SUSTAINABLE DEVELOPMENT GOALS
BASELINE REPORT OF KARNALI PROVINCE

Karnali Province Planning Commission

September 2020

SUSTAINABLE
DEVELOPMENT GOALS
BASELINE REPORT OF KARNALI PROVINCE

Karnali Province Planning Commission
Birendranagar, Surkhet

Ref. No.:

च.नं.

Date: 2077/05/25

PREFACE

Our common responsibility is to make the world civilized, prosperous and happy by achieving sustainable, broad-based, high and equitable development. Along with these, another very important responsibility is the utilization and promotion of our natural resources. During 2001 to 2015, when implementing the Millennium Development Goals (MDGs), initiated by the United Nations (UN) and adopted by the world community, we were successful in achieving many of the MDGs but not all. Thus, based on the foundation of the MDGs, the UN took the initiative to develop 17 Sustainable Development Goals (SDGs) with defined clear targets for 2015-2030, and made a call for all countries to meet them. Nepal has also made its commitment and has already started implementing these SDGs. Nepal is committed to achieve these goals by 2030, and, by then, it also aims to graduate the country to a medium level income status from a least developed country status. Embracing the Government of Nepal's long-term vision of 'Prosperous Nepal, Happy Nepali', the Government of Karnali Province is also formulating periodical plans with a long-term vision of 'Prosperous Karnali, Happy Karnali People'.

In comparison to other provinces, Karnali is richer in natural resources such as land, water and biodiversity including most valuable herbal medicinal plants. The Shija is a historical place of karnali where Nepali language was originated. We are proud of its rich art, culture, religion, and costumes. The province has a special identity as various lineages of Nepal also originated from Karnali itself.

However, compared to other provinces, Karnali is lacked behind in terms of modern infrastructure and socio-economic development indicators. Though, it has many possibilities and opportunities to grow and become a most prosperous province of Nepal. Sustainable infrastructure and energy, food security, decent job, quality education and health service, and organic agriculture, tourism, research and innovations are in top developmental priorities of Karnali. As one of the main development agenda of Karnali is its 'Green Economy', the provincial government has made a declaration to build Karnali as an organic province by accelerating its niche agricultural production. Considering its enormous water resources, Karnali has taken hydro-electricity as a key driver for prosperity. The province's development priorities are, therefore, aligned with the SDGs.

Karnali's provincial government has developed its approach paper for its first five-year plan, and has set its priorities for the period. The first priority of the Government of Karnali Province is infrastructure, which includes roads and other means of transportation, energy, drinking water, smart cities and settlement development, and communication. The provincial government has purposed Surkhet-Hilsa Fast track, Birendranagar airport and city infrastructure, key hydropower and electricity lines as game changer projects for Karnali. As Karnali has poor indicators in terms of education, health and social security, the province's second priority is social development. In this regards, high standard provincial and regional hospitals, and Karnali Mountain Science and Technology University, saving scheme for new born daughters are among the dream projects of Karnali Province. A compulsory minimum income programme has been started to address households below the poverty line, especially considering multidimensional poverty, which is above 50 percent. The province sees a maximum number of seasonal

migrants going to India as people do not have local opportunities for income and employment. Thus, the province has started investing in its children, and is providing employment to its youth and appreciation and protection to its senior citizens. Karnali's third priority is production based on a green economy, with tourism and environment its fourth priority. The province has plan to develop sustainabe industries based on mines, natural resources, agriculture while emphasizing on eco-cultural tourism with its unique natural and cultural tourist products. Research, science and technology, and innovation is its fifth priority, followed by Digital Karnali and good governance as sixth and seventh priorities, respectively.

Based on these priorities, the developmental ideas, targets, purposes, strategies, action points, and expected results are set in line with the SDGs. This SDG Baseline Report will help achieve the targets, purposes, strategies, and actions of Karnali Province. Karnali Province Planning Commission is thankful and pay its due respects to the Honourable Chief Minister of Karnali Province, who is also the Chair of the Karnali Province Planning Commission, for providing overall guidance. Special thanks go to members and staff of the Karnali Province Planning Commission, Ministry of Economic Affairs and the Planning, and to the United Nations Development Programme (UNDP) without their supports it was not possible to produce this report.

Karnali Province Planning Commission
Karnali Province Government
Birendranagar, Surkhet
Nepal

Karnali Province
Planning Commission

Mahendra Bahadur Shahi	Honorable Chief Minister, Chairperson
Prof. Dr. Punya Prasad Regmi	Honorable Vice Chairperson
Dr. Deependra Rokaya	Honorable Member
Yogendra Bahadur Shahi	Honorable Member
Laxmi Kumari Basnet	For Principal Secretary, Member
Ghanashyam Upadhyaya	Member Secretary, Secretary of Ministry of Economic Affairs and Planning

CONTENTS

One of the most popular tourist destinations in Karnali province, Phoksundo Lake is located in Dolpa district at an elevation of 3,611.5 m (11,849 ft) above sea level, with a maximum depth of 145 m (476 ft).
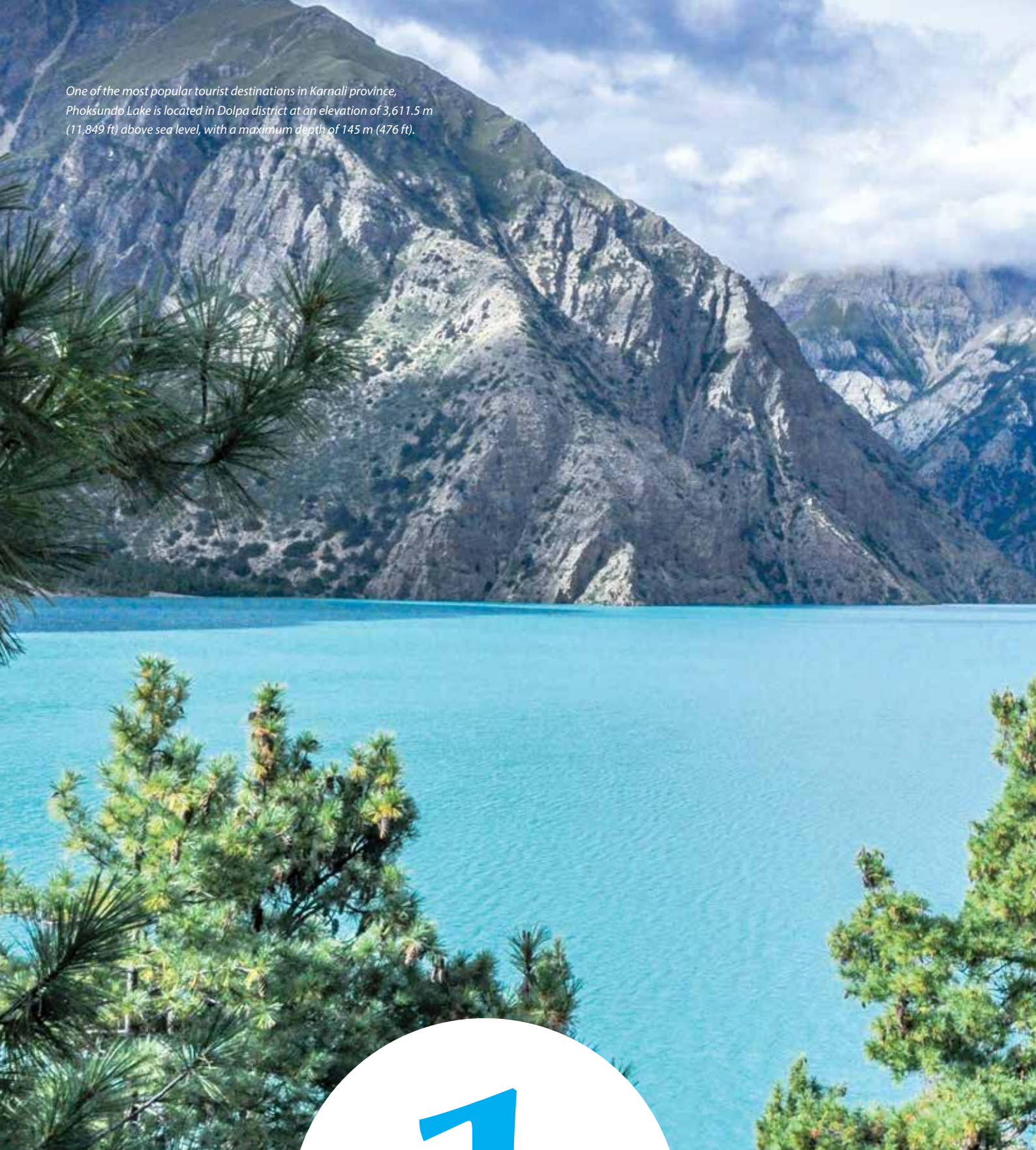
1

CHAPTER

PROVINCIAL CONTEXT

Karnali province borders China to the north, Sudurpaschim province to the west and Gandaki province and Province 5 to the east. The province consists of 54 rural and 25 urban municipalities, and has about 300,000 households. By geographical spread, it is the country's largest province with an area of 30,211 sq. km., covering nearly one-fifth of Nepal's total area. However, it is sparsely populated with over 1.5 million people, accounting for six percent of the national population and the lowest provincial density according to census 2068 total population is 1,570,478 in the country (56 persons per sq. km).

Despite major improvements over the past few decades, the province lags behind on several development fronts. Some 28.9 percent of its people live below the poverty line with a per capita income of $606, which is substantially below the national average. The literacy rate is 62 percent (72 percent for males and 53 percent for females).[1] Likewise, 51.2 percent of people are multidimensionally poor; and the Human Development Index (HDI) of the province is just 0.427, both of which are below the national average of 28 percent and 0.49, respectively.

The average life expectancy in Karnali is 67 years: the lowest of all provinces.[2] Malnutrition in children under five years is 58 percent. Furthermore, 35.9 percent of the total population do not have access to safe water, and only 50 percent of the households have proper toilet facilities. There are 439 public health institutions in the province. These represent up six percent and eight percent of Nepal's total, respectively.[3]

On infrastructure, the strategic road network covers 1,132 km, of which 51 percent is black topped, 35 percent is earthen, and 13 percent is gravelled. The village road network covers only 857.3 km, of which only three percent is black topped.[4] The province produces 8.25 Mega watt electricity connected to the national grid, likewise projects under construction: the 48 MW (megawatt) Bheri-Babai diversion (irrigation) project and the 900 MW Upper Karnali hydropower and other projects Nalsinghgad, Fukot, Betan, Jagadulla, Tila are also under construction.

By socio-ethnic composition, the province is home to a large share of Brahmins and Chettris (62 percent), followed by Dalits (23 percent), Janajati (13 percent), Tharus (0.5 percent), Madhesis (0.24 percent) and Muslims (0.18 percent). Nepali is the most common language, used by 95 percent of people, followed by the Magar language. Most people in this province are Hindus (95 percent), followed by Buddhists (three percent), Christians (one percent) and others (0.27 percent).

The province contributes less than four percent of Nepal's GDP, which is not surprising given the rough terrain and limited number of registered industries (only 39 as of March 2019).[5] Public administration and defence (11 percent) dominates its contribution to the provincial GDP, followed by education (seven percent), health and social work (seven percent), hotels and restaurants (five percent) and other community, social and personal service activities (five percent). The contribution of other sectors, such as agriculture and forestry, manufacturing and financial intermediation, is meagre at 4 percent, 0.7 percent and 0.9 percent, respectively.[6]

Of the 4,202 branches of banks and financial institutions in Nepal (in mid-July 2018), the province has only 3 percent of the total, the least of all provinces. The province contributes just 1 percent to overall deposit collection and credit mobilization of banks in Nepal.

In agriculture, the top categories of production include 119,500.54 metric tonnes (MT) of potatoes, 152,577 MT of maize and 160,772 KL of milk. out of total arable land only 31.5% has complete and partial irrigation facility, which is the lowest of all provinces. The region also faces a basic food availability deficit of 16.8 thousand MT.

---

[1] *Nepal in Data (2019)*
[2] *Ministry of Finance (2018)*
[3] *Ministry of Finance (2019)*
[4] *Ministry of Federal Affairs and Local Development (2016)*
[5] *Ministry of Finance (2019)*
[6] *CBS (2019)*

▲ *Women from high hills in a traditional attire*

Karnali province has a number of notable tourist attractions, such as the pristine Rara and Shey Phuksundo lakes. The rennovated Kankre Bihar in Surkhet resemble the Angkor Wat temples of Cambodia. Other places of cultural significance include Badimalika, Deuti Bajai and Chandannath temples. A number of high mountain peaks; Churen Himal, Nalakankar, Bej Chuchuro, Saipal Himal and Kanjirowa Himal are among the highest peaks in Karnali.

Karnali province has the potential to become an international trade and tourist conduit to Western China being a part of western silkroad of trans-Himalayas. It has been a fertile ground for publicly funded socio-economic programmes. The Karnali Employment Guarantee Programme, for example, has inspired a national version. The province's geographical vastness increases the cost of providing infrastructure.

Karnali province has major prospects in eco-tourism, high value organic agriculture, and hydropower. But a number of hurdles inhibit realization of these opportunities, such as clarifying the roles of national, provincial and local governments in the federal context; investment in hard and soft infrastructure; attraction of domestic and foreign investment; and creation of quality human resources.

The province is at a stage in its development where, with a proactive institutional push and improved public administration, the seeds of many economic opportunities can be planted. In other words, while the productivity of firms and enterprises drives long-term prosperity, public inputs to firms' production – such as infrastructure, workforce, export-oriented quality certification – will play a major role in lifting the economic prospects of this province.
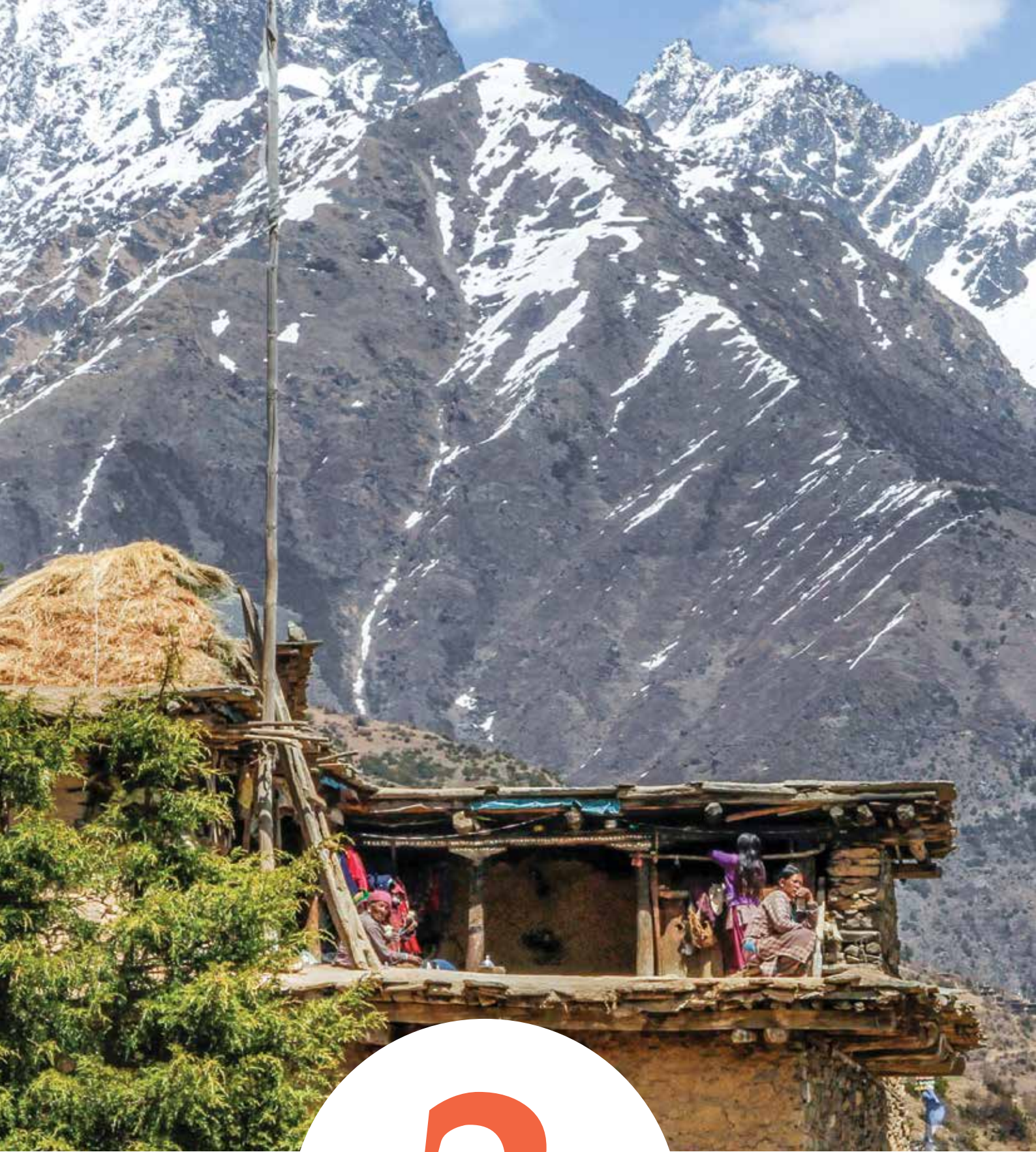
2

CHAPTER

Settled in the lap of massive mountains is Limtang village, Humla.

NORMATIVE ROOTS AND CHARACTERISTICS OF SDGS

The Sustainable Development Goals (SDGs) were born of the need to pursue socially inclusive and environmentally sustainable economic growth in an integrated manner. The normative basis of sustainable development is the pursuit of a good global society supported by these three core beliefs.

- There should not be poverty amidst plenty;
- The global community of nations must foster social cohesion and mobility, reduce inequalities, and end all forms of discrimination within and across societies; and
- Humans have a moral obligation to preserve planet Earth.

Before adopting the SDGs, the world agreed to implement the Millennium Development Goals from 2001 to 2015. They were largely successful because they were time-bound, quantified and simple to monitor. However, on several issues, they did not go into the root causes of development. The SDGs are not just an enlargement of the MDGs in terms of the number of goals and targets, they also seek to address complex issues like inequality and human rights. They take a more holistic approach to development. The ambition, however, is so high that many governments see several goals and targets as aspirational.

For a better conceptual appreciation as seen from Nepal's present development stage, the 17 SDGs can be grouped as follows.

Basic mark of civilization: Given the technologies on offer and the available finance, the world is now equipped to meet the minimum requirements of every citizen to lead fulfilling lives free from want and fear. These set the physical standards for a basic mark of civilization in the 21st century. This can be linked with the human development notion of empowerment that addresses people's capability to shape the processes and events that affect their lives. Going beyond notions of 'basic needs' for the poor, often with an accent just on commodity possession, the human development paradigm downplays this as being paternalistic. The paradigm attaches importance to issues of dignity and self-respect, which has a serious bearing on how people engage in processes that lead to higher incomes and capabilities, and political voice.

It may be argued that the SDGs in this grouping be pursued as a civilizational imperative. They call for an end to poverty in all its forms everywhere (Goal 1); ending hunger, achieving food security and improved nutrition, and promoting sustainable agriculture (Goal 2); ensuring availability and sustainable management of water and sanitation for all (Goal 6); and ensuring access to affordable, reliable, sustainable and modern energy for all (Goal 7).

Exercise of human capabilities and agency: Healthy lives and access to knowledge are worthy development goals for their intrinsic merit, not just their instrumental contribution to a more productive economy. Reducing all forms of inequality is a reflection of the higher aspirations of modern, democratic nation-states. Equity requires an enlargement of people's choices to access opportunities fairly. This often implies that the prevailing power structures must improve to ensure better distribution of assets, such as land and credit, transfer of public incomes through fiscal measures, and socio-political reforms that enhance opportunities for the participation of groups that lag behind others, ethnicity and gender.

> Going beyond the notions of 'basic needs' for the poor, often with an accent just on commodity possession, the human development paradigm downplays this as being paternalistic.

SDGs in this grouping seek to maximize the exercise of capabilities that human beings have acquired. They are about ensuring healthy lives and promoting well-being for all at all ages (Goal 3), and ensuring inclusive and equitable quality education and promoting lifelong learning opportunities for all (Goal 4). While complete

▲ *Wooden planks make do as a bridge; such bridges can be seen aplenty in the mountains of rural Nepal. This is on the way to Limi valley, Humla.*

equality may be difficult to pursue in a time-bound manner, they are goals worthy of pursuit on an ongoing basis, such as the achievement of gender equality and empowerment of all women and girls (Goal 5); reduction of inequality within and among countries (goal 10); and the promotion of peaceful and inclusive societies, access to justice for all, and the building of effective, accountable and inclusive institutions at all levels (Goal 16).

Means for sustained progress: Economic growth is about generating and sustaining resources to improve the quality of life. It embeds a constant quest to upgrade productivity. Human development is a means to higher productivity -- a well-nourished, educated, and alert labour force is an important productive asset. But rather than viewing humans as mere inputs into the production process, this paradigm views them broadly as ends of development itself.

