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# Assessment of Climatic and Environmental Concerns of Madhesh Province

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## Nepali Yuwa in Climate Action and Green Growth

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## EXECUTIVE SUMMARY

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Data and its availability are a powerful medium to identify the extent of society's needs, problems, and solutions. Open data that is fed by people living in the community further creates opportunities to identify the crux of the issues and address them on time. And the efficient way to make data open is to digitize them. Under this action, data-driven digital advocacy will be launched in all three target provinces. The advocacy will start from Madhesh Province in the first year. The experiences and learning from year one will be replicated in Karnali Province in the second year and to Sudurpaschim Province in the third year.

Through consultation with different identified stakeholders, solid waste management has been identified as an environmental issue for digital advocacy. During the consultation with stakeholders, it was identified that there is lack of awareness and sensitization on environmental

issues in the community. As per the findings, an extensive program related to the environment has not been initiated yet. Limited program like awareness raising and information sharing have been done by the government which is not enough to resolve the current solid waste problem. Intensive campaign for Greenery Janakpur/cleaning campaign is needed.

TagMe: A Digital Advocacy Campaign will be carried out in Janakpur on solid waste management. Waste Management Act, 2068 (Amended in 2075) has given the responsibilities to local governments to manage waste and segregate organic and non-organic waste at source. However, waste management is still a big issue for local governments. TagMe: Digital Advocacy will engage local youth and young professionals through crowdsourcing and capacitating them to use technology to collect evidence of waste issues to communicate for policy change.

## TABLE OF CONTENTS

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Executive Summary.....	I
Abbreviations.....	1
1. Introduction.....	2
1.1. Project Description .....	2
1.2. Project Outputs .....	3
1.3. About TagMe: A Digital Advocacy Campaign.....	4
1.4. Objective of this report.....	4
2. Methodology .....	5
3. Findings of the study.....	5
3.1. Climatic and environmental concerns of Madhesh Province.....	5
3.2. Findings from interviews.....	6
3.3. Environmental and climatic concern identified for Digital Advocacy Campaign.....	7
3.4. Target areas for the Digital Advocacy Campaign.....	7
4. Recommendation and Conclusion.....	8
5. Annex .....	8

## ABBREVIATIONS

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1. **BIPAD:** Building Information Platform Against Disaster Portal
2. **CCA:** Climate Change Adaptation
3. **CDMS:** Center for Disaster Management Studies
4. **CREASION:** Center for Research and Sustainable Development
5. **DRR:** Disaster Risk Reduction
6. **DRRM:** Disaster Risk Reduction and Management
7. **EU:** European Union
8. **GESI:** Gender Equality and Social Inclusion
9. **HDI:** Human Development Index
10. **KII:** Key Informant Interview
11. **NGO:** Non-Government Organization
12. **NYCAGG:** Nepali Yuwa in Climate Action and Green Growth
13. **YI-Lab:** Youth Innovation Lab
14. **YSB:** Youth Sounding Board

# 1. INTRODUCTION

## 1.1. Project Description

Youth Innovation Lab (YI-Lab) in the consortium of Restless Development, Center for Research and Sustainable Development (CREASION), and Center for Disaster Management Studies (CDMS) has won a grant from the European Union (EU) for the project Nepali Yuwa in Climate Action and Green Growth (NYCAGG) that will be implemented in Madhesh, Karnali, and Sudurpaschim provinces from 2022 to 2025. The First year of project implementation will start from Madhesh Province.

NYCAGG promotes Nepali youth inclusion in climate action and green economy in the post-COVID recovery of Nepal through their engagement in disaster and climate governance, entrepreneurship, and advocacy. It focuses on working with young people and empowering and providing them a platform to aid towards the post-COVID recovery and development process. Furthermore, the

activities under Climate Fellowship, Climate Smart Entrepreneurship, Mentee-mentorship, Digital Advocacy, and Youth Sounding Board work towards empowering young people, providing them employment opportunities, generating innovative ideas to address climate and environmental issues, and advocating for policy changes to promote environmental protection.

