

A Larger Perspective on Nepal's Transitional Strategy to Graduate from Less Developing Countries (LDC) to Developing Country (DC)

Ihsan Ullah¹, Yonghong Dai^{2*}, Nandita Khadgi³, Yonghong Qin^{2*}, Nischal Shrestha⁴, Amir Hamza⁵

¹Collaborative Innovation Center for Security and Development of Western Frontier China, School of International Studies, Sichuan University, Chengdu, China

²College of International Studies, Institute of Area and International Communication Studies, and Center for China's Overseas Interests, Yuehai Campus, Shenzhen University, Shenzhen, China

³Institute of South Asian Studies ISAS, Sichuan University, Chengdu, China

⁴Daayitwa Nepal Public Policy, Kathmandu, Nepal

⁵School of Media and Communication, Yuehai Campus, Shenzhen University, Shenzhen, China

Email: *daiyh1999@123.com, *1579366967@qq.com, Ihsanullah946@yahoo.com, nanditakhadgi21@gmail.com

How to cite this paper: Ullah, I., Dai, Y. H., Khadgi, N., Qin, Y. H., Shrestha, N., & Hamza, A. (2023). A Larger Perspective on Nepal's Transitional Strategy to Graduate from Less Developing Countries (LDC) to Developing Country (DC). *Open Journal of Social Sciences*, 11, 182-200.

<https://doi.org/10.4236/jss.2023.112013>

Received: November 15, 2022

Accepted: February 12, 2023

Published: February 15, 2023

Copyright © 2023 by author(s) and Scientific Research Publishing Inc. This work is licensed under the Creative Commons Attribution International License (CC BY 4.0).

<http://creativecommons.org/licenses/by/4.0/>



Open Access

Abstract

Given the fact that Nepal is right on the cusp of exclusively graduating from the Less Development Countries (LDC) category to Developing Countries, as the assessment by the United Nations. It is time to reorient, revamp, and re-caliber Nepal's policies to achieve the sustainable, fair, just, and inclusive growth that Nepal and its people so aptly deserve. Nepal has opted to graduate in a peculiar time, where the world seems to be facing huge impending problems such as climate change which has fundamentally changed how we view development as a process. Nepal is eligible to secure graduation with two criteria human assessment index (HAI), and the environmental vulnerability index (EVI). For most of the process, in modern times, Nepal has mostly been reliant on its development partners and donors to catch up, mostly because this old historic state has always been rather reactive in terms of disruptive transformations of the industrial age. Now Nepal has caught significantly up to a threshold that it can begin to forge its path ahead for the development and realization of its national goal. For this, the time to think bigger, and larger and the time to compete with the world has arrived. Nepal should find a way forward that stays true not only to its rich heritage, identity, history, and resources but also to match its development mechanism, framework, and process largely with the world, as the development paradigms transit to a sustainable mode of development, given the backdrop of human-induced climate change. In such a scenario, the paper tries to highlight the need for a "pivot" in the Nepalese economy for a sustainable LDC transition for larger

national rejuvenation. It tries to show how a pivot strategy in such a reality would look that matches such complexity and nuances of modern times and likewise puts the transition in perspective.

Keywords

Nepal, Irreversible Graduation, Middle Income Trap, LDC Transition Strategy, Climate, United Nations

1. Background and Problem Statement

Post, Promulgation of Nepal's new Federal Constitution in 2015 with a relatively steady socio-political background and after the devastating earthquake in the same year, in the past few years Nepal has achieved a remarkable growth rate of around 7.3%, which epitomizes vast prospects of reverberating effervescent characteristics of Nepalese economy (International Trade Administration, 2021). This has enabled Nepal to embark forward on the much-needed path of modernization and industrialization on very safe grounds for sustainable and equitable development which is embodied in the country's larger objective. In alignment with such national goals and track sheets paired with SDGs (Sustainable Development Goals) and bustling Human Assessment Index (HAI) as well as impressive EVI (Environment and Economic Vulnerability Index)¹, Nepal has largely generated enough traction to graduate from LDC and start a new chapter or milestone in its development process by 2024. Indeed, when we assess the state's impressive physiological resource endowments, human capital, competitive strengths, geography and other advantages and alignment with the impressive multidimensional progress in recent years on its various socio-political, socio-economic and human development fronts, graduation from LDC given correct long-term visionary strategies could prove to be paradigm changer for Nepal's development process or journey. For its people and the long journey Nepal has come through as a state, this graduation should be better understood as a key milestone in Nepal's development voyage which could bring new vigor, dynamism, attention, and synergy to its national goal, that all of its people so aptly.

Given the transition holds such importance, it is imperative to assess the question in multidimensional layers to come up with an ideal strategy that not only complements the long-term goal but supplements the gap left by the transition as well. It is also significant to account for the larger context of International Relations, Nepal is graduating upon and sophistication of modern times. In such a reality, perhaps it would be wiser to assess the question using a doctrine or theory that was specifically designed to be a decision-making strategy to cope

¹The three metrics of U.N assessment for LDC graduation are GNI (Gross Nation Income) HAI (Human Assessment Index) and EVI (Environment and Economic Vulnerability Index). Out of three Nepal meets the latter two of metrics of assessment and has met 60% of specified threshold of GNI. Nepal is the only Least Developed Country (LDC) to graduate by meeting the latter two metrics of the UN assessment metric which is often regarded very vital for an irreversible graduation.

with pressures of modern problems such as the “OODA Loop” which has time and again been tested in the worst of pressures. Today, the loop is increasingly applied in many distinct fields which are closely linked with International Relations such as business, litigation, law enforcement, and military or political strategies. By assessing Nepali LDC Transition with such a tool one can not only account for the significant long-term hurdles of transition such as “irreversible graduation” and “middle-income trap” but this four-step decision-making strategy would also provide a thorough outlook on the problem. The strategy chiefly focuses on assessing the presented information, comprehending it in the larger context, and responding by deciding upon the most suitable decision or strategy to bear the maximum result.

As it stands today, Nepal although positively has seen such remarkable transformations and synergy in the development process still faces many severe problems. Especially, a chief development vision that sews together all of the national goals and objectives seems to be lacking which is more clearly visible as Nepal picks up more pace in its progressive developmental rapport and graduates from LDC altogether. To put it simply, Nepal still struggles with disparity and duality in the sense that both scenarios of Nepal’s development process (good and bad) seem to be accessible on not so distant horizon, especially post COVID-19 (Karn, 2021). This is in part caused by both plethoras of internal and astounding external factors that Nepal has little to do with.

