

Achieving the Sustainable Development Goals in Chittagong Hill Tracts – Challenges and Opportunities



Ministry of Chittagong Hill Tracts Affairs
Government of the People's Republic
of Bangladesh



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The International Centre for Integrated Mountain Development, ICIMOD, is a regional knowledge development and learning centre serving the eight regional member countries of the Hindu Kush Himalayas – Afghanistan, Bangladesh, Bhutan, China, India, Myanmar, Nepal, and Pakistan – and based in Kathmandu, Nepal. Globalisation and climate change have an increasing influence on the stability of fragile mountain ecosystems and the livelihoods of mountain people. ICIMOD aims to assist mountain people to understand these changes, adapt to them, and make the most of new opportunities, while addressing upstream-downstream issues. We support regional transboundary programmes through partnership with regional partner institutions, facilitate the exchange of experience, and serve as a regional knowledge hub. We strengthen networking among regional and global centres of excellence. Overall, we are working to develop an economically and environmentally sound mountain ecosystem to improve the living standards of mountain populations and to sustain vital ecosystem services for the billions of people living downstream – now, and for the future.



ICIMOD gratefully acknowledges the support of its core donors:
the Governments of Afghanistan, Australia, Austria, Bangladesh, Bhutan,
China, India, Myanmar, Nepal, Norway, Pakistan, Switzerland, and
the United Kingdom.

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Achieving the Sustainable Development Goals in Chittagong Hill Tracts – Challenges and Opportunities

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Published by

International Centre for Integrated Mountain Development

GPO Box 3226, Kathmandu, Nepal

ISBN 978 92 9115 431 9 (printed) 978 92 9115 432 6 (electronic)

Production Team

A. Beatrice Murray (Consultant editor)

Christopher Butler (Editor)

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Photos: Arannayk Foundation – cover, pp 4, 31, 37; Aye Aye Maung – p x, 3, 16; Kabir Uddin – p 12;
Uma Partap – p 21

Printed and bound in Nepal by

Quality Printers Pvt. Ltd., Kathmandu, Nepal

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This publication is also available at www.icimod.org/himaldoc

Citation: Rasul, G. and Tripura, N.B.K. (2016) *Achieving the sustainable development goals in Chittagong Hill Tracts – Challenges and opportunities*. ICIMOD Working Paper 2016/12. Kathmandu: ICIMOD

Contents

| | |
|--|-----------|
| Message from the Hon'ble Prime Minister | v |
| Foreword, ICIMOD | vi |
| Acknowledgements | vii |
| Acronyms and Abbreviations | vii |
| Executive Summary | viii |
| Introduction | 1 |
| The SDGs in the CHT: Status and Challenges | 5 |
| SDG 1: End poverty in all its forms everywhere | 5 |
| SDG 2: End hunger, achieve food security and improved nutrition, and promote sustainable agriculture | 6 |
| SDG 3: Ensure healthy lives and promote well-being for all at all ages | 7 |
| SDG 4: Ensure inclusive and quality education and promote lifelong learning opportunities for all | 8 |
| SDG 5: Achieve gender equality and empower all women and girls | 9 |
| SDG 6: Ensure availability and sustainable management of water and sanitation for all | 9 |
| SDG 7: Ensure access to affordable, reliable, sustainable and modern energy for all | 10 |
| SDG 8: Promote sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all | 11 |
| SDG 9: Build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation | 13 |
| SDG 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss | 13 |
| SDG 16: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all, and build effective, accountable, and inclusive institutions at all levels | 14 |
| Achieving the SDGs in the CHT: Potential, Opportunities and Lessons | 17 |
| Intensification and diversification of agriculture to enhance productivity and sustainability | 17 |
| Diversification of livelihood options and enhancing resilience | 19 |
| Skills enhancement for women | 20 |
| Protecting agrobiodiversity in farming | 20 |
| Horticulture and high-value products | 21 |
| Forest resources | 22 |
| Livestock | 23 |
| Fisheries | 24 |
| Kaptai Lake | 24 |
| Agro-based micro-enterprises | 25 |
| Engaging the private sector in marketing and skills development | 26 |
| Watershed restoration | 26 |
| Tourism | 27 |
| Migration | 28 |
| CHT: A gateway to the east | 28 |

| | |
|--|-----------|
| Looking Forward: Framework for Promoting Growth and Achieving the SDGs | 29 |
| Key insights and messages | 29 |
| An integrated strategy | 30 |
| Key policy priorities | 30 |
| Strategic actions | 32 |
| Conclusion | 38 |
| References | 39 |
| Annexes | 42 |
| Annex 1: The Bangladesh-ICIMOD Partnership: A Reflection | 42 |
| Annex 2: Table A1: Progress towards achievement of the MDG targets in Bangladesh and the CHT districts – selected indicators | 44 |
| Table A2: Power and functions of key organizations in the CHT | 45 |

Message from the Hon'ble Prime Minister



بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ



PRIME MINISTER
GOVERNMENT OF THE PEOPLE'S REPUBLIC OF
BANGLADESH
20 Agrahayan 1423
04 December 2016

Message

I am happy to learn that the Ministry of Chittagong Hill Tracts Affairs and the International Center for Integrated Mountain Development (ICIMOD) have prepared a monograph titled 'Achieving Sustainable Development Goals in Chittagong Hill Tracts: Challenges and Opportunities'.

Chittagong Hill Tracts has been slower to other parts of the country in respect of development before 1997. But the situation has totally been changed following signing of the historic CHT Peace Accord ending the long-standing conflict. We have taken measures to build an inclusive and equitable society by mainstreaming ethnic, religious and cultural minorities into a national and social force. Our government is also committed to expediting the process of development in CHT to make up for the lost time and put it on a fast track on the development path.

The Ministry of CHT Affairs and CHT Regional Council have been established, and Hill District Councils strengthened as the outcome of the Peace Treaty. Most of the provisions of the Peace Accord have already been implemented and the remaining provisions are being implemented. Land Commission has been constituted to resolve land related disputes.

Bangladesh has made remarkable progress in achieving MDGs. Based on the experience and expertise in fulfilling the MDGs, we are committed to achieving the Sustainable Development Goals SDGs by 2030. The successful implementation of SDGs in CHT will require special focus, and context-specific approaches.

I hope this monograph will be useful in our journey to peace, progress and prosperity in CHT. I extend my sincere thanks to the Ministry of CHT Affairs and ICIMOD for the timely contribution.

Joi Bangla, Joi Bangabandhu
May Bangladesh Live Forever.

Sheikh Hasina

Foreword

The United Nations General Assembly held in September 2015 laid out a common vision and chartered a path for transforming the world towards sustainable development over the next 15 years. At that meeting, the world community adopted 17 Sustainable Development Goals (SDGs) which collectively represent a transformative agenda that will transform the economies and societies of developing countries with a view to eliminating poverty by 2030. The agenda is not simply about protection from vulnerability or destitution; it is about broader economic, social, and political transformation. It aims to end poverty and hunger, reduce inequalities, empower women, and generate inclusive growth, 'leaving no one behind'.

Bangladesh has had an impressive economic growth rate over recent years. With its rapid pace of development, the government aims to reduce poverty and inequality and achieve middle income country status by 2021. The government is also committed to creating a more inclusive and equitable society by streamlining disadvantaged ethnic and tribal communities into mainstream society and economy. Bangladesh has achieved most of the MDGs, and today, the government is in the process of implementing the Sustainable Development Goals 2030.

The Chittagong Hill Tracts (CHT) of Bangladesh, however, face greater development challenges because of its hilly terrains, inaccessibility, remoteness, and two decades of conflict. CHT requires a massive development thrust to make up for lost time and put it on a fast track. To achieve transformative change, careful attention must be given to understanding the hill and mountain context of the CHT, the spatial disadvantages and advantages, the ethnic and cultural diversity, and constraints and opportunities. It calls for special attention towards implementing the SDGs in the CHT with particular consideration for the local context.

CHT's unique natural and social history offers opportunities as well as challenges. Bangladesh has implemented a large degree of decentralization and devolution and this institutional innovation can support creative and cooperative development in CHT, with local institutions and people empowered to work effectively towards delivering the SDGs.

CHT is also undergoing its own economic and social transformation. Formal education, new roads, mobile connectivity, and the internet are changing the aspirations of the rural population, and broadening their opportunities. The greatest challenge will be how to support this transformation in a sustainable way.

The International Centre for Integrated Mountain Development (ICIMOD) is a regional intergovernmental organization focusing on mountain issues in the eight countries of the Hindu Kush Himalaya (Afghanistan, Bangladesh, Bhutan, China, India, Myanmar, Nepal, and Pakistan). We have a long history of partnering with the Government of Bangladesh, particularly since the establishment of the Ministry of Chittagong Hill Tracts Affairs (MOCHTA) in 1998. ICIMOD and MOCHTA recently implemented an innovative community-led project in Bandarban, and worked together to frame the strategic vision for CHT that contributed to shaping the development perspective on the CHT in the 7th Five Year Plan of the Government of Bangladesh.

MOCHTA and ICIMOD have joined talents in another endeavour to localize the SDGs in the CHT context. This effort is in the form of a working paper entitled, "Achieving SDGs in the Chittagong Hill Tracts - Challenges and Opportunities", which explores the development potential of the CHT and identifies options and mechanisms to expedite sustainable socioeconomic development. This paper is the first of its kind to provide an SDG-focused assessment of the CHT.

I hope this paper will serve as a benchmark to support the design of successful policies and strategies for achieving the SDGs in the CHT. We look forward to continue our work and support of MOCHTA and the Government of Bangladesh in their efforts to promote inclusive growth, peace, progress, and prosperity.

David J Molden, PhD
Director General, ICIMOD

Acknowledgements

The authors are grateful to Dr David Molden and Dr Eklabya Sharma for their support and encouragement of this publication. We also extend thanks to Dr Sharma and Dr Arabinda Mishra for providing constructive comments on our work. Special thanks and appreciation goes to Mr Manbar S. Khadka and Mr Narendra Dangol for their dedicated research support. The authors also wish commendation for the valuable editing input of Dr A. Beatrice Murray, and for Dr Christopher Butler and Mr Dharma Maharjan for the production of this document.

This study was partially supported by core funds contributed to ICIMOD by the governments of Afghanistan, Australia, Austria, Bangladesh, Bhutan, China, India, Myanmar, Nepal, Norway, Pakistan, Switzerland, and the United Kingdom. The views and interpretations in this paper are those of the author's.

Acronyms and Abbreviations

| | | | |
|--------|--|--------|--|
| ADC | Austrian Development Cooperation | IFAD | International Fund for Agricultural Development |
| BBS | Bangladesh Bureau of Statistics | LDC | Least Developed Country |
| BFDC | Bangladesh Fisheries Development Corporation | MoCHTA | Ministry of Chittagong Hill Tracts Affairs |
| BFRI | Bangladesh Fisheries Research Institute | MDGs | Millennium Development Goals |
| CDM | Clean Development Mechanism | NGO | Non-Government Organization |
| CEGIS | Center for Environmental and Geographic Information Services | NSSS | National Social Security Strategy |
| CF | Community Forestry | PF | Protected Forest |
| CFUG | community forest user group | PPP | Public Private Partnership |
| CHT | Chittagong Hill Tracts | RF | Reserved Forest |
| CHTRC | Chittagong Hill Tracts Regional Council | SDGs | Sustainable Development Goals |
| CSBAs | Community Skilled Birth Attendants | UN | United Nations |
| FAO | Food and Agriculture Organization | UNDP | United Nations Development Programme |
| GDP | Gross Domestic Product | UNESCO | United Nations Educational, Scientific and Cultural Organization |
| HDC | Hill District Council | UNICEF | United Nations Children's Fund |
| ICC | Indian Chamber of Commerce | USF | Unclassed State Forest |
| ICIMOD | International Centre for Integrated Mountain Development | VCF | Village Common Forest |
| ICS | Improved Cook Stoves | VDC | Village Development Committee |

Executive Summary

Bangladesh has shown a strong economic performance in recent years. Following commendable achievements towards fulfilling the Millennium Development Goals (MDGs), the government is now committed to achieving the Sustainable Development Goals (SDGs) by 2030. The SDGs represent a transformative agenda and visionary plan of action that will transform the economies and societies of developing countries with a view to eliminating poverty by 2030. The agenda is not simply about protection from vulnerability or destitution; it is about broader economic, social, and political transformation. There is wide disparity in development across the nation and some areas like the Chittagong Hill Tracts (CHT) – left behind economically and with a history of social tensions – will require special attention to ensure timely achievement of the SDGs while promoting social harmony. To avoid intensifying existing inequities, CHT will require context-specific strategies to achieve the SDGs.

The Chittagong Hill Tracts (CHT) is an ethnically, culturally, and topographically diverse region of Bangladesh with a population of approximately 1.6 million, including 12 ethnic communities with distinct tribal cultures and traditions. The region has rich natural and environmental resources with hills, forests, rivers, and lakes, a diverse flora and fauna, and areas of outstanding scenic beauty. The majority of the population relies on subsistence farming, and especially jhum farming practices. With increased environmental degradation and a low capacity to adapt to the impacts of climate change, the current agricultural practices can no longer sustain the population of the region. The region provides important ecosystem services that play a significant role in economic development, environmental protection, ecological sustainability, and human wellbeing, both in the CHT itself and downstream. Nevertheless, the CHT remains one of the most disadvantaged regions in the country and lags behind in almost all development indicators. More than 60% of households live below the poverty line and more than half do not have access to safe drinking water or sanitation facilities.

This paper sheds light on the importance of localizing the SDGs, while exploring the socioeconomic issues, development challenges, and potential and opportunities in the CHT. It discusses the development potential of the region in various sectors, assesses the present situation, identifies key issues and gaps, and suggests policy options and strategic mechanisms to optimize the full potential, expedite socioeconomic development, and achieve the SDGs.

This paper provides examples of good practices drawn from experience in neighbouring countries facing similar issues that can be replicated in the CHT region. The CHT has a significant potential for development in horticulture, high-value agricultural products, beekeeping, livestock, fisheries, agro-based micro-enterprises, tourism, forestry, and water resources management. Value chain development with agribusiness can play a key role in enhancing rural livelihoods, while tourism can help increase opportunities for off-farm employment. Forests will play a vital role in stabilizing the fragile landscape, protecting water resources, biodiversity conservation, and supporting daily needs. Integrated watershed management, together with community-led forest management to halt forest degradation and promote conservation and regeneration, can contribute substantially to development efforts.

Careful attention must be paid to understanding the hill and mountain context of the CHT, the spatial disadvantages and advantages, the ethnic and cultural diversity, and the constraints and opportunities. The SDGs need to be tailored to the CHT context so that they provide the scope for creating a long-term vision and planning appropriate action, while successful implementation will necessitate fostering multi-stakeholder engagement among government, local communities, development agencies, the private sector, NGOs, academia, and research organizations.

An enabling framework is presented with a multipronged integrated strategy for working towards realization of the SDGs. The key elements of the framework are:

- Ensuring peace, stability, and governance, putting in place appropriate policies, strengthening institutions, and making the financial and technical resources available to provide the overall framework conditions for implementing the SDGs;

- Focusing on infrastructure, environment, health, and human resources as key drivers for economic growth and development;
- Focusing on land (food), water, and energy as fundamental requirements for existence and prosperity;
- Developing the farm sector – agriculture, forestry, fisheries, and livestock – as the key to reducing poverty and achieving food and nutrition security; and
- Developing the non-farm sector as the key to creating decent work opportunities, accelerating economic growth, and reducing poverty and vulnerability.

In addition to ensuring peace, stability, and governance and strengthening institutions and coordination, the major policy priorities include poverty alleviation and achieving gender equality and empowering women. One of the first priorities will be to implement the outstanding elements of the 1997 wPeace Accord, especially the resolution of land disputes. This will go a long way to reducing social tensions and promoting social coherence, while helping local people to improve their livelihoods.

There are a range of areas where strategic action will help contribute to achieving the SDGs. They include education and skills development, especially for ethnic communities and women, and providing greater access to health care. Improving rural connectivity is essential to provide access to markets, education and health facilities, and employment opportunities, but care must be taken to ensure that road construction does not precipitate an increase in landslides and other hazards. Water conservation, harvesting, storage, and distribution systems need to be developed, along with improved sanitation. Efforts should be made to revive the traditional water sources, springs, and ponds and protect village common forests. A range of renewable energy sources – solar, biomass, biogas, hydropower, and wind – can be harnessed to provide affordable and environmentally sustainable energy security in off-grid rural areas. If proper care is taken to avoid negative social and environmental impacts, especially small and very small hydropower schemes can go a long way to fulfilling energy needs.

Development of the farm sector, while taking care not to degrade the environment, can contribute to economic growth and food and nutritional security and reduce inequalities. Transformation of jhum to agroforestry, horticulture, animal husbandry and other more productive systems is crucial. Post-harvest management, value chain development, processing, packaging, and market access all need to be strengthened and access to information facilitated. Credit facilities and loans should be provided to ethnic minorities to enable them to engage in income generating activities.

Non-farm based sources of livelihood are becoming increasingly important to diversify livelihood opportunities. Tourism has an immense potential for development, but needs to be properly planned and coordinated; community-based ecotourism can help ensure that the benefits accrue locally and negative impacts are avoided. Labour mobility and labour migration can also contribute to reducing the pressure on limited farmland resources and can be supported in various ways. Especially the ethnic minorities need to be encouraged and supported in entrepreneurial activities and developing trading and business relationships. Processing, packaging, and branding of farm-based produce; production of handicrafts from local resources; and service delivery all have potential as enterprises.

The unique situation in the CHT offers opportunities as well as challenges. There is already a large degree of decentralization and devolution and this institutional innovation can support creative and cooperative development, with local institutions and people empowered to work effectively towards delivering the SDGs. Integrating the CHT economically with the rest of the country and the wider world can provide a pathway for transforming poverty into prosperity and achieving the SDGs. But these efforts can only be successful if the people of the CHT are involved from the beginning and play an integral part from planning through to implementation and monitoring. Mutual respect, and trust and confidence, will provide the basis for facilitating transformation of the CHT from a conflict to a cooperation zone and moving from an unsustainable to a sustainable path of development.



Introduction

In September 2015, Heads of State and Government at the United Nations General Assembly laid out a common vision and agreed to set the world on a path towards sustainable development through the adoption of the 2030 Agenda for Sustainable Development (UN 2015). The Agenda includes 17 Sustainable Development Goals, or SDGs, which set out quantitative objectives across the social, economic, and environmental dimensions of sustainable development – all to be achieved by 2030. The goals provide guidance to national development and international development cooperation over the next 15 years in a framework for shared action “for people, planet and prosperity”. The SDGs represent a transformative agenda that aims to eradicate extreme poverty and hunger by 2030 and to “leave no one behind.” It intends to transform economies by making economic growth more inclusive and equitable, achieving decent work for all, decoupling growth from environmental degradation, and investing in climate-resilient development pathways. The Agenda is critically important for hills and mountain areas in developing countries as these areas tend to face multiple challenges and lag behind in socioeconomic development. Globally, mountains provide a wide variety of goods and services critical for human sustenance such as water, energy, and biodiversity. They are also home to many disadvantaged groups and ethnic minorities, who continued to experience multiple deprivations including poverty and vulnerability. Thus mountain areas will require special attention under the SDGs.

With a strong economic performance, and commendable achievements made towards fulfilling many of the Millennium Development Goals (MDGs), the Government of Bangladesh is now committed to achieving the SDGs by 2030. Bangladesh is growing fast. The country is aiming to accelerate economic growth, reduce poverty and inequality, and become a middle-income country by 2021, while creating a more inclusive and equitable society through the inclusion of ethnic, religious, and cultural minorities into a national and social force. To achieve these goals and promote social harmony, special attention needs to be paid to the Chittagong Hill Tracts (CHT) – a region that lags behind the rest of the country in terms of various development indicators and which has a history of social tensions.