SDGs in this grouping include the promotion of inclusive and sustainable economic growth, full and productive employment and decent work for all (Goal 8); building resilient infrastructure, promoting industrialization, and fostering innovation (Goal 9); making cities and human settlements inclusive, safe, and resilient (Goal 11); and ensuring sustainable consumption and production patterns (Goal 12).

Threats to future prosperity: From climate change to the changing chemistry of oceans and degradation of marine resources, land and forests, and biodiversity, they remind us that as economic growth is pursued, the natural heritage of the planet needs to be protected. Physical development does not need to be secured at an environmental cost. Sustainability, however, is not just about the renewal of natural resources. In human development terms it means that the physical, human, financial and environmental resources are governed by the current generation in a way that does not prevent the next generation from improving its own welfare.

SDGs in this grouping include urgent action to combat climate change (Goal 13); conserving and using the seas and marine resources sustainably (Goal 14); protecting, restoring and promoting sustainable use of terrestrial ecosystems, managing forests, combating desertification, and halting and reversing land degradation and halting biodiversity loss (Goal 15).

All these goals have a national, regional and global dimension. SDG 17 calls for strengthening the means of implementation and revitalizing global partnerships.

The clustering of the SDGs above is for ease of thematic reference. Three characteristics bind them together indivisibly. First, they embody an expansive notion of development as broadening of freedoms, widening of choices and human flourishing. Second, they exhibit traits of a 'complex system'. And third, the goals exhibit synergies as well as trade-offs. We elaborate in turn.

2.1 SDGS: EXPANSIVE DEVELOPMENT NOTION

The premise that people are the real wealth of nations, and the real end of development, led the UN to define human development as a "process of enlarging people's choices." These choices can be infinite, but the three essential ones are for people to lead a long and healthy life, to acquire knowledge, and have access to resources needed for a decent standard of living. Additional choices range from socio-economic and political freedoms to opportunities for being creative and productive, and enjoying personal self-respect and guaranteed human rights.[7]

Drawing on the works of Amartya Sen, among others, the paradigm of human development views poverty as a deprivation of capabilities, and not just incomes. It is broadly seen as a denial of choices and opportunities to lead the kind of life that people have reason to choose and value. The notion of human capabilities thus focuses on what people are actually able to *do* and what people are able to *be*. Incomes are only important for their instrumental roles in expanding opportunities. The paradigm thus rests on two pillars:

- Formation of human capabilities, such as being educated, healthy and in a position to command control over resources;
- People make use of these acquired capabilities for leisure, production, political-economic liberties, and participation in socio-cultural affairs.

> **The notion of viewing development as augmenting of capabilities and expanding of choices meshes with the triumph of the Enlightenment.**

A corollary of the above is that while an important focus of development lies on the pursuit of increased incomes, quality of life captures a broader set of achievements, from better education and nutrition, to cleaner environment, and even realization of greater individual freedoms. Because higher income is seen as a necessary, but not sufficient, condition to achieving many of these broader goals, the issue of economic growth is central to the study of development, as is the concern about how this may or may not translate into reduced poverty and decreased inequality between the sexes, within and among groups and nations, and across generations; and whether all these processes to generate and share prosperity adversely impact environmental sustainability and planetary boundaries.

Another corollary of the approach to viewing people as the end of development supports the principle of 'no one left behind'. This requires a conscious policy response to review and act on all instances of multi-faced discrimination (based on gender, class, ethnicity, caste, among others). Geographical isolation, shocks and vulnerability, too, require the state to step up to reach the last mile. Prevailing governance structures, through sheer inertia of history, often exclude people by design or otherwise. This needs radical measures to correct historical injustices through affirmative action, for example. All these aspects are salient to Karnali province, which is socio-culturally variegated, topographically remote, and was historically deprived of development opportunities by the levers of centralized governance.

The notion of viewing development as augmenting capabilities and expanding choices meshes with the triumph of the Enlightenment. As articulated by Pinker (2018), the world is getting better in almost all measures of development. Human flourishing has been enabled by the ideals of the Enlightenment through knowledge, reason, and science. The gift of the Enlightenment has been the moral commitment to humanism, in which the ultimate good is the well-being of people.

2.2 SDGS: COMPLEX SYSTEM

Sustainable development is not just a normative concept. It is a science of complex systems involving four elements, namely economic, social, environmental and governance. The interaction between the elements has emergent properties of a complex system, that produces something more than the sum of its parts.[8] For example, youth employment is linked to skills and education, but also has a more complex relationship with accessibility to transportation, which is linked to school enrolment rates.

As Sachs (2015) notes, complex systems represented by a global economy, social connectedness, and Earthly climate and ecosystems exhibit non-linear responses to shocks, i.e. a modest change in the components of the system can cause a large change in the performance of the system (as a whole).

Such complex relations can be understood using a systems approach. Under this approach, sustainable development is characterized by attainment of goals across environment, economic and social systems.[9] More recently, another element – governance – has become paramount. According to Sachs (2015), sustainable development involves understanding complex systems of an integrated global economy. It highlights the role of trust, ethics, inequality and social support network both locally and in communities engendered by the ICT revolution (social networks). It examines the changes in ecology and environment, focusing on issues such as climate change and biodiversity. And it investigates the problems in governance, as well as the performance of governments and businesses.

The systems approach can be illustrated using a Venn diagram (Figure 2.1).[10] The four sets are economic, social, environmental and governance. The intersection of the sets represents goals that are directly or indirectly linked to others. For example, SDG 1 (no poverty) is socio-economic in nature while gender inequality comes under the social set. The set – economic social represents the linkage that higher income (earned by women) reduces not just poverty, but also promotes women's empowerment and therefore gender equality.

Likewise, the intersection of the four sets represents ideas that are related to all four systems. For example, higher income would not only reduce poverty (Goal 1), but will also improve education opportunities for the poor (Goal 4), produce environmentally aware citizens who take climate change action (Goal 13), and raise a conscious public to ensure accountable and effective institutions.

It is important for policy makers to realize that attaining all goals at one time will not be possible. In such cases, economies should try to prioritize reduction in human deprivation, while taking into consideration the impact on biological productivity and ecological resilience, all while factoring in social justice and good governance.[11] Holmberg and Sandbrook (1992) contend that improving just one goal does not entail sustainable development, as its impact on other systems are ignored. For example, exploitation of resources as inputs in factories might improve the economy, but will have environmental and social ramifications.

Figure 2.1: Overlapping of sectors

---
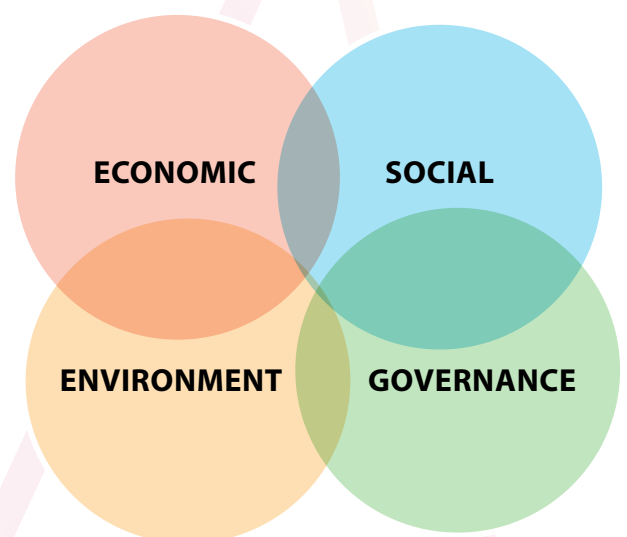
[8] *Sachs (2015)*
[9] *Babier (1987)*
[10] *Adapted from Barbier and Burgess (2017)*
[11] *Barbier and Burgess (2017)*

Several papers have identified and highlighted linkages across SDGs. For example, TWI2050 (2018) points out that concentrating on human capital such as education, health and gender equality are vital to help people live a self-determined life by enabling them to find decent work, generate income, and encourage them to tackle environment problems.

The government should be mindful of a complex system of SDGs for two major reasons. First, because of an interconnected system, uncoordinated efforts in one system might have negative ramification in the other. Second, because goals are related, there exists some forms of synergy and trade-off. This presents both opportunities and challenges in achieving SDGs. For synergies, the government can combine policies to maximize gains from two or more goals, whereas for trade-off it should remember to strike a balance between the two.

▲ *A woman in Jumla drying black beans (lentil), locally known as Kalo Simi.*

2.3 SDGS: SYNERGIES AND TRADE-OFFS

Given the complex and non-linear relation among the SDGs, and the holistic approach to development that these goals entail, there exist synergies and trade-offs among SDGs. While it is implicitly assumed that the SDGs are linked, a consensus on the links and the degree thereof does not exist. Some links can be direct. For example, greater access to clean energy (Goal 7) will reduce the chances of attaining goal 13 and 14 (climate change and oceans), in addition to health problems (Goal 3) that it may bring along. Meanwhile, some are more complex in nature, such as attaining food security (Goal 2) while preserving life on land (Goal 15).

Pradhan et al. (2017) analyse the interaction between SDGs and identify synergies and trade-offs. They classify the relation to be positive (synergy) if there is a positive correlation, while a negative correlation between SDGs is represented by a trade-off. They find that most countries have more synergies than trade-offs. They also conclude that SDG 1 has synergistic relationships with most goals, while SDG 12 has trade-off relationships with other goals. However, they warn that their analysis entails correlation analysis and thus the relationship cannot be classified as being causal.

The existence of trade-offs should not discourage policy makers. For example, in the context of agriculture and land use, one possible trade-off may exist between preserving biodiversity and ecosystems (SDG 15) and producing sufficient food (SDG 2).[12] The trade-off can be minimized through agriculture intensification and modernization technologies that use smaller amounts of land to produce larger amounts of food. In addition, changing to less meat-intensive diets and reducing food wastage (SDG 12) can lower land pressure.[13] This also has an impact on CO_2 emissions from changes in land use (SDG 13).[14]

Sachs (2015) challenges the trade-off that "society can aim to be rich, or it can aim to be equal." He argues that if tax on the rich is used on productive investments, such as in education and health, it will enable them to be more productive. If the incentive of the rich to work is less affected by tax, compared to the boost in productivity that the poor receive, it can lead to higher efficiency and equity.

In the context of urbanization, if the synergies are acknowledged, it provides massive opportunities to hit multiple SDG targets efficiently (low funds and in shorter time). For example, urbanization through delivery of utilities such as electricity and energy services, along with the promotion of urban mobility via use of electrically powered mass transport system (avoid air pollution), offer synergies between SDGs 3, 7, 11 and 13. On a tangential note, Grubler et al. (2018) and Parkinson et al. (2018) point out that improving responsible consumption and production (SDG 12) has co-benefits with other SDGs, offering an ideal synergistic entry point.

Nilsson et al. (2016) suggest that policy makers should map out, score and filter interactions between SDGs, while pondering on four questions. First, is the interaction reversible? For instance, loss of species due to inadequate action on tackling climate change (Goal 13) is irreversible. But changing land use from agriculture to bioenergy production (Goal 7) can result in poorer food security, which can be reversed. Second, the direction of the interaction, i.e. is it is one way or two way? For example, improved access to energy such as electricity can improve education scores, but improving education scores does not directly provide energy. Third, the strength of the interaction, or the magnitude of the effect one goal has on the other is another consideration that policy makers should remember. Trade-offs of low magnitude are tolerable. For instance, the impact of transport infrastructure and land resources are comparatively tolerable. Fourth, are interactions between two or more SDGs possible or have they happened before? In other words, research should guide policy makers in realizing the direction and magnitude of the linkages.

The magnitude of these linkages is not necessarily universal as it also depends on the geography, governance, technology and the level of development of countries.[15] For example, unlike other countries where the primary source of electricity is coal, in Nepal electricity is generated through hydropower. This lowers the magnitude of the linkage between energy and climate change. Similarly, weak institutions, legal rights and governance also affects SDGs. Poorly governed industrialization and infrastructure development (Goal 9) can counteract efforts to reduce inequality (Goal 10).

The complex interconnectedness among the SDGs demands a whole-of-government (WoG) approach. This means coordination not only among tiers of government, but with national stakeholders outside government such as the private sector, community groups, civil society and households. Many SDGs require a multi-sectoral ecosystem of a response with financial and human resources pooled and coordination streamlined. Take the example of nutrition (SDG 2). The Multi-sectoral Nutrition Plan (2018-2022), through a secretariat at the National Planning Commission, brings together six ministries of the Government of Nepal – health; education; agriculture and livestock; water and sanitation; local development; and women, children and social welfare. It also pools the resources of three major development partners.

---

[12] *Humpenoder et al. (2018); Popp et al. (2011)*
[13] *Humpenoder et al. (2018)*
[14] *Springmann et al. (2016)*
[15] *Nilsson et al. (2016)*

Traditional folk musicians playing damaha, a drum made from leather, brass or wood. The Dalit community has been playing this instrument for generations. The damaha is used during a range of different events – from the sad to the joyful to the religious.

3

CHAPTER

SDG BASELINE INDICATORS

Despite improvements in recent decades, the baseline SDG indicators of Karnali Province are dismal. A significant share of the population, especially women, are poor and illiterate; agriculture production is meagre; infrastructure is inadequate; and there is low access to opportunities, resulting in substandard performance in health, education and command over resources.

Karnali is the poorest of all provinces, with the nationally defined headcount rate of consumption-based poverty at 25.1 percent. Child poverty rate stands at 35.3 percent[16] while the international poverty line, measured as people living under US$1.9 per day, is 27.5 percent (Table 1).

The multi-dimensional poverty index (MPI), at 0.23, is the highest in Nepal. MPI is a product of H (Headcount), the percentage of people who are multidimensionally poor, and A (Intensity of Deprivation), the average percentage of dimensions in which poor people are deprived. In terms of headcount, more than half of the province are multi-dimensionally poor. Those who are identified as multidimensionally poor are deprived, on average, in 44.9 percent of the weighted indicators. Nationally, on average, poor people are deprived in 44.2 percent of the indicators.[17]

Table 3.1: Prevalence of Poverty

Province	a. Poverty at $1.9 per day (PPP value) (% of population)	b. MPI Headcount ratio	c. Headcount rate at National Poverty Line (% of Population)	d. Children below the national poverty line (Under 5 years of age %)
National	14.9	-	25.2	36
Province 1	7.49	0.09	16.74	24.48
Province 2	15.43	0.22	26.69	35.12
Bagmati Province	13.87	0.05	20.59	34.63
Gandaki Province	11.09	0.06	20.87	28.37
Province 5	14.17	0.13	24.52	29.21
Karnali Province	27.54	0.23	38.83	48.05
Sudurpashchim Province	27.03	1.15	45.61	59.38

Source[18]: a, c, d (Central Bureau of Statistics, 2011); b (Central Bureau of Statistics, 2014)

With only 31.5% of arable land has complete and partial irrigation facility, the region faces recurring food shortages. There is an annual deficit of 16.8 thousand MT. Per capita food[19] production in Karnali is 185 kg, while the national per capita food production stands at 197 kg. The average annual income of small-scale food producers is on the lower side, standing at Rs.28,102[20]; and about 63.1 percent of the population spend two-thirds of their consumption on food (nationally, it is 44 percent).

---

[16] Households with children under 5 years, and below the poverty line
[17] NPC and Oxford (2018)
[18] The World Bank staff calculations from the survey datasets (except for MPI which is reported in the NPC/Oxford report) (should we not cite the NPC/Oxford Report only)
[19] Food includes rice, wheat, millet, barley, buckwheat
[20] CBS (2011)

According to Engel's Law, the higher the household income, the lower the proportion of income spent on food.[21] From a policy perspective, this reflects the average living standard in the province, as well as its vulnerability to increases in food prices.

The affordability and availability of food reinforce the health and well-being of people. For example, about 29.4 percent of the women of reproductive age in Karnali province suffer from anaemia; the national average is 33.5 percent. Anaemia is understood to be hidden hunger, which results in poor pregnancy outcomes as well as impaired physical and cognitive development in newborns.

The prevalence of malnutrition (underweight malnutrition) in children under 5 years of age stands at 7.5 percent in the province. Malnutrition is approximately two percent points lower than the national average.

Despite improvements in female literacy, the province has a relatively lower share of women attending PNC as per protocol (Figure 3.1). Karnali also has the third lowest percent of institutional delivery, standing at 36 percent. Nevertheless, increasing literacy of women has improved health outcomes as more than two out of four women receive care through a prescribed number of ante-natal visits. It has emerged as a stylized fact across all provinces that higher literacy rates are associated with a greater share of women seeking PNC as per protocol (Figure 3.2).

Some 83.3 percent of infants receive three doses of (DPT-HepB-Hib) vaccine. Female education has tended to have a positive relation with health outcomes of family members, especially children.[22] Approximately seven percent of the population spend a large portion of household income on health.

Figure 3.1: Malnutrition and PNC
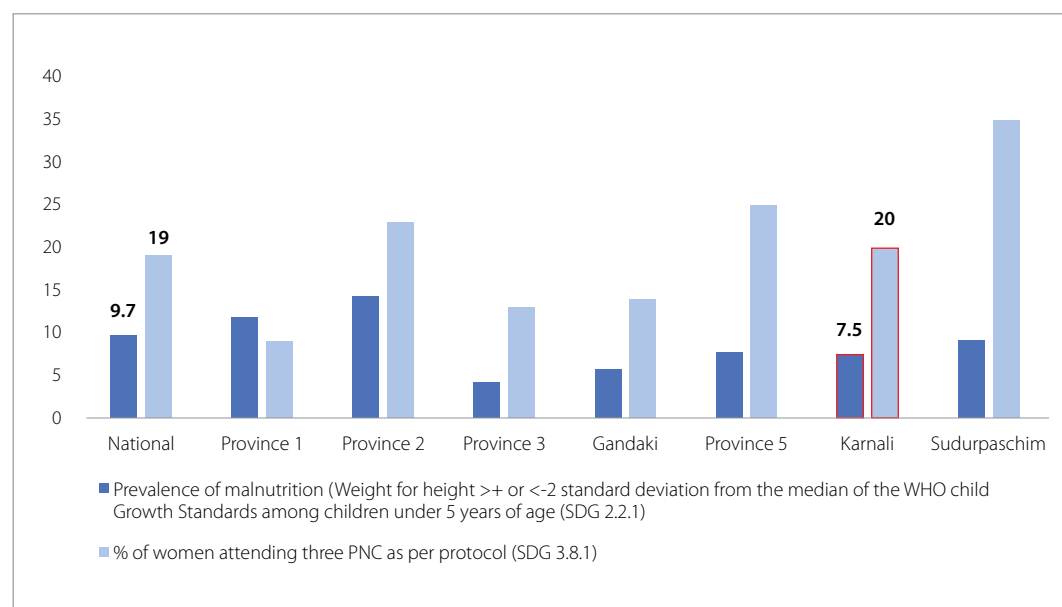
Source: Ministry of Health and Population (2016)

---

[21] Named after a statistician, Engel's law is an observation that as incomes rise, the proportion of income spent on food falls, even if absolute expenditure on food rises. In other words, the income elasticity of demand for food is between 0 and 1.

[22] De Walque (2007)

Neonatal mortality rate stands at 29 per 1,000 live births, and under-five mortality rate is 58 per 1000 live births. Interventions to reduce the neo-natal mortality rate include improving access to safe water, sanitation and hygiene, along with increased availability of basic health services, food and education. On other health-related indicators, about 11.1 percent of men, and 20.9 percent of women aged 15 years and above with high blood pressure take medicine. The leading risk factor for non-communicable cardio-vascular disease (CVD) is high blood pressure, which is in turn associated with unhealthy diets, particularly excessive sodium chloride, and physical inactivity.

