NEPAL INFRASTRUCTURE SUMMIT 2022

INFRASTRUCTURE FOR GROWTH

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8 - 9 September 2022

The Soaltee, Kathmandu

SUMMARY REPORT

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Ministry of Physical Infrastructure and Transport

Confederation of Nepalese Industries

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8 - 9 September

SUMMARY REPORT

FOREWORD

It is a matter of contentment and pride for the Confederation of Nepalese Industries (CNI) to organize the fourth series of 'Nepal Infrastructure Summit (NIS)' with the theme of 'Infrastructure for Growth' on the 8th and 9th of September 2022.

I believe the 'Nepal Infrastructure Summit (NIS)-2022' gracefully carried forward the legacy of its predecessors, becoming a luminous stage that showcased the robustness of Nepal and the burgeoning opportunities within infrastructure development. The event served as a cradle for pioneering strategies, insights, and best practices. This summit particularly highlighted the imperative need for green, climate-resilient infrastructure projects, digital infrastructure, and ignited the fervor for policy reforms.

I take great pleasure in presenting this report, a comprehensive amalgamation of the summit's key outcomes designed to nurture our nation's infrastructure and bridge existing gaps. This document is a treasure trove of summit briefs, expert opinions, and a profound testament to our commitment to Nepal's Sustainable Development Goals (SDGs).

On behalf of the CNI, I extend my gratitude to the Government of Nepal, particularly the Ministry of Physical Infrastructure and Transport (MoPIT), the Investment Board of Nepal (IBN), the Youth Community for Nepalese Contractors (YCNC), and our partners for their continuous support in organizing the event. Our sincere thanks also go to the organizing and steering committee members, CNI members and officials, sponsors, and media personnel for their dedicated efforts.

Furthermore, my heartfelt admiration goes to the summit team and our esteemed partners, PricewaterhouseCoopers Pvt Ltd (PwC) and the Institute for Integrated Development Studies (IIDS). Their wisdom and expertise played an instrumental role in designing and finalizing this summary report. On behalf of CNI, I extend my deepest gratitude to all distinguished guests, foreign delegates, keynote speakers, panelists, and all participants, including our partners, sponsors, and media who significantly enriched the summit.

I hope this summary report will be a useful resource to the policymakers, professionals, and all the stakeholders.

Vishnu Agarwal
President
Confederation of Nepalese Industries (CNI)

EXECUTIVE SUMMARY

NEPAL INFRASTRUCTURE SUMMIT 2022

INFRASTRUCTURE FOR GROWTH

Nepal Infrastructure Summit 2022, with the theme of "Infrastructure for Growth," was the fourth edition in the series organized by the CNI in cooperation with the government. The major objectives of the event were to build upon the legacy of the past three editions by identifying the challenges and opportunities facing the infrastructure sector in Nepal, catalyzing reforms promised by the government, forging stronger networks and alliances in the region for seamless connectivity, and attracting large-scale private investment in Nepal's core needs and strengths. The topics discussed in business sessions were broadly categorized into regional connectivity for economic growth, urban infrastructure for liveable cities, green infrastructure development, industrial infrastructure, innovative financing, governance of infrastructure development, and digital infrastructure and technology integration.

The recent COVID-19 pandemic has widened the scope of infrastructure development for countries, and in order for Nepal to embrace the expanded notion, its strategy for developing infrastructure should incorporate broad socio-economic and environmental aspects through the use of digital technology. Due to health infrastructure's deep embedding in social capabilities, countries such as Vietnam and Cambodia, with lower per capita income compared to other developed countries, were able to respond better to the health emergency. Evidence shows that these countries had fewer deaths during the earlier months of the pandemic. Moreover, good governance plays an important role in effective infrastructure by building trust between the public and the authority. The unchecked debt that led Sri Lanka to the verge of an economic crisis was mainly due to the government defying core principles of policy consistency and good governance. Nepal needs to improve its current infrastructure governance mechanism by incorporating regional and global best practices. Low capital expenditure has been a perennial problem exacerbated due to structural weakness in project preparation and implementation, low project readiness, bureaucratic hassles in approving and re-approving projects, and high fiduciary risk in project implementation. An online portal such as Gatishakti can be designed that gives details about the infrastructure projects, ministries responsible for the approval process, and the stage at which the projects are stuck. Such information available publicly will make the governance of infrastructure more transparent and efficient. An institution such as the National Planning Commission should have a clear directive on infrastructure planning and delivery before projects are handed over to contractors for implementation. This would improve project readiness.

In the context of federal Nepal with seven different provinces, it is necessary to strengthen the bottom-up approach for development as prioritization should devolve from a centralized system to provincial and local levels. Similarly, mechanisms for risk transfer at local levels to safeguard external investors should be developed by creating an enabling ecosystem to attract private investors. Public-Private Partnership (PPP) should be explored and encouraged with adequate risk allocation and participatory decision-making. To make the PPP modality more attractive for investors, the government should work on minimizing political risk, policy risk, and foreign currency risk. Just to achieve an average growth rate of 5%, Nepal needs an investment of around USD 29 billion by 2030, for which the mobilization of resources from the government alone is not enough. Different financial instruments need to be leveraged for mobilizing resources for infrastructure that includes private equity infrastructure funds, targeted funds for infrastructure projects, sizeable special project vehicles, debt capital markets with local currency bonds, and sovereign credit ratings. While credit rating is not a solution in itself, it plays a role of multiplying effects by opening up the economy and opening up the credit story.

The topics discussed in business sessions were broadly categorized into regional connectivity for economic growth, urban infrastructure for liveable cities, green infrastructure development, industrial infrastructure, innovative financing, governance of infrastructure development, and digital infrastructure and technology integration.

Digital infrastructure is an important aspect that Nepal should develop, requiring strong political commitment to strengthen IT capabilities across all ministries and agencies for leveraging digital transformation and growth. Steps should be taken for policy reforms and incentives to encourage start-ups to invest in digital solutions. 'ASAN' services in Azerbaijan and Digital India are good international examples that Nepal can follow in setting up online platforms for providing public services. Digital infrastructure should be overarching and connected to all aspects, such as agriculture, transportation, tourism, construction, and finance, which are important in achieving transformational changes. In recent years, access to broadband has increased even in rural areas. However, the major issue is low-quality internet services with reliance on a limited backbone and low redundancy, which need improvement.

ACTION POINTS

Governance Framework			
Problems	Way forward	Responsible Agency	Applicable Law
Nepal's budget allocation on capital expenditure is only about 22.7% and out of which the government is merely able to spend 57.2% of the total allocated budget for the financial year 2021-22. The problems with historically low capital expenditure include structural weakness in project preparation and implementation, low project readiness, and high fiduciary risk in project implementation at sub-national level.	For effective capital expenditure, it is important to allocate the budget to infrastructure projects that are almost at the stage of completion rather than on new ones that are uncertain. For effective and timely implementation of projects, it is important to focus on project readiness (provision of adequate budget, environment and forest clearance, land acquisition, community consultation, quarry of local materials, design review, etc.)	Ministry of Finance National Planning Commission (NPC) Other development ministries	Federal, provincial, and Local budget
Time overrun and cost escalation is another problem regarding project implementation arising due to bureaucratic hassles in approving and re-approving projects involving multiple ministries, poor project management and contractor capacity, and political intervention both at planning and operation levels.	Develop an online portal that provides one stop window process for project approval and minimizes bureaucratic hassles. We can learn from 'Gatishakti' portal in India which is an online platform that gives details about the infrastructure projects, ministries responsible for approval process and the stage at which the projects are stuck. All such information is visible on dashboard and accessible to public. Such online platform can be developed in Nepal. Preparation of procurement and DPR finalization process should be emphasized and the time it takes to finalize the process should be utilized for inter-ministerial coordination.	Ministry of Physical Infrastructure and Transport	New law to be formulated for co-ordination across ministry

In the present context, there are not many pipelines of viable infrastructure projects from the government. Most of the upcoming projects readied by the government do not have yet received land and forest clearance that often creates dispute among different stakeholders.	It is important to have a long-term national infrastructure plan for 40 to 50 years that would give foreign investors' confidence to invest in Nepal. Institutions such as NPC should have a clear directive on infrastructure planning and delivery before projects are handed over to contractors for implementation. Dispute resolution mechanism needs to be made effective by amendment in existing Arbitration Act. Similarly Public Private Partnership and Investment Act (PPPIA) should be rebooted to make it easier for land acquisition and project development.	Investment Board of Nepal National Planning Commission (NPC)	National 5 year plan PPPIA Act
Poor capacity of contractors due to contract awards to low-cost bidders.	Problem of underbidding could be solved by rejecting those bids that are 20% below the average bid. Ranking of contractors should be made based on their performance in implementing previous projects. Global best practices should also be adopted for selecting contractors. Procurement acts and regulations to be reviewed to address unrealistic low bidding practices. FIDIC 2017 (Selection of Contractors Proposed Alternative Mechanism to Award Construction Works Contracts) could be an example.	Public Procurement Management Office	Public Procurement Act
Nepal has also experienced premature deindustrialization in recent times due to factors such as lack of enabling infrastructures, ineffective Special Economic Zones (SEZs), delay in costoms and delay in tax dispute settlements.	Private sector should be involved in management of SEZ and Industrial zones/parks. There should be a provision of electricity transmission line, better road connectivity and necessary infrastructures. Various schemes of incentives such as exemptions from customs, tax and other national regulatory regimes, and subsidized rent on land lease should be provided to make SEZ more attractive for private sector. Successful SEZ models from Global industry practices, such as India, Vietnam and Middle East could be used as a model.	Department of Industries Special Economic Zones Authority Ministry of Finance	SEZ Act PPPIA Act Custom laws

Financing

Problems	Way forward	Responsible Agency	Applicable Law
Banks in Nepal have not been able to play an important role in developing large infrastructures as they lack enough capital. Banks largely derive their profit from lending and deposit activities. Most of the projects financed by the banks are short term while the loans have to be renewed every year making it difficult for large projects to access funding.	Nepal should link financial and capital market to incredible domestic energy and green resources that Nepal has by facilitating green infrastructure bonds. The foreign subsidized loan on green infrastructure needs to be tapped in by the Banks and use the long-term foreign funds in infrastructure projects	Nepal Rastra Bank Ministry of Finance	Monetary Policy Foreign loan bylaws
Liquidity crunch has been the major problem in Nepalese financial market due to which interest rates on loans and credits have gone up significantly. This has made it difficult for long term projects to access finance as well as reducing their viability in the long run.	NRB should make provision for banks to set up separate infrastructure cell that only issue loans and credits to infrastructure projects. Interest rates on long term projects should be aligned according to accurate forecast of inflation and other macro- economic indicators.	Nepal Rastra Bank	NRB directives
The provision of viability gap funding (VGF) mentioned in the budget has not been effective. Projects that are not commercially viable but otherwise can have high value socio-economic impact are difficult to implement. Domestic as well as international investors are exposed to high risks pertaining to policy uncertainties, lack of business infrastructures and political uncertainties	Financial instruments for mobilizing resources include private equity infrastructure fund, targeted funds for infrastructure projects, PPP through sizeable special purpose vehicles (SPV), debt capital market with local currency bonds and sovereign credit rating. To ensure long term loan guarantee for large projects, asset monetizing can be done that enhance credit rating for viable projects. In this case there is a lot to learn from India Infrastructure Finance Company Ltd. (IIFC) that has been important in developing infrastructure projects in India using Hybrid Annuity Model Infrastructure financing must be embedded as a way of business in institutions for good governance and outputs must be subject to public scrutiny. Funding modes other than debt and equity financing such as blended finance, hedging and viability gap funding should also be identified and implemented along with easing of repatriation.	Ministry of Finance Investment Board of Nepal	Blended Finance Policy Hedging Regulations

Digital Infrastructure			
Problems	Way forward	Responsible Agency	Applicable Law
In recent years, there has been increased access to broadband, even among people in rural areas. However, major issue is about low quality of internet services, with reliance on limited backbone and low redundancy. Nepal relies heavily on India for internet traffic, making the network too dependent and vulnerable.	Quality of internet services can be improved through big investments both in hardware and software components as well as in skilled manpower that can resolve quality issues through prompt service delivery. Need to coordinate with international markets other than India to diversity internet traffic and reduce dependency on India.	Nepal Tele-communication Authority	Tele-communications Laws
Nepal has not been able to integrate digital technology in its public services such as issuing licenses, passports and filling out taxes.	Nepal can learn a lot from international success stories. For instance, ASAN Service is a digital initiation in Azerbaijan started in 2008 where more than 300 public services are registered online in this digital platform making it quick and efficient for citizens to get services. For instance, there is a provision for an e-visa where international visitors can get a visa within 3 hours. New businesses can be registered within two days. There is a need to focus on digital literacy and digital adoption. It is vital to form partnerships with Academia to meet the demand for skilled resources and capacity development in the digital domain is essential.	All ministries	Digital Nepal Framework
As Nepal does not yet have its policies formulated around data there is a real chance that it can stumble into a so-called 'data colony'. While the Digital Framework Nepal is in place, it has not been able to act as an integrated platform.	In India, significant work has been done on policy reforms to integrate AI for sustained growth. Online Aadhar Card, Digi-Locker, and Bharat Net are some examples of online tools to integrate data into the central system and connect people for more financial inclusion. Similar online tools can be implemented in Nepal.	Ministry of Communication and Infrastructure Technology	Tele-communication Policy

