gender-sensitive policies that allow women to lead and participate in decision-making bodies.

Challenges Faced by Women in Higher Education in the Maldives

In addition to the historical prominence of women in leadership positions, the Maldives has also made notable strides in women's participation in education and higher education. Although HEIs play a vital role in shaping the intellectual, professional and personal growth of individuals, they are not immune to the challenges and biases prevalent in society.

The subsequent sections of this chapter provide a concise overview of women's progress throughout the past centuries, the representation of women in HEIs and the specific challenges encountered by women working in HEIs in the Maldives. Furthermore, these sections emphasise the significance of gender equality initiatives, the implementation of supportive policies within the academic sector and the critical importance of addressing these issues to foster inclusive and equitable educational environments for women in Maldives.

Women in academic positions encounter unique obstacles and biases

that affect their career progression, work-life balance and overall professional experiences. In a study conducted by T.W. Maxwell, Mizna Mohamed, Naashia Mohamed, Badhoora Naseer, Aminath Zahir and Aminath Nasheeda, the researchers have highlighted some factors that influenced the daily academic life of women in higher education. Work-life balance and time for self were noted as significant factors in this study. The majority of the women interviewed in the study were satisfied with how they managed work lives, being mothers, wives and homemakers, although they claimed it was difficult. Some highlighted that they do not get time for themselves, as most time is spent on work and the remaining free time is spent with children. Their social life is completely shut off, as they hardly ever find the opportunity to go out. Despite this, a striking finding from the study was that the majority of the women were quite satisfied with the work they do and “there was little or no articulation by the women interviewed of gender inequity issues.”²¹

The issue of gender equality is not a new concept and challenges to gender equality in higher education have been widely studied globally.²² However, very little information is available regarding why so few women reach leadership positions in academia. Despite the presence of gender equality slogans and initiatives in Europe, women’s representation in academic positions of power within academia remains limited.²³ Consequently, the underrepresentation of women in higher academic and senior management levels in universities remains a significant concern.²⁴

This issue is even more pronounced in developing countries, where the scarcity of research on the topic persists. The Maldives is no exception to this trend. In fact, the study titled *Becoming and Being Academic Women: Perspectives from the Maldives* by T.W. Maxwell and others, mentioned above, is considered to be the first of its kind on the topic. Referring to the findings from a previous study, the study identified various social issues affecting women’s lives in the Maldives. These included gender stereotyping, gender gaps in women’s participation in public office and decision-making as well as their involvement in the labour force, as previously mentioned. Their study shed light specifically on cultural and traditional constraints faced by women in the Maldives.

Among these constraints, achieving a work-life balance emerged as a

dominant barrier. Junior women participating in this study perceived this as a lesser issue compared to junior women who had children and household responsibilities. The latter group acknowledged the challenges, but expressed that they managed to navigate them, often with the help of a maid. The women in this study generally expressed satisfaction with their roles and how they were managing their careers in academia. However, they did raise a few concerns. They felt that men's work received more recognition, possibly due to the male dominance in university leadership positions. They also highlighted that although there were no differences in treatment or opportunities for promotion, the fact that many women had to interrupt their higher education due to family responsibilities indirectly affected their prospects for progress and promotion.²⁵

Another study conducted in the Maldives by A. Waheeda and F. Nishan delved into the difficulties confronted by female leaders in the HEIs.²⁶ The outcomes of this study present an alternative viewpoint on the obstacles identified in the previous study. The disparity may have arisen from the fact that the study primarily focused on women in leadership roles rather than encompassing women in academia as a whole. Key challenges identified in this study include limited opportunities for career progression and a lack of voice and support. The participants in the study expressed a sense of being deprived of prospects for advancing their careers due to the absence of policies for career development. Specifically, there was a lack of policies facilitating progress from the position of Lecturer to that of a Professor within the career ladder. Although this concern existed a few years ago, recent changes to the higher education pay framework have addressed the issue by outlining career progression in academia, along with corresponding pay increments. The possibility for career advancement in higher education is now open to all individuals, regardless of gender.²⁷

However, the challenge persists and is connected to the fact that women still need to balance household and family responsibilities with the demands of work. Unlike the previous perception of academia, the new framework recognises that academic work entails more than just teaching. Research is also given prominence. The career ladder now takes into consideration both the quality of research output and teaching performance when considering progression. The time required for sufficient research output is a challenge

to many women in academia as evident from the research, mainly owing to the demands of family and household responsibilities.

The priority of Maldivian women for achieving work-family balance is reflected in the data presented by the National Bureau of Statistics in 2020. It is observed that women dedicate an average of seven hours to their main job, while men invest nine hours in their main job. The fewer working hours for women coincide with a significantly greater amount of time spent on domestic chores. A Maldivian woman typically spends four hours per day on unpaid domestic work, in contrast to a man who spends two hours.²⁸ The same concern is highlighted in the research elsewhere. For instance, a study by Tiffany Barnes and Mirya Holman, looking at the challenges and barriers women face while trying to build a successful career in academia, pointed out that 59 per cent of respondents in the study referred to conflict with traditional gender roles (career vs. parenthood) to be one of the top three challenges.²⁹ Similar findings by R. Yousaf and R. Schmiede in their research titled *Barriers to Women's Representation in Academic Excellence and Positions of Power* indicated that careers interrupted by parental leaves and family responsibilities are barriers to the career advancement of women in academia.³⁰

Research on women in academia has revealed that women often occupy positions in academia that are more focused on teaching and involve fewer research responsibilities. They encompass tasks such as supervision and administration (referred to as care work in academia). This differs from their male counterparts and it has significant implications for the career prospects of women.³¹ This could explain why several studies indicate a higher number of men holding Professorship positions in universities compared to women.

A study on gender segregation within the university workforce conducted in Australia by Harvey and Jones revealed a higher representation of women in administrative leadership positions, such as Deputy Vice-Chancellor and Vice-Chancellor, compared to functional leadership roles such as Professors. The study concluded that men still dominate the senior ranks of Professor (Level E) and Associate Professor (Level D).³² Given the recent implementation of career progression considering both teaching and research, it will require a few years more to observe the trend regarding the representation of

women in functional leadership positions like Professorship within academia in the Maldives.

Gender stereotypes and biases, even if not overt, impact the experiences of women in Maldivian HEIs. These biases involve an unconscious mindset that links specific attributes, such as leadership and management, with masculinity. As a result, women's opportunities for advancement and recognition are constrained.³³ Regarding the satisfaction levels expressed by female academics in the study regarding the organisation of various aspects, the researchers alluded to the potential presence of normalisation.

Many of the experiences recounted by the participants were perceived by researchers as being accepted or taken for granted as if they had embraced the prevailing "gendered status quo". T.W. Maxwell and others in their research work, however, cautioned that more research is needed to establish this, as various other contextual factors, like hired assistance and family support, may have a cumulative impact on the satisfaction level of the participants of the study.³⁴

The lack of support and voice emerged as another significant challenge in the context of HEIs in Maldives.³⁵ The significance of support within academia was indirectly referenced by the participants of the study conducted by T.W. Maxwell and others, when they expressed satisfaction with the higher representation of women in a particular faculty where women also held leadership positions in general. According to the participants, they felt a greater sense of security and received a greater level of support from female colleagues.³⁶

Lack of voice is also an issue discussed in the existing literature to some extent. Feminist scholars have discussed the nature of voice and silence in particular. They have pointed out that "social power structures privilege some voices whilst excluding others."³⁷ With reference to a powerful statement by Aiston and Fo, "to speak and to be heard is to have power",³⁸ they have tried to understand women's silence in academia within the theoretical framework of micro-inequalities and micro-politics wherein expectations of how women should act determine how they try to fit in. Accordingly, women's silence can be considered both an enabler and a disabler within this framework. Women's inability to speak is related to lack of confidence. In Maldives'

academia where male dominance is prevalent, women leaders, particularly in leadership positions, often hesitate to voice their opinions due to the fear that their viewpoints may not be regarded seriously. The women are aware of the gendered mindset among men which associates specific cultural roles and abilities with women which, in turn, inhibits women in academia from asserting their viewpoints in certain situations.

Conclusion and Recommendations

Addressing the challenges encountered by women working in HEIs in the Maldives necessitates a comprehensive and multifaceted approach. Resolving these issues requires the collaborative efforts of various stakeholders to promote gender equality, challenge biases and stereotypes and implement supportive policies and initiatives. It is imperative to create ample opportunities for women's professional development, offer mentorship programs and foster a culture of inclusivity and respect within academia. To establish a more equitable and empowering work environment for women in higher education, recognising the historical legacy of women in leadership is crucial. By acknowledging their invaluable contributions and actively encouraging women's participation in higher education, the Maldives can cultivate an environment where women thrive academically and professionally and make significant contributions to the nation's progress.

As is evident from research and personal experience, it can be safely asserted that gender stereotypes and biases are inherent in the academic field of Maldives. This is despite efforts over the years to ensure gender equality as well as the significant strides made towards the achievement of this feat. Hence, it is imperative to first acknowledge the existence of this in our midst so that awareness can be created to challenge and address the perceived notions of women's competence, roles and authority in HEIs.

Support and mentorship have been referred to in the research papers discussed here. To foster the professional growth of women in HEIs in the Maldives, it is necessary to make more female role models and necessary female support available to women in HEIs. This will enable the creation of the equal representation of women in all levels of academia over time.

Support and enabling policies that take into account the disproportionate

burden women undertake when trying to attain a work-life balance can help women in academia to prosper and maintain a healthy relationship with work.

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7

Achieving Gender Equality and Decent Work through Sri Lanka's Economic Crisis

Ramani Gunatilaka

Introduction

Sri Lanka's economy is in unprecedented stagflation. Beginning in 2018, a series of internal and external shocks impacted an economy whose macroeconomic fundamentals had long been out of kilter. The series of policy blunders that followed precipitated balance of payments and debt crises, severe shortages of imported food, fuel, raw materials and pharmaceuticals and hammered businesses, jobs and incomes. Having delayed going to the International Monetary Fund (IMF) for balance of payments support, Sri Lanka defaulted on external debt in April 2022 and complicated the process of getting an IMF agreement which then required assurances from international creditors about restructuring debt. Faced with a dollar as well as a revenue crisis, the government hiked interest rates, raised the prices of utilities and increased taxes to stabilise the economy. The struggle for an IMF bailout finally bore fruit in March 2023. The IMF Programme will involve further austerity and considerable lay-offs from state-owned enterprises.

The crisis and stabilisation measures have doubled consumption poverty in Sri Lanka, and a quarter of Sri Lankans are expected to remain poor over the next few years.¹ Regenerating jobs in the face of an impending recession in Sri Lanka's main export markets in North America and Europe will be an

uphill task. Sticking with the Sustainable Development Agenda and ensuring gender equality (SDG 5) and full and productive employment and decent work for all (SDG 8) by 2030 will be particularly difficult; the crisis has impacted women more and worsened underlying factors that have long disadvantaged them in the labour market.

Relatively more Sri Lankan women than men lost their jobs with the crisis, while rising food prices, power cuts and gas and fuel shortages forced women to spend even more time and effort on unpaid household and care work. While both demand and supply-side factors have long held women back from participating in the labour market (women's labour force participation was 37 per cent in 2018), participation declined to 32 per cent in the third quarter of 2019 and to 31 per cent in the third quarter of 2022. As the crisis continues and drives young Sri Lankans abroad for work and intensifies long-felt skills deficits, addressing the constraints that have long kept women out of the paid workforce has become essential for economic recovery and sustained growth, no less than to also ensure gender equality and inclusive development.

This chapter reviews recent empirical literature about the reasons why Sri Lankan women are unwilling or unable to engage in paid work. It argues that whether Sri Lankan women undertake paid work depends on how successfully they navigate at least three-ring fences of obstacles. The outermost set of barriers consists of macroeconomic conditions; the next is made up of economic and socio-cultural conditions in the local environment; and the innermost ring fence comprises of individual and household level characteristics, including gender norms which impinge on the decision to participate.

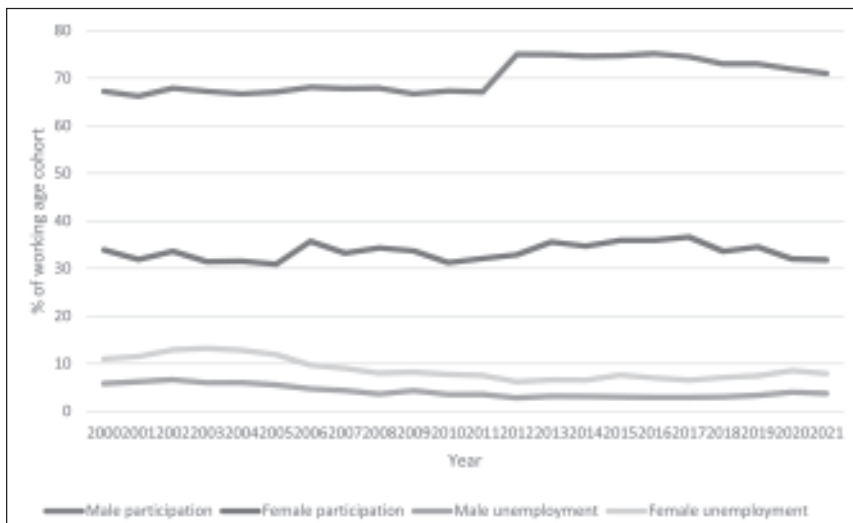
Background

This section presents some stylised facts about women's labour market outcomes in Sri Lanka. A review of Sri Lankan literature about the ring fences constraints to women's labour force participation follows, drawing from several empirical analyses and other relevant works. The final sections discuss the findings, summarise the main points and draw their implications for policy.

Although family and education systems have placed women more favourably in Sri Lanka than in many other South Asian countries,² most Sri Lankan women remain either unable or unwilling to engage in paid work. Low workforce participation has negated the achievements in health and education in the country's Global Gender Gap Index (GGGI) where Sri Lanka was ranked 110th in 2022 and its lowest ranking (122) was in the sub-index of Economic Participation and Opportunities compared to its high ranking in Health and Survival (30) and middle ranking in Educational Attainment (80).³

While participation has long stagnated at around 35 per cent of all women of working age, women who want to work face higher unemployment rates than men (Figure 7.1).

Figure 7.1: Labour Force Participation and Unemployment Rates by Gender, Sri Lanka 2000–2021



Source: Department of Census and Statistics (various years), Annual Reports of the Labour Force Surveys, Government of Sri Lanka.

Additionally, empirical analyses using nationally representative sample survey data suggest that those women who do find paid work are less likely to have decent jobs,⁴ they are heavily concentrated in just a few economic sectors and are almost invariably paid less than men with the same productive characteristics.⁵

For example, 29 per cent of all employed women in 2020 worked in agriculture and comprised a third of all agricultural workers. A further 24 per cent were employed in manufacturing where they accounted for a little less than half of all workers. Of all women employed, 11 per cent each were in trade and healthcare and 6 per cent in education.⁶ Other sectors too were dominated by men, especially the large wholesale and retail trading sector, transport and construction. Women comprised a majority only in health and education services provided mainly by the public sector. As a result, women made up nearly half of the public employees, but two-thirds of contributing family workers, a quarter of own-account workers and a mere tenth of employers.

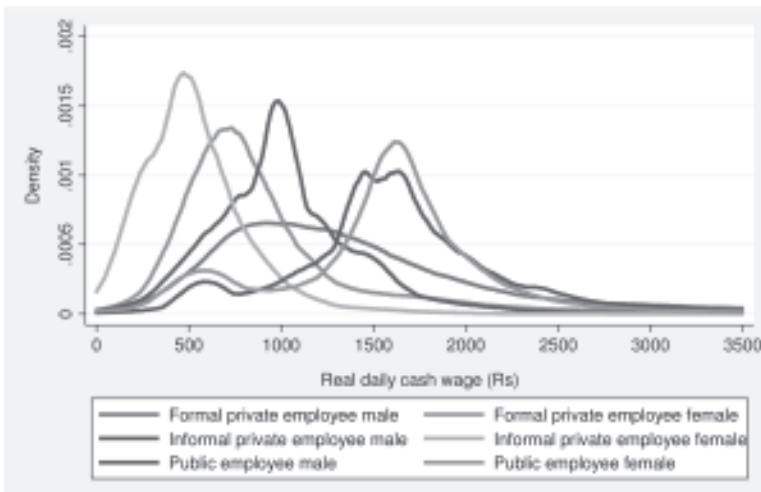
Nevertheless, many women looking for paid work appear to prefer jobs in self-employment or even in the family business, which enables them to juggle their dual burden, rather than in the private sector where working hours are rigid and part-time options not supported by law.⁷ However, most women's businesses do not seem to be viable. Returns to capital were found to be zero among women's microenterprises, but more than 9 per cent per month among men's.⁸ While some of the difference in returns were explained by differences in the type of industry, much of it could not be explained. Cultural norms can dictate what sort of business is appropriate for women and these may be exactly those activities that are the least profitable. Nevertheless, differences in access to capital, ability, risk aversion, and reasons such as women taking capital out of the business and using it for other household expenses, did not account for the gender-based differences in business profitability.⁹

Providing training, plus a grant to potential female entrepreneurs speeded up the process of starting a more profitable business, but this entry effect dissipated one and a half years after training.¹⁰ So, "getting women to start subsistence businesses is easier than getting these businesses to grow" and "the binding constraints on growth may lie outside the realm of capital and skills."¹¹ Elsewhere, it has been argued that women-owned enterprises are likely to be less profitable because they are generally smaller, and kept at a scale that enable the retention of some of the features that make micro-businesses attractive for women, such as not having to depend on others, the ability to care for children at the same time, flexible working hours and receiving daily

revenues.¹² Moreover, women’s domestic responsibilities and poor transport may make it difficult for them to procure inputs and technologies, transport inputs and raw materials, and market the output. Women may also find it difficult to enforce contracts in the informal economy.

Meanwhile, in Sri Lanka as elsewhere, women employees face gender wage gaps that favour men along the entire wage distribution. A much higher proportion of women employees are clustered at the lower end of wage distribution, while a relatively larger proportion of male employees are clustered at its middle. This can be seen in Figure 7.2, which plots kernel density functions using labour force survey data from 2016. The right tail of the density distribution for male wages is lifted substantially over the right tail of the kernel density curve for women and over a considerable range of middle to higher wages. It is only at the highest wages that the two tails converge. Regression-based analyses of gender-based wage differentials show that women who work as employees are underpaid in all sectors and for all ethnic groups, even when they have the same productive characteristics as men.¹³ While Sri Lankan women’s cognitive skills appeared to be higher than men’s and their non-cognitive skills similar, men earned more.¹⁴

Figure 7.2: Adaptive Kernel Density Estimation of the Distribution of Real Daily Cash Wages by Gender, 2016



Source and Notes: R. Gunatilaka, “Getting Better Jobs”, Technical Background Paper, NHDR, UNDP, Colombo, 2017. Estimated with LFS 2016 microdata using sample weights based on the Population Census of 2012.

The Outermost Ring Fence: Macroeconomic Conditions

In this section, the focus is on one outcome: participation in the paid workforce and the empirical evidence about the barriers constraining it.

Weak Macroeconomic Management and Lacklustre Economic Transformation

Sri Lanka's economy has long operated well within its production possibility frontier. This is evident in the inefficient allocation of its human capital resources. Two-thirds of all workers were informally employed in 2021 and 58 per cent of employment was in the informal sector.¹⁵ Even within the informal sector, high levels of segmentation and the concentration of workers in segments where returns are not maximised, are symptomatic of structural rigidities and barriers to movement in the labour market.¹⁶

The misallocation of labour shows that although Sri Lanka liberalised its economy relatively early in 1977, the processes of economic transformation and decent job creation have been weak. While the long war, which ended only in 2009, acted as a brake on economic advancement for several decades. Several other factors also conspired to squander the peace dividend after the war ended, preventing further transformation. Key among them was the lack of institutional capacity to develop a coherent policy framework for economic development and implement it. This was, in turn, due to policy capture by an inward-looking, collusive alliance of populist politicians and crony capitalists which grew on big government and the state procurement system.¹⁷

The corollary of this dynamic was the lack of meritocracy in the public sector and its politicisation, which encouraged long-term macroeconomic mismanagement. These conditions also led to corruption and inefficiencies in several critical state-owned utility services. For example, the power generation sector posts some of the highest electricity tariffs in the region, thus increasing the costs of doing business. Coupled with the absence of an effective Foreign Direct Investment (FDI) supported export-led growth strategy, these inefficiencies have seen exports stagnate and concentrate in low-tech products: Sri Lanka's production structures have failed to upgrade and diversify and still depend on IR 2.1 technologies.¹⁸

Consequently, unlike in many other emerging economies, exporting has not been associated with greater relative demand for women workers in Sri Lanka and the use of new technologies is only weakly associated with the relative demand for women workers.¹⁹ Technological backwardness has meant that employment growth has occurred largely in sectors with heavy concentrations of low-skilled sectors.²⁰ These sectors typically demand relatively more women and the demand for their labour is largely inelastic and only increases gender-wage differentials in those sectors and occupations.²¹ In fact, the relative demand for women workers in Sri Lanka is powerfully conditioned by structural rigidities caused by gender-based segregation in sectors and occupations.²²

In addition to macroeconomic conditions that have worked against FDI, exports, product diversification and the adoption of new technologies, the national policy framework in relation to at least two other areas has mediated against the employment of women. The first is the area of education and skills development and the second is in the area of labour law.

Weaknesses in the Education and Skills Development Systems

Poor quality and relevance, long duration of the education cycle and the length of the school day work against the employability of women.²³ While better education has been associated with increased participation, particularly in the long term and with rising tertiary education,²⁴ the quality and relevance of skills that the system imparts remain questionable. More than 50 per cent of employers surveyed in 2012 were dissatisfied with the quality and relevance of skills produced by the secondary and tertiary education systems.²⁵ Employers' perceptions that women lack the skills needed for their business operations is also significantly associated with lower relative demand for their labour.²⁶ Among perceived skills deficits are considerable skills gaps among women workers in middle-level occupations, particularly in English language skills and the capacity to learn and solve problems.²⁷

Students' performance evaluations confirm employers' perceptions. In 2016, half of Grade 8 students scored less than 5 per cent in Mathematics, while two-thirds of them scored less than 5 per cent in science and at least another two-thirds scored less than 40 per cent in English.²⁸ As the system

rewards only academic achievement measured through rote memorisation, it leaves children unable to understand and analyse problems as well as think independently about how to solve them. There has been little progress in students' achievements in the cognitive and content domains of knowing, applying and reasoning.²⁹ These weaknesses can have only worsened with the lockdowns during the pandemic of 2020–2021 and the economic crises of 2022.

Sri Lankan children also spend too many years in the education system, a maximum of 13 years in general education as opposed to 12 years in many other countries, without developing many of the skills and competencies that would increase their employability.³⁰ Delays in marking answer scripts and publishing examination results within the general education system as well as in the higher education system, lengthen the process further. These delays are likely to affect women's employment outcomes more than men's because women will have less time working and gaining experience before having children, making it more difficult for them to return to work afterwards and find suitable jobs. Meanwhile, the short length of the school day (from 7.30 am to 1.30 pm) affects teaching quality and forces parents to disrupt their working day to pick up their children from school. Shortfalls in education quality consume more parental time and expenditure on homework and tuition and many women give up work to invest time on their children's education, given their lower opportunity costs of giving up paid work as they earn less than men and tend to be in the more inferior jobs.

