

Nepal Engineering College

Changunarayan-4, Bhaktapur

Report on

Institution Sustainable Development Strategy Implementation Plan (SDSIP)

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1 Institution Sustainable Development Strategy Backbone

1.1 Introduction

Nepal Engineering College is committed to contributing to the United Nations Sustainable Development Goals (SDGs) for 2030 through education, research, and sustainable practices that foster a culture of sustainability and social responsibility in the campus and wider community. The college recognizes the need to address the global challenges of poverty, hunger, inequality, climate change, and environmental degradation, and is committed to taking action to promote sustainable development in Nepal.

This Sustainable Development Strategic Implementation Plan outlines the college's goals, actions, and strategies for achieving the UN SDGs in Nepal. The plan is designed to provide a framework for sustainable development initiatives that will promote social, economic, and environmental sustainability in the college and wider community.

The plan focuses on seven of the 17 UN SDGs, namely no poverty, zero hunger, good health and well-being, quality education, gender equality, clean water and sanitation, affordable and clean energy, decent work and economic growth, industry, innovation, and infrastructure, sustainable cities and communities, responsible consumption and production, climate action, life below water, and life on land. These goals are aligned with the college's mission and vision and represent a comprehensive approach to sustainable development in Nepal.

The plan outlines specific actions and strategies that the college will undertake to achieve these goals, including offering scholarship programs and financial aid to students from disadvantaged backgrounds, developing and implementing sustainable agriculture practices on campus, providing access to healthcare services and facilities on campus, offering programs and courses that promote sustainable development and social responsibility, promoting gender equality and empowering women and girls in Nepal, reducing energy consumption and promoting the use of renewable energy sources on campus, and developing and implementing initiatives that promote sustainable industry, innovation, and infrastructure on campus and in the wider community.

Through the implementation of this Sustainable Development Strategic Implementation Plan (SDSIP), Nepal Engineering College aims to make a significant contribution to the UN SDGs and promote sustainable development in Nepal. The college recognizes the importance of collaboration and partnership with local organizations, agencies, and stakeholders in achieving these goals and is committed to working together towards a sustainable future for Nepal.

2 Vision

The vision of Nepal Engineering College regarding the SDSIP in the college is stipulated as:

To create a sustainable future for Nepal through the development and implementation of sustainable practices in education, research, and campus operations

3 Mission

To achieve the aforementioned vision, nec is committed to the following missions

To contribute to the United Nations' SDGs through education, research, and sustainable practices that foster a culture of sustainability and social responsibility in the campus and wider community.

4 **Objectives**

The objectives of the SDSIP at nec is to develop strategy plan for implementation of SDGs through academic activities, research, outreach programs and to perform SWOT analysis for guiding the institutions in the course of accomplishing SDGs.

5 Methods

The overall framework adopted for developing SDSIP for nec consists of following steps.

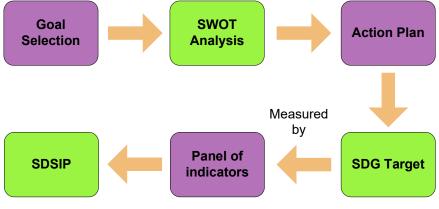


Figure 1 Methodological framework

6 Implementation of SDG 3: Good Health and Well-being

Goal: To promote good health and well-being for Nepali students and the wider community.

Strength	Weakness	Opportunity	Threat
 nec is not-for profit organization Full time faculty hiring policy Internationaliz ation policy adapted 	 Affiliated to university, cannot directly changes the policy on academic matter Economicaly Self sustainable Decreasing interest towards technical education in woman candidates 	 Diversed courses learning centre Qualfied faculties, teachers and staff Increased Colabortion and network 	 Financial sustainability Retaining the human resource

Figure 2 SWOT for Goal 3

Action	Indicator	Baseline data	Target by 2030	Task	UN Target/Rema rks
Reduce the number of suicide mortality rate in the university/inst itution	mortality rate in the	0	0	Provide mental health resources Develop a suicide prevention policy Establish support groups	UN target 3.4
Reduce substance abuse	3.2 Number of prevention programs on substance abuse	1	7	Develop and implementing evidence- based prevention programs for reducing substance abuse and evaluating their effectiveness	UN target 3.5

Provide maximum health coverage to students and staffs in university/inst itution	Health	100%	100%	Developing a comprehensiv e health insurance policy Conducting a needs assessment and engaging insurance providers	UN target 3.4
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7 Implementation of SDG 4: Quality Education