Figure 3.2: Literacy and PNC
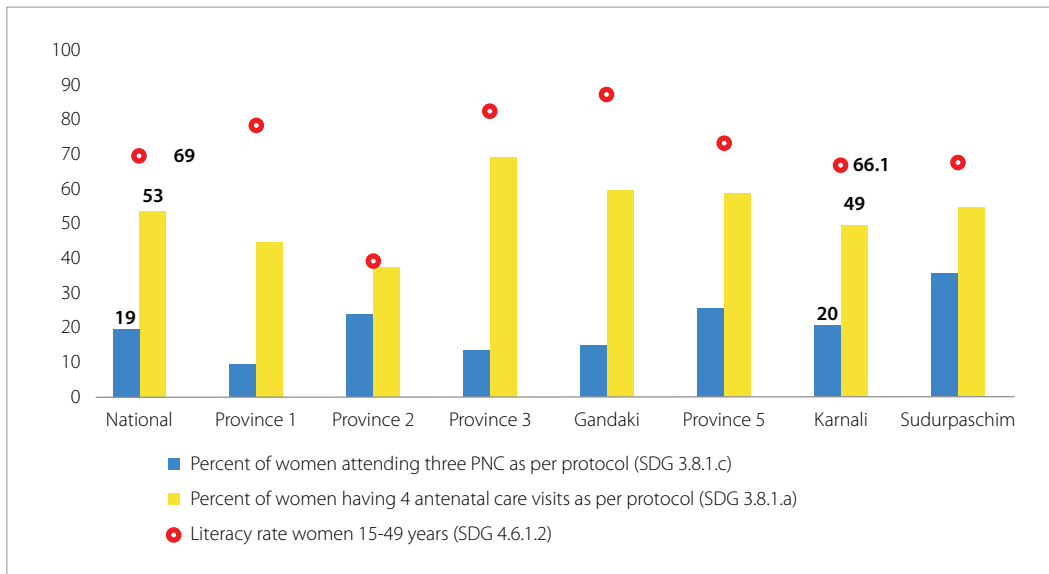
Source: Ministry of Health and Population (2016)

Figure 3.3: Neonatal mortality rate and ANC
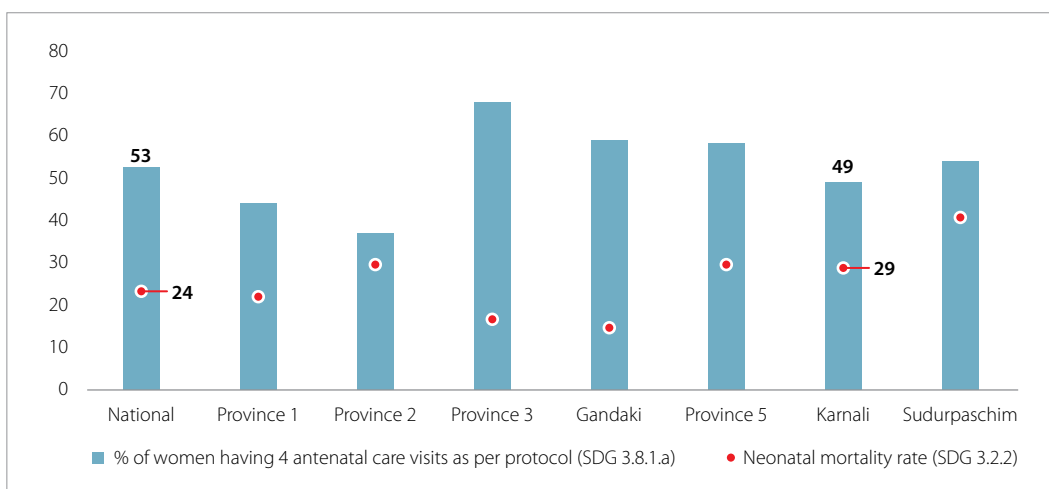
Source: Ministry of Health and Population (2016)

Proximity to health services plays an important role in addition to health awareness and education in incentivizing the public to access health services. It is reported from an analysis of NLSS data that almost 23.6 percent of the households live within 30 minutes of a health facility. The GIS estimates reveal the same scenario, where almost 46 percent of the population travels for more than 1 hour by foot to reach the nearest health facility during the monsoon (rainy) season.

Figure 3.4: Travel time estimates to health facilities (rainy season)

Travel time	Percentage
More than 32 hours	0.07%
16 to 32 hours	0.84%
8 to 16 hours	2.5%
4 to 8 hours	12.19%
2 to 4 hours	28.36%
1 to 2 hours	25.5%
30 Minutes to 1 hour	14.42%
0-30 minutes	18.07%
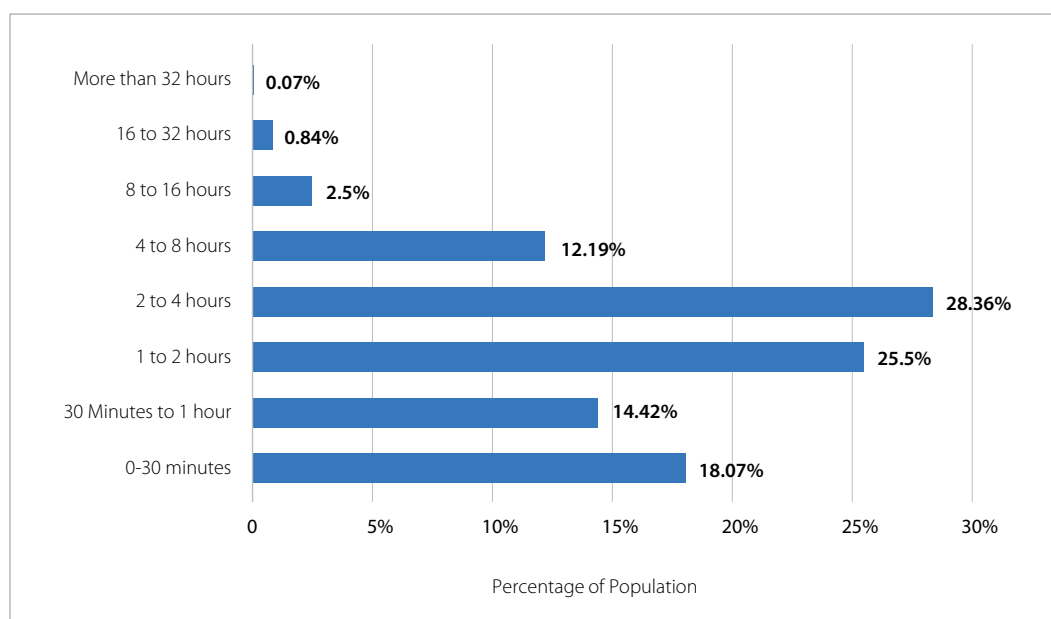
Source: The World Bank estimates

Figure 3.5: Literacy rate

	Literacy rate men 15-49 (%) (SDG 4.6.1)	Literacy rate men 15-49 (%) (SDG 4.6.1.1)	Literacy rate women 15-49 (%) (SDG 4.6.2)	Literacy rate women 15-49 (%) (SDG 4.6.2.1)
National	89.1	94.4	69.1	84.5
Karnali	91.5	98.0	66.2	91.9
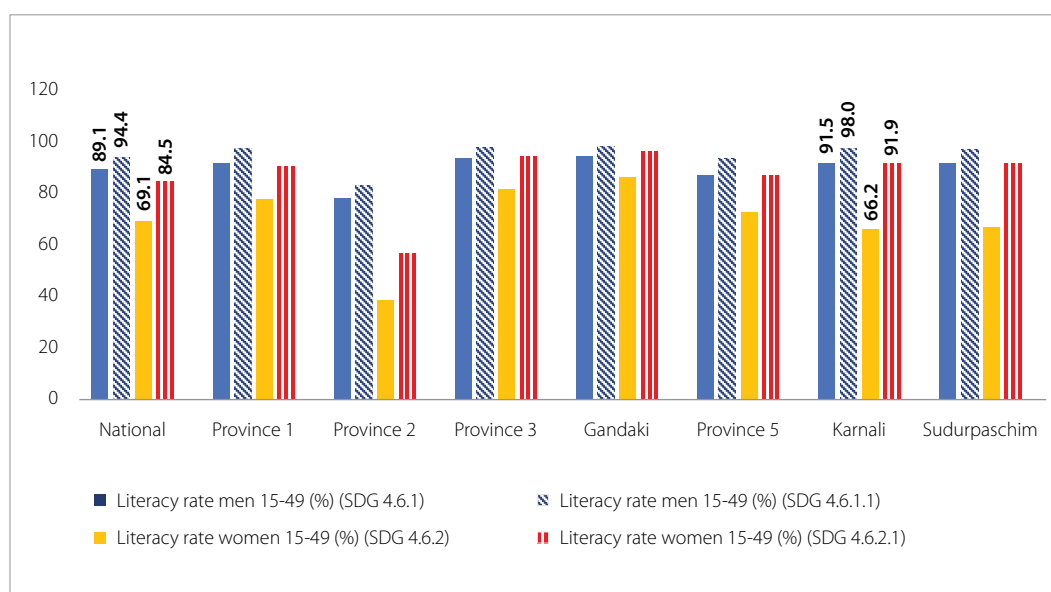
Source: World Bank estimates from the Ministry of Health and Population (2016) survey data

Literacy is a necessary condition for advanced education and critical thinking. It augments the capabilities of people to lead the kind of life they have reason to value. The literacy profile of Karnali is encouraging. For example, among the younger cohort aged 15-24, the literacy rate is 98 percent and 92 percent for men and women aged between 15 and 24 respectively (Figure 3.5). While the literacy rate of men[23] aged 15-49 years stands at 91.5 percent, women in the same cohort lag behind considerably, with literacy of just 66.2 percent.

---

[23] *Refers to men with an SLC or higher and men who can read a whole sentence or part of a sentence*

Lower literacy rate of females, among other reasons, is associated with poor economic participation and performance of women in the economy. For example, for every 100 men, there are 44 women in the labour force. In addition, women spend about 24 percent of time on unpaid domestic work and care. With regards to ownership of assets, only about 8.5 percent of women own land. This is the lowest figure in the country. Ownership of assets is found to positively relate to women's participation in household and community decision-making. It also shapes economic independence and provides the means to engage further in production and employment. The availability of credit and the opportunity to start a business is highly determined by the ownership of fixed assets. Effective women's participation in the labour force leads to job creation and reinforces productivity in the economy, which has a direct implication for Goal 8.

Access to sexual and reproductive rights are indivisible from the goal of reducing maternal mortality, which reinforces the decline in the incidence of communicable diseases. In Karnali province, it is reported that 44.5 percent of women in the 15-49 age group make their own informed decisions regarding the use of contraceptives. On a tangential note, the proportion of child marriage remains lower in this province than the national level in two categories – at 31.5 percent (before 18), and 3.1 (before 15).

Figure 3.6: Women aged 20-24 years who were married or in a union
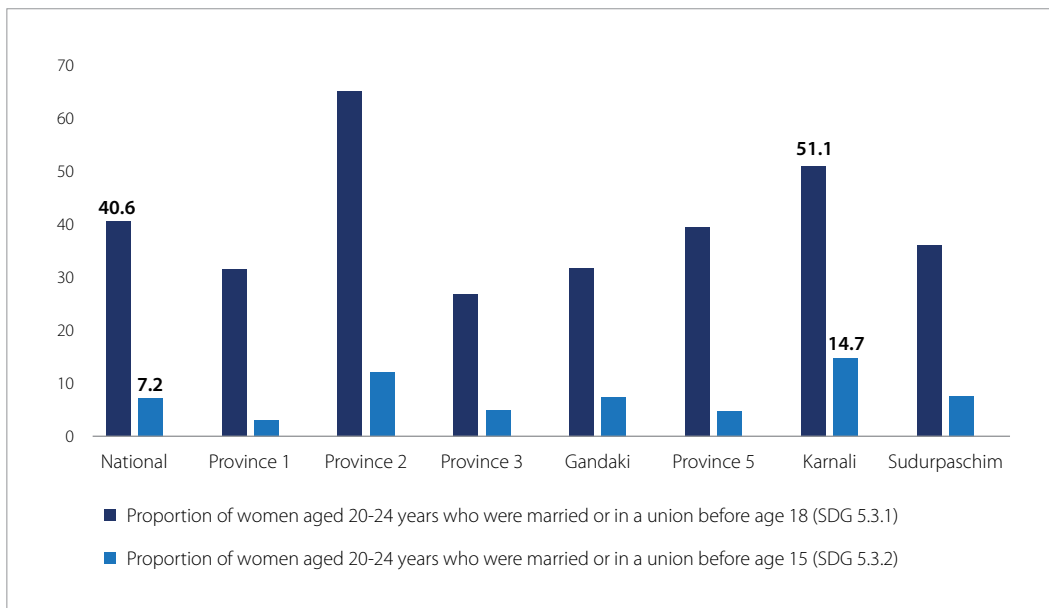
Source: Ministry of Health and Population (2016)

In Karnali province, it is reported that 44.5 percent of women in the age group 15-49 make their own informed decisions regarding the use of contraceptives.

Table 3.2: Measures of inequality[24]

Province	a. Measured by Gini-coefficient	b. Palma Index	c. Share of bottom 40% of population in total income	d. Share of bottom 40% of population in total consumption
National	0.328	1.3	5.3	18.7
Province 1	28.93	1.06	9.34	20.95
Province 2	29.50	1.11	10.85	19.52
Bagmati Province	35.33	1.45	5.48	16.25
Gandaki Province	34.66	1.41	7.81	18.92
Province 5	32.49	1.28	4.57	20.28
Karnali Province	27.01	0.93	2.86	21.38
Province	30.22	1.13	1.73	21.04

Source: World Bank estimates from Central Bureau of Statistics (2011)

Karnali province is relatively less unequal, but that is, arguably, due to the modest size of its economy. The share of the bottom 40 percent of the population in total consumption stands at 21.3 percent, whereas the share of the bottom 20 percent is 7.97 percent. The Gini coefficient – defined as a ratio with values between 0 and 1, with a coefficient less than 0.2 expressing low inequality – stands at 0.27. The Gini coefficient for Karnali province is the lowest in the country.[25] Similarly in another measure of inequality – the Palma index – which measures the ratio of the shares of the top 10 percent and the bottom 40 percent in national consumption, Karnali province scores 0.92, implying that the top decile of income earners does not earn more than the bottom four deciles (Table 2). The percentage of people living below US$1.9 per day in total employment is 25.6 percent.

Karnali has low access to services and utilities compared to other provinces. For instance, a mere 67.5 percent of the population[26] have access to electricity. This is starkly lower than the national average, which stands at 90.8 percent.

The proportion of the population with primary reliance on clean fuel technology is 10.3 percent, those using solid fuel as a primary source of energy for cooking is 89.5 percent, 9.54 percent of the population relies on LPG for cooking. When access to electricity is overlaid against the use of clean fuel and solid fuel for cooking, it is seen that provinces with higher access to electricity have a higher percent of households using clean fuel for cooking (Figure 3.7).

---

[24] *Shade of color represents different province, and not the magnitude of inequality.*
[25] *0.20= Low inequality; 0.25 = Inequality; High inequality = 0.35; Extreme inequality = 0.50 and above*
[26] *This stat is calculated from NDHS 2016 data set where population age group is 15-49.*

Figure 3.7: Access to clean fuel, solid fuel and electricity
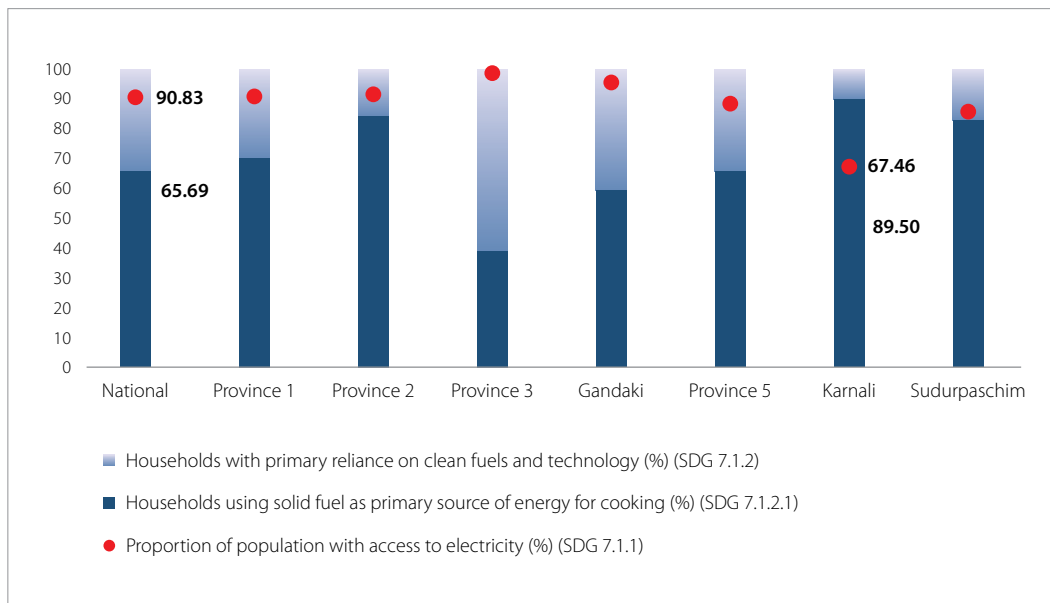
Source: Ministry of Health and Population (2016)

Clean fuels and technologies are also critical for achieving the goals set by SDGs that pertain to poverty alleviation, good health, gender equality, and action against climate change. As such, interventions linking poverty reduction, good health and sustainable development will be instrumental as technologies improve and prices fall. In the province, it is understood that marginalized communities remain underserved by appropriate technologies and delivery models. Therefore, solutions will have to integrate scale and inclusiveness.

As the province does not yet produce its own hydroelectricity, alternate energy sources will have to be explored to meet shortfalls.[27] Urbanization through delivery of utilities such as electricity and energy services, along with the promotion of urban mobility via use of an electrically powered mass transport system, would create synergies across multiple SDGs.

The state of youth underemployment is higher than the overall underemployment rate (Figure 3.8). A successful transition of the province's growth towards sustainable development will require reversal of outward-migration, and decline in youth underemployment. This would require promoting small and medium enterprises, increasing manufacturing employment in total employment from the current level of 4.5 percent (Figure 3.8), and generating options and opportunities for value creation in new sources of economic growth, such as high-end tourism and agro-processing.

The proportion of the population with primary reliance on clean fuel technology is 10.3 percent, those using solid fuel as a primary source of energy for cooking is 89.5 percent, and the population relying on LPG for cooking is 9.54 percent.

---

[27] *However, there are two big hydro-power projects in the pipeline.*

Figure 3.8: Unemployment and underemployment

■ Underemployment rate (15-49yr) (%) (SDG 8.5.2.1)   ▬ Youth (15-49yr) underemployment rate (%) (SDG 8.6.1.1)
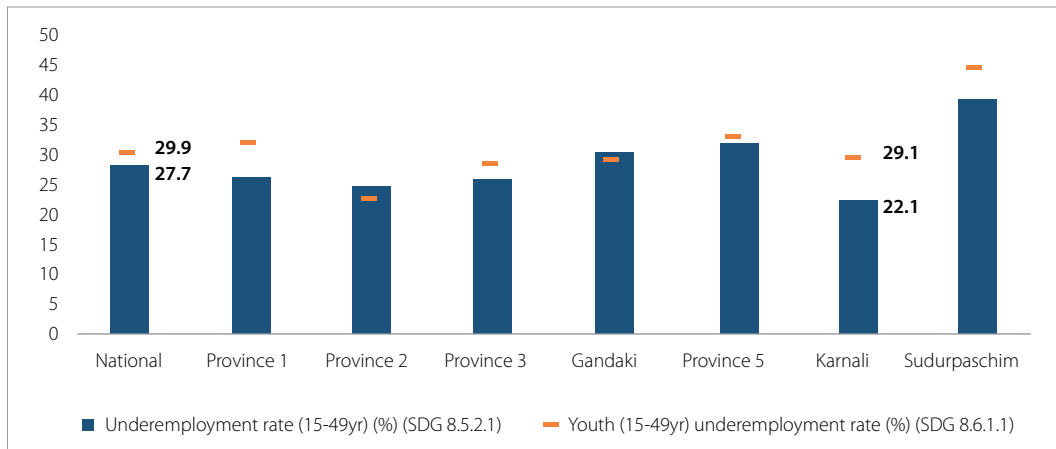
Source: Central Bureau of Statistics (2011)

Figure 3.9: Manufacturing employment as a proportion of total
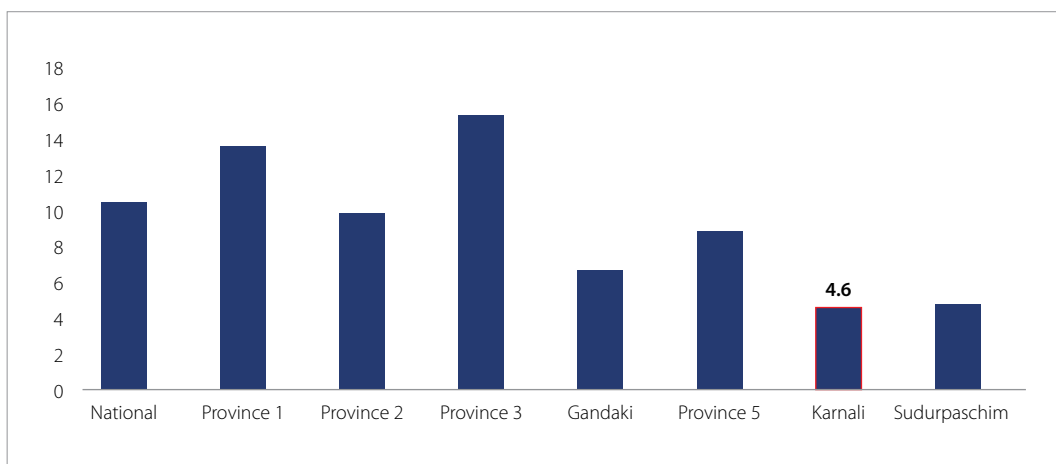
Source: Central Bureau of Statistics (2011)

Figure 3.10: Households with improved sanitation, piped water and thatched roof

■ Household using improved sanitation facilities which are not shared (%) (SDG 6.2.1.1)

▪ Household with access to piped water supply (%) (SDG 6.1.1.2)

▬ Household units roofed with thatched/straw roof (%) (SDG 11.1.2)
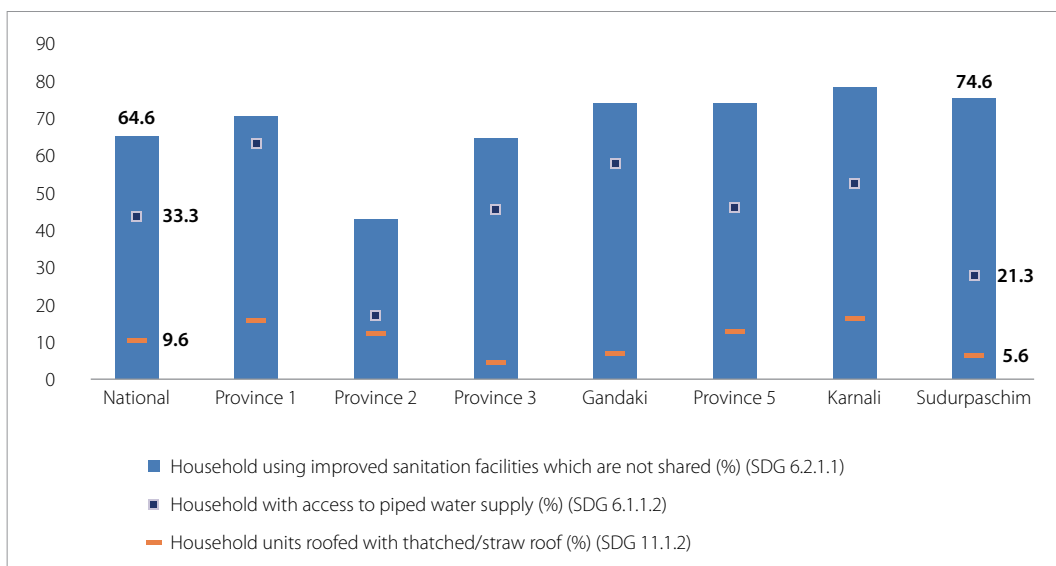
Source: Ministry of Health and Population (2016)

With regard to roads and proximity to services, the total local road network is approximately 3,132 km, and the road density is 8.72 km/100 sq. km.. Only 19 percent of households in the province have access to paved roads within 30 minutes' walking distance. Only 11 percent of the population have access to financial services. The northern parts of the province still have almost 13 percent of population that travel more than two hours by foot to reach the nearest financial institution even in the dry season (figure 3.11).