The Technical and Vocational Education and Training (TVET) sector performs no better. Also dominated by the public sector, most TVET in Sri Lanka is supply-driven and fails to provide young Sri Lankans with job-oriented skills. Tracer studies on the employability of TVET graduates reveal a high rate of unemployment among TVET graduates who have been trained for employment in even the fast-growing ICT, construction, tourism and light engineering subsectors.³¹

Legislation does not Support Flexible Working Hours and Makes it Costly to Hire Women

The legislative framework governing employment in Sri Lanka imposes many barriers to women's employment.³² For example, The Shop and Office

Employees Act of 1954 and amendments prohibit the employment of women at night in the services sector. But, it is this same sector that can provide better jobs, like ITC-related, call centre work, for women. While a few firms do at present employ women at night in shops and offices, it is either in violation of the law, or through ad hoc administrative arrangements with the Department of Labour. Nor does Sri Lanka's labour law provide for part-time work and flexible working hours. All statutory entitlements, such as paid leave and compensation for retrenchment, assume a 40-hour work week. So, a firm employing a worker part-time would have to bear the same statutory liabilities covering full time work, such as the compensation that needs to be given to a worker on retrenchment according to the Termination of Employment of Workmen (*sic*) (Special Provisions) Act No. 45 of 1971. The law also requires employers to bear the full cost of maternity leave requirements. In fact, the analysis of survey-based data from formal sector firms shows that it is legislative constraints that prevent employers from offering flexible working hours and nightwork to women, along with the costs of providing maternity benefits. All this makes women significantly less likely to be hired.³³

The Second Ring Fence: Socio-Economic Conditions in the Local Environment

Some of the macroeconomic conditions discussed above have also influenced economic and cultural conditions governing the demand for women workers in the local environment. Since occupational and sectoral structures of production powerfully condition the relative demand for female workers, high levels of gender-based segregation in employment in the local environment appear to signal to women that they have a greater chance of working in such industries and appear to influence labour force entry.³⁴ Meanwhile, the probability of workforce participation of women heading their households in the former conflict zone of the Northern Province increases with the number of trading and service establishments, but diminishes with the number of industrial and construction establishments.³⁵

While older and larger firms and foreign ownership favour the demand for women's labour, employers' perceptions of social norms about the kind of jobs women can and cannot do, are significant constraints on women's

recruitment.³⁶ Male managers tend to hire fewer women and this bias appears highly influential in the relative demand for women workers. In contrast, women proprietors and small and medium-scale enterprises tend to demand relatively more women workers, possibly because they are less able to invest heavily on capital and technology and are more reliant on cheap labour.³⁷

The Innermost Ring Fence: Characteristics of Individuals and Households

The innermost ring fence of barriers that women must navigate to engage in the paid workforce is made up of their own demographic and human capital attributes; the characteristics of their households, particularly their demographic composition and income status and the gender-based social norms prevailing in households and the community. Social norms and the demographic characteristics of households also condition the time women spend on unpaid work, especially if they are married, which also determines whether they can undertake paid work.

Although neo-classical theory posits the expected wage as a determinant of participation, it appears to influence only the participation of women heading their households in the former conflict zone of the Northern Province.³⁸ The expected wage was not a significant covariate of participation in Sri Lanka as a whole when the national-level sample survey data was used for the analysis.³⁹ In what follows we review the evidence about how demographic factors, characteristics of households and social norms influence the participation decision.

Demographic Characteristics, Human and Social Capital

Among the demographic characteristics found to influence women's labour force participation decisions are age, ethno-religious identity and marital status. While the likelihood of participating increases with age, it does so at a diminishing rate. Islamic ethno-religious identity makes participation unlikely and so does marriage.⁴⁰

Human and social capital endowments are significant predictors of women's workforce participation. For example, subjective perceptions of poor health and disability constrained participation in Sri Lanka's north.⁴¹ While nearly half of all Sri Lankan women are educated only up to the secondary

level, this characteristic makes it significantly unlikely that they will take up paid work. By contrast, education beyond the 10th year examination (GCE Ordinary Level) is associated with a greater probability of labour force participation, with tertiary education exerting the most powerful positive influence.⁴² In fact, improved tertiary education has driven women's workforce participation in the long term.⁴³

Access to social capital also influences workforce participation. While the strength of relationships with friends, strength of bonds with relatives and membership of associations are all influential, strong bonds with friends and membership of associations made it more likely that women would engage in paid work in Sri Lanka's north.⁴⁴ In contrast, strong bonds with relatives often have the opposite effect, possibly because help from relatives deriving from strong kinship ties could make it unnecessary for women to undertake paid work. At the same time, strong bonds with relatives could also subject women to more binding social norms which discourage participation.

Social Norms and Household Characteristics

Social norms about women's roles and culturally appropriate employment critically influence women's participation. The perceptions of husbands and wives of gender roles appear highly correlated with whether wives are likely to engage in paid work and, by and large, Sri Lankan men and women have similar traditional perceptions of gender roles, with better education making little difference to these perceptions.⁴⁵ In a survey of husbands and their wives undertaken in Western, mostly urban and peri-urban Sri Lanka, at least 85 per cent of men and women agreed that the woman's main responsibility was to manage household affairs and look after children. At least 69 per cent of both men and women agreed that, in a household, the man was mainly responsible for earning income. Meanwhile, at least 72 per cent of men and 58 per cent of women agreed that it would be best if in a family the wife is able to stay at home.

In this group, the more a woman agreed with the statements that "in a household, the main responsibility of earning money is the man's", and that "if the wife also works, the children are likely to be neglected and go astray", the less likely she was to participate in the labour market. But, the more the

husband agreed that “the extra income earned by a working wife is useful and helps reduce the pressure on husbands”, it was more likely that the wife would participate. In contrast, the more he agreed that “all things considered, it would be best if in a family the wife is able to stay at home”, the more it was likely that his wife would stay at home. The views of the community probably influenced much of these sentiments, because the more the husband thought that this last was a universal sentiment—that is “I think, generally speaking, that husbands prefer for their wives to stay at home rather than go out to work”—then the less likely it was that his wife undertook paid work.⁴⁶

Several household characteristics are significant predictors of the probability of participation. Having children less than five years of age inhibits participation, as young children increase the time needed to be spent on care work, leaving less time for paid work. The household receiving remittances from abroad also reduces the probability of participation through the income effect. An increase in the share of employed males in the household has a profoundly negative effect on the probability of women's labour force participation—also through an income effect, as it likely makes a woman's earnings less important for the management of household expenditure.⁴⁷ If the woman's husband works in a white collar rather than a manual occupation, she is less likely to take up paid work, possibly because of the gentrification effect of non-manual work.⁴⁸ In contrast, household poverty appeared to push women into the labour market.⁴⁹

Discussion

This chapter has thus far reviewed Sri Lankan empirical evidence about the concentric barriers keeping women away from paid work. This section pulls together these findings and discusses them from the point of view of the choices that women face when deciding whether to undertake paid work or not.

First, many women do not have the skills to get jobs that pay a good wage in decent working conditions that would make it worth their while to undertake paid work. Macroeconomic policies that have stifled the growth of decent jobs and education policies that have failed to impart marketable skills are underlying factors. Nearly half of all Sri Lankan women of working age have studied only up to the secondary level. Such women can only hope

to get uncongenial work offering low wages and be paid less than what men are paid for the same work because of gender-based discrimination by employers. Hence, these women may opt to invest their time making sure that their children get a good education so that they would get good jobs when their turn comes, rather than work for a wage that would hardly cover the expense of hiring somebody to look after the children. Many such women are forced to drop out of school because of the poor quality of education that they could access. Even women who do progress beyond the 'O Level', find further progress barred due to either poor quality teaching at the 'A Level' or the lack of university places and other tertiary education opportunities where they can acquire better skills. Even the majority who make it to university, are not selected into subject fields that are in demand in the labour market. Since women are not paid as well as men with the same skills, unless women are able to do well in school from an early age and thereby acquire a very high level of skills that will enable them to get jobs which offer wages that are at the highest end of the distribution, there is little incentive for women to acquire any further training.

Second, even women who qualify in subjects demanded by employers, are less likely to be hired, and when hired, are less likely to be paid as well as men, even if they are more skilled than men because of gender-based discrimination. Since there are statutory restrictions on the working hours of women in shops and offices, and women workers who give birth are entitled to get maternity leave paid for by employers, employers are more likely to hire men.

Men earn much more than women in the labour market because of gender-based discrimination, even if they have the same productive characteristics. This makes it more likely that women stay at home and spend their time doing unpaid household work while men work for pay. In fact, theory suggests that large and persistent gender wage differentials encourage marriage and specialisation in tasks within marriage.⁵⁰ Sri Lankan women are aware that they are likely to be subject to gender discrimination as well as sexual harassment at work if they were to go out to work, not only on the shop, office or factory floor, but also while travelling to work.⁵¹ This raises the costs of undertaking paid work relative to the benefits in terms of pay.

Third, Sri Lankan society tends to value the role that women play as mothers and wives much more than the roles they may play as paid workers. Women (and men) are socialised to believe that a woman's main responsibility is managing the home and looking after children and that if they were to take up paid work, their children would be neglected. At the same time, the poor quality of transport and education services may require that women spend more time on educating their children by taking them for tuition after school. Given that society places the main responsibility for childcare and household work on women, many women are forced to spend so much time doing unpaid work, such as cooking, cleaning and looking after children, that they do not have the time to go out and work as well. Household responsibilities, combined with inconvenient and unsafe transport facilities, may also directly prevent women from taking up jobs further away as getting to and from work eats into the time needed to cook, wash and care for children. Even if a woman were to hire somebody to look after her children, this means that the wage that she gets from working, and which she can spend as she likes, is what is left after she has paid the child minder. So, if her expected wage is low to begin with, it will be even less of an incentive for her to continue to work once she deducts the cost of childcare.

In fact, employed married Sri Lankan women have been found to be significantly less happy than married women who are full-time homemakers, all other things being equal. The underlying reason appears to be role strain, since they are often required to perform multiple roles, including that of paid worker.⁵²

Fourth, Sri Lanka has been unable to design and implement a macroeconomic policy framework to generate sufficient volumes of jobs with decent wages, regularity of employment, security of tenure and social protection even for men, who are more advantaged in the labour market anyway. The economy has long been stuck in transition with the large mass of the country's workers trapped in the vast borderlands between low-paid agricultural work in rural areas and high-skilled, high-waged technical and knowledge-based work in the cities.⁵³ Most Sri Lankans are educated enough to aspire to middle-class status, but without the skills and connections to rise beyond the lower classes. At the same time, most working-age women are not so unskilled and poor that they marry poor men and need to go out

to work. Nor are they so well-educated that they can get jobs which offer them financial independence or so well-endowed with inherited wealth that they need not work at all. Most such women may opt to invest in marriage and children to the exclusion of full-time work for the material benefits that marriage offers, including a more secure old age being looked after by one's children. This is perceived as being more desirable than what a government pension can provide. In fact, the traditional perceptions of gender roles may also be a socially acceptable way in which individuals caught in this vast transitional space, justify rational choices made in response to unfavourable individual and macroeconomic circumstances. For most women in developing countries such as Sri Lanka, marriage offers many material advantages that available jobs do not.

Sri Lanka's ongoing economic crisis has probably intensified many of these negative features of its labour market. In fact, economic distress is probably driving many women to work, but mostly overseas, where they can get better wages in foreign currencies which will hold their values better. In contrast, women left behind may be burdened with additional care responsibilities and so be even less able to take up paid work than before.

Conclusions and Implications for Policy

Sri Lanka's economy shrank by 7.8 per cent in 2022 and is expected to contract by a further 4.2 per cent in 2023.⁵⁴ As policymakers cut the fiscal deficit, raise interest rates and the price of utilities to stabilise the economy, the developmental impact of the crises on jobs, incomes and indeed tax revenues must be mitigated with supportive structural measures to resuscitate growth as well as the labour market.

While the crisis is likely to have pulled Sri Lanka's economy even further back from its production possibility frontier, Sri Lanka could experience a permanent inward shift in its production possibility curve as its population ages, skilled young workers emigrate and malnutrition and the lack of resources for skills development retard the human capital formation of those left behind. The economic crisis will also prevent Sri Lanka from achieving the SDGs by 2030. Nevertheless, the country needs to stay the course of the Sustainable Development Agenda more than ever, to work through its current existential crisis and prevent development in reverse. Redoubling efforts to

ensure gender equality, full and productive employment and decent work for all, is needed now more than ever.

Specifically, Sri Lanka needs to implement macroeconomic policies that encourage FDI, export-led economic growth, diversification and the upgrading of productive structures. Measures to enhance women's acquisition of middle-level occupational skills, particularly English language skills, the capacity to learn and to solve problems are needed. Strategies that promote small and medium firms, female entrepreneurship, ownership and management and the retention of women workers after marriage are essential. Labour law reforms that facilitate flexible working hours and nightwork for women, socialise the costs of maternity benefits and ensure decent work standards in new forms of employment are also necessary. A political consensus on the economic reforms needed, underpinned by reforms to ensure transparency and accountability, may be the first step towards Sri Lanka's sustainable recovery, regeneration and growth.

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8

Nature-Based Solutions for Coastal Disaster Management in Bangladesh

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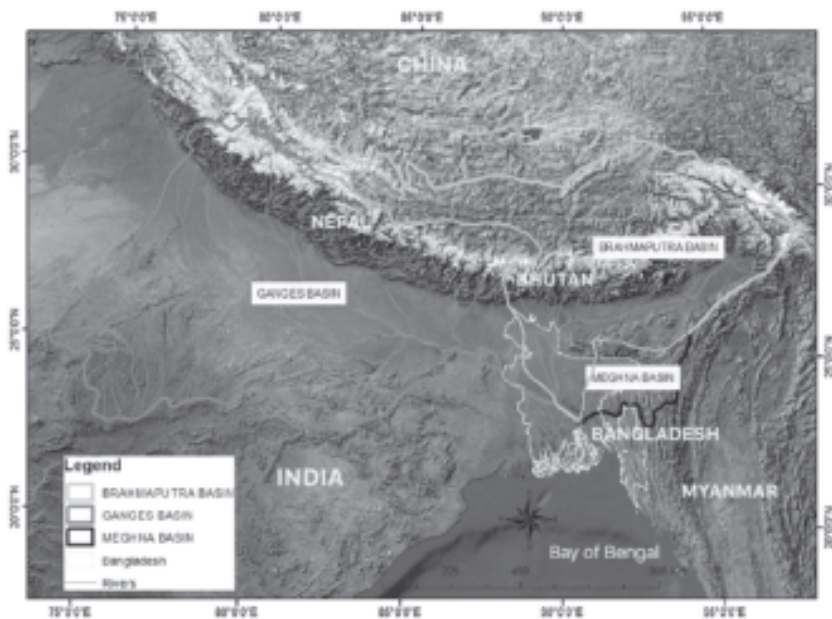
Introduction

Coastal disasters such as cyclones, storm surges and tidal floods can expose a coastal area to risk of property damage, loss of life and environmental degradation. Several techniques are used for coastal disaster risk management. The methods can be classified into two main categories: structural measures and non-structural measures. Non-structural measures can be tangible, such as ‘building with nature’, also known as ‘nature-based solutions’. The structural measures undertaken at national and local levels to protect coastal regions have been inadequate and often economically inefficient for developing countries. The nature-based solutions target major challenges like climate change, disaster risk reduction, food and water security, biodiversity loss, human health, and are critical to sustainable economic development. Coastal vegetation covers can offer effective protection against storm surges and intense wind speeds. This chapter presents natural-based solutions for coastal disaster management. It shows that natural or artificial elongated mangrove strips can be used as a nature-based solution to significantly reduce the destructive effects of cyclones and storm surges. This represents an efficient and cost-effective way forward for coastal disaster management in resource-constrained countries.

Geographical and Physiographical Setting of Bangladesh

The Ganges-Brahmaputra-Meghna (GBM) river systems drain about 1.72 million sq km through Bangladesh into the Bay of Bengal (Map 8.1). Out of this large catchment area, only 8 per cent lies in Bangladesh. Bangladesh is predominantly a low-lying floodplain country, with 12 per cent hills, 8 per cent terraces and 80 per cent floodplains. Bangladesh has one of the largest networks of rivers in the world. All the rivers, except those of the South-East hydrological region, belong to the GBM Basin. The GBM rivers have built the largest delta in the world, known as the Ganges-Brahmaputra-Meghna Delta. Due to its geographical location and physiographic features, Bangladesh suffers from several hydrometeorological disasters, like floods, cyclones, droughts, tidal surges, storm surges, tornadoes, river erosion, water logging, rising water and soil salinity, landslides and lightning. Bangladesh has a very long coastline, which is highly vulnerable to cyclones and storm surges.

Map 8.1: The Ganges-Brahmaputra-Meghna Rivers Basins



Source: M. H. Ali, B. Bhattacharya, A. K. M. S. Islam, G. M. T. Islam, M. H. Hossain, A. S. Khan, "Challenges for Flood Risk Management in Flood-Prone Sirajganj Region of Bangladesh", *Journal of Flood Risk Management*, 2018.

Coastal Disasters in Bangladesh

Tropical cyclones frequently ravage the coastal areas of Bangladesh. Such storms can be remarkably dangerous and cause enormous devastation.¹ Almost every year in early summer, during April-May or late rainy season during October-November, tropical cyclones, mostly originating from the Bay of Bengal, lash coastal Bangladesh and wreak havoc. The Bay of Bengal in the Northern Indian Ocean consistently observes the world's highest surges, as this sub-basin averages five surges ≥ 5 m per decade and has observed credible storm tide levels reaching 13.7 m.² Table 8.1 lists major cyclonic storms from 1960 to 2019. The table draws information from the data provided on the Bangladesh Meteorological Department (BMD) website and the Global Disaster Alert and Coordination System (GDACS).

Table 8.1: List of Major Cyclonic Storms, 1960–2019

<i>Date of Occurrence</i>	<i>Nature of Phenomenon</i>	<i>Landfall Area</i>	<i>Maximum Wind Speed in km/hr</i>	<i>Direction of the Max. Wind Speed</i>	<i>Tidal Surge Height in ft</i>
11.10.60	Severe Cyclonic Storm	Chittagong	160	South-East	15
31.10.60	Severe Cyclonic Storm	Chittagong	193	South-East	20
28.05.63	Severe Cyclonic Storm	Chittagong-Cox's Bazar	209	South-East	8-12
15.12.65	Severe Cyclonic Storm	Cox's Bazar	210	South-East	8-10
12.11.70	Severe Cyclonic Storm with a Core of Hurricane Wind	Chittagong	224	South-East	10-33
29.04.91	Severe Cyclonic Storm with a Core of Hurricane Wind	Chittagong	225	South-East	12-22
02.05.94	Severe Cyclonic Storm with a Core of Hurricane Wind	Cox's Bazar-Teknaf Coast	220	South-East	5-6
19.05.97	Severe Cyclonic Storm with a Core of Hurricane Wind	Sitakundu	232	South-East	15
20.05.98	Severe Cyclonic Storm with a Core of Hurricane Wind	Chittagong Coast near Sitakundu	173	South- South-East	3
15.11.07	Severe Cyclonic Storm with Core of Hurricane Winds (SIDR)	Khulna-Barisal Coast near Baleshwar River	223	South-West	15-20

Source: Syed Labib Ul Islam, "Assessment of the Potential of Bioengineering Intervention for Retarding Cyclonic Wind and Storm Surge in Coastal Bangladesh", M.Sc. (WRD) Thesis, Institute of Water and Flood Management (IWF), Bangladesh University of Engineering and Technology (BUET), Dhaka 1000, Bangladesh, 2021.

The following map (Map 8.2) from BMD shows major cyclonic storm tracks. Storm surges accompanying cyclones take many lives and can cripple the local economy for a long time. Climate change is expected to further increase the frequency of high-intensity tropical cyclones. Ocean temperatures and stronger cyclones are correlated.³ Furthermore, the rise in temperature may substantially increase storm surges.⁴

Map 8.2: Cyclonic Storm Tracks



Source: Banglapedia, (Accessed 2 February 2024).

It is evident from Map 8.2 that cyclone tracks frequently move across the Central and Eastern parts of the Bangladesh coast. According to the *Special Report on the Ocean and Cryosphere in a Changing Climate (SROCC)*, it is virtually certain that the global mean sea level is rising and it can be said with high confidence that the rate of this rise is accelerating.⁵ It can also be concluded with high confidence that anthropogenic forcing is the dominant cause of the global mean sea level rise since 1970. In their article *Exposure of Developing Countries to Sea level Rise and Storm Surges*, S. Dasgupta, B. Laplante, S. Murry and D. Wheeler have concluded from the scientific evidence that an increased sea surface temperature will intensify cyclone activity and heighten storm surges.⁶ In their study, R. Mendelsohn, K. Emanuel, S. Chonabayashi and L. Bakkensen, point out that climate change is predicted to increase the frequency of high-intensity storms in selected ocean basins depending on the climate model.⁷ In his research about global tropical cyclone damage, M.H. Ali explains various reasons for the disastrous effects of cyclones and storm surges in Bangladesh.⁸ He has warned that sea level rise and the consequent increase in storm surge heights will have disastrous effects on a deltaic country like Bangladesh, most of which lies not much above the mean sea level.

Structural Interventions for Coastal Disaster Management

Hard engineering entails the use of concrete and steel for the solution to some engineering problems. This mode of solution relies heavily on concrete and steel structures. This reliance on concrete became widespread during the industrial era. However, concrete and steel also encompassed the field of engineering almost entirely in the aftermath of the worldwide repair and reconstruction effort of destroyed cities.⁹ Part of the appeal of hard engineering options is the seemingly inexpensive and simple solution in the short term. The use of crushed waste concrete as aggregate at the end of World War II further boosted the concrete industry.¹⁰

The extensive use of hard engineering measures for coastal protection and management has taken place despite the natural aversion to the intermix of concrete and saline water. This confrontation has brought about many types of research to improve the effectiveness of concrete and steel in the coastal or marine environment. To prevent the corrosion of steel reinforcement

in coastal structures and severe environmental conditions, Fiber-Reinforced Polymers (FRP) may provide an alternative.¹¹ Some hard engineering techniques frequently used in coastal management are sea walls, groynes, gabions, revetments, riprap, breakwaters, tidal barriers, etc. Human interventions in the shorelines means, they are reliant on continual maintenance, such as dredging, drainage, etc.¹² Moreover, using hard coastal structures on the foreshore and onshore negatively affects morphological, hydrodynamic and ecological conditions.¹³ Figure 8.1 shows a typical revetment structure for the Maheshkhali Channel shore protection in Cox's Bazar in Bangladesh.

Figure 8.1: Revetment for the Maheshkhali Channel Shore Protection in Cox's Bazar



Another aspect of the hard engineering measures is that they can give a false sense of security. Hard engineering measures can lead to increased commercial development adjacent to the hard protection structures. When these structures are inevitably breached, massive damage is caused, as outlined by several studies investigating the economic loss of such events.¹⁴ The structural measures undertaken at the national and local levels to mitigate cyclones have been inadequate and often inefficient. Recently, some non-structural measures, like forecasting, warning, local action plans, etc., have been taken up on a short scale, as it is rather strongly believed that non-structural mitigation measures need to be complemented by structural mitigation measures to modify or reduce some disaster effects.¹⁵ Thus, the concept of using soft engineering measures is again coming into the limelight. The need for developing and utilising sustainable engineering techniques is gradually being understood worldwide to tackle various problems. This

realisation has led to the development and improvement of various soft engineering measures. While preventing natural disasters like cyclones is impossible, coping with cyclones is possible. Nature-based solutions in bioengineering is one such soft engineering measure that is being used as an effective and sustainable coping mechanism.