NYCAGG envisions increased participation of Nepali youth in governance, entrepreneurship, and advocacy for climate action through the intervention. The proposed activities of the project fall under five themes which work towards empowering youth, providing them employment opportunities, generating innovative ideas to address climate and environmental issues, and advocating for policy changes to promote environmental protection (Figure 1).

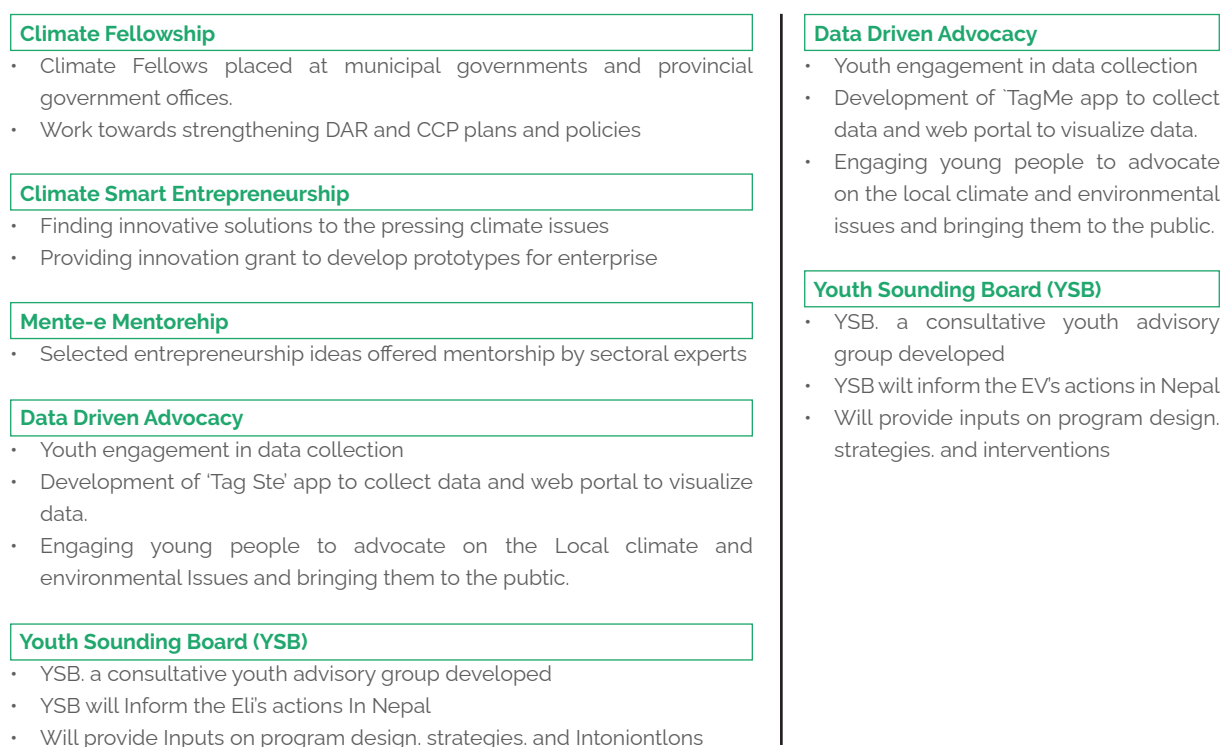


Figure 1: Major areas of youth engagement through NYCAGG project

## 1.2. Project Outputs

The outputs of the project include the following:

- ◆ **Output 1:** Opportunities created for embedding youth to gain professional experience in provincial and local governments of Madhesh, Karnali, and Sudurpaschim provinces on DRR and CCA
- ◆ **Output 2:** Strengthened capacities of Nepali youth on DRR, CCA, and Gender Equality and Social Inclusion (GESI) in Madhesh, Karnali, and Sudurpaschim provinces
- ◆ **Output 3:** Increased awareness and capacities of provincial and municipal elected representatives and government officials on DRRM and CCA
- ◆ **Output 4:** Upgraded and updated DRR and CC-related plans at the municipal level and integrated DRR and CC related datasets into Building Information Platform Against Disaster (BIPAD) Portal
- ◆ **Output 5:** Opportunities created by the intervention for youth entrepreneurship, employment, and mentorship in the market of green economy and climate resilience
- ◆ **Output 6:** Strengthened capacities of Nepali Youth for data-driven advocacy and policy dialogue on climate change and environment



### 1.3. About TagMe: A Digital Advocacy Campaign

Data and its availability are a powerful medium to identify the extent of society's needs, problems, and solutions. Open data that are fed by people living in the community further creates opportunities to identify the crux of the issues and address them on time. And the efficient way to make data open is to digitize them.