Figure 3.11: Travel time estimates to financial institution (dry season)
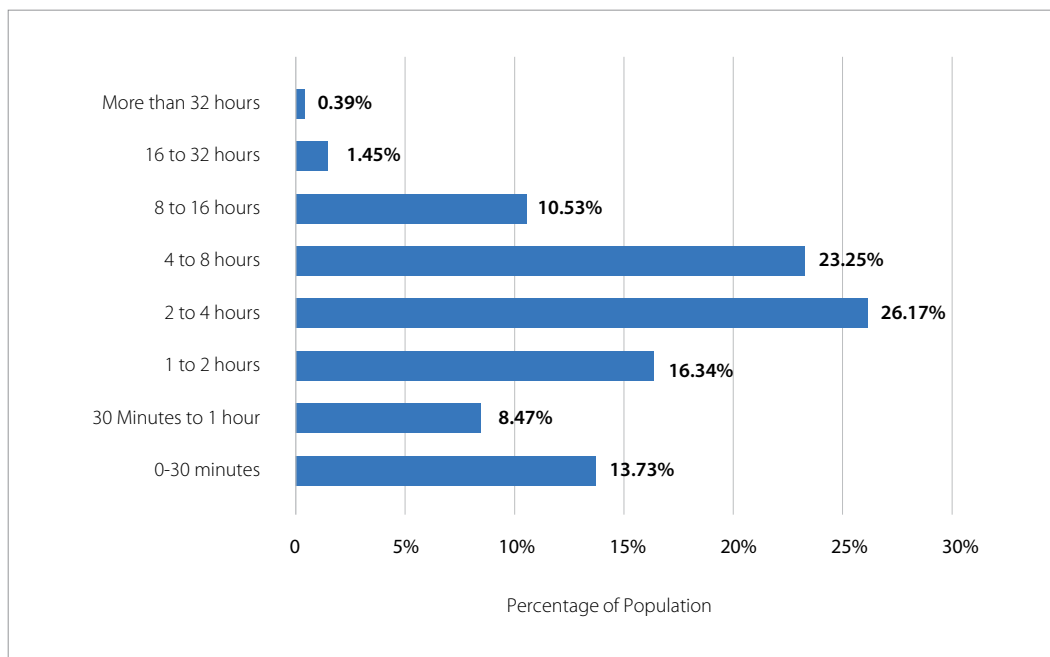
Source: The World Bank estimates

In terms of WASH infrastructure, the population with access to safely managed drinking water stands at 86.1 percent,[28] which is the highest among all provinces. In terms of ease of access to water supply, almost 36.1 percent of households have piped water supply. In the same population, 15.4 percent of households have thatched or straw roofs (Figure 3.10). Provinces with higher access to piped water supply have a higher proportion of households using improved sanitation facilities. It is understood that households with access to piped water supply might have a higher proportion of households using improved sanitation facilities.[29]

---

[28] *Safely managed drinking water: "the percentage of de jure population whose main source of drinking water is a household connection (piped), public tap or standpipe, tube well or borehole, protected dug well, protected spring, or rainwater collection."*

[29] *Improved sanitation facilities: "the percentage of de jure population whose household has a flush or pour flush toilet to a piped water system, septic tank or pit latrine; ventilated improved pit latrine; pit latrine with a slab; or composting toilet and does not share this facility with other households."*

Figure 3.12: Mobile phones and internet (women)
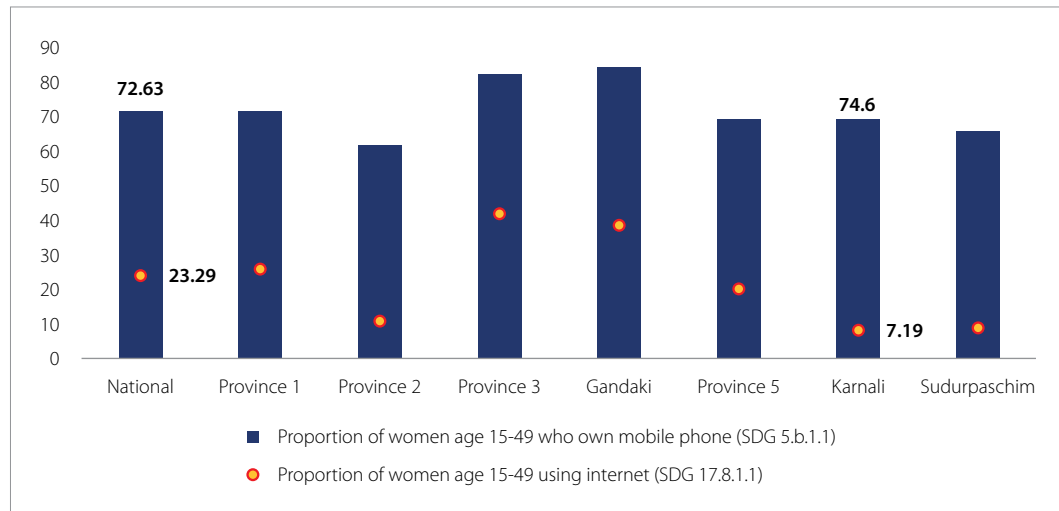
Source: Ministry of Health and Population (2016)

Some 69.2 percent of women aged 15-49 own a mobile phone, and almost 7.1 percent of the women use the internet (Figure 3.12). For men, the figures are 83.6 percent and 28 percent respectively. Mobile penetration continues to grow in the province as operators develop solutions to extend affordable services. This has, in turn, created a platform of opportunity for people to use their devices to access the internet, which has presented immense opportunities for people to access a range of life-enhancing services.

Under digital infrastructure and use of ICT, the proportion of women aged 15-49 who own mobile phone stands at 69.2 percent, and almost 7.1 percent of the women use internet. On the other side, the proportion of men aged 15-49 who own mobile phone stands at 83.6 percent, and almost 28 percent of men use the internet.

Inquisitive eyes: local people of Kaike rural municipality, Dolpa

4

CHAPTER

DATA GAPS

DATA GAP AND AVAILABILITY- PROVINCIAL SDGS INDICATORS

A cursory assessment of the available data for this baseline report estimates almost 230 indicators do not have data available for SDG reporting. Altogether, there are 350 indicators finalized by the province of which only 120 have data readily available for reporting.

Table 4.1 Availability of data for SDGs indicator- Province level

SDGs	Indicators that are included for the reporting purpose	Indicators which will be reported but no data available
1	18	7
2	21	7
3	48	25
4	50	39
5	35	16
6	13	6
7	10	5
8	21	15
9	9	6
10	12	8
11	14	9
12	14	13
13	10	8
15	23	22
16	24	20
17	28	24
Total	**350[30]**	**230**

Source: Calculated for the report based on the Nepal SDGs Status and Roadmap, 2016-30 and http://sdg.npc.gov.np/data/

Most data are estimated from NLSS (2011), NDHS (2016) and population census (2010). Approximately 29 percent from NDHS, and 32 percent from NLSS are analysed for the provincial baseline report. The paucity of data comes from a disconnect in the survey calendar as household and other surveys are conducted infrequently and without coherence. Filling in the gap in data should be a priority, because to understand what it means to achieve sustainable development, we need to start with fully understanding who is left behind, for which data points are imperative.

A dynamic data ecosystem is imperative for the success of the SDGs. To provide continuous feedback for economic growth, incentivize the progress towards SDGs, and to improve efficiency in delivering the basic services, establishing transparency require a broad array of data. Developing and strengthening the provincial statistical system to monitor and evaluate the progress of the SDGs is crucial.

---

[30] *These exclude global indicators, and those indicators that repeat across the 17 Goals.*

▼ *Women of Limi valley, Humla, attired in their traditional outfits.*

Filling in the gap in data should be a priority, because to understand what it means to achieve sustainable development, we need to start with fully understanding who is left behind, for which data points are imperative.
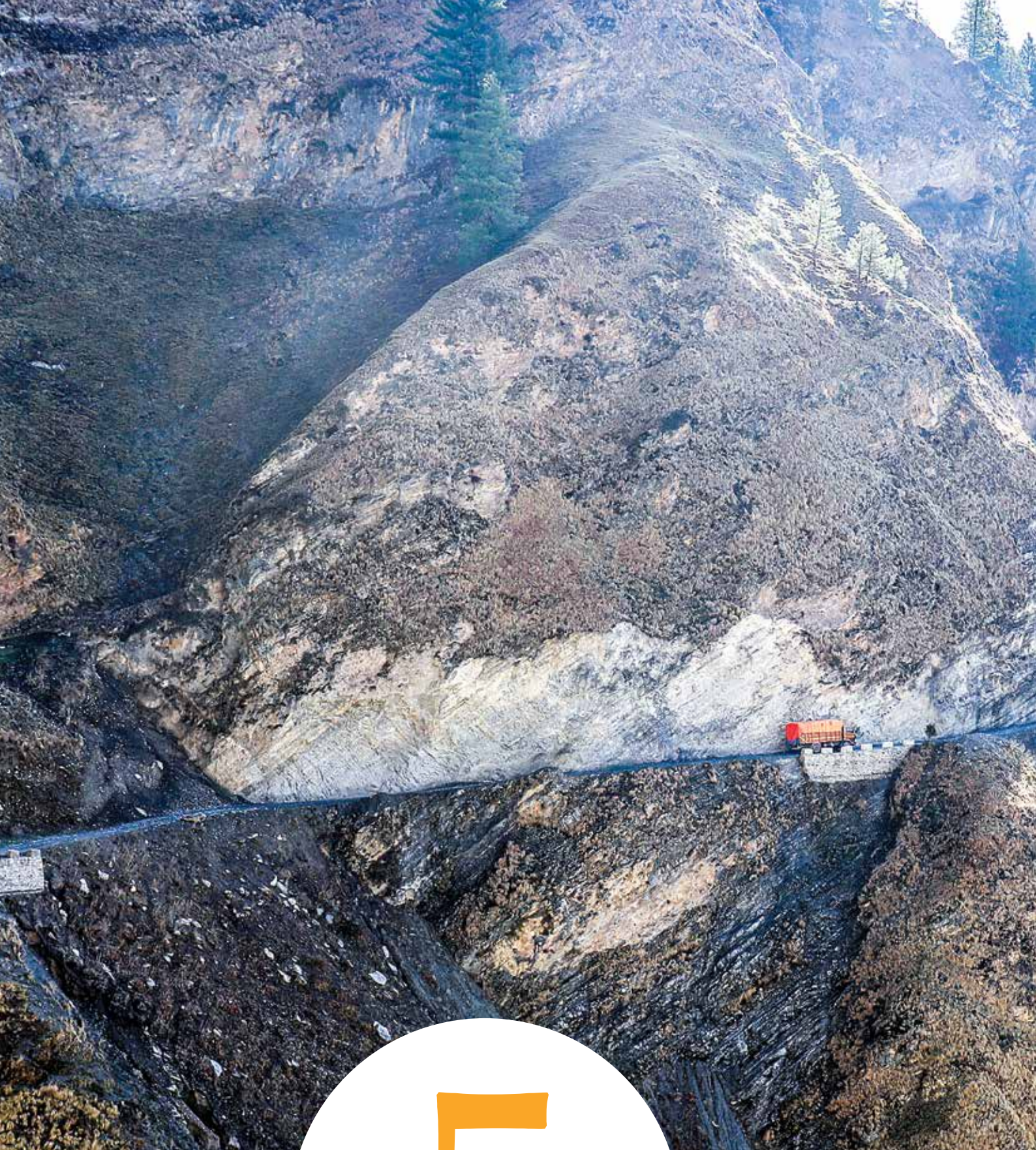
5

CHAPTER

A vehicle plies through a rocky, winding road. Such roads can be seen throughout Karnali province.

IMPLEMENTATION AND POLICY DIRECTION[31]

---

[31] This section draws on, and adapts for the province, issues covered in NPC (2017)

There are several implementation challenges related to the goals, targets and indicators of the 2030 Agenda for Sustainable Development at the provincial level. First, the targets are highly ambitious for several goals and need to be negotiated to make them more realistic. Second, some of the targets within the SDGs are less relevant for Nepal, while additional targets would be necessary to address province-specific challenges. For instance, in SDG 5, targets related to untouchability during menstruation would be more important in Karnali province and across Nepal than other harmful practices specified in the global list of targets. Third, global targets for some SDGs are insufficient. Some are only proximate. They rely more on the markets than on state interventions, and they may not work properly in LDCs like Nepal. Fourth, one goal related to oceans, seas, and marine resources (SDG 14)[32] is less relevant for Nepal while in some other goals like combating climate change (Goal 13), action is more dependent on other countries. Some goals, including sustainable consumption and production (Goal 12) and reducing inequality among countries (part of Goal 10), concern the developed world much more. Finally, as the goals and targets overlap, one indicator may serve more than one target. There is, therefore, a possibility of duplication.

> **Localization of SDGs is, therefore, important for several reasons. First, vital public services, which form a social core of the SDGs, are now the responsibility of local governments, such as basic and secondary education, primary health care, water supply and sanitation, agriculture, basic infrastructure, and social security.**

It has been suggested that SDG indicators be disaggregated, where relevant, by income, sex, age, race, ethnicity, migratory status, disability and geographic location.[33] There would be at least six types of disaggregations necessary to monitor the progress in detail. Many targets and indicators require heavy data, which the country will take years to generate.

In laying a framework for implementing the SDGs, there are four pillars to grapple with. First, identification of priorities; second, intervention of policy instruments; third, investment of resources; and fourth, institutional readiness. These 'I's – Identification, Instruments, Investment and Institutions – provide a coherent guide for the fifth 'I' – the Implementation of the SDGs.

Weaving rugs--locally known as Raadi and Paakhi--in Humla.

Much of the burden of SDG implementation will be borne by sub-national governments. Localization of SDGs is, therefore, important for several reasons. First, vital public services, which form a social core of the SDGs, are now the responsibility of local governments, such as basic and secondary education, primary health care, water supply and sanitation, agriculture, basic infrastructure, and social security. Second, mandated transfer of revenue and other resource mobilization authority given by the constitution to the provincial and local governments means that they will have increased resources to fund SDGs. Third, given the uneven development achievements, prioritization and sequencing of SDGs can now be better tailored to local contexts. Fourth, local people's participation,

---

[32] *SDG 14 deals with life below water, with the goal of managing and protecting marine and coastal ecosystems. This has salience for landlocked countries insofar as it covers the protection of inland water resources and river ecosystems. Karnali province has major river systems of Nepal with implications for hydropower, irrigation, fisheries, and tourism. Over-fishing is not yet a concern, but they must be safeguarded from excessive pollution and anthropic degradation of dependent biodiversity.*

[33] *UN General Assembly Resolution 68/261, United Nations.*

▲ *Women hold their babies at Jiuka Birth Center in Jiuka village, Mugu.*

and the maxim of 'leaving no one behind' requires targeted interventions at pockets of deprivation. This is a task best handled when information and peer-monitoring is leveraged locally.

5.1 IDENTIFICATION

In the face of limited resources, a key challenge is to identify an implicit order of priorities for the numerous goals. A logical point to start with is the country's recently-approved approach paper of the 15th periodic plan covering 2019-2023. This should guide the preparation of both the federal and provincial budget priorities. Although all SDGs are important, indivisible, and common for all countries, their priorities are country- and region-specific.

The primary areas of priority will be sectors where the MDG agenda is still unfinished. Goals with the potential to trigger inclusive economic growth through job creation, strengthened social protection systems, and reductions in disaster risks are also significant priorities in today's Nepal. However, the SDGs are not stand-alone goals, and achievement of one goal has implications for others. They are intertwined. For example, reduction of poverty depends on the reduction of hunger, gender disparities, outcomes in education and health, and environmental stresses.

Prioritization will also be guided by financing and the availability of other resources. These are better determined after a thorough needs assessment exercise. When priorities are determined, their sequencing will be vital. Those goals and targets deserve early attention if (i) new legislative mandate or organizational set-up is not necessary; (ii) they deliver low-hanging fruits in terms of development outcomes; and (iii) the delivery of other top priorities is contingent upon their prior achievement.

> For effective monitoring of outputs and outcomes, a results framework will need to be devised. Beyond the financial outlay, SDG priorities also need to factor in the managerial, institutional and allied capacity constraints.

Once the SDGs are built into periodic plans and annual budgets, there is a need for an annual budget audit from an SDG perspective by the Provincial Planning Commission (to prevent a conflict of interest, this should not be an implementing agency).

For effective monitoring of outputs and outcomes, a results framework will need to be devised. Beyond the financial outlay, SDG priorities also need to factor in the managerial, institutional and allied capacity constraints. Ambitious implementation of the SDGs demands a heightened culture of evidence-based policymaking. An SDGs dashboard could be created to provide open source information on the state of SDG implementation and progress made throughout the 2019-2030 period.

Karnali province is prone to disasters such as earthquakes, floods and landslides. Disasters halt and reverse development achievements accrued over decades. This implies that adequate disaster risk reduction interventions must be identified during an SDG needs assessments. An emerging consensus on effective disaster response is that provinces need a coordinated plan, nimble decision-making and flexible financing on standby. Pre-agreed, pre-financed, rules-based arrangements work. Where there is no prior plan or financing, chaos reigns. A better balance of ex-ante risk management (preparation) and ex-post risk management (coping) requires knowledge of risks, protection to lower the probabilities of risks, and insurance schemes when protection cannot eliminate risks.[34] Slow disasters in the making, such as climate change, can be factored into plans that have a longer horizon. For instance, droughts exacerbated by climate change have far-reaching implications on livelihoods. Contingency planning for disasters also demands unconventional forms of human resources, such as large networks of volunteers across the province.

5.2 INSTRUMENTS

After identifying and prioritizing major goals and targets, what will be decided is the nature of intervention of policy instruments. Do these instruments entail capital investments, human resources, or simple stroke-of-the pen policy reforms? What kind of synergies and consistencies need to be sought or forged? What roles should be apportioned to the state, private sector and civil society? Will there be incentives for collaboration and partnership in pursuit of shared goals? Are they to be front-loaded or back-loaded?

The nature of interventions will vary by sector. Post-disaster reconstruction (such as the 2017 floods) is timebound; hence, investment is front-loaded. In agriculture, too, investment peters off, because large investments in major irrigation and agricultural infrastructure like roads, electricity and market infrastructure are anticipated in the initial SDG period. But in a sector like health, expenditure will grow over time because of gradual ageing of the population and the rollout of the universal health insurance scheme. The energy sector will also be backloaded. Large hydro-power projects are implemented during the later years of the SDG period. Certain sectors will need constant attention, such as transport and industry, forestry, gender, tourism, and climate change.

SDGs are not a government responsibility alone, they are a national undertaking. Strategic partnerships between government, the private sector, NGOs and community sectors would, therefore, be required. Importantly,

An SDGs dashboard could be created to provide open source information on the state of SDGs implementation and progress made throughout the

2019-2030 Period.