In such a context of mixed realities and duality for Nepal, given multifaceted impounding problems the study tries to provide brief comprehensive segment strategies as a pivot for the economy and future of Nepal. Realizing Nepal’s vast heritage, rich history, geo-strategic location, resource endowment, and demography dividend and assessing it with the larger transformations in International Relations, both disruptive and pre-emptive, the study aims to showcase the quintessential need for “pivot” in the Nepalese economy for a larger rejuvenation, repump and attainment of the national goals. The studies in particular aims to showcase what a “pivot” strategy for the Nepalese economy could look like for a sustainable LDC graduation and successful venture forth onwards also as a developing nation. It chiefly pays attention to such possible macro sectors for the economy as a “pivot” measure and means for a larger strategy, which compliments its rich past, heritage, diversity, and exotic resources and aligns with the future and the larger trajectory of International Relations.

2. Methodology

The study is primarily focused on an extensive desk study and secondary data which were comprehensively compiled, tagged, and assessed. Existing data related to the literature were summarized, collected, and measured for their efficacy for the topic at hand. Research reports from donor agencies/bodies, academics, key experts, and policymakers were taken into account. Several data were also extracted from various open-access trade statistics data portals such as

UNCOM Trade, World Trade Integrated Solutions, and TEPC (Trade and Export Promotion Centre) Nepal. Featured data from significant international bodies such as World Bank and IMF also played important role in the framing of the research. Relevant documents and manuscripts were also accessed from various ministries, administrative institutions, and bodies locally for data collection of the research. Party manifestos, press releases, books, features, and other secondary data describing leading political parties were also taken into account to paint a more pragmatic picture and importantly for framing the research for higher efficacy.

3. The Need for a Larger LDC Transition Strategy for the Larger Nepalese Goal

To ensure a smooth transition, it is also imperative to focus on the larger national goal, as no country before Nepal exclusively targeted graduates from LDC, the focus has always been towards a larger national goal and graduation has mostly always been a byproduct (Islam, Kaplan, Writz, & Gallagher, 2021). The nature of transition strategies varied as per the graduates and their difficulties, needs, and susceptibilities. The bulk of graduating states, policies were concentrated on improving economic productivity within and beyond the border ensuring structural transformations and mitigating susceptibilities via increasing higher-value product manufacturing and ramping up various other economic sector as per their advantages (Razzaque, 2020).

Diversifying exports, upscaling technology, and infrastructure, improving production, and institutionalizing competent institutive governance has always been the key focus (Oraboune, 2020). Nepal has only graduated in two of the category, it is most vulnerable on the economic front, more so because of the COVID-19 epidemic and the shock it delivered to the Nepalese economy which is heavily reliant on remittance and tourism (The Asian Foundation, 2021). Nepal should keep exploring the avenues for requesting additional specific measures as well as providing critical support to strengthen public health and trade capacity measures to mitigate the stressors of the time.

Whilst most of the literature available in this regard has been focused on mitigating the short-term stressors induced by preferential market and financial measures triggered by LDC graduation, this study tends to highlight the need for pivot and to provide a more holistic focus for the Nepalese economy in segments to transit for the realization of its national aspiration of development and prosperity. Such a take, could not only paint a more illustrative picture of the transition process and development process but would help identify critical as well as strategical variables in the transitional strategies symmetrical to the larger goals and dynamics.

4. Impact of LDC Graduation

To understand the impact of LDC graduation it is also important to put the

graduation of Nepal in perspective. It is truly one of the most unique cases that is graduated or poised to have been graduated. Equatorial Guinea, Maldives, Botswana, Cape Verde, and Samoa are the only other states that have graduated from LDC altogether (Paddidon, 2019). Nepal is not only a relatively very significantly populated country pitted between one of the two largest economies of the world but its case is very much dynamic because of the time it has chosen to graduate in as well; pitted with ongoing radical changes in International Relations which range from disruptive changes in Geopolitics to Power Parity to New Dimensions of threats such as (Climate Change, Global Public Health Issues to name a few among others) as well as ongoing transformations in Traditional Security Mechanism due to robust advancements in military technology.

Simply the case of Nepal is very much unique and so is the timing, if Nepal plays its cards right so could be the reward. But to maximize or ensure such reward, first, it is very much imperative to assess the impact of LDC graduation and put things in perspective with larger national goals (UNCDP, 2020). One of the most perilous issues raised after LDC graduation is likely to be the loss of trade concessions, preference, and conveniences which were put in place via different global support measures to ensure market access, technology transfer, and to provide critical assistance (UNESCAP, 2021b). Although this is likely to have an adversarial impact on Nepal in the mid to short term it is also imperative to assess the larger picture, to put things in perspective. Even though economically Nepal has been doing very well in the last several years, relatively speaking at the same time its share of export about GDP has been declining from 5.1% in 2008-2009 to 2.7 in the 2018-2019 fiscal year, which is very alarming given the fact that this has been progressive time for Nepalese economy (GoN, 2019). Nepal's export is primarily focused on a handful of manufactured products. However, the fact is that the substances required for processing and manufacturing are heavily dependent on imports. According to the Economic Complexity Index (ECI), Nepal lies at 164 in terms of GDP with just 159 exports and 101 imports around the world. It has not been able to align itself with any regional or international global supply and value chains. Its trade scorecards have always struggled (Acharya, 2019). Simply, the whole trade and commerce ecosystem has always been compromised. Contrary, to preferential market access, Nepal's trade internally and externally has been very weak in comparison to the rest of the graduates, although it holds impressive possibilities especially to harness the demography dividend, resources endowments, and access to the largest market of the worlds which also happen to be our neighbours.

4.1. Delta: Nepal's Loss of LDC Trade Preference from a Perspective

Nepal at present receives 136 LDC-specific support measures from developed countries but has mostly not been able to capitalize on such opportunities except for technology transfer, critical assistance, and Official Development Assistance (ODA) measures (UNDESA, 2020). It is inevitable for Nepal, in many cases as it

progresses in its development path to evolve from such a scenario and become more self-sufficient, regardless in terms of short-term transition strategies any robust strategy should also take this into account in the larger variable and try to find a holistic solution that not only supplements such gap but compliments larger developmental goals as well.