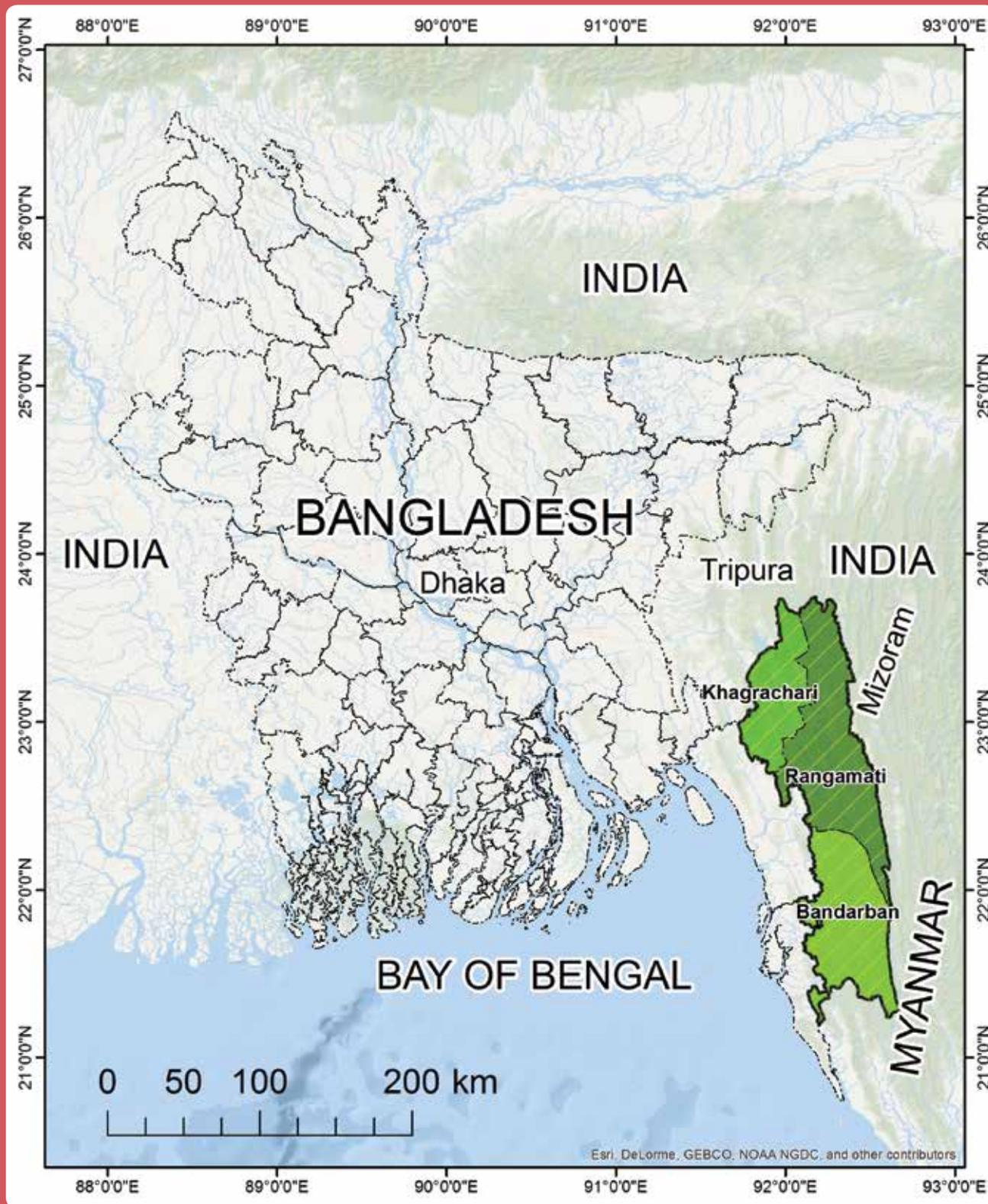
Bangladesh aspires to build a secular, tolerant, and liberal progressive democratic society. It aims to promote social justice, good governance, and reduce inequalities and regional imbalances. The country has made impressive progress in achieving the Millennium Development Goals (MDGs), particularly in reducing poverty and hunger, and improving health, education, life expectancy, and other related socioeconomic indicators in recent years. Bangladesh has now started the implementation process for the SDGs, but given the variation in the level of development across the country, it is imperative to localize the SDGs at a sub-national level in order to address the development challenges in different regions, including, and especially, in the Chittagong Hill Tracts.

The Chittagong Hill Tracts (CHT) is an ethnically, culturally, and topographically diverse region extending over 13,295 square kilometres, about 10% of Bangladesh’s land area, and divided into three districts: Bandarban, Khagrachari, and Rangamati (Figure 1). The population of more than 1.6 million includes 12 ethnic communities with unique cultures and traditions. The region has rich natural and environmental resources with hills, forests, rivers, and lakes, a diverse flora and fauna, and areas of outstanding scenic beauty. The CHT provides important ecosystem services that play a significant role in economic development, environmental protection, ecological sustainability, and human wellbeing, both in the CHT itself and downstream. About 40% of Bangladesh’s forest land is in the CHT. The forests play an important role in conserving biodiversity, protecting the regional environment, preventing erosion, maintaining water quality, regulating water flow, reducing the severity of floods, and regulating local and regional climate.

Even though the CHT has immense biological, cultural, and environmental resources, it remains one of the most disadvantaged and vulnerable regions in the country. The CHT lags behind in almost all development indicators, such as poverty, income, food security, health, and education, and in access to roads, infrastructure, electricity, and credit facilities (Zohir 2011; Sen et al. 2014). According to a survey conducted by Barkat et al. in 2009, the incidence of poverty in the CHT is about 60%, much higher than the national average of 32%, and some of Bangladesh’s ‘hardcore poor’ are found in this region (Table 1). The Planning Commission lists Bandarban in the

CHT as one of the three poorest districts in Bangladesh. Even after the huge development efforts that followed the signing of the Peace Accord in 1997, much of the CHT remains physically and socioeconomically less advanced. There are several reasons for this, including the rugged and inaccessible terrain. Although recent developments have brought considerable improvement, much remains to be done.

Figure 1: Map of Bangladesh showing CHT



The national-level priorities of accelerating economic growth, reducing poverty and inequality, and creating a more inclusive and equitable society are well aligned with the Sustainable Development Agenda, which cuts across the three dimensions of sustainable development – economic development, social inclusion, and environmental sustainability. The SDGs constitute a charter for people and the planet in the twenty-first century to respect and safeguard Mother Earth, secure peace and prosperity, and reinvigorate a global partnership for sustainable development. The central goals are to eliminate extreme poverty, hunger, and malnutrition; to conserve the environment; and to foster peaceful, just, inclusive, and prosperous societies that enable all to enjoy prosperous and fulfilling lives in harmony with nature. The SDG framework attaches central importance to equality and non-discrimination and inclusiveness and pledges that ‘no one will be left behind’ and to ‘reduce inequality within and among countries’.

Table 1: Key socioeconomic indicators in the CHT and Bangladesh overall (%)

| Indicator (%) | CHT | National |
|---|-----------|-----------|
| Poverty rate | 62 (2009) | 32 (2010) |
| Population in extreme poverty 2010 ^b | 26.2 | 17.6 |
| Measles vaccine coverage ^b | 80 | 77 |
| Access to suitable source of drinking water ^b | 65 | 75 |
| Anaemia prevalence (6–59 months) ^b | 62 | 49 |
| Anaemia prevalence (13–19 years) ^b | 43 | 28 |
| Primary school net enrolment (boys/ girls) ^b | 82/82 | 82/86 |
| Never been enrolled in school (boys/ girls) ^b | 16/17 | 15/13 |
| Deaths due to malaria ^b | 33 in 100 | – |
| Underweight prevalence (0-59 months)<-2 SD ^c | 39 | 32 |
| Stunting prevalence (0-59 months) <-2 SD ^c | 48 | 42 |
| Wasting prevalence (0-59 months) <-2 SD ^c | 14 | 10 |
| Low birthweight infants <2.5 kg ^c | 30 | 26 |
| Under 5 mortality/1000 live births ^a | 64 | 64 |
| Infant mortality/1000 live births ^a | 50 | 49 |
| Child delivery attended by skilled personnel ^a | 9 | 24 |
| Neonatal tetanus protection ^c | 59 | 81 |
| Child under five with diarrhoea in the last two weeks ^c | 8 | 4 |
| Households using solid fuel for cooking ^c | 98 | 88 |
| Use of improved drinking water sources ^c | 59 | 98 |
| Use of improved sanitation facilities which are not shared ^c | 35 | 56 |
| Safe disposal of child’s faeces ^c | 27 | 39 |
| Place to wash hands available with water and soap ^c | 42 | 59 |

Source: ^a MICS (2009); ^b UNICEF (undated); ^c MICS (2014)

Ethnic minorities and tribal areas in Asia and elsewhere remained largely marginalized in socioeconomic development (McDougall 2015). As in other tribal areas, development in the Chittagong Hill Tracts has been slower than in other parts of the country as a result of several factors including social tension. The signing of the Peace Accord has enhanced the prospects for promoting lasting peace and improving governance, inclusive growth, and sustainable development in the CHT. However, successful implementation of the sustainable development agenda will require an approach that is tailor-made for the region. This implies localization of the SDGs, with planning, implementation, and monitoring of activities at sub-national level, and national strategies designed such that they support implementation of SDGs at a local and regional level (Global Task Force 2016). This will help to ensure social inclusion and to promote faster and peaceful development in the region.

Localization of the SDGs is crucial as many development interventions occur at subnational level under the jurisdiction of local bodies. Indeed, achievement of the SDGs will largely rest on local and regional governments as they are delegated with the responsibility of providing basic services and promoting inclusive and sustainable territorial development (Global Task Force 2016). Local bodies are best situated to link the global goals with local communities. For example, the sustainable development goals are linked to improving human lives through provision of better education, health, and quality water, and preservation of air and natural resources, all of which are related to local development processes. Local bodies are also well placed to inform local communities about the sustainable development goals and their importance locally (Global Task Force 2016).

In the CHT, the local bodies (the hill district councils or HDCs) are well placed to identify the subnational needs and priorities that align with the sustainable development agenda. The HDCs can raise awareness among local

communities about the importance of the sustainable development goals and their relevance to the local people. In doing so, they can engage with the private sector and community organizations to ensure greater participation and collaboration for the localization and advocacy of the Agenda. The HDCs can seek a bottom-up approach for implementation, monitoring, and evaluation of the SDGs that will ensure commitment and support from the local communities. But for this to be effective, the HDCs must be given a greater role in local resource management, fiscal and financial devolution, and progressive environmental protection, among others. The local level governments should be engaged in creating a sense of ownership and given responsibility in planning and implementation of the SDGs to provide an enabling environment for the localization process.

This paper is intended to shed light on the status of and challenges for selected SDGs in the CHT. It highlights the importance of localization of the SDGs to address the development challenges in the region and redress past grievances and marginalization. It explores the development potential of the CHT in various sectors, assesses the present situation, identifies key issues and gaps, and suggests policy options and strategic mechanisms to optimize the full potential and expedite socioeconomic development, thereby achieving the SDGs. The paper is broadly divided into five sections: this introduction; the status and challenges of the SDGs in the CHT; the development potential and opportunities; a way forward that details various action plans for promoting inclusive growth and achieving the SDGs in the CHT; and a conclusion.



The SDGs in the CHT: Status and Challenges

The SDGs represent a transformative agenda that will transform the economies and societies of developing countries with a view to eliminating poverty by 2030. The agenda is not simply about protection from vulnerability or destitution; it is about broader economic, social, and political transformation.

Bangladesh aspires to achieve middle income country status by 2021, which is clearly reflected in the 7th Five-Year Plan (2016–20). The plan also emphasizes the development priorities in the CHT and their contribution to the overall economic development of the country. While this is a good first step towards developing the CHT, much more will need to be done in a prioritized manner to achieve the SDGs in this region by 2030.

Especially the ethnic communities in the CHT are lagging behind in many, if not all, of the major goals and targets. It is important to engage local people and organizations in the SDG planning and implementation process so that the whole of Bangladesh can truly transform, bringing peace and prosperity for all and leaving no one behind. One of the envisaged goals of the SDGs is to reduce inequality within and among countries. At present, the socioeconomic disparity between the hills and plains areas in Bangladesh is quite marked. The prevalence of inequality has been one of the principal causes of tensions in the CHT region. Localizing the SDGs in the CHT context will be critically important for engaging all stakeholders, reducing inequality, and promoting inclusive growth. Disaggregated data are needed at the district and CHT level so that pockets of poverty and areas disadvantaged in other ways can be identified and given focused support to transform. At present, there are very few disaggregated data related to the status of the SDGs in the CHT. In the following, we have used available secondary information to contextualize the SDGs in the CHT context and present the status of these SDGs in the CHT while highlighting possible challenges. This is the first attempt to gather together this information for the CHT. It is hoped that it will serve as a benchmark and support the design of successful policies and strategies for the implementation, monitoring of progress, and adjustment of activities for achieving the SDGs in the CHT.

SDG 1: End poverty in all its forms everywhere

The world has made commendable progress in poverty alleviation over the decades with extreme poverty rates reduced by more than half since 1990. Nevertheless, poverty eradication in all its forms remains a burning challenge. SDG 1 intends to end poverty in all its forms everywhere – a very ambitious goal.

Bangladesh has made impressive progress in reducing poverty, however it has not been uniform across the regions. Although considerable progress has been made recently in the Chittagong Hill Tracts, the region still lags behind significantly in socioeconomic development and poverty alleviation, as well as in achieving several of the MDG targets (see Annex 1 for selected indicators in the CHT districts) (Planning Commission 2015). Fifteen of the 64 districts in Bangladesh have been identified as the least developed and most deprived in terms of roads, electricity, credit, education, health, water supply, and overseas employment; they include all three of the districts in the CHT. The highest levels of poverty in Bangladesh are found in the CHT district of Bandarban, while the Bandarban upazilas of Ali Kadam, Thanchi, Rowangchhari, Ruma, and Naikkongchhari are among the most deprived upazilas in the country (Khondker and Mahzab 2015). More than 62% of households in the CHT live below the absolute poverty line – 1.6 times the rate in rural Bangladesh as a whole (Table 2). The poverty status of women is of even greater concern. According to the National Social Security Strategy (NSSS) of Bangladesh (Planning Commission 2015), the majority of women in the CHT live below the poverty line. The incidence of poverty among the different ethnic communities also varies considerably. Between 80 and 93% of households in the Lushai, Bawm, Chak, Khyang, and Pangkhua communities belong to the absolute poor (Table 2). The high incidence of poverty remains one of the critical issues facing the CHT region.

Table 2: Household poverty by community (DCI Method)

| Poverty Level | Indigenous people | Bawn | Chak | Chakma | Khyang | Khumi | Lushai | Marma | Mro | Pangkhu | Tanchangya | Tripura | Bangalee | All CHT | National (Rural) |
|---------------|-------------------|------|------|--------|--------|-------|--------|-------|------|---------|------------|---------|----------|---------|------------------|
| Absolute poor | 65.1 | 90.7 | 83.7 | 60.1 | 80.9 | 60.5 | 93.3 | 61.2 | 66.7 | 80.0 | 63.3 | 71.9 | 58.7 | 62.2 | 39.5 |
| Non poor | 34.9 | 9.3 | 16.3 | 39.9 | 19.1 | 39.5 | 6.7 | 38.8 | 33.3 | 20.0 | 36.7 | 28.1 | 41.3 | 37.8 | 60.5 |

Source: Barkat et al. 2009

The poverty in rural CHT is multi-dimensional (Barkat et al. 2009). People not only lack income, they also lack adequate assets and productive resources and face multiple challenges such as poor health, low education, and poor access to water, sanitation, and other basic services. Non-income poverty is also higher in the CHT than in other parts of Bangladesh.

The high levels of poverty are largely attributed to low diversification and high dependency on agriculture. Agriculture remains a key source of livelihood for the majority of rural people in the CHT, but most of the land is not suitable for intensive agriculture and many families depend on wage labour for income. The opportunities for wage labour are limited, however, and the demand is low and the unemployment rate very high. Unemployment and economic hardship, together with limited economic opportunities, have triggered social conflicts and ethnic tensions in the region.

Given the multidimensional nature of poverty in the CHT, eradicating poverty in its all forms by 2030 will be a huge challenge. A business as usual approach will not be enough. Special efforts will be required on different fronts, particularly accelerating economic growth to create productive jobs for both men and women, and equitable distribution to make growth inclusive so that everybody benefits from growth and development. Economic inclusion, particularly building sustainable livelihoods in remote areas of the CHT, remains a major challenge. In order to end poverty in all its forms, poverty eradication and economic growth need to be accelerated and inclusive to create productive jobs for both men and women and promote equality.

SDG 2: End hunger, achieve food security and improved nutrition, and promote sustainable agriculture

With an ever-increasing population and shrinking natural resource base, feeding the world's population remains a daunting challenge. The solution lies in sustainable agriculture practices. But unplanned rapid urbanization and the subsequent loss of agricultural land, and the unsustainable use of natural resources have risked the goal of attaining food and nutrition security for all. There is a need to change the global food and agriculture system to feed today's 795 million hungry people and the additional 2 billion expected by 2050 (UN 2015).

SDG 2 wants to end hunger, achieve food security, improve nutrition, and promote sustainable agriculture. Bangladesh has made impressive progress in achieving food self-sufficiency. However, much needs to be done to end hunger and achieve food security at both the national and local levels. Realizing the mammoth goal of ending hunger, the 7th Five-Year Plan has set targets for reducing the prevalence of stunting among children under five from 36 to 25% and the prevalence of underweight in children under five from 33 to 20% (Planning Commission 2015).

The food security situation in the CHT region is much worse than in the country as a whole. Most of the rural people in the CHT are food insecure, especially from June to August. The rural population has a daily average energy intake of only 1,798 kcal per person per day, considerably less than the average level among those in absolute poverty in Bangladesh overall (2,122 kcal); the values are lowest among the Bawn (1,440 kcal) and the Lushai, Chak, and Khyang (1,600 kcal) (Barkat et al. 2009). The Chakma community are slightly better off in terms of energy intake at 1831 kcal per person per day, but this is still far below the average for Bangladesh. Furthermore, the nutrition status of children in the CHT is considerable worse than that of children in the plains areas of Bangladesh. The prevalence of underweight among children is higher in all three CHT districts than in Bangladesh as a whole, with almost half of all children (47%) underweight in Rangamati compared to 32% over the country

Table 3: The nutrition status and mortality rate of children in the CHT and Bangladesh as whole (%)

| Indicators | Bandarban | Khagrachari | Rangamati | Bangladesh |
|---|-----------|-------------|-----------|------------|
| Prevalence of underweight in children under 5 <-2 SD ^b | 33.9 | 35.0 | 47.4 | 31.9 |
| Prevalence of stunting in children under 5 <-2 SD ^b | 40.6 | 52.9 | 51.4 | 42 |
| Prevalence of wasting in children under 5 <-2 SD ^b | 12.9 | 9.7 | 19.1 | 9.6 |
| Low birthweight infants <2.5 kg ^b | 32.4 | 28.9 | 28.7 | 26 |
| Under 5 mortality/ 1000 live births ^a | 85 | 63 | 45 | 64 |
| Infant mortality/1000 live births ^a | 63 | 49 | 36 | 49 |
| Child delivery attended by skilled personnel ^a | 7.6 | 9.1 | 11.5 | 24.4 |

Source: ^a MICS (2009), ^b MICS (2014)

(Table 3). The prevalence of stunting is also higher in the CHT districts than in the plains areas as is the prevalence of wasting (19.1% in Rangamati district, compared to 9.6% in Bangladesh as a whole) (Table 3).