Green Infrastructure

Problems	Way forward	Responsible Agency	Applicable Law
According to the recent economic survey by the Ministry of Finance; the total energy consumption in Nepal in 2021 was 174 TW, and out of this 28% came from imported petroleum. This, in addition to contributing to a lot of GHG emissions, shows the green energy sources form of hydroelectricity has not been fully utilized.	Green infrastructure and investment have immense positive externalities as seen in the case of EV, Carbon/ RE trade in terms of self-sufficiency, local resources, economy, etc. - electricity generation itself will have the potential for 82 million tons CO2 saving cumulatively by 2030. Therefore, such projects should be prioritized.	Department of Electricity Development Ministry of Energy, Water Resources and Irrigation	Electricity Act and rules
On the domestic side, close to 66% of energy is being consumed from traditional biomass whereas electricity contributed only about 4% and renewable energy less than 2%. Nepal's energy consumption pattern is not sustainable, heavily dependent on imported fuel, and unsustainable biomass. While Nepal can generate 43 GW of electricity, it currently generates less than 2.2 GW.	Climate-responsive investments such as public transport, electric buses, and sewage treatments, are being undertaken that need to be replicated across cities and provinces. Participatory planning, especially at the neighborhood level and community-led urban infrastructure solutions, should be explored to encourage collaborative efforts and effective public engagement. It should attract other investments from the private sector.	Ministry of Urban Development Ministry of Finance Ministry of Federal Affairs and local government	Federal, provincial, and Local budget
Despite Nepal being one of the most vulnerable countries in terms of climate disasters, projects are not designed with the aspect of green resilience. One recent example is the Melamchi project which was significantly damaged due to flood and landslide resulting in the loss of billions of properties.	Infrastructure needs to be measured in terms of ESG– Environment, Social, and Governance indicators while compliance cost will need to be factored in.	National Planning Commission Ministry of Physical Transport Ministry of Urban Development	Multiple acts relating to project development

OPENING PLENARY

Chief Guest

Hon'ble Pushpa Kamal Dahal, Former Prime Minister of Nepal

Chair

Mr. Vishnu Kumar Agarwal, President, CNI

Special Address

Mr. Ashok Lavasa, Vice President of Private Sector Operations and Public-Private Partnerships, ADB

Mr. Deepak Shetty, CEO and Managing Director, JCB India

Mr. Satish Kumar More, Immediate Past President, CNI

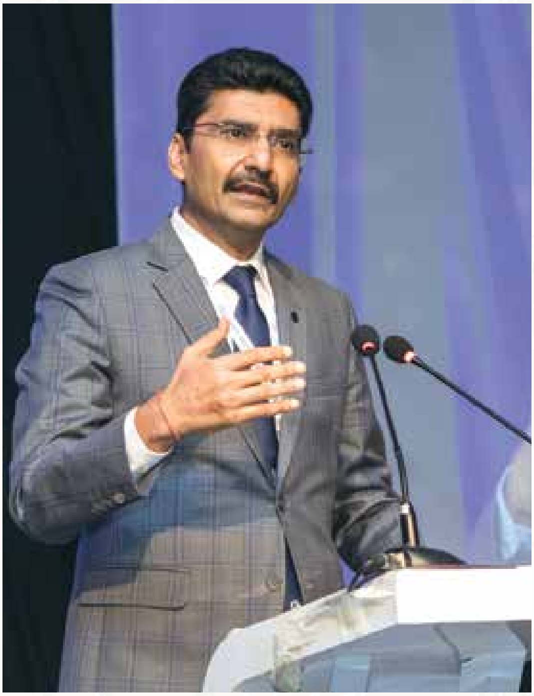
Summit Highlights

Mr. Birendra Raj Pandey, Vice President, CNI

Vote of Thanks

Mr. Sushil Kumar Shrestha, President, YCNC

Mr. Vishnu Kumar Agarwal - President, CNI



Mr. Agarwal reminiscing upon the success of the past three summits initiated the fourth Nepal Infrastructure Summit by envisaging a result-oriented notion of infrastructural growth. He highlighted that infrastructural growth has a multiplier effect touching every sector of human life and the aim of the fourth summit with its theme "Infrastructure for Growth" is to provide a solid framework to pursue such infrastructural goals. Nepal ought to spend at least 8% to 9.5% of its total GDP in the infrastructural sector to fill the prevailing infrastructural gap and to attain long term sustainable growth. However, it is expected that merely 4.5% will be spent in current fiscal year. With such record, the current summit aims to dissipate the idea that policy reforms are prerequisite for infrastructural growth which ultimately enables us to gain unfettered advantage in every sector of human life. Similarly, special focus to tourism, PPP model, roads, IT, etc will paint the integrated approach to infrastructural prosperity. Prime Minister Narendra Modi has launched the Infrastructure Masterplan to achieve the goal of making India a USD five trillion economy by 2025 and upgrading it to a developed nation by 2047. India has recently risen to the fifth largest economy in the world. From this, it needs to be realised that a 'National Infrastructure Masterplan' with such a big and broad thinking is needed to take a leap in infrastructure development.

SUMMIT HIGHLIGHTS

Mr. Birendra Raj Pandey - Vice President, CNI

Mr. Pandey gave the entire picture of the summit with his description of various Business Sessions and Parallel Sessions. There were 5 plenary sessions which were as follows:

Session 1 with theme "Infrastructure for Growth", the discussions were focused on regional mega trends and how Nepal should plan and develop its infrastructure for long-term growth. These discussions set the entire discourse for 2 summit days.

Session 2 with the theme 'Regional Connectivity for Economic Growth', Mr. Pandey emphasised on the need to leverage existing regional mechanism and how SAARC and BIMSTEC can contribute.

In session 3, the theme of 'Digital Infrastructure and Technology Integration: Leapfrogging Opportunities' emphasised on how digital and technological integration can play a transformative role for infrastructure development and project management.

Session 4 with the theme of "Innovative Financing for Infrastructure Financing Modalities for Resources Mobilisation" focused on the existing financial gaps and the innovative financing strategies.

Session 5 with the theme of 'Governance of Infrastructure Development Policies, Strategies and Implementation' focused on the ways the current infrastructure governance mechanism can be improved incorporating global and regional best practices into the system.

In addition, there were six different parallel session.

Parallel session 1: Business Forum where IBN convened the session on infra and investment. 21 projects and five dozen identified projects from provinces were showcased to the investors.

Parallel session 2: Infrastructural marketplace where best entrepreneurship idea was awarded by the jury.

Parallel session 3: Urban Infrastructure for liveable city which focused on identification of potential opportunities and challenges for urban development and what roles can the local government play.

Parallel session 4: Provincial Infrastructure for inclusive economic growth focused on innovative ideas, models, and measures adopted by provinces.

Parallel session 5: Opportunities for green infrastructure development highlighted the need for contribution of GDP for long-term sustainable growth.

Parallel session 6: Industrial Infrastructure discussed the current issues faced by the industries and how the industrial infrastructure can reduce the overall cost of production. The greater role of private sector in managing and directing infrastructural project was also explored.

Mr. Pandey stated five key dimensions of infrastructural development that were to be discussed throughout the summit. They were-

a) Economic viability
b) Regional Context
c) Financing modalities
d) Environmental consideration and climate change
e) Social Inclusion.

SPECIAL ADDRESS

Mr. Deepak Shetty - CEO and Managing Director, JCB India

Mr. Deepak Shetty with his special address highlighted about the multiplier effect. He stated that an infrastructure project generates both during its construction phase and after it has been completed. Nepal has set the growth percentage of 8% for FY 2022-23 and with this it is time for Nepal to build and create new ambitious projects with vehement investment in the infrastructure. He stated that the multiplier effects from infrastructure projects increase domestic demand, trade volume, and create jobs. The equipment manufactures in this regard play significant role and it is deemed that an equipment sold creates 4 to 5 job opportunities. In the same way, JCB has initiated different skill development programmes which have set Nepal as a fountainhead of qualified manpower. Similarly, the green and digital development of infrastructure will be pertinent in the country like Nepal as it ensures connectivity and longevity of projects even in desolate areas. He concluded by stating that event like this can create buzz and momentum in infrastructural sector by creating meaningful dialogues among the stakeholders.

Mr. Ashok Lavasa
Vice President of Private Sector Operations and Public-Private Partnerships, ADB

Mr. Lavasa talked about how infrastructure spending creates significant stimulus compared to spending on other aspects. Pre-COVID ADB estimation stated that USD 1.7 trillion is needed to meet climate resilient infrastructure in Asia Pacific. To reach such goal, PPP model is an important instrument that brings private sectors innovation, operational efficiency, and crowding capital. ADB has contributed about USD 7.3 billion to Nepal in both sovereign and non-sovereign operation in different financial and technical sectors. ADB for its country partnership with Nepal identifies three core developmental objectives, which are, a) Improved infrastructure for private Sector led growth (b) Improved access to devolved service (c) and environmental sustainability and climate resilient infrastructure. On the sovereign side ADB supports renewable energy, road, air transport, logistics etc. and on the non-sovereign side it will expand its private sector operations such as hydro partnership and venture capital.

Mr. Satish Kumar More - Immediate Past President, CNI

Mr. More highlighted that prioritising the economy specially by the government would remove the bottlenecks and hurdles that exist for infrastructure development. The production of goods and services can be made successful by utilising comparative advantage, for which establishing Special Economic Zones (SEZ) or Industrial Zones in PPP model is important. For this, logistic infrastructure is needed to increase the competitiveness of industries. Express ways should be made from Kathmandu to Narayangadh, Bhairahawa, Birgunj, Biratnagar and other places for the transportation to cost less time and money. Strategic roads are needed to connect other places as well. It is also necessary to contemplate on how the cost of air transportation can be reduced to make the product competitive. He stated that how the private sector initiation of Make in Nepal has generated employment through localised production and created amiable environment for export. However, even with such effort from private sector, government trivialises the economy as it does not carry through required regulation and procedures on time. CNI as a representative of private sector has continuously recommended government on formulation of various policies and removal of hurdles through various means.

CHIEF GUEST

Hon'ble Pushpa Kamal Dahal - Former Prime Minister of Nepal

Mr. Dahal said the infrastructure summit organised post Covid has provided with the positive outlook regarding PPP and its positive result on the country's economy. He emphasised that no country can achieve high economic growth, given the globalised and digitalised world structure, without inculcating private sector. Countries such as China, India, Taiwan, Vietnam, Thailand, and other emerging economies have done impressive works in industrial infrastructure development in the last few years which was not possible without participation from private sector. Lessons need to be learnt from them, and should try to take a leap forward in industrial development by operating industrial areas in PPP model by giving facilities and incentives to industries like these countries. He thoroughly emphasised that government through various statutes and laws is prioritising PPP partnership & FDI and is trying to create conducive environment for private sector. GoN, in various international summits and forums, has continuously emphasised the trade facilitation for Nepalese private sector in international trade.

VOTE OF THANKS

Mr. Sushil Kumar Shrestha - President, YCNC

Mr. Shrestha extended his sincere gratitude to chief guest, chair, various guests, partners, speakers, panellist, dignitaries, delegates, sponsors, participants, and media for making this event successful.

KEY TAKEAWAYS

- This edition of the Nepal Infrastructure Summit is a result of the immense success seen in the three previous summits organised by the CNI. The first summit in 2014 played a significant role in underlying the importance of infrastructure for strong economy. The two succeeding summits highlighted the importance of a dedicated bank for investment in infrastructure and pointed out the benefits of public private partnership model. The establishment of Nepal Infrastructure Bank is a result of achievement of these summits.
- Infrastructure development touches all sectors as a catalyst. Since its spill over impact is in every sector including industry, tourism, transportation, shipping, its development also helps to improve the standard of living from job creation to convenience in

people's lives. Due to such multiplier effect, infrastructure development is important for creating demand in the economy.

- According to a report prepared by CNI in 2019, Nepal needs to invest at least 8% to 9.85% of GDP in the infrastructure sector, to eliminate the gap in the infrastructure sector and meet the Sustainable Development Goals (SDG). But if we look at the budget implementation data of the last ten years, it seems that the government has spent less than 5% of the GDP on capital expenditure. Now the size of GDP has reached about USD 48 billion and the expected spending on capital expenditure is less than 4.5% in capital expenditure. To take a leap in infrastructure development, it is imperative to improve the capital expenditure.

- The production of goods and services can be made successful by utilising comparative advantage, for which establishing Special Economic Zones (SEZ) or Industrial Zones in PPP model is important. For this, logistic infrastructure is needed to increase the competitiveness of industries by reducing the logistic cost. Many expressways should be made from Kathmandu to Narayangadh, Bhairahawa, Birgunj, Biratnagar and other places for the transportation to be time and cost effective. Such strategic roads are needed to connect other places as well. It is also necessary to contemplate on how the cost of air transportation can be reduced to make the product competitive.

- China, India, Taiwan, Vietnam, Thailand, and other emerging economies have done impressive works in industrial infrastructure development in the last few years. Lessons need to be learned from them and should try to take a leap forward in industrial development by operating industrial areas in PPP model by giving facilities and incentives to industries like these countries.

- Prime Minister Narendra Modi has launched the Infrastructure Masterplan to achieve the goal of making India a USD five trillion economy by 2025 and upgrading it to a developed nation by 2047, which has recently risen to the fifth largest economy in the world. From this, is should be realized that Nepal also needs a 'National Infrastructure Masterplan' with such a big and broad thinking to escalate infrastructure development.

BUSINESS SESSION 1:

INFRASTRUCTURE FOR GROWTH | THE BIG PICTURE IN THE POST-COVID SCENARIO

Session Chair:

Dr. Yuba Raj Khatiwada, Former Minister, Ministry of Finance, Nepal Government

Keynote Speakers

Dr. Swarnim Wagle, Chief Economic Advisor, UNDP Asia Pacific; Former Vice Chairman, National Planning Commission, Nepal

Mr. Ashok Lavasa, Vice President for Private Sector Operations and Public-Private Partnerships, Asian Development Bank

Panelists

Dr. Warren Evans, Special Senior Advisor (Climate Change), Office of the President, Asian Development Bank

Mr. Nirvana Chaudhary, Vice President, CNI; Managing Director, Chaudhary Group

Ms. Heidi Tavakoli, Deputy Development Director, Foreign, Commonwealth and Development Office, Nepal

Mr. Radhesh Pant, Chairman, VRock and Company; Former CEO, Investment Board of Nepal

Moderator

Mr. Anil Chitrakar, Social Entrepreneur

KEYNOTE SPEAKERS

Dr. Swarnim Wagle - Chief Economic Advisor, UNDP Asia Pacific; Former Vice Chairman, National Planning Commission

The global disruption of Covid-19 has allowed the unique opportunity for Nepal to reflect and chart a new course for inclusive growth. Considering this, Dr. Wagle believes that capital formation through infrastructure is vital for growth to take off. The development of physical infrastructure is important because it bolsters economic productivity, which usually is the most crucial factor for the prosperity of a nation. However, the recent pandemic has widened the scope of what infrastructure development means. The impact of infrastructure is magnified when it incorporates socio-environmental considerations. The disparity in the death rates in countries like the US and UK due to the coronavirus, compared to their high rankings in health indexes before the Covid years, elucidated that there is a clear distinction between infrastructure capacity and social capability. During the pandemic, even countries with identical medical preparedness witnessed varying results regarding infection and death rates. Another point that he discussed was the role of good governance in infrastructure development. The unchecked debt rampant in Sri Lankan infrastructure development defied core good governance principles and eventually led to the economic collapse. Therefore, development projects must be vetted, processes must be transparent, and outputs must be subject to public scrutiny. He also emphasised embracing an expanded notion of infrastructure, from the physical to social and then eventually to digital. Our challenge, according to him, is to simultaneously pursue unfinished work from the first, second, third, and fourth industrial revolutions. For development in the digital sector, public-private cooperation is especially important. The government should encourage development in this sector by expediting cross-border digital transactions and establishing provisions for cheaper and more-widely accessible internet.