Moreover, the loss of preference should also be put into perspective. Minimizing risk from preference abruption is very much doable and within reach for Nepal especially given its complexity in International Relations and also its stature relative to other LDC graduates (Cosic & Sudyumna, 2017). Previous, LDC graduates have faced similar challenges more specifically, Maldives, Cape Verde, and Samoa were successful to negotiate with the EU for further extension of the EU's Everything but Arms (EVA) trade preferences (Shrestha, 2021). Nepal must follow the path of other graduates and bilaterally approach this issue with relevant parties to negotiate for an extension for several years for a smooth transition from LDC, especially given the pressing matter of time such as Climate Change and the Pandemic. Since Nepal is also going to lose DutyFree, Quota-Free (DFQF) market access as well as eased up tariffs, Nepal must come up with a long-term strategy to overcome such hurdles by seeking a more active role in International Relations, joining hands with likeminded developing partners who face the similar problem for symmetrical global development. The table (Table 1) below tries to showcase the scope and dynamics of trade loss from preference abruption.

Moreover, there is also fear that Nepal is likely to lose a significant amount of

Table 1. Trade loss from preference erosion.

State	Loss from Preference Abruption (% of Bilateral Trade)	Loss from Preference Abruption (% of Total Export)
Australia	8.1	1.6
Canada	26.1	6.5
China	24.5	14.4
United States	1.71	5.1
Japan	18.7	5.5
European Union	20.1	56.8
New Zealand	20.7	0.0
Norway	10.0	0.0
Thailand	19.7	0.3
Türkiye	9.5	7.8
Chile	14.1	0.0
Republic of Korea	27.8	1.7

Source: Nepal Human Development Report, 2020, p. 64.

aid and other support measures which is not true in most cases. Whilst, in some cases the nature of aid or support is likely to evolve as per LDC status, in many cases aid is likely to remain linear as it is often derived from geopolitical nuances, mutual benefit, and other interests. In this case, it is wiser, to comprehend LDC graduation as merely a milestone or a signal of new heights in its developmental voyage. Graduation is not a binary concept and does not generally signify a solution to all of the problems but it generally only signifies a new level or height in the development process. The below figures (**Figure 1**, **Figure 2**) classify the bilateral and multilateral developmental partners in terms of transitional impact in aid and support measures.

It is also estimated by World Integrated Trade Solutions, by using SMART which is an economical and trade equilibrium modeling tool, as per a scenario run post-LDC preferential treatment for Nepalese economy, it was seen that Nepalese export or economy largely is likely to feel very moderate effects, at most totaling to around only 3.7 percent of total export, regardless it was also seen that most of the loss would be in EU which would amount to almost half of the entire loss (Ezemenari, Joshi, Blum, Varela, & Ganz Carulla, 2021). As per the milestone of transiting LDC, Nepal can see transit towards mixed aid rather than concessional or strings-free foreign aid. Likewise, as this change signifies that Nepal is slowly evolving and gaining traction in its development path, any future loans are likely to be equipped with higher interest rates but would be only quantifiable as per bilateral or multilateral negotiation process. Over a long period, this could aid in the increment of external debt to GDP ratio, which at the contemporary falls under the untroublesome threshold.

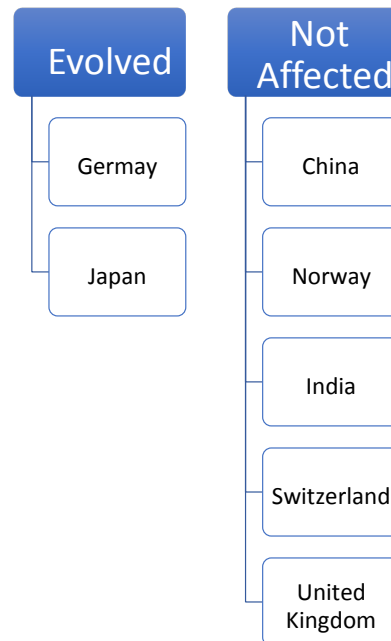


Figure 1. Post-graduation aid impact scenarios for major bilateral development partners. Source: Nepal Human Development Report 2020, GoN, NPC and UNDP, p. 73.

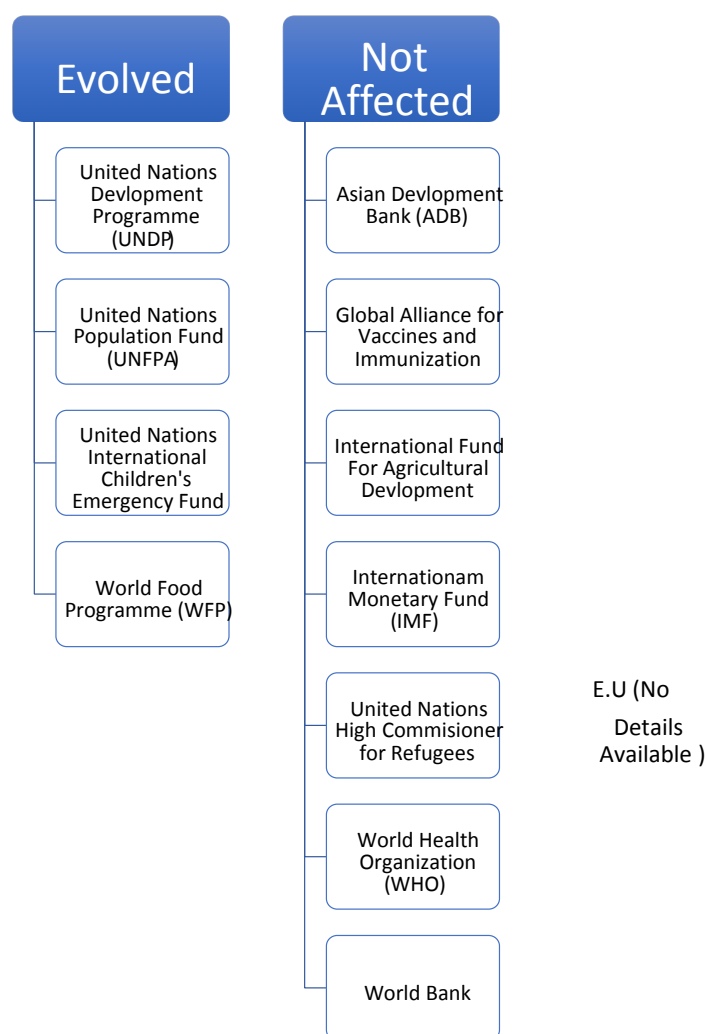


Figure 2. Post-graduation aid impact scenarios for the major multilateral development part. Source: Source: Nepal Human Development Report 2020, GoN, NPC and UNDP, p. 74.