Agriculture remains a key source of livelihood for the majority of rural people in the CHT. More than 70% of the rural population depends on agriculture, forestry, fisheries, and horticulture for their living. The vast majority of the land in the region consists of steep and undulating hill slopes and only about 5% is suitable for intensive agriculture (FAO (2013)). Agriculture has a very limited capacity to provide gainful employment to the growing workforce and around a quarter of households depend on wage labour for their livelihoods.

The problem is further exacerbated by the dwindling area of common property resources and increasing landlessness. The area of common property land used for jhum cultivation is shrinking due to a variety of reasons including population pressure, submergence of a vast area under water by the Kaptai dam, and commercial plantations. Land disputes, unclear property rights, inadequate recognition of common property rights, and land grabbing, have all discouraged investment and sustainable use and management of common property land. Ethnic communities are becoming increasingly landless due to seizing of land by others, with the level of landlessness now 36%. As a result, the jhum cycle has been reduced to three to four years, which is not enough to regenerate soil fertility or maintain the essential forest fallow part of the cycle. The land available for jhum or any other expansion of agriculture has become increasingly scarce and productivity has gone down. Jhum is no longer able to ensure food security and improve the living conditions of the tribal people. Settling land disputes, improving productivity, and transforming jhum into more productive systems, remain major challenges in the CHT.

Poor market access has further increased the challenge. The remoteness and poor accessibility of most of the CHT make marketing of agricultural products, and moving from subsistence to cash crops, a challenge. Most paras (small hamlets) are more than half-a-day's walk from an all-weather road. Poor road conditions and high transportation costs further constrain marketing. There is little value addition and post-harvest losses can reach 33% due to the weak market infrastructure, lack of storage and processing facilities, and high transportation costs.

Various social safety net programs such as widow allowances, handicapped allowances, and handicapped education stipend are being initiated in the region by the Government of Bangladesh. However, given the poor food and nutrition situation in the CHT, the goal of ending hunger and achieving food security and improved nutrition by 2030 by promoting sustainable agriculture will need focused attention and efforts from all the concerned bodies. As the majority of people depend on a combination of agriculture, forestry, horticulture, livestock, fisheries, and non-farm activities for access to food, an integrated approach will be essential. The social safety net programs initiated by the government will need to be scaled up further to improve food and nutrition status in the CHT.

SDG 3: Ensure healthy lives and promote well-being for all at all ages

Human endowment is one of the key assets to economic development and growth. In the absence of healthy human resources, a country cannot prosper. Of late, significant progress has been made towards increasing life expectancy and reducing some of the common factors associated with child and maternal mortality (UN 2015). But more efforts are needed towards promoting healthy lives, providing access to basic healthcare services to the poor and ultra-poor, and creating awareness among communities on prevention and cure of diseases.

Table 4: Child health indicators (%) in the CHT and Bangladesh overall

| Indicators | Bandarban | Khagrachari | Rangamati | Bangladesh |
|---|-----------|-------------|-----------|------------|
| Neonatal tetanus protection | 78.0 | 60.0 | 38.9 | 80.8 |
| Child under five with diarrhoea in the last two weeks | 0.3 | 13.7 | 8.7 | 3.9 |
| Households using solid fuel for cooking | 99.5 | 98.9 | 96.9 | 88.2 |

Source: MICS (2014)

SDG 3 aspires to ensure healthy lives and promote well-being for all people of all ages. Bangladesh has made some progress towards achieving the MDG indicators for this, especially those related to health such as births attended by skilled health staff and reducing maternal mortality rates. Nevertheless, much needs to be done to attain the goal of SDG 3 of ensuring healthy lives for all by 2030. In the 7th Five-Year Plan, the Government of Bangladesh has prioritized reducing the under-five mortality rate from 41 to 37 per 1000 live births and reducing the maternal mortality rate from 170 to 105 per 100,000 live births.

While overall the health scenario in Bangladesh has improved, the condition of people in the CHT region remains relatively worse than elsewhere (Table 1). The rates of maternal and infant mortality remain high and both women and children tend to be anaemic (UNICEF 2012; MICS 2014). Women experiencing complications during pregnancy and childbirth die due to the lack of available health care staff or services at health facilities as well as lack of transportation to reach an appropriate health facility. The lack of facilities is reflected in the low rates for neonatal tetanus protection (only 40% in Rangamati compared to 81% in Bangladesh overall) and high rates of diarrhoea in the more remote districts (Table 4).

The poor state of health in the CHT is due both to lack of awareness of primary health care issues and services and lack of actual healthcare facilities. The socio-economic baseline survey by Barkat et al. (2009) showed that most of the ethnic communities either didn't know where to go for primary healthcare services or the service providers were too far from their current locality.

Given the present poor levels of health in the CHT, achieving the health targets under SDG 3 by 2030 will be challenging. Without concerted efforts from all concerned stakeholders towards improving the health indicators, ensuring healthy lives for all will remain an elusive goal. Improving health status means first recognizing the local beliefs and customs and the social, economic, cultural, and linguistic differences among the tribal ethnic communities, and then developing appropriate ethnically sensitive approaches and measures that will be effective in reaching the local communities.

SDG 4: Ensure inclusive and quality education and promote lifelong learning opportunities for all

Education plays an important role in human resource development and is immensely important for the development and economic growth of a country. In recent decades, the world has made significant improvements in terms of attaining basic literacy skills, increasing access to education at all levels, and enhancing school enrolment rates for women and girls (UN 2015).

SDG 4 intends to achieve inclusive and equitable quality education and lifelong learning opportunities for all. While primary and secondary education attainment rates are relatively good in the plains areas of Bangladesh, the situation in the three CHT districts remains relatively low in terms of both literacy (Table 5) and years of schooling.

Access to primary schools remains difficult in many paras. Up to half of all children never attend school, and those that do rarely complete even primary

Table 5: Literacy rate in the CHT and Bangladesh overall

| District | Literacy rate (%) | | |
|-------------|-------------------|------|--------|
| | Total | Male | Female |
| National | 51.8 | 54.1 | 49.4 |
| Bandarban | 35.9 | 40.3 | 30.9 |
| Rangamati | 49.7 | 56.4 | 42.3 |
| Khagrachari | 46.1 | 51.9 | 40.1 |
| CHT total | 43.9 | 49.5 | 37.8 |

Source: BBS (2011)

school, with less than 1% achieving above secondary. Among the ethnic communities, Khumi, Mro, and Khyang have the highest proportion of population with no education at all. In the baseline survey, 65% of respondents reported discontinuation of their children's education before completion of the primary cycle and a further 19% at transition to secondary (Barkat et al. 2009).

In the 7th Five-Year Plan, the Government of Bangladesh has prioritized achieving a 100% net enrolment rate for primary and secondary education and ensuring quality education at all levels, thus addressing the present poor status of inclusivity and inequitable quality of education (Planning Commission 2015). The issues that will need to be addressed in the CHT include the challenging terrain and scattered settlements, lack of qualified teachers, lack of adequate learning spaces, high levels of poverty, high dropout rate, and financial challenges; a huge effort and resources will be needed to achieve the SDG 4 targets.

SDG 5: Achieve gender equality and empower all women and girls

While improvements have been made towards gender equality and women's empowerment, discrimination and violence against women and children continue. Peaceful and harmonious societies, and thus sustainable development, are difficult to achieve in the absence of gender equality. But much remains to be done in terms of providing equal access to education, health care, decent work, and representation in political and economic decision making processes around the globe (UN 2015).

Gender equality is both a means to promote inclusive and sustainable human development and a goal in itself. As such, gender equality and women's empowerment remains one of the most important sustainable development goals to achieve in a number of countries. The issue of gender inequality is more prominent in many poor and developing nations than in more developed countries. In the CHT, women work very hard growing food (jhum cultivation), raising and caring for livestock (mainly poultry, pigs, goats, and cattle), collecting firewood, and fetching water, while carrying out all the daily household work. Women carry their produce to the nearest market for sale and prepare their own cloth using handlooms and thread prepared from their own cotton harvest. They also make handicraft objects from bamboo and rattan. Notwithstanding their hard work and primary role in the management of natural resources, women receive almost no support from agricultural extension, credit, marketing, or other institutional services, and are largely absent from community decision-making processes (Talukder 2014). Women have little access to information and few linkages with outside communities; they bear the burden arising from the strenuous socio-political situation but their voices remain largely unheard. Only 11 of 375 headmen are women and none of the three circle chiefs (Talukder 2014), while in the Chittagong Hill Tracts Regional Council (CHTRC) only 3 out of 25 positions for members are reserved for women. Women also have limited access to land and other property, and limited access to non-farm economic activities such as working in hotels, restaurants, shops, and offices (Dewan nd).

Mammoth efforts will be needed to achieve gender equality and empower all women and girls in Bangladesh, and even more so in the CHT. To achieve gender equality, the Government of Bangladesh in its 7th Five-Year Plan has set the target of raising the gender parity index from 0.7 to 1 and increasing the ratio of literate females to males for the age group 20–24 from 86 to 100% (Planning Commission 2015). The issue of gender inequality is quite pronounced in the CHT and the indicators for gender equality and women and girls' empowerment are generally low. Girls' education has a low priority, one-third of girls overall are not consulted on matrimonial issues, and almost none in the Mro communities (Barkat et al. 2009). Only one-fifth of women in the CHT can inherit property, and virtually none in the Mro and Khyang communities (Barkat et al. 2009). Women have little say in major decisions, including sending children to school, involvement with NGOs, income generating activities, or using or choosing family planning methods, among others (Barkat et al. 2009; Talukder 2014; Dewan nd). Violence against women is also pervasive as in other parts of the country.

SDG 6: Ensure availability and sustainable management of water and sanitation for all

Poor hygiene and lack of sufficient and good quality water claims millions of lives, mostly of children, every year. Furthermore, water scarcity negatively affects food security, thereby worsening hunger and malnutrition. Good health is directly linked to clean drinking water, good environmental sanitation, and personal hygiene; while the primary

causes of ill health in many poor and developing countries are related to poor hygiene and poor environmental sanitation facilitating the spread of water-borne diseases.

SDG 6 envisages ensuring access to water and sanitation for all across the globe. Access to an adequate quantity and quality of water and good sanitation are critical for good health and nutrition. Despite recent efforts, access to safe drinking water and sanitation remain poor in the CHT compared to the rest of Bangladesh (Table 6). There is a high prevalence of stunting, underweight, and wasting among children under five and the poor water and sanitation conditions compound the vulnerability of children to morbidity and mortality from diarrhoea and other preventable diseases. Providing access to safe drinking water is difficult due to the topography of the area and often too costly for the local people. Only 65% of people have access to safe drinking water, compared to 75% of rural people in Bangladesh as a whole. Drinking water largely comes from perennial water sources such as streams, springs, and lakes, but increasingly, natural water bodies are drying up and perennial water bodies are becoming seasonal. Shortage of water for agricultural and domestic use has become a major problem, and fetching water, usually by women and children, takes longer. The reduction in forest quality and degradation of watersheds is exacerbating the problems faced in securing water supplies. Furthermore, open defecation is still normal practice in many areas, which can lead to pollution of drinking water sources and health and nutritional problems (MOHAFW 2011; UNICEF 2012; World Bank 2014). In Bandarban less than half of households have access to improved drinking water sources or improved sanitation, compared to 98% for water and 56% for sanitation in Bangladesh overall (Table 6). Access to improved sanitation is even lower in Khagrachari (27%) and Rangamati (33%).

The Government of Bangladesh has launched several initiatives to bring all households across the country under the sanitation coverage, including the National Strategy for Water and Sanitation in Hard to Reach Areas of Bangladesh (2012), National Hygiene Promotion Strategy for Water Supply and Sanitation Sector in Bangladesh (2012), and National Strategy for Water Supply and Sanitation (2014). Under the 7th Five-Year Plan, Bangladesh seeks to raise the proportion of the urban and rural population with access to sanitary latrines to 100% and 90%, respectively (Planning Commission 2015). While these are notable targets towards achieving SDG 6, huge efforts will be needed on the part of both public and private sectors to achieve them, particularly in terms of finance and awareness creation.

Table 6: Water and sanitation indicators in CHT and Bangladesh overall (%)

| Indicators | Bandarban | Khagrachari | Rangamati | Bangladesh |
|--|-----------|-------------|-----------|------------|
| Use of improved drinking water sources | 45.8 | 69.8 | 60.7 | 97.9 |
| Use of improved sanitation facilities which are not shared | 45.8 | 26.9 | 32.8 | 55.9 |
| Safe disposal of child's faeces | 4.5 | 32.2 | 44.6 | 38.7 |
| Place to wash hands available with water and soap | 16.3 | 52.8 | 57.6 | 59.1 |

Source: MICS (2014)

SDG 7: Ensure access to affordable, reliable, sustainable and modern energy for all

Development of a country hinges on the availability of energy resources. Today, many poor and developing countries around the globe face acute shortages of the energy crucial for rapid economic development. Energy is essential for jobs creation, combating climate change, and food production, among others. Moreover, access to sustainable energy is of paramount importance for sustainable development. Promoting access to and use of sustainable energy, requires improving the efficiency and use of renewable resources.

SDG 7 aspires to provide clean modern energy for all at an affordable price. While Bangladesh has been making progress towards improving energy efficiency and providing energy to its vast population, energy access to people in the CHT remains below the national average (Figure 2) and access to solar energy is also very low (Table 7). In Bandarban, only 28 % of households have access to electricity, and a further 5% to solar power, compared to a national average of 56%. Only Rangamati has a relatively higher electricity access (42%).

Table 7: Access to solar power in the CHT

| | Solar (%) |
|-------------|-----------|
| Bandarban | 5.0 |
| Rangamati | 5.6 |
| Khagrachari | 1.6 |
| CHT total | 4.2 |

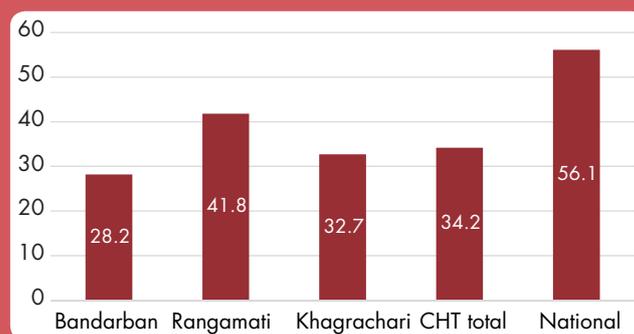
Source: Bala et al. (2010)

People in the CHT rely heavily on traditional sources of energy such as firewood and coal as opposed to modern clean energy sources like solar power, wind, and hydroelectricity. The consumption of different types of fuel is shown in Table 8; 573,984 t of

fuelwood and 94,260 t of coal were consumed annually as primary sources of energy, with a further – and alarming – 48,674 t of wood used in tobacco preparation production.

To achieve the SDG 7 goal, the Government of Bangladesh has set a target of increasing electricity generation to 23,000 MW, electricity coverage to 96%, and energy efficiency by 10% by the end of the 7th Five-Year Plan (Planning Commission 2015). These are ambitious targets and a notable effort will be needed to achieve them.

Figure 2: Household access to electricity



Source: BBS (2011)

Table 8: Annual energy consumption in the three districts of the CHT and selected upazilas

| | Fuelwood (t) | Twigs (t) | Diesel (l) | Petrol (l) | Kerosene (l) | Electricity (kWh) | Coal (t) | Wood (for curing tobacco) (t) |
|--------------------|--------------|-----------|------------|------------|--------------|-------------------|----------|-------------------------------|
| CHT overall | 573,984 | 70,768 | 12,209,075 | 1,722,461 | 3,440,387 | 74,454,485 | 94,260 | 48,674 |
| Bandarban | | | | | | | | |
| Bandarban total | 202,198 | 24,146 | 2,359,926 | 178,624 | 754,752 | 17,948,547 | 20,600 | 35,167 |
| Bandarban sadar | 90,231 | 9,152 | 1,671,726 | 109,774 | 355,200 | 13,600,000 | 14,000 | 11,200 |
| Alikadam | 61,650 | 7,042 | 412,800 | 36,000 | 249,600 | 3,548,547 | 3,900 | 21,376 |
| Ruma | 50,317 | 7,952 | 275,400 | 32,850 | 149,952 | 800,000 | 2,700 | 2,591 |
| Rangamati | | | | | | | | |
| Rangamati total | 178,093 | 20,442 | 5,057,160 | 1,242,850 | 1,815,267 | 36,902,950 | 2,500 | 11,008 |
| Rangamati sadar | 117,120 | 12,210 | 2,800,000 | 1,113,250 | 255,500 | 30,000,000 | 2,500 | 0 |
| Barkal | 39,337 | 4,175 | 37,160 | 0 | 157,212 | 302,950 | 0 | 9,600 |
| Kaptai | 21,636 | 4,057 | 2,220,000 | 129,600 | 1,402,555 | 6,600,000 | 0 | 1,408 |
| Khagrachari | | | | | | | | |
| Khagrachari total | 193,693 | 26,180 | 4,791,989 | 300,987 | 870,368 | 19,602,988 | 71,160 | 2,499 |
| Khagrachari sadar | 96,773 | 9,023 | 1,671,726 | 109,774 | 355,200 | 13,600,000 | 6,400 | 1,408 |
| Mahalchari | 4,233 | 8,162 | 720,000 | 33,600 | 132,000 | 2,523,048 | 1,400 | 1,091 |
| Dighinala | 92,687 | 8,995 | 2,400,263 | 157,613 | 383,168 | 3,479,940 | 63,360 | 0 |

Source: Bala et al. (2010)

SDG 8: Promote sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all

SDG 8 aspires to achieve sustained and inclusive economic growth and productive employment for all; a GDP growth rate of at least 7% per annum is targeted for the Least Developed Countries (LDCs). The Bangladesh



Government, aims to achieve a GDP growth rate of 7.4% over the period of the 7th Five-Year Plan, and provisional assessment indicates that a growth rate of 7.1% will already have been achieved in 2016. While the national GDP growth rate is satisfactory, the challenge of expediting growth in regions like the CHT remains.

In the past, the CHT region remained outside of mainstream development, initially as a result of British colonial policy which treated the CHT as an excluded area, and later as a result of the two-decade long insurgency and persistent low-level conflict. The CHT economy is primarily agricultural, with both jhum cultivation and sedentary agriculture practised. Jhum cultivation is the traditional practice of the tribal communities for carrying out agriculture on the steep slopes in the region, which involves clearing and burning surface vegetation, before sowing first year mixed crops of rice, maize, millet, sesame, vegetables, and cotton, with fewer crops in the second year, followed by a very long period of forest fallow, when the forest cover regenerates and only tree crops are harvested (Tripura 2013). The traditional cycle was 10–15 years or more with plots allocated for use in rotation, but with pressure on land this has now been reduced to 2–3 years, which greatly reduces soil fertility and doesn't allow for forest regeneration. Jhum cultivation is still practised at a subsistence level in remote areas. The marketable surplus is low, and sedentary agriculture, particularly with fruit and horticulture and high value niche crops such as cashew nuts and tobacco are gradually replacing the traditional practice among the tribal communities. The major agricultural crops are rice, potato, cotton, ginger, garlic, maize, tobacco, jackfruit, lemon, pineapple and nuts. Extraction of timber and non-timber forest products such as medicinal plants, herbs, bamboo, and rattan also provides supplementary income.

Low levels of entrepreneurship, and limited private investment in industry, services, and commercial enterprise, have resulted in limited employment and livelihood opportunities in the non-farming sector in the CHT. The farm and non-farm sectors are unable to absorb the growing labour force productively and a significant portion of the youth remained un- or underemployed. Moreover, it is difficult for people from the CHT to take up job opportunities outside the region because of the generally low level of education, poor vocational skills, inadequate information, and poor networks. So far, only a few thousand young people have found work in Dhaka and Chittagong in the garment and other industries. Although a huge number of people from the plains are working abroad and sending back remittances, very few people from the CHT and almost none from the tribal communities, are able to take advantage of the international labour market. The challenge is how to prepare the people of the CHT, particularly the ethnic communities, to seize the opportunities offered by the national and global labour market and business. Unemployment and economic hardship, along with limited economic opportunities, have triggered social conflicts and ethnic tensions in the region.