Mr. Ashok Lavasa - Vice President for Private Sector Operations and Public-Private Partnerships, Asian Development Bank

The Covid-19 exposed the underinvestment in health and infrastructure in Nepal and uncovered its capacity to respond to crises. Fortunately, even after the $1.7-2.5 trillion loss due to the coronavirus pandemic in Asia pacific, Nepal has been allowed a rebound due to policy responses and stimulus packages. However, he believed it is important to address increasing public debt and falling tax revenues to move forward with development and get alleviated being so vulnerable to global crises. Since the pandemic has been terrible for Nepal from financial perspective, he suggested more involvement from the private sector. Speaking about PPP ventures, he believed them to be extremely lucrative, stating that Nepal should choose such projects wisely. The right financial projects should be selected and both local and regional markets should benefit from them. The long-term contracts with such projects should have clear indicators marking their progress and outcomes. He also believed in the strengthening of digital connectivity, which the pandemic had mainstreamed. He and the ADB commended the government for their timely response to the pandemic and reassured them aid in assisting Nepal in all such ventures going forward.

PANELISTS

Mr. Radhesh Pant

Chairman, VRock and Company; Former CEO, Investment Board of Nepal

The financing of infrastructure has never been the problem granted that the avenues for investment are profitable and stable. What has caused hindrance, however, are unstable policies, bureaucracy, and a flawed mindset within the public sector. The government never coherently expresses what projects they are working on. Getting approval for projects requires having to run to multiple government entities. Mr. Pant believed that the government must build trust and confidence in its population and investors that policies are stable and communication is fluid, and only then should capital be built from entities like the ADB and the FCDE. With the emergence of PPP as an effective and mutually beneficial form of infrastructure development, he reinforces that these steps are even more vital. PPP models revolve around risk and negotiations. As such, policies and communications need to be strengthened for such ventures to go forward. He also brought up the notion that decentralisation in development should be focused upon. The municipalities outside of Kathmandu have shown aptitude for energy development and production but individuals in those areas still flock to the capital.

Mr. Nirvana Chaudhary

Vice President, CNI; Managing Director, Chaudhary Group

Mr. Chaudhary reiterated Mr. Pant's sentiments about how building confidence is bigger hurdle than acquiring capital. Infrastructure in Nepal always boils down to bottlenecks in development rather than a lack of financing. Frequent changes in governments and rules hamper foreign investment and joint ventures with foreign companies. For instance, ten years ago, when the AES exited the country as an energy partner, after years of planning, because the government accidentally issued them the wrong license. The Chaudhary Group want to contribute to the digital economy through broadband services and digital banking via Nabil bank, as there has been a 70-80% increase in data access in the country over the years. However, the government policies have hindered this project. But there is still a reason to be hopeful as a myriad of international firms in the energy sector are still achieving moderate success here. He believes that the private sector should be given much more freedom in the infrastructure development sector in Nepal, reinforcing that a policymaker can either serve as a lifeline or a bottleneck for new projects and ideas.

Ms. Heidi Tavakoli - Deputy Development Director, Foreign, Commonwealth and Development Office, Nepal

Ms. Takavoli primarily pointed out that one of the major drawbacks in infrastructure development is market failures. Because of the risks involved in PPP models, she emphasised working with firms which are aware and equipped to handle them. She suggested planning projects with these firms and monitoring their progress in terms of productivity and sustainability. She also suggested bringing in firms and entities with experience in handling development hurdles. Their expertise in similar situations in other countries would prove vital in ensuring effective and timely responses to any issues that may arise in projects. Lastly, she reinforced the notion that development should be inclusive. No parties should be left behind in these big ventures to make sure that every development project, if not beneficial to all parties, should not at least adversely affect any of them. She hoped that these ideas that were discussed at such summits landed on influential ears which would help mobilise them sooner.

Dr. Warren Evans - Special Senior Advisor (Climate Change), Office of the President, Asian Development Bank

Dr. Evans emphasised the vulnerabilities associated with climate change. He strongly believed that climate change will cause natural disasters to increase in frequency and magnitude, and risk assessment will be vital for stable development. He suggested incentivising firms in the private sector to develop low-carbon infrastructure and focus on sustainability going forward.

He reassured that the ADB can assist in developing low-carbon infrastructure, especially benefitting small businesses like a recent USD 200,000 projects in Thailand. The private sector can especially help initiate development at such a grassroots level. Dr. Evans' sentiments matched Mr. Pant's regarding bottom-up development, adding that it has led to equitable and effective outcomes in other countries.

SESSION CHAIR

Dr. Yuba Raj Khatiwada - Former Minister, Ministry of Finance

Dr. Khatiwada believed that even after reeling from the consequences of a pandemic, the private sector would find a way to mobilise its resources for infrastructure development in the nation. However, the major questions that engulf this situation are where to invest and how to invest. One of the major ways to spring forward in development is to obtain foreign currency, which Dr. Khatiwada believes Nepal does not invest in heavily. Therefore, sectors like tourism, hydropower, and aviation should prioritise paying off the debts Nepal has incurred. He also stated that insurance companies should play a more prominent role in development by widening their scope to cover risks like Covid-19 health insurance, weather insurance for crops, and natural disaster insurance. Since credibility and honesty are musts in PPP projects, he emphasised on creating stability in hedging mechanisms. He emphasised equity joint ventures and discouraged debt financing when involving international firms. Finance mobilisation should be from all sources including FDI, equity, and debt. When speaking about incentivising the private sector, he suggested developing mechanisms to pass on risks at a local level. This would not always shift the burden of risk on foreign aid and investors, encouraging their future participation in development projects.

KEY TAKEAWAYS:

- The impact of physical infrastructure is magnified when it incorporates socio-environmental considerations. Infrastructure is not just a means for growth but should inch towards serving the end of sustainable development itself. Infrastructure that does not foster social cohesion or bolster resilience has limited utility.
- Financing infrastructure projects is not a challenge. However, unstable policies, lack of transparency, lack of proper risk sharing, and limited confidence in government are creating challenges in project financing.
- Vulnerabilities and opportunities concerning climate change are huge. Climate risk assessment is vital for stability in projects under development.

BUSINESS SESSION 2:
REGIONAL CONNECTIVITY FOR ECONOMIC GROWTH

Session Chair

Hon'ble Jeevan Ram Shrestha, Minister, Ministry of Culture, Tourism, and Civil Aviation

Keynote Speakers

Mr. Rajat Nag, Member, Board of Directors at Partnership for Transparency, Delhi, India

Ms. Cecile Fruman, Director, Regional Integration and Engagement, South Asia, World Bank

Panelists

Mr. Thiam Hee Ng, Senior Economist, Economic Research and Regional Cooperation Department, ADB

Ms. Nandini Thapa, Senior Director, Nepal Tourism Board

Mr. Kul Man Ghising, Managing Director, Nepal Electricity Authority

Mr. Khadga Bahadur Bisht, Executive Managing Director, MCA

Mr. Gyanendra Lal Pradhan, Chair, Energy Council, CNI

Moderator:

Mr. Ram Krishna Khatiwada, CEO, Nepal Infrastructure bank

KEYNOTE SPEAKERS

Mr. Rajat Nag
Member, Board of Directors at Partnership for Transparency, Delhi, India

Mr. Nag began by mentioning that South Asia is a region that was highly integrated in terms of trade 75 years ago, but now is one of the least integrated globally. However, currently, intraregional trade in South Asia accounts for less than five percent of the entire continent, compared to 55% in East Asia. The World Bank data showed that if South Asia had not created this artificial barrier, trading could be threefold on an average than what is being done now. He mentioned that Sri Lanka and Bangladesh could more than double their trade inter-regionally, India could triple, Nepal could quadruple, and Pakistan can escalate by eight-folds. In addition to thick borders, there is a lack of connectivity in India with its north-eastern neighbours, harbouring a 'chicken's neck' situation. According to reports provided by the World Bank, it is 15-20% cheaper for Indian companies to trade with Brazil or Germany than with Bangladesh and other immediate neighbours. To improve the situation, there must be provisions for multi-modal transport like railways to encourage productivity. Mr. Nag also discussed how India and Bangladesh are considering developing connected eastern waterways. This would be a tremendous benefit for India for opening up trade with northern neighbours. Mr. Nag also added that while the hardware is important to build roadways and waterways, software should not be overlooked. He concluded by stating that Asia collectively shares the destiny of four billion people who can come together and share prosperity. The ADB and the World Bank have proved beyond doubt that infrastructure has potential here for economic growth, equity, and regional connectivity.

Ms. Cecile Fruman

Director, Regional Integration and Engagement, South Asia, World Bank

Ms. Furman specified that while the goal in the South Asia region should be of achieving development to its maximum potential, there are also other externalities that needs consideration. One such externality is in trade facilitation i.e., creating thick borders. The cost of higher tariffs and even higher non-tariff measures make it less efficient and more expensive for regional trade exchange. Nepal has the capacity to increase trade potential by 76%. She stated that the World Bank is collaborating with the Asian Development Bank on infrastructures like express highways, border infrastructure, aviation waterways, more viable solutions for reducing tariffs and non-tariff barriers and supporting digital system modernisation and digitalising—which in particular is gaining a lot of traction in terms of importance. Ms. Furman speculated that Nepal could increase its trade opportunities with more accessible borders and greater trade facilitation. To combat the high prices of trade in South Asia, the BPIN agreement should be emphasised. The World Bank is also focusing on other modes of physical connectivity like roads, runways, inland waterways, and civil aviation in accordance with the government of Nepal. She also mentioned transborder electricity trade as another priority for the World Bank in this project. The estimates show that regional cooperation could expand hydropower and clean energy capacity threefold by 2040 from 64 GW in 2015 to 117 GW in 2024. This would yield better access to electricity for Nepal and the international market.

The World Bank is also focusing on the response to the Covid-19 pandemic. This is pivotal to Nepal as it is one of the only regions which does not have any formal agency outside the WHO disease surveillance network in dealing with widespread health issues. In terms of supporting development on the digital front, Ms. Furman mentioned that the World Bank had approved a new digital project in Nepal that would focus on data regulation, leading to an ecosystem that favours digital inclusion. They are focusing on cross-border data regulation issues, ensuring that cross-border payments are not constricted, which would otherwise hinder e-commerce.

PANELISTS

Mr. Thiam Hee Ng - Senior Economist, Economic Research and Regional Cooperation Department, ADB

Mr. Ng began by highlighting that the ADB SASEC programme, which started in 2001, had amassed to be a USD 17 billion project through resource mobilisation. Out of it, Nepal received USD three billion for its projects, with a focus on energy and transport. There is need for more transport infrastructure in Nepal but financing is a major challenge. While the physical infrastructure in Nepal is not in a critical condition, there is a lack of focus in terms of climate disaster and pandemic resilience focus. As such, the ADB is working on high-cost transmission lines for renewable energy, Green-Hydrogen transmission lines, and a water GRID project. Mr. Ng also discussed about the huge scope of regional tourism, especially religious tourism, in Nepal. Due to the number of important Buddhist sites here, promoting religious tourism would lead to a tourism circuit between Nepal, India, and Bhutan, bolstering regional cooperation. He concluded by mentioning that the ADB is giving out loans to Nepal to improve border trade. It is also working with the custom secretary to solve deeply rooted border problems.

Ms. Nandini Thapa - Senior Director, Nepal Tourism Board

Ms. Thapa began by addressing the cultural diversity of Nepal as a leading factor for the nation being ripe for tourism. However, ever since the pandemic, the nation has been experiencing stagnancy, with it now experiencing a slow recovery. She suggested that the tourism sectors of Nepal focus on the five A's of tourism: attraction, accessibility, abilities, activities, and accommodations. There is also a need to ramp up infrastructures like roads, sanitation services, and clean air accessibility to assist the sector. Ms. Thapa also mentioned that many tourists from nations like Bangladesh and Sri Lanka depart soon after visiting because of lack of activities and sites catered to them. Therefore, the government and private sector needs to diversify the avenues of tourism. She agreed with Mr. Ng in promoting religious tourism to Buddhists from neighbouring countries.

Mr. Kul Man Ghising - Managing Director, Nepal Electricity Authority

Mr. Ghising began by highlighting the importance of transmission connectivity and the market equation. At present, he stated that Nepal has seven formational carry transmission connectivity in India, with Nepal possessing a ward with a total capacity of 22000 megawatts. Within a year, one 400 km ward transmission line will be completed with surplus and another 132 km transmission line with a capacity of 2500 megawatts, totalling total capacity to 4500 megawatts. In terms of the market equation, he noted that last year had been very encouraging for Nepal as it had open and easy access to the Indian exchange market. Focusing on the energy sector would help Nepal to export hydropower to India and Bangladesh. Mr. Ghising's team and the government had been in discussions with Bangladesh and had come to the consensus of opening energy trade.