4.2. Plus: Positives of LDC Graduation

As much as it is significant to assess the negative impact of the LDC transition, it is also equally beneficial to assess the positive impact of the transition as well (UNCDP, 2021). In the long term, the positive impact is likely to far outweigh what little or manageable negative impact it may come with. As this change signifies progressiveness. As Nepal transits to a developing country, it may be a very well time to garner our attention to attract Foreign Direct Investment, Foreign Talent & Expertise rather than aid, volunteer, and support. This change signifies a robust strategy that seeks to integrate Nepal more dynamically into global financial market, supply/value chain, and economy.

Lastly, to mitigate the stress of the LDC Transition we can also urge our bilateral and multilateral partners to phase out the preference in a phased manner, whilst Nepal takes suitable measures for negotiation and to overcome the gap. At the end of successful graduation, Nepal can also seek to set up donor support

groups or forums, like Cape Verde and The Maldives (Khanal, Pandey, & Sharma, 2020). Nepal has a unique and appealing case, vis-à-vis LDC graduation, it should opt to use such advantages in its benefits. In theory, although there may be minor to moderate stressors that could have some adverse effect after Nepal graduates officially, which is in itself very debatable, practically boots on the ground, the capability and aptitude of a state for retention of such preferential access and international support measures whilst LDC transition, hangs solely on a state's competency to muster financial, technical and political goodwill from its various multilateral and bilateral development counterparts.

4.3. 21st-Century Development Discourse

Nepal has opted to transit LDC at a special time when the entire world has realized that the true development path only ends with sustainable development. By that means, or metric no country is truly developed in its utter and utmost sense including the likes of highly developed countries until they offset their carbon emissions and achieve truly sustainable development. This massive recalibration of how we understand the development process and discourse is likely to have far-fetching implications. To make their going about the daily process of life sustainable and to align everybody's growth with sustainability is arguably going to take some quiet time still regardless of the trajectory that seems to be heading there. A future of development where growth is sustainable, that is not harmful to the environment as well as sustainable in terms of energy, and socioeconomic aspects tied to other things as well (Menah, 2019). The following conceptual idea (Figure 3) presenting the development discourse in international relations.

Today, development in its true sense is the biggest challenge a state can face which is being sustainable to the environment and being sustainable in terms of resources it needs for going about its business. Likewise, it is likely to be easily the single biggest challenge for Nepal in any event of the case as it graduates from LDC and ventures forward as a developing state in days to come, where the rules and goals of development are poised to be very different (UNCTAD, 2018). From a development front, as a species and civilization, this is likely to be a disruptive paradigm changer, as the entire of Humanity awakens from the seemingly eternal slumber of a "zero sum" development approach which has always pitted humanity against the environment and surrounding for survival or boom.

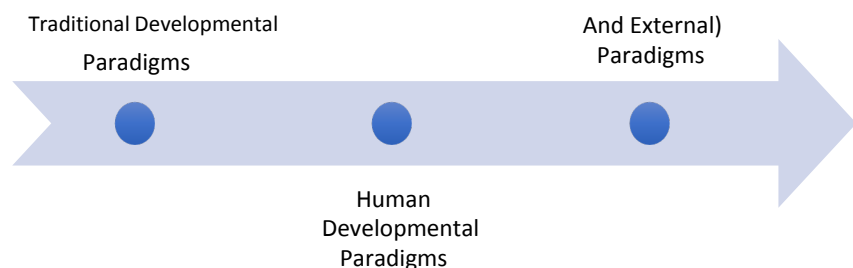


Figure 3. Conceptual idea of development discourse in international relations. Source: Author.

In the long term, such a paradigm shift is also inevitable to have a profound effect in terms of how we see, understand, contextualize and value development in International Relations.

5. Climate Change and Nepal's Development Process

Climate change as we understand is simply the erosion of greenhouse gas equilibrium by unintended artificial means such as over production of Carbon Monoxide (Co₂), Methane and other forms of Green House Gas (GHG) from industrial process which can cause unprecedented greenhouse effect leading to artificial warmer temperature ultimately tarnishing the very equilibrium of climate which we depend to thrive upon. Below **Figure 4** illustrates the scientific narrative of global warming which is leading to artificial climate change.

Assessment Report entitled, "Climate Change 2021: The Physical Science Basis"

Nepal is in a huge risk not only because of the delicate and large ecosystems but also because of the fragile topography, its reliance in agriculture as well as other climate reliant socioeconomic aspects in which women are poised to be very vulnerable with restricted adaptive aptitudes. The 6th Assessment of IPCC (Intergovernmental Panel on Climate Change) also indicates that the rapid melting of glaciers in Nepal and changes in hydrological cycle is poised to increase the chances of flash floods, glacier lake outburst, affect river run off, increase water related hazards, displace communities and impact vegetation, agriculture, biodiversity and public health. The report also suggests that Nepal is likely to see heavy increase in precipitation and thawing of permafrost in glaciers which will hamper rain/snow cycle till 2050s.

Likewise, the report also indicates that the heatwaves, droughts (especially in dry seasons) and extreme weather patterns are likely to get more intense in nature and frequent in numbers for the 21st Century inviting more hot days than cold,