Karnali province

is prone to disasters such as earthquakes, floods and landslides. Disasters halt and reverse past development achievements accrued over decades.

The media will continue to be an ally to disseminate innovatively about the

2030 Agenda.

[34] *World Bank (2013).*

there needs to be sufficient political buy-in of the agenda, in provincial parliaments as well as across all major political parties.

Relative to the MDG period, the role of the private sector has increased substantially. For partnerships to be credible, there needs to be a mechanism whereby the private sector participates in policy formulation, implementation and monitoring of the SDGs. Effective implementation of the SDGs demands meaningful participation of non-governmental actors. They were instrumental in helping deliver several MDGs, and this should continue in the SDG era.

Nepal's constitution envisages a special role for cooperatives. The government expects cooperatives to complement public and private sector activities. Social organizations, such as trades unions and youth organizations, will also need to be engaged in SDG implementation. The media will continue to be an ally in disseminating information innovatively about the 2030 Agenda. Their creativity in capturing the attention of lay audiences will greatly determine the political capital that the state expends on the SDGs.

> **Effective implementation of the SDGs demands meaningful participation of non-governmental actors. They were instrumental in helping deliver several MDGs, and this should continue in the SDG era.**

Some SDGs have an international dimension, for which collaboration will need to be forged with sub-regional and international organizations to address SDGs that have cross-border implications such as trade, investment, tourism, capital flows, trans-boundary pollution, migration, disasters, and social protection. Regional cooperation frameworks, such as China's Belt and Road Initiative and India's infrastructural outreach embedded in the Neighbourhood First policy, must be utilized for the benefit of Nepal's lagging provinces, including Karnali.

SDGs also require a rigorous, data-driven campaign. Mapping SDG data and their existing quality shows large gaps in monitoring targets and indicators. Large investments will, therefore, be required to undertake new surveys jointly by CBS and provincial statistical wings, utilizing new internet-enabled ICT technologies to educate the public.

No better location to work on his weaving! In the background is the scenic Rara lake. The main feature of Rara National Park, located in Jumla and Mugu districts, it is the biggest and deepest fresh water lake in Nepal.

▲ *Too engrossed to look around: a school girl doing her homework.*

Against this backdrop, what specific policy instruments will the different goals demand? What follows are illustrative excerpts from an NPC study on needs assessment, costing and financing of SDGs.

Take **poverty reduction**, possibly the most important challenge of this generation. How shall it be achieved? Informed by existing literature, the interventions include (i) income generation activities to directly solve "the problem of the last mile" and to serve the hard-to-reach; (ii) concessional micro-credit, with subsidized interest to small and medium enterprises expected to generate jobs; (iii) location-specific infrastructure; (iv) prevention and mitigation of disasters that could worsen poverty; and (v) widening of social protection coverage.

In **agriculture**, relevant interventions include (i) improvements in food and nutrition security of the most disadvantaged groups; (ii) strengthened agricultural extension system; (iii) expansion of year-round irrigation; (iv) improvements in the distribution of seeds and fertilizers; (v) expansion of rural roads; and (vi) commercialization and modernization of agriculture.

The interventions envisioned in **education** are (i) improved management of pre-primary, basic and secondary education; (ii) literacy and lifelong learning; (iii) teachers' professional development; (iv) disaster risk reduction and physical safety of schools; (v) promotion of youth in sports; (vi) higher education and research; (vii) technical and vocational education; (viii) promoting equity and quality across all levels of education; and (ix) better nutrition programmes through the school meals and incentive grants.

In **water and sanitation**, interventions planned include (i) universal and equitable access to safe and affordable drinking water and adequate sanitation and hygiene for all; (ii) addressing water quality concerns, including waste water treatment and recycling; (iii) better water efficiency to avoid water scarcity; and (iv) improvements in water resource management and protection of ecosystems.

Interventions in **energy** include (i) the generation of power through large hydro projects, micro hydro off-grid, and grid-connected solar system; (ii) transmission and distribution systems; (iii) improved energy efficiency; and (iv) O&M expenses to maintain a steady quality of power supply.

Interventions related to **inclusive growth and productive employment** include (i) creation of jobs in labour intensive sectors like agriculture, construction, manufacturing, and tourism; (ii) promotion of small and medium enterprises and access of small business to financial services; (iii) skills' development; (iv) an employment information system; (v) elimination of child labour; (vi) protection from work place injuries; and (vii) enforcement of labour laws.

▲ *A farmer in Dailekh ploughing the paddy fields to plant rice.*

Under **tourism**, interventions include construction of hotel rooms, development of tourism products, and marketing for tourist inflows. Interventions planned under **physical infrastructure** include new construction of roads, railways, bridges and airports, maintenance, upgrading and new construction of the strategic road network and local road network. The investment requirement for **industry** needs to be based on the target set for increasing the share of manufacturing in provincial GDP.

Interventions in **urban development and housing** include (i) safe urban road construction; (ii) storm drainage and sewerage; (iii) housing for the poor and slum up-gradation; (iv) post-disaster reconstruction and pre-disaster mitigation; and (v) construction of urban utilities like piped water supply and electricity connection. **Climate change** related interventions include (i) building resilience and adaptive capacity; (ii) reducing emissions; (iii) strengthening data and monitoring of climate change; and (iv) climate-proofing technology for infrastructure.

Forest and ecosystem related interventions include (i) conservation of forests, lakes, wetlands, wild life, biodiversity, and land; (ii) integration of ecosystem and biodiversity values into national and local planning; and (iii) conservation of watershed. Interventions related to **governance** include (i) access to justice; (ii) capacity building for anticorruption; (iii) improvements in the provisioning of public services; (iv) capacity development for planning, budgeting and implementation; (v) electoral awareness; and (vi) data systems for monitoring SDGs.

Several SDG indicators are qualitative in nature and, thus, cannot be costed to derive the investment requirement. They have to be achieved through policies, regulations and administrative enforcement. Furthermore, indicators related to inequality, injustice, exclusion, or insecurity are best addressed through both policies and institutions designed and mandated to work specifically on these issues.

Almost
50%
of bank credit is expected to flow into SDG areas, including five percent that is already mandated to cover "deprived sectors.

The incremental financing resources of cooperatives available for SDGs are estimated at about
Rs. 25b
annually nationwide.

The NGOs also mobilize about
Rs. 20b
annually for spending in social and economic activities.

5.3 INVESTMENT

At the national level, a preliminary estimate of the annual investment requirement for the entire SDG period, 2016-2030, ranges between 42 to 54 percent of GDP. The average requirement is estimated to be about Rs1,770 billion per year,[35] or nearly 49 percent of GDP over the entire duration of the SDGs. In view of its economic clout and population, Karnali province is likely to account for up to 15 percent of the national share.

This scale of investment needs a full mobilization of all national and international sources – public and private. Households are probably the least appreciated group of investors. They already spend a large portion of their incomes on basic social and economic services offered by both the public and private sectors. Households vary by income. If segregated by their position relative to the national poverty line, and under varying assumptions of their marginal propensity to consume or spend, households could finance up to five percent of the total SDG investment requirement.

The private sector is expected to invest more heavily in industry, energy, physical infrastructure, housing, urban infrastructure, and tourism. It is expected to contribute nearly three-fifths of the investment needs in tourism, industrial and transport infrastructure. The public sector is expected to shoulder about 55 percent of the SDG investment requirement nationally, starting with sectors like poverty reduction and followed by agriculture, health, education, gender, water and sanitation, transport infrastructure, climate action, and governance. The public investment requirement is expected to be the lowest in tourism, followed by energy, industry, and urban infrastructure (mainly housing).

Nationally, domestic financing through revenue mobilization and internal borrowing could finance about 62 percent of the public sector SDG investment requirement while official aid would finance another 20 percent of the public sector financing need under the assumption that the overall foreign aid pie grows by at least 10 percent during 2016-2020, five percent during 2021-25 and two percent thereafter. The amount of ODA inflow will have to double from existing levels. It is estimated that about two-thirds of domestically raised resources and about 90 percent of official development assistance will need to be directed to the SDGs.

The sources of private finance are equity generated through domestic savings; foreign equity mobilized through foreign direct investment; debt financing through domestic and foreign banks; and resources shared with the public sector through public-private partnerships (including viability gap funding). Almost 50 percent of bank credit is expected to flow into SDG areas, including five percent that is already mandated to cover deprived sectors. The financing gap in the private sector will have to be met by reorienting non-SDG investments towards the SDGs; mobilizing larger volumes of equity; bank financing; and attracting large foreign direct investment, especially for industry and the physical infrastructure.

The incremental financing resources of cooperatives available for SDGs are estimated at about Rs.25 billion annually nationwide. The NGOs also mobilize about Rs.20 billion annually for spending in social and economic activities. The cooperative and NGO sector are not expected to face a financing gap, because their investment portfolios are constricted by the funds they raise.

Almost
50%
of bank credit is expected to flow into SDG areas, including five percent that is already mandated to cover "deprived sectors.

The incremental financing resources of cooperatives available for SDGs are estimated at about
Rs. 25b
annually nationwide.

The NGOs also mobilize about
Rs. 20b
annually for spending in social and economic activities.

[35] Subsequently revised to exceed Rs. 2000 billion per year.

Overall, as a share of the GDP, the national financing gap ranges between nine percent in the 2016-2019 period to a high of about 15 percent in the last leg, 2025-2030. The average financing gap is about 12 percent of GDP, assuming real economic growth of a steady 6.6 percent throughout 2016-2030.

Nepal's nascent local governments will need to step up and raise substantial new resources to finance the SDGs locally. Transfers from central government will remain a principal source of financing for most local governments. Local borrowing is needed to enhance the flexibility of long-term infrastructure planning. There are at least two windows that local governments can use for borrowing: Town Development Funds for municipalities, and banks and financial institutions for all local governments. As the need for local financing is much higher than their present income, legal arrangements have been made to enable them to finance public spending through borrowing.

Public-private partnership as a concept needs to be operationalized much more seriously in the era of federalism to finance local infrastructure. Private sector participation can take a variety of forms that provide opportunities for local governments to expand their scope of operations and revenue generation such as out-contracting, issuing concessions and franchising. Several additional financing mechanisms would need to be introduced. Land-pooling, for example, can enable the promotion of shared infrastructure with the communities incentivized with arguments that the value of land appreciates after it is linked with modern infrastructure.

There is considerable scope for enhancing fiscal space in the public sector through pro-poor expenditure switching. Yet switching government resources from one sector to another requires a strong mixture of political drive and bureaucratic cooperation. During the MDG era, it was easy to earmark a larger percentage of the government budget to basic social services. But for the SDGs, it is difficult (and perhaps not credible) to switch resources from economic sectors to social sectors, as the former is as important as the latter in the SDG menu. Increasing expenditure efficiency is also often suggested as the main instrument for enhancing fiscal space for the SDGs.

Provinces have to make an extra effort to raise the revenue that the constitution permits. For a sustainable rise over the long haul, the tax base – GDP – needs to broaden. Indirect taxes are by their very nature regressive; widening such a tax base to cover basic goods and services could exclude access by the poor. Provinces will not be expected to meet the financing needs on the non-SDG front (such as debt servicing and national security).

Beyond finance, a critical constraint in Nepal is the capacity deficit at the institutional level. This has crippled the quality delivery of services even when the will exists, and funds are allocated. Unless capacity development interventions are mainstreamed into the provincial planning and budgeting process, they will not get the requisite priority and resources for expedited implementation. The capacity assessment exercise undertaken in the context of MDGs implementation provides a lot of tools, knowledge and experience within the UN system and they could be adapted for SDG-related capacity assessment.

▼ *A woman digs into the soil at her farm in Dho village, upper Dolpa.*

5.4 INSTITUTIONS

When governance is characterized by lack of transparency, accountability or competence, the poor and vulnerable people suffer most. When income inequality is high, economic growth does not reduce poverty. When state policies and programmes are captured by the elite, the poor do not have access to resources; opportunities shrink, and voices are excluded. The SDGs are rightly concerned with these issues, and they lay a powerful emphasis on building effective, accountable and inclusive institutions at all levels.

As Nepal implements a federal form of governance for the first time in its 250-year history, this is the right time to redesign grassroots institutions to deliver more effective services promoting community participation and downward accountability. Reformed public agencies at the federal level also need to focus much more on the design and coordination of policies and facilitate private sector investment, among others, which are critical to realizing the SDGs.

A strong monitoring system with credible data is crucial for the success of the SDGs. Only an effective government with a strong statistical system can measure and incentivize progress across the goals.

Other challenges in data are disaggregation (by sex, age, ethnicity, disability, location, administrative units of the state, and income or wealth) and standardization (definition, unit of measurement, method of computation). Data for more than 100 global SDG indicators are not available. There is also much qualitative information to be collected – such as citizens' perceptions of public services, corruption and wellbeing. There is also a big difference between data recorded by government and those compiled by NGOs. This is particularly the case for crime, human trafficking, and violation of human rights.

The rapidly evolving innovation in data collection techniques and technologies, and the capacity to distribute data widely and freely, has expanded the horizon of possibilities. The current statistical system in Nepal is, however, yet to evolve that way. In particular, access to public and even private sector data is a major challenge for independent monitoring agencies outside the government. Major surveys are often financed by donors, which are subject to delays in aid mobilization. The government will make necessary legal, organizational and operational changes in the existing data system to generate and share large, high quality and timely data to monitor the progress of the SDGs.

▼ *It's time to eat!: A man in Humla prepares cake.*

> The old M&E systems at the regional and district levels will now need to be restructured into appropriate mechanisms at the sub-national levels, helping track the local achievement of SDGs.

All the institutions of the state need to be on the same page to advance the sustainable development agenda. Only a proper institutional mechanism among state and non-state actors can ensure that interventions related to the SDGs are executed in a coordinated, coherent and complementary way. The role of the parliament, federal and provincial, will be crucial, particularly in creating and reforming laws facilitating and governing SDG implementation and monitoring. Parliamentary committees will also be instrumental in monitoring progress.

The provincial ownership of the SDGs ought to be manifested in the institutional set-up of the High-level Steering Committee, ideally chaired by the Chief Minister. Below this lies a Coordination and Implementation Committee chaired by the Vice-Chair of the Provincial Planning Commission (PPC), followed by thematic committees led by members of the PPC.

Nepal has an Integrated Evaluation Action Plan for 2016- 2020 that incorporates the activities of government agencies, Voluntary Organizations of Professional Evaluators (VOPEs) and UN agencies under the leadership of the NPC. This equity-focused and gender-responsive evaluation action plan aims to generate, share and use evaluation-based evidence in policy processes and to help build capacity of evaluation commissioners, evaluators and evaluation users. These efforts aim not only to track SDGs, but also to institutionalize EVALSDGs. The NPC at the central level is gradually shifting from a narrow monitoring of processes to results-based monitoring and evaluation.

Like the NDAC at the centre, high-level provincial development action committees (PDAC) could be formed to relieve coordination bottlenecks and redress problems that cannot be solved at the ministerial level. This committee reviews the implementation of programmes and projects and establishes inter-ministerial coordination on development related issues. The PDACs are preceded by the Ministerial Development Action Committee (MDAC) in each line ministry. These committees organize meetings every trimester to review the implementation status of programmes and projects.

Before the provincial administrations were set up under the new constitution, M&E was carried out at the regional level by regional directorates and regional administration offices. Regional directorates reported directly to their line ministries, while regional administration offices report to the Office of the Prime Minister. The old M&E systems at the regional and district levels will now need to be restructured into appropriate mechanisms at the sub-national levels, helping track the local achievement of the SDGs.

ANNEXES

SDG #1: End poverty in all its forms everywhere

TARGETS AND INDICATORS	BASELINE FIGURE (2015)		PROPOSED DATA SOURCE	MONITORING FRAMEWORK				
	NATIONAL	KARNALI PROVINCE		DATA SOURCE PROVIDED IN THE REPORT	DATA YEAR	DISAGGREGATION	FREQUENCY	RESPONSIBLE AGENCY
SDG 1. END POVERTY IN ALL ITS FORMS EVERYWHERE								
Target 1.1 By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than $1.25 a day								
1.1.1 Proportion of population below the international poverty line, by sex, age, employment status and geographical location (urban/rural)								
1 Poverty $1.9 Per day (Purchasing Power Parity value)	15	27.4	NLSS	NLSS-WB estimate	2011	Province	5 years	CBS
Target 1.2 By 2030, reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions								
1.2.1 Proportion of population living below the national poverty line (percent)	25.2	38.8	NLSS	NLSS-WB estimate	2011	Province	5 years	CBS
1 Women of all ages below national poverty line (percent)	25.3	39.3	NLSS	NLSS-WB estimate	2011	Province	5 years	CBS
1.2.2 Proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions								
1 Multidimensional Poverty Index (MPI)	28.6	51.2	PMICS	NPC	2014	District	5 years	PPC
2 Children below national poverty line (under 5 years of age, percent)	35.4	48	NLSS	NLSS-WB estimate	2011	Province	5 years	CBS
Target 1.3 Implement nationally appropriate social protection systems and measures for all, including floors, and by 2030 achieve substantial coverage of the poor and the vulnerable								
1 Social protection expenditure in total budget (percent)	11		Report			Province	Annual	PPC/MOEAP
2 Employed people with income less than US$ 1.9 in Purchasing Power Parity (PPPs) value per day (percent)	16.5	25.6	NLSS	NLSS-WB estimate	2011	Province	5 years	CBS
Target 1.4 By 2030, ensure that all men and women, in particular, the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance								
1.4.1 Proportion of population living in households with access to basic services								
1 Households having access to market centre within 30 min walk (percent of total)	44.7	18.8	NLSS	NLSS-WB estimate	2011	Province	5 years	CBS
2 Household having bank account (percent of total)	68.3	48.1	NLSS	NDHS-WB estimate	2016	Province	5 years	CBS
3 Households covered by formal financial services (percent of total)	40[i]		NLSS			Province	5 years	CBS
1.4.2 Proportion of total adult population with secure tenure rights to land, with legally recognized documentation and who perceive their rights to land as secure, by sex and by type of tenure								

SDG 1. END POVERTY IN ALL ITS FORMS EVERYWHERE	BASELINE FIGURE (2015)		PROPOSED DATA SOURCE	MONITORING FRAMEWORK				
TARGETS AND INDICATORS	**NATIONAL**	**KARNALI PROVINCE**		**DATA SOURCE PROVIDED IN THE REPORT**	**DATA YEAR**	**DISAGGREGATION**	**FREQUENCY**	**RESPONSIBLE AGENCY**
1 Share of bottom quintile in national consumption (percent)	7	7.9	NLSS	NLSS-WB estimate	2011	Province	5 years	CBS
2 Proportion of the urban population in the lowest quintiles that spends more than 30 percent of its income on accommodation			NLSS			Province	5 years	CBS
3 Proportion of the population in the lowest quintiles that spends more than [10 percent] of its income on basic services (water, sanitation, energy, education, health, transport)			NLSS			Province	5 years	CBS
Target 1.5 By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters								
1.5.1 Number of deaths, missing persons and directly affected persons attributed to disasters per 100,000 population								
1 Loss of lives from disaster (number)	8891j	157	Admin data			District	Annual	MOHA/MOIAL
2 Missing persons and persons affected by disaster per 100,000 (number)	415j		Admin data			District	Annual	MOHA/MOIAL
1.5.4 Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with national disaster risk reduction strategies			Admin data			District	Annual	MOIAL/MOITFE

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

SDG 2: END HUNGER, ACHIEVE FOOD SECURITY AND IMPROVED NUTRITION AND PROMOTE SUSTAINABLE AGRICULTURE	BASELINE FIGURE (2015)		MONITORING FRAMEWORK					
TARGETS AND INDICATORS	NATIONAL	KARNALI PROVINCE	PROPOSED DATA SOURCE	DATA SOURCE PROVIDED IN THE REPORT	DATA YEAR	DISAGGREGATION	FREQUENCY	RESPONSIBLE AGENCY
Target 2.1 By 2030, end hunger and ensure access by all people, in particular, the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round								
2.1.1 Prevalence of undernourishment	38	55.6	PLSS	NLSS-WB estimate	2011	Province	5 years	PSO
1 Population spending more than two-thirds of total consumption on food (percent)	44.1	63.1	NLSS	NLSS-WB estimate	2011	Province	5 years	CBS
2 Per capita food grain production (kg)	197	185	MIS/report	Agriculture statistics	2017	District	Annual	MOALC
3 Access to drying, storage, and processing facilities			Admin data			District	Annual	MOALSC
Target 2.2 By 2030, end all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons								
2.2.1 Prevalence of stunting (height for age <-2 standard deviation from the median of the World Health Organization (WHO) Child Growth Standards) among children under 5 years of age	36	54.5	PMICS	NDHS-WB estimate	2016	District	5 years	MOSD/PSO
2.2.2 Prevalence of malnutrition (weight for height >+2 or <-2 standard deviation from the median of the World Health Organization (WHO) Child Growth Standards) among children under 5 years of age, by type (wasting and overweight)	9.7	7.5	PMICS	NDHS-WB estimate	2016	District	5 years	MOSD/PSO
1 Proportion of children under age 5 years who are underweight (-2 SD) (percent of total)	30.1	35.5	PMICS			District	5 years	MOSD/PSO
2 Prevalence of anaemia among women of reproductive age (percent)	33.5	29.4	PMICS	NDHS	2016	District	5 years	MOSD/PSO
3 Prevalence of anaemia among children under 5 years (percent)	46	48.4	PMICS			District	5 years	MOSD/PSO
4 Sickle cell anaemia infected population			PMICS			District	5 years	MOSD/PSO
Target 2.3 By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment								
2.3.1 Volume of production per labour unit by classes of farming/pastoral/forestry enterprise size								
2.3.2 Average annual income of small-scale food producers, by sex and indigenous status								
1 Average income of small-scale food producers in NRs.	35560	28102	NLSS	NLSS-WB estimate	2016	Province	5 years	CBS
2 Average income of small-scale food producers in NRs.: Male	40148	29271	NLSS	NLSS-WB estimate	2011	Province	5 years	CBS

Continued...