Nature-Based Solutions and Bioengineering Interventions

The IUCN defines nature-based solutions (NBS) thus: “Nature-based solutions are actions to protect, sustainably manage and restore natural and modified ecosystems that address societal challenges effectively and adaptively, simultaneously benefiting people and nature.” Nature-based solutions are underpinned by benefits that flow from healthy ecosystems. They target major challenges like climate change, disaster risk reduction, food and water security, biodiversity loss and human health, and are critical for sustainable economic development. There is a gradual shift to soft engineering measures, such as nature-based solutions. There are many factors responsible for the shift from hard engineering interventions to nature-based solutions, such as the economic realities of expensive hard engineering interventions, the performance of hard engineering interventions, sustainability, environmental considerations, adapting to the changing climate and long-term solutions. H.M. Schiechl defines bioengineering as the use of living materials, mainly vegetation, to provide engineering functions.¹⁶ Bioengineering can be employed in near-natural construction and can complement classical engineering work. This approach of using vegetation in combination with inert materials for stabilisation and protection against erosion can be an alternative, a complementary tool or even a substitute for a traditional engineering tool.¹⁷

Coastal forests, especially mangroves, are particularly effective in offering protection from rapid storm surges and intense wind during cyclones. There are numerous examples of protection during cyclones to attest to the facts based on local and international experience. During the terrible Cyclone *Sidr* in 2007, the thick growth of mangrove trees in the Sundarbans successfully reduced the intensity of both the wind and the storm surge.¹⁸ The Sundarbans took the brunt of the cyclonic force and saved people—for which there is gratefulness in the local community towards the forest. The

damage in the Philippines due to typhoon *Haiyan*, one of the most powerful tropical cyclones ever recorded, could have been much more devastating without the protection of dense mangroves. J.M. Pulhin, D.T. Gevaña and F.B. Pulhin have noted how the local community recognised the services of the mangroves for their protection and the community-based approach to mangrove management was lauded as a sustainable strategy to revert degraded mangroves to their once verdant condition.¹⁹ Several studies have shown that economic damage is significantly less when effective mangrove protection occurs during cyclonic events.²⁰ M. Spalding, A. McIvor, F. Tonneijck, S. Tol and P. Van Eijk have shown how the wave height of storm surges is reduced by 13–66 per cent per 100 m of mangrove and storm surge height is reduced by 5–50 cm/km of mangrove.²¹ K.S. Mita has also concluded that the combined effect of mangrove afforestation and polder significantly reduces thrust force.²²

Bioengineering often offers effective protection against storm surges and intense wind speeds. Mangrove forests are efficient in reducing winds and storms. During Cyclone *Sidr*, the thick growth of mangrove trees in Sundarbans reduced the intensity of the wind and the storm surge.²³ Quantifiable monetary loss due to cyclones can be halved if there is mangrove protection, and local people highly value the storm protection service of the Sundarbans mangrove forest.²⁴ However, the protective impact of mangroves is insignificant when the landfall location is outside the Sundarbans.²⁵

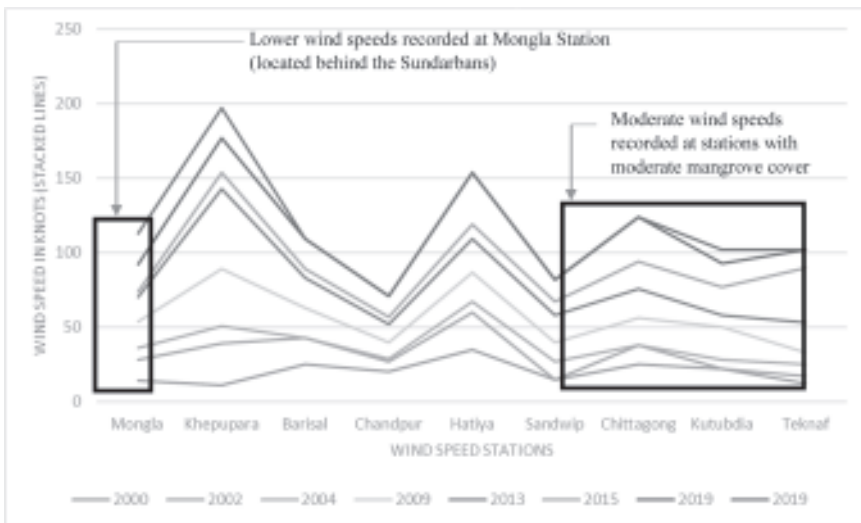
Bangladesh can be clarified by analysing these indicative parameters of storm surge levels and wind speeds at locations protected by coastal forests and locations that are more or less exposed to the Bay of Bengal and the local perception of such measures. The combined effect of mangrove afforestation and polder significantly reduces thrust force.²⁶ Wave height is reduced by 13–66 per cent per 100 m of mangrove, and storm surge height is reduced by 5–50 cm/km of Mangrove.²⁷ A study in India showed that mangrove-protected villages had the lowest adverse factors or the highest positive factors after the cyclone of 1999.²⁸ Despite facing extreme stress on land demand in Bangladesh, combining bioengineering and environmental measures could reduce damage and act as a buffer against tides and cyclones.²⁹ The NBS can be used to treat steep slopes, soil instability, erosion control, seepage zones, live-reinforced earth walls and coastal protection. The coastal

population is largely aware of the effectiveness of green buffers depending on local conditions. Experience with major cyclones has enriched the experience of the local people. Coastal residents are welcoming the concept of combining hard engineering intervention with strategic soft engineering. The NBS can potentially diversify livelihoods and resilient livelihood opportunities and is highly effective for Integrated Coastal Zone Management.

Impact of Mangrove Vegetation on Cyclonic Wind Speed

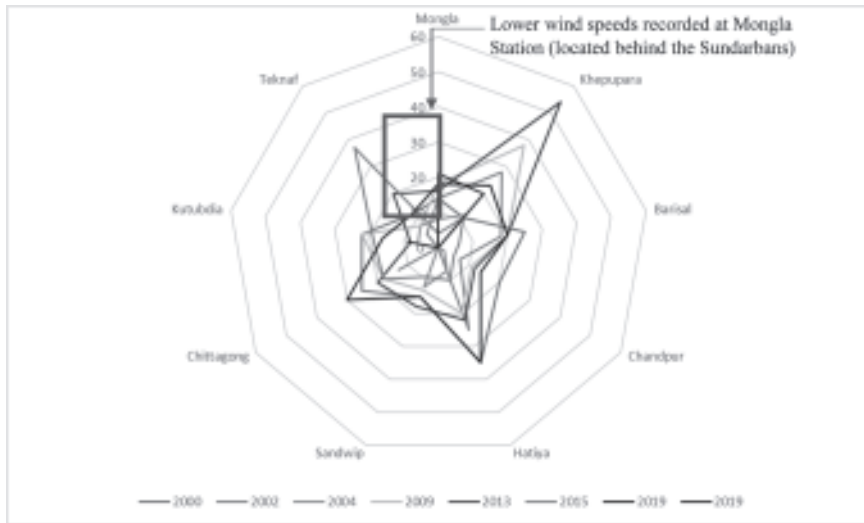
The Western Coastal Zone of Bangladesh is protected by a buffer zone in the form of the Sundarbans mangrove forest. However, the Central Coastal Zone has a minimal buffer and is virtually exposed to the Bay of Bengal. The Eastern Coastal Zone has moderate strip elongated mangrove covers. Figures 8.2 and 8.3 show the variation of recorded wind speeds at the different selected wind speed stations on the day of landfall for cyclones with a maximum recorded wind speed ≤ 100 km/hr between 1988 and 2019. Figures 8.2 and 8.3 show the wind speeds both cumulatively and non-cumulatively.

Figure 8.2: Stacked Line Chart (Cumulative) Showing the Wind Speeds at Different Stations for Cyclones with Maximum Wind Speed ≤ 100 km/hr, 1988–2019



Source: Syed Labib Ul Islam, “Assessment of the Potential of Bioengineering Intervention for Retarding Cyclonic Wind and Storm Surge in Coastal Bangladesh”, M.Sc. (WRD) Thesis, Institute of Water and Flood Management (IWF), Bangladesh University of Engineering and Technology (BUET), Dhaka 1000, Bangladesh, 2021.

Figure 8.3: Radar Chart (Non-Cumulative) Showing the Wind Speeds at Different Stations for Cyclones with Maximum Wind Speed ≤ 100 km/hr, 1988–2019



Source: Syed Labib Ul Islam, “Assessment of the Potential of Bioengineering Intervention for Retarding Cyclonic Wind and Storm Surge in Coastal Bangladesh”, M.Sc. (WRD) Thesis, Institute of Water and Flood Management (IWFM), Bangladesh University of Engineering and Technology (BUET), Dhaka 1000, Bangladesh, 2021.

The Figures show that the Mongla station near the Sundarbans mangrove forest regularly experiences lower wind speeds during the cyclone landfall dates. At the same time, the exposed Khepupara station in the Central Coastal area experiences comparatively higher wind speeds. The other stations, being either moderately protected or situated inland, experience corporately moderate wind speeds.

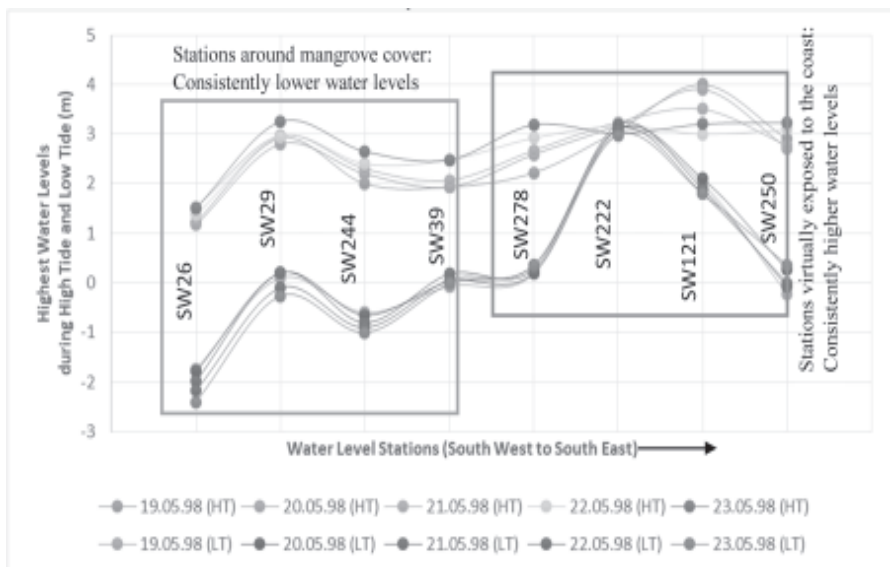
Impact of Mangrove Vegetation on Storm Surge Level

Figure 8.4 shows the maximum water levels during high tide and low tide at different stations during the cyclone in 1998. Figure 8.5 shows the maximum water levels during high tide at different stations during the cyclone in 1998. From the graphs, it is discernible that the water levels (storm surges) were consistently lower in the gauge stations located near the mangrove cover, while water levels were recorded to be higher in the coasts exposed to the Bay of Bengal. This trend is especially prominent in the cases of moderately strong cyclones, with diminishing effects on the stronger cyclones. The

retarding effect on water levels is naturally greater if the landfall location of the cyclones is at a distance from the protected coasts and it is also pertinent in the cases of landfall locations on mangrove covers compared to exposed coastal locations.

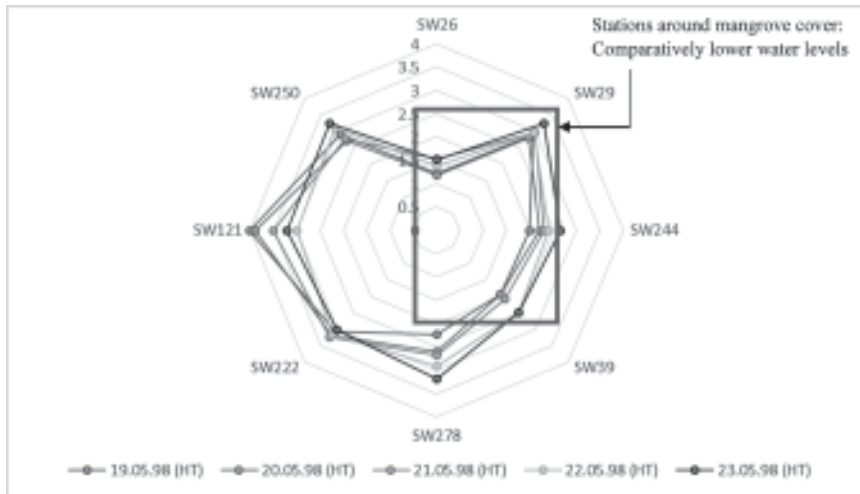
In certain areas where the dissipation of hydraulic energy may be particularly challenging or local conditions lead to more flooding, it may be best to employ a hybrid approach that combines a nature-based strategy with structural or hard interventions to provide more robust protection. Nature-based solutions in the form of bioengineering intervention are effective for coastal protection in Bangladesh. Consistently lower wind speeds and storm surges are observed during cyclonic events. It has environmental and economic benefits. The NBS can be used in conjunction with structural intervention depending on the nature of the protection. The NBS can also be used as an adaptation option and for combating climate change.

Figure 8.4: Maximum Water Levels during High Tide and Low Tide at Different Stations for Cyclone in 1998



Source: Syed Labib Ul Islam, “Assessment of the Potential of Bioengineering Intervention for Retarding Cyclonic Wind and Storm Surge in Coastal Bangladesh”, M.Sc. (WRD) Thesis, Institute of Water and Flood Management (IWFM), Bangladesh University of Engineering and Technology (BUET), Dhaka 1000, Bangladesh, 2021.

Figure 8.5: Maximum Water Levels during High Tide at Different Stations for Cyclone in 1998



Source: Syed Labib Ul Islam, “Assessment of the Potential of Bioengineering Intervention for Retarding Cyclonic Wind and Storm Surge in Coastal Bangladesh”, M.Sc. (WRD) Thesis, Institute of Water and Flood Management (IWF), Bangladesh University of Engineering and Technology (BUET), Dhaka 1000, Bangladesh, 2021.

Conclusion

Bangladesh is frequented by tropical cyclones almost every year due to the geographical positioning of the country. Nature-based solutions in the form of bioengineering intervention are effective for coastal protection in Bangladesh. Coastal vegetation covers can offer effective protection against storm surges and cyclonic wind speeds. The natural or artificial elongated mangrove strips can be used as a nature-based solution to significantly reduce the destructive effects of cyclones and storm surges. This represents an efficient and cost-effective way forward for coastal disaster management in resource-constrained countries.

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9

Adaptation Challenges in Small Transboundary River Basins in the North Ganga Basin: A Reflection

Ajaya Dixit

Introduction

Floods and droughts adversely impact natural ecosystems, humans as well as the physical infrastructures on which they depend for sustenance. Of late, the intertwining of climate change-influenced extreme weather events and landscape changes have exacerbated the multiple consequences of floods, droughts and pollution on both people and systems. Strengthening the capacity of populations and systems at all levels, from the local to the global and to adapt to such disruptions is among the most important challenges currently facing humanity. The fact that we need to adapt naturally raises the question of how we can adapt and what does or can aid the adaptive process.

By examining the courses of action households take during floods and drought events and locating the insights generated in a wide review of regional trends, government programmes and systems, M. Moench and A. Dixit in their research attempted to disaggregate the factors that enable communities to adapt to the sort of climatic variability that triggers floods and droughts and which also intertwine with social and political factors to cause disasters.¹ The authors indicate that the vulnerability and adaptive capacity of a given

community during flood and drought contexts are, in part, influenced by the state of natural resources, particularly the degree to which normal ground and surface water ecosystems have been disrupted. The long-term decline in the groundwater level of a region, for example, should be a major warning to decision-makers and planners, one that signals a serious shortage of water for drinking and irrigation of agriculture during a drought.

During the monsoon of 2023, parts of Nepal's Madhesh Pradesh, including the cities of Birgunj and Janakpur, faced groundwater depletion that led to a short-lived drinking water problem. This was widely reported in Nepal's print, visual and social media platforms.² The problem was partly averted after the monsoon rains arrived, but in the drier months, the risks remain. Though an in-depth examination of the change process is needed to identify the factors that led to this decline and to suggest appropriate management strategies for ensuring that these factors do not recur in the future, we can safely say that a number of factors rather than a single one led to the disjuncture. In 2023, many months without winter rain and a period of exceptional summer heat were two recent climate processes that added layers to the long-term trends. One such trend is an increase in the area under concrete surfaces brought about as urbanisation has progressed and the area of open spaces and wetlands functioning as sponges has simultaneously decreased.

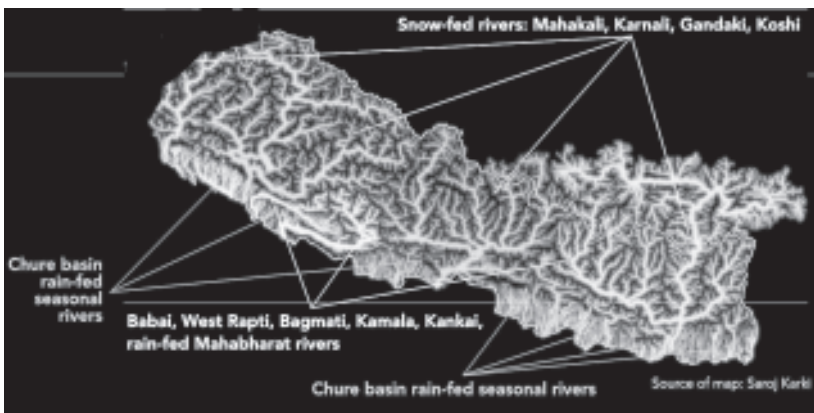
The increase in the area under concrete surfaces decreases water retention on the surface and augments peak floods, both resulting in lower recharge rates. In addition, the excessive extraction of groundwater for drinking, irrigation and industrial uses has lowered the groundwater table. Since Nepal's groundwater aquifers cross international borders, their use in India may also have had some upstream impact. This interdependency, however, has not yet been examined in depth. The continued degradation of the upper watershed in the forms of deforestation of the Chure range, and river pollution among others, is another factor that has engendered change in the dynamics of the water ecosystem that serves the region. The people of the plains of Nepal, Northern Bihar and Uttar Pradesh depend on small rivers and groundwater aquifers for sustenance. While the region faces the multi-faceted pressures of development and climate risks, these emerging constraints and challenges have not been systematically examined.

The Chure Basin Rivers

Nepal's Southern plains extend from the international border to the Chure range, which itself extends from east to west along the southern *Mahabharat* range. In this chapter, the small rivers that originate in the Chure mountain range are defined as the Chure Basin (CB) rivers.³ The Chure (known as the Siwalik in India) range is the source of many rain-fed small seasonal rivers that, after they flow through Nepal's southern districts, cross the international border into the Indian states of Uttar Pradesh and Bihar as small transboundary rivers of the North Ganga Basin.

All of Nepal, as well as the Northern Tibet Autonomous Region, is the head watershed of the tributaries of the Ganga River. These tributaries can be broadly grouped into three types: snow-fed, spring- and rain-fed and seasonal rain-fed. They can be further classified by considering the diversity of Nepal's physiography and morphology, and the size and nature of the water sources that feed them.⁴ Snow- and spring-fed rivers, which have larger areas in the hills than in the plains, exit from the gorges they have eroded over millennia before flowing across Nepal's plains into Uttar Pradesh and Bihar. On the North Indian plains, the rivers join with each other and ultimately flow into the Ganga. In this way, CB rivers and their tributaries contribute to the Ganga River.

Map 9.1: The CB Rivers



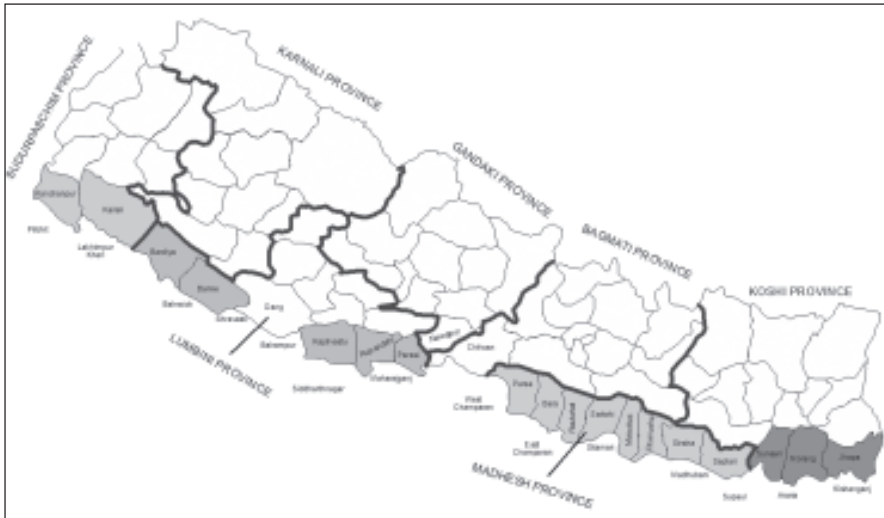
Source: Based on Saroj Karki, A. Dixit, N. Rimal, D. Bhandari and S. Sharma, *Catalyzing Resilience Across Boundaries: Challenges in Nepal's Small Transboundary Rivers*, The Asia Foundation and Institute for Social and Environmental Transition, Kathmandu, Nepal, 2023.

From the Chure range, the CB rivers flow directly into the Bhabar zone (the boulder region south of the Chure) and then onto the Tarai plains. In their upper reaches, these rivers flow only as long as rain lasts. In addition to amounts and intensities of rainfall, geography, slope, elevation and the vegetative cover of a given CB catchment also determine the flow of these rivers. After they reach the Bhabar zone, the CB rivers become braided. They also may become invisible as, for a certain distance, sub-surface flow occurs. As they flow south from the Bhabar zone, the rivers receive interflow from their banks. Thus, in the lower reaches, even during the dry season, these rivers may have at least some discharge. If they do, they begin to meander. Rainfall-led run-off from the CB region's grassland, forests, agricultural land, freshwater bodies and urban areas feed these rivers, providing provisioning, regulating, supporting and cultural ecosystem services for people living in Nepal's CB and the contiguous regions of North Uttar Pradesh and Bihar.

Of Nepal's total six metropolitan cities, 11 sub-metropolitan cities, 276 municipalities and 460 rural municipalities, the CB region has two metropolitan cities, eight sub-metropolitan cities, 125 municipalities and 117 rural municipalities. The 18 CB districts in Nepal occupy 18.1 per cent of the country's total land area and are home to about 45 per cent of the population, according to the census of 2021. The contiguous land area in Uttar Pradesh and Bihar has a population of about 45 million. The number of seasonal small transboundary rivers that flow through the 18 districts into the states of Uttar Pradesh and Bihar along the border is estimated to be 164.⁵ However, because of the nature of the terrain, these rivers may mix with wetlands and form oxbow lakes, thereby creating a land-water mosaic that makes the exact number of rivers hard to ascertain.