The limited extent of industrialization and urbanization means that other economic opportunities are limited, but “the trends clearly indicate that, over the next decade or so, and perhaps well beyond that, the economy of the Hill Tracts will be integrated further into the regional and global market economy. This in turn, is almost certain to lead to the decreased dependence of indigenous people on land-based activities, including their traditional occupations” (Roy 2000:109). It is also likely that more of the collectively-managed lands will come under the private ownership of indigenous people. Although the whole of Bangladesh faces challenges of widespread poverty, the development challenges faced by the CHT are different to those in other parts of the country because of the special socio-cultural and geographic situation. The livelihoods of people in the CHT are more susceptible to environmental

and economic changes than those in the lowlands. Sustainable development in the CHT is greatly challenged by the remoteness and poor accessibility, poor infrastructure and social and economic services, rapid socioeconomic change, and growing stress from climate change with inadequate measures to support adaptation. Although progress has been made in certain areas, special attention and support will be needed in order to facilitate culturally inclusive growth in the CHT and achieve the SDGs, and especially to further economic opportunities, create productive employment, and transfer labour from less productive to more productive sectors and from the farm to non-farm sectors. This will require a huge investment in education, health, and skills development to develop human capital and attract further investment in the value addition of primary products produced in the CHT, tourism, and opportunities in other non-farm sectors, to create decent employment and a thriving local economy.

SDG 9: Build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation

Infrastructure is essential to support growth and the development of employment opportunities. SDG 9 focuses on building resilient infrastructure as a basis for promoting growth through industrialisation and innovation, while ensuring that the opportunities remain inclusive. Investment is critical to growth and development. Investment in infrastructure such as transport, irrigation, energy, and information and communication technology will help achieve sustainable development thereby empowering communities in many countries. The improvement in rural infrastructure in Bangladesh began in the early 1980s with the initiation of a rural development strategy. Since then, the government has focused on the development of physical infrastructure, such as roads, markets and storage facilities, but the country has a large unmet demand for rural infrastructure. While improvements in rural infrastructure have been accelerating in the plains areas, the CHT remains far behind. Investment is needed in rural transport as well as supporting infrastructure such as irrigation facilities and water supplies. The region lacks an adequate road and trail network and improvement is needed to connect the many scattered rural areas with the growing regional hubs. The poor infrastructure conditions hinder the participation of ethnic minority people in economic activity. Development of infrastructure and of the institutional capacity needed to support rural development will help generate employment opportunities and enhance the livelihoods of the rural poor.

The difficult terrain, remoteness, and scattered communities pose a huge challenge to building physical infrastructure and improving the delivery of basic services. Building infrastructure is both very expensive and environmentally risky and needs careful and sensitive planning. The development challenges facing the CHT include lack of funds to develop infrastructure; limited participation of local people in the planning, design, and implementation of development projects; and the immense task of rural road development in the fragile socio-political environment of the region.

SDG 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

Biodiversity plays an important role in sustaining ecosystems, both upstream and downstream. But with the increased clearing of forests, biodiversity has been threatened, negatively affecting millions of lives and livelihoods. Forests not only provide food security and shelter, they also play an important role in regulating water and preventing erosion, combating climate change, conserving biodiversity, and protecting the homes of indigenous people. Deforestation and desertification are mainly caused by human activity; both pose a serious threat to achieving sustainable development across the globe. In recent times, the world has lost thirteen million hectares of forest every year due to environmental degradation.

SDG 15 envisages protecting, restoring, and promoting the sustainable use of terrestrial ecosystems, sustainably managing forests, combating desertification, reversing land degradation, and halting biodiversity loss. This goal is of particular importance in the context of the CHT as the region is rich in biodiversity and still retains an important level of forest cover.

Forest coverage overall is very low in Bangladesh, at 11% one of the lowest in the world outside of desert countries (World Bank 2016) and only 0.022 ha per capita (Chowdhury 2005). The forest area is still declining due to

population pressure and the increased demand for forest resources. Bangladesh was a long way from achieving the MDG indicator of increasing forest cover to 20% of the total land area in 2015. The CHT region has close to 40% of Bangladesh's forest cover and a great biodiversity, but poor management has led to a marked decline in area over the years (Table 9) and significant degradation of the forest resources. Deforestation and forest degradation have affected the lives and livelihoods of the ethnic population, who depend heavily on forests for sustenance. The forest area has declined while agricultural land has increased; with forest cleared especially for the cultivation of rubber and tobacco over the last forty years or so. Forest degradation has been aggravated by the ever-increasing population growth, indiscriminate harvesting, lack of alternative livelihoods, climate change, and shortening of the jhum fallow period, among others. The government policy of settling thousands of Bengali people from the plains areas in the CHT has also resulted in loss of forest area and resources. Deforestation combined with unsustainable agricultural practices, including mono-cropping of ginger, turmeric, rubber plants, and other crops, has increased runoff soil erosion and loss of nutrients and biodiversity (Khisra and Mohiuddin 2014).

Changing land use patterns have been cited as one of the main causes of increased forest degradation in the CHT region. The increased cultivation of various horticultural products has been accompanied by a decline in forest cover. Table 10 summarizes the existing land use in the CHT. Bandarban has the greatest proportion of area under forest, Rangamati the greatest proportion under shifting cultivation (18%), and Khagrachari the greatest proportion of flatland, which is mainly used to grow rice (30%). More than a quarter of land area in all districts is under horticulture. The overall forest cover is 36%, above the world average of 30%.

Sustainable management of forests and biodiversity in the CHT remains a challenging task. Once the land disputes have been settled, awareness generation will be needed among the local people on the detrimental effects of changing land use patterns and the need to halt forest degradation, conserve biodiversity and other natural resources, restore lost forest, and regenerate the natural ecosystem. One of the most challenging tasks will be to develop an appropriate model for sustainable forest management that engages local communities in the management activities. This will require both considerable investment and institutional innovation. A further challenge is to make jhum more productive and sustainable, or to transform it to more productive systems. Replacing tobacco cultivation has also become a serious concern, as it is leading to wide-scale environmental degradation due to the use of vast numbers of trees to cure the tobacco as well as intensive use of chemicals in production (Akhter 2014). There is also an urgent need to switch to modern forms of energy and away from traditional sources such as fuelwood and twigs. Massive efforts will be needed on the part of both the government and the local people to conserve forests and biodiversity. While infrastructure development, and safe, resilient, and sustainable human settlements are needed, care must be taken to ensure that fragile ecosystems are not damaged in the process of their development.

SDG 16: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all, and build effective, accountable, and inclusive institutions at all levels

SDG 16 calls for promoting peaceful and inclusive societies for sustainable development, providing access to justice for all, and building effective, accountable, and inclusive institutions at all levels. Bangladesh has made strong

Table 9: Deforestation in the Chittagong Hill Tracts 1969–1998

| Year | Total forested area (ha) |
|---------|--------------------------|
| 1969/70 | 1,234,413 |
| 1979/80 | 1,188,259 |
| 1989/90 | 833,198 |
| 1997/98 | 778,138 |

Source: Adnan and Dastidar (2004: 251)

Table 10: Land use in the CHT

| | Forest (%) | Shifting cultivation (jhum) (%) | Horticulture (%) | Flatland (paddy) (%) | Other (%) |
|-------------|------------|---------------------------------|------------------|----------------------|-----------|
| Bandarban | 40.4 | 15.5 | 27.9 | 15.5 | 0.9 |
| Rangamati | 35.9 | 18.0 | 28.1 | 4.1 | 13.9 |
| Khagrachari | 28.9 | 13.1 | 26.8 | 29.8 | 1.4 |
| CHT overall | 35.9 | 15.5 | 27.6 | 16.2 | 4.8 |

Source: Bala et al. (2010)

endeavours to address the concerns and grievances of the ethnic minorities in the CHT and to promote a peaceful and inclusive society and build effective institutions. The signing of the Peace Accord in 1997 was a historical milestone towards establishing peace and building inclusive institutions in the CHT. It not only brought an end to two decades of insurgency, it also ensured a greater degree of decentralization of power to the tribal ethnic minorities and established an institutional mechanism for representation of the ethnic tribal communities in local, regional, and national policies related to the CHT. These inclusive institutional arrangements are described in the following. The functions of the main bodies are summarized in the Annex (Table A2).

The Peace Accord recognized the CHT as a 'Tribal Populated Region', and acknowledged the need to protect the characteristics of the region and give a leading role to the ethnic communities in the CHT administration. The CHT region was recognized as a unique political and administrative unit and special institutional arrangements were made that differ significantly from those in the rest of Bangladesh. These arrangements were designed to respond to the specific needs of the CHT people and to establish responsive and inclusive institutions. A number of institutions were introduced to resolve grievances, promote culturally inclusive development, and establish lasting peace and security, including the Chittagong Hill Tracts Regional Council (CHTRC), the Hill District Councils (HDC), the Ministry of Chittagong Hill Tracts Affairs (MoCHTA), and a Land Commission. Safeguarding measures have been introduced to ensure representation and participation of the ethnic communities in decision-making in all affairs related to the CHT with representation from all eleven tribal ethnic communities as well as from the Bengali community. The heads of the organizations will be from the tribal ethnic communities as will two-thirds of the members. Along with the formal democratic institutions, the Peace Accord also recognized the role of traditional institutions: the circle chiefs, mauza headman, and village karbari (headman). The traditional institutions play an important role in parallel to the formal institutions in safeguarding the land rights of tribal ethnic communities and in land management and the administration of justice (Roy 2014).

The CHT Regional Council (CHTRC): The introduction of the CHTRC was a great achievement in the peace process. The Council is an apex political and administrative body entrusted with specific powers and functions. It has a mandate to coordinate and supervise all the activities of the three Hill District Councils (HDCs), general civil administration and law and order, and all other development activities and programmes undertaken by autonomous bodies and NGOs in the CHT. It also has an advisory role with regard to laws made for the CHT region. It can provide recommendations to the central government to amend any law or make a new law for the region. The central government should consult with the CHTRC on making any law concerning the CHT region. The CHTRC has 25 members, 18 – including the chairperson – from ethnic communities, and a minimum of 3 women to represent women's issues. As Chakma says: "The formation of the CHTRC as per the 1997 Accord is a straight recognition of the human rights of the indigenous peoples living in CHT" (Chakma 2014: 131).

The Hill District Councils: Hill District Councils (HDCs) have been established in each of the three districts – Rangamati, Khagrachari, and Bandarban. The HDCs are responsible for economic, social, and cultural development, implement government projects, and supervise the work of NGOs. While some remarkable improvements in terms of easing socio-ethnic tensions have been made, much needs to be done to fully resolve the issues. For instance, devolution of power to the region is an ongoing process as per the Peace Accord. They have authority over a number of subjects or departments delegated to them by the central government, such as health, education, agriculture, culture, land management, commerce, and trade. The HDC are intended to be at the centre of all development activities in the CHT and activities related to the transferred departments are now administered through these councils, while all transferred department and departmental heads report to the HDC chairmen. Under the three HDC Acts of 1989, as amended by the 1997 CHT Peace Accord, a total of 33 subjects are supposed to be transferred from the Ministries to each of the three HDCs. So far, 30 departments have been transferred to the Rangamati and Khagrachari HDCs, and 28 to Bandarban HDC (Tripura 2016). Each HDC is composed of 34 members, with the chair and between 21 and 23 councillors (based on the size of the tribal ethnic population) from the ethnic communities, and the remaining councillors from the Bengali community. The intention was for councillors to be directly elected by the local people, but the election process has not yet started and councillors are still appointed by the government.

The Ministry of CHT Affairs (MoCHTA): The Ministry of Chittagong Hill Tracts Affairs (MoCHTA) is the principal policy and coordination organization at both national and regional levels. At regional level, the MoCHTA monitors and

coordinates the overall development activities undertaken by the HDCs, the CHTRC, and the district administration (which is headed by the deputy commissioners, who look after law and order and general district administration), as well as allocation of the funds for the HDCs and CHTRC. At the national level, MoCHTA acts as a focal point for the CHT region, coordinates with other line ministries, and provides advisory support to the government with regards to CHT matters. It also plays a role in the implementation of policies related to the CHT and making policies, rules, and laws on CHT issues. Under the provisions of the Peace Accord, MoCHTA is led by a minister from the tribal ethnic communities.

Although significant progress has been made towards building a lasting peace and establishing trust and confidence since the signing of the Peace Accord in 1997, formidable challenges still remain. Inter-communal violence remains common (Tripura 2016) and opposition persists among some groups, especially Paharis and Bengalis. Peace and progress will depend on full implementation of the Peace Accord – in letter and spirit – including making the HDCs and CHTRC truly representative through direct elections, settlement of land disputes, and strengthening of the effectiveness of the CHT institutions and their capacity to respond to the needs of the population.

The Government of Bangladesh is strongly committed to taking all measures required to fulfil the remaining provisions of the Peace Accord within the period of the 7th Five-Year Plan. In a promising step, it has already amended the CHT Land Commission Act 2001 in order to address the concerns of the tribal ethnic communities and make the Land Commission functional and effective. It is hoped that this will go a long way to reducing ethnic tensions in the CHT and also contribute to peace and stability, as land disputes are the root cause of most of the ethnic tension and conflict. It will be critically important to strengthen the capacity and enhance the capability of the CHT institutions in planning and successful implementation of development work, taking into account local conditions and involving local people in order to achieve the SDGs.



Achieving the SDGs in the CHT: Potential, Opportunities and Lessons

Hills and mountains are often regarded as areas with less potential and are less favoured for investment in economic growth and development, so that the potential that does exist remains underused (Mergos 1994). The result is that these areas have slower growth, more limited economic opportunities, and worse socioeconomic conditions than in the adjacent plains areas (Birthal et al. 2006).

In order to accelerate economic growth and achieve the SDGs in the CHT, it is critically important to focus on optimum and sustainable use of the available natural and human resources and exploiting their possibilities. Although the CHT faces many development challenges, it has a tremendous potential which can be harnessed to improve the lives of the local people and the environment. The signing of the Peace Accord and establishment of a decentralized governance structure and institutions has opened up new windows of opportunity in the CHT for breaking the poverty cycle and accelerating inclusive growth and the sustainable use of resources. In recent decades, the framework conditions for rural development have changed significantly due to globalization, increased connectivity, labour mobility, progress in transportation and communication, and advances in mobile and internet technologies. Remote villages have now been connected to national, regional, and global markets; cash crops are replacing subsistence agriculture; and many new opportunities are emerging with the changing contour of the world economy that can be tapped to boost the economy of the region. There is an increased move towards livelihood diversification and reduced dependence on agriculture, with value addition and improvement of value chains for rural products, promotion of agribusiness, and development of the non-farm sector. The potential for development in both urban and rural areas of the CHT has improved substantially with the introduction of mobile and internet technologies and the building of new roads.

Livelihood diversification is already underway in the CHT. Jhum is still practised for subsistence in remote areas, but farmers are also increasingly engaged in off-farm activities such as weaving, wage labour, and selling fuelwood, while on-farm activities are also increasingly diversified. Table 11 shows the range of activities reported by ethnic and non-ethnic households in a survey by Jamaluddin et al. (2010). More than half of the ethnic respondents practised fruit gardening and 41% weaving, indicating the increasing range of livelihood opportunities.

This section looks at the untapped potential of the CHT region. It presents good practices drawn from experience in neighbouring countries that can be replicated in the CHT region, covering such topics as watershed management, community forestry, apple production, microenterprise development, and community-based tourism.

Intensification and diversification of agriculture to enhance productivity and sustainability

Opportunities for investment in agriculture and food processing

Agriculture is one of the principal sources of livelihoods in the CHT and the majority of the rural population depend on agriculture for sustenance. Agricultural development is thus critically important for achieving the SDGs on poverty alleviation (SDG 1), food security (SDG 2), and economic growth (SDG 8), among others. Broadly, two types of agriculture are practised: jhum farming in remote hill areas and plough agriculture in the plains. Other agricultural occupations include fishing, herding, dairy farming, and livestock rearing, while tobacco cultivation is increasing in some parts of the CHT, particularly Bandarban. The main non-cereal crops are vegetables, cotton, sugarcane, and fruit; while the major cereal crop is rice, either high yielding or local (HYV Aman, followed by HYV Boro, and local Aus) (FAO 2013; Talukder et al. 2013).

A number of studies have suggested that with appropriate policy and institutional support, there is considerable potential for increasing both the productivity and sustainability of crop production, horticulture, fisheries, and livestock, and for transforming jhum into more productive systems (USAID 2015, Talukder et al. 2013; FAO 2013). This potential remains largely untapped due to poor market access, inadequate access to key production inputs

Table 11: Major livelihood activities of ethnic and non-ethnic households in the CHT

| Livelihood activities | % of respondents of each group | | | | | | | |
|---|--------------------------------|------------|-------------|------------|-----------|------------|--------|------------|
| | Bandarban | | Khagrachari | | Rangamati | | All | |
| | Ethnic | Non-ethnic | Ethnic | Non-ethnic | Ethnic | Non-ethnic | Ethnic | Non-ethnic |
| On-farm activities | | | | | | | | |
| Fruit gardening | 61.9 | 16.7 | 55.7 | 80.0 | 59.6 | 10.0 | 59.1 | 35.6 |
| Livestock rearing | 55.4 | 10.0 | 38.5 | 46.7 | 40.2 | 23.3 | 44.7 | 26.7 |
| Poultry rearing | 49.2 | 23.3 | 29.8 | 23.3 | 48.8 | 46.7 | 42.6 | 31.1 |
| Valley farming in plains/ valley/fringe land | 5.1 | 16.7 | 82.2 | 46.7 | 44.6 | 16.7 | 44.0 | 26.7 |
| Off-farm activities | | | | | | | | |
| Weaving | 60.2 | 0.0 | 15.9 | 0.0 | 46.7 | 43.3 | 40.9 | 14.4 |
| Small business | 5.0 | 20.0 | 13.4 | 6.7 | 40.4 | 43.3 | 19.6 | 23.3 |
| Govt. service | 1.5 | 0.0 | 0.9 | 3.3 | 12.2 | 0.0 | 4.9 | 1.1 |
| Private service | 5.6 | 20.0 | 8.8 | 0.0 | 13.1 | 10.0 | 9.2 | 10.0 |
| Wage labour | 68.2 | 60.0 | 51.4 | 70.0 | 47.7 | 73.3 | 55.8 | 67.8 |
| Selling fuelwood | 44.7 | 60.0 | 28.0 | 50.0 | 19.4 | 0.0 | 30.7 | 36.7 |

Source: Jamaluddin et al. (2010)

such as quality seed and institutional credit, and lack of knowledge about the correct application of fertilizers and pesticides (Talukder et al. 2013; FAO 2013). Other critical hurdles include the lack of value chain development, and especially of agro-processing, storage, and transportation facilities, which results in huge post-harvest losses. While Bangladesh has many large agro-processing companies in many parts of the country, the CHT has virtually no agro-processing or collection points (FAO 2013). As a result, most agricultural produce is sold as raw material at a low price.

Agriculture in the CHT is largely rainfed. The monsoon rainfall is very high, around 2210 mm annually, and the CHT has considerable surface and groundwater resources as a result, which offers considerable potential to expand irrigation systems and enhance productivity. A recent study by Islam et al. (2016) suggested that given the high monsoon rainfall, irrigation using rainwater harvested by constructing check dams would be very cost-effective and can increase cropping intensity and crop productivity considerably.