Mr. Khadga Bahadur Bisht - Executive Managing Director, MCA

Mr. Bisht stated that Millennium Challenge, a US-based organisation that has invested in large infrastructure projects in Nepal was chosen in the 2014 grant agreement, signed in 2017, to strengthen projects relating to regional connectivity. Mr. Khadka mentioned that MCA has donated USD 500 million, with the government of Nepal contributing USD 130 million for this endeavour. He stated that about 90% of these funds would go to transmission line development and the rest being allocated to road construction. Mr. Bisht elaborated that the larger portion of funds would be dedicated to the transmission line starting from north of Kathmandu Lapsi Kheti to the Indian border, a 315 km transmission line carrying up to 3500 megawatts. He also mentioned another road maintenance project in western Nepal, about full depth recycling technology, the first of its kind in that region.

Mr. Gyanendra Lal Pradhan - Chair, Energy Council, CNI

Mr. Pradhan addressed the energy sector in his speech. He suggested that India and China should work on developing coal-based power plants and mentioned the need to work on clean energy in India and Bangladesh. In Nepal, he demonstrated how primitive the sources of energy are as more than 120000 gigawatts of energy come from firewood,with petroleum products, gas, and electricity accounting for only 9000 gigawatts. However, one good news is Nepal has obtained a soft loan from the Indian government, focusing their efforts on BBIN and the power sector.

SESSION CHAIR

Hon'ble Jeevan Ram Shrestha

Minister, Ministry of Culture, Tourism, and Civil Aviation

Mr. Shrestha stated that without connectivity, Nepal cannot make significant progress in development of sectors such as agriculture, water, and tourism. He also emphasised intra-regional connectivity because of how much it would bolster religious tourism in areas like the far-western region. Sites like Mansarovar and Rara Lake are very hard to get to despite their renowned status, which hinders income received from these regions. He mentioned the main obstacle in this endeavour was the rural/urban divide in terms of infrastructure. He stated the need to improve aviation services, and develop partnerships with Russia and the United States, which they are working on. Mr. Shrestha also mentioned that Nepal is looking to develop multiple international airports too. Developing the aviation sector would surely bolster tourism and job opportunities, alleviating poverty in cities like Nepalganj and Bhairava.

KEY TAKEAWAYS:

- South Asia faces the need to integrate more deeply with itself, as trade in the region is currently fragmented.
- Digital infrastructure should not be overlooked in favour of more hard infrastructure. The software can often bridge wider gaps when it comes to connectivity between regions.
- Nepal needs to prepare for climate and disaster resilience when planning for new infrastructure projects.
- The energy sector in Nepal is still underdeveloped, and there is a lack of focus on newer and greener energy sources which would surely advance trade and productivity.
- Religious tourism has great scope in Nepal, especially Buddhist sites. However, these areas are not promoted enough internationally.

BUSINESS SESSION 3:

DIGITAL INFRASTRUCTURE AND TECHNOLOGY INTEGRATION; LEAPFROGGING OPPORTUNITIES

Session Chair

Dr. Baikuntha Aryal, Secretary, Ministry of Communication and Information Technology

Keynote Speakers

Mr. Manohar Kumar Bhattarai, Director, Internet Governance Institute, Former Vice-Chair, High Level Commission for Information Technology

Mr. Santosh Mishra, Partner, Technology Consulting, PwC India

Panelists

His Excellency Dr. Ashraf Shikhaliyev, Ambassador Extraordinary and Plenipotentiary, Embassy of Azerbaijan

Mr. Pushottam Khanal, Chairman, Nepal Telecommunication Authority

Mr. Siddartha Raja, Senior Digital Development Specialist, World Bank

Ms. Karvika Thapa, Founder and CEO, Khimbu Tech

Moderator

Mr. Bal Krishna Joshi, Fintech Evangelist, Co-founder, Thamel.com

KEYNOTE SPEAKERS

Mr. Manohar Kumar Bhattarai - Director, Internet Governance Institute, Former Vice-Chair, High Level Commission for Information Technology

Mr. Bhattarai focused on the digital framework of Nepal that should also transform other sectors including agriculture, health, education, tourism, energy, transportation, and finance. To see the visible impacts on infrastructure development digital technologies should bring about transformational changes rather than incremental changes. Two indicators of digital infrastructure that are connectivity and common technology stack should be prioritised. The key components of connectivity are fibre optics and broadband services. While broadband penetration is increasing in Nepal, the connectivity particularly in rural areas is still poor. However, on the positive side, 5 G trials are happening and the work of laying down fibre optics is ongoing. The major issue for facing quality connection is low redundancy of infrastructure. Moreover, dependency on India for internet traffic is also a problem. Nepal should look to diversify its international traffic to reduce dependency on India. Another aspect he focused on was platform and shared technology stack. It is through this system that India has been able to develop payment system called Aadhar India payment, that has brought about one billion people under digital banking system. Nepal should look to build similar shared platform through national data centre and government cloud to leverage overall infrastructure development.

Mr. Santosh Mishra - Partner, Technology Consulting, PwC India

Mr. Mishra talked about the different stages of industrial revolutions where industrial revolution 1.0 was about steam engines, industrial revolution 2.0 was about electricity, industrial revolution 3.0 was about computers and internet and industrial revolution 4.0 is about artificial intelligence (AI), robotics and internet of things (IoT). The difference between first two industrial revolutions was that in industrial revolution 1.0 the production took place where the power was generated while in industrial revolution 2.0 production could take place elsewhere. With advancement in digital technologies, third and fourth industrial revolutions are about leapfrogging opportunities with people from all over the world who are able to enjoy same technologies and lifestyle. He also talked about the importance of both hardware and software components of digital technology. While hardware comprises of broadband wire, optic fibres, satellites, the computers software includes inter-operability and data. South Asia is currently sitting on a huge amount of raw data that is unstructured and unusable. Only if this data could be harnessed through right administrative apparatus, would it be possible to leapfrog opportunities. He gave some of the success stories of India in digital front saying that it plans to be a USD one trillion economy by 2025. Some of the successful examples include United Payment Interface, Digi-locker, India Stack, online Goods and Services Tax (GST) system, Cowin platform, and Aarogya Setu. He also pointed out the project call Bharat net that connects all six lakhs panchayats of India. By citing these examples, he emphasised if a country does not build its policies around data, there is a real danger of slipping into a data colony.

PANELISTS

H.E. Dr. Ashraf Shikhaliyev

Ambassador Extraordinary and Plenipotentiary, Embassy of Azerbaijan

Dr. Shikhaliyev mentioned the experience of digitisation of the Republic of Azerbaijan through the State Agency for Public Service and Social Innovations under the president of the Republic of Azerbaijan (ASAN service). This service is the umbrella where ten public service commissions and dozens of private institutions are included. In this platform, 325 public services are available such as registering new businesses, military services, or marriage, granting apartment for children, selling and buying of apartment, obtaining driving licence, applying for visas and issuance of all types of certificates that can be done all in a single platform. He highlighted the efficiency of this unified online platform saying how international visitors can obtain an e-visa within three hours and how new business can be registered within two days. This system also has a rating system where customer can rate according to their satisfaction and is, in fact, a winner of the UN service award. Lastly, he mentioned that Azerbaijan is ready to help Nepal in the development of such projects.

Ms. Karvika Thapa - Founder and CEO, Khimbu Tech

Nepal tech industry is running a catering service where most of the companies are taking the projects from foreign countries. However, due to a lack of technical expertise of domestic resources, it is difficult to serve complying to foreign standards. She mentioned the cause of cramped tech industry in Nepal by pointing out that it started getting into tech pretty late and missed two big tech waves of 2000s. For tech industry to grow in Nepal there must be a significant investment from public as well as private sectors. The government must be clear about IT policies and laws that will be conducive for investment in this sector. Moreover, to produce technically competent and skilful human resources in IT sector, there must be a provision of good IT education at school and college level.

Mr. Pushottam Khanal - Chairman, Nepal Telecommunication Authority

Mr. Khanal talked about digital infrastructure status in Nepal. There are five companies that have the licence to operate telecom in Nepal, however only three of them are in operation. There are more than 100 internet service provider companies with 20 different network services. Construction of information superhighway through mid-hill highway is ongoing. In case of broadband connectivity, all the rural municipalities and ward offices as well as health posts of the country are connected to the internet. For the connectivity purpose, most of the Terai and urban areas in hills are connected with optical fibres, other hilly terrains are connected with radio services and Himalayan areas are connected through satellites. Talking about the overall population, about 85 percent of people have mobile connectivity.

Mr. Siddartha Raja - Senior Digital Development Specialist, World Bank

Mr. Raja talked about the importance of public and private sector partnership to deliver better results for people of the country. He said Nepal needs to invest about USD one billion by 2030 to ensure that every Nepali gets at least 20 mbps internet connectivity. Such amount of money cannot come from public or private sector alone. Therefore, there must be a strong partnership with public and private sectors along with development partners that needs very creative and innovative financial solutions with better risk taking and risk sharing strategy. Nepal needs to learn about these solutions from similar countries all the while leveraging its unique human and capital resources. He gave an example of cyber building certification in buildings and apartments in South Korea in late 90s that was an awe-inspiring way of integrating digital technology from the initial phase of project development. To be able to envision such projects there should be a big investment on data centres and data economy. He summarised by saying that to develop three core infrastructures in digital front i.e., broadband infrastructure, data economy, and human infrastructure, there should be a strong collaboration between public and private stakeholders.

SESSION CHAIR

Dr. Baikuntha Aryal
Secretary, Ministry of Communication and Information Technology

Dr. Aryal said that while Nepal has made great progress in the IT sector, there is no time to be complacent as it need to advance substantially to be comparable with other countries. He acknowledged the points made by other Panelists regarding the success stories of Azerbaijan and India and said that Nepal should aspire to do similar things in IT sector. He also addressed the concern raised about the lack of skilled human resources in IT field in the country by saying that he is coordinating with Ministry of Education regarding establishing quality IT colleges. In order to address the capacity constraints on the digital front, Nepal Government in collaboration with the World Bank has already initiated a project called Digital Nepal Acceleration. This project aims to help private sector in developing digital infrastructure. The idea of data centres and data hubs are also being conceptualised that will help to integrate national and international data ecosystem. Given that Nepal has electricity sufficiency in the present context, it might not be too far-sighted to establish such data hubs. He concluded by saying that to achieve the desired progress on digital infrastructure some policy tweaks are needed that require inter-ministerial coordination.

KEY TAKEAWAYS

- Nepal is somewhere around the middle in context of the world for digital readiness. To implement Digital Nepal Framework, the forum highlighted the need for integration of digital technologies implemented in the country. This can start with 'Inferencing' approach and gradually scale to 'Integrated' platforms.

- Nepal should have strong political commitment towards strengthening IT capabilities in all ministries and agencies for leveraging digital transformation and growth. The necessary steps should be taken for policy reforms and incentives to encourage startups to invest in digital solutions, e.g., ASAN programme of Azerbaijan or Startup India.

- There is a need to focus on digital literacy and digital adoption. It is vital to form partnerships with academia to meet the demand of skilled resources and capacity development in the digital domain.

- There is a need to understand the importance of both hardware and software components of digital technology to build sustainable digital infrastructure. While hardware comprises of broadband wire, optic fibres, and satellites, the computers software includes inter-operability and data. South Asia is currently sitting on a huge amount of raw data that is unstructured and unusable. Only if this data could be harnessed through right administrative apparatus would it be possible to leapfrog opportunities.

- Digital infrastructure should be overarching and connected with all aspects, such as agriculture, transportation, tourism, construction, and finance which is important in achieving transformational changes, not just incremental changes.

- Fibre optics is a major backbone of internet connectivity in Nepal. In recent years, there has been an increased access to broadband, even among people in rural areas. However, major issue is about low quality of internet services, with reliance on limited backbone and low redundancy. Nepal relies heavily on India for internet traffic, making its network vulnerable. Therefore, coordination needs to be diversified with other international markets.

- Nepal can learn a lot from international success stories. For instance, ASAN Service is a digital initiation in Azerbaijan started in 2008 and is a winner of UN Public Service Award. More than 300 public services are registered online in this digital platform making it quick and efficient for citizens to get services. There is a provision of e-visa where international visitors can get a visa within three hours. New business can be registered in two days.

- India has taken a great stride on the digital front with its ambitious plan of being a USD one trillion digital economy. Significant works have been done on policy reforms to integrate AI for sustained growth, with a narrative that data policy should be a pre-thought rather than an afterthought. Online Aadhar Card, Digi-Locker and Bharat Net are some examples of online tools to integrate data into central system and connect people for more financial inclusion.

- In this digital age, if a country such as Nepal does not have policies formulated around data, there is a real chance to stumble into so called 'data colony'.

BUSINESS SESSION 4:

INNOVATIVE FINANCING FOR INFRASTRUCTURE; FINANCING MODALITIES FOR RESOURCE MOBILISATION

Session Chair

Hon'ble Janardan Sharma, Minister, Ministry of Finance

Keynote Speaker

Dr. Bindu Lohani, Former Vice President, ADB

Special Remarks

Mr. Jason Ving, Regional Head of Public Sector, ASEAN and South Asia, Standard Chartered Bank

Panelists

Mr. Anil Kumar Upadhyay, President, Nepal Banker's Association

Mr. Bam Bahadur Mishra, Deputy Governor, Nepal Rastra Bank

Mr. Rajeev Kumar Gupta, Deputy General Manager, India Infrastructure Finance Company Ltd

Mr. Ashish Garg

Moderator

Mr. Ghanshyam Ojha, Vertical Lead, Public Infrastructure and New Initiatives, Nepal Infrastructure Bank Limited

KEYNOTE SPEAKER

Dr. Bindu Lohani - Former Vice President, ADB

Nepal's current infrastructure investment to GDP is only about 2.5%, which is one of the lowest in the Asia-Pacific region. However, other countries in the region, such as China and India, spend more than 7% and 5% of their GDP, respectively. Nepal's current infrastructure stock is also the lowest in the region, indicating poor investment in infrastructure. One of the key issues that Nepal faces is a large financing gap in infrastructure development. It needs to invest USD 29 billion in infrastructure to achieve an annual growth of 5% while it needs an additional USD two billion to develop climate-resilient infrastructure. The ways to bridge the gap in infrastructure investment include internal resource mobilisation, increase in private sector involvement in infrastructure development, multilateral and bilateral borrowing agreements, climate-resilient global funds, and foreign direct investment. Since the financial mobilisation from the current institutional setup is not enough for sustained investment in infrastructure, focus should be on different financial instruments such as PPP modality, private equity investment, Special Purpose Vehicle (SPV), debt capital market with foreign bonds, and Sovereign Credit Rating.