During the summer months, the climate of the CB region is subtropical and humid. Though small, CB rivers have a unique hydrology that needs to be recognised in order to establish appropriate water and natural resource management strategies. The discharges of a very few CB rivers are routinely measured and indirect methods are used to estimate the annual surface run-offs from these rivers. These small rivers flow through a region with high population density, form a crucial part of local ecosystems and play a key

Map 9.2: CB River Districts in Nepal



Source: A. Dixit, N. Rimal, D. Bhandari and S. Sharma, *Catalyzing Resilience Across Boundaries: Challenges in Nepal's Small Transboundary Rivers*, The Asia Foundation and Institute for Social and Environmental Transition, Kathmandu, Nepal, 2023.

role in meeting people's needs. The health of these small rivers eventually determines the health and integrity of the Ganga River.

The ecohydrologies of the CB rivers are different from the hydrologies of both snow-fed and spring-fed *Mahabharat* rivers, both of which, as mentioned earlier, cover a much larger area in the hills than in the Tarai plains. In contrast, the CB rivers flow over larger areas in the plains than in the Chure hills. Each of the CB rivers has unique morphological and sediment transport characteristics which, in part, determine changes in its plain form and the elevations of its bed. In the plains, these rivers move laterally, form oxbow lakes, and sometimes link with wetlands, thereby becoming part of the natural mosaic of terrestrial and freshwater ecosystems. In the last few decades, this mosaic has undergone major changes.

During the monsoon months, the CB rivers overflow and spill onto their banks and surrounding the floodplains and their banks, inundating agricultural land and settlements, destroying assets and adversely affecting lives and livelihoods. In the last few decades, human interventions, such as the development of transportation networks, barrages, weirs and canals; the

expansion of settlements; sand and aggregate mining; pollution and groundwater pumping, have altered the geomorphology of the CB rivers. Over the last 70 years, embankments built along the rivers in many places have created boundaries between river courses and their flood plains. Within embankments, river flows may erode and cut the banks on which they are built. Embankments also breach, causing major losses of lives and properties.

Underneath the plains of the CB districts lie extensions of large Ganga aquifers that extend from the Ganga River to the Bhabar zone. Three interconnected aquifers, the Bhabar, seepage and plains zones, exist along the north-south transect. Along the Bhabar zone, the underground aquifers are deep, about 60 m to 100 m below the surface. Further south on the plains of the CB districts, two types of aquifers exist: shallow (0–46 m deep) and deep (>46 m deep).

The surface flow of the CB rivers, in-situ rainfall and part of the river discharge flowing through the Bhabar zone together recharge these aquifers. In addition, monsoon floods, seepage from irrigation canals and irrigation water from farmers' fields also replenish the aquifers and add to their storage. At the scale of the regional aquifer, significant spatial differences in groundwater recharge, permeability, storage and water chemistry (quality) exist.⁶ Groundwater is used for meeting irrigation, domestic water and industrial water supply needs across the region.

Change Processes, Impacts and Evolving Issues

In the following sections, we discuss various ecosystemic change processes and their impacts on the CB region.

Urbanisation

The expansion of settlements, commercialisation and the development of markets around old cities have led to the socio-ecological transformation of the CB districts. In 1989, urban areas occupied just 221.1 km² of the Tarai region. Twenty-seven years later, in 2016, the urban area had more than quadrupled to 930.22 sq km and this growth in urban area is associated primarily with the loss of cultivated lands.⁷ Indeed, it is estimated

that 93 per cent of the land absorbed by cities was formerly cultivated. This loss of vegetated land exacerbates the adverse effects of greater climate exposure and increases vulnerability given the current social and economic contexts.

Riverine Floods

In the CB districts, monsoon rainfalls swell the CB rivers, which can then cut and submerge their banks as they flow through the Central and Southern regions of the Chure Basins and across the border. Once they reach the downstream regions, these rivers mix with the high discharges of Nepal's snow- and spring-fed rivers, significantly magnifying the flood hazard across the interlinked ecohydrological region. Sometimes these linkages, particularly those regarding political boundaries are forgotten and in the monsoon months, downstream flooding is often erroneously attributed to deliberate action by the upstream state (Nepal).

Border Inundation

Several areas along these rivers close to the Nepal-India border experience problems with inundation because various structures built in India constrain the natural flow. This problem recurs almost every monsoon and each time it arises, it undermines the otherwise cordial relations between the two countries. For Nepal, border inundation is what is deemed a "substantial" problem, while for India, Nepal's large and powerful neighbour, it appears to be merely a "nominal" problem in the official dialogue. Their perspectives can and need to be resolved using a systemic approach and creative discussion.

A review of the Minutes of the bilateral dialogues, Nepal and India have held on water resources over the last fifty years (1971–2022) was not particularly encouraging.⁸ A. Dixit, N. Rimal, D. Bhandari and S. Sharma in their research found that the water agencies of both countries had chosen structural methods over an appropriate mix of structural and non-structural approaches to minimise flood risks.⁹ Engagement between the two governments on this problem has not been able to expand the scope of the approach to include river health, the rejuvenation of seasonal rivers, nature conservation or vulnerability reduction strategies.

Groundwater Overdraft

Part of the large aquifer of the Ganga Basin and groundwater in the plains of Nepal play a crucial role in meeting agricultural and domestic water needs in the CB. Over-extraction and other factors have depleted groundwater aquifers in pockets, an effect that can result in seasonal water scarcity. In the CB region, open wells were the traditional practice, while in recent times, suction handpumps on shallow aquifers, deep aquifer pumps and mechanised pumps using diesel or electricity to extract groundwater for irrigation became ubiquitous. With rapid urbanisation and industrial development, more high-capacity pumps are being used in many parts of the Tarai. The rate of groundwater use has also increased as more water is pumped for uses other than drinking. The outcomes are over-pumping and stressed aquifers. The high rate of urbanisation in the CB region has incurred high costs: the loss of agricultural land and lowered recharge. Changes in rainfall patterns have also exacerbated groundwater recharge, but these dynamics have not been systematically studied.

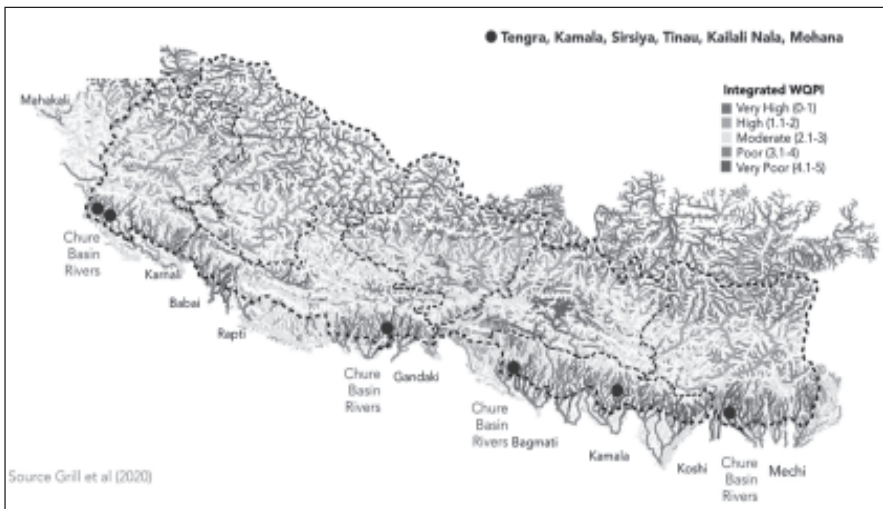
A number of other factors have led to groundwater overdrafts. The historical rate of groundwater pumping, particularly from shallow aquifers, is affected by the higher rate of extraction of water for irrigation, drinking water and industrial needs. The degradation of watersheds and haphazard human interventions for developing infrastructure, the loss of greenery and the drying up of water bodies also affect recharge. On the one hand urbanisation and concretisation increase peak urban flooding while, on the other, they lower groundwater recharge as the amount of water which can infiltrate is reduced. On a landscape with a considerable human footprint, the erratic nature of rainfall patterns associated with climate change adds to peak flood woes, particularly when heavy rains fall in a short time. When there is little rain and drought conditions increase, groundwater can act as a buffer. However, when groundwater storage is depleted and the water table is low, even mechanised pumps, let alone shallow-dug wells, cannot bring water to the surface and people's access to water is greatly reduced.

Pollution

A major ongoing change process in the CB region is the pollution of freshwater as is described in the following sections.

Surface Water: Industries, cities, towns and commercial agriculture produce point and non-point sources of waste when untreated, cause pollution. In many cases, solid and liquid wastes produced by expanding cities and towns pollute nearby rivers and streams. Polluted rivers degrade human and environmental health and have net negative impacts on livelihoods. The impacts of pollution on the CB rivers are considerable during the non-monsoon months when river discharge and consequently, their capacity to dilute wastes is low. In non-monsoon months, high concentrations of pollutants turn the drains of cities in the CB districts into cesspools. Riverbanks, where solid waste is haphazardly dumped, pollute rivers and become home to hazardous pests which directly threaten human health. Once water quality declines, the aquatic environment is permanently damaged and the wellbeing of those who depend on the water is debilitated. In addition, in the last few decades, climate change has created favourable conditions for disease vectors, such as dengue mosquitoes that travel long distances, transmitting diseases and affecting people. This change simply adds to existing health threats.

Map 9.3: The Extent of Pollution of the CB Rivers



Source: G. Grill, K. C. Thieme, J. Kumar, N. Shahbol, R. Sada, R. Schmitt, J. Opperman and M. Erik, *High Conservation Value River Assessment: Methodology and Results*, USAID Paani Program, DAI Global LLC, Kathmandu, 2020.

Faecal Waste Contamination: In the CB districts, as elsewhere in the country, the amount of waste with concentrated pollutants is greater in urban than in rural households. Human faeces and urine released into drains or dumped into rivers without treatment, pose risks.¹⁰ In some cities, while there are rudimentary sewage pipes, there is no treatment system. As urbanisation spreads in the CB districts, the number of enclosed toilets disposing of human waste and septic tanks is increasing and are also emptied into water bodies and rivers. The use of pits and pour-flush latrines and within-house toilets has no doubt reduced open defecation, but while these developments have brought health benefits, the disposal of the untreated faecal waste they contain has generated new risks. Pit and pour-flush toilets deposit faecal solid materials in the soil under the assumption that the soil will disinfect harmful pathogens. Within-house toilets, in contrast, discharge faecal materials first into septic tanks and then, if they exist, first to sewer lines and then, ideally, to a waste treatment plant. In most CB districts, however, there are no such plants. The increase in the number of offices, malls, schools, colleges, hospitals, security barracks and other edifices has increased the number of within-house toilets and, consequently, also the amount of faecal material, each gram of which can contaminate ground and surface water sources that much more easily.

Arsenic Contamination: On the plains of the Ganga Basin, naturally occurring arsenic poses an emerging risk to groundwater use. Rocks rich in arsenic eroded from mountains and highlands thousands of years ago and were, along with sand, gravel and silt, deposited in the low-lying areas of the CB districts of Nepal, Uttar Pradesh, Bihar, West Bengal and Bangladesh. In the rural areas of these countries, tube wells, which pump water from shallow aquifers at a depth of 20 m–30 m, are widely used and provide safe drinking water to almost 100 per cent of the population. The geological and geochemical conditions of the region, however, have resulted in arsenic contamination in certain cases, a condition that poses a serious risk to users who depend on tube wells for drinking water. Arsenic contamination can cause arsenicosis, a potentially lethal condition that disproportionately affects the poor and engenders further social and economic challenges. In these regions, various types of bio-sand filters and chemical powders are used to

remove arsenic and iron from tube-well water, but their effectiveness has not been assessed to determine if further measures are still needed.

Sand and Aggregate Extraction

The extraction of sand and aggregates from the rivers of CB districts is linked to the expansion of urban areas, the development of infrastructure and the propensity for local entities to sell the materials to earn revenue. Across the world, sand and gravel are mined from riverbeds for use in the construction of infrastructures such as residential, educational, commercial and industrial buildings; dams and barrages; airports; highways and bridges. With the pace of infrastructure construction increasing, the amount of sand and aggregates extracted from rivers has also seen a steady rise. Though an exact estimate of the amount extracted is not available, it can be assumed that extraction is increasing in all CB rivers and, in a poor governance regime, it has serious social, economic, political and environmental consequences. In fact, in many cases, social tension, violence and even deaths have been among the outcomes.

Drought

Historically, droughts have been less studied in Nepal than other hazards, such as floods, despite the fact that the country's meteorological patterns include distinct seasons, with varying amounts of rainfall and that some of these seasons are indeed drought-prone. The CB region is no exception. The post-monsoon season is generally characterised by decreasing and, ultimately, very low or no rainfall. Anomalies do exist, however, and extreme rainfall can occur even during 'dry' months. Winter in Nepal is relatively dry and cool, with low levels of rainfall. That said, westerly winds bring moisture and high elevations get snow while low elevations get rain. In fact, the 20 per cent of total rainfall distributed across the post-monsoon, winter and pre-monsoon seasons is crucial for various aspects of life, including agriculture, water resources and ecosystems. Changes in these patterns, including prolonged days without rain, lead to drought conditions and impact communities' access to water for irrigation and drinking.

In recent years, the incidence of drought conditions, even during the monsoon season, has increased due to climate change and altered rainfall

patterns. Prior to the onset of the 2023 monsoon, Nepal's Department of Hydrology and Meteorology (DHM) and the South Asian Climate Outlook Forum (SASCOF) had forecast below-average rainfall for the current rainy season and above-average maximum temperatures in most parts of Nepal due to, in part, El Nino conditions.¹¹ The 2023 monsoon groundwater crisis in parts of Nepal's Madhesh Pradesh, as discussed above, should be seen as a signal of a decline in the effectiveness of the adaptative actions adopted by the population in response to drought conditions.

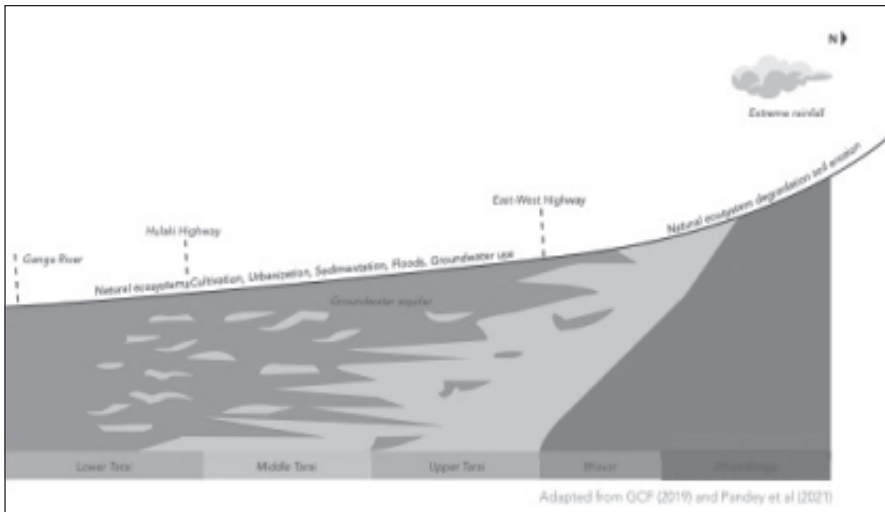
Heat Problems

Nepal's CB region and lower mid-hill valleys experience high temperatures, especially during the summer months, compared to the rest of the country. Temperatures in the Tarai, like plains of India, can become quite high, with some areas experiencing temperatures well above 40 degrees celsius during the summer. High temperatures exceeding 40 degrees in these regions in 2023 had adverse impacts on agriculture, local communities, water resources, crop growth and human health. But, heat as an emerging threat has not yet been recognised in Nepal's Tarai and lower valleys in the hills.

Cold Waves

During the winter, especially from late January to late February, dense fog continuously blocks the sun for days, sometimes even weeks. For these two months, villagers resort to burning straw and dung patties to stay warm. Women work outdoors in the cold or indoors in smoky kitchens, while men huddle around outdoor fires. The smoke particulates help thicken the fog and increase air pollution, thereby putting all, but especially women, children and the elderly, at great risk. People who live in warm conditions—like those who reside in the Tarai, are not equipped metabolically or behaviourally to deal with such abrupt, intense and continuous cold. Lived experiences suggest that the fog in 2023 was not as heavy as it was in 2022, but it lasted longer. With fog making days unbearably cold and reducing visibility, schools, which have no heating facilities, have to be closed; crops are adversely affected; transport, both air and road traffic, is disrupted and the number of road accidents increases.

Figure 9.1: The Challenges in CB Rivers



Source: A. Dixit, N. Rimal, D. Bhandari and S. Sharma, *Catalyzing Resilience Across Boundaries: Challenges in Nepal's Small Transboundary Rivers*, The Asia Foundation and Institute for Social and Environmental Transition, Kathmandu, Nepal, 2023.

Framework for Adaptive Responses

The small transboundary rivers in the North Ganga Basin, though very important, are not on the radar screens at any level in the Governments of Nepal or India. In the era of altered climate regimes, it is important to deepen our examination of the challenges faced by these rivers and the people and institutions that rely on them as well as the role institutions can play in river conservation and the sustainable use of natural resources in order to promote more effective adaptive actions. Institutions shape the behaviours of people, government agencies, businesses and community groups in their interactions among themselves in response to external stresses, including stresses due to climate change.¹² Effective actions for adaptation must be holistic in planning and designing. To ensure a holistic response, it will be necessary to understand the cross-scale linkages among water, agriculture and natural ecosystems, and how changes in each element of the linkages affect disaster dynamics. Increased exposure to hazards, degraded natural ecosystems, infrastructure vulnerability, institutional rigidity, policy dysfunction and the marginalisation of users worsen the impacts.

Figure 9.2: Framework for Adaptation



Source: A. Dixit, N. Rimal, D. Bhandari and S. Sharma, *Catalyzing Resilience Across Boundaries: Challenges in Nepal's Small Transboundary Rivers*, The Asia Foundation and Institute for Social and Environmental Transition, Kathmandu, Nepal, 2023.

This examination should explore new approaches to planning and designing climate risk-adapted roads and highways, railways, bridges, flood control embankments, shelters and energy transmission and distribution networks. The new approaches will require revisiting codes, standards, construction practices and management. This entails integrating resilience considerations into the use and management of natural ecosystems and their services. At the same time, the design, implementation, operation and maintenance of infrastructure must take heed of increasing climate risks as well as for enhancing resilience and collaboration. Moreover, the exchange of experiences among various actors in different countries of the region are essential. Learning from both successful and unsuccessful approaches, sharing best practices and fostering dialogue will all contribute to identifying effective strategies.

Accurate and comprehensive data on natural resources, climate patterns and social vulnerabilities, which is crucial for informed decision-making and planning, must be ensured. Governments, the private sector and community groups must work together to develop targeted support for effective climate actions. At the same time, the government and other relevant institutions need to prioritise and integrate resilience-building plans and investments into their strategies and decision-making processes must ensure that resilience-building is a fundamental consideration across the sectors of agriculture, forest, transport, water resources and clean energy development.

Developing guidelines, tools and capacities across various sectors will help governments make informed decisions for climate resilience. Governments would also require reforming the way water engineering education is organised and delivered. While these are long-term endeavours, it must be realised that disasters will occur and that those on the social margins will continue to face the impacts of those disasters, directly and consistently.

It is, therefore, necessary to establish social support mechanisms to help marginal and low-income families and families facing displacement stay resilient in the face of climate-induced disruptions. Unless there are such safety measures, many such people end up as migrants living on urban fringes. A key action that enhances climate resilience is pursuing development practices that consider climate risks from the outset to minimise loss and damage caused by climate-related hazards.

Conclusion

When hazards damage natural ecosystems and infrastructure, their services are disrupted. If these disruptions persist, communities are deprived of basic services and face additional hardships. Indeed, people may become more vulnerable if these disruptions are unaddressed. It is important to emphasise that the better and more enduring the quality of the services, the better-prepared communities will be to deal with external shocks. At the same time, the underlying causes of vulnerability must also be addressed. Otherwise, natural ecosystems exposed to increasing hazards will aggravate the impacts of disasters, with increased losses and damage. Degraded ecosystems and maladapted infrastructure can also act as hazards, whereas healthy ecosystems

provide communities with a buffer against physical hazards and environmental shocks.

Human interventions in the CB region elevate the adverse impacts of hazards on local socioeconomic conditions and livelihoods and these impacts cascade across boundaries. At the same time, the changing climate is further worsening the impacts of floods and droughts, high winds, forest fires, winter fog, heat and hail. In addition, rising temperatures and humidity, in combination, pose an emerging risk to the region. Collectively, these changes are likely to make it even more challenging to adapt in the future than now. Unfortunately, the scale of the problem is poorly recognised across the border.

Climate change and the growing size of the human footprint on the CB rivers and aquifers are already beginning to expand, via alterations in geomorphology, the decreased quality and increased degradation of rivers, high extraction rates, limited recharge of aquifers and increased dependency of local economies on resources from outside the region, such as remittances from abroad. These changes will ultimately spiral outward, impacting the lives of all people in Nepal's CB districts as well as in parts of Northern Bihar and Northern Uttar Pradesh. The conventional approaches to risk management practised in the region have not supported effective adaptive actions. On the contrary, the adverse impacts suffered by those in the social and economic margins have only increased. Consequently, vulnerable and marginalised families, without alternative livelihood trajectories, are being pushed deeper into states of vulnerability.

One of the main challenges in the CB districts is minimising floods and other climate risks. This effort needs proactive and systemic responses that recognise the changing nature of hazards and exposure. An improved understanding of ongoing climate and socio-ecological change dynamics is one of the bases for making synergistic efforts to minimise risks and achieve win-win outcomes. A better understanding of how exposure has changed and how it can be reduced is needed. Our new approach must put communities and natural landscapes at the core of interventions. Technological flexibility and nature-based solutions can ensure that response strategies reduce flood and other climate-induced risks. Such strategies will not only facilitate adaptation and recovery from all disasters, including

climate-related disasters, but also help agencies in Nepal and India become action-oriented in addressing risks and thereby capable of building back better following a disaster.

For effective flood risk management, it is crucial to provide space for rivers to flow uninterruptedly. Guided by this foundational philosophy, the package of solutions we adopt must include scaled-up transboundary flood early warning systems in all seasonal rivers, timely weather forecasts and agricultural advisories, an improved understanding of climate change science and its impacts in the region, contextualised actions for vulnerability reduction, the development of climate-adapted infrastructure and the conservation of natural ecosystems. Farmers, who constitute the majority of the region's population, should be provided with diversified sources of livelihood, appropriate and effective agricultural technologies and inputs, such as extreme climate-tolerant seeds, reliable and affordable irrigation, trustworthy insurance products, affordable credit and finances.

Other key supportive measures include social safety arrangements, fair pricing and ready access to local markets for selling produce. In many countries, including Nepal and India, disaster risk reduction actions are still based on certain ex-post measures, like immediate relief and, to a certain extent, rehabilitation support. There is a need for many more preparedness measures. The progress of Nepal and India in achieving shared prosperity will require a wide variety of in-country efforts as well as efforts made synergistically across boundaries to promote policy alignment and harmonised effort.