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

Strength	Weakness	Opportunity	Threat
 nec is not-for profit organization Full time faculty hiring policy Internationaliz ation policy adapted 	 Affiliated to university, cannot directly changes the policy on academic matter Economicaly Self sustainable Decreasing interest towards technical education in woman candidates 	 Diversed courses learning centre Qualfied faculties, teachers and staff Increased Colabortion and network 	 Financial sustainability Retaining the human resource

Figure 3 SWOT for Goal 4

Table	2	Strategic	Plan	for	Goal	4
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Action	Indicator (common)	Baseline data (2021-2022)	Target by 2030	Task	UN Target/Rem arks
Increasing number of female students	4.1 Ratio of female/total students enrolled	Female- 451/2007	Female- 500/2007	Increase in reserved quota	UN TARGET 4.4,4.5

Offering diverse course	 4.4 Diverse courses offered 4.9 Number of academic programs offered 4.10 courses offered in an academic year 	Undergraduate- 7/11 Graduate-4/11	Sustaining existing course/program s	Through Marketing plans	UN TARGET 4.4
Promoting higher education of concerned faculty	4.5 Number of PhD faculties, Number of Masters faculties	PhD-8/133 Masters- 117/133 Bachelor-8/133	PhD-15/133 Masters- 118/133 Bachelor-0/133	Incentive (Cash/leave) for pursuing higher education	Considering total required faculty to be same UN target 4.c
Providing scholarship for needy ones	4.6 Number of scholarship4.12 Number of students receiving scholarship on inclusive basis	UG-82/97 G-15/97	Sustaining existing scholarship	Information dissemination to target area	UN target 4.b UN target 4.3
Increasing mobility	4.7 Total number of teacher mobility through international universities collaboration	Male-13/17 Female-4/17	Total-40	Increase in collaboration	UN Target 4.c
Providing training to teaching/non- teaching staff	4.8 Capacity building training for staffs	7	Total-205	Resource allocation (financial)	UN Target 4.c
Imparting SDG knowledge to students through curriculum	4.13 Number of courses in the curriculum aligned with issues corresponding to SDGs	Archi-20 Civil,C&R-19 CEM-4 NRM-13 IWRM-9 TEAM-1 Comp-1 Elx-0 Ele-0	Continuing to current level and integrating SDG on newly introduced courses.	Conducting relevant noncredit modular training courses	UN Target 4.7

Conducting/ participating seminar, workshops, conference, training, project, symposium with SDG as thematic area	4.14	18	40	Scheduling conference, workshops biannually Budget allocation	
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8 Implementation of SDG 5: Gender Equality

Goal 5 : To promote gender equality on campus and in the wider community.

Strength	Weakness	Opportunity	Threat
 diverse student body that helps to create platform for discussing and addressing gender issues from various perspective Strong network though alumuni and current student 	 no representation of students beyond STEM Resistance to change Inadequate policies 	 Development of gender sensitive talk programs for awreness Partnership with organization to advance gender equality initiatives. leadership training 	 Societal norms limited funding

Figure 4 SWOT for Goal 5

Table 3 Strategic Plan for Goal 5

Action	Indicator	Baseline data	Target by 2030	Task	Remarks
Increase the involvement of female researchers in the university/inst itution	5.1. Percentage of female chief researchers with respect to the total number of chief researchers during the academic year.	18%	25%	Creating a supportive environment can involve implementing policies and practices that promote work- life balance and gender equity Developing targeted recruitment strategies can help increase the number of female researchers in the institution.	UN target 5.1 and 5.5
Increase the number of female academicians in the university/inst itution	5.2. Percentage of women in academic posts.	17%	25%	Developing targeted recruitment strategies can help increase the number of female academicians in the institution.	UN target 5.5
Developing targeted outreach and recruitment strategies to increase the percentage of female students in STEM in the university/inst itution	enrolled in STEM courses	29%	50%	Addressing gender biases and stereotypes to help create a more inclusive and welcoming learning environment for female students.	UN target 5.b

Creating a dedicated scholarship fund for female students	5.4. Scholarship to female students during admission.			Reviewing the scholarship criteria to help ensure that female students are not excluded from consideration due to biased or discriminatory selection criteria.	UN target 5.1
Developing a diversity and inclusion policy to help create a supportive and inclusive work environment that values gender equity and diversity.		16.7%	25%	Reviewing the hiring process to help identify any barriers or biases that may be preventing women from being hired into administrative positions. Offering professional development opportunities to help support the career advancement of women in administrative jobs.	UN target 5.5
Establishing a gender equity task force to help ensure that gender equity is a priority at the institutional level.	academic and administrative	3	5	Providing leadership development programs for women can help support their career advancement and prepare them for leadership roles.	UN target 5.5