SPECIAL REMARKS

Mr. Jason Ving

Regional Head of Public Sector, ASEAN and South Asia, Standard Chartered Bank

Mr. Ving emphasised the importance of having a long-term national infrastructure plan for 40 to 50 years that would give foreign investors a confidence to invest in Nepal. As Nepal has incredible domestic energy and green resources, it can facilitate green bonds through support from government partnerships while multilateral development banks like ADB are also willing to work with Nepal. He also focused that it is a suitable time for Nepal to have its sovereign credit rating done as it emerges from the Covid-19 pandemic. While sovereign credit rating is not a financial instrument, it helps to provide transparency and depth to the Nepalese financial market. Since there is a worldwide race for capital which is not easy to win, Nepal should find creative ways to attract more financial capital. He added that Nepal should look to mobilise domestic and foreign capital resources through green bonds that would help to confidently strengthen its nation-building foundations, formulate a vision in a unified manner, and build the foundational work for Nepal's development.

PANELISTS

Mr. Rajeev Kumar Gupta
Deputy General Manager, India Infrastructure Finance Company Ltd.

Mr. Gupta talks on behalf of India Infrastructure Finance Company Ltd. (IIFC) and their role in development of infrastructure in India. He explains that IIFC finances green field projects with direct lending in which they give long term financing up to 80 percent of the economic life of the project. To support the developers, they extend subordinating debt to support the viable projects. During initial days when IIFC started issuing long term loans, they did face the problem of equity mismatch. However, to solve this problem they introduced an asset monitoring project for credit enhancement. This provided the basis for rating agencies to upgrade the credit rating of the projects and ensure loan guarantee. IIFC also introduced the Hybrid Annuity Model for financing and through this model they have been able to finance large infrastructure projects. They financed, for example, 52 percent of the overall port capacity of India, 25% of national highway projects, and 24% of the power sector of India. Therefore, Nepal has a lot to learn from IIFC model in terms of how to finance large infrastructure projects.

Mr. Anil Kumar Upadhyay - President, Nepal Banker's Association

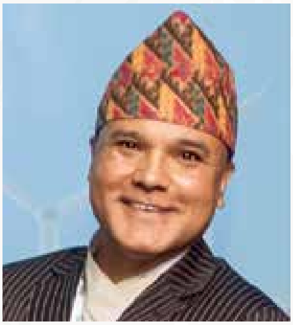
Mr. Upadhyay highlighted the fact that except for couple of years, Nepalese banks have always faced liquidity crisis in the last ten years. The banks in Nepal have not played an important role in developing large infrastructures as they largely derive their profit from lending and deposit activities. Most of the projects financed by the banks are short term while the loans have to be renewed every year. To be able to finance the long-term projects, Nepal government and financial authorities should find ways to link financial and capital market with domestic resources for development of large infrastructure projects. Moreover, Nepal should also be able to reach out to international market for capital resources. While NRB has the capacity to borrow USD five billion from European Central Bank (ECB), banks have only been able to mobilise around USD 0.2 billion.

Mr. Ashish Garg

Vice President, Indepedent Power Producers' Association, Nepal (IPPAN)

The involvement of private sector in Nepal in the infrastructure sector has not been satisfactory as they have only invested in hydro projects and few cable cars. While the private sector entities usually take loans for 10 to 12 years, they run the risk of asset-liability mismatch due to fluctuating interest rates on loans. Also due to small size of Nepal's economy, banks in Nepal lack domestic funds to invest in large infrastructure projects. While there is a talk of public private partnership for mobilising funds, there is no risk sharing strategy in place. There should be a provision of hedging mechanism that would not only ensure against domestic investment risk but also currency risk to protect foreign investment. Moreover, it is also difficult to borrow money from international market due to lack of bankable projects. Lack of country's sovereign credit rating has also made infrastructure projects less credible among foreign investors. Therefore, credit rating is the need of the hour to capitalise foreign market while in the domestic market money from insurance companies needs to be utilised.

Mr. Bam Bahadur Mishra - Deputy Governor, Nepal Rastra Bank



Mr. Mishra talked about the policies and efforts made by NRB as a regulatory body to enable more private participation and channel funds for infrastructure projects that may not be commercially viable but are major contributor for country's economic growth. NRB has made policy provision for financial consolidation so that banking and financial institutions are able to fund large projects. He addressed the concern of fluctuating interest rates raised by private investors by stating that NRB is trying to bring the policy to peg the long-term interest rates. To address the problem of asset and liability mismatch, NRB has also made provision allowing financial institutions to issue total bonds worth of around USD 0.5 billion. Similarly, as domestic saving of Nepal is not enough to cater the enormous investment need in infrastructure, NRB has made provision to make it easier for foreign investors to retain and repatriate their profits. Further, mechanisms for risk transfer to safeguard external investors should be enhanced by creating enabling ecosystem to attract private investors, easing of operations within Nepal, and easing of repatriation. Finally, he welcomed the idea about appropriate hedging mechanism from experts to ensure foreign investments by reducing exchange rate risk.

SESSION CHAIR

Hon'ble Janardan Sharma - Minister, Ministry of Finance

Mr. Sharma began by voicing his opinion on why infrastructure development in Nepal has not been up to the par. He believed it is mainly because most of the time the absolute interests of specific political parties or individuals are prioritised. He believed, it is time that all of us think from the perspective of national interest. There should be clarity regarding what is Nepal's development goal, what are the infrastructure projects it needs and what is its strategy to build them. Development goal and strategy should be backed by good governance, public policies, and transparent rules and laws. The focus should be on our strength by utilising domestically available resources. While Nepal is happy selling the excess hydropower supply in the international market, it is time to utilise the hydroelectricity to enhance production and domestic demand. Traditionally, there have been stringent laws in Nepal when it comes to utilising forests and land resources that become counterproductive from development perspective. If benefits could be realised through cost-benefit analysis, natural resources should be used without impacting climate and ecosystem. While foreign assistance and foreign investment can be taken for the development projects, internal resources should be mobilised wherever possible.

KEY TAKEAWAYS

- Nepal needs an investment of USD 29 billion in infrastructure by 2030 just to achieve 5% average annual growth and an additional 2 billion USD for climate resilient infrastructure. Currently, there is the biggest gap in transportation followed by energy sector. There is a need to leverage both knowledge and money to fill the existing gap for sustainable infrastructure.
- Size of the banks in Nepal are too small to finance large infrastructure project. Therefore, there is a need to mobilise external financial resources by tapping in multilateral development grants, concessional loans, FDIs, and Global Climate Funds.
- To make public private partnership modality more attractive for investors, the government should work on minimising political risk, policy risk, and foreign currency risk. Project approval process should also be improved and expedited.
- Five proposed financial instruments to be leveraged for mobilising resources for infrastructure, that should include private equity infrastructure fund, targeted funds for infrastructure projects, sizeable special project vehicles, debt capital market with local currency bonds, and sovereign credit rating. While credit rating is not a solution, it plays a role of multiplying effects by opening the economy and credit story.
- Infrastructure financing must be embedded as a way of business in institutions for good governance. The projects must be vetted, processes must be transparent, and outputs must be subject to public scrutiny. The funding modes other than debt and equity financing such as blended finance, hedging and viability gap funding should also be explored.
- Mechanisms for risk transfer to safeguard external investors should be developed by creating enabling ecosystem to attract private investors, easing of operations within Nepal and easing of repatriation.
- Nepal needs to have a clear national strategy for required infrastructure projects to achieve its development goals.

BUSINESS SESSION 5:

GOVERNANCE OF INFRASTRUCTURE DEVELOPMENT; POLICIES, STRATEGIES, AND IMPLEMENTATION

Session Chair

Mr. Vishnu Kumar Agarwal, President, CNI

Keynote Speaker

Prof. Dr. Rajendra Prasad Adhikari, Infrastructure/Construction Management Expert

Panelists

Er. Ang Dorji Lama, Senior Vice President, FCAN

Mr. Arnaud Cauchois, Country Director, ADB

Mr. Gopal Prasad Sigdel, Secretary, Minister of Physical Infrastructure and Transport

Er. Dr. Hari Bahadur Darlami, President, Nepal Engineers' Association

Mr. Ranen Banerjee, Government Sector Leader, Pricewaterhouse Coopers, India

Mr. Sushil Bhatta, CEO, Investment Board, Nepal

Moderator

Dr. Hare Ram Shrestha, Executive Director, SiDeF, Former President, Nepal Engineers' Association

KEYNOTE SPEAKER

Prof. Dr. Rajendra Prasad Adhikari
Infrastructure/Construction Management Expert

If Nepal has to realise its goal of achieving SDGs and being a middle-income country by 2030, it must strive for a long-term vision of infrastructure development. Adequate and reliable infrastructure is a backbone for a country's sustained development. The fifteenth periodic development plan also prioritises the investment in long term infrastructure. The government has made some legal provisions for infrastructure development such as Company Act, Public Procurement Act, National Civil Code, Public Private Partnership Act, Investment Act and so on. However, there is still more clarity and transparency required in these acts to give good direction for infrastructure development. Similarly, national budget in infrastructure needs to be increased by up to 40%. Infrastructure projects should be selected and prioritised according to the need of the country. For instance, there has been a recent trend of building view towers among local governments in most places that needs to be stopped. In addition to identifying suitable projects for development, provision should be made to complete them on time. Developing an effective dispute resolution mechanism among concerned stakeholders is necessary to ensure timely delivery of the projects. The government as well as contractors should demonstrate transparency, competitiveness, and accountability. There should also be a proper mechanism in place to incentivise private participation in infrastructure investment. Finally, employment generation through investment in infrastructure is also an important factor that will have positive development impacts.

PANELISTS

Mr. Gopal Prasad Sigdel

Secretary, Minister of Physical Infrastructure and Transport

Political instability has been the major problem in Nepal that usually delays the timely completion of the infrastructure projects. While the annual budget always includes numerous infrastructure projects, they are rarely implemented on time. Since the budget is usually inflated, it is difficult to match with actual funds. Problem also lies in the limited procedural capacity of the public sector. Contractors tend to hold too many projects at the same time that are often beyond their implementing capacity. However, to solve this problem the government has amended the public procurement act whereby a single contractor cannot hold more than 5 projects at the same time. The government has also introduced a development act that prioritises nation pride projects and helps to reduce procedural difficulties. The concerned ministry is drafting National Highway Act and Integrated Transport Policy to regulate national highways and is also trying to introduce tech-based monetisation process. They are also attempting to make government offices function online and are automatic to make the procurement process more transparent. With right efforts from the government, Nepal can surely increase investment in infrastructure from public and private sectors.

Mr. Sushil Bhatta - CEO, Investment Board, Nepal

Since its inception in 2010, Investment Board Nepal (IBN) has played an vital role in implementing large infrastructure projects in Nepal. In the present context, total projects worth USD 3 billion are in development process under IBN. Similarly, projects worth USD 10 billion are in different development phases that are also under IBN. Arun 3 and Upper Karnali hydropower projects are one of the kind projects in Nepal developed by IBN with both having a capacity of more than 900 MW. IBN is now in the process of implementing large hydropower projects equivalent to 5000 MW of generation capacity. IBN has played a pivotal role in building credibility and trust between infrastructure developers and the government. They are planning to work on Design, Build, Operate and Manage Model for constructing large infrastructure projects that would be effective in bringing responsibility and accountability. While PPP model has been implemented, it has not been effective in risk sharing mechanism. Although the investors should be ready to bear the immediate financing risk of investing in infrastructure projects, the government and regulatory authorities should create an enabling environment to ensure that investors will get good returns in the long term. Overall, while things are moving in the right direction for infrastructure investment in Nepal, it is high time to accelerate the process and work with an integrated approach.

Er. Ang Dorji Lama - Senior Vice President, FCAN

Mr. Lama pointed out that land acquisition particularly under forest area is a major problem in Nepal for infrastructure developers when working on field for operations. In addition, the construction companies do not receive timely payment after the completion of the projects. Due to the constant change in the project manager, construction companies need to act accordingly causing delay in the projects. Low bidding is also another problem created by the public procurement act that hinders the quality in delivery. The advance money given to the developers by the government has decreased from 20% to 10 % making it difficult to acquire necessary capital. Frequent changes in procurement policies also make it difficult to acquire investment projects. He advocated to include more engineers at the policy level who would understand technical aspects of project development and would help in making right decisions.

Mr. Arnaud Cauchois - Country Director, ADB

The Asian Development Bank has been working in infrastructure development for a long period of time in Nepal. ADB's main target in Nepal for the coming five years is to enable capacity of private sector in infrastructure development. ADB's current portfolio in Nepal is around USD 3.2 billion out of which significant portion goes to investment in the infrastructure sector. However, the portfolio is not being fully utilised when it comes to infrastructure development. The main reason behind this is ineffective procurement and planning process. Another critical issue regarding the incompetency of project development and implementation is the high turnover rate of the government staffs that significantly reduces accountability. Even government officials at high level such as secretary and project directors are moving out of projects very frequently creating a lot of disturbances in contract management, decision making, and approval process. Tenders are being issued even when projects are not ready and statutory clearances are not in place. These problems can easily be solved through inter-agency coordination. There are very particularly examples available internationally regarding online portals that streamline the approval process among inter agencies. The Nepal government must take these issues seriously and the ADB is ever ready to join hands with them in solving these problems and support infrastructure development.

Er. Dr. Hari Bahadur Darlami - President, Nepal Engineers' Association

Dr. Darlami mainly points out the importance of engineers for infrastructure development of the country as they are the ones to have technical knowledge. He mentioned that since about 60% of capital is generated through engineers, they should be more involved in decision making process which is lacking at present in the country. However, to strengthen the quality of the engineers in the country, the capacity of Engineering Council has to be increased and it must be autonomous. There is also a need of staff engineering college to provide quality education and produce world-class engineers. He concluded by saying that to have a prosperous nation, Nepal should strive for quality production of engineers.