SDG 2. END HUNGER, ACHIEVE FOOD SECURITY AND IMPROVED NUTRITION AND PROMOTE SUSTAINABLE AGRICULTURE

TARGETS AND INDICATORS	BASELINE FIGURE (2015)		PROPOSED DATA SOURCE	MONITORING FRAMEWORK				
	NATIONAL	KARNALI PROVINCE		DATA SOURCE PROVIDED IN THE REPORT	DATA YEAR	DISAGGREGATION	FREQUENCY	RESPONSIBLE AGENCY
3 Average income of small-scale food producers NRs: Female	39837	28022	NLSS	NLSS-WB estimate	2011	Province	5 years	CBS
4 Average income of small-scale food producers NRs: Indigenous	33387	23928	NLSS	NLSS-WB estimate	2011	Province	5 years	CBS
5 Average income of small-scale food producers NRs: Non-indigenous	43206	32232	NLSS	NLSS-WB estimate	2011	Province	5 years	CBS
6 Land productivity (AGPA/ha) USD	3278		Admin. Data			District	Annual	MOALC
Target 2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality								
2.4.1 Proportion of agricultural area under productive and sustainable agriculture								
1 Total agricultural land at the present level (000 hectare)	2548		Admin data	NRB	2017	District	Annual	MOALC
2 Round the year irrigated land in total arable land (percent)	29.2	31.5	Admin data	NLSS-WB estimate	2011	District	Annual	MOALC
3 Cultivated land in the total agriculture land (percent)			Agri. Census			District	10 year	CBS

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

GOAL 3: ENSURE HEALTHY LIVES AND PROMOTE WELL-BEING FOR ALL AT ALL AGES

TARGETS AND INDICATORS	BASELINE FIGURE (2015)		PROPOSED DATA SOURCE	DATA SOURCE PROVIDED IN THE REPORT	DATA YEAR	DISAGGREGATION	FREQUENCY	RESPONSIBLE AGENCY
	NATIONAL	KARNALI PROVINCE						
Target 3.1 By 2030, reduce the global maternal mortality ratio to less than 70 per 100000 live births								
3.1.1 Maternal mortality ratio per 100000 live births	258		PMICS			Urban-rural (Prov)	5 years	MOSD/PSO
3.1.2 Proportion of births attended by skilled health personnel	58	59	PMICS	NDHS, Karnali Province Five years Planning: Approach paper	2016	District	5 years	MOSD/PSO
3.1.3 Number of Uterine prolapse cases			HMIS			District	Annual	MOSD/PSO
Target 3.2 By 2030, end preventable deaths of newborns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1,000 live births and under-5 mortality to at least as low as 25 per 1,000 live births								
3.2.1 Under-five mortality rate per 1000 live births	39	58	PMICS	NDHS	2016	District	5 years	MOSD/PSO
3.2.2 Neonatal mortality rate per 1000 live births	24	29	PMICS	NDHS	2016	District	5 years	MOSD/PSO
Target 3.3 By 2030, end the epidemics of Acquired Immune Deficiency Syndrome (AIDS), tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases								
a. Number of new HIV infections	1781	9	HMIS	DOHS	2017	District	Annual	MOSD/PSO
b. Tuberculosis incidence (per 100,000 population)	111	98	HMIS	DOHS	2017	District	Annual	MOSD/PSO
c. Malaria incidence (per 100,000 population)	10	13	HMIS	DOHS	2017	District	Annual	MOSD/PSO
d. Hepatitis B prevalence (per 100,000 population)	2654		HMIS			District	Annual	MOSD/PSO
3.3.5 Number of people requiring interventions against neglected tropical diseases								
a. Leprosy incidence rate per 1,000 population	11	7	HMIS	DOHS	2017	District	Annual	MOSD/PSO
b. Kala-azar (Leishmaniasis) cases*	325		HMIS			District	Annual	MOSD/PSO
c. Lymphatic Filariasis cases	1,354	56	HMIS	DOHS	2017	District	Annual	MOSD/PSO
d. Dengue cases	931	7	HMIS	DOHS	2017	District	Annual	MOSD/PSO
e. Trachoma cases	22421	251	HMIS	DOHS	2017	District	Annual	MOSD/PSO
f. No of Uterine prolapsed cases			HMIS			District	Annual	MOSD/PSO
Target 3.4 By 2030, reduce by one-third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being								
a. Percent of children under age 5 with diarrhoea in the last 2 weeks	7.6	6	PMICS	NDHS	2016	District	Annual	MOSD/PSO
b. Number of laboratory confirmed cases of influenza (H1N1)	204		HMIS			District	Annual	MOSD/PSO
3.4.1 Mortality rate attributed to cardiovascular disease, cancer, diabetes or chronic respiratory disease								

Continued...

SDG 3. ENSURE HEALTHY LIVES AND PROMOTE WELL-BEING FOR ALL AT ALL AGES

TARGETS AND INDICATORS	BASELINE FIGURE (2015)		MONITORING FRAMEWORK					
	NATIONAL	KARNALI PROVINCE	PROPOSED DATA SOURCE	DATA SOURCE PROVIDED IN THE REPORT	DATA YEAR	DISAGGREGATION	FREQUENCY	RESPONSIBLE AGENCY
a. Mortality between 30 and 70 years of age from Cardiovascular disease, Cancer, Diabetes or Chronic respiratory disease (per 1000 population)	2.8		CRVS/HMIS			District	Annual	MOSD/LGs
a. Cardiovascular disease	1.44		CRVS/HMIS			District	Annual	MOSD/LGs
b. Cancer	0.67		CRVS/HMIS			District	Annual	MOSD/LGs
c. Diabetes	0.27		CRVS/HMIS			District	Annual	MOSD/LGs
d. Chronic respiratory disease	0.8		CRVS/HMIS			District	Annual	MOSD/LGs
3.4.2 Suicide mortality rate (per 100,000 population)	16.5		Admin data			District	Annual	MOHA/MOIAL
Percent of hard drug users who ever visited rehabilitation centres for comprehensive services	40		Hard Drug Users' Survey			District	3 years	PSO/MOIAL
Target 3.6 By 2020, halve the number of global deaths and injuries from road traffic accidents					District			
3.6.1 Death rate due to road traffic injuries	19.86		Traffic police reports			District	Annual	Nepal police
Target 3.7 By 2030, ensure universal access to sexual and reproductive health-care services, including for family planning, information and education, and the integration of reproductive health into national strategies and programs								
3.7.1 a. Proportion of women of reproductive age 15-49 years) who have their need for family planning satisfied with modern methods	56	57.9	PMICS	NDHS	2016	District	5 years	MOSD/PSO
b. Contraceptive prevalence rate (modern methods) (percent)	42.8	44.5	PMICS	NDHS	2016	District	5 years	MOSD/PSO
c. Total Fertility Rate (TFR) (births per women aged 15-49 years)	2.3	19	PMICS	NDHS	2016	District	5 years	MOSD/PSO
3.7.2 Adolescent birth rate (aged 10-14 years; aged 15-19 years) per 1,000 women in that age group	71		PMICS			District	5 years	MOSD/PSO
Target 3.8 Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all								
3.8.1 a. Percentages of women having 4 antenatal care visits as per protocol (among live births)	53	49	PMICS/HMIS	NDHS	2016	District	5 years	MOSD/PSO
b. Percentages of institutional delivery	54.6	36	PMICS/HMIS	MOHP	2017	District	5 years	MOSD/PSO
c. Percentages of women attending three PNC as per protocol	20	20	PMICS/HMIS	NDHS	2016	District	5 years	MOSD/PSO
d. Percentages of infants receiving 3 doses of Hepatitis B vaccine	86	83.3	PMICS/HMIS	NDHS	2016	District	5 years	MOSD/PSO
e. Percentages of women aged 30-49 years screened for cervical cancer	16.6		PMICS/HMIS			District	5 years	MOSD/PSO

	TARGETS AND INDICATORS	BASELINE FIGURE (2015)		DATA SOURCE		MONITORING FRAMEWORK			
		NATIONAL	KARNALI PROVINCE	PROPOSED DATA SOURCE	DATA SOURCE PROVIDED IN THE REPORT	DATA YEAR	DISAGGREGATION	FREQUENCY	RESPONSIBLE AGENCY
	SDG 3. ENSURE HEALTHY LIVES AND PROMOTE WELL-BEING FOR ALL AT ALL AGES								
	f. Percentage of people living with HIV receiving Antiretroviral combination therapy	39.9		PMICS/HMIS			District	5 years	MOSD/PSO
	g. Percentage of population aged 15 years and above with raised blood pressure who are currently taking medication			PMICS/HMIS			District	5 years	MOSD/PSO
	g.1. Percentage of male population aged 15 years and above with raised blood pressure who are currently taking medication	33.4	11	PMICS/HMIS	NDHS	2016	District	5 years	MOSD/PSO
	g.2. Percentage of female population aged 15 years and above with raised blood pressure who are currently taking medication	34.3	20.9	PMICS/HMIS	NDHS	2016	District	7 years	MOSD/PSO
	h. Percentage of population aged 15 years and above with raised blood glucose who are currently taking medication	25		PMICS/HMIS			District	5 years	MOSD/PSO
	i. Percentage of households within 30 minutes travel time to health facility	49	23	NLSS	NLSS-WB estimate	2011	Province	5 years	MOSD/PSO
	j. Percentage of poor people enrolled in health insurance	0		NLSS/HMIS			Province	5 years	CBS
3.8.2	1. Proportion of population with large household expenditures on health as a share of total household expenditure or income (percent)	10.7	6.9	NLSS			Province	5 years	CBS
	2. Percentage of out of pocket expenditure in total health expenditure	53		NLSS			Province	5 years	CBS
Target 3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination									
3.9.1	Mortality attributed to households and ambient air pollution (%)			GBD Study			Province	Annual	MOHP
3.9.2	Mortality attributed to unsafe water, unsafe sanitation and hygiene for all WASH Service (%)			GBD Study			Province	Annual	MOHP
3.9.3	Deaths from hazardous chemicals (toxic substances, pesticides, etc.) (number)			GBD Study			Province	Annual	MOHP
3b.	Support the research and development of vaccines and medicines for the communicable and non-communicable diseases that primarily affect developing countries, provide access to affordable essential medicines and vaccines, in accordance with the Doha Declaration on the TRIPS Agreement and Public Health, which affirms the right of developing countries to use to the full the provisions in the Agreement on Trade-Related Aspects of Intellectual Property Rights regarding flexibilities to protect public health, and, in particular, provide access to medicines for all								
3b.1	a. Proportion of the target population covered by all vaccines included in their national programme	88		HMIS/ PMICS			District	5 years	MOSD/PSO
	b. Percentages of health sector budget in the total government budget			Budget book			Province	Annual	MOSD/MOEAP
	c. Percentages of health sector budget for research and development	n.a.		Budget book			Province	Annual	MOSD/MOEAP

Continued...

SDG 3. ENSURE HEALTHY LIVES AND PROMOTE WELL-BEING FOR ALL AT ALL AGES				MONITORING FRAMEWORK				
TARGETS AND INDICATORS	BASELINE FIGURE (2015)		PROPOSED DATA SOURCE	DATA SOURCE PROVIDED IN THE REPORT	DATA YEAR	DISAGGREGATION	FREQUENCY	RESPONSIBLE AGENCY
	NATIONAL	KARNALI PROVINCE						
3b.3 Proportion of health facilities that have a core set of relevant essential medicines available and affordable on a sustainable basis								
a. Percentage of government health facilities with no stock out of essential drugs	70		LMIS			District	Annual	MOHP/MOSD
3c Substantially increase health financing and the recruitment, development, training and retention of the health work force in developing countries, especially in the least developed countries and small island developing States								
a. Health worker density and distribution (per 1000 population)	1.05		Admin data			District	Annual	MOHP/MOSD

Note: NDHS and NMICS don't provide reliable estimates below province level due to their small sample sizes. As such, a tailored-made survey consisting of the features of NDHS and NMICS is required to monitor SDG3 and performance of the health-related programs for the provincial government. The Provincial Multiple Indicator Cluster Survey (PMICS) with adequate sample size which can provide reliable estimates up to district level is desired to fill the data gap at the province.

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

SDG 4: ENSURE INCLUSIVE AND EQUITABLE QUALITY EDUCATION AND PROMOTE LIFELONG LEARNING OPPORTUNITIES FOR ALL	BASELINE FIGURE (2015)		MONITORING FRAMEWORK					
TARGETS AND INDICATORS	NATIONAL	KARNALI PROVINCE	PROPOSED DATA SOURCE	DATA SOURCE PROVIDED IN THE REPORT	DATA YEAR	DISAGGREGATION	FREQUENCY	RESPONSIBLE AGENCY
Target 4.1 By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes								
4.1.1 Proportion of children and young people: (a) in grades 2/3; (b) at the end of primary; and (c) at the end of lower secondary achieving at least a minimum proficiency level in (i) reading and (ii) mathematics, by sex								
1 Net enrolment rate in primary education (percent)	97.2	97.9	EMIS	Department of education	2017	District	Annual	MOSD
2 Primary school completion rate (percent)	80.6		PMICS			District	5- years	MOSD/PSO
3 Proportion of pupils enrolled in grade one who reach grade eight (percent)	76.6		PMICS			District	5- years	MOSD/PSO
4 Ratio of girls (to boys) enrolled in grade one who reach grade eight	1.04		PMICS			District	5- years	MOSD/PSO
5 Ratio of girls (to boys) enrolled in grade one who reach grade twelve	1.1		PMICS			District	5- years	MOSD/PSO
6 Gross Enrolment in secondary education (grade 9 to 12) (percent)	80.3	81.8	Flash report	Department of education	2017	District	Annual	MOSD
Target 4.3 By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university								
4.3.1 Participation rate of youth and adults in formal and non-formal education and training in the previous 12 months, by sex								
1 Ratio of girls enrolment in technical and vocational education	0.53		EMIS			District	Annual	MOSD
2 Ratio of girls enrolment in tertiary education (graduate level)	0.88		EMIS			District	Annual	MOSD
3 Scholarship coverage (percent of total students)	37		EMIS			District	Annual	MOSD
Target 4.4 By 2030, increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship								
4.4.1 Proportion of youth and adults with information and communications technology (ICT) skills, by type of skill								
1 Youth & adults with technical & vocational training (number in '000, annual)	50		EMIS			District	Annual	MOSD
2 Working age population with technical and vocational training (percent)	25		EMIS			District	Annual	MOSD
3 Internet users (percent of adult population)	46.6		MIS			District	Annual	NTA

Continued...

| TARGETS AND INDICATORS | BASELINE FIGURE (2015) | | PROPOSED DATA SOURCE | MONITORING FRAMEWORK | | | | |
	NATIONAL	KARNALI PROVINCE		DATA SOURCE PROVIDED IN THE REPORT	DATA YEAR	DISAGGREGATION	FREQUENCY	RESPONSIBLE AGENCY
SDG 4: ENSURE INCLUSIVE AND EQUITABLE QUALITY EDUCATION AND PROMOTE LIFELONG LEARNING OPPORTUNITIES FOR ALL								
Target 4.5 By 2030, eliminate gender disparities in education and ensure equal access								
4.5.1 Parity indices (female/male, rural/urban, bottom/top wealth quintile and others such as disability status, indigenous peoples and conflict-affected, as data become available) for all education indicators on this list that can be disaggregated								
1 Gender parity index (GPI) in primary education (grade 1-5)	1.02	1.02	Flash report	Department of education	2017	District	Annual	MOSD
2 Gender parity index (GPI) in basic education (grade 6-8)	1.02		Flash report	Department of education	2017	District	Annual	MOSD
3 Gender Parity Index (GPI) (secondary school)	1		Flash report			District	Annual	MOSD
4 Gender Parity Index (GPI) based on literacy (above 15 years)	0.62		Pop. Census			LGs	10 year	MOSD/PSO
Target 4.6 By 2030, ensure that all youth and at least 95 percent of adults, both men and women, achieve literacy and numeracy								
4.6.1 Proportion of population in a given age group achieving at least a fixed level of proficiency in functional (a) literacy and (b) numeracy skills, by sex								
1 Literacy rate of 15-24 years old (percent)	88.6		Pop. Census	Department of Education		LGs	10 years	CBS
2 Female literacy rate of 15-24 years old population (percent)	84.5	91.9	Pop. Census	Department of Education	2017	LGs	10 years	CBS
3 Male literacy rate of 15-24 years old population (percent)	94.4	98	Pop. Census	Department of Education	2017	LGs	10 years	CBS
4 Literacy rate of 15-49 years old population (percent)			Pop. Census			LGs	10 years	CBS
5 Female literacy rate of 15-49 years old population (percent)	69.1	66.1	Pop. Census	Department of Education	2017	LGs	10 years	CBS
6 Male literacy rate of 15-49 years old population (percent)	89.1	91.5	Pop. Census	Department of Education	2017	LGs	10 years	CBS
7 Literacy rate of 5 years and above population (percent)			Pop. Census			LGs	10 years	CBS
8 Literacy rate of 5 years and above population (percent) - Male			Pop. Census			LGs	10 years	CBS
9 Literacy rate of 5 years and above population (percent) - Female			Pop. Census			LGs	10 years	CBS
10 Literacy rate of 5 years and above population (percent)	65.9		Pop. Census	Pop. Census	2010	LGs	10 years	CBS

Continued...

SDG 4: ENSURE INCLUSIVE AND EQUITABLE QUALITY EDUCATION AND PROMOTE LIFELONG LEARNING OPPORTUNITIES FOR ALL

TARGETS AND INDICATORS	BASELINE FIGURE (2015)		PROPOSED DATA SOURCE	MONITORING FRAMEWORK				
	NATIONAL	KARNALI PROVINCE		DATA SOURCE PROVIDED IN THE REPORT	DATA YEAR	DISAGGREGATION	FREQUENCY	RESPONSIBLE AGENCY
11 Male literacy rate of 5 years and above population (percent)	75.1		Pop. Census	Pop. Census	2010	LGs	10 years	CBS
12 Female literacy rate of 5 years and above population (percent)	57.4		Pop. Census	Pop. Census	2010	LGs	10 years	CBS
13 Public spending per student (Basic education in '000)	15		EMIS			District	Annual	MOSD
Target 4.a Build and upgrade education facilities that are child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all								
4.a.1 Proportion of schools with access to: (a) electricity; (b) the internet for pedagogical purposes; (c) computers for pedagogical purposes; (d) adapted infrastructure and materials for students with disabilities; (e) basic drinking water; (f) single-sex basic sanitation facilities; and (g) basic handwashing facilities (as per the WASH indicator definitions)								
4.a.1 Schools with access to electricity (percent)			EMIS			District	Annual	MOSD/PPC
4.a.2 Schools with access to internet (percent)	3.9		EMIS			District	Annual	MOSD/PPC
4.a.3 Basic schools with access to WASH facilities (percent)	80		EMIS			District	Annual	MOSD/PPC
4.a.4 Disability friendly schools (percent)			EMIS			District	Annual	MOSD/PPC
Target 4.b By 2020, expand globally the number of scholarships available to developing countries, in particular, least developed countries, small island developing states and African countries, for enrolment in higher education, including vocational training and information and communications technology, technical, engineering and scientific programmes, in developed countries and other developing countries								
4.c.1 Proportion of teachers in: (a) pre-primary; (b) primary; (c) lower secondary; and (d) upper secondary education who have received at least the minimum organized teacher training (e.g. pedagogical training) pre-service or in-service required for teaching at the relevant level in a given country								
4.c1 Proportion of teachers in basic education who have received at least the minimum organized teacher training, (percent)	95.5	50	EMIS	Karnali Province Five Years Plan: Approach paper		District	Annual	MOSD/PPC
4.c2 Proportion of teachers in secondary education who have received at least the minimum organized teacher training, (percent)	95.4	58	EMIS			District	Annual	MOSD/PPC

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

SDG 5: ACHIEVE GENDER EQUALITY AND EMPOWER ALL WOMEN AND GIRLS

TARGETS AND INDICATORS	BASELINE FIGURE (2015)		PROPOSED DATA SOURCE	DATA SOURCE PROVIDED IN THE REPORT	DATA YEAR	DISAGGREGATION	FREQUENCY	RESPONSIBLE AGENCY
	NATIONAL	KARNALI PROVINCE						
Target 5.1 End all forms of discrimination against all women and girls everywhere								
5.1.1 Whether or not legal frameworks are in place to promote, enforce and monitor equality and non discrimination on the basis of sex								
1 Wage equality for similar work (ration of women's wage to that of men)	0.62		NLSS			Province	5 years	CBS
Target 5.2 Eliminate all forms of violence against all women and girls in the public and private spheres, including trafficking and sexual and other types of exploitation								
5.2.1 Proportion of ever-partnered women and girls aged 15 years and older subjected to physical, sexual or psychological violence by a current or former intimate partner in the previous 12 months, by form of violence and by age								
1 Lifetime Physical and/or Sexual violence (percent)	28.4		PMICS			District	5 Years	MOSD/PSO
2 Children age 1–14 years who experienced psychological aggression or physical punishment during the last one month (percent)	81.7		PMICS			District	5 Years	MOSD/PSO
5.2.2 Proportion of women and girls aged 15 years and older subjected to sexual violence by persons other than an intimate partner in the previous 12 months, by age and place of occurrence								
1 Women aged 15–49 years who experience sexual violence (percent)	6.9		PMICS	NDHS	2016	District	5 Years	MOSD/PSO
2 Women and Girls Trafficking (in number)	1697		Admin. Data			District	5 Years	MOHA/NHRC
Target 5.3 Eliminate all harmful practices, such as child, early and forced marriage and female genital mutilation								
1 Proportion of women aged 20–24 years who were married or in a union before age 15	7.1	14.6	Pop. census	NDHS	2016	LGs	10 years	CBS
2 Proportion of women aged 20–24 years who were married or in a union before age 18	40.5			NDHS	2016			
2 Women aged 15–19 years who are married or in union (percent)			Pop. census			LGs	10 years	CBS
Target 5.4 Recognize and value unpaid care and domestic work through the provision of public services, infrastructure and social protection policies and the promotion of shared responsibility within the household and the family as nationally appropriate								
5.4.1 Proportion of time spent on unpaid domestic and care work, by sex, age and location								

MONITORING FRAMEWORK

Continued...