The CHT region has a congenial agro-climatic environment for growing a number of high-value crops. The area is suitable for growing fruit such as pineapple, mango, papaya, orange, banana, and jackfruit; a wide range of vegetables; and spices, herbs, and nuts, including ginger, turmeric, and cashew. There is a rapidly rising demand in Bangladesh for high-value products, and especially a growing demand for CHT fruits, spices, nuts, and off-season vegetables. If the supply constraints can be removed and market linkages improved, including agro-processing and value addition, the CHT can emerge as an important centre of high-value agriculture. Rapid growth in high-value agriculture will accelerate the overall growth of the agricultural sector and benefit a large number of poor smallholders, creating additional employment opportunities as well as contributing to achieving food and nutrition security and reducing poverty. Ravallion and Datt (1996), Thirtle et al. (2002), and Warr (2003) have shown that in developing countries where a sizeable proportion of the population depends on agriculture, growth in the agricultural sector has a more favourable effect on poverty reduction than growth in other sectors of the economy.

Box 1 describes how in Vietnam the Ede ethnic group in Vietnam was able to escape poverty through institutional support for cash crop production. A similar type of institutional support could be given to the ethnic minorities in the CHT to boost both cereal and non-cereal production, thereby enhancing their livelihoods.

Box 1: Escaping poverty with cash crop production: Ede ethnic minority, Buon Dung village, Dak Lak province, Vietnam

The Ede are the largest indigenous ethnic minority in Dak Lak province of Vietnam, comprising about 20% of the population. Agriculture, particularly shifting cultivation, was their primary livelihood with up to 90% of households practising subsistence agriculture, while a quarter of households suffered acute poverty. These ethnic minority households shifted from subsistence to various cash crops including coffee. The government extension department provided training, the Vietnam Bank of Agriculture provided loans, and the Farmer's Union provided market information and storage and processing facilities. The cash crops provided a high income, the farmers' economic condition improved, and families are investing their profits in purchasing additional land in neighbouring villages as well as constructing improved houses in traditional Ede style.

Source: World Bank (2009)

Box 2: Commodity diversification among the Hmong ethnic minority in Lao Cai Province, Vietnam

The Hmong, an ethnic minority group in Na Loc village in Lao Cai Province of Vietnam, are considered to be among the 'poorest of the poor'. For a while, the farmers in Na Loc produced a significant quantity of pineapples which were sold in a nearby Vietnamese market for good returns. But then the market dropped, and as they were relying on a single market, the farmers did not know what to do for their livelihoods. They came up with a range of innovative ideas and diversified from a single commodity to other cash crops such as a combination of hybrid and traditional seng cu seeds, corn, banana, and tea. Now they again earn a reasonable income but their livelihoods are more resilient.

Source: World Bank (2009)

Diversification of livelihood options and enhancing resilience

The majority of households in the CHT depend heavily on agriculture or other land-based activities for their livelihoods and are therefore highly vulnerable to shocks such as crop failure, price fluctuations, and natural disasters. Such events threaten household income, food and nutrition security, and livelihood security. It is important to diversify household livelihood options in order to reduce risk and build resilience (Ellis 2000). There is considerable potential to diversify livelihood options in the CHT in both the farm and non-farm sectors, and thus create opportunities for additional income and employment, for example by growing medicinal and aromatic plants or mushrooms and producing handicrafts (Rasul 2015).

Box 2 provides a classic example of how farmers' livelihoods can suffer greatly due to over reliance on a single commodity, and can recover through crop diversification. The ethnic communities of the Chittagong Hill Tracts of Bangladesh can learn from this and focus on diversifying their livelihood options.

Beekeeping is another important livelihood option in the CHT. The indigenous honeybee *Apis cerana* is common in all three districts, but most people harvest honey from wild nests and only a few manage this bee in hives, even though beekeeping with *Apis cerana* is common in other areas of the Himalayas. The CHT is rich in bee floral resources, thus there is great potential for promoting beekeeping for income generation.

In the past, ICIMOD has promoted beekeeping in all three districts of the CHT in various projects, especially the UNDP Livelihoods Project and later the bee project financed by the Austrian Development Cooperation (ADC). The projects focused on building the capacity of partner institutions and potential beekeepers in various aspects of beekeeping management and honey production. The pilot activities with local communities were a success and the income of beekeepers at the project sites increased by 25–30%. At present, approximately 5,000 to 7,000 kg of honey is produced in the CHT annually. The honey is favoured in the local markets and sells at almost twice the price of honey produced in the plains. Recently, the Ministry of Chittagong Hill Tracts Development Affairs has been promoting beekeeping as an important income generating activity for improving the livelihoods of local communities.

Beekeeping has another very important advantage. With the decline in naturally occurring pollination, the role of domesticated bees for pollination has gained prominence in many countries. Box 3 describes the success of beekeeping for pollination of cash crops, particularly apples, in Himachal Pradesh, India, a practice that has proven

Box 3: Using honeybees for apple pollination: A case study in Himachal Pradesh

Honeybees are one of the most efficient providers of the pollination services essential for enhancing agricultural yield and ensuring human food security. They also provide by-products rich in nutrition and health benefits such as honey, beeswax, and pollen, which when marketed well can further increase household income. As the diversity and abundance of naturally occurring pollinators declines, the role of domesticated bees – one of the greatest providers of pollination services – is becoming increasingly important. Apple farmers in the small northwest Indian province of Himachal Pradesh use honeybees, both *Apis cerana* and *Apis mellifera*, for pollination of apples. The fee for renting bee colonies is INR 800–900 (USD 13–17) per colony for the apple flowering period. A well-organized system has been established for hiring and renting honeybee colonies. The use of beekeeping for pollination of cash crops has proven to be of great benefit not only to the farmers but also to the beekeepers. Beekeepers receive money for the pollination services of their honeybees as well as benefiting from bee products such as honey, while farmers' income is increased through the boosting of crop productivity.

Source: Uma Partap, ICIMOD

Box 4: Women's social enterprise: A success story in Gilgit-Baltistan, Pakistan

Altit is a beautiful historical village in the Hunza-Nagar district of Pakistan made up of 722 households and renowned for its ancient fort. The locals' main source of income is agriculture. In 2003, a project called Women's Social Enterprise was initiated as a pilot activity in order to engage young girls in the heritage development activities of the Aga Khan Cultural Service Pakistan (AKCSP). Initially, six boys and six girls were trained in plan-table survey, but the boys later withdrew. The technical enterprise continued to train young women from marginalized families who were then engaged as surveyors and in technical documentation of heritage assets. Their success gained attention from various local and international organizations who provided resources to expand the training. Now renamed CIQAM, this women-led social enterprise has been providing technical education since 2008 to develop women's skills in non-traditional areas including masonry and carpentry, as well as modern computer technology. Group members have learned to manufacture products like chairs, tables, windows, interiors, and others. The group has installed a saw mill and seasoning technology and developed a green wood supply chain in other villages. These young women can now earn their own livelihoods and participate in the local economy as a result of their acquisition of non-farming and non-traditional skills.

Source: CIQAM (2012); AKRSP (2015)

beneficial to both farmers and beekeepers. The CHT region of Bangladesh is renowned for the cultivation of horticultural products, and provision of pollination services via beekeeping could also be initiated in the region to increase productivity.

Skills enhancement for women

Providing vocational training to women is another promising approach that can be used to enhance rural livelihoods in poor and remote areas of the CHT region. When women are given access to new skills, they can contribute significantly to household welfare and reduce rural drudgery. For example, in Altit, one of the remotest villages in Gilgit-Baltistan, Pakistan, female poverty was very high as a result of strict cultural norms that confined women to the performance of household chores. In recent times, the young women in the village have been able to overcome these age-old norms and form a group that has enabled them to acquire skills and training and work in areas that were previously closed to them (Box 4). The initiative has harnessed an entrepreneurial culture and helped the women to enhance their earnings and find ways to alleviate rural poverty. The women in the CHT could profit from a similar skills development programme which could help them channel their creativity and labour into productive work that generates income. Skills development will increase confidence and self-reliance, increase empowerment, and enable women to take important decisions related to their households and communities .

Protecting agrobiodiversity in farming

The CHT is a centre of biocultural diversity, with both rich natural resources and cultural diversity (Halim et al. 2007). The region has a large proportion of Bangladesh's natural environment and a wide diversity of animals and plants. Even more important, it is home to a large number of local varieties of domesticated plant species (landraces) that are adapted to the local environmental and climatic conditions. The agro-ecosystem in the CHT comprises cereals, vegetables, oil plants, spices, condiments, culinary herbs, and floricultural and medicinal plants. There is a wide genetic diversity within species (for example, at least 18 varieties/cultivars of rice). In addition to the agrobiodiversity, farmers use around 50 wild plant species as food, which are also linked to food security and nutrition. The diversity of local domesticated plant varieties and the biodiversity in the



ghum forest fallows represents a rich genetic pool of useful plant species. Most of the farmers in the CHT still use no chemical fertilizers, insecticides, or pesticides, thereby helping to preserve agrobiodiversity and organic production. This local agrobiodiversity can play an important role in adapting local livelihoods in a sustainable way and offers a gene pool that could be more widely exploited under access and benefit sharing approaches.

Horticulture and high-value products

Horticulture and high value products can be seen as an opportunity and engine for sustainable development that has a positive impact on a wide range of indicators (health, wealth, employment, market opportunities, and women empowerment, among others). At present, most farmers in the CHT region rely on subsistence farming, but there is tremendous potential for growing high-value products such as fruit and vegetables and medicinal and aromatic plants, as well as for agroforestry. The hill slopes of the CHT are suitable for growing a number of high value fruits such as banana, pineapple, papaya, jackfruit, guava, and lemons. Large-scale commercial plantation of banana, papaya, lemons, and some other fruits is already being practised in the region, but with limited technical knowledge. Farmers rarely use proper plantation methods or the appropriate application of fertilizers and pesticides. With proper plantation and integrated pest management techniques, the productivity of high-value fruits could be greatly enhanced. The majority of farmers grow vegetables for household consumption, but there is an immense potential for growing high value produce such as off-season vegetables. The fallow upland areas could be used for cultivation of off season vegetables during the summer months, and this should be highlighted to promote commercial farming.

A number of factors have limited the ability of farmers to exploit the potential for growing high value products, especially issues related to access to input and output markets and access to information, credit, and other

Box 5: The success of apple production in Himachal Pradesh, India

In Himachal Pradesh – also called the ‘Fruit State’ or ‘Apple State’ of India – 32% (196,000 ha) of arable land is under horticultural crops and 312,000 tons of fruit are produced annually. Apples are the main cash crop, accounting for 42% (78,000 ha) of the total area under fruit cultivation and about 90% (277,000t) of total fruit production. Today, apple growing contributes 60–80% of the total household income in many villages. There are about 150,000 apple growers in the state. In 2005, apples contributed an estimated USD 1.7 billion per year to the state economy, with about USD 150–170 million being contributed directly and the remainder indirectly through jobs to thousands of people, not only in Himachal but also in Asia’s biggest fruit market in Delhi during the six-month apple selling season. The sale of apples has brought cash to mountain households, which in turn has raised the standards of living of the farmers and hundreds of others that depend on the trade. The apple economy of Himachal Pradesh extends beyond these mountains into the plains, spilling over even into neighbouring countries. The orchards employ tens of thousands of labourers and provide business to producers of packing materials, truck operators, contractors, wholesalers, and retailers. Income from apple growing has seeped into every strata of society, enough to make the apple growing areas of Himachal prosperous.

Source: Partap and Ahmad (2005)

institutional services. Farmers do not have easy access to quality seed, modern agricultural tools, fertilizers, or pesticides, which are essential to increase productivity. Furthermore, they are unaware of seed quality and are potentially exposed to the production of adulterated seeds (FAO 2013). Farmers also face problems related to storage, collection mechanisms, grading and packaging, and transportation, among others. Value chain development with better processing and marketing would help make the most of the opportunities. Box 5 illustrates the success of apple farming in Himachal Pradesh, and provides a good example of the type of high value products that have been gaining in popularity and success. This type of success story could well be replicated in the Chittagong Hill Tracts, which has similar socio-physical characteristics. At the same time, farmers should be careful to study some of the challenges, for example ensuring pollination through planting of pollinizer trees and maintaining bees.

Forest resources

Forest is one of the most important resources in the CHT and has contributed to the livelihoods of the ethnic minorities in the form of food, energy, and timber, among others, as well as providing wider benefits such as the protection of water resources, health benefits, and national revenue generation.

Forests contribute a significant portion of the CHT economy (46%) followed by crop/fruit production, and are also important at national level (Khan et al. 2007). Forests provide important ecosystem services that play a significant role in economic development, environmental protection, ecological sustainability, and human wellbeing, both within the CHT and downstream. Around 40% of Bangladesh’s forest area lies in the CHT with 319,614 ha of reserved forest (RF) – close to a quarter of the CHT land area – and more area in the form of protected forest, sanctuaries, unclassed state forest (USF), and village common forest (VCF) (Roy 2002; Rasul 2015).

In the CHT, historical forest management systems like the village common forests (VCFs) helped protect local water bodies near the settlements, among other functions, and forests are still a source of fuelwood, herbs, roots, bamboo shoots, wild fruit, vines or leaves for cooking, and medicinal plants – all vital to the lives of the ethnic communities (Halim and Roy 2007). The forests play a vital role both in biodiversity conservation and providing daily necessities. Over time, however, a considerable part of the forestland in the CHT has become degraded – reduced to grass or with scattered trees, bamboo, and weeds (Altrell et al. 2007; Hossain 2013).

Forest protection is vital for sustainable development in the CHT. Box 6 describes an example of how community forestry has helped conserve forests and initiate development activities in many hill districts of Nepal. Given the similar biophysical and geographical characteristics of the CHT region to the hill areas of Nepal, it seems likely that a similar model could be successfully adapted to protect and regenerate the forest in the CHT. The community forest approach has not only helped preserve the forest ecosystem in Nepal, it has also improved the livelihoods of local people through increased income generation by forest user groups. The income is invested in development activities and pro-poor programmes that benefit the whole community. There is growing trend towards farm forestry in the CHT, and considerable opportunity for protection and development of village common forest. Community-led forest management offers a very promising approach for regenerating forest, conserving biodiversity, conserving watersheds, and improving the lives and livelihoods of the people of the CHT.

Box 6: Contribution of community forestry to livelihoods in Nepal

In Nepal, community forestry (CF) has become a well-established management form over the past three decades. CF is a major government programme in the forestry sector implemented throughout the country. About a quarter of all forest is managed by community forest user groups (CFUGs), with more than 14,000 CFUGs, involving 1.6 million households, currently managing more than 1 million hectares of forestland. Income generation is an important activity. The annual income of the CFUGs is estimated to be more than USD 10 million, with forest products contributing the major share.

A study conducted in three mid-hill districts – Lamjung, Tanahu, and Kaski – showed that most CFUGs generate income from a variety of sources including the sale of forest products, membership fees, and fines collected from rule violators. The CFUGs invested more than half of their income in development activities such as school buildings, roads, temples, water reservoirs and irrigation, offices and community buildings, teachers' salaries, and electricity/mills; close to a quarter in pro-poor programs such as loans and self-employment skills-oriented training; 17% in forest development; and 6% in running the CFUG institution – thus supporting sustainable development and providing a tool for poverty reduction.

Source: Pokharel (2009)

The forests can also be used as a sink for greenhouse gasses. The forests in the CHT, as elsewhere in Bangladesh, can benefit from a greenhouse gas reduction regime under the Kyoto Protocol Clean Development Mechanism (CDM). The implementation of CDM projects can help prevent further degradation of forests and restore depleted areas through increased reforestation and afforestation activities. There is considerable potential for Bangladesh to participate in a carbon trading scheme, thus benefiting both economically and environmentally (Shin et al. 2006). Box 7 describes a pilot carbon trading scheme underway in the neighbouring country of Nepal. The scheme has helped to reduce carbon emissions, enhance forest growth, and promote carbon sequestration, while improving people's livelihoods. A similar model could be replicated in the CHT region, where the forest has degraded rapidly over recent years.

Box 7: Community-based REDD+ approach: a win-win solution

A large proportion of Nepal's population relies heavily on forests for its livelihood, putting significant pressure on these resources. In 2009, ICIMOD initiated a four-year REDD+ pilot project to test the feasibility of implementing a REDD+ incentive mechanism. The project provided an economic incentive for biomass improvement, helping to reduce carbon emissions, enhance forest growth and promote carbon sequestration, whilst improving people's livelihoods.

Source: Khadka et al. (2014)

Livestock

The Government of Bangladesh has given top priority to livestock development in recent years to meet the growing demand for milk, meat, and eggs, and to create employment and generate income for the rural poor. The CHT has considerable potential for the development of livestock for a number of reasons including availability of land for grazing and fodder production, natural water resources, hard working population, changing lifestyles of the hill people, increasing literacy rate, and presence of indigenous breeds of different species of livestock and poultry suited to the local conditions. The CHT offers an alternative for fodder production in Bangladesh where the plains are more favourable for crop production, especially rice. The lakes in the CHT can be used for duck farming with minimum investment, while pork is a favourite food for most of the tribal people and hence pig farming is another opportunity. The CHT is a suitable area for sustainable poultry farming, especially broilers and layers, for sheep and goat farming due to the abundant grazing areas, and for dairy farming due to the availability of grazing pasture, opportunity for fodder production, and low cost of farm labour. Table 12 shows the present livestock and poultry population in the CHT.

Given the huge potential for livestock development in the CHT, both the public and private sectors should undertake special initiatives to promote this sector. Livestock can be one of the key livelihood options for disadvantaged ethnic communities.

Fisheries

Aquaculture offers important economic prospects for the CHT through enhanced fish farming and increased fish production in the abundant freshwater creeks and ponds and Kaptai Lake. There are an estimated 5,573 creeks with a total area of 1,378 ha that could be used for aquaculture with a slight modification of the natural flow using structures like small earthen dams (Table 13). Small ponds fed by creeks can also be constructed and used to raise fish. The Bangladesh Fisheries Research Institute (BFRI) has introduced pen and cage aquaculture in creeks and lagoons in and around the Kaptai Lake to support the Bangladesh Fisheries Development Corporation (BFDC) (FAO 2013). The BFRI looked at various adaptations of the cage culture technique, which showed promising results, and found that the spawn could be nursed in the creek environment in lean periods to raise fingerlings for the lake. Increasing creek aquaculture together with cage farming in the lake could improve productivity and generate income and employment, thus improving rural livelihoods. Production of cages and pens using local resources could be encouraged to lower the cost.

The average yield from the lake and creeks is shown in Table 14. At present, the annual production of fish from the lake is only 130 kg/ha, with 110 kg/ha of this from natural catch, which is far below the potential. The yield from creeks is several times higher than the natural catch from the reservoir. Selected fast growing species with a low-cost diet could dramatically increase production, and supplemental feed used in cages will indirectly help increase the fertility of the lake water. Community participation will be essential for the success of the stocking program; while involving the local fishermen in raising stocking materials could help the success of additional stocking programs. Periodic training for fishermen on the Fish Act and fishing regulations can be arranged at times in the cycle when fishing is banned. There are good prospects for integrated farming of fish-cum-poultry, fish-cattle-poultry, and fish-livestock-agriculture in the hill districts, which would not only improve the economic conditions of hill residents but also their nutritional status.

Kaptai Lake

Kaptai Lake covers an area of approximately 1,036 km² and is the largest man-made lake in east Asia. Although the lake has submerged a vast area of productive agricultural land and displaced a huge population, it has also created vast resources. Properly harnessed, its full potential in terms of tourism, freshwater fish, and navigation could transform the economy of the CHT. Integrated management of the lake and its surrounding lands, forests, and settlements is required to ensure sustainable use, raise environmental awareness, improve the environmental quality of the lake, and make the most of the opportunities it offers.

