

GOAL PROFILE OF

SDG 9: INDUSTRY, INNOVATION AND INFRASTRUCTURE



Prepared by: _____



NAYA
Nepal APFSD Youth Alliance



Background:

The Sustainable Development Goals (SDGs) are global development targets adopted by all UN member states, including Nepal, in 2015. The Asia Pacific Forum on Sustainable Development (APFSD) and the High-Level Political Forum (HLPF), respectively, have regional and global institutions in place to monitor and review Agenda 2030. Every year, CSOs, institutions, and people gather at these forums to share their experiences, best practices, progress, gaps, and obstacles in achieving the SDGs. These forums are quite effective in SDG advocacy for diverse groups and constituencies.

To implement follow-up actions around APFSD in Nepal, the Nepal APFSD Youth Alliance (NAYA) was formed after the completion of the 8th APFSD Youth Forum. The alliance is made up of eleven youth-led and youth-serving organizations in the working group, and more than 200 individuals who represent a diverse geography, themes, disability, gender identity, and other factors. NAYA envisions young people at the forefront of Agenda 2030 for Sustainable Development at the national, regional, and international levels.

Visible Impact serves as a secretariat for NAYA. Visible Impact serves as the secretariat for NAYA. Visible Impact is a young women-led organization in Nepal that is creating a visible impact on the lives of adolescent girls, women, and youth by unleashing their social and economic leadership through participatory innovative interventions.

Every year, NAYA conducts a youth consultation prior to APFSD main event, to collect recommendations of Nepalese youths on different clusters of SDGs being reviewed that year.

This year, NAYA first prepared goal profiles of all five SDGs being reviewed in 2026 (SDG 6: Clean water and sanitation, SDG 7: Affordable and clean energy, SDG 9: Industry, infrastructure and innovation, SDG 11: Sustainable cities and communities and SDG 17: Partnerships for Goals). The working group members of NAYA and other partner organizations contributed to its preparation through intensive desk reviews of all relevant articles and documents found online. After the preparation of the goal profile, NAYA conducted 'Nepal Youth Forum 2025' on 31st of October to draw first-hand information on issues and recommendations of Nepalese youths on these five SDGs being discussed in 2026. The forum was conducted online and about 60 youths from diverse backgrounds contributed to the findings.

Combining the information from both, desk reviews and youth consultation, NAYA is producing this comprehensive goal profiles of all five SDGs. While goal profiles of SDG 6,7,9 and 11 consist of information from both, desk reviews and youth consultation, the goal profile of SDG 11 is solely documented through a desk review. Since SDG 17: Partnerships for Goals can be a cross-cutting theme to all other SDGs, a separate thematic session was not designed for it, at the youth consultation



Goal Profile of  SDG 9: Industry, Innovation and Infrastructure

SDG 9: Industry, Innovation and Infrastructure

Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.

Introduction:

Sustainable Development Goal 9 (SDG 9) intends to develop robust infrastructure, promote inclusive and sustainable industrialization, and spur innovation. It covers 12 indicators to monitor progress and 8 targets to be achieved by 2030. As Nepal graduates from Least Developed Countries (LDC) next year, it is crucial to focus on innovation, developing new infrastructure, and industries. It focuses on closing the gap between developed and developing nations by ensuring cost-effective access to infrastructure, promoting sustainable businesses, and stimulating research and innovation. It is also pivotal in accelerating structural transformation, expanding productive jobs beyond subsistence agriculture, and reducing regional disparities. In recent times, significant progress has been observed in digital connectivity and electricity access, but diversifying industries and research development remain stagnant.

Situation Analysis:

SDG 9, which is to build strong infrastructure, support inclusive and sustainable industrialization, and encourage innovation, is relevant to Nepal now more than at any other time in its history. Achieving SDG 9 is crucial for structural transformation, productive employment, and increased competitiveness as Nepal strives to graduate from its Least Developed Country (LDC) status to middle-income status by November 2026 (1). The attainment of SDG 9 targets is, however, directly hindered by Nepal's not so well-regulated industrialization, infrastructure, innovation, and internet accessibility constraints.