Learning from both practices in the field as well as the many studies that have been conducted on water, the environment and climate change offers opportunities for the replication and scaling up of good practices. Creative efforts are needed to include the lessons from such practices in bilateral dialogues on water resources and other themes. While it is true that climate change is a global phenomenon with local impacts, it is equally important to recognise that impacts, such as floods, move across scales and boundaries, leading ultimately to disasters with cascading effects. Impacts do not only move directly with hazards but also transfer indirectly through linkages of watersheds, markets, human mobility and institutions. A holistic approach

to climate resilience encompasses grounded data and policies as well as society-informed, capacity-building, integrated knowledge, knowledge-sharing, and innovations, all tailored to specific geographical and social contexts. A comprehensive approach can ensure that governments, businesses and communities are well-prepared to adapt to the challenges posed by external shocks, including climate change.

NOTES

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10

Upscaling Cross-border Flood Early Warning for a Resilient South Asia

Dinanath Bhandari

Introduction

In South Asia, Bangladesh, India, Nepal and Pakistan recurrently face flood disasters. They are among the highest flood-prone countries in Asia and are on the top in South Asia. Since floods affect many aspects of development and livelihoods, such as the economy, natural resources, physical infrastructure, health and education in the region as well as in individual countries, they must work together to mitigate flood disaster risks. This chapter focuses on cross-border flood management between India and Nepal through collaboration.

Flood is one of the major hazards in Nepal and India. They are recurrent phenomena in both countries where flood damages are high. The major rivers of South Asia, such as the Brahmaputra, Ganga and Indus flow through more than one country. Since the rivers and their tributaries flow across borders, flood risk, impacts and management challenges extend across the border through upstream-downstream linkages.¹ Nepal is the upstream catchment of the Ganga River Basin. The Ganga's major tributaries—Koshi, Gandaki, Karnali and several smaller rivers—originate in Nepal. The floods in these river basins cause significant flood damage annually in both countries as well as further downstream in Bangladesh.

India's National Disaster Management Authority (NDMA) has estimated that over 12 per cent of India's land area is flood-prone.² The extent of floods and its damage to land, development infrastructures and economic losses are increasing and so are human casualties in recent decades.³ The DRR Portal of the Government of Nepal (GoN) provides a record of disasters in the country. From 2000 to 2020, Nepal recorded 4218 flood events, killing 3,433 people including 865 missing.⁴ Data on economic losses and damage to properties are scanty.

According to the World Resources Institute, Nepal faces average annual economic losses exceeding US\$ 218 million and is exposed to possible damage to physical assets as a value equivalent to 1.36 per cent of its gross domestic product (GDP).⁵ Flood intensity and extent are rising in the region due to the changing climate system and increased economic and development activity in the floodplains. It is likely that economic damage associated with floods will increase in the coming years.⁶ In 2017, 2021 and 2022, Nepal faced flood disasters. In June 2021, at the start of the monsoon, floods occurred in the Manang and Mustang trans-Himalayan districts and other higher reaches. These regions had never faced such floods before. Similarly, the Melamchi River (a sub-tributary of the Koshi River) had catastrophic floods.⁷ In October 2021 and 2022, the floods occurred at the end of monsoon. This magnitude of flood had not been experienced in the past. They damaged ready-to-harvest crops and other assets.⁸

Ajaya Dixit, Naresh Rimal, Dinanath Bhandari and Shankar Sharma have presented a detailed account of flood risk management of the rivers that originate in Nepal's Chure hills and flow through Nepal's Tarai plains, crossing into the Indian states of Bihar and Uttar Pradesh.⁹ Several in numbers, these rivers merge with spring- and snow-fed rivers, which originate in the mid-hills (*Mahabharat*) and high mountain regions respectively. The Chure Basin rivers are seasonal and get quickly flooded following rain. They are critical from the point of view of flood risk management and climate change adaptation perspectives.

Climate change is affecting the monsoon and making rainfall patterns more erratic. It has aggravated flood disasters in the South Asian region sharing the same climate system, the monsoon. Most peoples' livelihood is

dependent on the Ganga, Brahmaputra, Indus and their several tributaries. Climate change will worsen disasters and their impacts in linked upstream-downstream systems. Cross-border and regional efforts are needed to address these challenges now and in future.

This chapter highlights the importance of engagement and roles of the community and civil society organisations in managing flood risks across political borders, enriching bilateral and regional cooperation in disaster risk reduction and building resilience to climate change. The engagement of concerned communities and non-governmental organisations (NGOs) in flood risk management is efficient, effective and provides evidence and insights to national governments, bilateral institutions and regional cooperation mechanisms, both for proper policy making and adopting innovative approaches.

Flood Management of Cross-border Rivers

The cross-border rivers between Nepal and India are diverse in nature. They can be broadly grouped into the following three categories: 1) the first-order rivers such as Koshi, Gandaki, Karnali (Ghaghra in India) and Mahakali, all originating in the high mountains; 2) the second-order rivers such as Kankai (Mahanadi in India), Kamala, Bagmati, West Rapti and Babai (Saryu in India), which originate in the mid-hills and 3) the third order rivers, several in numbers, which originate in the Chure range. The first-order snow- and spring-fed rivers have large basins; the second-order rivers, being only spring-fed, have moderate catchments and the third-order rivers with smaller watersheds are rain-fed. They are seasonal and flow during the monsoon only in the upper reaches. The flow of all the rivers ultimately adds to the Ganga River. These rivers are also sources of flooding in both countries during the monsoon.

Flood Risk Reduction and Management: Government Initiatives

This section presents an account of flood risk management initiatives for cross-border rivers. Floods are regular features in these rivers, causing inundation, cut banks and deposit sand. In the mountains, the floods come with a bang and last for only a few hours. In the Nepal Tarai, they remain longer and even longer in downstream Uttar Pradesh (UP), Bihar, West

Bengal and Bangladesh, where gradients are lesser, and the flood waters do not drain immediately. In many rivers, embankments and levees have been built along the rivers and those in the border areas cause upstream inundation due to backflows. Such problems are common in many places on the Nepal-India border.¹⁰

India and Nepal have talked about cross-border flood management in bilateral meetings. These discussions have been going on for over the past 50 years, since the establishment of the Ganga Flood Control Commission (GFCC) in 1972 in India.¹¹ The initial flood control initiatives focussed on rivers like Koshi and Gandak for which barrages were constructed. Later, the focus was extended to other cross-border rivers. Between the Government of India (GoI) and the GoN, there are institutional mechanisms at different levels, such as through the Nepal-India Joint Committee on Water Resources (JCWR) to pursue bilateral discussions on water resources and flood management. As recommended by the third and fourth meetings¹² of the JCWR, a three-tier bilateral mechanism was set up in 2008: 1) the Joint Ministerial Level Commission on Water Resources (JMCWR), 2) the JCWR headed by a Secretary and 3) the Joint Committee on Inundation and Flood Management (JCIFM).¹³ Along with these committees, the Joint Standing Technical Committee (JSTC) and the Joint Committee on the Kosi and Gandak Projects (JCKGP) are also working.

The committees focus mostly on building dams and embankments.¹⁴ Citing the Minutes of the fourth meeting of the Nepal-India JCIFM held on 10–14 January 2011, Ajaya Dixit, Naresh Rimal, Dinanath Bhandari and Shankar Sharma write,

“The suggestions the bilateral committees have made for addressing the problem consist mostly of structural measures such as embankments. In South Asia, hard adaptation measures, such as embankment building, continue to remain a major component of the prevailing approach to flood disaster mitigation.”¹⁵

Embankments, levees and dykes cause backflows and inundate places in the border areas.¹⁶ The authors argue for the adoption of non-structural measures, like early warning systems and maintaining healthy ecosystems in the river basin for effective long-term flood risk reduction and management.

Between 2000 and 2010, the advancement of communication, remote sensing technologies and the improved ability of weather forecasting have provided the impetus for introducing softer approaches to flood risk management in South Asia, including Nepal and India. With support from India, nine hydrology stations were established and old stations were equipped with improved physical infrastructures in Karnali (Chisapani), Babai (Chepang), West Rapti (Kusum), Narayani (Devghat), Bagmati (Sarlahi), Kamala (Ranibas), Koshi (Chatara), Budhi Gandak (Sunsari) and Kankai (Domukha). A control room was established in Sindhulimadi. Subsequently, the stations were equipped and a mechanism was set up to share information on flood levels observed at these stations. The data sent to the control room in Sindhuli every day is relayed to Patna.

The meeting of the India-Nepal JCIFM held on 30 June–5 July 2009 discussed the progress of flood forecasting, including the establishment of a network of hydro-meteorological stations for flood forecasting. The Minutes of the meeting reads,

“...according to the Flood Forecasting Master Plan, 20 hydro-meteorological stations and 27 meteorological stations in Nepal, along with 18 hydro-meteorological sites in India, are included into the flood forecasting network. All the 27 meteorological stations are already in operation. However, only 15 out of 20 hydrological stations have been operationalised.”¹⁷

Initially, the sharing of flood monitoring and information did not benefit Nepal. There was no anticipatory flood response mechanism to use this information. In the downstream region across the border, it is not clear how the information relayed from Nepal to Patna was utilised. It can be assumed that the GFCC would use it to understand the trend of floods in different rivers, calculate the accumulated impact on the larger rivers and design embankments and dams. The joint mechanisms could have planned to utilise information from the hydrology stations to save the lives, assets and livelihoods of at-risk people in both countries through effective Flood Early Warning System (FEWS). The current status of practical actions on the ground indicates that the information available from these monitoring stations has not been utilised. Subsequent meetings, including those of the

joint committees, do not discuss and plan for beneficial outcomes of bilateral collaboration and cooperation or of building resilience on each other's strengths in flood risk reduction and management. For example, the statement of the Bihar State Disaster Management Authority about the 2016 floods is useful:

“We do not have a robust system of monitoring rainfall in the catchment areas of rivers emanating from Nepal. As a consequence, thereof we were taken by surprise when Mahananda, Kankai, Bakra, Parman and other rivers/rivulets got flooded in the last week of July.”¹⁸

In fact, there are monitoring stations in many rivers and the real-time river level information is in open access on the webpage of Nepal's Department of Hydrology and Meteorology (DHM).¹⁹

Community-based Flood Early Warning

NGOs and communities have been accessing information, communicating across the border through different linkages and using it to help people and save lives from floods. The advancement in technologies and the scientific understanding of meteorology, hydrology, remote sensing and telecommunications have led to new opportunities for better flood risk management. Building on these technologies, the Early Warning System (EWS) has been systematically developed globally.²⁰ This sub-section discusses the FEWS in cross-border rivers between India and Nepal. It also covers the emergence of cross-border FEWS and how to scale it up in other rivers

After 2007, Nepal has benefitted from the rainfall and river level monitoring by utilising the information into FEWS. The FEWS has also benefitted communities across the border in UP and Bihar in India by saving lives and assets. The DHM has equipped its stations with river-level sensors, with the addition of telemetry and real-time data transfer technologies. The DHM has also increased the density of river-level monitoring stations, the number of stations with such technologies is over 100 and covers nine major river systems and their tributaries across the country. The stations provide almost real-time information on water levels and also provide an indication of whether the flood level is increasing or decreasing. Based on the flood level, discharge is calculated for each river and potential flooding in

downstream areas is forecasted. The real-time information of river levels and potential flood risk is made public through its web pages.²¹ Moreover, rainfall stations across the river catchments provide flash flood guidance that serves as flood alerts for the downstream.

During the monsoon, river-level information is used to inform downstream communities and disaster management agencies about the potential risk of floods. The risk is calculated and analysed by using computer models for forecasting and by geographic information systems (GIS), with river levels (water depth), cross-section, speed and downstream landscape as inputs. Based on the model outputs, the DHM sets warning and danger levels at each station for the community of concern in downstream Nepal. If the flood level rises above the warning level defined for the hydrology station, the DHM issues a flood alert or warning. It is disseminated through various media, including text messages to mobile phone subscribers in the areas where the flood risk is forecasted. The flood alert is utilised through the institutional mechanism of EWS in each river basin that connects vulnerable communities to flood forecasting and to concerned disaster management authorities who would also be receiving the alerts. Based on the forecasts, they take early action in anticipation of the impending floods. The system has helped save the lives, assets and livelihoods of flood-vulnerable communities in the Tarai region of Nepal, UP and Bihar in India.²²

Cross-border Flood Early Warning in Karnali, Babai and West Rapti Rivers

Parbati Gurung is a river gauge observer at the Chisapani station of the Karnali River in Nepal. In the 2007 monsoon, she and her colleagues started sending information on flood levels to community focal persons in Rajapur and Tikapur, Nepal. This information provided up to a two hour lead time for the community to move to a safer place from the incoming flood and helped save lives and movable properties. In the Babai and West Rapti rivers, these flood warning arrangements were initiated even earlier, in 2006, with support from the European Commission's Humanitarian Aid Department. The initiative in Karnali flood-prone communities was one among the series of pilot projects by NGOs to set up and operationalise community-based

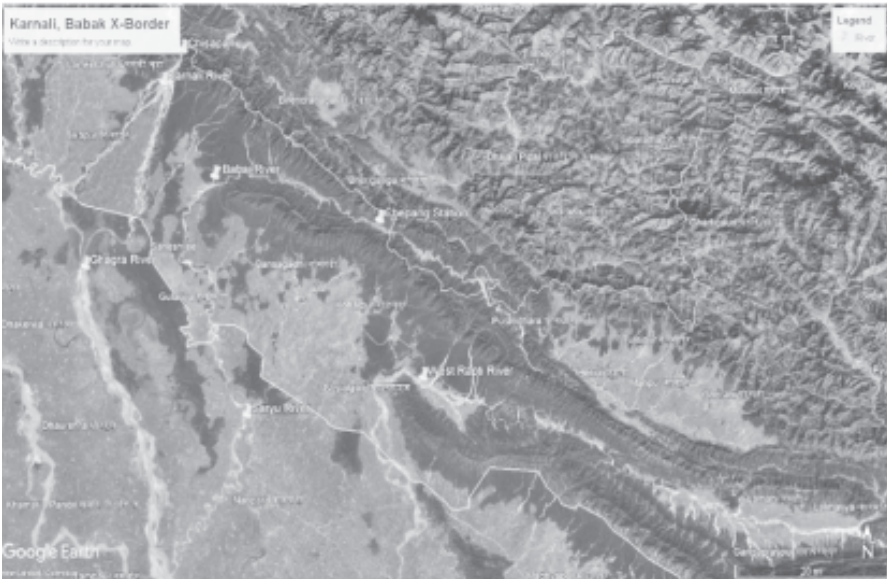
FEWS in different river bank communities in Nepal. This started in 2002 in the East Rapti River, a tributary of Narayani (Gandak) River and was replicated with improvements adapting to available advanced technologies.²³ The EWS in Karnali River was an important step in institutionalising DHM support and engagement in providing flood forecasting services to communities and local disaster management authorities and was also the first step in sharing flood risk information with the communities further downstream across the border.

Community taskforces were formed and trained for information, dissemination and evacuation rescue in these river bank communities. Equipment like sirens, megaphones, life jackets and rescue boats were provided. Such task forces focus on accessing flood information from hydrology stations situated in upstream, disseminating it amidst the community and making anticipatory responses, that is, helping people to go to identified safe locations and shelters before the impending flood hits the area. They also monitor rivers in their locality. The taskforces are volunteer groups, formed and trained in different humanitarian services. They make arrangements to stay in safe locations until further support reaches them or a new update of the flood comes in. This arrangement continues till today, along with the use of web-based information on floods details. These task forces also provide primary health care.

With the flood warning mechanism installed in Nepal, information could be shared with downstream communities in India. In the early days, internet and web-based facilities were not as widespread as they are today. Telephone services were available only in city centres, and access to mobile phones was limited. In 2008, two persons in the local community—one each from the Babai and Karnali rivers—began relaying flood level information to their relatives in Mihipurawa and Shivpur in UP, India.

In 2010, NGOs²⁴ began providing support to the cross-border early warning arrangements. This information helped save lives in the flood plains of the Karnali (Ghagra), the Babai (Saryu) and the West Rapti river regions (Map 10.1).

Map 10.1: Karnali, Babai and West Rapti Rivers, Nepal–India Border



Source: Google Earth Pro.

The community leaders from UP, India visited the Chisapani station, the NGOs involved in the EWS and the communities in Nepal to discuss the institutionalising of the practice of information sharing as well as the replication of community level institutional arrangements, such as community taskforces in India. The visits and interactions have helped community members from across the border to better understand each other's susceptibility to floods and the role of timely early flood warning in saving lives. The interactions have also helped strengthen cross-border information sharing and the setting up of early warning mechanisms in downstream communities.

The Purvanchal Gramin Vikash Sanstha (PGVS) supported the formation and capacity building of the disaster management committees and taskforces in UP. The *Pradhan* and other local leaders in the community facilitated the communities. The task forces in each community disseminated information available from upstream, alerted them about imminent floods and helped them in making anticipatory responses.

Digital display boards were installed at the Nanpara Tehsil Office and

among selected communities, with the provision of information dissemination equipment, like sirens, megaphones and rescue tools (Figure 10.1). The boards show real-time flood levels of the Karnali, Babai and Rapti rivers in Nepal. Like in Nepal, the communities in UP were also provided with training.

Figure 10.1: River Level Display Boards and Rescue Volunteers, Uttar Pradesh



Source: PGVS.

The flood warning communication arrangements across the border provided many benefits in the 2014 and 2017 floods in the Karnali (Ghagra) and Babai (Saryu) rivers in Nepal and India.²⁵ Moreover, the practice that was replicated in other rivers by different organisations also demonstrated good results.²⁶

The cross-border FEWS have also helped to improve the understanding of the character and political economy of transboundary flood risks. Then, the Nepali and Indian government authorities working in the area, such as the Chief District Officers in Nepal, the Additional District Magistrate of Baharaich and the Sub Divisional Magistrate in the Nanpara Office in India appreciated the success of cross-border early warning information sharing mechanism in saving lives and assets.²⁷ The argument that “Nepal sends flood” to India no longer finds an audience among the communities along the riverbanks of the Ghagra and Saryu rivers.

In 2013, the NGOs facilitated the formation of a cross-border coordination committee in order to strengthen civil society initiatives on EWS. The Chairperson of the district chapter of the Nepal Red Cross Society and a media person from UP, India, jointly chaired the group. The committee would meet prior to, during and after the monsoon to review the exchange

of information on floods. The meetings were discontinued after 2017 since there was no funding support. The NGOs are instrumental in keeping community organisations active and keeping the cross-border FEWS functional at the community level. Now, they are no longer active.

Improved accessibility of telephone and internet services in recent years has filled the gap. Presently, Nepal's DHM web page displays flood level information on cross-border rivers (from west to east: Mahakali, Karnali, Babai, West Rapti, Narayani, Bagmati, Kamala, Koshi and Kankai). The information can be accessed publicly in India. This information is useful to saving lives downstream. Improvement in weather forecasting technologies can open new avenues of collaboration between the two countries.

The practice of building on the access to river-level information upstream has been extended to other cross-border rivers between India and Nepal, all through non-government arrangements.²⁸ These small-scale and low-cost community-centred flood early warning arrangements have helped save lives, improved cross-border contacts, dispelled myths to some extent and built trust between the communities across the border. Such measures must be upscaled and institutionalised. As the upstream country, Nepal has much to offer on hydrological information, while India can do the same in the field of space-technology-based weather forecasting as well as flood risk management.

Flood Risk in South Asia

South Asia, one of the most populous regions in the world, has only about 3 per cent of the world's land area and houses 30 per cent of the world's population. The region has the fastest urbanisation rate. However, this urbanisation does not consider disaster risks. The number of people living in flood and landslide risk areas is increasing. In addition, the development of infrastructure and the conversion of natural landscapes into settlements, roads, tunnels, dams and agriculture fields in high-risk areas are increasing their exposure to extreme climatic hazards even further. South Asia is a global hotspot for a multitude of disasters. Some examples are: the 2004 Indian Ocean Tsunami, the 2005 Kashmir Earthquake, the 2013 Uttarakhand Floods, the 2014 Cyclone *Hudhud*, the 2015 Nepal Earthquake, the 2017 Floods in the Northern Ganga River Basin and the 2022 Pakistan floods.

These shocks further weaken the community and country's capacity to cope with future stresses.

The South Asia Monsoon (SAM) is becoming more erratic, making the conditions of too much and too little water more extreme. The *Fifth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC)* has highlighted that South Asia will face climate change-induced challenges, such as rising temperature, erratic precipitation, melting of permafrost, extreme rain in short periods with hazards such as floods, droughts and windstorms cascading across boundaries.²⁹ Past events show that these predictions are becoming true earlier and faster than thought. The impacts are also transferred through the market and other socioeconomic linkages, including migration. It is, therefore, important for South Asian countries to work together and avoid irreversible climate change. They must also build local and regional resilience capacity to deal with the disasters, considering the linkage between SAM and the river basins.

By working together, South Asian countries can better manage disasters. They can use the capacity to achieve climate change adaptation targets. The linked natural landscape, river systems, culture and the climate of the region have the potential to achieve complementarity for balanced development. By sharing capacities, including technologies and climate information, countries can prosper together and build resilience to current and future disasters, like floods.

Opportunities and Challenges

Nepal and India need to collaborate for flood forecasting, early warning and other aspects of flood management by using structural and non-structural measures. India's Meteorological Department (IMD) is the regional leader for the South Asia Climate Outlook Forum (SASCOF) and heads one of four regional climate centres in Asia and the South Asia Regional Centre for Severe Weather Forecasting Programme. The IMD also globally coordinates with the World Meteorological Organisation. India has developed the capacity for weather monitoring by satellite and for analysing weather patterns using high-powered computer technologies. These allow the forecasting of weather events with higher precision. Nepal can benefit from this capacity and, in turn, India can benefit from flood information derived from Nepal through

a cross-border flood early warning mechanism. Regional and bilateral cooperation on the timely sharing of data and information about severe weather and hazards will help the region to improve access to climate information and climate-induced disaster risk management.

Factors such as slow progress on adaptation and increasing disaster impacts are likely to affect achieving Sustainable Development Goals in 2030. South Asia is not adequately prepared for future shocks even as the risks are increasing. The South Asian Association for Regional Cooperation (SAARC), the institutional structure for collaboration, is almost defunct and so is the SAARC Disaster Management Centre. Individual countries have achieved some successes in reducing casualties from cyclones and weather/water-related disasters, thanks to improved early warning systems. However, the regional response capacity which is needed is not built up. The COVID-19 message is that every nation in the region must come together to overcome adverse impacts, which are likely to spread directly and indirectly and affect vulnerable populations and the economy.