Table 12: Livestock and poultry population

| | Number | | | |
|---------|-----------|-------------|-----------|-----------|
| | Rangamati | Khagrachari | Bandarban | CHT total |
| Cow | 184,654 | 134,814 | 170,927 | 490,395 |
| Goat | 142,457 | 109,211 | 63,623 | 315,291 |
| Sheep | 2,897 | 3,349 | 740 | 6,986 |
| Buffalo | 11,470 | 2,890 | 1,517 | 15,877 |
| Pig | 74,028 | 37,110 | 43,195 | 154,333 |
| Chicken | 483,994 | 851,344 | 297,234 | 1,632,572 |
| Duck | 112,837 | 69,843 | 51,520 | 234,200 |

Source: DLS (2012)

Table 13: Creeks in the CHT

| District | Number of Creeks | Area (ha) |
|-------------|------------------|-----------|
| Khagrachari | 2,660 | 721 |
| Rangamati | 1,557 | 352 |
| Bandarban | 1,356 | 304 |
| CHT Total | 5,573 | 1378 |

Source: CEGIS (2013)

Table 14: Fish yield from the Kaptai Lake and creeks

| Kaptai Lake | |
|--|--------|
| Area during monsoon (ha) | 68,300 |
| Area during dry season (ha) | 58,000 |
| Annual production of fish (kg/ha) | 130 |
| Average retrieval rate of stocked carp (%) | 24 |
| Average yield from natural catch (kg/ha) | 110 |
| Creeks | |
| Average yield from creeks (kg/ha) | 966 |

Source: GoB and FAO (2013)

Agro-based micro-enterprises

The growing trend towards increased production of fruits and vegetables in the CHT hints at the huge potential for agri-business and agro-based industries. A conducive environment for private investment is crucial and appropriate mechanisms for benefit-sharing from genetic resources must also be developed. Once these are in place, agro-based microenterprises can be promoted as an alternative livelihood option in the region. The success of micro-enterprise development in improving socioeconomic conditions in hill areas was clearly demonstrated in a study in Udayapur, Nepal (Box 8).

The CHT has considerable potential for the development of agri-business which can be supported via provision of the necessary support services, including technology, finance, and marketing (FAO 2013). Farmers produce many types of perishable fruit, but only a fraction of households are engaged in fruit processing activities such as making achar (pickles) and chutney (sauce). Agro-processing facilities need to be established to enable farmers to achieve better prices for their produce. Interested individuals or groups of farmers can be trained in processes such as improved drying, grinding, and packaging of spices like turmeric, Indian bay leaf, and black pepper, as well as extraction of oleoresin or making candy, paste, and others. This kind of processing would not only limit post-harvest losses, but would also help to enhance rural livelihoods. The region has an immense potential for the production of a number of high-value low volume cash crops such as off-season vegetables, fruits, seeds and others, the kind of agro-enterprise development model described in Box 7 could be implemented for the promotion of such cash crops in the region.

There is also a need to link smallholder farmers to markets through value chain development. The success of this approach was illustrated in a case study into the ginger value chain in Myanmar (Box 9). Ginger is an important non-cereal crop with considerable potential to increase the income of poor farmers, but this requires better links to markets and product enhancement. The type of innovative model described in Box 9 could also be replicated in the CHT.

Box 8: The success of micro-enterprise development in Udayapur district, Nepal

A study was conducted to analyse the impacts of micro-enterprise in improving the socioeconomic condition of entrepreneurs in the headquarters town of Gaighat and in Hadiya village in Udayapur district, Nepal. Credit, training, and marketing support was provided by the Micro Enterprise Development Programme (MEDEP) to facilitate micro-enterprises focused on high value products such as honey, cardamom, fruits, herbs, and mushrooms, as well as bamboo products, metalwork and engineering, and tapari (leaf plates). The number of micro-enterprises increased from 4 to 32 in Gaighat and from 9 to 21 in Hadiya between 2004 and 2007, and the average monthly income of entrepreneurs increased from NPR 4,627 to NPR 7,891 (+70%) in Gaighat, and from NPR 3,538 to NPR 7,752 (+119%) in Hadiya (NPR 100 = USD 75). The socioeconomic conditions of the entrepreneurs improved considerably, as shown by an improvement in physical assets, increased enrolment rates at schools of all levels, and increased expenditure on basic items like food, clothes, education, and medicine.

Source: Lama (2010)

Box 9: Linking smallholders to markets through value chain development: ginger in Myanmar

Farmers in Myanmar were able to produce ginger, but had to sell locally and received only low returns for their efforts. A ginger project was introduced which followed a two-pronged strategy. The first consisted of strengthening groups and using a collective approach to supply ginger in bulk from one place. Six collection points/ginger seed banks were established (one in each village) on a cost-sharing basis and the capacity of the community groups enhanced. The second part of the strategy consisted of identifying an anchor company which was interested in receiving a continuous supply of good quality ginger. The project team facilitated a dialogue between the communities and the regional agent of the company. The agent recognized the business benefits of sourcing ginger in bulk from one collection point and making a collective deal rather than negotiating with individual suppliers. Farmers brought ginger to the collection point and sold it collectively. In one year, 149 t of ginger were sold to the company at an average price of USD 0.28 per kg (MMK 335), bringing in a total revenue of USD 41,353. Farmers were able to sell at a higher price than in the local market and the weighing scales provided by the project ensured that the payment was based on a standard unit. Farmers also saved on transportation costs and time. The managing director of the anchor company came to the pilot villages to hold meetings with the communities, made a commitment to buy ginger (and turmeric) in the coming years, and promised to provide business-embedded services like the supply of quality seeds and fertilizer to grow turmeric. The company agreed not to charge interest on any money provided for purchasing seeds and fertilizer, and the communities will pay back the amount at the time of harvest. It is hoped that the increased market linkages will enhance farmer's income and wellbeing.

Source: Surendra Raj Joshi, ICIMOD

Box 10: Private sector engagement in flower distribution in Mizoram, India

The flower producer Zopar Group is playing an important role in a public-private partnership initiative (PPP) by providing storage, distribution, and marketing infrastructure in Mizoram and Meghalaya in North East India. The group started a turnkey project in 2005 for floricultural and horticultural crops on a build-operate-transfer (BOT) basis and has set up poly-houses covering 30 hectares and facilitated construction of much more through regional state departments. The company currently provides technical expertise, equipment, and marketing services (buyback method) to about 2,000 farmers selected by state horticultural departments; a technical team provides on-site training to farmers. As fresh flowers are perishable, Zopar has set up 12 cold storage facilities in North East India, which provide a shelf-life for the flowers of up to seven days. The group originally focused on catering to the domestic market but is now expanding to markets overseas by creating a surplus of premium quality flowers. Among others, the group has developed an export-oriented project for orchids grown primarily in Mizoram, and now plans a project to export Dutch roses to markets in Southeast and West Asia, which will be trialled on a two hectare plot in Mizoram. The activities are also being extended to the production of exotic fruits and vegetables. This public private partnership enables the local hill farmers to benefit directly from the diversification to high value products by assuring a market and providing the necessary marketing chain infrastructure.

Source: Bora (2013); ICC (2013)

Engaging the private sector in marketing and skills development

As a result of the poor marketing facilities in the CHT, farmers receive very low prices for their produce and the potential of the region remains underutilized (Rasul 2015). Private sector investment in agribusiness can help reduce poverty and strengthen food and nutrition security via pro-poor development (IFAD 2012). Market access for poor rural farmers can be extended and secured by creating linkages between smallholder farmers and agro-processors or commercial buyers. Private sector involvement in packaging and storage facilities and distribution of produce should substantially reduce post-harvest losses and help farmers to escape poverty. Private entrepreneurs need to be encouraged to set up storage, distribution, and marketing infrastructure, for example cold storage chains, along major highways to bring perishable produce rapidly to marketing hubs and support development of the horticultural potential in the region. This type of approach has been recommended in North East India, which faces very similar challenges to the CHT (ICC 2013). Public-private partnership (PPP) or leasing approaches could also be explored for cold chain operations. An initiative of this type has been introduced in Meghalaya and Mizoram in India, in which flowers are being distributed outside the region by a private distributor, Zopar, which supplies seed and cold chain storage facilities to farmers (Box 10).

Private sector involvement in development of skills and rural enterprises can also play a key role in improving household productivity, employability, and income-generation opportunities for rural people as well as enhancing food security and promoting environmentally sustainable rural development and livelihoods (Reddy and Anuradha 2013). Rural enterprise development based on local resources and using a PPP model can generate large-scale employment opportunities, as shown in the example Box 10. The CHT has considerable potential in terms of natural resources and human capital, development of rural enterprises and skills in partnership with the private sector is a promising approach to help address the problem of unemployment and underutilization of resources.

Watershed restoration

Watershed degradation has affected the lives and livelihoods of the people of the CHT and affected food production, health, and nutrition. There are many wise practices and considerable experience available in restoring degraded watersheds in different parts of the HKH region that could be applied in the CHT. ICIMOD's experience in watershed management over more than 20 years suggests that integrated soil, water, nutrient, and vegetation management can lead to greater productivity and increase ecosystem resilience. Activities such as mixed cropping, plantations of nitrogen-fixing trees to improve the regeneration of soil fertility during the fallow period, community-based biodiversity and forest conservation, contour planting, use of mulch, composting, contour beds, terracing, vegetative check dams, participatory resource mapping and land use planning can all contribute to watershed restoration (Sharma et al. 2007).

The many water bodies in the CHT offer a potential source of water for livestock development irrigation, aquaculture, and poultry and duck farming, among others. Water pumped up from the rivers below could also

be used to relieve the moisture stress of plants and grasses on hilltops where the soils are sandy and dry. This would keep grazing land green and usable all year round. But to maximize the benefit of water resources, and avoid the negative impacts of over-exploitation, it is important to use an integrated management approach.

Box 11 illustrates how watershed management practices can help address problems of water scarcity in the dry season. Even the CHT region faces water scarcity at this time, and similar models of sustained social and community mobilization could be replicated in the three CHT districts to promote water conservation and replenish the drying springs.

Tourism

The CHT holds immense potential for tourism development due to its richness in natural vegetation and ecosystems. The region presents a contrasting topography of high hills, vast lakes, and scenic valleys, while rich ethnic and cultural diversity offers an attractive contrast to the more homogenous plains areas. With its varied cultures, wide open spaces, and nature-friendly trekking opportunities, the CHT can be an ideal place for developing tourism as an industry. However, although there are some signs of growth in tourism, the huge potential has remained largely unutilized, not least because of the decades long tensions and limitations on visitors, and much needs to be done in terms of infrastructure development, especially connecting the remote and mystic parts of the region with the main areas of the country.

For example, Bandarban, 'the roof of Bangladesh', has been referred to as a hidden paradise by the National Tourism Organization of Bangladesh. The Bandarban sub-district of Ruma, in particular, holds immense potential for tourism with popular natural scenic areas like the Boga lake, Rijuk waterfall, Darjiling para, Passim para, Double Fall, and Tajing Dong hill, among others. But the basic amenities necessary for tourism are lacking. The hotels in Ruma bazaar are very small and have limited facilities (personal observation during ICIMOD field visit, January 2015). The present accommodation facilities are far too limited and do not meet the high quality standards required for region to be promoted for world class tourism. The CHT currently faces a number of challenges in service supply, with problems related to the supply of water and electricity, a poor transportation system, and limited accommodation facilities, among others. If these problems are addressed, then tourism can flourish, thereby contributing to the local economy of the region.

The ethnic communities in the CHT have unique cultures and traditions, and this together with the immense natural beauty of the region can be a major source of attraction for tourists. Box 12 describes the success of community-based tourism in the indigenous mountain and forest area of Luang Namtha province in Laos. Local communities were engaged in tourism activities as guides, porters, hotel and lodge entrepreneurs, and so forth. The community involvement helped boost tourism in the area, while benefiting the local population. A similar approach could be promoted in the CHT region, which has many similarities with Luang Namtha.

Box 11: A watershed project in Nepali mid-hill districts works to address problems of water scarcity

Mid-hill village life in Nepal, as elsewhere in South Asia, is a daily struggle to cope with the problems posed by steep slopes and a demanding climate. Streams and rivers often lie far below hill settlements and cannot provide the water needed by households due to the high cost of carrying by hand or pumping uphill. Thus the springs (or 'mul') that rise in the hills are critical to survival, supplying water for drinking, irrigation, and livestock, and generally sustaining domestic needs and the rural economy, especially during the long dry season. These springs are fed by groundwater which accumulates in underground aquifers during the monsoon. But many are now drying up, threatening a whole way of life.

ICIMOD worked with the residents and local administration in Kavre District in Nepal to track local water processes and find ways to best utilize water and replenish the drying springs. The project made some critical insights into spring water dynamics and local water management practices. ICIMOD combined advanced science with community knowledge and used sustained social and community mobilization to promote water conservation in the watershed and construct recharge ponds to replenish the drying springs. As a result, community perception on watershed conservation and spring revival has changed. Local government bodies like the municipality and village development committees (VDCs) have made rehabilitation of old ponds and spring protection activities a top priority in their annual development plans. Several projects for pond rehabilitation and construction, spring protection, and water distribution have been proposed for 2017. Efforts are underway to incorporate experience and knowledge from Kavre district into Nepali government plans and activities and out scale throughout the mid-hills of Nepal where water scarcity is problematic.

Source: Shariar Wahid, Coordinator, Koshi Basin Programme, ICIMOD

Box 12: Community-based tourism by ethnic populations in Luang Namtha Province, Laos

To alleviate poverty and promote socioeconomic development, the Ministries of Agriculture and Forestry, and Information and Culture carried out a community-based tourism project in collaboration with UNESCO in the Luang Namtha Province of Laos. The project provided training to build skills in different tourism activities such as homestay, running a guest house, tour operations and transportation, and monitoring tourist safety. The project also designed trekking and cultural programmes, a river tour, and a jungle safari. These programmes provided opportunities for tourists to experience the area's most distinctive natural attractions and visit ethnic minority settlements, where lodging was provided by the local communities. This provided an opportunity for the local people to participate in tourism planning for their area and to share in the benefits. As a result of these activities, tourist numbers increased. A survey of international tourists found that the two strongest factors attracting tourists to the area were ethnic minorities (68% of respondents) and the natural world (66%). Cultural attractions (50%) and the novelty effect of a new destination (44%) were also strong influences. The increased employment of local people resulted in an improvement in their socioeconomic conditions and helped them move away from subsistence agriculture. Overall, the community-based tourism generated USD 137,794 in gross revenue between 2001 and 2005, of which USD 9,485 went to village funds for village development.

Source: Sontikul (2007)

Migration

Poor social networks, low human skills, and limited access to finance, have made people from the CHT more reluctant to migrate to improve their livelihood opportunities than those from other parts of Bangladesh. In recent years, a small number of people from the CHT have migrated for labour, both within the country and abroad. Overall, Chittagong state accounted for 10% of the total migration flow from Bangladesh between 2005 and 2014, but there was barely any migration from the ethnic communities in the CHT districts during this time. The younger generation is keen to work in the industrial and service sectors, and with proper support there is a huge potential to increase labour mobility from the CHT. If the youth are provided with the skills needed for foreign employment and access to finance, then they can acquire better earning opportunities abroad, which will in turn help raise the rural economy via remittances, as shown in Table 15 for the neighbouring country of Nepal. In Nepal, the percentage of households receiving remittances increased significantly between 1995/96 and 2010/11, while the average amount received per household also increased substantially, to around one-third of total household income.

CHT: A gateway to the east

The CHT is located in the southeast of Bangladesh and has borders with India and Myanmar. Bangladesh has been focusing on increasing economic and trade engagement with countries to the east, particularly Myanmar, Thailand, and China, as well as developing an economic corridor with Kunming. The CHT is ideally located to provide a gateway for this. The region can be promoted as a trade transit between Bangladesh and the countries to the east, if regional cooperation flourishes and a favourable environment is established.

Table 15: Household remittances in Nepal

| Description | 1995/1996 | 2003/2004 | 2010/2011 |
|--|-----------------|-----------------|-------------------|
| | % | | |
| Share of agricultural sector in wage employment | 53 | 37 | 35 |
| Share of non-agricultural sector in wage employment | 47 | 63 | 65 |
| Households receiving remittances | 23.4 | 31.9 | 55.8 |
| Nominal average amount of remittances per recipient household in NPR (USD) | 15,160 (261) | 34,698 (488) | 80,436 (1,077) |
| Share of remittances in total household income of recipients | 26.6 | 35.4 | 30.9 |

Source: NLSS (2011)

Looking Forward: Framework for Promoting Growth and Achieving the SDGs

Key insights and messages

The analysis revealed some key insights that can help in designing and implementation of activities towards the SDGs in the CHT.

- The socio-cultural and geographic situation in the CHT leads to both unique problems and unique opportunities. Although the whole of Bangladesh faces the challenge of widespread poverty, the development challenges faced by the CHT are different to those in other parts of the country. Especially the ethnic minorities face multiple challenges and are vulnerable to land being seized by others (land grabbing), which destroys the basis of their livelihoods and forces them into a cycle of poverty. The unique situation of the CHT calls for CHT specific strategies, one-size-fits-all approaches and solutions are unlikely to be effective for achieving the SDGs in the CHT; on the contrary, they are more likely to intensify the existing inequities.
- The ethnic communities in the CHT can contribute greatly to achieving the SDGs through strengthened solidarity and cooperation and using their heritage and environment as assets for local development in an environment of multi-stakeholder engagement.
- Minority and indigenous communities often face greater environmental challenges as their livelihoods depend heavily on natural resources. Alongside economic development, adequate measures need to be taken to ensure environmental conservation and rehabilitation. The dependence of ethnic minorities on forests, and their role as conservators should be recognized and supported in the modern context by linking forest conservation with benefits for local people.
- Peace and socioeconomic development are interlinked and mutually reinforcing. While peace is critical for socioeconomic development, socioeconomic development is critical for preventing conflicts and establishing peace. Poverty exacerbates inequality, increases social tensions, and destroys social harmony. Faster and more inclusive development will be crucial for confidence building and promoting a peaceful situation in the CHT. Development plans should recognize and address the ongoing ethnic and social tensions, particularly the divide between the hills and the plains.
- The aspirations of the ethnic minority people have changed considerably due to access to formal education, increased urbanization, and increasing accessibility and affordability of basic services (Roy 2000). Especially the younger generation are increasingly reluctant to engage in traditional livelihoods such as jhum farming and are looking for alternative livelihoods in the non-farm sector.
- Robust employment generating economic growth will be critical for eradicating poverty in the CHT. At present, close to three-quarters of the working population is engaged in the farm sector, generally with low productivity. It will be critical to increase farm productivity, especially through activities related to processing, value addition, and marketing of produce, as well as to create jobs in the non-farm sector.
- The region has many specific advantages. The CHT has good natural resources and considerable potential for sustainable development. This potential needs to be used appropriately and managed sustainably to improve the living standards and quality of life of the CHT people, while maintaining their equity, dignity, and cultural identity. The CHT is strategically located with proximity to both eastern India and Myanmar and could provide an entry point to the Southeast Asian markets.
- Economic growth is important, but economic growth alone will not be enough to eradicate poverty and ensure food security. Special measures will need to be taken to empower women and focus on social development, with more equitable distribution of income, reduction in inequality, and increased measures for social protection.

- The CHT needs special attention and increased support for achieving the SDGs. The steep and rough terrain, remoteness of villages, and protracted unrest have seriously impeded socioeconomic development. The region has remained outside mainstream development for two decades due to conflict and now requires a massive development thrust to bring it back in line with the rest of the country and put it on a fast track to achieving the SDGs.

The individual SDGs are not standalone or mutually exclusive. Achievement or underachievement of any one goal will have implications for the achievement of other goals. For example, ending poverty (SDG 1) depends on achieving economic growth (SDG 8), food security (SDG 2), industrialization (SDG 9), good health (SDG 3), good governance (SDG 16), and a healthy environment (SDG 15). Similarly, achieving food security (SDG 2) is critically dependent on ensuring water availability (SDG 6), energy (SDG 7), a healthy environment (SDG 15) for food production, economic growth (SDG 8), reducing inequality (SDG 10), and achieving gender equality (SDG 5).