There is a notable gap in structural transformation in Nepal's industrial sector, which lags behind its competitors in the Global South and South Asia. Nepal had one of the lowest manufacturing value added percentages of GDP in South Asia in 2024, at about 4.37%. In contrast, Bangladesh's manufacturing sector accounted for 34.1% of its 2024 GDP. This disparity indicates that Nepal's industrial base is weak, which impedes the country's ability to create jobs, diversify its exports, and prosper economically overall (2).

Nepal's logistics position is 114th out of 139 countries in the World Bank's Logistics Performance Index 2023. Despite some progress from previous years, it reflects substantial issues with infrastructure, customs efficacy, and service quality. However, neighboring countries like Bangladesh and India have made considerable strides in their logistics, enabling increased trade and economic collaboration. Similarly, Nepal's ranking of 107th out of 139 economies in the Global Innovation Index 2025 highlights its limited Research and Development capacity (3), which is crucial for industrial advancement. These comparable figures underscore the need for targeted policies and investments to reduce these gaps and advance sustainable industrialization in Nepal.

Achievements:

The progress on achieving SDG 9 such as developing more resilient infrastructure, promoting inclusive and sustainable industrialization, and increasing attention towards innovation-led development

has been moderate. Firstly, the road density has increased to 0.12 km per square kilometer in 2022, which is beyond the target set for the year (4). Similarly, progress can be seen in the proportion of manufacturing employment out of total employment reaching 15.1% in 2022 surpassing the target of 9.6%. The increased enrollment in science and technology cannot be overlooked as it signifies the increasing interest of students in technology and innovation (4).

In addition, new initiatives can be observed that encourage industrialization. For example, the Industrial Enterprises Act of 2020 has been revised to include investment incentives and the restructuring of sick industries. The Sixteenth Plan (FY 2024/25-2028/29) promotes industrialization and aligns with the target 9.2 of SDG 9 (5). In the same way, policy and refinancing windows offered by the Nepal Rastra Bank, as well as new institutions such as the Nepal Infrastructure Bank (NIFRA) have increased the long-term finance environment, including infrastructure that fosters business expansion. This initiative promotes the access for small and medium enterprises to finance.

Also, mobile broadband and smartphone penetration have increased; a majority of the population is now online (55.8%), establishing digital public services and e-commerce for growth under the Digital Nepal Framework (6). Similarly, the percentage of the population using at least a 3G mobile network had increased to 51% in 2022 compared to 50% in 2015. There has been even a greater increase in the population proportion covered by a 4G network. In 2015, only 15% of the population were covered by 4G mobile networks while the coverage has increased tremendously to 45% in 2022 (7).

Challenges/Gaps:

While progress has been made in several indicators, key challenges that must be addressed to accelerate the progress of SDG 9. Despite the increase in the proportion of manufacturing employment, Nepal still falls short in the share of manufacturing value added as a proportion of GDP (4). Manufacturing value added (MVA) accounts for approximately 4-5% of GDP and is susceptible

to shocks, with limited diversification beyond low-tech goods (8). Similarly, the contribution of the industrial sector to GDP also remained low with 13.1%, compared to the target of 19.7%. Also, Nepal has not been spending sufficient resources on research and development which shows that enough attention hasn't been given to innovation led projects (4),(9).

The very low Logistics Performance Index (LPI) ranking indicates persistent bottlenecks (road quality, warehousing, border operations), which increase trade costs for enterprises (10). While digital accessibility is getting better, the quality of rural internet, the cost of devices, and the lack of digital skills are all making it harder for small businesses and students to be more productive.