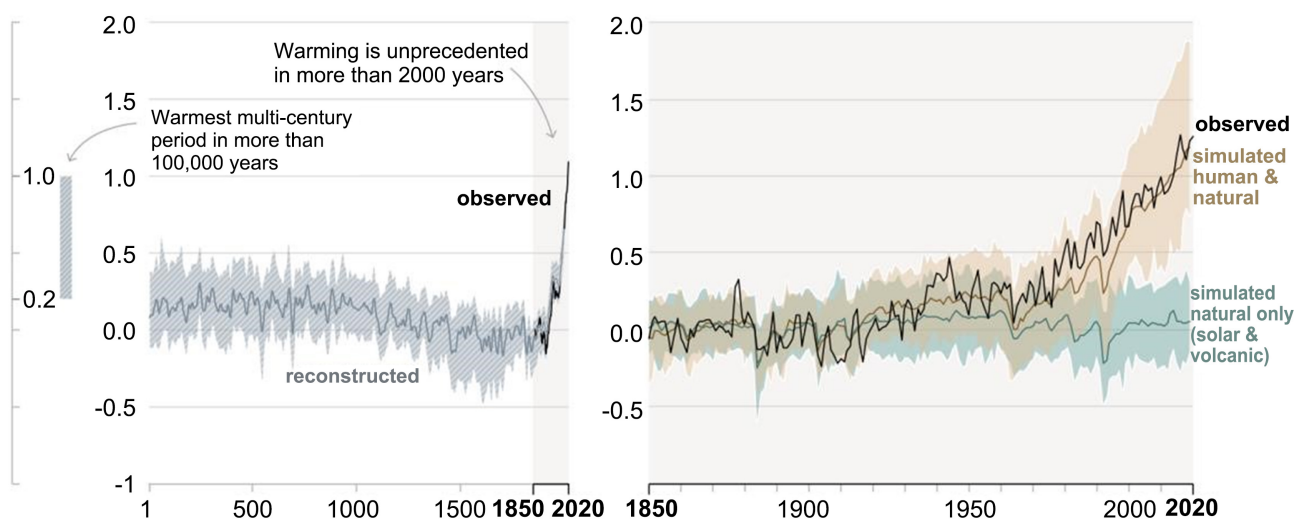


Figure 4. (Left) global average temperatures for last 2000 years. (Right) Changes in global average temperatures from 1850-2020. Source: This figure was taken from Intergovernmental Panel on Climate Change's Sixth.

such dynamics is also likely to progress more with time. Below **Tables 2-7** shows the overall mapping of districts of Nepal that are most susceptible to climate change.

A distinct report conducted by USAID patents also indicates that Nepal is likely to see 33% - 35% increase in extreme rainfall events till 2050s. Likewise, the national temperatures are also poised to see increment of 1.6°C to 2.2°C at

Table 2. Mapping climate change vulnerability in Nepal.

Very Risk Area	High Risk Area	Moderate Risk Area	Low Risk Area	Very Low Risk Area
Kathmandu	Mahottari	Sankhuwasabha	Nuwakot	Ilam
Ramechhap	Dhading	Baglung	Dhankuta	Jhapa
Udayapur	Taplejung	Sindhuli	Kanchanpur	Banke
Lamjung	Siraha	Bhojpur	Nawalparasi	Palpa
Mugu	Gorkha	Jumla	Sarlahi	Rupandehi
Bhaktapur	Solukhumbhu	Mustang	Sindhupalchok	
Dolkha	Chitwan	Rolpa	Darchula	
Saptari	Okhaldhunga	Bajahang	Kaski	
Jajarkot	Achham	Rukum	Arghakhanchi	
	Manag	Rautahat	Morang	
	Dolpa	Panchthar	Dang	
	Kalikot	Parbat	Lalitpur	
	Khotang	Dadeldhura	Kailali	
	Dhanusha,	Sunsari	Syanja	
	Dailekh	Doti	Kavre	
		Tanahu		
		Makwanpur		
		Myagdi		
		Humla		
		Bajua		
		Baitadi		
		Bara		
		Rasuwa		
		Nawalparasi		
		Sarlahi		
		Sindupalchok		
		Darchula		
		Kaski		

Source: MoE/NAPA Project (2010), Climate change vulnerability mapping for Nepal.

Table 3. Climate risk for Nepal in ecology.

Climate Stressors	Risks
Increase in Temperatures	Public Health Issues (Pests and Diseases)
Reduced Rainfall and Increased drought like conditions	Forest Fires, Erosion of hillslopes
	Depletion of Wetlands and reduction in fish wild and domestic animal livestock

Source: USAID Climate Change Integration Support, 2017.

Table 4. Climate risk for Nepal in water resources.

Climate Stressors	Risks
Increase in Temperatures	Water stress for agriculture, industry and human settlements
Change in seasonal precipitation dynamics	Water security issue and depletion of underground water resources (including reduced water quality)
Increment in drought-like conditions and extreme weather anomaly	Reduced hydropower and other renewable energy potential

Source: USAID Climate Change Integration Support, 2017.

Table 5. Climate risk for Nepal in agriculture.

Climate Stressors	Risks
Increase in Temperatures	Soil Erosion and Land Security Issues
Change in seasonal precipitation dynamics	Reduced crops yield and agricultural productivity (Damage to crops and livestock)
Increment in drought-like conditions and extreme weather anomaly	Loss of Employment and Social destabilization

Source: USAID Climate Change Integration Support, 2017.

Table 6. Climate risk for Nepal in public health.

Climate Stressors	Risks
Increase in Temperatures	Heat Strokes, Epidemics and increment in waterborne and vector borne disease
Change in seasonal precipitation dynamics	Reduced crops yield and agricultural productivity (Damage to crops and livestock)
Increment in drought-like conditions and extreme weather anomaly	Natural Disasters

Source: USAID Climate Change Integration Support, 2017.

Table 7. Climate risk for Nepal in infrastructure.

Climate Stressors	Risks
Amplified risk and frequency of extreme weather patterns	Displacement of Human Settlements
Rising Temperatures and Increase Glacier Outbursts	Damage to Basic Human Infrastructures
	High risk of injury and fatality

Source: USAID Climate Change Integration Support, 2017.

the same time (USAID Climate Change Integration Support, 2017). Below mentioned are some of the summary of the report.

Nepal because of its wide, diverse and arduous topography has also seen 6-billion-dollar worth of physical and economical damage in Nepal because of Natural Disasters in past 40 years. It is also estimated that 80% percent of that total population are prone to nature and climate enforced disaster in Nepal (GoN, 2021). Economically backwards, indigenous people and disadvantaged

community in Mountains and Hills as well as Terai regions who rely on the environment and nature for socioeconomic aspects are likely to be hit worst. Climate Change is poised to adversely affect.

Nepal's development process in many multi-dimensional factors and could easily prove to be the single most difficult blockade in its path (Nuruzzaman & Tateno, 2021). Nepal is committed to act in the framework of Paris Agreement, although it barely emits any emissions. Nepalese primary focus has always been limiting the rise of global average temperature to 1.5°C as that would drastically help in lowering risks for Nepal, although it will still have adverse effect but holds significantly lower threshold of risk compared to 2°C or higher. It's even more progressive second NDC (Nationally Determined Contribution) 2020-2021, aims to create a climate resilient society and seeks to mitigate the issues of Climate Change (WHO, 2021).