Mr. Ranen Banerjee - Government Sector Leader, Pricewaterhouse Coopers, India

Mr. Banerjee pointed out that the problems that are seen in infrastructure development are not limited to Nepal. These are the problems seen all over the world whether it is low-, middle- or high-income country. He mentioned the importance of allocating budget on the infrastructure projects that are on verge of completion rather than on new ones that are uncertain. He gave an inspiring example of investments being made in very exceedingly potential irrigation projects in Madhya Pradesh. However, those projects were only able to irrigate small portion of land as not all of them were completely finalised. However, when some of the projects were completely finalised with interventions from PwC, it led to a large amount of land being irrigated within a very short period. He also emphasised the importance of preparation of procurement and DPR finalisation process and the time it takes to finalise the process should be utilised for inter-ministerial coordination. He also mentioned about online portal called 'Gatishakti' in India that gives details about the infrastructure projects, ministries responsible for approval process, and the stage at which the projects are stuck. All such information is visible on dashboard and accessible to public that creates pressure as well as incentive for all the relevant stakeholders and coordinating agencies to complete the projects on time. He also illustrated some relevant examples to elaborate the point of how a problem of underbidding could be solved by rejecting those bids that are 20% below the average bid.

SESSION CHAIR

Mr. Vishnu Kumar Agarwal - President, CNI

Mr. Agarwal thanked all the panel members as well as the moderator for having such a wonderful discussion on governance of the infrastructure projects. He personally felt this was one of the most important sessions of the event as Nepal's infrastructure projects are blighted by poor governance. Panel members not only pointed out the problems in the Nepalese context, but they also provided potent solutions with examples of best international practices. Mr. Agarwal added that if lessons can be learn from these discussions, significant headway can be made in infrastructure sector that is significant to change the living standard of people.

KEY TAKEAWAYS

- Given that delivering infrastructure projects is the need of the hour, efficient use of available resources becomes key for its optimum utilisation. The discussions should focus on the ways to which the current infrastructure governance mechanism be improved incorporating best global and regional practices into the system.
- Good governance of infrastructure projects, project preparedness, project prioritisation, overcoming low biding rates, and tackling distinct aspects of a project lifecycle are critical to increase investment in infrastructure.
- There is a strong need to improve transparency for better coordination. Transparent inter-agency coordination dashboards (example of Gati Shakti of Govt of India) and coordinated approach on project which are close to completion, will help achieve real outcomes.
- The significance and need for private sector participation to meet over half of the infrastructure investment requirements should be realised. Special emphasis to be laid to ensure successful PPPs through special purpose vehicles in priority sectors.
- Dispute resolution mechanism needs to be made effective by amendment in existing Arbitration Act.
- There is a longstanding problem in Nepal of not being able to fully utilise the capital expenditure. Capital expenditure stands around 70% of total capital budget allocated. There is a need to strengthen decision making capabilities of the government at federal, provincial, and local level. Large national pride projects should be identified based on need-based demand rather than on the basis of political decision. Already available international standard bid document for projects can be used rather than spending time to prepare own document.
- The government approval process for identified projects can be expedited using digital technology and transparent methods. It is essential to adopt technology-based monitoring and evaluation methods through office automation.
- Problem of underbidding could be solved by rejecting those bids that are 20% below the average bid.
- High time for integrated and coordinated approach among three tiers of government. Formulation and implementation of relevant policies at provincial and local level should be made a priority to give clear guidelines for private investors.

PARALLEL SESSION 3:
URBAN INFRASTRUCTURE FOR LIVEABLE CITIES

Panelists:

Mr. Arnaud Heckman, Head, Portfolio Management Unit, Nepal Resident Mission, ADB

Mr. Krishna Prasad Sapkota, Executive Director, Town Development Fund

Mr. Dhan Raj Acharya, Mayor, Pokhara Metropolitan City

Mr. Rajesh Man Singh, Mayor, Birgunj Metropolitan City

Mr. Nagesh Koirala, Mayor, Biratnagar Metropolitan City

Mr. Tirtharaj Bhattrai, Mayor, Diktel Rupakot Majhuwagadhi Municipality

Moderator:

Mr. Krishna Gyawali, Former Nepal Government secretary, Policy Advisor, Nepal Urban Resilience Program

PANELISTS

Mr. Arnaud Heckman

Head, Portfolio Management Unit, Nepal Resident Mission, ADB

To make cities more liveable, the indicators such as the 'quality of life' and 'happiness index' must be considered. Furthermore, there is a need to have a better connectivity between rural and urban areas. To ensure this, the meaning of 'rural' needs to be redefined as this label should not deprive them of 'urban' amenities. Urban areas should not be regarded as the epitome of civilisation, a sentiment that will continue to make rural areas fall behind in terms of development and amenities. In the context of Nepal, federalism offers an advantage because it makes tailored local development easier. For urban development, cities need to conduct water management and sanitation surveys because their implementation will differ tremendously based on the area. In cities, infrastructure should be developed in ways that attract jobs and the private sector. According to Mr. Heckman, what often goes neglected in urban development is residential planning. They require a complex process and configuring where and how to establish housing and services is vital to make these areas more liveable.

Mr. Krishna Prasad Sapkota - Executive Director, Town Development Fund

Mr. Sapkota highlighted the importance of changing the mindset among public regarding making their city beautiful. However, the aspects such as greenery and dust management are neglected in most metropolitans and municipalities. The leadership has neglected establishing greenery and inclusive public transport because they do not know how to get started. He also believed that there is a lack of communication between different tiers of the government, although he admitted that blame and responsibilities are often bounced around in the public sector. He stated that depending on foreign aid for big projects is a massive bottleneck that halts development. Elected leaders do not look past their tenure for development projects. He emphasised that the current policies will not facilitate innovation. Start-ups should incentivised by leveraging funding from multilateral development agencies such as the World Bank and the ADB.

Mr. Dhan Raj Acharya - Mayor, Pokhara Metropolitan City

Mr. Acharya pointed out that his primary objective is to make Pokhara an international city, a tourist hub. While this plan will not be completed within his five-year tenure, it is vital to initiate, nonetheless. While the local government did develop infrastructure in Pokhara relatively earlier by establishing an airport and urban housing, he stated that currently, they are experiencing stagnation in development. If Pokhara does not upgrade its infrastructure according to the demand of increasing population, it will face congestion. Currently, even the drainage system is not sufficient for the number of people living in the city. He stated that because of lack of adequate infrastructure, people do not want to reside in Pokhara permanently. Even if there is enough space for more people to live in, infrastructure planning has not been up to the task to cater ever increasing population. One major issue is that the contracts for infrastructure projects are given to lowest bidder without assessing their capacity and so at the end many bidders are incapable of completing the projects on time. He concluded by stating that cooperation between the private and public sector is needed for seamless development.

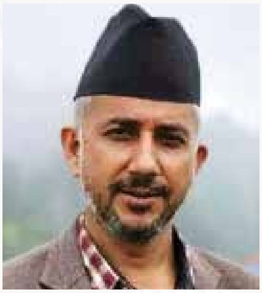
Mr. Rajesh Man Singh - Mayor, Birgunj Metropolitan City

When asked about what the summit could do to extend assistance to Birgunj, Mr. Singh expressed that even though big promises are made in such events, they are not generally kept. Even though Birgunj is considered as the economic hub of the nation, there are not enough economic activities taking place with unemployment being the major issue. He shared that the meagre budget that Birgunj gets from the federal government is spent mostly on compensating government workers. While the major promise he made during his campaign was building better roads, but bureaucracy has been holding him back. He said citizens of Birgunj are also accountable for some of the problems in the city. While citizens are aware about the importance of hygiene and clean environment, they never take initiatives to keep their surroundings clean. He concluded by saying that the implementation of projects is a bigger issue than acquiring funding. He also invited anyone with the relevant expertise to help Birgunj become a more liveable city.

Mr. Nagesh Koirala - Mayor, Biratnagar Metropolitan City

Mr. Koirala was concerned about Biratnagar's waning tourism potential, especially given its cultural significance in the Mahabharat. He shared Mr. Singh's sentiments the promises made in the event such as this are not kept. He also expressed concerns regarding sewage system in Biratnagar. Since Biratnagar is long and narrow, it is often susceptible to floods. Furthermore, road expansion has also been halted due to lack of funding from federal government. Roads consisting of one highway is branching out into dirt paths, causing accidents and pollution. However, the city is in dialogue with the ADB to upgrade its waterways and roads. Currently, most of the ongoing projects in Biratnagar are largely unsustainable due to their makeshift nature. The city has also been planning with the private sector to make Biratnagar an economic corridor. But Mr. Koirala feared that these projects will not be completed after his tenure is over. One last comment that he made was to make Biratnagar a transit to domestic flights, which would boost tourism and increase internal revenue.

Mr. Tirtharaj Bhattrai - Mayor, Diktel Rupakot Majhuwagadhi Municipality



Mr. Bhattrai revealed that the city receives an annual budget of only about USD 16,00,000, while big metropolitans get more than twenty times. The amount of budget is barely adequate to build competent infrastructure. He also mentioned a lack of infrastructure such as big hospitals, making it difficult for local people to receive medical services. They have to commute on foot for as long as six days to receive decent medical treatments. He remained optimistic, however, and mentioned that there are plans to make Diktel Rupakot Majhuwagadhi a 'smart' municipality. There are also plans in place to strengthen crop export and construct an interconnected road. He invited investment from national and international donors including the World Bank and the ADB to materialise these plans.

KEY TAKEAWAYS:

- Lack of adequate budget from central government has been the major issues of metropolitan and sub-metropolitan cities of the countries. To address the shortage of adequate funding, cities should look to increase economic activities to generate internal revenue. Shortage of funding can also be manged by improving efficiency of the projects that would significantly reduce cost overrun.
- Sustainability of infrastructure projects are often neglected during planning phase. Proper planning requires effective coordination among all the three tiers of government.
- Development partners such as the World Bank and the ADB should also focus on investing in local projects that would benefit people living in rural areas. For instance, lack of infrastructures such as hospitals in rural areas prevent people from getting even basic health facilities. Such critical issues demand immediate attention from relevant stakeholders.
- Nepal being a unique country in terms of geography as well as in terms of socio-cultural aspects, each city has plenty to offer for both domestic and international tourism. Therefore, promoting tourism can be an important aspect for internal revenue generation that could be channelised towards infrastructure development.

PARALLEL SESSION 4:
PROVINCIAL INFRASTRUCTURE FOR INCLUSIVE ECONOMIC GROWTH

Distinguished Panel of Chief Ministers

Hon'ble Krishna Chandra Nepali, Chief Minister, Gandaki Province

Hon'ble Kul Prasad KC, Chief Minister, Lumbini Province

Hon'ble Rajendra Prasad Pandey, Chief Minister, Bagmati Province

Moderator

Prof. Dr. Govinda Raj Pokharel, Former Vice Chairman, National Planning Commission

DISTINGUISHED PANEL OF CHIEF MINISTERS

Hon'ble Kul Prasad KC - Chief Minister, Lumbini Province

Mr. K.C shared Lumbini Province's master plan on how it is managing infrastructure and highlighted some interesting themes. Infrastructures in the province are being constructed with the coordination and help from federal government and private sector. The coordination with federal government and management of foreign loan and grants has been effectively managed through Province Infrastructure Development Authority (PIDA). There are currently 20 to 22 project banks for the financing of infrastructure projects and PPP has been formally inculcated to raise ample capital for projects. Lumbini province currently hosts 17 cement factories, an international airport, and two major trade portals. Therefore, Lumbini has enough prospects for investment, and it is a "virgin land" for investors. With elimination of interventionist approach of central government upon state's jurisdiction and with proper consultation and coordination with private sector, Lumbini Province shall be on the way to achieve its goal of 'Prosperous Lumbini Self-Reliant State'.

Hon'ble Krishna Chandra Nepali - Chief Minister, Gandaki Province

Mr. Nepali highlighted major prospects for prosperity of Gandaki Province. Gandaki Province in coordination with private sector is currently making 23 'national pride' infrastructure projects. Some of the key achievements of Gandaki province include construction of 500 km of black topped roads, strong financial package for tourism sector during Covid, and improvement of inter-provincial connectivity through roads and air routes. Hydro is one of the major sectors for private investors to invest as Gandaki Province has capacity to produce more than 1500 MW of electricity. Another major attraction for private sector is to invest in tourism infrastructure by developing a religious corridor. Gandaki Province has been working, coordinating, and taking instructions from various stakeholders, private sector, and foreign investors on investing in right infrastructures. However, the concern remains as there is a power-tussle between the central government and state government and such coordination problem should be solved with one-door policy.

Hon'ble Rajendra Prasad Pandey - Chief Minister, Bagmati Province

Mr. Pandey talked about major impediments and prospects for Bagmati Province. He shared that the major impediment for Bagmati province is power tussle between federal and provincial governments. Federal legislative still has not been able to enact the relevant laws and regulations to enable states to act on their own constitutional jurisdiction. For example, in absence of Federal Civil Service act, the state government was forced to pass the Provincial Civil Service act as ordinance to meet the required workforce. With regards to infrastructure development, Bagmati province is moving forward with public private partnership and looking to be a self-reliant province through internal revenue. The focus of Bagmati Province is to make investment in big projects. The total annual budget of the province is around USD 0.6 billion out of which USD 0.17 billion is from internal revenue of the province. Bagmati Province has the largest budget allocated among all seven provinces of Nepal. Some of the major infrastructure projects that the province plan to undertake include chemical fertiliser manufacturing plant, university for handicraft, science and technology labs, alternate route to Prithvi highway, and inter-provincial religious corridor connecting different religious sites such as Devghat, Gosainkunda, Triveni, and Manakamana. On the digital front, Bagmati is currently aiming to implement digital fair-payment in public vehicles. With proper support from the central government, the province can aim to achieve noteworthy progress in the near future concerning development aspects.