Climate-related conflicts and migration are other emerging challenges that need to be addressed in the region. Climate change-induced disasters are likely to become more severe in the region in the near and medium term. Computer model-based studies suggest that if greenhouse gas mitigation is done within the current targets and pledges only, climate-induced disasters may displace 62.9 million people in South Asia by 2050.³⁰ If the Paris Agreement³¹ targets are met, 22.5 million people may be displaced globally by 2030 and 34.42 million people by 2025.³² Referring to increasing climate stress in the region, Ahsan Butt argues:

“Regardless of the specifics, it is well past time for India, Pakistan and Bangladesh—along with Afghanistan, Nepal, Sri Lanka, Bhutan and the Maldives—to put aside their squabbles and begin region-wide conversations on climate adaptation and mitigation.”³³

Thus, bilateral and multilateral cooperation is becoming more important in cross-border flood risk management amidst changing SAM. Such cooperation must focus on enhancing the community’s access to severe weather and flood early warning as well as upscale community-based low-cost practices of flood risk reduction. These must then be institutionalised

into national, bilateral, as well as regional policy priorities to depart from top-down, single-sector dominated structural strategies and siloes between countries.

Conclusion

The bilateral efforts by Nepal and India in managing floods in cross-border rivers have focused on building embankments and levees. The efforts do not involve local communities in flood risk management decisions and local communities are considered passive recipients of the benefits. Non-structural measures, like early warning systems with the active participation of local communities, can provide better outcomes in lowering flood risk.

NGOs and civil societies in both countries can complement the government's efforts. Coordination and collaboration between government and non-government sectors can help develop locally suitable mechanisms to communicate flood risk. NGOs can help government authorities in flood management, but face a lack of regular funds to innovate. Governments should provide funding to NGOs to work on community-based approaches to flood risk reduction and management.

The national meteorology agencies should collaborate better to develop and provide reliable weather and flood forecasts of local scale as well as national and regional so that local communities can utilise the information to be safe and save their assets from flood. Bilateral flood management mechanisms between India and Nepal should upscale community-centred early warning systems, and working with civil society organisations should be taken up as a priority. Such cooperation is important between other countries in the region as well. A regional collaboration in weather monitoring and meteorological forecasting is important and, with its capacity, India can take the lead.

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Red Cross Society, Jhapa; District Administration Office, Banke and Bardiya; Flood Forecasting Division, DHM. Kamal Tripathi (currently with SEEDS India); Bhanu Mall (PGVS, UP); Nanpara Tehsil Office; and District Magistrate Office, Baharaich, India.

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11

South Asia's Economic Challenges and Priorities in an Uncertain Global Economy

Ganeshan Wignaraja

Introduction

Initial post-pandemic era expectations of an era of sustained global growth have not materialised. After an initial uptick in 2021, global growth has slowed, weighed down by external shocks from the continuing Russia-Ukraine conflict and heightened trade tensions between China and the United States of America (USA) which are causing de-risking of global supply chains by G7 economies and tightening global monetary conditions which are partly triggering an emerging market debt crisis. The International Monetary Fund's (IMF's) annual world economic reports make for sombre reading. For instance, the *World Economic Outlook* of April 2023 labelled the global economic outlook as a "rocky global recovery".¹ Meanwhile, the key message of the *IMF World Economic Outlook Update* of January 2024 is broadly balanced risks to global growth with a possible soft landing. While this seems a modest change over the last few months, many global risks and uncertainties still prevail. How an uncertain global economic scenario is affecting South Asia and what policy options are available to navigate its choppy waters are important questions for the world's most populated region.

To stimulate policy discussion, this chapter discusses key macroeconomic, debt, aid and trade issues in South Asia. First, it considers the pervasive

economic fallout from the Russia-Ukraine conflict on South Asia, arguably the most consequential global shock. Second, it explores Sri Lanka's experience and India's role as an emerging aid donor to put the spotlight on South Asia's simmering external debt crisis. And third, amid talk of the world's economic centre of gravity shifting to Asia and the de-risking of global supply chains by G7 economies, it analyses the importance of South Asia in trade integration across Asia. Finally, it concludes.

The Russia-Ukraine Conflict and South Asia

As background, Table 11.1 provides some economic indicators for South Asia. A population approaching 2 billion people makes South Asia the most populated region in the world. But, the region's economies vary by country size and economic development. Looking at the country size, the largest populations are in India (1.4 billion), Pakistan (231.4 million) and Bangladesh (169.4 million). India is by far the largest economy, followed some way behind by Bangladesh, while Bhutan and the Maldives are the smallest. Although South Asia has made some economic and social progress over recent decades, there is room for improvement. For instance, most of the region's economies are counted as lower-middle-income (with a per capita income of between US\$ 1,086 and US\$ 4,255). The Maldives (US\$ 10,366.3) with a population of 0.5 million is an outlier while Sri Lanka (US\$ 4,013.7) is close to the threshold for upper-middle-income economies (US\$ 4,255). However, except for Sri Lanka (92.4 per cent) and the Maldives (97.8 per cent), literacy levels in most of South Asia lag world rates (87 per cent).

Table 11.1: South Asia: A Diverse Region

<i>Country</i>	<i>Population 2023*</i>	<i>GDP (Current US\$) 2021</i>	<i>GDP Per Capita (Current US\$) 2021</i>	<i>Literacy Ratio (%) 2021</i>
India	1.4 Bn	3.1 Tn	2,256.6	81.0
Bangladesh	169.4 Bn	416.2 Bn	2,457.9	74.6
Pakistan	231.4 Bn	348.2 Bn	1,505.0	58.0
Sri Lanka	22.2 Mn	88.9 Bn	4,013.7	92.4
Nepal	30 Mn	36.2 Bn	1,208.2	71.1
Bhutan	0.8 Mn	2.5 Bn	3,266.4	71.0
Maldives	0.5 Mn	5.4 Bn	10,366.3	97.8

Source: World Bank Development Indicators, at <https://databank.worldbank.org/source/world-development-indicators> (Accessed 5 June 2023).

Just as a fragile global economy was recovering from COVID-19, the conflict between Russia and Ukraine escalated in late February 2022, delivering a major blow to the global economy, hurting growth and raising prices.² Reflecting the severity of the external shock, the latest IMF data indicate that global growth abruptly halved from 6.1 per cent to 3.5 per cent between 2021 and 2022 and could slow further to 3.1 per cent in 2023 and 2024 (see Table 11.2). This means that global risks (particularly a continuing Russia-Ukraine conflict, US-China tensions and the Israel-Hamas conflict) could tilt these forecasts to the downside.

Table 11.2: Annual Average Growth Rates in South Asia (% per year)

<i>Country</i>	<i>2020</i>	<i>2021</i>	<i>2022</i>	<i>2023*</i>	<i>2024*</i>
India	-6.6	8.9	7.2	6.7	6.5
Bangladesh	3.5	5.0	7.1	6.0	6.0
Pakistan	-1.0	5.6	6.1	-0.5	2.5
Sri Lanka	-3.6	3.6	-7.8	-3.1	1.5
Nepal	-2.1	2.7	5.6	0.8	5.0
Bhutan	-2.4	-3.7	4.8	5.3	3.0
Maldives	-33.5	33.4	13.9	8.1	5.0
World	-3.1	6.1	3.5	3.1	3.1

*Forecast

Source: IMF World Economic Outlook, April 2023, October 2023, Update 2024, at <https://www.imf.org/en/Publications/WEO> (Accessed 12 March 2024).

The conflict shock has hit South Asia's growth trajectory, with some economies experiencing immediate disruptions.³ As Table 11.2 shows, India's growth slowed from 8.9 per cent to 7.2 per cent between 2021 and 2022; Maldives from 33.4 per cent to 13.9 per cent and Sri Lanka's from 3.6 per cent to -7.8 per cent. Growth disruptions in others may come with one- or two-year lags, exacerbated by domestic macroeconomic imbalances. Thus, between 2022 and 2023, Pakistan's growth could slow from 6.0 per cent to -0.5 per cent and Bangladesh's from 7.1 per cent to 6.0 per cent. Meanwhile, between 2023 and 2024 Bhutan could slow from 5.3 per cent to 3.0 per cent while Nepal's growth may increase from 0.8 per cent to about 5.0 per cent.

The IMF data also hints at the emergence of a two-speed growth pattern in South Asia in 2023–2024. The faster-growing regional economies in 2023 could be India (6.7 per cent), the Maldives (6.1 per cent) and Bangladesh

(6.0 per cent), while the slower ones could be Nepal (5.0 per cent) and Bhutan (4.3 per cent). However, as discussed below, Sri Lanka (−3.1 per cent) is likely to see a continued contraction along with Pakistan (−0.5 per cent) due to severe economic challenges. While most of South Asia could exceed the low bar of global growth projections, only four (India, Bangladesh, Nepal and Sri Lanka) may see improved growth in 2024 as compared to 2023.

Inflation has been much higher than in recent decades and caused a cost-of-living crisis in South Asia as the poor struggle to make ends meet. Pakistan and Sri Lanka had double-digit inflation in 2023. Advanced economies have withdrawn the monetary stimulus provided during the pandemic, and global monetary policy is being tightened. Volatility in global financial markets has increased due to concerns about the timing of the tightening of the monetary policy of major central banks. Disruptions in supply chains and rising petroleum prices after the invasion of Ukraine caused challenges in managing global inflation and growth. Russia and Ukraine combined have a significant share of the global supplies of oil, gas and other commodities; and so the invasion has increased commodity prices. As financial flows are low with Russia and Ukraine, South Asia's financial markets could be insulated from the conflict in the short term. But, global financial flows to South Asia may be indirectly affected due to volatility in global financial markets.

What are the transmission channels of the conflict shock to South Asia? The direct impact of the conflict on South Asia is mainly occurring through trade linkages and via rising commodity prices as the region is a net importer of commodities.⁴ Even before the invasion, inflation in South Asian economies was rising relative to competitors in global markets. The additional shock in commodity prices is further widening the gap, increasing the relative cost of production in the region and eroding the competitiveness of cheap labour and energy-intensive industries. Dependence on fossil fuels for energy generation is higher in South Asia than elsewhere. Lower global demand for goods and services from the region and increased volatility and uncertainty in financial markets, leading to the flight of capital to safety is indirectly impacting the region. The direct impact is translating to higher relative

inflation while the indirect impact is lowering growth, possibly causing stagflation in the second round.

Table 11.3: Persistent Macroeconomic Problems in South Asia, Most Recent Estimates

<i>Country</i>	<i>Primary Balance % of GDP</i>	<i>Current Account Balance % of GDP</i>	<i>External Debt % of GDP</i>	<i>Foreign Reserves (US\$ Billion)</i>
India	-3.6	-2.2	20	578.8
Bangladesh	-3.8	-2.1	11.4	32.2
Pakistan	-7.2	-29	34.5	773.0
Sri Lanka	-3.8	-1.6	76	2.2
Nepal	-5.3	-1.6	17.3	756 Mn
Bhutan	-0.5	-2.3	69	4.0
Maldives	-3.2	-5.2	71	9.3

Source: IMF World Economic Outlook, April 2023, at <https://www.imf.org/en/Publications/WEO/Issues/2023/04/11/world-economic-outlook-april-2023> (Accessed 5 June 2023). IMF Data Mapper, at https://www.imf.org/external/datamapper/GGCBP_G01_PGDP_PT@FM/USA (Accessed 5 June 2023). <https://data.imf.org/?sk=e6a5f467-c14b-4aa8-9f6d-5a09ec4e62a4> (Accessed 5 June 2023).

Much depends on the duration of the conflict, the severity of Western sanctions on Russia and Russia's response. The hit to South Asian economies could vary, depending on their economic linkages with Russia and Ukraine, the growth and financial market linkages to the rest of the world and the extent of their self-sufficiency in food and commodities. Stronger and lengthy Western sanctions against Russia will cause a persistent rise in commodity prices as well as global inflation. This would hit global growth, leading to lower external demand for South Asian exports. Inflation in South Asia has risen after the pandemic, increasing income inequalities and poverty. A full invasion scenario is likely to further increase the region's inflation, which will hamper growth and widen income inequalities.

It is interesting to speculate on the hit to South Asia's growth under pessimistic conflict scenarios. With its bigger domestic market, India may sustain a positive (but lower) growth for some time. Bangladesh is heavily dependent on exports and remittances, so it will also be affected by lower

external demand through the growth channel. Smaller economies which are more vulnerable to external shocks, Bhutan, Nepal, Maldives and Sri Lanka, could see larger shorter-term contractions compared to India and Bangladesh. Pakistan's vulnerable economy could also contract. Tourism and trade linkages will take a hit in Sri Lanka and the Maldives. Russia and Ukraine are important tourism markets for these countries, and Russia imports about 20 per cent of Sri Lankan tea.

Table 11.4: Status of IMF Programmes in South Asia in June 2023

<i>Country</i>	<i>Nos of IMF Programmes in History</i>	<i>Current IMF Programme (Y/N/UD)</i>	<i>IMF Programme Period</i>	<i>Value US\$</i>
India	7	N	—	—
Bangladesh	14	Y	2023-2027	3.3 Bn
Pakistan	23	Y	2023-2024	1.1 Bn
Sri Lanka	17	Y	2023-2027	3.0 Bn
Nepal	9	Y	2023-2027	52.8 Mn
Bhutan	—	N	—	—
Maldives	3	Y	2023	21.2 Mn

Source: IMF Extended Programme Data, at <https://www.imf.org/external/np/fin/tad/extrans1> (Accessed 5 June 2023).

Macroeconomic management in South Asia during heightened global risks from the conflict has been difficult. Table 11.3 provides a snapshot of the magnitude of the macroeconomic challenges facing South Asia in 2022. The data tells a grim story of unsustainable twin fiscal and current account deficits and high external debt to GDP ratios across the region. India has significant foreign reserves to sustain its import capacity and to maintain liquidity to navigate an economic crisis. With this advantage, India is attempting to minimise the growth impact through domestic demand management policies by using its available monetary and fiscal policy space. However, others in South Asia are in a more precarious economic position. They are being forced to absorb the impacts of lower external demand and volatile financial market conditions through economic contraction, leading more people to fall below the poverty line. Not surprisingly, except for India and Bhutan, the other South Asian economies have sought IMF assistance to tackle acute balance of payments and fiscal problems (See Table 11.4).

Sri Lanka's Crisis and India's Role

A prime island location in the Indian Ocean means that the USA and China consider Sri Lanka's role as an example of a small economy punching above its weight class.⁵ Alice Wells, Principal Assistant Secretary for South and Central Asian Affairs at the US State Department, recently observed that "Sri Lanka occupies some very important real estate in the Indo-Pacific region, and it [is] a country of increasing strategic importance in the Indian Ocean region."⁶ This has led some to see Sri Lanka largely through the lens of competition between the USA and China.⁷ The country is about ten nautical miles off the main East-West maritime trade route which sees some 60,000 ships passing through annually and only 34 nautical miles off the Southern coast of the large Indian economy. Furthermore, great powers have long eyed the Trincomalee Harbour in Northeast Sri Lanka, reputed to be one of the world's deepest natural harbours, as a potential naval base, particularly for submarines. Trincomalee was home to the East Indies Station of the Royal Navy during World War II and has become the Sri Lanka Navy's main base.

Sri Lanka has attempted to leverage its geography to become a regional trading and services hub by opening its economy to foreign trade and investment in 1977. Major investments to handle containerised cargo since the early 1980s have led to the Colombo Port being ranked as South Asia's top container port on the Lloyds List. It handles about half of all India's foreign transshipment trade. To overcome the disadvantage of a small domestic market, Sri Lanka began securing preferential market access to dynamic Asian markets through bilateral free trade agreements (FTAs) with Bangladesh, China, India, Singapore and Thailand.

However, Sri Lanka's regional hub ambition has faced a severe setback. An acute balance of payments crisis forced Sri Lanka to preemptively default on foreign debt of over US\$ 50 billion in April 2022, triggering a crippling economic contraction, with spiralling inflation. Sri Lanka's GDP fell by -7.8 per cent in 2022, year-on-year inflation rising to 69.8 per cent in September 2022 (measured by the Colombo Consumer Price Index) and a reversal in previous gains in poverty reduction.⁸ Mass protests by ordinary Sri Lankans against family-dominated governance and economic

mismanagement also resulted in the resignation of the government of President Gotabaya Rajapaksa and his brother Mahinda Rajapaksa.⁹

External economic shocks and policy missteps explain the economic crisis.¹⁰ The severe economic shock from COVID-19 meant an economic contraction of -3.6 per cent in 2020, and an additional half a million ‘new’ poor (mostly in urban areas, among formal sector employees and informal sector workers). As economic recovery began, the Russia-Ukraine conflict shock hit the economy through higher import bills for fuel and food, leading to 60+ per cent inflation by August 2022 and a significant exchange rate depreciation against the US\$. These external shocks hurt an already weak economy already suffering from the economic costs of a thirty-year civil conflict which ended in 2009, persistent twin fiscal and current account deficits, excessive foreign borrowing from China’s Belt and Road Initiative (BRI) for low-return infrastructure projects and rising external debt service in US\$.

The so-called homegrown economic solutions by a government led by President Gotabaya Rajapaksa and his brother Prime Minister Mahinda Rajapaksa, during 2019 to early 2022, compounded the problems, including comprehensive tax cuts which drastically reduced tax revenue, banning imports of chemical fertilizers without preparing farmers prompting a surge in food prices, maintaining a highly expansionary monetary policy beyond its shelf life, persisting with a fixed exchange rate without the foreign reserves to support it and a long delay in seeking an IMF programme. With these factors weighing on the country’s outlook, Sri Lanka’s economy contracted by as much as -8.7 per cent in 2022.

The good news by May 2023 was that the economy is showing signs of stabilising. A return to growth in Sri Lanka is expected in 2024, IMF forecasts made in April 2023 suggest a less severe economic contraction of -3.1 per cent in 2023 and growth of 1.5 per cent in 2024.¹¹ Year-on-year inflation fell about 25 per cent in May 2023 (measured by the Colombo Consumer Price Index). However, negative growth in 2022–2023 means job losses across the economy, a doubling of income poverty to 25 per cent of the population (at US\$ 3.65 per capita, 2017 PPP) and child malnutrition with many families switching to less nutritious diets.¹²

The revised economic outlook is underpinned by a calming of the turbulent political situation (which is allowing ordinary Sri Lankans to live their lives), decisive economic measures by the new Sri Lankan government under President Ranil Wickremesinghe and timely Indian aid. From late July 2022 onwards, the Wickremesinghe government began implementing measures to stabilise the economy, intensified talks on an IMF Programme and sought assurances from Sri Lanka's bilateral creditors on debt restructuring. Concrete economic stabilisation measures have included significantly tightening monetary policy to control spiralling inflation, raising taxes, removing fuel and electricity subsidies and a privatisation programme for commercial state-owned enterprises (SOEs), including Sri Lankan Airlines, Sri Lankan Telecom and Sri Lanka Insurance.

Responding to crisis-hit Sri Lanka's urgent request for external financing pending an IMF Programme, India mobilised the largest bilateral aid package in its history. This aid was motivated by the unfolding humanitarian crisis affecting the Sri Lankan people, worries about a flood of refugees across the Palk Strait and political pressure from South India. Indian aid, of about US\$ 4 billion during the first half of 2022, flowed to Sri Lanka through credit lines, loans and grants. India's aid to Sri Lanka in 2022 far exceeds bilateral aid to Sri Lanka by other development partners and has cemented its reputation as a key emerging donor. India also undertook quiet diplomacy for the IMF Programme for Sri Lanka and has extended a US\$ 1 billion credit line to Sri Lanka until March 2024. As early as July 2020, the Reserve Bank of India had agreed a currency swap arrangement with the Central Bank of Sri Lanka for short-term financing of US\$ 400 million to mitigate the effects of the COVID-19 pandemic.

In March 2023, the IMF Board approved a long-delayed IMF Programme of US\$ 2.9 billion over 48 months for Sri Lanka, after receiving assurances that financing or debt relief provided by all bilateral creditors would be consistent with restoring debt sustainability under the Programme. An IMF bailout after defaulting inevitably has geopolitical repercussions. Talks with China, a holder of as much as 8.5 per cent of Sri Lanka's public debt (June 2022), were lengthy due to China's tough zero COVID-19 restrictions and Chinese demands that its debt be treated differently from

other bilaterals.¹³ China eventually gave creditor assurances to IMF's satisfaction after high-level discussions between President Wickremesinghe and senior Chinese officials.

The 17th and toughest IMF Programme in Sri Lanka's history is important to tackle the economic crisis. It seeks to restore fiscal and debt sustainability by raising taxes and improving tax administration, improving public expenditure management and anti-corruption measures, better-targeting poverty reduction programmes, creating an independent central bank and recapitalising the banks.¹⁴ The programme will unlock external financing, with US\$ 333 million immediately disbursed, followed by Asian Development Bank and World Bank financing. Some risks, however, could affect the implementation of the IMF Programme, including a difficult debt restructuring process ahead, a lack of political consensus among political parties on the IMF Programme and a sharp global economic slowdown.

Nonetheless, the changing outlook for Sri Lanka makes it opportune for India-Sri Lanka ties to shift from an aid relationship to deepening bilateral trade and foreign direct investment (FDI) flows.¹⁵ The conglomerate Adani Group recently committed to investing US\$ 1,142 billion in wind power renewable energy plants in the Mannar Basin and the West Container Terminal in Colombo Port. Adani's huge projects are equivalent to nearly 67 per cent of all Indian FDI into Sri Lanka between 2005–2019. A miles-long transmission line running under the Indian Ocean to promote bilateral power trade is also being discussed. It has been reported that the conglomerate Tata Group, which acquired Air India in January 2022, is currently in talks to buy Sri Lankan Airlines. One hopes that these Indian infrastructure projects will be transformative for Sri Lanka by bringing in capital as well as transferring skills and technology. Confidence built through these investments could encourage more Indian FDI in Sri Lanka in agro-processing, textiles, light manufacturing and the information technology services sectors.

Similarly, globalising Sri Lankan firms should invest in South Indian states, such as Brandix in textiles, Dilmah in tea and tourism and John Keels Holdings in food processing and tourism. India and Sri Lanka should actively promote bilateral FDI flows by better marketing to investors, liberalising FDI entry regulations and cut the red tape hampering investors through

digitisation. Early resumption of talks on a comprehensive India-Sri Lankan trade deal to promote regional rules-based trade and FDI would be icing on the cake. The goal should be to achieve a high standard trade deal to facilitate deep integration in supply chains and services by adopting the so-called 21st Century trade rules.

One year on, Sri Lanka seems to be transitioning from an economic crisis to a recovery pathway. With the political will to implement the IMF Programme, Sri Lanka could see some economic normalcy in a few years. India-Sri Lanka ties should shift from an aid relationship to deepening trade and investment flows for mutual benefit. A growing Sri Lanka would be a major win for Prime Minister Modi's 'Neighbourhood First policy' and enable India to steal a march over China as an emerging donor during its G20 Presidency.

Trade Integration across Asia¹⁶

The underwhelming record of regional trade integration in South Asia means that it would make economic sense for the region to trade more with globally important East Asia. Since the 1990s, South Asia-East Asia trade and FTAs have gathered pace, linked to India's trade re-aligning towards East Asia. Although from a small base, total merchandise trade between South Asia and East Asia (in US dollar terms) grew rapidly, at about 10 per cent per year between 1990 and 2018, to reach US\$ 332 billion in 2018 (see Figure 11.1). A conservative projection suggests that this figure could rise to about US\$ 479 billion over the next few years.¹⁷ It is not surprising that the large and dynamic Indian economy has been central to South Asia's trade integration with East Asia. The rest of South Asia is also seeing increasing trade with East Asia. Market-led integration through global supply chains and conventional trade has been followed by policy-led integration through trade deals. The number of FTAs in effect linking economies in South Asia and East Asia could also increase three-fold from 10 in August 2021 to around 30 by 2030.