The traditional livelihoods of the ethnic communities in the CHT are complex and precarious and farmers must engage in multiple tasks to survive. They practice jhum, grow paddy in valley bottoms, raise livestock, grow horticultural plants, practise agroforestry, collect timber, gather non-timber forest products including medicinal plants, catch fish, hunt wild animals, and gather food. They also work as a wage labourers. Both the interconnectedness of the SDGs, and the complex nature of livelihoods in the CHT, mean that an integrated approach is essential for developing strategies to promote faster and inclusive development, conserve the environment, and achieve the SDGs. The CHT requires differentiated measures, approaches, and delivery mechanisms that are appropriate to the local cultural and social context and meet the specific needs, requirements, and capabilities of the CHT people.

An integrated strategy

Figure 3 shows a multi-pronged integrated strategy with six interdependent components which can be used as a framework for working towards realization of the SDGs. The key elements of the framework are

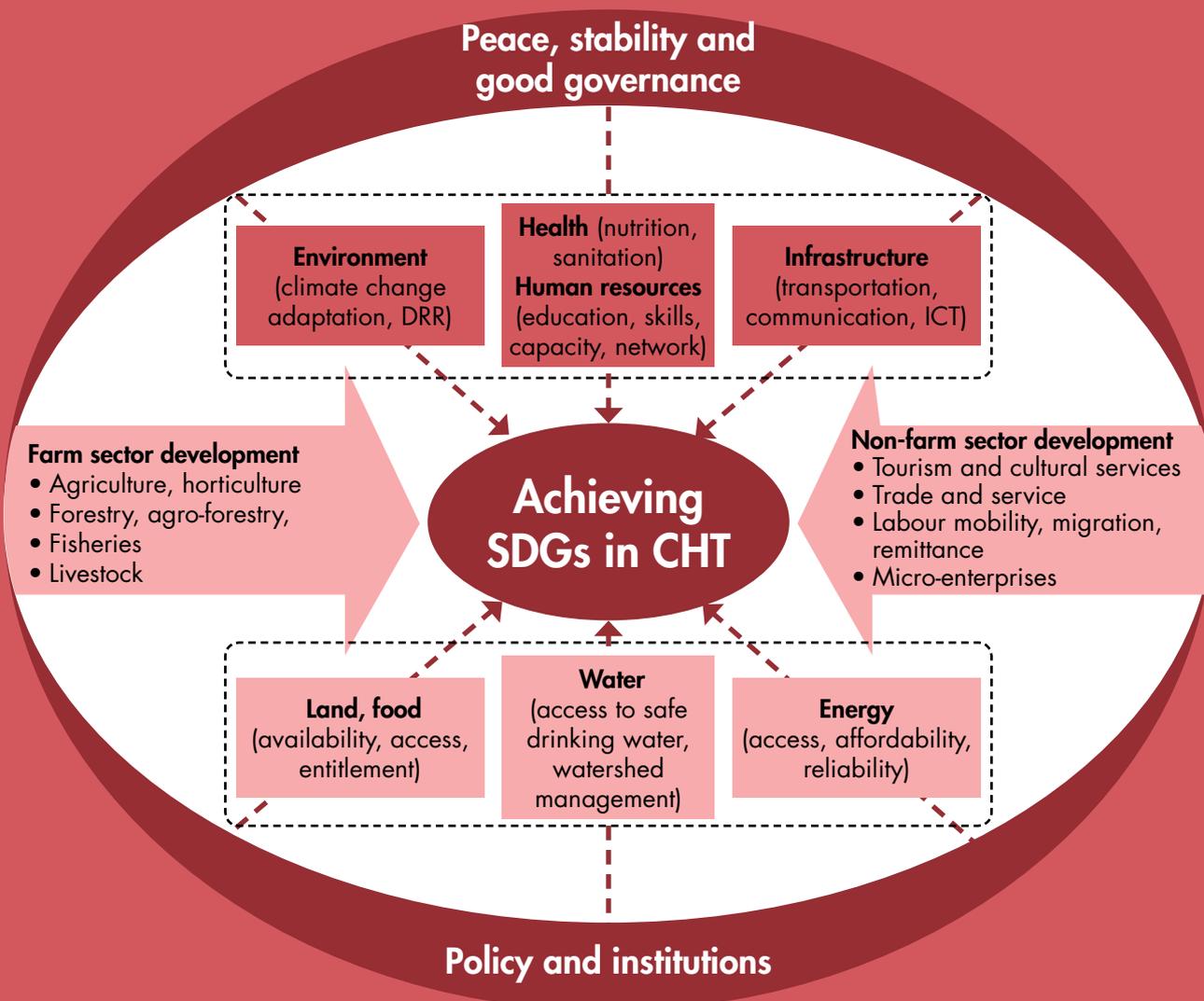
- Ensuring peace, stability, and governance, putting in place appropriate policies, strengthening institutions, and making the financial and technical resources available to provide the overall framework conditions for implementing the SDGs;
- Focussing on infrastructure, environment, health, and human resources as key drivers for economic growth and development;
- Focussing on land (food), water, and energy as fundamental requirements for existence and prosperity;
- Developing the farm sector – agriculture, forestry, fisheries, and livestock – as the key to reducing poverty and achieving food and nutrition security; and
- Developing the non-farm sector as the key to creating decent work opportunities, accelerating economic growth, and reducing poverty and vulnerability.

Key policy priorities

There are a number of key priorities for policy to underpin the specific activities.

- Ensuring peace, stability, and good governance is a precondition for growth and development. The first priority for this in the CHT is to implement the outstanding elements of the Peace Accord. Land disputes lie at the root of the social tensions, particularly disputes between Paharis and Bengalis. Resolving these disputes will involve recognizing the customary land rights of tribal ethnic people and restitution of occupied lands. Immediate efforts should be made to stop any further seizing of ethnic minorities' land by any of the various vested interest groups. Leasing of common property land to outsiders for orchards or rubber plantations has created tension and affected the livelihoods of local people. Such leases should be cancelled as soon as possible and the land given back to local people to establish orchards, horticulture, forestry, and others. This alone will go a long way to reducing social tensions and promoting social coherence, while helping local people to improve their livelihoods.
- The capacity of the CHT institutions needs to be strengthened to ensure that they are in a position to provide the strong leadership and support needed for achieving the SDGs. The Peace Accord has led to a considerable level

Figure 3: Enabling framework for achieving the SDGs in the CHT



of decentralization and devolution in the CHT; three important institutions have been established, which are now responsible for matters relating to the planning, implementation, coordination and supervision of development activities. However, their potential has not yet been fully utilized and their capacity to provide a long-term development vision and prepare, implement, and monitor the development program in the CHT has yet to be fully developed (Chakma 2014). It is critically important to further strengthen the decentralization process in the spirit of the Peace Accord and strengthen the capacity of these CHT institutions to take forward the SDGs to enable socioeconomic development and establish peace and harmony.

- The coordination of development activities also needs to be strengthened. The SDGs are integrative and cross-sectoral and successful implementation will require intensive cross-sectoral coordination. The Ministry of Chittagong Hill Tracts Affairs (MOCHTA) is responsible for coordination of development activities in the CHT. But the sectoral efforts of line ministries and the fragmented work of different NGOs often overlap and fail to produce the desired development outcomes. To ensure that development activities can be made more effective and sustainable, and to avoid duplication, MOCHTA's capacity for planning and coordination should be strengthened and it should be entrusted with the full responsibility for coordinating development work in the CHT.
- Eradicating poverty is the central aim of the SDGs. In the CHT it is of critical importance and the most critical aspect of development. Poverty is the root cause of the social tensions in the region and the single most important factor in the ongoing destruction of the environment. A large proportion of ethnic minority people are living in conditions of extreme poverty. All activities should focus on poverty alleviation as the underlying aim, which means focusing on inclusive growth, ensuring equitable distribution of any benefits that accrue, ensuring equitable access to resources and facilities, and involving local people at every stage of planning and implementation of activities to ensure that they address local needs, are appropriate for local conditions, and benefit local people.
- Achieving gender equality and empowering women is critical for achieving many of the SDGs, including ending poverty and hunger, improving nutrition, ensuring healthy lives, improving quality education, accelerating economic growth and reducing inequality, and is thus one of the top priorities in the CHT. A multipronged approach will be required. Priority should be given to the economic empowerment of women by creating more economic opportunities and eliminating economic, social, and cultural barriers to women's participation in economic activities. Efforts should be made to strengthen existing and build new skills and nurture entrepreneurship in women through appropriate training, advice, and financial and technical support. Efforts should also be made to eliminate discrimination against women in terms of inheritance of property, access to land and other property, access to formal and informal jobs, and access to credit, extension, marketing and financial services. Special attention should be given to building women's leadership and increasing women's representation in local government institutions and the traditional systems so that they can play a more active role in social, economic, and cultural arenas and decision making. Urgent action needs to be taken to address and prevent violence against women. While legal measures are necessary, efforts should also be made to generate mass awareness and social mobilization against women's discrimination at different levels involving community organizations, NGOs, civil society, and the media. Legal support to affected girls and women should be provided by the government.

Strategic actions

The enabling framework indicates a range of different areas for strategic action that together will contribute to achieving the SDGs.

Achieving food security

Given the poor food security scenario in CHT, strategic actions are needed to enhance food security of the CHT people. While the CHT cannot be food self-sufficient given its undulating hilly terrains, limited land for intensive agriculture for the cultivation of a number of major cereal crops, specific plans and policies are therefore needed to meet the required food deficiency of the CHT. Especially the major cereal crops like rice and wheat that the CHT lack can be imported to address the growing food insecurity in the region. For strengthening food security in the CHT, there is a need to promote horticulture, agro-forestry and other high-value low-volume cash crops such as off-season vegetables in the region. Such agro-products have growing markets and demands. Due to remoteness and

scattered villages in the CHT, the food distribution system has not been effective in the region. So for achieving food distribution efficiency, rural road infrastructure needs to be upgraded in the region. The other important aspect for achieving greater food security in the CHT is via enhancing income generation opportunities for ethnic communities in the region. With greater income generation, the issue of food accessibility will be resolved. So there is a need to generate off-farm employment opportunities in areas like community based ecotourism, agro-processing industries, livestock enterprises and such others. More importantly, there is a need to adopt changing production and consumption patterns, and farmers in the CHT should be trained on value chain development of agro-products.

Education and skills development

Achieving the SDGs in the CHT will depend heavily on quality education and human resource development to build the human capital that will be needed. While formal education is spreading in the CHT, considerable differences remain among the ethnic communities and the school dropout rate is still high at both primary and secondary level. Language difficulties, high poverty, financial constraints, and high unemployment among the educated all lead to frustration and fuel the dropout rate. Ethnic communities in the CHT face particular difficulty in school as they speak their mother tongue at home but have to study in Bangla. To achieve the goal of ensuring inclusive and quality education at primary level, additional support should be given to ethnic community students to increase their skills in Bangla and English to enable them to excel in school while maintaining their mother tongue. To overcome cultural barriers, more ethnic minority teachers should be recruited and training provided to more ethnic minority teachers; incentives in the form of fringe benefits should be given for teaching in remote areas. Alongside the formal education system, increased emphasis should be placed on skills development through technical and vocational education in order to create productive capacity and enhance employability. Skills-oriented education needs to be expanded in the CHT targeting ethnic minorities, girls, and women.

Ensuring healthy lives

Ensuring healthy lives in the CHT will require provision of improved health services, as well as achieving food security, improving nutrition, and ensuring access to safe drinking water and sanitation. Much of the CHT area is hard to reach due to the hilly terrain and poor accessibility. Concerted efforts will be needed with special programmes that take into account tribal socio-cultural aspects and geographic factors in order to take health services to these remote areas and reach poor ethnic communities. A hill and mountain specific health system should be developed that is friendly to tribal cultural, caters to the special needs of the CHT population, and suits the hilly terrain where people live in scattered remote areas. The emphasis should be on an area-based comprehensive health service delivery system developed through effective cooperation among the existing health facilities. Reproductive and maternal health needs to be improved in order to reduce the maternal mortality rate. The deployment of government-trained community skilled birth attendants (CSBAs) and trained midwives needs to be strengthened to ensure that skilled attendants are present at home births and in birthing facilities. Local women and men should be recruited for the whole range of posts in health centres to provide tribal/ethnic friendly services. Educational and training facilities should be established where tribal/ethnic people can acquire the skills required to serve in facilities run by the government. Measures should be taken to improve knowledge and awareness about health and sanitation, including knowledge about the importance of antenatal and postnatal care (ANC and PNC), and to facilitate access to information on health issues. Special efforts need to be taken to control malaria, one of the more deadly diseases in the CHT, and measures need to be taken to improve water and sanitation services in remote tribal areas. Improved cook stoves (ICS) should be promoted in the CHT to improve the health of women and children and reduce drudgery and free up time for productive employment.

Improving rural connectivity

Investment is needed in rural transport as well as supporting infrastructure such as irrigation facilities and water supplies. The region lacks an adequate road and trail network and improvement is needed to connect the many scattered rural areas with the growing regional hubs. The poor infrastructure conditions hinder the participation of ethnic minority people in economic activity. Development of infrastructure and of the institutional capacity needed to support rural development will help generate employment opportunities and enhance livelihoods of the rural poor.

It is essential to increase connectivity in the CHT and connect the many scattered rural areas so that the scattered rural population can gain better access to markets, education and health facilities, and increased employment opportunities. It is a huge task that will require considerable investment. At the same time, it is important to pay close attention to environmental considerations to ensure that road construction does not precipitate an increase in landslides and other hazards. The areas which have already experienced a marked loss of ecosystem services should be identified and avoided for further expansion of roads and trails. Greater local participation is needed in the construction of roads to ensure that a) construction improves rural market access; b) rural infrastructure development creates opportunities for the poor, particularly women, including access to core economic and local governance infrastructure; and c) the built infrastructure is not only sustainable but also effectively utilized. Road construction is expensive and environmentally sensitive and an effort should be made to develop water transport in the CHT through the Kaptai lake and Sangu and Matamuhuri rivers.

Chittagong hill tracts of Bangladesh is on the frontline of climate change impacts. With increased forest degradation over the years, the frequency of natural disasters such as landslides and floods in the region has intensified. In this context, disaster risk reduction (DRR) strategy is crucial as it helps identify, assess and reduce the risks of disaster. The DRR strategy should be made an integral part of the organizations given the necessity to combat disaster in every sector of development and humanitarian work. The DRR strategy is crucial not just to minimize vulnerabilities and disaster risks throughout a society but also to prevent and mitigate the adverse impacts of hazards for creating an enabling environment towards sustainable development.

The local communities in the CHT should be made aware regarding the natural disasters, their frequencies and their likely impacts on human lives. Their capacities to deal and cope with disasters need to be enhanced. This can be achieved via trainings to ethnic communities on how best to rescue trapped victims during landslides, floods and other disasters. They can be trained on providing basic health services to light injured victims during natural disasters. The ambulance service should be extended in many remote areas of the CHT for efficient rescue and management of victims affected by natural disasters. Hence, besides focusing on community based disaster risk management, an equal emphasis is needed towards accelerating basic services such as road connectivity, health centers and ambulance for effective disaster risk management. The local communities and the local government should work collectively in the planning and implementation of disaster risk reduction strategy.

Land resources

The farmers in the CHT, especially in the ethnic communities continue to be disaffected as a result of the increasing pressure on the limited land resources resulting from competition with communities from elsewhere. Appropriate policies to address land rights that promote access to land for local CHT farmers will be fundamental for achieving inclusive sustainable development in the CHT.

Water and sanitation

Considerable investment and effort will be required, both short and long-term, to address the drinking water and sanitation challenges in the CHT through water conservation, efficient management of water resources, and installation of water distribution systems. Efforts should be made to revive the traditional water sources, springs, and ponds and protect village common forests. Small water reservoirs should be developed at appropriate locations to capture and store spring and rainwater for distribution to downhill communities through a small flexible pipe network. Where feasible, springs, ponds, protected dug wells, and tubewells should be developed as community water points. Cultural and geological aspects and indigenous knowledge and local skills need to be taken into account when designing and developing water schemes in the CHT to create ownership and make schemes sustainable. Serious efforts need to be made to stop open defecation and promote individual and/ or community eco-toilet facilities. It is also important to change the behaviour and hygiene practices through education and motivational campaigns to ensure safe drinking water and sanitation. Efforts need to be made to harvest rainwater by building check dams, and to use other indigenous technologies that make better use of rainwater for productive purposes in irrigation, livestock, and other economic activities.

Forest, environment and biodiversity

Forest plays an integral role in the livelihoods of the ethnic communities in the CHT. The ethnic communities depend on forest for fuelwood, food, medicines, and house-building materials, and collect non-timber forest products such as bamboo, rattan, and medicinal plants for cash income. Forest also plays an important environmental role by maintaining the water supply, preventing erosion, supporting biodiversity, and moderating the climate, among others. Effective measures need to be taken to halt the ongoing forest degradation and regenerate degraded forest in the CHT. Given the heavy dependence of ethnic communities on forest resources, it is critically important to involve these communities in forest management. Community-led forest management has emerged as a successful intervention for protecting forest resources and biodiversity, and the importance of community involvement for successful forest management has gained widespread acceptance globally. It is critically important in the CHT to manage forests successfully and provide livelihoods to the local ethnic communities. Community-led forest management can be ensured by setting up joint management groups comprised of community leaders and representatives from the Forest Department. This will empower the traditional institutions and help build modern management capacity within them, providing forest departments with partners to craft new management systems. This type of forest management will allow communities to develop their own resource management plans to address conservation and livelihood issues. It will help foster the practice of agroforestry with a mix of commercial products, including timber, fibre, spices, and medicinal plants to generate income, and take the pressure off steeper slopes and help reduce the jhum farming system.

The maintenance of forests as carbon sinks is also receiving increasing attention through the expansion of carbon trading opportunities. The forests of the CHT could provide an income stream to the local people through carbon trading while conserving the forest and biodiversity.

Addressing energy needs

It is critically important to address the energy needs of the people in the CHT, not only to overcome poverty, improve wellbeing, and accelerate economic growth, but also to protect the environment. A huge amount of biomass is used in the CHT for cooking and curing tobacco. Although providing a grid connection to remote rural areas is difficult and costly, the CHT has considerable potential for addressing energy needs in a sustainable manner. A range of renewable energy sources – solar, biomass, biogas, hydropower, and wind – can be harnessed to provide an environmentally sustainable energy security as well as an affordable power supply to the off-grid rural areas of the CHT. The hilly terrain, steep gorges, high rainfall, and presence of many canals and tributaries of the Karnafuli, Shangu, and Matamuhuri rivers, offer opportunities for many different types of hydropower schemes. The lessons from the Karnafuli hydropower project indicate that the focus should be on small, micro, and pico hydro projects, rather than large schemes. If proper care is taken to avoid negative social and environmental impacts, these hydropower schemes can go a long way to addressing the energy needs of the CHT (Akanda et al. 2015).

Developing the farm sector

Development of the farm-sector is very important in the CHT, notwithstanding the move to off-farm employment. The vast majority of people still rely on agriculture for their livelihoods, and it is important that they are not forced to move to urban areas simply because they cannot support themselves. Integrated management of land, water, forest, and ecosystems is needed to enable increased productivity of land, forest, livestock, and fisheries in a sustainable fashion, while ensuring the maintenance of ecosystem services. Development of the farm sector, while taking care not to degrade the environment, can contribute to economic growth and food and nutritional security and reduce inequalities. The demand for CHT products, particularly fruit, nuts, fish and other organic products, is increasing. Efforts should be made to enhance the productivity of both jhum and valley agriculture by providing quality seeds and seedlings, improved extension services, better market linkages, and credit facilities. Where appropriate, transformation of jhum to agroforestry, horticulture, or other more productive systems can be facilitated. Where suitable, freshwater sources such as charra (streams) and creeks could be exploited to expand irrigation using check dams and rainwater harvesting, while conserving the watersheds.