As Nepal turns over a new leaf in its development process, by achieving new heights by graduating from LDC, it is imperative to raise the scope of adaption and re-gear the entire economy as well as reframe its growth model towards even more sustainable path to achieve the national goal. This process of shifting its entire focus and re-wrapping its development paradigm around Climate Change could also provide ideal opportunity to sync its modernization, industrial and growth model in accordance to the nuances of International Relations this time around which previously for the first half of Industrial Revolution Nepal mostly lacked. The second half of it, is only likely to be completed with absolute sustainable development in sights. Although Nepal can't solve the problem of climate change alone and the fact is it has always been at the receiving end of things, when it comes to global climate change. It can choose to exclusively adapt and lead by example by trying to make the best of the situation and structural openings in development paradigm. This time around, it can reorient, by re-observing, deciding and acting (OODA Loop Cycle) on green strategies to largely attain the national goal of Nepal.

6. Pivots to Green Economy

Given the calculus of any developmental strategy, including LDC transition strategy for Nepal it is very much imperative that climate change is likely to be the most significant and sturdy disruptive variable in its equation. Hence, Nepal needs to wrap its development strategies around it as world is increasingly favoring green and sustainable development, not only to access its competitive advantages such as resources endowment and demography dividend but to attract FDI and Talent/Expertise for a smooth journey as a Developing or even Developed nation. The background and imperatives of Climate change also makes it inevitable for Nepal make transit to a green economy. It is not a matter of if, but a matter of when as developmental paradigm has seen fundamental pivot to sustainable development. The only difference in that case, is likely to be the real meaning of it which is fulfilled and how best will Nepal make use of

pivot when it does so. Embracing a green economy, re-synergizing its development process to meet the complexities of time could help is simply getting on top of things. So that can Nepal be better equipped in its developmental process and traction. On an important side note, it could also help Nepal escape barriers like “middle income trap” by bringing enough vigor, dynamicity and vibrancy to the economy and largely development process of Nepal.

Riding the Green Energy Wave

Nepal has a vital scope for clean energy which is not just limited to Hydropower. In solar energy given the states very ideal latitude that gets healthy amount of solar radiation. It is estimated that, that it can attain more than 2920 GWh of energy by only using 0.01% of the total land area (Kafle, 2017). Given Nepal’s heritage of Biomass and also potential in Wind and Hydropower energy, there is immense potentiality for Nepal to ride the new surge in green energy wave. More importantly, clean energy is also one of the only plausible means for Nepal to increase its energy consumption given the asymmetry of development, socio-economy status and also variation in topography. Big Hydropower projects and necessity to import oil from different international sources are creating economic burden for the country (Butchers, Williamson, & Booker, 2021). To understand the full dynamics of energy sector in Nepal it is also imperative to assess critical hindsight’s of Nepalese Hydropower sector which is often perceived as the most luscious energy aspect of Nepal as illustrated below (Figure 5).

With recent urgent push in green and clean energy in the backdrop of Climate change and advancements in renewable energy, it is also time for Nepal to capitalize on this and make a comprehensive as well as robust energy plan which

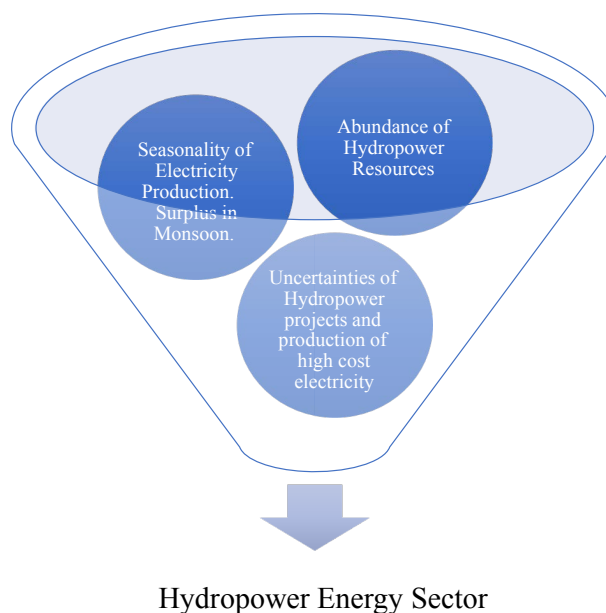


Figure 5. Critical hindsight of Nepalese hydropower. Source: Author.

compromises more than Hydropower. From this perspective technologies advancements in Solar, Wind and Green Hydrogen which have been seeing lowering in cost to production ratio and seeing rising investments/demand globally has very unique prospects for Nepalese energy sector (Mali, Niraula, Kafle, & Bhusal, 2021). Especially, Green Hydrogen which simply refers to sustainable process of making hydrogen using renewable technology fits picturesquely for Nepali energy dynamics in which hydropower is seeing seasonal surplus in monsoon (Thapa & Thapa, 2020). Enhancing further capabilities using wind, solar, geothermal and even biomass to generate green hydrogen could help Nepal not only fuel its sustainable economic development but could also help traditional barriers that have been holding back to Nepal to export clean energy. Hydrogen is an energy carrier hence, there is much feasibility to trade it as a good or commodities that generally doesn't rely on grids and supply transmission lines. **Figure 6** tries to illustrate the proposed green hydrogen eco-system in Nepal.

7. Hi-Tech Sustainable Agriculture Ecosystems

Hi-Tech Sustainable Agriculture Ecosystems simply is a multi-dimensional concept which emphasizes the use of new sophisticated technologies such as Robotics, Big Data, Information Communication Technology (ICT), AI & Automation,