SDG 5: ACHIEVE GENDER EQUALITY AND EMPOWER ALL WOMEN AND GIRLS

TARGETS AND INDICATORS	BASELINE FIGURE (2015)		MONITORING FRAMEWORK					
	NATIONAL	KARNALI PROVINCE	PROPOSED DATA SOURCE	DATA SOURCE PROVIDED IN THE REPORT	DATA YEAR	DISAGGREGATION	FREQUENCY	RESPONSIBLE AGENCY
1 Ratio of women to men participation in labour force	65.8	44.6	NLSS	NLSS-WB estimate	2011	Province	5 Years	PSO
2 Proportion of time spent on unpaid domestic work and care (percent)	16.5	18.9	NLSS	NLSS-WB estimate	2011	Province	5 Years	PSO
3 Proportion of time spent by men on unpaid domestic work and care (percent)	10.3	13.2	NLSS	NLSS-WB estimate	2011	Province	5 Years	PSO
4 Proportion of time spent by women population on unpaid domestic work and care (percent)	21.9	24	NLSS	NLSS-WB estimate	2011	Province	5 Years	PSO
5 Proportion of time spent by people aged 19-64 years in unpaid domestic work and care (percent)	25.6	33.2	NLSS	NLSS-WB estimate	2011	Province	5 Years	CBS
6 Proportion of time spent by people aged 65 years and above in unpaid domestic work and care (percent)	16.8	17.7	NLSS	NLSS-WB estimate	2011	Province	5 Years	CBS
Target 5.5 Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life								
5.5.1 Proportion of seats held by women in (a) national parliaments and (b) local governments								
(a) provincial parliament (percent)			Election records			Provincial	5 Years	NEC
(b) local government bodies (percent)			Election records			LGs	5 Years	NEC
5.5.2 Proportion of women in managerial positions								
1 Women's participation in decision making level in the private sector (percent)	25		NLSS			District	5 Years	CBS
2 Women's participation in cooperative sector (percent)	50		NLSS			District	5 Years	CBS
3 Women in public service decision making positions (percent of total employees)	11		NLSS			District	5 Years	CBS
4 Ratio of women to men in professional and technical workers (percent)	24		NLSS			District	5 Years	CBS
Target 5.6 Ensure universal access to sexual and reproductive health and reproductive rights as agreed in accordance with the Programme of Action of the International Conference on Population and Development and the Beijing Platform for Action and the outcome documents of their review conferences								
5.6.1 Proportion of women aged 15-49 years who make their own informed decisions regarding sexual relations, contraceptive use and reproductive health care			PMICS			District	5 Years	MOSD/PSO

Continued...

SDG 5: ACHIEVE GENDER EQUALITY AND EMPOWER ALL WOMEN AND GIRLS

TARGETS AND INDICATORS	BASELINE FIGURE (2015)		PROPOSED DATA SOURCE	MONITORING FRAMEWORK				
	NATIONAL	KARNALI PROVINCE		DATA SOURCE PROVIDED IN THE REPORT	DATA YEAR	DISAGGREGATION	FREQUENCY	RESPONSIBLE AGENCY
1 Awareness about reproductive rights among girls and women (percent)- Proportion of women aged 15-49 years who make their own informed decisions regarding sexual relations, contraceptive use and reproductive health care.	19	17	PMICS	NDHS	2016	District	5 Years	MOSD/PSO
2 Receiving specific support and service provisions related to sexual health care to the poor, discriminated and marginalized groups (percent)			PMICS			District	5 Years	MOSD/PSO
Target 5.a Undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources, in accordance with national laws								
5.a.1 (a) Proportion of total agricultural population with ownership or secure rights over agricultural land, by sex; and (b) share of women among owners or rights-bearers of agricultural land, by type of tenure								
1 Number of enterprises owned by women			Eco. census			LGs	10 years	CBS
2 Proportion of household with women's ownership of property on land (percent)	22.2	8.57	Pop. census	Pop.census	2010	LGs	10 years	CBS
3 Proportion of household with women's ownership of property house (percent)	11.7	4.5	Pop. census	Pop.census	2010	LGs	10 years	CBS
4 Proportion of household with women's ownership of property (land and house) (percent)	11.8	4.5	Pop. census	Pop.census	2010	LGs	10 years	CBS
Target 5.b Enhance the use of enabling technology, in particular information and communications technology, to promote the empowerment of women								
5.b.1 Proportion of individuals who own a mobile telephone, by sex								
1 Proportion of women aged 15-49 years who use mobile phone	72.6	69.2	PMICS	NDHS	2016	District	5 years	MOSD/PSO
2 Proportion of men aged 15-49 years who use mobile phone	89.3	83.6	PMICS	NDHS	2016	District	5 years	MOSD/PSO
3 Use of Internet by women aged 15-24 years (percent)	19.6d		PMICS			District	5 years	MOSD/PSO
Target 5.c Adopt and strengthen sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls at all levels								
1 Proportion of budget allocated by the government for gender equality and women's empowerment (percent)			Budget book			Province	Annual	MOEAP

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

SDG 6: ENSURE AVAILABILITY AND SUSTAINABLE MANAGEMENT OF WATER AND SANITATION FOR ALL					MONITORING FRAMEWORK			
TARGETS AND INDICATORS	BASELINE FIGURE (2015)		PROPOSED DATA SOURCE	DATA SOURCE PROVIDED IN THE REPORT	DATA YEAR	DISAGGREGATION	FREQUENCY	RESPONSIBLE AGENCY
	NATIONAL	KARNALI PROVINCE						
Target 6.1 By 2030, achieve universal and equitable access to safe and affordable drinking water for all								
6.1.1 Proportion of population using safely managed drinking water services	94.9	86.2	Pop. Census	NDHS	2016	LGs	10 years	CBS
1 Population using safe drinking water (percent)	15		Exp. Research			LGs	Annual	MOSD
2 Household with access to piped water supply (percent)	33.3	36.1	Pop. Census	NDHS	2016	LGs	10 years	CBS
4 Percentage of population in the poorest quintile whose financial expenditure on water, sanitation and hygiene is below 3 percent of the national poverty line.			NLSS			Province	5 years	CBS
Target 6.2 By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations								
6.2.1 Proportion of population using safely managed sanitation services, including a hand-washing facility with soap and water								
1 Households using improved sanitation facilities which are not shared (percent)	64.6	77.6	Pop. Census	NDHS	2016	LGs	10 years	CBS
2 Proportion of population using latrine (percent)	67.6		Pop. Census	NDHS	2016	LGs	10 years	CBS
3 Sanitation coverage (percent)	82		Pop. Census			LGs	10 years	CBS
4 Urban households with toilets connected to sewer systems/ proper FSM (percent)	30		Pop. Census			LGs	10 years	CBS
Target 6.3 By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated waste water and increasing recycling and safe reuse.								
Target 6.b Support and strengthen the participation of local communities in improving water and sanitation management								
6.b.1 Proportion of local administrative units with established and operational policies and procedures for participation of local communities in water and sanitation management			Admin data			LGs	Annual	MOSD

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

SDG 7: ENSURE ACCESS TO AFFORDABLE, RELIABLE, SUSTAINABLE AND MODERN ENERGY FOR ALL	BASELINE FIGURE (2015)		MONITORING FRAMEWORK					
TARGETS AND INDICATORS	NATIONAL	KARNALI PROVINCE	PROPOSED DATA SOURCE	DATA SOURCE PROVIDED IN THE REPORT	DATA YEAR	DISAGGREGATION	FREQUENCY	RESPONSIBLE AGENCY
Target 7.1 By 2030, ensure universal access to affordable, reliable and modern energy services								
7.1.1 Proportion of population with access to electricity	90.8	67.4	Pop. Census	NDHS	2016	LGs	10 years	CBS
1 Per capita energy (final) consumption (in gigajoules)	16		Admin. Data			District	Annual	MOEWRI/ NEA
7.1.2 Proportion of population with primary reliance on clean fuels and technology								
1 Households using solid fuel as primary source of energy for cooking (percent)	65.7	89.5	Pop. Census	NDHS	2016	LGs	10 years	CBS
2 Proportion of population with primary reliance on clean fuels and technology for cooking	33.9	10.3	Pop. Census	NDHS	2016	LGs	11 years	CBS
3 People using liquid petroleum gas (LPG) for cooking and heating (percent)	30	9.5	Pop. Census	NDHS	2016	LGs	10 years	CBS
4 Electricity consumption (KWh per capita)	80	28	Admin. Data			LGs	Annual	NEA
Target 7.2 By 2030, increase substantially the share of renewable energy in the global energy mix								
7.2.1 Renewable energy share in the total final energy consumption	11.9	39.5	Admin. Data			LGs	Annual	MOEWRI
1 Installed capacity of hydropower (Megawatt)	990	8.25	Admin. Data	Ministry of Finance	2017	Subnational	Annual	MOEWRI
Target 7.3 By 2030, double the global rate of improvement in energy efficiency								
7.3.1 Energy intensity measured in terms of primary energy and Gross Domestic Product (GDP)								
4 Electric vehicles in public transport systems (percent)	1		Admin data			Province	Annual	DOTM

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

TARGETS AND INDICATORS	BASELINE FIGURE (2015)		MONITORING FRAMEWORK					
	NATIONAL	KARNALI PROVINCE	PROPOSED DATA SOURCE	DATA SOURCE PROVIDED IN THE REPORT	DATA YEAR	DISAGGREGATION	FREQUENCY	RESPONSIBLE AGENCY
SDG 8: PROMOTE SUSTAINED, INCLUSIVE AND SUSTAINABLE ECONOMIC GROWTH, FULL AND PRODUCTIVE EMPLOYMENT AND DECENT WORK FOR ALL								
Target 8.1 Sustain per capita economic growth in accordance with national circumstances and, in particular, at least 7 percent gross domestic product growth per annum in the least developed countries								
8.1.1 Annual growth rate of real Gross Domestic Product (GDP) per capita								
1 Per capita Gross Domestic Product (GDP) growth (percent)	2.3		National Account Statistics			Province	Annual	CBS
Target 8.3 Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro-, small- and medium-sized enterprises, including through access to financial services								
8.3.1 Proportion of informal employment in non agriculture employment, by sex	70		NLSS			Province	5 years	CBS
1 Proportion of population in informal employment in non-agriculture	38.3	41.2	NLSS	Pop.Census	2010	Province	5 years	CBS
2 Proportion of male population in informal employment in non-agriculture sector (percent)	31.3	30.8	NLSS	Pop.Census	2010	Province	5 years	CBS
3 Proportion of female population in informal employment in non-agriculture (percent)	54.1	64.5	NLSS	Pop.Census	2010	Province	5 years	CBS
4 Access to Financial Services (percent)	21	11	NLSS	NDHS	2016	Province	5 years	CBS
5 Access to Cooperatives (percent of households within 30 min walk)	53.6	30.7	NLSS	NLSS-WB estimate	2010	Province	5 years	CBS
Target 8.5 By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value								
8.5.1 Average hourly earnings of female and male employees, by occupation, age and persons with disabilities			NLSS			Province	5 years	CBS
8.5.2 Unemployment rate, by sex, age and persons with disabilities								
1 Underemployment rate (15-59 y) (percent)	27.7	22.08	NLSS	NLSS-WB estimate	2011	Province	5 years	CBS
Target 8.6 By 2020, substantially reduce the proportion of youth not in employment, education or training								
8.6.1 Proportion of youth (aged 15-24 years) not in education, employment or training								
1 Proportion of youth aged 15-24 years not in education (percent)	47.2	44.7	Pop. Census	NLSS-WB estimate	2011	LGs	10 years	CBS
2 Youth underemployment rate (aged 15-24 years) (percent)	29.9	29.1	NLSS	NLSS-WB estimate	2011	Province	5years	CBS
3 Proportion of youth aged 15-24 years not in employment (percent)	60.5	53.8	NLSS	NLSS-WB estimate	2011	Province	5years	CBS

Continued...

SDG 4: ENSURE INCLUSIVE AND EQUITABLE QUALITY EDUCATION AND PROMOTE LIFELONG LEARNING OPPORTUNITIES FOR ALL

| TARGETS AND INDICATORS | BASELINE FIGURE (2015) | | MONITORING FRAMEWORK | | | | | |
	NATIONAL	KARNALI PROVINCE	PROPOSED DATA SOURCE	DATA SOURCE PROVIDED IN THE REPORT	DATA YEAR	DISAGGREGATION	FREQUENCY	RESPONSIBLE AGENCY
Target 8.10 Strengthen the capacity of domestic financial institutions to encourage and expand access to banking, insurance and financial services for all								
8.10.1 1. Number of commercial bank branches per 100,000 adults and	18a		Admin data			District	Annual	NRB/PSO
2. Automated teller machines per 100000 adult population (number)	11a		Admin data			District	Annual	NRB/PSO
3. Life insurance coverage (percent)	5d		NLSS			District	5 years	CBS
8.10.2 Proportion of adults (15 years and older) with an account at a bank or other financial institution or with a mobile-money-service provider	34d		NLSS			District	5 years	CBS

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

SDG 8: BUILD RESILIENT INFRASTRUCTURE, PROMOTE INCLUSIVE AND SUSTAINABLE INDUSTRIALIZATION AND FOSTER INNOVATION

| TARGETS AND INDICATORS | BASELINE FIGURE (2015) | | MONITORING FRAMEWORK | | | | | |
	NATIONAL	KARNALI PROVINCE	PROPOSED DATA SOURCE	DATA SOURCE PROVIDED IN THE REPORT	DATA YEAR	DISAGGREGATION	FREQUENCY	RESPONSIBLE AGENCY
Target 9.1 Develop quality, reliable, sustainable and resilient infrastructure, including regional and trans-border infrastructure, to support economic development & human well-being, with a focus on affordable & equitable access for all								
9.1.1 Proportion of the rural population who live within 2 km of an all-season road	78.8	47.5	NLSS	NLSS		District	5 years	CBS
1 Road density (km/100 sq. km)	39.2	8.72	Admin data			District	Annual	MOPID
9.1.2 Passenger and freight volumes, by mode of transport								
1 Paved road density (km/sq. km)	0.01		Admin data			District	Annual	MOPID
2 Passenger, by mode of transport (Road) (percent)	90		Admin data			District	Annual	MOPID
Target 9.2 Promote inclusive and sustainable industrialization and, by 2030, significantly raise the industry's share of employment & gross domestic product, in line with national circumstances, & double its share in the least developed countries								
1 Manufacturing employment as a proportion of total employment	10.5	4.5	Economic census			District	10 years	CBS
2 Proportion of population covered by a mobile network, by technology	94.5		Admin. Data			LGs	Annual	MOICT/NTA

SDG #10: Reduce inequality within and among countries

SDG 10: REDUCE INEQUALITY WITHIN AND AMONG COUNTRIES	BASELINE FIGURE (2015)		PROPOSED DATA SOURCE	MONITORING FRAMEWORK				
TARGETS AND INDICATORS	NATIONAL	KARNALI PROVINCE		DATA SOURCE PROVIDED IN THE REPORT	DATA YEAR	LEVEL OF DISAGGREGATION	FREQUENCY	RESPONSIBLE AGENCY
Target 10.1 By 2030, progressively achieve and sustain income growth of the bottom 40 percent of the population at a rate higher than the national average								
10.1.1 Growth rates of household expenditure or income per capita among the bottom 40 percent of the population and the total population			NLSS			Province	5 years	CBS
1 Consumption inequality (measured by the Gini coefficient)	0.33		NLSS			Province	5 years	CBS
2 Income inequality (measured by the Gini coefficient)	0.328	0.27	NLSS	NLSS	2011	Province	5 years	CBS
3 Share of bottom 40percent of population in total consumption (percent)	18.7	21.3	NLSS	NLSS	2011	Province	5 years	CBS
4 Share of bottom 40percent of population in total income (percent)	5.3	2.8	NLSS	NLSS	2011	Province	5 years	CBS
5 PALMA Index	1.3	0.9	NLSS	NLSS	2011	Province	5 years	CBS
6 Percentage of urban households with income below 50percent of median income			Administrative data					MoUD
Target 10.2 By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status								
10.2.1 Proportion of people living below 50 percent of median income, by sex, age and persons with disabilities			NLSS			Province	5 years	CBS
Target 10.3 Ensure equal opportunity and reduce inequalities of outcome, including by eliminating discriminatory laws, policies and practices and promoting appropriate legislation, policies and action in this regard								
10.3.1 Proportion of population reporting having personally felt discriminated against or harassed in the previous 12 months on the basis of a ground of discrimination prohibited under international human rights law			Special Survey			District	5 years	PSO
Target 10.5 Improve the regulation and monitoring of global financial markets and institutions and strengthen the implementation of such regulations								
10.5.1 Financial Soundness Indicators								
1 Proportion of farm households covered by microfinance (percent)	20.9	10.8	NLSS	NLSS	2011	Province	5 year	CBS

SDG #11: Make cities and human settlements inclusive, safe, resilient and sustainable

SDG 11: MAKE CITIES AND HUMAN SETTLEMENTS INCLUSIVE, SAFE, RESILIENT AND SUSTAINABLE			MONITORING FRAMEWORK					
TARGETS AND INDICATORS	BASELINE FIGURE (2015)		PROPOSED DATA SOURCE	DATA SOURCE PROVIDED IN THE REPORT	DATA YEAR	LEVEL OF DISAGGREGATION	FREQUENCY	RESPONSIBLE AGENCY
	NATIONAL	KARNALI PROVINCE						
Target 11.1 By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums								
11.1.1 Proportion of urban population living in slums, informal settlements or inadequate housing								
1 Population living in slum and squatters ('000)	500		Pop. Census			LGs	10 years	CBS
2 Household units roofed with thatched/straw roof (percent)	9.5	15.5	Pop. Census	NDHS	2016	LGs	10 years	CBS
3 Proportion of urban population living in inadequate housing	67.8	78	Pop. Census	NDHS	2016	LGs	10 years	CBS
4 Households living in safe houses (percent)	29.8		Pop. Census			LGs	10 years	CBS
Target 11.2 By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons								
11.2.1 Proportion of population that has convenient access to public transport, by sex, age and persons with disabilities								
1 Availability of safe public transport (percent)	0.1		NLSS			Province	5 years	CBS
2 Access to paved road within 30 minutes of walking (percent)	50.5	19.03	NLSS	NLSS-WB estimate	2011	Province	5 years	CBS
Target 11.3 By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries								
11.3.2 Proportion of cities with a direct participation structure of civil society in urban planning and management that operate regularly and democratically								
1 Planned new cities (number)	10		Plan doc.			Province	Annual	PPC
2 Households with 5 and more persons residing (percent)	55.3	62.2	Pop. Census	Pop. Census	2010	LGs	10 years	CBS
Target 11.4 Strengthen efforts to protect and safeguard the world's cultural and natural heritage								
1 Budget allocated for the protection of natural and cultural heritage (percent)	1.15		Budget book			Province	Annual	PPC
Target 11.5 By 2030, significantly reduce the number of deaths and the number of people affected and decrease the economic losses relative to gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations								
11.5.1 Number of deaths, missing persons and directly affected persons attributed to disasters per 100,000 population			Admin. Data			District	Annual	MOIAL
1 Deaths due to natural disaster (number)			Admin. Data			District	Annual	MOIAL
2 Injuries due to disaster (number)	22300 h		Admin. Data			District	Annual	MOIAL

Continued...