More importantly, the farmers in the region suffer from volatile prices and post-harvest preservation challenge, which forces them to sell their produce immediately at low prices, and generally as raw material. Marketing facilities needed to be strengthened through provision of market information and farmers linked with regional markets through improved roads. Policy reforms are needed to facilitate establishment of farmers' groups and cooperatives, especially in ethnic villages, to reduce transaction costs and enhance bargaining power. Branding of CHT products is also important.

Access to market information should be strengthened across the CHT region. Farmers need to be made aware and provided with access to full and regular provision of information about market prices through various channels such as agricultural promotion staff, the mass media, and service centres. They should also be provided with information related to key planting decisions (e.g. weather conditions, predictions of glut, market changes) early in the agricultural cycle to maximize crop yields.

Women play an important role in farming in the CHT, but extension services barely reach them (Rasul 2006). Extension services need to be made more effective and extension messages improved, so they cover remote hill areas and reach out particularly to women farmers. More ethnic minority people should be recruited in the extension services, and training provided to educated youth to engage them in the development of high-value agriculture.

In the CHT, scattered production units and low volume of production make it difficult for farmers to reap the benefits of increased productivity. Often, even the small amount that is produced fails to reach the market due to lack of post-harvest facilities. Post-harvest management, value chain development, processing, packaging, and market access all need to be strengthened. Income generation for small-scale farmers should be fostered by expanding financial and technical assistance and improving the infrastructure and institutional setting for processing and marketing of agricultural produce and value added products. It is essential to promote commodity-specific value chains with an emphasis on processing, packaging, branding, and certification. There is a need to establish clear market linkages with collection centres at accessible locations by engaging the private sector and other market players. Proper storage facilities are needed to minimize post-harvest losses. In order to strengthen post-harvest management, farmers need to be trained in improved harvesting techniques. Agro-processing centres should also be established at strategic locations, especially for the perishable horticultural products that are commonly grown in the CHT.

One of the biggest challenges to promoting the farm sector in the CHT is the lack of access to credit and to market information. As a result of the remoteness and high risk potential of the area, farmers are often at the mercy of a small number of local moneylenders and middlemen and can become trapped in a cycle of debt, which limits overall economic growth. Hence, rural credit schemes and formation of community-based savings and credit organizations should be promoted. Poor marginal farmers should be empowered so that they can avoid the problems of middlemen taking advantage of their lack of knowledge. Financial and banking institutions should increase average loan sizes for ethnic minorities, particularly in areas where cash-crop agriculture entails high investment costs. Financial schemes should also be targeted to ethnic minorities to enable them to engage in income generating activities.

Developing the non-farm sector

Extreme poverty in the CHT leads to fierce competition over land between Paharis and Bengalis, not least because of the lack of alternative sources of livelihood. Over the past two decades, the government has focused its efforts more on land-based activities. Now it is becoming increasingly important to develop non-farm based alternative sources of livelihood and build human capital and business and entrepreneurship skills to increase employability and enhance and diversify livelihood opportunities. Experience from other countries suggests that people in hill and mountain areas are increasingly engaging in the non-farm sector

Tourism has an immense potential for development in the CHT given the region's rich biodiversity and scenic beauty, but promotion of tourism needs to be properly planned and coordinated in order to reap the benefits and avoid negative impacts. A comprehensive tourism master plan should be prepared including development of new destinations and trails, as well as improved tourism products, service delivery, and hospitality. Forward and backward linkages to development should be emphasised so that local people, especially ethnic communities,

receive adequate benefits from the tourism industry. Women should be engaged where possible. Easily identifiable and attractive circuits should be developed around the key themes of nature, wildlife, adventure, and culture. Linkages should be strengthened between the CHT and Cox's Bazar, the key tourism hub in Bangladesh, in order to attract foreign tourists to the CHT. Community-based ecotourism should be promoted by engaging local people in planning and development of the tourist trade and encouraging local investment, in order to create ownership and ensure that the benefits of tourism are accrued locally. The government should ensure further development of tourism infrastructure, including hospitality, and provide sufficient budget for investment in infrastructure such as roads, trails, and bridges. Providing security and facilitating tourist movement should be a top priority.

Labour mobility and labour migration can both contribute to reducing the pressure on limited farmland resources. In the rural context, facilitating labour movement from the farm to the non-farm sector, and from the rural sector to urban services, transport, and production (manufacturing) is likely to be more rewarding than migration. However, migration for labour is also common across the Himalayan region, a large part of income in rural mountain areas in Nepal, western India, and Pakistan comes from remittances, with more than half of all households in Nepal, and close to a quarter in Himachal Pradesh and Uttarakhand in India, benefiting. Labour migration may also offer a useful non-farm option in parts of the CHT and should be supported in various ways, including providing the necessary skills to prospective migrants to enable them to gain better employment opportunities abroad. Specific policies need to be formulated to reduce the cost of migration and provide financial credit at a subsidized rate to facilitate their aspirations. Help desks can be set up to provide free education and information on migration so that prospective migrants have information related to job opportunities and the specific skills needed.

Especially the ethnic minorities in the region need to be encouraged and supported in entrepreneurial activities and developing trading and business relationships. Local community groups and co-operatives can develop non-farm enterprises focussed on processing, packaging, and branding of farm-based produce; production of handicrafts from local resources; or service delivery, for example in tourism and energy and water. Communities can change their approach to trading, for example, by establishing community-oriented shops where trading is done for the benefit of the community. All of this requires support to facilitate access to information, resources, and investment. As in the farming sector, special credit facilities need to be made available to ethnic minorities, and training programmes introduced that focus on building the capacity of women and marginalized groups to participate in the non-farm sector.

Conclusion

The 2030 Agenda for Sustainable Development is a visionary plan of action that charts a path to promote inclusive growth, secure peace and prosperity, and strengthen cooperation and partnership to achieve sustainable development while respecting and safeguarding Mother Earth. The Agenda's goals – the SDGs – will help developing countries to transform their economies and societies with the aim of eliminating poverty by 2030. The agenda is not simply about protection from vulnerability or destitution; it is about broader economic, social, and political transformation.

The SDGs offer both an immense opportunity and a major challenge for the CHT. Given the present low level of socioeconomic development, timely achievement of the SDGs will require a high level of understanding of the region and an ambitious and visionary approach, but the clearly defined goals offer a framework for planning and implementation that can be used to identify the most appropriate pathways to engage the local population and lay the basis for success. The SDGs envisage reducing poverty in all its forms and achieving food and nutrition security by promoting sustainable agriculture. Empowerment of women, inclusive and equitable quality education, health, provision of basic services, and conservation and restoration of the environment underpin the approach and are crucial to lasting success.

The unique situation in the CHT offers opportunities as well as challenges. There is already a large degree of decentralization and devolution and this institutional innovation can support creative and cooperative development, with local institutions and people empowered to work effectively towards delivering the SDGs. The region is undergoing economic and social transformation. Formal education, construction of new roads, mobile connectivity, and the internet are changing the aspirations of the rural population, and broadening the opportunities (Roy 2000). Increasing the economic benefits in the region can help lessen the remaining ethnic tensions, while local businesses can become powerful advocates for peace and help bring stability to the troubled region through economic development.

We live in an era of ever greater connectedness and economic integration. With better connectivity, the CHT can gain access to knowledge about effective livelihood practices from other hill and mountain regions, and can implement them where appropriate. Integrating the CHT economically with the rest of the country and the wider world can provide a pathway for transforming poverty into prosperity and achieving the SDGs. But these efforts can only be successful if the people of the CHT are involved from the beginning, and play an integral part from planning through to implementation and monitoring. Mutual respect, and trust and confidence, will provide the basis for facilitating transformation of the CHT from a conflict to a cooperation zone and moving from an unsustainable to a sustainable path of development.

To achieve transformative change, careful attention must be given to understanding the hill and mountain context of the CHT, the spatial disadvantages and advantages, the ethnic and cultural diversity, and constraints and opportunities. The SDGs need to be tailored to the CHT context so that they provide the scope for creating a long-term vision and planning appropriate action, while successful implementation will necessitate fostering multi-stakeholder engagement among government, local communities, development agencies, the private sector, NGOs, academia, and research organizations.

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Annex 1: The Bangladesh-ICIMOD Partnership: A Reflection

Naba Bikram Kishore Tripura and Golam Rasul

The International Centre for Integrated Mountain Development (ICIMOD) is a regional intergovernmental organization established in 1983 by the eight countries of the Hindu Kush Himalaya – Afghanistan, Bangladesh, Bhutan, China, India, Myanmar, Nepal, and Pakistan. Its dual mandate is to improve the hill, mountain and river basin environments of the Hindu Kush Himalaya (HKH) while also enhancing the lives of its resident populations. With its headquarters in Kathmandu, Nepal, ICIMOD serves the region by generating mountain specific knowledge, sharing information, and fostering regional cooperation to find innovative solutions to the region's problems.

Bangladesh is a founding member of ICIMOD and has supported ICIMOD activities since its inception. The partnership between Bangladesh and ICIMOD has grown over the years, particularly since the establishment of the Ministry of Chittagong Hill Tracts Affairs (MOCHTA) in 1998, which is the focal Ministry for ICIMOD in Bangladesh. MOCHTA represents the Government of Bangladesh on ICIMOD's Board of Governors, the Centre's highest policy-making body.

The Bangladesh-ICIMOD collaboration covers a broad range of activities from knowledge sharing and income generation to livelihood improvement, climate change adaptation, watershed management, and disaster risk reduction. ICIMOD's engagement in Bangladesh is both strategic and programmatic.

At the strategic level, ICIMOD engages with key organizations on strategic issues of importance to Bangladesh. At the programmatic level, we bring regional knowledge and expertise to bear on hill and mountain issues in Bangladesh to find solutions to problems in collaboration with national partners.

To strengthen ICIMOD's engagement in Bangladesh, MOCHTA and ICIMOD jointly organized the Bangladesh-ICIMOD Partnership Day in Dhaka on 24 January 2016. This event was attended by ICIMOD's key partners and stakeholders in Bangladesh including the Ministry of Chittagong Hill Tracts Affairs and other government agencies, research organizations, academics, NGOs, and private sector representatives.

One of ICIMOD's successful strategic engagements with MOCHTA has been the recent development of 'A Strategic Framework for Sustainable Development in the Chittagong Hill Tracts of Bangladesh'. This framework recognizes the geographic, cultural, and social specificities of the Chittagong Hill Tracts and outlines its unique potential. It also identifies the actions and mechanisms needed to develop the Chittagong Hill Tracts in an inclusive manner. As part of these efforts, ICIMOD worked with the Bangladesh Planning Commission to incorporate a hill perspective in the nation's 7th Five Year Plan.

Another area of strategic engagement is ICIMOD's support of the Government of Bangladesh to improve its flood and water management. Most of Bangladesh is located within the floodplains of three great rivers: the Ganges, Brahmaputra, and Meghna. As a lower riparian country, Bangladesh is prone to floods and other water-related disasters. Hence, real time data and information from upstream countries are critical for Bangladesh to develop flood forecasting and early warning systems, and for water resource management, in general. ICIMOD and its partners in Bangladesh are working to establish a regional flood information system to facilitate the timely exchange of flood data and information to strengthen regional cooperation in the management of floods and other natural disasters. ICIMOD is also looking for opportunities to facilitate transboundary cooperation between Bangladesh and India and Bangladesh and Myanmar using the landscape approach to ecosystem management.

At the programmatic level, ICIMOD collaborates with a number of agencies to promote improved livelihoods and sustainable development in a variety of ways. ICIMOD's initial focus in Bangladesh centered around watershed management and conservation of water and soil. However, as the majority of people in the Chittagong Hill Tracts are subsistence farmers with little cash income, ICIMOD has broadened its scope over the years to promote alternative livelihood options through value chain development, increased market access, and tourism development. Mushrooms, high-value medicinal plants, and beekeeping are just a few of the value chains that ICIMOD has promoted.

Tourism in the Chittagong Hill Tracts presents another opportunity for Bangladesh, and in that mode, ICIMOD recently partnered with the Bandarban Hill District Council to initiate the Rural Livelihoods and Climate Change Adaptation (Himalica) initiative, which focuses on inclusive growth by involving local communities in tourism development.

The Bangladesh-ICIMOD Partnership Day on 24 January 2017 will be another step forward in our strategic partnership. On this day we will reflect on the key aspects of the Bangladesh-ICIMOD partnership, and explore emerging opportunities for future collaboration on new issues such as the Sustainable Development Goals and adaptation strategies consonant with the recent Paris Agreement. Building on our past success and looking toward the future, ICIMOD is eager to build its relationship with Bangladesh in 2017 and beyond.

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Annex 2:

Table A1: Progress towards achievement of the MDG targets in Bangladesh and the CHT districts – selected indicators

| Indicator | Measure | Bandarban | Khagrachari | Rangamati | Bangladesh |
|--|---|-----------|-------------|-----------|------------|
| Extreme poverty and hunger | Population below national upper poverty line, % 2010 | 41.1 | 50.5 | 33.2 | 31.5 |
| | Prevalence of underweight in children under 5, % 2009 | 41.0 | 45.0 | 39.7 | 45.0 |
| Universal primary education; child mortality | Net enrolment in primary education, % 2011 | 68.4 | 79.0 | 77.3 | 77.0 |
| | Under 5 mortality rate per 1,000 live births, 2009 | 85 | 63 | 45 | 53 |
| | Infant mortality rate per 1,000 live births, 2009 | 63 | 49 | 36 | 43 |
| | % of 1 year old children immunized against measles, 2009 | 89.0 | 95.7 | 90.0 | 87.5 |
| Maternal health | Maternal mortality rate, 2013 | 85 | 96 | 65 | NA |
| | Births attended by skilled health personnel, % 2009 | 7.6 | 9.1 | 11.5 | 28.8 |
| | Antenatal care coverage, % 2009 | 31.4 | 14.0 | 43.0 | 54.6 |
| Environmental sustainability | % of population using improved drinking water sources, 2013 | 46.3 | 56.0 | 45.0 | 97.9 |
| | % of population using improved sanitary facilities, 2013 | 32.7 | 56 | 85.0 | 55.9 |

Source: Planning Commission 2014; Mujeri and Basher 2015,

Table A2: Power and functions of key organizations in the CHT

| CHT Organizations Post Peace Accord | Key Functions |
|---|--|
| The Ministry of Chittagong Hill Tracts Affairs (MoCHTA) | <ul style="list-style-type: none"> ▪ Administrative work of the Ministry of the Chittagong Hill Tracts ▪ Advisory support to the Chittagong Hill Tracts local governments in selected issues ▪ Coordination among the concerned ministries and departments ▪ Secretarial support for all council committees, special committees, and working committees related to the Chittagong Hill Tracts ▪ Advisory support to the government, monitoring and implementation for the government and different committees ▪ Preparation of planning and development activities for the government and Chittagong Hill Tracts ▪ Implementation of work for the development of the Chittagong Hill Tracts Regional Council and District Councils. ▪ Implementation of works in accordance with the traditional laws of the Chittagong Hill Tracts, by upazila councils, municipalities, union councils, village councils, and other local government bodies ▪ Coordination among all concerned government agencies to protect the environment and geological aspects of the Chittagong Hill Tracts ▪ Development work for the betterment of the economic, educational, cultural, social, language, and indigenous religious activities of the tribal and non-tribal people of the Chittagong Hill Tracts ▪ Running and coordination of relief and rehabilitation work during disaster periods in the Chittagong Hill Tracts ▪ Monitoring of NGO activities in the Chittagong Hill Tracts ▪ Monitoring and coordination of the Chittagong Hill Tracts Regional Council and all local government councils' development work, and coordination of all inter ministries/ departments development work ▪ Administration of the Chittagong Hill Tracts Development Board ▪ Chittagong Hill Tracts related issues of the International Centre for Integrated Mountain Development (ICIMOD) ▪ Issues of the civil affairs office, Chittagong ▪ Liaison among the Ministry of Chittagong Hill Tracts and other concerned international organizations and on other international issues ▪ Preparation of laws related to the Ministry of Chittagong Hill Tracts Inquiry and statistical issues of the Ministry of Chittagong Hill Tracts |
| Chittagong Hill Tracts Regional Council (CHTRC) | <p>A. Functions</p> <ul style="list-style-type: none"> ▪ Overall supervision and coordination of all development activities under the Hill District Councils and all other matters entrusted to them ▪ Supervision and coordination of the local councils including municipalities ▪ Overall supervision and coordination of the Chittagong Hill Tracts Development Board set up under the Chittagong Hill Tracts Development Board Ordinance, 1976 (LXXVII of 1976). ▪ Supervision and coordination of the general administration of the hill districts, law and order, and development ▪ Supervision and coordination of tribal traditions, practices, and so on, and social justice. ▪ Issuing licenses for setting up heavy industries in hill districts in keeping with the National Industrial Policy. ▪ Conducting of disaster management and relief work and coordinating of NGO activities <p>B. Consultation with regards to legislation (Article 53)</p> <ul style="list-style-type: none"> ▪ Before making any law concerning the Chittagong Hill Tracts, the Government shall consult the Chittagong Hill Tracts Regional Council (CHTRC) ▪ The Chittagong Hill Tracts Regional Council (CHTRC) may apply or submit recommendations to the Government to amend a law, if any, which might adversely affect development of the CHT and well-being of indigenous peoples. It may also recommend to the Government to make new laws, if necessary. |

A. Functions

- Supervision, maintenance and improvement of law and order in the district
- Coordination of the development activities of local authorities in the district; monitoring the implementation of development projects and audit thereof; rendering assistance, cooperation and encouragement
- Education (mainly primary and adult education)
- Health
- Agriculture and forestry
- Animal husbandry
- Fisheries
- Cooperatives
- Commerce and Industries
- Social welfare
- Culture
- Construction, maintenance and development of highways, culverts, and bridges not reserved by the government or any local authority
- Management and control of such ferries which are not maintained by the Government or any local authority
- Provision of public parks, sports grounds, and open spaces and maintenance thereof
- Establishment and maintenance of inns, inspection bungalows, and rest houses
- Implementation of development plans entrusted to the Council by the Government
- Development of the communication system
- Provision of drainage and water supply systems, metalling of roads, and other essential public welfare activities
- Preparation of plans for local development
- Taking measures for religious, moral, and economic upliftment of the locality and its inhabitants
- Police (local)
- Tribal customs, traditions, and social justice system
- Land and land management.
- Proper utilization and irrigation of the water resources of rivulets, canals, and streams other than the Kaptai lake
- Conservation and development of ecology
- Youth welfare
- Local tourism
- Improvement of trust in local government organizations (apart from municipalities and union councils)
- Issuing licenses for local industries and businesses
- Preservation of statistics on births, deaths, and others
- Money lending business
- Jhum (shifting) cultivation

B. Restriction on land transfer (Article 64)

- No land including khasland suitable for settlement within the three Hill Districts (Rangmati, Khagrachari, and Bandarban) shall be leased out, settled with, purchased, sold out, or otherwise transferred without the prior approval of the concerned Hill District Council. However, reserved forests (RFs) and protected forests (PFs) and several other public land areas are outside of HDC jurisdiction.
- HDCs to supervise and control the functions of headmen, chainmen, amins, surveyors, kanungos and assistant commissioners (land)
- Settlement of fringe land in Kaptai lake with the original owners on a priority basis.

C. Development plans (Article 42)

- Preparation and implementation of development plans on any matter within its jurisdiction consistent with its resources
- HDC may formulate and implement development plans on the subjects and departments transferred to it with its own funds or funds received from the Government.



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ISBN 978 92 9115 431 9