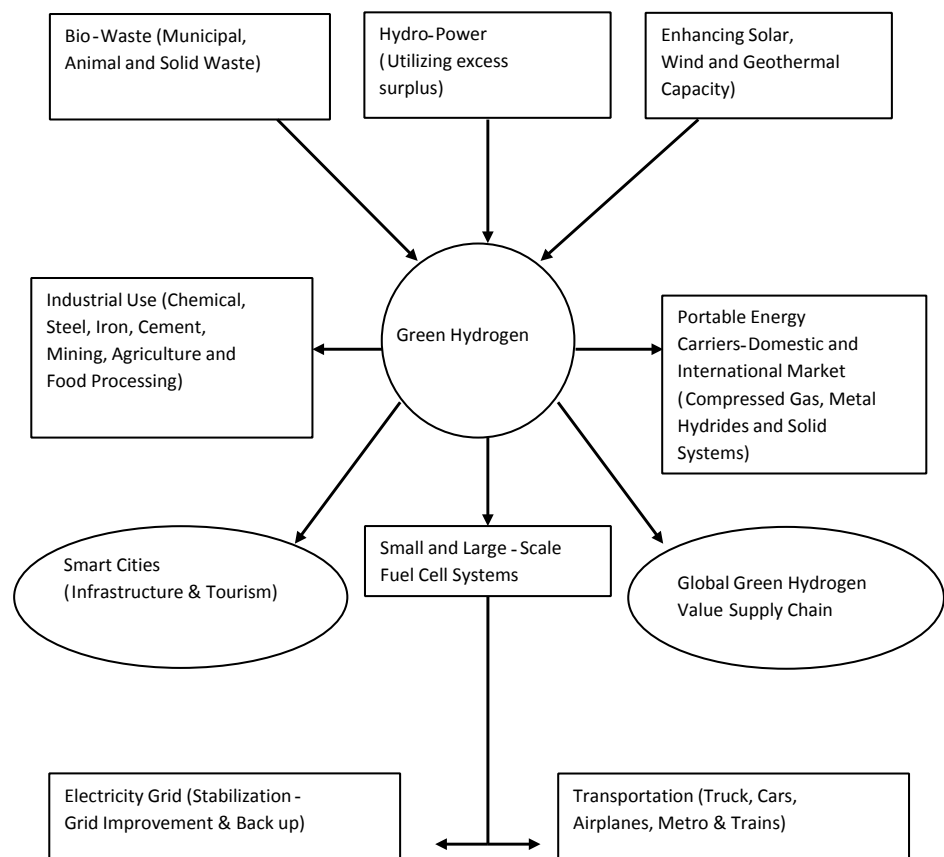


Figure 6. Conceptual framework of hydrogen eco-system in Nepal. Source: This figure (Figure 6) was based on proposed R&D by Green Hydrogen Lab Kathmandu University (K.U).

Climate & Earth Observation Technology in synergy to commercially farm in an environment friendly way that not only protect environment but enhances food security and productivity to create thriving Agricultural ecosystems. Given Nepal's impressive resources endowments and human capital and also the problems that Agriculture sector faces that is lack of qualitative manpower and capital such pivot could also rebrand Nepal's agricultural sector both domestically and internationally generating investments, research and development (Pasa, 2017). Real Transformation of Nepalese economy will begin with reforms and modernization in agriculture (NAPA, 2010). The current 15th year Plan does put massive emphasis on agriculture but lacks a bigger thread, given proper reorientation, in the net structure of federalism and implementation in a synchronized way, the strategy can aid to unleash the true potential of agriculture and largely also transformation of the economy (MoFE, 2019).

8. Transforming Manufacturing Sector

Manufacturing is very essential part of development in the Industrial age. It induces structural transformation and incentivize employment, export as well as causes sustainable economic growth because of its trickle-down effects to the other aspects of economy. Participating in global value chains helps LDC country to raise as well as diversify their exports, explore new sectors and finance commercial gaps (DiCaprio & Suvannaphakdy, 2017). Because of its competitive advantages in terms of trade and commerce in comparison to other sectors of economy manufacturing enables engagement with the rest of the world. Hence, it is easy to understand that manufacturing is also considered the 'engine of growth' because of its contribution to development in the Industrial age. It also helps in attracting FDI, Foreign talent & expertise and also enables technological transfer. It also aids in utilization of surplus of other sectors of economy such as Agriculture and Energy which in Nepal's case is very much feasible (UNESCAP, 2021a). The deindustrialization of Nepal like every underdeveloped state is primarily because of abrupt shifts and lack of through consistency in neo-liberal economic policies of economic liberalization and monetary policy (Tregenna, 2016). Despite some apprised policies in past several decades, the manufacturing sector still continues to face massive institutional, structural and policy constraints. Undoubtedly, for an eloquent graduation the value of manufacturing sector has to increase above 20% in terms of total economic and employment output (UNDP, 2020).

9. Conclusion

As far as Nepal's LDC Transition goes, Nepal needs to approach the issue and come up with befitting solutions that match the importance of this graduation, as it signifies a new height or a milestone in Nepal's development process. Such opportunity is very rare to come by especially given the long arduous journey Nepal and its people have come through. The strategies must be based upon the

long-term national goal of Nepal, whilst accommodating the gaps left by LDC Transition more importantly the strategies should also avoid great barriers of the development process as well as LDC graduation such as “irreversible graduation” and “middle income trap” and prove to be a multidimensional staple stone that helps unlock new elements in Nepalese development synergy that contribute vitally to Nepal statehood (both internal and external) and be complementary to these larger than life structural realities of International Relations by being proactive with regards to what’s going in the larger world rather than being reactive.

In much of her time, since Nepal opened up it has always been heavily reliant on its development partners to catch up because it was reactive to disruptive transformations of the Industrial age. Now that Nepal has caught up to a threshold after several centuries in line with the rest of the world it can aim to venture or forge its own unique development path for the attainment of its national goal. The time to re-gear its economy seems to have arrived. Time to think bigger and larger has also arrived. Time to compete has arrived, and more precisely to match the latter theme of the industrial revolution which is likely to be shifted exclusively towards sustainability, given the backdrop of human-induced climate change.