KEY TAKEAWAYS

- Lumbini Province has developed a Provincial Capital Development Project Master Plan where Infrastructure Development Authority is responsible for developing the plan. The authority is provided with policy instruments and permanent structure, and it can mobilise local resources for infrastructure investment.

- It took five years to develop the master plan with NPR 100 billion required in total for investment in infrastructure. The first phase involves completion of provincial administrative buildings requiring NPR 25 billion. The subsequent phases include developing other city infrastructures. The government has the responsibility to channel funds from internal revenue at least for the first phase of the plan as it might be commercially viable for private sector.

- In terms of city infrastructures, Lumbini Technical University, Lumbini Provincial Hospital, and road networks connecting all thirteen districts of the province are of utmost priority.

- Some of the key achievements of Gandaki province include construction of 500 km of black topped roads, strong financial package for tourism sector during Covid, and improvement of inter-provincial connectivity through roads and air routes.

- National Innovation Center in Pokhara is a priority for provincial government for which budget has already been allocated. Similarly, Gandaki Institute of Technology is also very important for which the construction works have already been started. The aim of these projects is to generate skilled human resources.

- Development of religious corridor is also identified as an important project for connecting Buddhist tourists to Tibet as well as for connecting tourists from India to Muktinath.

- While Gandaki province is rich in water resources, these resources have not been tapped enough. With such resources having immense potential in power generation, there is a need to attract investment from private sector and build necessary infrastructure. On the other hand, the provincial government is still fighting for provincial rights and has not been able to fully utilise already existing infrastructure.

- The focus of Bagmati Province is to make investment in big projects. Total annual budget of the province is around 0.6 billion USD out of which 0.17 billion USD is from internal revenue of the province. Bagmati Province has the largest budget allocated among all seven provinces of Nepal.

- Along with the capital city of the country, there are other major economic zones located in this province. Despite this, diverse landscape with remote and difficult geography is a challenge for equitable growth and development.

- One major initiative the Bagmati province planned was the provision of public transport online ticket system. However, the initiative could not go ahead due to the encroachment from federal government. If the federal government were to interfere less, provincial government would have been able to mobilise its own local resources for infrastructure investment.

- Some of the major infrastructure projects that the province plan to undertake include chemical fertiliser manufacturing plant, university for handicraft, science and technology labs, alternate route to Prithvi highway and inter-provincial religious corridor connecting different religious sites such as Devghat, Gosainkunda, Triveni, and Manakamana.

PARALLEL SESSION 5:
OPPORTUNITIES FOR GREEN INFRASTRUCTURE DEVELOPMENT

Session Chair:

Hon'ble Pradeep Yadav, Minister, Ministry of Forest and Environment

Panelists

Dr. Maheshwar Dhakal, Director General Department of National Parks and Wildlife conservation

Dr. Ram Krishna Khatiwada, CEO, Nepal Infrastructure Bank Limited

Dr. Stephen Danyo, Sector Leader for Sustainable Development, World Bank

Dr. Ram Prasad Dhital, Former ED, Alternative Energy Promotion Centre

Mr. Robert Dobias, Advisor, Climate Centre, National Research Council of Thailand

Prof. Dr. Tae Tiong Jung, Professor, Yonsei University

Moderator:

Prof. Dr. Shobhakar Dhakal, VP, Academic Affairs, AIT; Member of Advisory Board, CNI

PANELISTS

Mr. Stephen Danyo - Sector Leader for Sustainable Development, World Bank

Mr. Danyo began by stating that sustainable measures of green infrastructure and opportunities in developing countries like Nepal should essentially be more competent. As the water regime is changing due to climatic variation, the flow is less predictable and non-resilient, and Nepal needs to be prepared for these variances. He stated that forests, wetlands, and rivers are all-natural capital for infrastructural assets of any country and are as important as building infrastructure capital. Therefore, the World Bank is working closely with the Ministry of Forest and Agriculture and the Ministry of Roads to generate a plan for a territorial approach to reforestation and forest protection for resilient projects. He also noted that since there is a huge significance of the private sector in Nepal, the government needs to make an enabling environment for their investment. While there has been a significant number of investments in hydropower, transmission lines and distribution are not adequate. Therefore, significant investment must be channelized towards such infrastructures to utilise hydropower generation at its full capacity. Lastly, he emphasised importance of the private sector in achieving the infrastructure development target.

Dr. Ram Prasad Dhital - Former ED, Alternative Energy Promotion Centre

Dr. Dhital referred to the recent economic survey by the Ministry of Finance. He said that the total energy consumption in 2021 was 174 TW, and out of this 28% came from imported petroleum. Therefore, to promote green energy, the aim should be to replace petroleum products. On the domestic side, close to 66% of energy is being consumed from traditional biomass whereas electricity contributed only about 4% and renewable energy less than 2%. Nepal's energy consumption pattern is not sustainable as it is heavily dependent on imported fuel and biomass. Reducing petroleum usage not only helps Nepal to move towards net-zero emissions but will also help to reduce massive trade deficit with India. Finally, he said that to measure the success of any infrastructure projects, they must be measured by Environment, Social and Governance (ESG) indicators, and such indicators will help them make more sustainable.

Dr. Maheshwar Dhakal

Director General, Department of National Parks and Wildlife conservation

Dr. Dhakal began by asking the audience to think of "green" in terms of productivity and value addition. He said that it is important to have three characteristics in mind when developing green infrastructure to determine the feasibility of social, economic, and ecological safeguards. The first was impact assessments, which would determine project feasibility in the long term. He noted that the private sectors sometimes ignore this process due to complicated and lengthy procedures and the burdens that they would have to bear. The second was climate resilience, as disregarding this often leads to safety risks. Therefore, climate risks such as erratic rainfall and landslide should be considered while planning for green infrastructure. Finally, low carbon emissions and strategies should be taken as a strict benchmark while planning for infrastructure. He added that digital infrastructure should be included in every single one of these criteria, otherwise, green infrastructure cannot be developed effectively and efficiently.

Mr. Robert Dobias - Advisor, Climate Centre, National Research Council of Thailand

Mr. Dobias began by drawing attention to how climate change was negatively affecting the glaciers above Nepal, emphasising the need for action. He also highlighted how profitable green infrastructure can be. Existing wetlands or creating wetlands in Nepal would yield naturally filtered water that has a potential to generate a profit of about USD 2.9 billion. He also noted the benefits of urban forests in culturally significant areas, as they could be used as recreation, health, and well-being sites, bolstering tourism even further there. Finally, he noted the agricultural benefits of green infrastructure. 'Green roofs' and 'vertical/rooftop farming' are concepts that have had huge successes in Bangkok, and they also have scope to be implemented in Nepal.

Prof. Dr. Tae Tiong Jung - Professor, Yonsei University

Dr. Jung noted that green infrastructure is not new or exclusive to Nepal, which meant that the nation had now "taken part in a global race." He noted that Nepal had just as many opportunities as any other nation for developing green infrastructure when asked if Nepal was qualified to be in this "race" by the audience. Dr. Jung added that when discussing green infrastructure, it is vital to include and think about digital components too. It is digital transformation that helps green infrastructure projects become cheaper, which is especially important for Nepal. He noted that due to the competent human resources and digital presence that Nepal possesses, it would not be much of a hurdle to integrate digital infrastructure into sustainability, leading to a promising future. He concluded with an example given by Dr. Lohani where he mentioned innovative financing schemes, highlighting the importance of policy risk, currency risk, and private risk, and how to utilise them in developing green projects.

Dr. Ram Krishna Khatiwada - CEO, Nepal Infrastructure Bank Limited

Dr. Khatiwada pointed out that Nepal already invested USD 46 billion in the climate change initiative, but the treasury cannot sustain this effort anymore after around eight years of continuing to do so. He urged the private sector to contribute to this effort too. He noted that there are many opportunities in green infrastructure in Nepal like hydropower which the private sector continues to finance. He also listed common and industrial infrastructure as areas where sustainable practices could be implemented. He also stated that 10% of loan derivatives will be invested in hydropower. The central bank has also announced the monetary policy that the green taxonomy will be formalised starting this fiscal year. Dr. Khatiwada also suggested there be an enhancer mechanism for the sum limit of credit to encourage financial institutions and the private sector to invest in green infrastructure. There are different instruments he has been discussing within NIFRA and the ministry of finance to come up with a 'green bond'. Dr. Khatiwada also mentioned that the central bank is coming up with green loans or green financing with other multinational organisations assisting this effort. He concluded by stating that while the government could not fully commit to green infrastructure by 2030, help from the private sector would help in bridging the gap.

SESSION CHAIR

Hon'ble Pradeep Yadav - Minister, Ministry of Forest and Environment

Hon'ble Yadav began by lamenting how the mass deforestation in many municipalities, to draw profits, has caused mass floods during the springtime. Therefore, he suggested that the government should make robust policies addressing this problem. He stated that many mayors in Nepal take up jobs as contractors, abusing their power for gain, highlighting the systemic nature of this issue. He also noted that the ministry is often subjected to unjustified scrutiny from the public, with activists harassing them for cutting down trees even after careful planning. He said it was impossible to develop infrastructure without harming the environment in some way. Yadav clarified that his ministry is always looking for ways to mitigate their damage, like planting ten times the amount of trees that they cut down for development. He also elaborated on their work with commercial vehicles. They are implementing Euro 6 standards as diesel in Nepal is made considering that standard. However, Euro 3 standard vehicles would still be supported, with the government hopefully phasing them out eventually. He concluded his speech by being optimistic about sustainability in Nepal, noting that summits such as these greatly help in that regard.

KEY TAKEAWAYS:

- Since there is a significant presence of private sector is Nepal, incentivising them is the only viable way to develop green infrastructure in Nepal.
- Nepal already has enormous potential for green infrastructure in terms of its hydropower projects, which should be further vetted and planned for to ensure their long-term profitability and sustainability.
- It is vital to include digital components while planning for green infrastructure for robust futureproofing and effectiveness.
- While deforestation is rampant across Nepal causing many climatic disasters, proper use of forest resources for infrastructure development cannot be misunderstood. There are stringent rules and laws regarding forest use in Nepal that can often become bottlenecks for development projects. Such constraining rules and laws must be reformed.
- Climate responsive investments – public transport, electric buses, sewage treatments, etc. are being undertaken that needs to be replicated across cities and provinces. Participatory planning especially at neighbourhood level and community-led urban infrastructure solutions can be explored to encourage collaborative efforts, and effective public engagement should attract other investments from private sector

PARALLEL SESSION 6:
INDUSTRIAL INFRASTRUCTURE

Session Chair

Dr. Toya Narayan Gyawali, Secretary, Ministry of Industry, Commerce and Supplies

Keynote Speaker

Mr. Hari Bhakta Sharma, Past President, CNI

Panelists

Dr. Chandrika Prasad Bhatta, Executive Director, Special Economic Zone Authority

Mr. Ravi Rayavaram, Managing Director, Surya Nepal Pvt Ltd

Mr. Sujay Shetty, Director, Economic Development, PwC India

Moderator

Prof. Dr. Pramod Bahadur Shrestha, Institute of Engineering

KEYNOTE SPEAKER

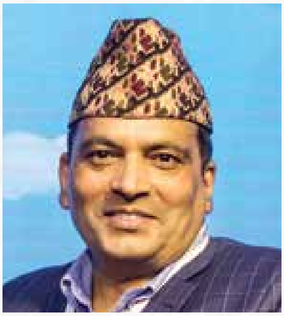
Mr. Hari Bhakta Sharma - Past President, CNI

He talked about the current context of industrial infrastructure in Nepal saying that price of real estate is too high for industrial purpose. Moreover, the available land for establishing large industries is also quite limited. There is also a funding gap as Nepal needs more than USD 45 million to develop adequate infrastructures for industries. Nepal should emphasise on efficiency to make industrial products more competitive that requires good transport network connectivity. Similarly, low energy price is also a principal factor for making industrial output more competitive. Since Nepal is producing abundant hydropower these days, electricity for industries should be made available at cheaper rate. The rent for leasing land for developing industrial infrastructure can also be reduced. While currently, there are some industrial zones and special economic zones, but they have not been able to attract enough investment from private sector for developing industries. To solve this problem, Nepal can make the lowest corporate tax zones in South Asia. Such zones can be established in every state. Lack of skilled human resources for industrial development should be addressed with the supply of quality education. Public private partnership model should be made effective to attract more investment for industrial infrastructure.

PANELISTS

Dr. Chandrika Prasad Bhatta

Executive Director, Special Economic Zone Authority



Some of the facilities required in Special economic Zones (SEZ) for attracting industrial investment include excellent physical infrastructure, fiscal benefits, and non-fiscal benefits. In the context of Nepalese SEZs, there are excellent land plots, water, and electricity facilities, as well as other physical infrastructures that are of international standards. Regarding fiscal policies, income tax is made free for the first 5 years of industrial operation inside SEZ. Further, there is an additional 50% discount in tax for the first 25 years. Some customs duties are made free in SEZs. In addition to these fiscal benefits, SEZs also provide other financial incentives for industries. The provision of special economic zone act has also been made that has made the investment feasible for the industries. There has been a problem of inter-governmental coordination among three tiers of government that needs to be solved through amendments in existing industrial acts.

Mr. Ravi Rayavaram - Managing Director, Surya Nepal Pvt Ltd

He gave an example of how Surya Nepal has been a highly successful company. Though it is primarily a foreign invest, there are also significant shares from Nepalese counterparts. With Surya Nepal being so successful, there is no reason for other companies not to follow the same successful path with foreign and domestic investment. He said the clearance for establishing new industries in Nepal has improved and become easier than before though there is still room for improvements. Some of the key parameters leading to successful infrastructure development and industrialisation include integrated planning, investment in enabling infrastructure, supportive incentive and regulatory regime, and strong institutional structure with clear mandate. The concept of contract manufacturing can also be implemented that will help reduce industrial cost and make production more competitive.