Several factors explain the shift in regionalism priorities.¹⁸ First, India's adoption of a 'Look East policy' and an outward-orientated economy in 1991 marked the start of a new phase in regional ties. India's 'Look East policy' signalled its intent to revitalise its cultural, defence and economic

relations with globally important East Asia. India's 'Act East policy' took effect when Prime Minister Narendra Modi (on his maiden visit to the ASEAN-India Summit in 2014) emphasised practising more action-oriented policy toward ASEAN and the wider East Asia. The landmark ASEAN-India Comprehensive Economic Cooperation Agreement of 2010 and other FTAs have liberalised intra-Asian trade and investment. India's moves have catalysed academic and policy interest in the gains from regional integration across Asia.

Second, South Asia's adoption of more outward-oriented development strategies has encouraged greater global and Asian trade ties. Sri Lanka was the earliest to undertake economic reforms in 1977 to promote FDI and exports. Bangladesh began implementing economic reforms in the early 1980s, while Pakistan's major economic reforms came in 1988. Although India began partial economic reforms in the 1980s, major economic reforms started only in 1991.

Figure 11.1: Total Merchandise Trade Between South Asia and East Asia, 1990–2023F* (US\$ Billion)



Third, China's offshoring of global supply chains to other parts of Asia is also significant. Supplies of cost-competitive skilled labour and falling trade costs amid technological progress and productivity gains have helped spur the fragmentation of manufacturing activities throughout East Asia through supply chains and trade in intermediate goods. The first wave of supply chain activity involved Japanese firms offshoring segments of automotive and electronics manufacturing to economies such as Korea, Malaysia, Taiwan Province of China and Thailand. A second wave of supply chain activity followed China's opening to export-oriented FDI and membership of the World Trade Organisation (WTO) in 2001. Regional supply chain activity naturally gravitated to a rapidly growing Chinese economy that emerged as Asia's central assembly hub. A third, and more recent, wave of supply chain activity was driven by rising labour costs in China, an intensifying US-China trade war extending to semiconductor chips and China's zero COVID policy which was eased in December 2022. These developments are encouraging the offshoring of some labour-intensive segments of global supply chains from China to lower-wage parts of Asia, including India, Bangladesh and Sri Lanka.¹⁹

The onset of the COVID-19 pandemic in 2020 precipitated an ongoing global economic crisis, disrupting trade and the world economy in unimaginable ways. Signs of a recovery in regional trade in Asia after the COVID-19 pandemic have opened opportunities for South Asian economies to participate in global supply chains and services trade. Unshackling trade-led growth between South Asia and East Asia offers a useful engine to raise productivity, create jobs and reduce poverty.

What then needs to be done? Regional trade integration across Asia can be encouraged by gradually streamlining and reducing barriers to goods and services trade. Economic reforms have meant that South Asia had falling import tariffs through the 1990s and early 2000s. Tepid global GDP growth after the global financial crisis coincided with sluggish global trade growth. Fears of unemployment in declining sectors have led to mounting public pressure for protectionism. Import tariffs, particularly in agriculture and murky non-tariff measures have risen in several South Asian economies since the 2008 global financial crisis.²⁰ Rising protectionism is also occurring

against a backdrop of restricted trade in services in both regions. In 2023 and beyond, South Asian economies should explore rationalising import structures by streamlining irrational protection on essential food supports to ensure food security for poor households and on intermediate goods imports to mitigate disruptions in supply chains. When the recovery is firmly rooted, regional economies can embark on gradual trade liberalisation and export promotion programs. South Asia's trade opening needs to be carefully calibrated with tax reforms, as trade taxes account for much of government revenue in some economies. Adjustment financing to losing sectors to reallocate factors of production and re-training workers is also essential to promote gains from trade and to mitigate income inequality.

Another priority is improving the performance of special economic zones (SEZs) and investing in services SEZs to facilitate industrial clustering and exports. South Asia has over 600 SEZs in operation, including in Cochin in India, Gwadar in Pakistan, Mirsarai in Bangladesh and Hambantota in Sri Lanka. Dedicated SEZs for services, such as the Colombo Port City SEZ are less common. However, South Asia's SEZs have a variable record, which is measured by generating exports and jobs and fostering local linkages with the domestic economy. They mainly operate as public sector entities, which means it becomes expensive for South Asian economies to bear the full costs of establishing and running them, particularly while offering generous fiscal incentives. Fiscal incentives only matter on the margin in the locational decisions of multinationals and long tax holidays deprive poorer economies of vital tax revenue.

Furthermore, the odds are stacked against SEZs in small South Asian economies with difficult geographical circumstances. For instance, landlocked Nepal and Bhutan are hampered by the lack of sea connectivity, high transit costs involved in international border crossings, gaps in domestic infrastructure and cumbersome bureaucratic approvals. Improving SEZs in South Asia requires ensuring macroeconomic and political stability, adopting good practice regulatory policies towards investors, providing reliable electricity and 5G broadband cellular technology and upgrading worker skills. The feasibility of SEZs in small economies should also be carefully studied and policy lessons drawn.

Moreover, pursuing comprehensive FTAs eventually leading to the Regional Comprehensive Economic Partnership (RCEP) can provide for regional rules-based trade to help insure against rising protectionist tendencies. While South Asia is a latecomer to FTA-led regionalism compared to East Asia, it has made a start with the Japan-India FTA, the Sri Lanka-Singapore FTA and the Pakistan-Indonesia FTA. However, regional economies need to improve tariff preference use by better preparing business on navigating complex rules of origin in FTAs and including new trade issues relevant to global value chains in future FTAs. Mega-FTAs, like RCEP, can provide a framework for regional rules-based trade to insure against rising protectionism. Although India opted out of the RCEP talks in November 2019, the door is open for it to join the RCEP agreement. India has returned to free trade deals and concluded FTAs with UAE and Australia in 2022.²¹ India can prepare for future RCEP membership by undertaking structural reforms to boost business competitiveness in global supply chains and foster greater regulatory coherence with East Asia. If India joins RCEP, the rest of South Asia may be incentivised to also join due to the fear of being left out and suffering from trade diversion effects.

Finally, a reinvented trade-focused Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) can facilitate stronger trade ties and support the interest of smaller members. Inactivity in the South Asian Association for Regional Cooperation (SAARC) has meant that BIMSTEC has gained some prominence as a regional cooperation institution. Established in 1997 to promote regional cooperation between South Asia and Southeast Asia, it has evolved gradually. BIMSTEC presently has five South Asian members (India, Bangladesh, Bhutan, Nepal and Sri Lanka) and two Southeast Asian members (Myanmar and Thailand). The member-driven organisation is served by a small under-resourced secretariat in Dhaka, with limited autonomy and technical skills.

One outcome is that negotiations on a BIMSTEC FTA have been ongoing since 2004 with no end in sight. Nonetheless, a BIMSTEC Charter setting out rules for the organisation and a 10-year BIMSTEC Masterplan for Transport Connectivity (outlining 141 flagship projects costing US\$ 47 billion) were adopted at the 5th BIMSTEC Summit in Colombo in March 2022. The unfinished agenda to make BIMSTEC more focused on regional

trade requires better resourcing of the BIMSTEC Secretariat, pushing to conclude the long-running BIMSTEC FTA and building trade policy capacity in smaller economies.²² BIMSTEC should also introduce dialogue partner status to encourage trade cooperation with outsiders and open regionalism in Asia.

While broad South Asia-East Asia trade integration may be desirable, increasingly complex geopolitics might rule it out for some time. Accordingly, a narrower geographical coverage between South Asian and Southeast Asian economies could act as a building block for eventual trade integration across Asia. Computable general equilibrium studies suggest that a deep regional integration scheme covering South Asian and Southeast Asian economies can generate significant welfare gains for both regions.²³ To avoid a potential backlash against regionalisation, special attention should also be paid to ensuring actual gains from trade for South Asia's smaller and poorer economies.

Regional trade integration between South Asia and East Asia is an idea whose time has come in a gloomy world economy. A coherent set of pro-regional trade policies and political will can make this a reality and uplift the lives of millions of people across Asia.

Conclusion

All the South Asian economies have attained lower-middle-income status in the world's most populous region. But differences in country size and economic development levels exist. In a "rocky global economy" scenario, there are also concerns about the outlook for regional economies. This chapter has explored the economic challenges in South Asia posed by an uncertain global economy through the lens of the Russia-Ukraine and Hamas-Israel conflicts, Sri Lanka's economic crisis and Asian regional trade integration. The discussion suggests several findings and policy implications.

First, the Russia-Ukraine conflict has hit South Asia quite hard just as a pandemic recovery was starting. Transmission of the conflict shock through trade and monetary channels is causing a growth slowdown, higher inflation and rising external debt in the region. This underlines the importance of implementing macroeconomic stabilisation measures and seeking early IMF assistance at the onset of a balance of payments crisis.

Second, Sri Lanka's economic crisis offers sobering lessons for South Asia regarding the costs of economic mismanagement when facing external shocks in a country once dubbed as a basic needs success story. Nonetheless, one year on, decisive economic stabilisation efforts by the Government of Sri Lanka, Indian aid and a stringent IMF Programme may be offering Sri Lanka a sporting chance of recovery.

Third, trade integration between South Asia and East Asia is increasing amidst lacklustre global trade and underwhelming South Asian trade integration. A coherent set of pro-regional trade policies and political will can make this a reality and uplift the lives of millions of people. Key measures include gradually reducing barriers to trade, improving the performance of SEZs, pursuing comprehensive FTAs eventually leading to the RCEP and reinventing BIMSTEC.

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12

Resilient Growth in Turbulent Times: Lessons from South Asian Good Practices for Deepening Regional Economic Integration

Mahfuz Kabir

Introduction

The cumulative impact of the COVID-19 pandemic and the Ukraine war has created immense strain on the global economy. The world economic slowdown that started in 2022 has worsened in 2023 and, according to the prediction of the World Bank¹ and the International Monetary Fund (IMF), would persist for several years.² According to the projection of the World Bank, the global economy is likely to experience the growth of the gross domestic product (GDP) at only 1.7 per cent. The growth of per capita income would be lower than that in the 2010s in all the regions of the world. The growth of GDP in the Middle East region would experience a sharp contraction in 2023 because of the lower level of oil production due to the fear of reduced prices. The economic growth in the Middle East and North Africa (MENA) would decelerate sharply to 1.9 per cent in 2023, after growing at 6 per cent in 2022. This would impact the demand for migrant workers negatively.³ Developing and Emerging Economies (DEEs, excluding China) would face an approximately 6 per cent lower growth of GDP by the end of 2024 than the projected growth in the early 2020s. The

slowdown that is being experienced by DEEs would be deepened further, which would be accompanied by lower private investment, currency depreciation and high inflation among others.

Like many other parts of the world, South Asia is currently passing through turbulent times. The countries are exposed to unprecedented back-to-back effects of COVID-19 and the Ukraine war which have dampened the region's impressive growth because of these unprecedented shocks. They have exacerbated manifold economic and developmental challenges. The challenges emanate from recent massive disruptions in input-output supply chains and energy crises, along with catastrophic natural disasters and global climate change and deepened the slowdown of the regional economies and the integration processes. Currently, smaller countries in South Asia are facing challenges of maintaining a critical level of foreign currency reserves, financing infrastructure and cross-border connectivity and promoting regional economic integration. The situation will be worsened in the near term due to the prolonged global economic slowdown, diplomatic tensions among the major powers, the continuing Ukraine war and the recent crisis in the Middle East. The cumulative effects of slow growth, financial tightening through high policy interest, restrictive trade and international transactions and increasing geopolitical tensions could further deepen the crisis in the global economy as well as in South Asia.⁴

Given this broad context, this chapter analyses the ongoing challenges in the South Asian economies due to the cumulative effects of COVID-19 and the Ukraine war from Bangladesh's perspective and draws lessons from regional good practices for deepening economic integration.

Fallout of Global Economic Slowdown in South Asia

According to the IMF, the world economy would face stresses because of the Ukraine war, high inflation and the slowdown in the USA, Chinese, the EU and Japanese economies. However, according to its forecast, the global growth would be slightly higher (2.7 per cent in 2023) than that predicted by the World Bank, though it is lower than that of 2022 (3.2 per cent). It clearly mentions that greater than one-third of the world economy would shrink in 2023, including the USA, the EU and China. However, in a revised projection, another IMF report⁵ has mentioned that global economic growth

would be slightly higher than its preceding projection (2.9 per cent) in 2023, while growth in the USA, the EU and advanced economies would be very low (1.2, 1.4 and 0.7 per cent respectively). It cautions that the continuation of a restrictive monetary policy stance to curb inflation could cause further slowdown in the developed economies.

Countries in South Asia are witnessing significant challenges because of the global economic slowdown emanating from the back-to-back impacts of COVID-19 and the Ukraine war. Bangladesh experienced a temporary increase of poverty and unemployment since early 2020. The country continues to require additional public expenditure despite a short-term recovery in early 2022. The country resorted to the IMF for loan support of about US\$ 4.76 billion in January 2023⁶ to counter downward pressure on foreign exchange reserves (Figure 12.1). Sri Lanka suffered from massive public unrest due to an acute shortage of daily necessities, including food and fuel, that stemmed mainly from a ‘debt trap’, exhausted foreign currency reserves and the lack of external support to salvage the crisis. Inflation was heightened when the country was struggling with the crisis and with meeting basic necessities in 2021 and 2022. However, the Sri Lankan Central Bank could successfully tame inflation even as it was struggling with the shortage of foreign exchange. The latter compelled the country to declare itself as a

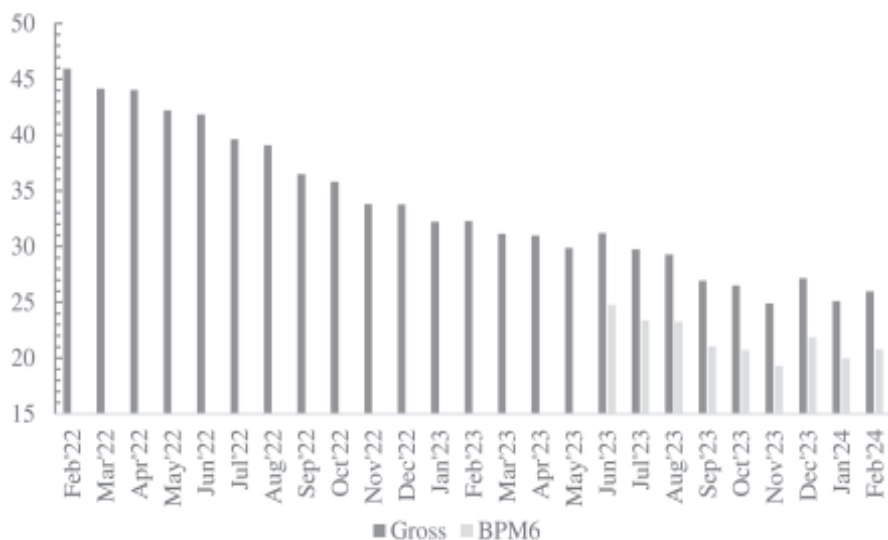
Table 12.1: Growth of Real GDP (%)

	2021	2022	2023	2024	2025	2026	2027	2028
World	6.28	3.42	2.83	3.02	3.16	3.16	3.07	3.05
USA	5.95	2.07	1.58	1.06	1.76	2.05	2.12	2.12
EU	5.37	3.47	0.79	1.37	1.88	1.72	1.49	1.41
UK	7.60	4.05	-0.25	0.95	2.17	2.01	1.77	1.53
China	8.45	2.99	5.24	4.48	4.08	3.96	3.62	3.44
Bangladesh	6.94	7.10	5.50	6.50	7.10	7.30	7.40	7.00
Bhutan	-3.33	4.33	4.68	3.40	5.41	7.17	4.00	3.88
India	9.05	6.83	5.89	6.33	6.21	6.07	6.00	6.04
Maldives	41.75	12.33	7.23	5.73	6.47	5.87	5.46	5.11
Nepal	4.25	5.84	4.40	5.11	5.18	5.20	5.22	5.25
Pakistan	5.74	5.97	0.46	3.53	4.40	4.80	5.00	5.00
Sri Lanka	3.33	-8.66	-3.05	1.48	2.61	3.00	3.09	3.10

Source: IMF World Economic Outlook, April 2023 Database.

defaulter of US\$ 51 billion loan in 2022.⁷ Pakistan has been suffering from massive pressure in the external sector due to the nearly dried foreign currency reserves and the vulnerability of the domestic economy.

Figure 12.1: Foreign Exchange Reserve in Bangladesh (US\$ Billion)



Source: Bangladesh Bank, March 2024.

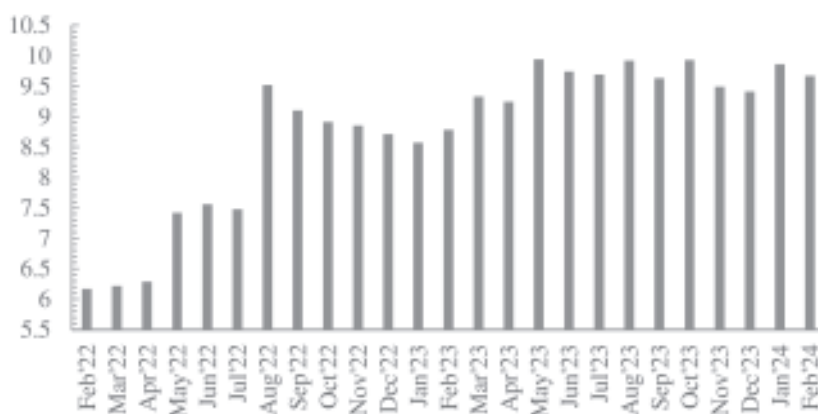
The fallout of the COVID-19 pandemic and the Ukraine conflict on the Bangladesh economy can be seen in its performance as represented by four major indicators. It can be clearly observed that before the onset of COVID-19, the growth of GDP of Bangladesh was about 8 per cent, which drastically reduced to 3.45 per cent. Subsequently, while the resilience of the economy was observed, the growth rate did not return to the pre-COVID level (Table 12.2). The growth rate again fell after the onset of Russia-Ukraine war. In addition, inflation has been high after the onset of Russia-Ukraine war (Figure 12.2). According to the forecast of IMF (2023), the growth rate of the real GDP of Bangladesh would remain the highest in South Asia from 2024 to 2028, followed by India (Table 12.1). The two economies are the largest in South Asia and they are based on complementarity and cooperation for mutual gains.

Table 12.2: Growth before and after COVID-19

<i>Financial Year</i>	<i>GDP Growth (%)</i>
2017-18	7.32
2018-19	7.88
2019-20	3.45
2020-21	6.94
2021-22	7.10
2022-23	5.78

Source: Bangladesh Bureau of Statistics (BBS), 2024.

Figure 12.2: Consumer Price Inflation (Point-to-Point, %)



Source: Bangladesh Bureau of Statistics, May 2022 to March 2024.

Integration in South Asia: The Case of Bangladesh-India Economic Cooperation

India and Bangladesh, the two largest and fastest growing economies of South Asia, have been demonstrating impressive resilience. The common areas of policy convergence of the two countries include macro-prudent policies for external sector management and adopted selective austerity measures to stabilise the macroeconomy and external sectors. The governments continued investment in climate change adaptation and mitigation, in human development and in the expansion of social protection coverage despite fiscal stresses.

Bilateral trade of goods and services, especially trade along value chains, continued to increase during the years of COVID-19 and afterwards, which

implies that the economic integration deepened during this period, based on mutual needs, dependence and complementarity.

Bilateral merchandised trade between Bangladesh and India is the highest in South Asia and can be considered as one of the best practices in the region during the turbulent time. The bilateral trade is remarkably high during COVID-19 onwards. The merchandised import of Bangladesh from India was US\$ 9.49 billion, the second largest import source in 2022–23. It was 13.9 per cent of total merchandised imports in that fiscal year. Cotton was about one-third among the imported products, which was followed by cereals (about-one sixth), vehicles and parts, sugar and sugar confectionary and mineral fuels and products.

Table 12.3: Bangladesh's Merchandised Imports from India by Major Products, 2021–22

<i>Products</i>	<i>US\$ Billion</i>	<i>% of Merchandised Imports</i>
Cotton	1.922	20.2
Cereals	0.996	10.5
Boilers, machinery and mechanical appliances; parts	0.590	6.2
Residues and waste from the food industries; Prepared animal fodder	0.572	6.0
Vehicles, and parts and accessories	0.482	5.1
Mineral fuels, oils and products, mineral waxes	0.470	4.9
Sugar and sugar confectionery	0.441	4.6
Organic chemicals	0.330	3.5
Edible vegetable and certain roots and tubers	0.304	3.2
Tanning or dyeing extracts, etc.	0.282	3.0
Plastics and articles thereof	0.276	2.9
Iron and steel	0.244	2.6
Other	2.583	27.3
Total	9.492	100.0

Source: Bangladesh Bank.

Bangladesh's exports to India have been impressive during the turbulent period. It has been mainly because of the expanded market of Bangladeshi main export items and price competitiveness, by utilising the duty-free access of almost all products in the Indian market. Bangladesh's merchandise exports to India amounted to US\$ 2.13 billion, which was 3.83 per cent of Bangladesh's total merchandise export earnings in 2022-23. The country

was the seventh-largest export destination of Bangladesh in the same year.⁸ Readymade garments (RMG) and accessories, jute, home textile, animal or vegetable fats and oils, and leather and travel goods occupied about three-quarters of the earnings of merchandised exports (Table 12.4).

Table 12.4: Bangladesh's Merchandised Exports to India by Major Products, 2022-23

<i>Products</i>	<i>US\$ Million</i>	<i>% of merchandised exports</i>
Woven apparel and clothing accessories	580.70	27.27
Knitted apparel and clothing accessories	432.15	20.29
Jute	222.35	10.44
Home textile	120.23	5.65
Animal or vegetable fats and oils	117.05	5.50
Articles of leather; travel goods, etc.	102.38	4.81
Footwear, gaiters and the like; parts	67.10	3.15
Plastics and articles thereof	55.43	2.60
Fish and crustaceans, etc.	51.63	2.42
Cotton	39.09	1.84

Source: Export Promotion Bureau of Bangladesh.

India is one of the top sources of Bangladesh's inward Foreign Direct Investment (FDI). It had the 9th position in terms of the amount of net FDI inflow in the fiscal year 2023. The net FDI inflow from the country was US\$ 119.88 million (Figure 12.3), which was 3.69 per cent of the total net

Figure 12.3: Net FDI Inflows by Major Countries in FY2023 (US\$ Million)



Source: Bangladesh Bank, Foreign Direct Investment and External Debt, Dhaka, 2023.

inflow of FDI in Bangladesh in FY 2023. The country also occupies the same position in terms of the stock of FDI as of June 2023 (Table 12.5), with 3.41 per cent of the total stock of FDI in Bangladesh.

Table 12.5: FDI Stock by Major Countries at the End of June 2023

<i>Country/Territory</i>	<i>US\$ Million</i>
USA	3,948.30
UK	2,820.15
Singapore	1,546.76
South Korea	1,482.91
Netherlands	1,320.15
Hong Kong, PRC	1,308.74
China	1,265.35
Malaysia	850.98
India	689.22
Australia	677.27
Others	4,328.61

Source: Bangladesh Bank, 2023.