Challenges Identified from Nepal Youth Forum:

The major issue identified with SDG 9 was the limited diversification of industries where industries are concentrated within limited sectors constraining diverse jobs and innovation. Similarly, industrial spaces often lacking inclusivity which restricts the participation of marginalized groups and persons with disabilities was another important concern of youths. The visible gaps are seen in digital access among urban and rural populations which is hindering equitable participation in industrial and technological progress. Also, the difficult topography of the country making industries difficult to expand, political instability and inconsistent policy execution and weak research and development culture were identified as factors affecting the progress of SDG 9 adversely. As a landlocked developing country, we face challenges like insufficient logistics, high trade and internet costs, and infrastructure limitations which was also reflected in the voices of participants.

Key stakeholders involved:

The government and the public sector provide policy, regulation, infrastructure, and an enabling environment. This includes the National Planning Commission (SDG steering Planning Team), Ministry of Industry, Commerce and Supplies, Ministry of Education, Science and Technology. The stakeholders under this sector also include other ministries and all provincial as well as 752 local governments across the country.

The financial sectors play a key role in ensuring investment and credit flow. This sector includes the Nepal Infrastructure Bank (NIFRA) and other commercial banks.

The Knowledge/Innovation Sector looks after driving research, innovation, and technology transfer. This sector includes Nepal Academy of Science and Technology (NAST), universities, tech incubation centres and private R&D units. Private Sector & CSOs are major players in implementing industrial projects, creating jobs, bridging between communities and government and promoting innovation. Federation of Nepalese Chambers of Commerce and Industries (FNCCI), Confederation of Nepalese Industries (CNI), SME associations, startups and cooperatives fall under this sector. National Innovation Center is one of such non-governmental organizations dedicated to fostering innovation and entrepreneurship. Finally, Development Partners like ADB, UN agencies (UNDP, UNIDO, ITU, etc) and World Bank are the ones who ensure finance, technology, and technical support for ensuring successful implementation of SDG 9.

Current Policies Guiding SDG 9:

Nepal has adopted several key policies and plans to accelerate progress toward SDG 9:

- i) Industrial Enterprises Act, 2020 (2076): Integrates industrial regulations, incentives, and measures (including support for poor performing industries) to promote a thriving industrial sector.
- ii) National Science, Technology & Innovation (STI) Policy, 2019: Emphasizes entrepreneurship, commercialization, and innovation. Also, calls for more robust research ecosystems.
- iii) Digital Nepal Framework (2019): The government's cross-sector digital strategy, which consists of eight pillars, aims to promote connectivity, digital services, and private sector innovation.
- iv) Sixteenth 5 Year Plan (FY 2024/25–2028/29): Sets a short-term vision, includes a dedicated SDG chapter, and integrates SDGs throughout every level of government.
- v) SDG mainstreaming / VNR (2024): Nepal's participation in the Integrated National Financing Framework (INFF) reflects an effort to develop comprehensive organizational links

across planning, budgeting, and financing domains, hence promoting SDG coherence across all government levels.

Recommendations:

To address the gaps identified and accelerate the progress of SDG 9 in Nepal, some specific actions need to be prioritized.

Firstly, NPC should establish an SDG 9 Delivery Unit to monitor quarterly progress on key indicators (manufacturing value-addition, logistical productivity, R&D spending, ICT access, etc). There should be clarity regarding the tasks of subnational governments and incorporate SDG 9 goals into provincial and local development plans.

Secondly, increasing the number of credit guarantee programs and concessional loans aimed at firms run by women, young people, and underrepresented groups should be prioritized. Easy financial assistance to SMEs for implementing clean technology and digital tools needs to be ensured.

Another focus should be on improving logistics and connectivity. The government should establish a National Logistics Master Plan with an emphasis on digital customs, leased warehousing, border modernization, and rural roads. For connectivity, establishing regional connectivity routes to connect Nepal with markets in China, Bangladesh, and India could be beneficial.

For fostering innovation, the establishment of a National Innovation Fund to assist women, young people, and university-industry collaborations should be prioritized. The National Innovation Center should be scaled up to different provinces and encouraged to work in vital fields like digital health, agri-tech, renewable energy, and climate smart technologies. Investing in Research & Development (R&D) should be prioritized. It should be aimed to raise total R&D expenditures from the public and private sectors to 1% of GDP by 2030.