Matching synergy with the rest of the developed world, learning from its past mistakes of its steep history, and putting its national goals and objectives first Nepal, can channel this impressive growth in many multidimensional fronts in the last several years, into something big and something much more meaningful to finally turn a new chapter in its development process, and give the people of Nepal, what they aptly deserve. Given correct shifts, and pivots at a given time, Nepal will undoubtedly be able to channel its luscious prospects to do well not only as a developing nation but also to attain the large national goal and become a developed nation.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

References

- Acharya, K. R. (2019). Nepalese Foreign Trade: Growth, Composition, and Direction. *NCC Journal*, 4, 91-96. <https://doi.org/10.3126/nccj.v4i1.24741>
- Butchers, J., Williamson, S., & Booker, J. (2021). Micro-Hydropower in Nepal: Analysing the Project Process to Understand Drivers that Strengthen and Weaken Sustainability. *Sustainability*, 13, Article No. 1582. <https://doi.org/10.3390/su13031582>
- Cosic, D., & Sudyumna, K. (2017). *Climbing Higher: Toward a Middle-Income Nepal*. The World Bank.
- DiCaprio, A., & Suvannaphakdy, S. (2017). *Are Least Developed Countries Sidelined in Manufacturing Products?* Asian Development Bank.
- Ezemenari, K. M., Joshi, N. K., Blum, F. M., Varela, G. J., & Ganz Carulla, F. (2021). *Ne-*

- pal Development Update: Harnessing Export Potential for a Green, Inclusive, and Resilient Recovery*. The World Bank.
- GoN (2019). *Economic Survey 2018/19*. Ministry of Finance.
- GoN (2021). *Conference of Parties (COP26) of UNFCCC*. Embassy of Nepal.
- International Trade Administration (2021). *Nepal Country Commercial Guide*. International Trade Administration, U.S. Department of Commerce.
<https://www.trade.gov/country-commercial-guides/nepal-market-overview>
- Islam, D., Kaplan, W. A., Writz, V. J., & Gallagher, K. P. (2021). *The Social Costs of Graduating from Least Developed Country Status: Analyzing the Impact of Increased Protection on Insulin Prices in Bangladesh (GEGI Working Paper 038)*. Global Development Policy Center.
- Kafle, S. (2017). *Enhancing Efficient Promotion of Renewable Energy in Nepal*. Asia Institute of Diplomacy and International Affairs.
- Karn, S. K. (2021). Impact of COVID-19 on Nepalese Economy. *International Journal of Social Sciences and Management*, 8, 348-351. <https://doi.org/10.3126/ijssm.v8i2.36637>
- Khanal, D. R., Pandey, P. R., & Sharma, B. (2020). *Nepal Human Development Report 2020: Beyond Graduation; Productive Transformations and Prosperity*. UNDP.
- Mali, B., Niraula, D., Kafle, R., & Bhusal, A. (2021, April). Green Hydrogen: Production Methodology, Applications and Challenges in Nepal. In *2021 7th International Conference on Engineering, Applied Sciences and Technology (ICEAST)* (pp. 68-76). IEEE. <https://doi.org/10.1109/ICEAST52143.2021.9426300>
- Menah, J. (2019). *Sustainable Development: Meaning, History, Principles, Pillars, and Implications for Human Action: Literature Review*. *Cognent Social Sciences*, 5, Article ID: 1653531. <https://doi.org/10.1080/23311886.2019.1653531>
- MoFE (2019). *Climate Change Scenarios for Nepal for National Adaptation Plan (NAP)* (p. 84). Ministry of Forests and Environment, Government of Nepal. <https://lib.icimod.org/record/34554>
- NAPA (2010). *National Adaption Programme of Action to Climate Change*. Government of Nepal. NAPA.
- Nuruzzaman, S., & Tatenno, Y. (2021). *COVID-19 Pandemic and the Asia-Pacific LDCs: Impacts, Challenges, Gaps and Way Forward*. United Nations Economic and Social Commission for Asia and the Pacific (ESCAP).
- Oraboune, S. (2020). *Lao PDR's Development toward LDC Graduation by 2020*. United Nations Economic and Social Commission for Asia and the Pacific. Vientiane Provincial Administration Bureau.
- Paddidon, O. (2019). *Overview of LDC Graduation: Opportunities and Challenges*. United Nations, ESCAP.
- Pasa, R. B. (2017). Technological Intervention in Agriculture Development. *Nepalese Journal of Development and Rural Studies*, 14, 86-97. <https://doi.org/10.3126/njdrs.v14i1-2.19652>
- Razzaque, M. (2020). *Nepal's Graduation from the Least Developed Country Group: Potential Implications and Issues for Consideration*. MPFD Working Papers. United Nations Economic and Social Commission for Asia and the Pacific.
- Shrestha, D. (2021). Economic Diplomacy for Development Partnership. *Journal of Foreign Affairs*, 1, 59-78. <https://doi.org/10.3126/jofa.v1i1.36249>
- Thapa, B. S., & Thapa, B. (2020). Green Hydrogen as a Future Multi-Disciplinary Research at Kathmandu University. *Journal of Physics: Conference Series*, 1608, Article

ID: 012020. <https://doi.org/10.1088/1742-6596/1608/1/012020>

- The Asian Foundation (2021). *The Impact of the Covid-19 Pandemic on Employment in Middle-Order Cities of Nepal*. Asian Foundation.
- Tregenna, F. (2016). *Development, Handbook of Alternative Theories of Economic*. Edward Elgar Publishing.
- UNCDP (2020). *Comprehensive Study on the Impact of COVID-19 on the Least Developed Country Category*. United Nations Committee for Development Policy.
- UNCDP (2021). *The 2021 Triennial Review of the List of LDCs*. United Nations Committee for Development Policy.
- UNCTAD (2018). *Achieving the Sustainable Development Goals in the Least Developed Countries*. United Nations Conference on Trade and Development.
- UNDESA (2020). *COVID-19 Pandemic Deals a Huge Blow to the Manufacturing Exports from LDCs*. United Nations Department of Economic and Social Affairs, Department of Economic and Social Affairs.
- UNDP (United Nations Development Programme) (2020). *Nepal Human Development Report 2020*.
https://www.undp.org/nepal/publications/nepal-human-development-report-2020?utm_source=EN&utm_medium=GSR&utm_content=US_UNDP_PaidSearch_Brand_English&utm_campaign=CENTRAL&c_src=CENTRAL&c_src2=GSR&gclid=EA1aIQobChMIheWs0byG_QIVRofVCh3NcAmcEAAYASAAEgKeBvD_BwE
- UNESCAP (2021a). *Summary of the Asia-Pacific Countries with Special Needs Development Report 2021: Strengthening the Resilience of Least Developed Countries in the Wake of the Coronavirus Disease Pandemic*. United Nations Economic and Social Commission for Asia and the Pacific.
- UNESCAP (2021b). *Towards Sustainable Graduation of South Asian LDCs in the aftermath of COVID-19: Challenges, Prospects and Policy Lessons*. United Nations Economic and Social Commission for Asia and the Pacific.
- USAID Climate Change Integration Support (2017). *Climate Risk Profile: Nepal*.
<https://www.climatelinks.org/resources/climate-risk-profile-nepal>
- WHO (2021). *COP26 Special Report on Climate Change and Health*. World Health Organization.