Developing a gender diversity policy to help create a supportive and inclusive campus environment that values gender equity and diversity.	5.7. Percentage of women on a campus (staff and students)	22.32%	40%	Providing more scholarships and implementing quota to female students and support for women staff on campus can help address their unique needs and challenges to promote their success and retention.	UN target 5.5
Providing professional development opportunities for women to help support their career advancement and increase their qualifications.	5.8. Qualification of female staff members	36.1%	50%	Establishing a mentorship program can help support the career development and advancement of female staff members.	UN target 5.5

9 Implementation of SDG 6: Clean Water and Sanitation

Goal: To promote access to clean water and sanitation in Nepal.

Strength	Weakness	Opportunity	Threat
 Enough water	 Diversed	 Improved water	• Quality of water
source Local	infrastruture Lack of trained	quality Local	
government	manpower for	government	
representation in	regular	involvement Clean water	
governing body	maitenance	supply	

Figure 5 SWOT of Goal 6

Table 4 Strategic Plan for Goal 6

Action	Indicator	Baseline data	Target by 2030	Task	Remarks
Providing water and sanitation facilities for all	facilities with	55 22		Periodic maintenance of the service	UN target 6.1 and 6.2

10 Implementation of SDG 7: Affordable and Clean Energy

Goal: To promote the use of affordable and clean energy in Nepal.

Strength	Weakness	Opportunity	Threat
 Expertise in energy-related fields Awareness and education about the importance of clean energy and its benefits Capacity building among students and professionals to work towards achieving SDG 7 	 nec do not have adequate funding and resources to invest in research and development of clean energy solutions 	 nec can develop curriculum focused on clean energy solutions and sustainable practices partnership for research and development clean energy demonstration projects that can serve as a model for the broader community 	 Insufficient funding limited public awareness about clean energy the major source is already hydropower energy so alternative clean energy source may not be very appealing

Figure 6 SWOT for Goal 7

Table 5 Strategic Plan for Goal 7

Action	Indicator	Baseline data	Target by 2030	Task	Remarks
Establish a renewable energy policy to help create a clear vision and roadmap for increasing the production of renewable energies on campus.	(presence of renewable energy sources (from outside/inside)	Yes	Yes	Conducting an energy audit to help identify the current energy consumption patterns and sources on campus, as well as areas where energy efficiency can be improved. Investing in renewable energy infrastructure to help promote the adoption and use of renewable energy sources on campus.	UN target 7.a

11 Implementation of SDG 8: Decent Work and Economic Growth

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

Strength	Weakness	Opportunity	Threat
•Good recruitment polciy	•Self sustainable •No grants	 Competitive environment in work job security 	 Overstaffing Less peer review Comparsion in work nature

Figure 7 SWOT for Goal 8

Table	6	Strategic	plan	for	Goal	8
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Action	Indicator	Baseline data	Target by 2030	Task	Remarks
Providing equal pay for equal work	8.1 Average hourly earnings of employees (by sex, age, occupation and persons with disabilities)	Equal payment scheme		Continuation of the existing policy	UN target 8.5

12 Implementation of SDG 9: Industry, Innovation and Infrastructure

Goal 9: To promote sustainable industrialization and infrastructure development in Nepal.

Strength	Weakness	Opportunity	Threat
 Expertise in architecture, structure and other engineering domain Awareness and education about the importance of resilent infracture and innovations Iab facilities for research and testing 	 nec do not have access on the policy formulation platform 	 nec can develop curriculum and offer traninings and non credit courses 	 Insufficient funding limited access to technology syllabus update process slow