The location of India's FDI in Bangladesh is fairly diversified. The sector-wise allocation of net FDI in 2022 indicates that more than half of investment is dedicated to textiles and wearing apparel, which is followed by banking, trading and food (Table 12.6). However, the flow of FDI is expected to increase significantly after the commencement of the activities of the Indian Special Economic Zones (SEZs).

Table 12.6: Net FDI Inflow from India by Sector, 2022

<i>Sector</i>	<i>US\$ Million</i>
Textiles & Apparel	53.10
Banking	18.49
Trading	10.96
Food	4.89
Agriculture & Fishing	3.80
Chemicals & Pharmaceuticals	3.33
Others	25.31

Source: Bangladesh Bank, 2023.

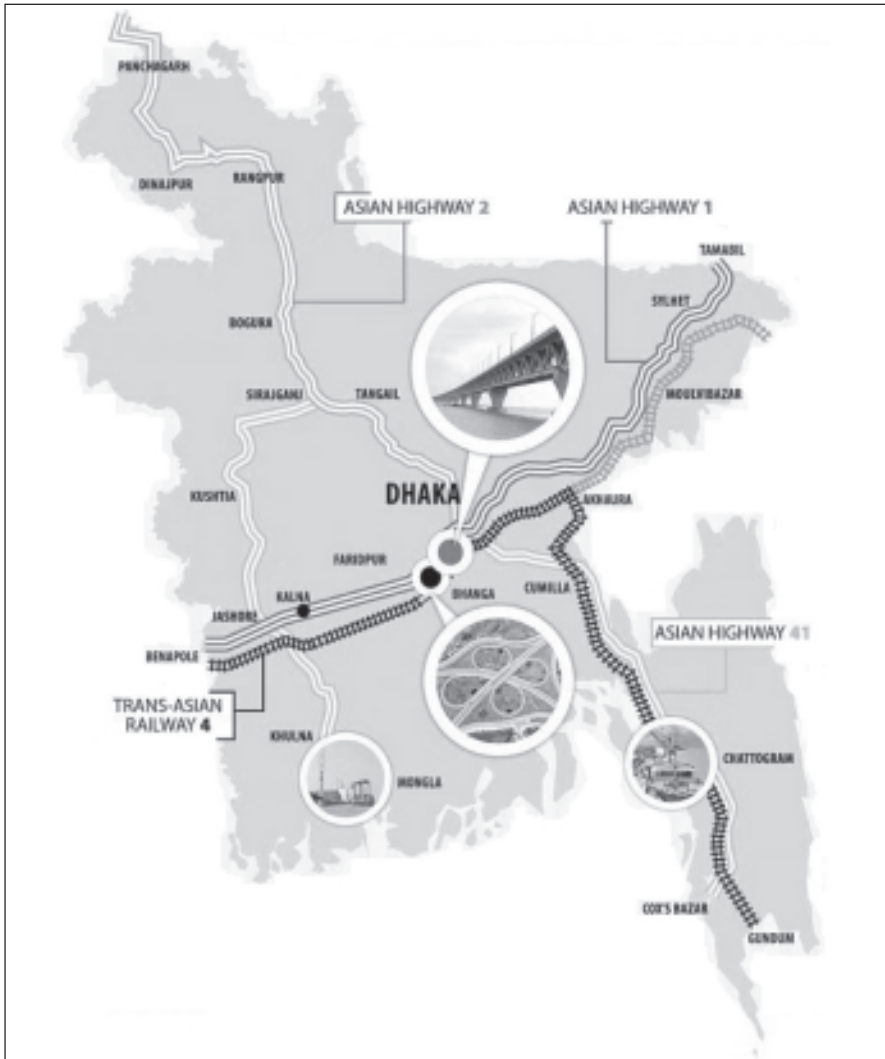
Major Development Projects in Bangladesh for Regional Trade and Connectivity

Bangladesh is continuing public spending in growth-enhancing mega projects, connectivity and investment that partly connects India and South Asia. The recent 'mega' projects in Bangladesh include Padma multipurpose bridge, SEZs, power plants, constructing the third Terminal of Hazrat Shahjalal International Airport (HSIA), sub-regional multi-modal connectivity and new seaports (Payra and Matarbari). These helped the country to get prepared for greater regional integration with India and other neighbouring countries in South Asia, through reducing distance and easing the cross-border transport of goods and services.

Padma Multipurpose Bridge

The Padma Bridge, which aims at promoting both road and rail connectivity, has been contributing significantly to integrating the South-Western part of Bangladesh with the capital Dhaka and the rest of the country as well as promoting trade and connectivity with Asian countries through seamless and rapid transport. It will work as a main component of the Asian Highway-1 (AH-1), thereby improving the country's position in the continent. Bangladesh is connected with three Asian Highway routes: AH-1, AH-2 and AH-41, with a total length of 1,771 km. The AH-1, connecting Assam with West Bengal in India via the Sylhet-Dhaka (Padma Bridge)–Narail (Kalna Bridge)–Jashore. In addition to the 6.150 km Padma Bridge, the 690 m Kalna Bridge in Narail has contributed significantly to reducing travel time and distance between Assam and West Bengal. Now, the total distance is only 492 km. Moreover, the Padma Bridge will also pave the way for setting up a new route for the Trans-Asian Railway (TAR) network. It would be the fourth and the shortest TAR route that would link India and Myanmar via the Padma Bridge. The Dhaka–Bhanga–Jashore track will be the fourth route of the TAR network in Bangladesh. The route would run through Petrapole–Benapole–Jashore–Narail–Bhanga–Mawa (Padma Bridge Rail Link)–Narayanganj–Dhaka–Tongi–Akhaura–Chattogram–Dohazari–Gundum–Myanmar. The Padma Bridge would reduce the travel distance from Dhaka to Kolkata by 63 km.⁹

Map 12.1: Padma Bridge and Asian Connectivity



Source: Adapted from *Daily Star*, 2022.

SEZs

The Bangladesh Economic Zones Authority (BEZA) has identified a total of 97 SEZs and three special tourism parks.¹⁰ Initially, two SEZs were identified for Indian investment: Mongla in Bagerhat district and Bheramara in Kushtia district. Both the SEZs are located in proximity with the Indian

border. The government is currently developing the Mongla SEZ on 110 acres of land. However, the Indian authorities cancelled establishing the SEZ Bheramara in Kushtia as the feasibility study report concluded that the zone would not be suitable for investment. Mongla and Bheramara SEZs were supposed to be established under the Indian second Line of Credit (LoC), for which US\$ 88 million was earmarked. However, approximately US\$ 50 million would be spent on another project. India has expressed interest in establishing a tourism park near the Naf River (Naf Tourism Park) and constructing a cable car over the river.¹¹

Another dedicated SEZ for Indian companies is currently being developed at Mirsharai in Bangabandhu Sheikh Mujib Shilpa Nagar in Chattogram on 900 acres of land. India is providing Tk 9.15 billion under its LoC out of the total project cost of Tk 9.65 billion under the LoC.¹² The Executive Committee of the National Economic Council (ECNEC) approved the project in April 2019, with the deadline of completion by 30 June 2023. BEZA signed an agreement with Adani Ports and SEZ Limited on 1 April 2022 to develop the SEZ. It also appointed India's Mahindra Consulting Engineers Limited for designing and the overall supervision of the project. The project will include land development, along with the construction of access roads, administrative buildings, security sheds and water supply and sanitation systems. It will also develop telecommunication, a water treatment plant and other relevant logistic facilities to support Indian investment.¹³ It is expected to be operational by 2024.

Agartala-Akhaura Rail Link

Bangladesh and India signed a memorandum of understanding (MoU) on 21 May 2013 to connect the Agartala railway station in India's Tripura and Akhaura Junction railway station in Bangladesh. The total length of the railway line will be 15.054 km, of which 5 km is on the Indian side. Construction of the railway commenced on 29 July 2018. After the implementation of this project, goods will move from Chattogram seaport and Dhaka to the other Northeastern states of India via rail and road. Because of this project, trade between Bangladesh and the Northeastern states of India trade will grow, as it will be easier and faster to transport goods, thereby reducing the cost of doing business. So far, the installation of railway lines

on the entire Bangladesh part of the Akhaura-Agartala dual gauge railway project has been completed. In addition, all 16 bridges and culverts of the project have been completed while the construction of the immigration and customs station is nearly completed.

The Akhaura-Agartala rail link will reduce the distance between Kolkata and Agartala by about 1,100 km. After the completion of the project, cargo trains will run on this railway while passenger trains will commence afterwards.¹⁴ As the transportation of goods by rail is safer and cost-effective, cross-border trade would increase significantly after the commencement of this rail link, which would pave the way to reduce both the cost of doing business and the price of traded goods for consumers on both sides of the border.

Mongla-Khulna Railway Line

Nationwide rail connectivity with Mongla, the second-largest seaport of Bangladesh, is expected to boost connectivity in the sub-regional countries: India, Nepal and Bhutan. Transportation of goods to India, Nepal and Bhutan would be conducted under the sub-regional transit facility. The project is divided into three components: the construction of a railway bridge over the Rupsa River in Khulna, the installation of main railway lines and the establishment of telecommunications and signalling for train transportation. Under the project, the railway track includes the loop and broad-gauge lines as well as the construction of 107 small bridges and nine underpasses. Indian contractors Larsen & Toubro constructed a railway bridge while Ircon International conducted the remaining components of the project¹⁵ under the Indian LoC. Train movement on the Mongla-Khulna railway line opens new horizons for trade and commerce of the South-Western region connecting Mongla port. The project opened up a new era of trade and commerce of the region that connects the port, Mongla EPZ and the Mongla Economic Zone. It aims to ease low-cost transportation of goods to India, Nepal and Bhutan, and facilitate domestic and foreign tourists to travel to the Sundarbans.¹⁶ The rail line project also includes plans to develop it as an international rail route, which would boost trade in South and Southeast Asia.

Inland Waterway

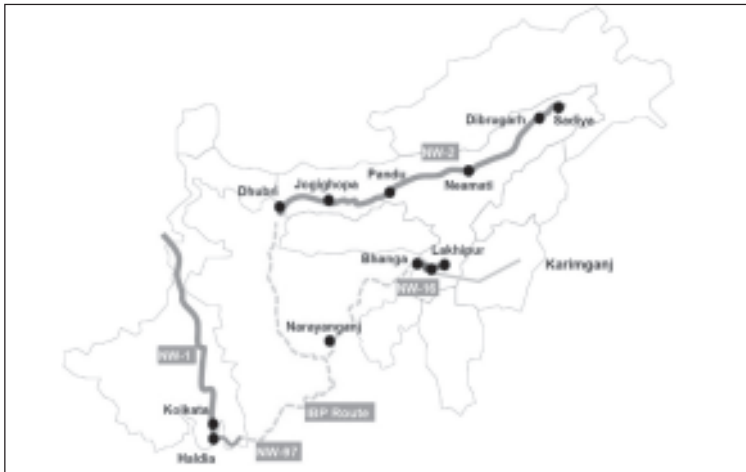
Inland waterways are gradually becoming alternate modes of transport connectivity among Bangladesh, Bhutan, India and Nepal (BBIN) region.¹⁷ Bangladesh-India connectivity through inland waterways has received new impetus in the context of sub-regional integration considering the economic and environmental benefits of BBIN. MV *Ganga Vilas*, a high-end motorised river cruise vessel, sailing in January 2023 from Varanasi in North India, along rivers in Bangladesh and then India again, was a landmark initiative from India showcasing the potential of a cross-border environment-friendly water transport between Bangladesh and India.¹⁸ India's National Waterway-1 connects to the Bangladesh-India joint waterway system. It allows vessels to move to the Bay of Bengal from Haldia in Kolkata and then enter Bangladesh's river system through the Chattogram seaport. The route then goes upstream towards Dhaka, joins the Jamuna in Bangladesh at Aricha and then moves to Dibrugarh in eastern Assam in Northeast India. The main thrust of the Bangladesh-India collaboration on this transboundary water route is to minimise negative effects on the environment, maintain water depth and reduce siltation through dredging to maintain navigability, rather than constructing barrages or storage reservoirs in the Indian upstream. Both countries are in the process of consolidating their existing 10 transboundary 'protocol routes' into the 'Eastern Waterways Grid' that aim to enhance navigability through dredging, revitalising river ports and strengthening road and rail connectivity to these ports in both countries.

The Protocol on Inland Water Transit and Trade (PIWT&T) plays a major role in promoting trade between Bangladesh and India. The India-Bangladesh Protocol (IBP) and India's National Waterway (NW) routes converge and portray the core areas of cooperation between the two countries on inland water navigation. The total length of NW-2 (River Brahmaputra) is 891 km (Bangladesh border to Sadiya) and the total length of NW-16 (River Barak) is 121 km (Lakhipur-Bhanga). The IBP route connects NW-1 with NW-2 and NW-16 and provides an alternate route to the congested Siliguri corridor (see, Map 12.2a). It also provides an alternate route to congested road routes/land customs station (LCS) for Bangladesh-India trade. There are six 'ports of call' on either side of the protocol routes. On the India side the ports are Kolkata, Haldia, Dhubri, Pandu, Silghat and

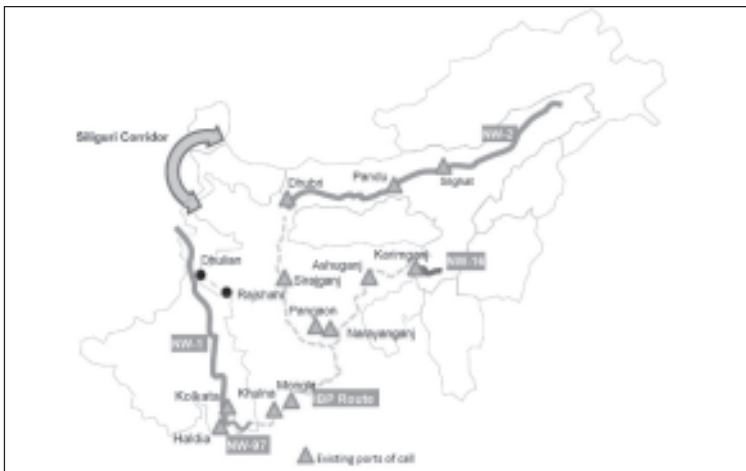
Karimganj; on the Bangladesh side, the ports are Narayanganj, Khulna, Mongla, Sirajganj, Ashuganj and Pangaon (see, Map 12.2b).

Map 12.2: India's National Waterways and Protocol Route with Bangladesh¹⁹

(a) India's NWs



(b) IBP Route and Connectivity with NWs



Source: Inland Waterways Authority of India, 2019.

The Government of India (GoI) is currently planning to develop an eastern grid, with 5,000 kms of navigable waterways to integrate two neighbouring countries, Bangladesh and Myanmar, to enhance connectivity through port and waterways. It aims to create opportunity via an economic

corridor of 3,500 kms that connects Northeast India with the rest of India via Bangladesh through a smooth connection among NW-1 (Ganga), NW-2 (Brahmaputra) and NW-16 (Barak).²⁰

Thus, transboundary waterway cooperation between Bangladesh and India entails a range of tasks that is ongoing for integration among regional countries, despite the manifold challenges emanating from the global economy. Both countries are collaborating deeply on shipping, which portrays endless potential for boosting trade and cross-border investment and, at the same time, lowering the financial and environmental cost of transportation through reducing the carbon footprint.

Matarbari Deep Seaport

Bangladesh is constructing its first deep seaport at Matarbari in the Moheshkhali upazila in the Cox's Bazar district, with financial support from the Japan International Cooperation Agency (JICA). It mainly aims to assist the nearest (and the country's main) seaport, Chattogram, in exports and imports as well as connect two other seaports, Payra and Mongla, through feeder vessels. It is expected that Matarbari would surpass all other trading hubs in South Asia because of its location. Currently, the construction of the seaport is going on along with a coal-fired power plant, an LNG terminal, and connecting roads. The project is expected to be completed by 2026.²¹ Located on the South-Eastern coast of Bangladesh and south of the Chattogram port, the Matarbari port will drastically decrease the dependence of the country and the sub-region on the other deep-sea ports in the region, such as Colombo, Singapore and Malaysia, thereby reducing the transshipment cost for incoming-outgoing ships from Bangladesh. Mother vessels and container ships with larger drafts will be able to dock directly in this port. This would transform Bangladesh into a regional transshipment hub because of its location adjacent to landlocked countries and regions, such as Northeast India, Nepal and Bhutan, by regional transshipment costs. Thus, economic activities of the sub-region would also boost significantly because of Matarbari deep seaport.²² The JICA is also planning to support Bangladesh to develop an international port city in Maheshkhali based on Japanese standards. It is also expected to generate non-trivial economic gains for the country as also

transform the economic landscape of the region through trade, transport and employment generation.

Possible Areas of Cooperation

South Asian countries have been some of the hardest hit by the global economic slowdown. However, there are ample instances of indigenous initiatives and good practices (as described above) that can be learned for deepening integration in South Asia. Nobel laureate Rabindranath Tagore said, “Together, we survive. Divide, we perish.” The negative spill-over effects of the global economy can be countered more effectively if the countries of the region come together with greater coordination and cooperation.

First, South Asia currently has no common monetary policy, although there is a free trade area among countries in the region. We have seen, in recent times, how quickly stresses in the global economy can spill over into South Asian economies. In these circumstances, inflation in each of the economies of Pakistan, Bangladesh, Sri Lanka and India has created an extremely negative impact on the lives of the people and the economy of the region. A major reason behind this is the lack of coordination in monetary policies among countries in the region. The declining state of foreign exchange reserves has severely affected some economies and played a detrimental role in the South Asian economy as a whole. Inflation was rampant in Pakistan and Sri Lanka. However, the central banks of the two countries have brought the inflation to a more tolerable level through monetary interventions. However, due to the fact that the policy interest rate in Bangladesh has not been raised immediately, Bangladesh is still struggling with high inflation, even as other countries in South Asia could reduce inflation. The economies of South Asia are still uncoordinated in the external sector. As a result, the economies of the region are on the brink of many opportunities that are not being realised. For this reason, bringing more coordination in monetary policy among the countries of the region will play a positive role in the economic growth and stability of the region and will help countries move forward in dealing with downward economic pressures.

Second, the COVID-19 pandemic and the Russia-Ukraine war have caused severe disruptions in global supply chains. This has had a negative

impact on almost all South Asian economies. Production, trade and employment have been disrupted. Disruption in the supply of industrial raw materials, intermediate goods, machinery and energy products has affected production and trade. This has created macroeconomic instability in almost every country in South Asia. Inflation has increased across the region. In this context, attention should be paid to creating an alternative supply chain among South Asian countries for the future. Besides, a regional system should be created in the supply of raw materials, intermediate products and emergency energy products. A strategic reservoir of energy products, especially petroleum, needs to be created for South Asia. This will avoid disruption in the supply of fuel and emergency goods. At the same time, cooperation between neighbouring countries should be increased in the field of energy, especially renewable energy. New pipelines and grids should be developed for power and energy transport and trade in which regional investment should be emphasised. Currently, there has been a silent revolution in the production of different types of renewable energy in India, especially in the field of solar energy. The levelised cost of renewable energy is very low in India, which can play an important role in strengthening energy trade and cross-border cooperation in the region.

Third, some of the essential benefits of the fourth industrial revolution (4IR) have become visible, largely quietly, in South Asian countries during the COVID-19 pandemic. No doubt there were early fears that the revolution could have a negative impact on the region. However, now in this period of instability in the world economy, cooperation among South Asian countries should be strengthened to fully realise the benefits of this revolution. For this reason, cross-border cooperation in e-commerce, f-commerce, and between businessmen as well as research institutions, especially those working in the information technology sector, should be increased. It should be kept in mind that when the global economy was at a standstill during the COVID-19 period, businesses and online employment were kept largely normal through information technology. Therefore, cooperation between South Asian countries can go a long way in dealing with the current economic instability.

Fourth, the main reason for low trade among South Asian countries is that these countries have a relatively low range of tradeable products. There

are certain products that each country produces and wants to trade them among themselves. Because of this, cooperation among these countries is very weak in the field of trade. Two steps must be taken to address this problem. Firstly, cross-border production fragmentation or the creation of production systems can be established at different stages of the same product, which will benefit every country. Secondly, exportable products should be diversified. Then, intra-regional and intra-industry trade can be further enhanced. In addition, a high-powered committee should be set up to eliminate non-tariff barriers between countries and a realistic action plan should be set for their implementation with respective timelines. Countries like Bangladesh and Nepal will have to adopt the next action plan to secure convenient duty-free and concessional market access through South Asia Free Trade Agreement (SAFTA) and in Indian markets after graduation from the group of least developed countries (LDCs) in 2026, especially with active support from India.

Finally, South Asian nations need to work together to address climate change risks. Regional cooperation is essential for critical ecological assets, such as the Sundarbans. In this regard, India and Bangladesh have to work together. Besides, regional cooperation should be increased in the flow of fresh water in the Sundarbans. Inland water navigation through protocol routes needs strategic cooperation to ensure that trade and the supply of goods and human mobility through waterways do not harm the environment, particularly the Sundarbans.

Conclusion

Like many other parts of the world, South Asia is currently passing through a turbulent time. South Asian countries have been exposed to unprecedented cumulative effects of the COVID-19 pandemic and the Ukraine war which have dampened the region's impressive growth posed by unprecedented shocks and exacerbated manifold economic and developmental challenges. Challenges emanating from the recent massive disruptions in input-output supply chains, the energy crisis, along with catastrophic natural disasters and global climate changes have deepened the slowdown of the regional economies and integration processes. Anecdotal evidence suggests a temporary increase of poverty and unemployment since early 2020, which continues to

require additional public expenditure, despite a short-term recovery in early 2022. However, Sri Lanka is struggling with a debt crisis and meeting basic necessities, while Pakistan has been suffering from massive pressure in the external sector due to the nearly dried foreign currency reserves and the vulnerability of the domestic economy.

Amidst the ongoing challenges, India and Bangladesh, the two largest and fastest growing economies of South Asia, have been demonstrating impressive resilience because of their macro-prudent policies, external sector management, selective austerity measures, investment in climate change adaptation and mitigation, expansion of social protection coverage, bilateral trade of good and services especially trade along value chains and continuing public spending in growth-enhancing mega projects, connectivity and investment, among others. Maldives and Nepal are the other countries in which the return of tourism is promoting growth. Considering the recent economic challenges in South Asia, the region can enhance cooperation in strengthening supply chains, cross-border cooperation in energy and circular economy, promote export diversification through broadening the export basket of goods and services and strengthen monetary policy coordination to avoid global economic shocks and slowdown. Countries in South Asia can learn from economic and connectivity initiatives between Bangladesh and India towards deepening integration in the region.

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APPENDIX

Table A1: South Asian Economies in 2022 (GDP, US\$ Billion, Nominal)

	<i>GDP, Current Prices</i>	<i>GDP, Per Capita</i>
Afghanistan*	20.14	611.268
Bangladesh	460.20	2,730.85
Bhutan	2.64	3,477.57
India	3,386.40	2,379.21
Maldives	6.207	15,883.27
Nepal	40.15	1,331.54
Pakistan	376.49	1,658.36
Sri Lanka	75.30	3,362.08

*Data for the Year 2020 (latest available).

Source: IMF, World Economic Outlook Database, April 2023.

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