Mr. Sujay Shetty - Director, Economic Development, PwC India

According to him, Nepal has a unique benefit of being located between the two manufacturing giants and accordingly it should take advantage of such situation. The initiatives taken by the Nepal Government such as tax infrastructure development and tax exemption are in good direction. However, there is a problem regarding the registration of new companies. There is a duplication in approval process as paper works have to be done from multiples ministries and divisions. To avoid this problem, the government should recognise that the 'one window policy' is more effective. While industries within SEZs do get benefits in terms of low tax and other customs, SEZs have not been able to attract enough investment from private sectors due to lack of adequate physical infrastructure. He gave an example of how industrialisation has been successful in Vietnam using integrated technology. The Government of Vietnam has emphasised on the need to speed up the country's industrialisation process through value addition and technological upgrading. They have identified three key industries i.e., manufacturing, telecommunication, and electronics and other priority subsectors in the manufacturing industry, with a focus on developing high value-added industry as well as on industries with strong backward and forward linkages. Nepal should learn from these success stories from similar counties by identifying its competitive strength.

SESSION CHAIR

Dr. Toya Narayan Gyawali - Secretary, Ministry of Industry, Commerce and Supplies

The most important aspect for industrial infrastructure is investment. There are two primary sources of investment; one is domestic resources, and another is FDI. Since domestic saving of Nepal is not enough to meet the humongous financial capital required for adequate industrial infrastructure, Nepal should look to increase FDI. Nepal has been receiving FDI from more than 90 countries that have invested in more than 5000 projects. However, the amount of money received through FDI is only USD 400 million. The total number of employment generation through FDI is only about 200,000. These figures are incredibly low compared to other countries in South Asia. Nepal must significantly increase the investment of the country. Nepal Government has been liberal on Foreign Investment and allows 100% foreign ownership in most of the sectors of economy. There is also a provision of 'tax holiday' for selected locations/thrust sectors and competitive corporate tax rate at 20% for priority sectors and 25% for general sector. However, there are still other things investors look for while investing in foreign countries such as safety, rate of return, and capital growth. Therefore, it is the responsibility of the government and the authorities to ensure these requirement for foreign investors. Nepal needs to improve on indicators such as logistics performance index (LPI), innovate index rating, competitiveness index and ease of doing business index to attract more investors. Improving upon these indicators require good inter-government coordination, good transport and digital connectivity, and good business environment ecosystem.

KEY TAKEAWAYS

- Located amidst economic power houses with developed and developing industrial and service sector hubs, Nepal has unique advantage for investment in infrastructure. Nepal government is liberal on Foreign Investment and allows 100% foreign ownership in most of the sectors of economy. There is also a provision of 'tax holiday' for selected locations/thrust sectors and competitive corporate tax rate at 20% for priority sectors and 25% for general sector. However, there is still more room to relook at the manufacturing sector basket, focus on import substitution, and move up the value chain.

- The government and the policymakers should understand the need for industrialisation in the country. Better connectivity and industrial infrastructures are essential for this to happen. However, whether it is unavailability of highways or delay at costumes, delay in tax payments or delay in tax dispute settlements, there has been rapid deindustrialisation in recent times.

- Key parameters leading to successful infrastructure development and industrialisation include integrated planning, investment in enabling infrastructure, supportive incentive and regulatory regime, and strong institutional structure with clear mandate.

- Energy is the major input for industrial sector. As Nepal is increasing its production of hydropower, industries should be provided with improved quality and reliability of electricity. There is a need to provide dedicated power feeder to large scale industries so that they enjoy consistent supply of energy input.

- Special Economic Zones (SEZs) have emerged as a major policy tool for promoting economic and industrial development. Their four key objectives of SEZs include increasing exports, bringing in foreign investments, creating jobs, and developing world class infrastructures. However, SEZs are not performing as well as expected. Therefore, scheme of incentives such as exemptions from customs, tax and other national regulatory regimes must be strengthen.

- Numerous governance models exist to strengthen SEZs. Zone management and oversight can involve governments from all three tiers, investors, and other stakeholders. Development, ownership, and management of individual zones can be public, private, or public private partnership. The successful models from global industry practices, such as Vietnam and Middle East, could be used as model.

CLOSING PLENARY

Chief Guest

Hon'ble Gyanendra Bahadur Karki, Minister, Ministry of Communication and Information Technology

Session Chair

Mr. Vishnu Agarwal, President, CNI

Address

Hon'ble Umesh Shrestha, State Minister for Health and Population

Hon'ble Binod Kumar Chaudhary, Member of Parliament; President Emeritus, CNI

Mr. Birendra Raj Pandey, Vice President, CNI

Valedictory Note

Mr. Nidish Nair, Executive Director and Leader, Climate Resilience and Cities, PwC India

Vote of Thanks

Mr. Gopal Prasad Sigdel, Secretary, Ministry of Physical Infrastructure and Transport

SESSION CHAIR

Mr. Vishnu Agarwal - President, CNI

Mr. Agarwal summarised the entire sessions and highlighted some of the key problems and solutions identified during the summit regarding infrastructure development. Cost overrun and untimely finishing of infrastructure projects is the biggest impediment to Nepal's development. Good governance with strong participation from private sector is a key for unlocking true potential of infrastructure investment in Nepal. PPP is an important concept to finance big projects while improving industrial logistics and reducing business costs are the ways to ensure viability of the projects. In addition to this, the need of financial and technical investment in physical and industrial infrastructure, and construction of IT Park to address communication and technical needs were also highlighted. CNI as a representative of private sector shall lobby the stakeholders for the prompt implementation of agendas discussed in the summit. Mr. Agarwal hoped that the summit provided the government, private sector, development partners, and international investors with the structural framework and ample ideas to increase infrastructural investment in Nepal.

VALEDICTORY NOTE

Mr. Nidish Nair
Executive Director and Leader, Climate Resilience and Cities, PwC India

Mr. Nair encapsulated the critical items and agendas discussed across various sessions of the summit. Some of the agendas that he touched upon are as follows:

- Strengthening bottom-up approach to development – prioritisation should devolve from a centralised system to provincial and local level.

- PPP projects should be explored and encouraged with adequate risk allocation, participatory decision-making, PPP communication, and transparency.

- Climate resilience (risk assessment / risk insurance) should be made integral for all the projects. Green infrastructure development should be incentivised.

- Infrastructure financing must be embedded as a way of business in institutions for good governance. The projects must be vetted, processes must be transparent, and outputs must be subject to public scrutiny. The funding modes other than debt financing such as JVs, FDI, and equity should be explored, including blended finance, hedging, and viability gap funding.

- Mechanisms for risk transfer at local levels to safeguard external investors should be developed by (i) Creating enabling ecosystem to attract private investors / FDI (ii) Ease of operating within Nepal and (iii) Ease of repatriation.

- Nepal has potential to quadruple its trade volume provided the South Asia and other regions are interconnected with developed infrastructures. It needs to focus on development of economic corridors, multimodal transport, tourism, agriculture, and water sectors.

- During 2025-2027, Nepal's transmission capacity will enhance to 13000 MW, accelerated focus on development of energy and transmission infrastructure will help Nepal export more hydropower to India and Bangladesh.

- BBIN, SAARC, and BIMSTEC forums should be used to leverage mechanisms to discuss the regional connectivity. Development partners like the ADB, the World bank, and MCA were committed to support in connectivity infrastructures across the region.

- Nepal should have strong political commitment and strong IT capabilities in all ministries and agencies for leveraging digital transformation and growth. There should be numerous policy reforms and incentives to encourage startups to invest in digital solutions e.g., 'Aasan' programme of Azerbaijan or Startup India. There is a need to focus on digital literacy and digital adoption. The partnerships with Academia to meet the demand of skilled resources and capacity development in digital domain is essential.

- There should be designated programmes or funds for priority projects. A need for new and innovative instruments such as asset monetisation and FDI for infrastructure financing is essential. Intermediation by Financial Institutions for leveraging sovereign funds. Development of special purpose vehicles for PPP projects, including for viability gap funding and standardizing concession agreement. Priority should be given to explore Local Currency Bond (NPR) and Masala Bonds, and carry out Sovereign Credit Rating.

- Good governance of infrastructure projects (including quality and timely critical), project preparedness, project prioritisation, overcoming low biding rates, tackling different aspects of a project lifecycle are critical.

- Improve transparency for better coordination with transparent inter-agency coordination dashboards (example, Gati Shakti of Govt of India). A coordinated approach on project which are close to completion, will help achieve real outcomes.

- Climate responsive investments such as public transport, electric buses, sewage treatments, being undertaken that needs to be replicated across cities and provinces. Participatory planning especially at neighbourhood level and community-led urban infrastructure solutions can be explored to encourage collaborative efforts, and effective public engagement should attract other investments from private sector.

- Green infrastructure and investment have immense positive externalities as seen in the case of EV, Carbon/ RE trade in terms of self-sufficiency, local resources, economy etc. The electricity generation itself will have potential for 82 million tons CO_2 saving cumulatively by 2030.

- Infrastructure needs to be measured in terms of ESG – Environment, Social and Governance indicators while compliance cost will need to be factored in.

- Since Industrial Estates and SEZs are not performing well, scheme of incentives needs to be strengthened. The private Sector needs to be encouraged to partner on operation and management of Industrial Estates and SEZs. The cost of Logistics is quite high which erodes competitiveness. The considerable support is needed for connected infrastructure such as roads, power, land, and human capital.

CHIEF GUEST

Hon'ble Gyanendra Bahadur Karki
Minister, Ministry of Communication and Information Technology

Mr. Karki stated that the summit is an important platform as it discussed the preconditions to infrastructural development for both private sector and the government, and helps to resolve various bottlenecks that exist. Government of Nepal has heeded upon the various agendas from stakeholders and CNI that will help to facilitate the infrastructural growth in Nepal. He highlighted that to achieve the required nine percent of expenditure in infrastructure, private sector's involvement is compulsory. Similarly, in the situation where 60% of the total capital for investment is raised from private sector, the government has readily provided various incentives to private sector for business facilitation. He concluded that he envisages Nepali people to be economically prosperous in ten years.

ADDRESS

Mr. Gopal Prasad Sigdel - Secretary, Ministry of Physical Infrastructure and Transport

Mr. Sidgel highlighted three important takeaways of the summit. First, the aim should be of motivation and incentives for both public and private sector. Second, there should be good coordination between all the agencies and stakeholders involved in infrastructure development and third, solid framework for green and resilient infrastructure for sustainable growth should be build. He emphasised the importance of policy recommendation from the organisation like CNI and committed support from Ministry of Physical Infrastructure and Transport for the summit.

Hon'ble Binod Kumar Chaudhary - Member of Parliament; President Emeritus, CNI

Mr. Chaudhary highlighted the matter of infrastructure development, contract and infrastructural projects and the need of the hour to market Nepal for infrastructure building. He stated that the recent development in Nepal on infrastructural sector such as airports, hydroelectricity, roads, cement, and steels has helped us to recalibrate our balance of payment with India. Such development has also renewed sense of confidence among entrepreneurs both nationally and internationally. However, despite some positive developments, there is still a chronic issue of inability to complete infrastructural projects on time that generates significant cost run. This is also one of the factors that drives away foreign investors. Good governance is a must to solve this critical problem. Additionally, Mr. Chaudhary also highlighted the importance of marketing Nepal's international market as a lucrative place to invest with very high growth potential. One way that Nepalese companies can enhance their capabilities is by participating in joint venture partnership with international companies. Therefore, the government should play an important role in welcoming foreign investors with appropriate laws and incentivising policies. Overall, Nepal is continuing in a right path and if it strives to do so in the coming days then there is a reason to be optimistic about the future prospects.

Hon'ble Umesh Shrestha - State Minister for Health and Population

Mr. Umesh Shrestha talked about opportunities that could be leveraged through formation of effective government policies. The bureaucracy and the politicians must change their mindset and constitute investment and infrastructure friendly policies that could cater the changing demand of modern times. While the government has budget of around USD three billion allocated for infrastructure development, it is not able to spend even 60% of it. Some of the major problems for industrial establishment include land and forests acquisition as well as lack of energy inputs. There should be dedicated industrial parks with all the required physical infrastructures for industrial development. He also focused on how young human resources should be utilized in Nepal. Around 600,000 young people enter labour market in Nepal every year, however, only about fifty to sixty thousand are able to get employment. To absorb this labour force, there should be a focus on establishing industries on sectors such as hydro, tourism, agricultural, herbs, and IT that Nepal has a competitive advantage on. To promote investment in such sectors, the government should necessarily provide right incentives by reducing interest rates and by provisioning hedging mechanism for appropriate risk sharing. Nepal can be a prosperous nation if businesses and industries can flourish that are enabled by right policies and laws.

VOTE OF THANKS

Mr. Birendra Raj Pandey - Vice President, CNI

Mr. Pandey talked about the importance of the two-days summit that highlighted some of the important aspects in relation to infrastructure development such as good governance, innovative financing mechanism, green infrastructure, and digital transformation. He highlighted that the summit brought about 1000 delegates including over 40 international delegates from 12 different countries, the collaborative effort of over 50 partner organisation and stakeholders, 80 national and international speakers in 11 sessions. He expressed his sincere gratitude to participants, supporters, sponsors, speakers, Panelists, partners, co-organisers, and volunteers, and with this Nepal Infrastructure Summit 2022 was formally concluded.

KEY TAKEAWAYS

- Major points discussed in different sessions of the conference include implementing Public Private Partnership (PPP) model, exploring investment options to raise the necessary capital for large infrastructure, focusing on digital infrastructures to leverage emerging technologies on data, and investing more on resilient infrastructure keeping in mind the potential damages that could incur due to climate change.

- There were discussions on how to reduce the cost of doing business by upgrading the Industrial and Logistic Infrastructure. Nepal's need for large financial and technical investment in infrastructure ranging from physical to information technology also became a broad topic of debate. It was proven that the need for information vvtechnology infrastructure can be addressed by building IT parks.

- In the given context of Nepal, the conference provided a rough blueprint for the government, the private sector, development partners, and other international investors regarding the priorities that Nepal should identify to give extra speed to the economy through infrastructure development.

- The economic transformation of Nepal can only be successful through significant investment in infrastructure by cooperating with the latest and appropriate models of investment in international practice. Government and policy makers should create an enabling environment for this by adopting and sustaining necessary and appropriate policies.

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