Figure 8 SWOT for Goal 9

Table 7 Strategic Plan for Goal 9

Action	Indicator	Baseline data	Target by 2030	Task	Remarks
Developing a research and development policy to help establish a clear framework for promoting innovation and research on campus.	fund allocated by the College for the innovation, research and	NPR 1,000,000	NPR 5,000,000	Conducting a needs assessment to help identify the specific research and development needs of the institution, as well as areas where additional funding may be needed. Identifying and pursuing external funding opportunities to help supplement the funds allocated by	UN target 9.5

				the College for innovation, research, and development.	
Establishing an academia- industry partnership office to help create a central point of contact for promoting and facilitating collaborations between academia and industry.	9. 2. Policies, events, activities and programs promoting academia- industry partnership	11	50	Organizing industry engagement events to help facilitate interactions between academia and industry, and promote the benefits of collaboration.	UN target 9.5 and 9.b
Establishing an academia- industry partnership office to help create a central point of contact for promoting and facilitating collaborations between academia and industry.	through students	11	50	Developing internship and research policies to help establish a clear framework for promoting collaboration with industry and ensure that the partnerships benefit both the institution and industry. Organizing industry- specific career fairs to help connect students with potential industry partners and create opportunities for internships and research collaborations.	UN target 9.b

13 Implementation of SDG 10: Reduced Inequalities

Goal 10: Reduce inequality within and among countries

Strength	Weakness	Opportunity	Threat
 nec is not-for profit organization Good exisitng policy for scholarship 	 No grant from any govenment body Exisitng infrastructure for disable students Less intake 	 Sustaining the exisiting policy on scholarship Increased competition 	•Financial sustainability

Figure 9 SWOT for Goal 10

Table 8	Strategic	Plan for	Goal 10
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Action	Indicator	Baseline data	Target by 2030	Task	Remarks
Providing scholarship on basis of inclusion		Provincial scholarship-7 Reserved quota for female-105		Continuation of provincial scholarship Maintaining reserved quota	UN target 10.2
Giving fair opportunities to disable candidates	Percentage of	Staff-2/203		Reservation of suitable post for disable people Building new infrastructure as per the need	UN target 10.2
Closing the gap between highest and lowest remuneration					

14 Implementation of SDG 11: Sustainable Cities and Communities

Goal 11: To promote sustainable urbanization and development in Nepal

Strength	Weakness	Opportunity	Threat
 Partnership with local community organization for conducting relevant capacity building training 	 nec do not have access on the policy formulation platform for application 	 nec can develop curriculum and offer traninings and non credit courses 	 natural disaster limited funding

Figure 10 SWOT for Goal 11

Action	Indicator	Baseline data	Target by 2030	Task	Remarks
Developing policies, identifying funding sources for on- campus housing	11. 1. Number of persons who benefited from affordable on- campus and/ or university supported housing.	None	200	Conducting a campus housing needs assessment to help identify the current state of on- campus housing and assess the demand for affordable housing.	UN target 11.1
Establishing a sustainable development officer can help create a central point of contact for promoting and facilitating the development of best practice pollution control and waste management policies by the institution/univ ersity	11. 3. Number of policies adopted towards best practice pollution control (including air) and waste management processes by the institution/ university	None	5	Conducting a pollution control and waste management audit to help identify the current state of pollution control and waste management practices at the institution/univ ersity, and assess opportunities for improvement. Developing and implementing pollution	UN target 11.6

Table 9 Strategic Plan for Goal 11

				control and waste management policies to help establish a clear framework for promoting best practice environmental sustainability practices by the institution/univ ersity.	
Establishing a campus greening initiative to help promote and facilitate the development of green spaces on campus.	Percentage of area occupied	5%	10	Developing and implementing greening policies and projects to help establish a clear framework for promoting the development of green spaces on campus.	UN target 11.7

15 Implementation of SDG 12: Responsible Consumption and Production

Goal 12: Ensure sustainable consumption and production patterns

Strength	Weakness	Opportunuty	Threat
 Muncipality involvement in college governing mechanism Easy Policy formation 	 No garbage storing facility Lack of funding for such projects avaialble 	 Green and clean campus Lead the local community towards the reducing waste Initiate new project 	•Gowing community surrounding college which can depend on the college resources only

Figure 11 SWOT for Goal 12

Table 10 Strategic Plan for Goal 12

Action	Indicator	Baseline data	Target by 2030	Task	Remarks
Reducing waste in college	 12.1 Policy and practice devised to reduce waste in college/university 12.2 Policy and practice devised to reuse resources in college and universities 	None	Reducing, recycling and reuse of waste generation	Developing waste reduction and management guidelines	UN target 12.5

16 Implementation of SDG 13: Climate Action

Goal: To promote climate action and resilience in Nepal.