Lastly, steps should be taken to encourage businesses to utilize energy-efficient technologies

and renewable energy sources like solar and hydropower to promote sustainable and green industrialization.

Recommendations from Nepal Youth Forum:

One of the important recommendations was to introduce an industrial risk sharing mechanism by establishing government backed frameworks to mitigate financial losses and support industrial resilience. Actions from the government to accelerate digitalization and encourage innovation, adoption of inclusive and disability friendly designs in all industries, integrating technical education, vocational training and innovation-oriented learning from the school level were also recommended by the participants of Nepal Youth Forum.

Similarly, other recommendations included improving rural connectivity, by increasing investment in transport and internet in rural and Himalayan regions and empowering women through skilled networks to encourage them to achieve economic independence. Encouraging the investments in environmentally conscious and clean energy sectors like hydropower was also identified as a priority action to help the sustainable energy sector foster in Nepal. In addition, the budget allocated for research and development should increase significantly to accelerate the progress in all sectors including industry, infrastructure and innovation.

While discussing the cross-cutting SDGs like SDG 3,5 and 17, multi-stakeholder collaboration among government agencies, private sector actors, academia and civil society was recommended. Similarly, the importance of ensuring that the gender and social inclusion principles are incorporated actively in the technological and industrial sector has been highlighted. Also, the forum spotlighted on building stronger regional and international partnerships to exchange expertise, resources and best practices in innovation and infrastructure development, for addressing the gaps and accelerating progress of SDG 9.





References:

1. Nepal graduation status | LDC Portal – International Support Measures for Least Developed Countries [Internet]. United Nations Committee for Development Policy; [cited 2025 Sep 24]. Available from: <https://www.un.org/ldcportal/nepal-graduation-status/>
2. World Bank. Manufacturing, value added (% of GDP) [Internet]. World Bank Data; [cited 2025 Sep 24]. Available from: <https://data.worldbank.org/indicator/NV.IND.MANF.ZS>
3. World Intellectual Property Organization (WIPO). Nepal Ranking in the Global Innovation Index 2025 [Internet]. Geneva: WIPO; 2025. Available from: <https://www.wipo.int/gii-ranking/en/nepal>
4. Government of Nepal; National Planning Commission. Voluntary National Review of Sustainable Development Goals, Nepal 2022 [Internet]. Kathmandu: National Planning Commission; 2022 [cited 2025 Sep 25]. Available from: <https://nepalsdgforum.org/uploads/attachments/cqcvxyd8msowlpij.pdf>
5. Department of Industry, Government of Nepal. Notices-20210601125541336 [Internet]. Kathmandu: Department of Industry; 2021 [cited 2025 Sep 25]. Available from: <https://www.doind.gov.np/uploads/notices/Notices-20210601125541336.pdf>
6. World Bank. Individuals using the Internet (% of population) [Internet]. Washington, DC: World Bank; [cited 2025 Sep 25]. Available from: <https://data.worldbank.org/indicator/IT.NET.USER.ZS>
7. United Nations Economic and Social Commission for Asia and the Pacific (UN ESCAP). National Analysis: Overview — Nepal [Internet]. [Place of publication]: UN ESCAP; [publication year] [cited 2025 Sep 25]. Available from: <https://data.unescap.org/national-analysis?tab=overview&country=NPL>
8. World Bank. Manufacturing, value added (% of GDP) [Internet]. Washington, DC: World Bank; [cited 2025 Sep 25]. Available from: <https://data.worldbank.org/indicator/NV.IND.MANF.ZS>
9. Poudel RC. Implementation of National Science Technology and Innovation Policy 2019: Assessment of Challenges in Government Organizations of Nepal. *Nepal Journal of Science and Technology*. 2021;20(2):85-102. doi:10.3126/njst.v20i2.45779
10. World Bank. Logistics Performance Index (LPI): Global [Internet]. Washington, DC: World Bank; 2023 [cited 2025 Sep 25]. Available from: <https://lpi.worldbank.org/international/global/>