SDG 11: MAKE CITIES AND HUMAN SETTLEMENTS INCLUSIVE, SAFE, RESILIENT AND SUSTAINABLE

TARGETS AND INDICATORS	BASELINE FIGURE (2015)		MONITORING FRAMEWORK					
	NATIONAL	KARNALI PROVINCE	PROPOSED DATA SOURCE	DATA SOURCE PROVIDED IN THE REPORT	DATA YEAR	LEVEL OF DISAGGREGATION	FREQUENCY	RESPONSIBLE AGENCY
Target 11.6 By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management								
11.6.1 Proportion of urban solid waste regularly collected and with adequate final discharge out of total urban solid waste generated, by cities			Admin data			Municipality	Annual	LGs
Target 11.7 By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities.								
1 Number of public spaces by types with areas (playgrounds, open spaces, gardens, parks, exhibition centres etc.)			Report			Province	Annual	PPC
Target 11.b By 2020, increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, develop and implement, in line with the forth-coming Hyogo Framework, holistic disaster risk management at all levels								
1 Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with national disaster risk reduction strategies			Record			LGS	Annual	PPC/MOITFE

SDG #12: Ensure sustainable consumption and production patterns

TARGETS AND INDICATORS	BASELINE FIGURE (2015)		MONITORING FRAMEWORK					
	NATIONAL	KARNALI PROVINCE	PROPOSED DATA SOURCE	DATA SOURCE PROVIDED IN THE REPORT	DATA YEAR	LEVEL OF DISAGGREGATION	FREQUENCY	RESPONSIBLE AGENCY
Target 12.2 By 2030, achieve the sustainable management and efficient use of natural resources								
12.2.2 Domestic material consumption, domestic material consumption per capita, and domestic material consumption per Gross Domestic Product (GDP)								
1 Land use for agricultural production (cereal as percent of cultivated land)	80		Agri. census			District	10 year	CBS
2 Per capita cereal food consumption (in KG) annual			Agriculture statistics			District	5 year	PSO

SDG #13: Take urgent action to combat Climate change and its impacts

SDG 13: TAKE URGENT ACTION TO COMBAT CLIMATE CHANGE AND ITS IMPACTS	MONITORING FRAMEWORK							
TARGETS AND INDICATORS	BASELINE FIGURE (2015)		PROPOSED DATA SOURCE	DATA SOURCE PROVIDED IN THE REPORT	DATA YEAR	DISAGGREGATION	FREQUENCY	RESPONSIBLE AGENCY
	NATIONAL	KARNALI PROVINCE						
Target 13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries								
13.1.1 1. Number of deaths, missing persons and directly affected persons attributed to disasters per 100,000 population	0.0236		Admin data			District	Annual	MOHA/MOIAL
2. Economic loss due to disaster (in million Rs.)								
13.1.3 Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with national disaster risk reduction strategies			Admin data			District	Annual	MOITFE
Target 13.2 Integrate climate change measures into national policies, strategies and planning								
13.2.1 Number of countries that have communicated the establishment or operationalization of an integrated policy/strategy/plan which increases their ability to adapt to the adverse impacts of climate change, and foster climate resilience and low greenhouse gas emissions development in a manner that does not threaten food production (including a national adaptation plan, nationally determined contribution, national communication, biennial update report or other)								
a) Local adaptation plan preparation (number of LGs)	4		Admin data			District	Annual	MOITFE
b) Community level adaptation plan	31		Admin data			District	Annual	MOITFE
c) Implementation of adaptation plan	0		Admin data			District	Annual	MOITFE
d) Climate smart villages	0		Admin data			District	Annual	MOITFE
e) Climate smart farming	0		Admin data			District	Annual	MOITFE
Target 13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning								
13.3.1 Number of countries that have integrated mitigation, adaptation, impact reduction and early warning into primary, secondary and tertiary curricula								
1 Proportion of schools covered by climate change education (percent)	80		Flash report			District	Annual	MOSD
13.3.2 Number of countries that have communicated the strengthening of institutional, systemic and individual capacity-building to implement adaptation, mitigation and technology transfer, and development actions								
1 Number of trained persons in climate change mitigation			Admin data			District	Annual	MOITFE
2 Number of trained persons (local planners) in climate change adaptation	791		Admin data			District	Annual	MOITFE

SDG #14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development

SDG 14: CONSERVE AND SUSTAINABLY USE THE OCEANS, SEAS AND MARINE RESOURCES FOR SUSTAINABLE DEVELOPMENT					MONITORING FRAMEWORK			
TARGETS AND INDICATORS	BASELINE FIGURE (2015)		PROPOSED DATA SOURCE	DATA SOURCE PROVIDED IN THE REPORT	DATA YEAR	DISAGGREGATION	FREQUENCY	RESPONSIBLE AGENCY
	NATIONAL	KARNALI PROVINCE						
Less relevant for Nepal								

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

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			MONITORING FRAMEWORK					
TARGETS AND INDICATORS	BASELINE FIGURE (2015)		PROPOSED DATA SOURCE	DATA SOURCE PROVIDED	DATA YEAR	DISAGGREGATION	FREQUENCY	RESPONSIBLE AGENCY
	NATIONAL	KARNALI						
Target 15.1 By 2030, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and dry lands, in line with obligations under international agreements								
15.1.1 Forest area as a proportion of total land area (percent)	44.7	38.57	Forest Survey	Province Status paper	2017	District	10 years	MOFSC
1 Forest area under community-based management (percent)	39		Admin. Data			District	Annual	MOITFE
2 Forest by type of management practices			Admin. Data			District	Annual	MOFSC
15.1.2 Proportion of important sites for terrestrial and freshwater biodiversity that are covered by protected areas, by ecosystem type								
1 Protected area (including forest, in percent of total land area)	23.2	17.9	Admin. Data			District	Annual	MOITFE
2 Conservation of lakes, wetlands, and ponds (number)	1727	2	Admin. Data			District	Annual	MOITFE
3 Area under lakes, wetlands and ponds			Admin. Data			District	Annual	MOITFE
Target 15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and increase afforestation and reforestation								
15.2.1 Progress towards sustainable forest management								
1 Handover of forests to leasehold forest groups (000 hectare)	44.6		Admin. Data			District	Annual	MOITFE
2 Deforestation replacement plantation rate (percent)			Admin. Data			District	Annual	MOITFE
3 Additional plantation (seedlings in million per annum)	-		Admin. Data			District	Annual	MOITFE
Target 15.4 By 2030, ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development								
15.4.1 Coverage by protected areas of important sites for mountain biodiversity								
1 Potentially dangerous lakes (percent)	0.37		Admin. Data			Province	Annual	MOITFE
Target 15.5 Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species								
15.5.1 Red List Index								
1 Threatened flora (medicinal & aromatic plants) (percent)	0.48		Research			District	5 year	MOITFE
2 Threatened fauna (mammals, birds, reptiles, amphibians, fishes, insects, Platyhelminthes, mollusks, etc.) (percent)	0.81		Research			District	5 year	MOITFE
3 Wild tigers (number)	198		Census			Province	5 year	MOITFE
4 Rhino (number)	534		Census			Province	5 year	MOITFE

Continued...

TARGETS AND INDICATORS	BASELINE FIGURE (2015)		PROPOSED DATA SOURCE	DATA SOURCE PROVIDED IN THE REPORT	MONITORING FRAMEWORK			
	NATIONAL	KARNALI PROVINCE			DATA YEAR	DISAGGREGATION	FREQUENCY	RESPONSIBLE AGENCY
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								
5 Community led anti-poaching units mobilized (number)	400		Admin data			Province	Annual	MOITFE
Target 15.9 By 2020, integrate ecosystem and biodiversity values into national and local planning, development processes, poverty reduction strategies and accounts								
15.9.1 Progress towards national targets established in accordance with Aichi Biodiversity Target 2 of the Strategic Plan for Biodiversity 2011-2020								
1 Plant (floral) species under conservation plan (number)	3		Research			District	5 year	MOITFE
2 Animal (faunal) species under conservation plan (number)	5		Research			District	5 year	MOITF

SDG #16: 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

SSDG 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					MONITORING FRAMEWORK			
TARGETS AND INDICATORS	BASELINE FIGURE (2015)		PROPOSED DATA SOURCE	DATA SOURCE PROVIDED	DATA YEAR	DISAGGREGATION	FREQUENCY	RESPONSIBLE AGENCY
	NATIONAL	KARNALI						
Target 16.1 Significantly reduce all forms of violence and related death rates everywhere								
16.1.3 Proportion of population subjected to physical, psychological or sexual violence in the previous 12 months	6.5		PMICS	NDHS	2016	District	5 years	MOSD/PSO
16.1.4 Proportion of population that feel safe walking alone around the area they live			PMICS			District	5 years	MOSD/PSO
Target 16.2 End abuse, exploitation, trafficking and all forms of violence against and torture of children								
16.2.1 Proportion of children aged 1-17 years who experienced any physical punishment and/or psychological aggression by caregivers in the past month								
1 Children age 1-14 years who experienced psychological aggression or physical punishment during the last one month) (percent)	81.7		PMICS			District	5 years	MOSD/PSO
16.2.2 Number of victims of human trafficking per 100,000 population, by sex, age and form of exploitation								
1 Children trafficking to abroad (including India) per annum (reported number)	64		Report			District	5 years	MOSD/NHRC
16.2.3 Proportion of young women and men aged 18 29 years who experienced sexual violence by age 18			PMICS			District	5 years	MOSD/PSO
Target 16.3 Promote the rule of law at the national and international levels and ensure equal access to justice for all								
16.3.1 Proportion of victims of violence in the previous 12 months who reported their victimization to competent authorities or other officially recognized conflict resolution mechanisms			PMICS			District	5 years	MOSD/PSO
1 Transparency, accountability, and corruption in public (score out of 6)	3		ISDES			District	5 years	PSO
16.3.2 Unsentenced detainees as a proportion of overall prison population			Admin. Data			District	Annual	Nepal Police
2 Good governance (Reported along a scale of -2.5 to 2.5. Higher values correspond to good governance) for control of corruption	-0.78		ISDES			District	5 years	PSO/MOJAL

Continued...

SSDG 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

TARGETS AND INDICATORS	BASELINE FIGURE (2015)		PROPOSED DATA SOURCE	DATA SOURCE PROVIDED	DATA YEAR	DISAGGREGATION	FREQUENCY	RESPONSIBLE AGENCY
	NATIONAL	KARNALI						
Target 16.5 Substantially reduce corruption and bribery in all their forms								
16.5.1 Proportion of persons who had at least one contact with a public official and who paid a bribe to a public official, or were asked for a bribe by those public officials, during the previous 12 months			ISDES			District	5 years	PSO/MOIAL
1 People's perception of corruption (percent of people with at least one instance in the past 12 months that require to give a bribe/present)	10	2	ISDES	NASC	2017	District	5 years	PSO/MOIAL
16.5.2 Proportion of businesses that had at least one contact with a public official and that paid a bribe to a public official or were asked for a bribe by those public officials during the previous 12 months			ISDES			District	5 years	PSO/MOIAL
Target 16.6 Develop effective, accountable and transparent institution at all levels.								PSO/MOIAL
16.6.2 Proportion of population satisfied with their last experience of public services			ISDES			District	5 years	PSO/MOIAL
Target 16.7 Ensure responsive, participatory and representative decision making at all levels								
16.7.1 Proportions of positions (by sex, age, persons with disabilities and population groups) in public institutions (national and local legislatures, public service, and judiciary) compared to national distributions			Admin. Data			District	Annual	MOFAGA
16.7.2 Proportion of population who believe decision-making is inclusive and responsive, by sex, age, disability and population group								
1 Proportions of decision-making positions held by women in public institutions	15		Women and Men in Decision Making Survey (WAMIDMS)			District	5 years	PSO/MOIAL
Target 16.9 By 2030, provide legal identity for all, including birth registration								
16.9.1 Proportion of children under 5 years of age whose births have been registered with a civil authority, by age	56.2	64.9	CRVS	NDHS	2016	LGS	Annual	MOSD/PSO
Target 16.b Promote and enforce non-discriminatory laws and policies for sustainable development								
16.b.1 Proportion of population reporting having personally felt discriminated against or harassed in the previous 12 months on the basis of a ground of discrimination prohibited under international human rights law			ISDES			District	5 years	PSO/MOIAL

SDG #17: Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development

TARGETS AND INDICATORS	BASELINE FIGURE (2015)		PROPOSED DATA SOURCE	MONITORING FRAMEWORK				
	NATIONAL	KARNALI PROVINCE		DATA SOURCE PROVIDED IN THE REPORT	DATA YEAR	DISAGGREGATION	FREQUENCY	RESPONSIBLE AGENCY
SDG 17. STRENGTHEN THE MEANS OF IMPLEMENTATION AND REVITALIZE THE GLOBAL PARTNERSHIP FOR SUSTAINABLE DEVELOPMENT								
Target 17.1 Strengthen domestic resource mobilization, including through international support to developing countries, to improve domestic capacity for tax and other revenue collection								
1 Proportion of provincial budget funded by provincial tax taxes (percent)			Budget Book			Province	Annual	MOEAP
17.6.2 Fixed Internet broadband subscriptions per 100 inhabitants, by speed								
1 Internet Density (per 100 person)	49.8		MIS/Pop.census			LGs	Annual/10 yrs	MOICT/CBS
Target 17.8 Fully operationalize the technology bank and science, technology and innovation capacity-building mechanism for least developed countries by 2017 and enhance the use of enabling technology, in particular information and communications technology								
1 Proportion of individuals using the Internet			MIS/Pop.census			LGs	Annual/10 yrs	MOICT/CBS
2 Proportion of women aged 15–49 years using internet	23.3	7.1	MIS/Pop.census	NDHS	2016	LGs	Annual/10 yrs	MOICT/CBS
3 Proportion of men aged 15–49 years using internet	48.5	28.1	MIS/Pop.census	NDHS	2016	LGs	Annual/10 yrs	MOICT/CBS
Target 17.18 By 2020, enhance capacity-building support and increase significantly the availability of high-quality, timely and reliable data disaggregated by income, gender, age, race, ethnicity, migratory status, disability, geographic location and other characteristics.								
1 Proportion of sustainable development indicators produced with full disaggregation relevant to the target, in accordance with the Fundamental Principles of Official Statistics			Meta data			Province	Annual	PSO
2 Developed and enforced statistical legislation that complies with the Fundamental Principles of Official Statistics	Yes		Law			Province	2019	PPC/MOIAL
3 Developed and implemented a statistical plan that is fully funded	Yes		Plan			Province	2019	PPC/PSO
4 Proportion of budget allocated to strengthen statistical capacity (percent of total budget)			Budget book			Province	Annual	MOEAP
5 Proportion of children under 5 years of age whose births have been registered	58.1		CRVS	NDHS	2016	LGs	Annual	MOSD/PSO

ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
ANC	Antenatal Care
CBS	Central Bureau of Statistics
CRVS	Civil Registration and Vital Statistics
CVD	Cardiovascular Disease
DPT	Diphtheria Pertussis and Tetanus
DoHS	Department of Health Services
GER	Gross Enrolment Rate
GoGP	Government of Gandaki Province
GoN	Government of Nepal
GPI	Gender Parity Index
Hib	Haemophilus influenza type b
LPG	Liquefied petroleum gas
MICS	Multiple Indicators Cluster Survey
MDGs	Millennium Development Goals
MoSD	Ministry of Social Development
MoWS	Ministry of Water Supply
MPI	Multidimensional Poverty Index
MW	Megawatt
NCDs	Non-communicable Diseases
NDHS	Nepal Demographic and Health Survey
NLSS	Nepal Living Standard Survey
NLFS	Nepal Labour Force Survey
NPC	National Planning Commission
OWG	Open Working Group
PNC	Post-Natal Care
PPC	Province Planning Commission
PSO	Provincial Statistical Office
SDGs	Sustainable Development Goals
TB	Tuberculosis
UN	United Nations
UNGA	United Nations General Assembly
WB	The World Bank

LIST OF FIGURES & TABLES

REFERENCES

Barbier, E. B. (1987). The concept of sustainable economic development. Environmental conservation, 14(2), 101-110.

Barbier, E. B., & Burgess, J. C. (2017). The Sustainable Development Goals and the systems approach to sustainability. Economics: The Open-Access, Open-Assessment E-Journal, 11(2017-28), 1-23.

Central Bureau of Statistics and UNICEF. (2014). Nepal Multiple Indicator Cluster Survey (MICS) 2014. Government of Nepal.

Central Bureau of Statistics. (2011). National Living Standard Survey 2010/11. Government of Nepal.

Central Bureau of Statistics. (2011). Poverty in Nepal. Government of Nepal.

Central Bureau of Statistics. (2019). Economic Census. Government of Nepal.

Grubler, A., Wilson, C., Bento, N., Boza-Kiss, B., Krey, V., McCollum, D. L., ... & Cullen, J. (2018). A low energy demand scenario for meeting the 1.5 C target and sustainable development goals without negative emission technologies. Nature Energy, 3(6), 515.

Holmberg, J., & Sandbrook, R. (1992). Sustainable development: What is to be done? In J. Holmberg (Ed.), Policies for a small planet (pp. 19-38). London: Earthscan

Humpenöder, F., Popp, A., Bodirsky, B. L., Weindl, I., Biewald, A., Lotze-Campen, H., ... & Rolinski, S. (2018). Large-scale bioenergy production: how to resolve sustainability trade-offs?. Environmental Research Letters, 13(2), 024011.

Liu, L., Oza, S., Hogan, D., Chu, Y., Perin, J., Zhu, J., ... & Black, R. E. (2016). Global, regional, and national causes of under-5 mortality in 2000–15: an updated systematic analysis with implications for the Sustainable Development Goals. The Lancet, 388(10063), 3027-3035.

Ministry of Federal Affairs and Local Development. (2016). Statistics of Local Road Network (SLRN) 2016. Kathmandu: Ministry of Federal Affairs and Local Development.

Ministry of Finance. (2018). Economic Survey 2017/18. Kathmandu: Ministry of Finance.

Ministry of Finance. (2019). Economic Survey 2018/19. Kathmandu: Ministry of Finance.

Ministry of Health and Population. (2016). Nepal Demographic and Health Survey 2016. Government of Nepal.

National Planning Commission. (2017). Nepal's Sustainable Development Goals, Baseline Report. Government of Nepal.

National Planning Commission and Oxford Poverty and Human Development Initiative (2018). Multidimensional Poverty Index: Analysis Towards Action. Government of Nepal and University of Oxford.

Nepal in Data (2019). Retrieved June 10, 2019 from
https://nepalindata.com/insight/provincial-profile-karnali-province/

Nilsson, M., Griggs, D., & Visbeck, M. (2016). Policy: map the interactions between Sustainable Development Goals. Nature News, 534(7607), 320.

Parkinson, S., Krey, V., Huppmann, D., Kahil, T., McCollum, D., Fricko, O., ... & Raptis, C. (2019). Balancing clean water-climate change mitigation trade-offs. Environmental Research Letters, 14(1), 014009.
Pinker, S. (2018). Enlightenment Now: The Case for Reason. Science, Humanism, and Progress, 47.

Popp, A., Dietrich, J. P., Lotze-Campen, H., Klein, D., Bauer, N., Krause, M., ... & Edenhofer, O. (2011). The economic potential of bioenergy for climate change mitigation with special attention given to implications for the land system. Environmental Research Letters, 6(3), 034017.

Pradhan, P., Costa, L., Rybski, D., Lucht, W., & Kropp, J. P. (2017). A systematic study of Sustainable Development Goal (SDG) interactions. Earth's Future, 5(11), 1169-1179.

Ricardo, D. (1887). Letters of David Ricardo to Thomas Robert Malthus, 1810-1823. Clarendon Press.

Sachs, J. D. (2015). The age of sustainable development. Columbia University Press.

Springmann, M., Godfray, H. C. J., Rayner, M., & Scarborough, P. (2016). Analysis and valuation of the health and climate change co-benefits of dietary change. Proceedings of the National Academy of Sciences, 113(15), 4146-4151.

TWI2050 - The World in 2050 (2018). Transformations to Achieve the Sustainable Development Goals. Report prepared by The World in 2050 initiative. International Institute for Applied Systems Analysis (IIASA), Laxenburg, Austria.

Ul Haq, M. (1995). Reflections on human development. oxford university Press.
United Nations Development Programme. (1990). Human Development Report 1990. Washington, D.C.

World Bank. (2013). World Development Report 2014: Risk and Opportunity—Managing Risk for Development. Washington, DC.

Seven Key Drivers of Prosperity

- Tourism
- Agriculture
- Energy
- Industry
- Infrastructure
- Human Resources
- Good Governance

Five Key Enablers of Prosperity

- Natural Beauty
- Biodiversity
- Unity Between Social Diversity
- Cultural Prosperity, Co-existence & Identity
- Demographic Dividend

Karnali Province Planning Commission