Strength	Weakness	Opportunity	Threat
 Different programs with courses pertaining to climate change action Research cell unit 	• Limited climate change experts	 develop faculties through trainings and motivating to research conducting project and research towards climate change action Increase in subject demand 	 Competition from other educational institutions and organizations that may have stronger or more established programs No partnership with influencer stakeholders

Figure 12 SWOT for Goal 13

Action	Indicator	Baseline data	Target by 2030	Task	Remarks
Collaboration with local organizations and institutions	13. 1. Total events, programs and activities related to disaster and climate change organized to general public	0	4	Develop a comprehensiv e event calendar that highlights upcoming events, programs, and activities related to disaster and climate change that are open to the general public and host the events accordingly	UN target 13.3
Create a committee consisting of students, faculty, and staff that is dedicated to reducing greenhouse gas emissions in the college or university.	reduction in the	None	7	Promote sustainable transportation options to reduce emissions from transportation.	UN target 13.2

17 Implementation of SDG 15: Life on Land

Goal 15: To promote the conservation and sustainable use of terrestrial ecosystems in Nepal.

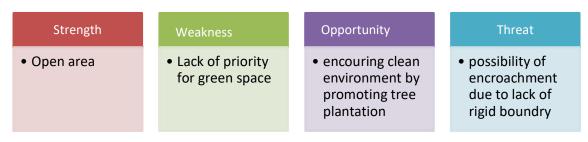


Figure 13 SWOT for Goal 15

Table 12 Strategic Plan for Goal 15

Action	Indicator	Baseline data	Target by 2030	Task	Remarks
Establishing a campus greening initiative to help promote and facilitate the development of green spaces on campus.	Forest area in College or	None	10%	Developing and implementing greening policies and projects to help establish a clear framework for promoting the development of green spaces on campus.	UN target 15.2

18 Implementation of SDG 16: Peace, Justice, and Strong Institutions

Goal 18: Peace, Justice, and Strong Institutions

Strength	Weakness	Opportunity	Threat
 Comunity type non-profit organization Existing policy for the local welfare 	• Self funding institution and no external fund provided to the college	 Local level (government/pol itical)support Good public relation 	• Sometimes undue interfere from local political bodies

Figure 14 SWOT for Goal 16

Table 13 Strategic plan for Goal 16

Action	Indicator	Baseline data	Target by 2030	Task	Remarks
Involving in welfare activities	16.3 Number of welfare activities concerning the local community provided by the University/Institution	Ward Scholarships- 10 Municipality scholarship-5 Donations to local school Technical/ Space assistance during community events		Maintaining existing practices	UN target

19 Implementation of SDG 17: Partnerships for the Goals

Goal 17: To promote partnerships and collaboration for sustainable development in Nepal.

Strength	Weakness	Opportunity	Threat
• Long practice of collaborative research with different international universitites and organizations	• relatively rigid administrative procedure to practice collaborations	 Mobility Student exchange Teaching and non teaching staff training 	• visa problem

Figure 15 SWOT for Goal 17

Action	Indicator	Baseline data	Target by 2030	Task	Remarks
Increase outreach and networking efforts to establish connections with potential national and international entities for partnership opportunities.	17.1. MoUs signed and maintained with national and international entities.	11	50	Develop a pipeline of potential partnership opportunities by identifying national and international entities that share common goals and objectives.	UN target 17.6
Increase awareness and promotion of cultural and academic exchange programs	17.2. Staff and students who have availed cultural and academic exchange programs within and outside the country.	21	50	Provide support for program applications and preparations	UN target 17.6

Table 14 Strategic Plan for Goal 17

Strengthen partnership development efforts with national and international agencies by actively seeking out potential partner organizations and identifying areas of mutual interest and benefit.	17.3. Collaborative research or projects with national and international agencies	8	16	Create a pipeline of potential research or project partnership opportunities by identifying national and international agencies that share common research interests and goals.	UN target 17.6
Strengthen partnership development efforts with public authorities and social bodies by actively seeking out potential partner organizations and identifying areas of mutual interest and benefit.	17.4. Number of collective agreements for partnership with public authorities and social bodies.	None	10	Identify potential partnership opportunities with public authorities and social bodies by conducting research and analysis to determine areas where the organization can make a meaningful contribution.	UN target 17.6
Strengthen network development efforts by actively seeking out international networks working for sustainable development that the institution can participate in.	17.5. Number of international networks working for sustainable development that the institution participates in.	15	30	Identify potential international networks for sustainable development by conducting research and analysis to determine networks that align with the institution's strategic priorities and goals.	UN target 17.6