TagMe is a digital advocacy campaign to collect evidence of environmental and climatic issues to advocate for policy change. This assessment is being carried out to identify the major environmental and climatic issues of Madhesh province that could be advocated for policy change.



Figure 2: Six-pronged Implementation Strategy of Digital Advocacy

Digital Advocacy will be carried out using a tried-and-tested, circular, six-pronged approach: 1) Awareness – of a challenge being faced by society and individuals that includes reaching out to youth and sensitizing on the waste management issues, 2) Collecting Evidence – collecting data of the environment concerns to communicate the extend of concern to relevant stakeholders,

3) Incentives – for individuals or institutions to change their practices, 4) Take Action –to address the concern, 5) Policy Dialogue – communicating the collected evidences to policymakers to initiate policy dialogue, and 6) Legislation –use the evidence for policy change and hold stakeholders accountable to commitments made to changing legislation and implementing it.

### 1.4. Objective of this report

Followings are the major objectives of this report:

- a. To identify the major climatic and environmental concern that could be addressed via digital advocacy.
- b. To identify the target area for the advocacy.



## 2. METHODOLOGY

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Following methods will be used to identify the climatic and environmental concerns that could be addressed via Digital Advocacy Campaign.

a. *Review of journals and publications of environmental and climatic concerns of Madhesh Province*

b. *Key Informant Interview (KII) with concerned stakeholders of Madhesh Province*

Furthermore, to identify the concern to address via digital advocacy, it should be measurable and could be geo-tagged.

## 3. FINDINGS OF THE STUDY

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### 3.1. Climatic and environmental concerns of Madhesh Province

Madhesh Province is the smallest province in Nepal with an area of 9,661 sq. km but has the highest population (6,126,288) and highest population density (630 per sq. km) in the country<sup>1</sup>. It consists of one Metropolitan, three Sub-Metropolitan, seventy-three Municipalities, and fifty-nine Rural Municipalities spread over eight districts. Among the provinces, Madhesh, Karnali, and Sudurpaschim provinces fall behind while examining HDI<sup>2</sup>. According to the vulnerability and risk assessment report 2021<sup>3</sup>, climate extreme events have the greatest impact on Madhesh province, and all its districts have experienced high to extremely high extreme events. Furthermore, Madhesh Province is vulnerable to various natural disasters such as floods, drought, storms, and cold waves. NAPA vulnerability ranking of districts of Nepal show that Saptari and Siraha districts shows a very high ranking in drought vulnerability with Mahottari district showing a very high ranking in flood vulnerability<sup>4</sup>.

Rapid and uncontrolled urbanization has increased pollution and waste management in Madhesh Province. After the country adopted federalism, many village development committees were merged to make municipalities. As these areas became municipalities, they started to get urbanized. People from villages started to come to settle in these municipalities increasing the population which has started the waste management problem. While old municipalities in Terai have tried to manage waste through landfills, new ones have not even paid attention to it. Many municipalities neither have a waste management division nor do they have a waste processing center. Janakpur sub-metropolitan city hires 106 people to manage waste. It also has six tractors, two containers, four tippers, four small vans, and one boomer. Despite this, the city still faces waste management issues. Like most cities, Janakpur does not have a proper landfill site.<sup>5</sup>

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1 CBS, "National Census 2078 Preliminary Results" (Central Bureau of Statistics, 2021).

2 Provincial Comparison of Development Status in Nepal: An Analysis of Human Development Trend for 1996 to 2026 -<https://bit.ly/3GiMKQq>.

3 Vulnerability and Risk Assessment and Identifying Adaptation Options -<https://bit.ly/3jBKYjP>.

4 Nepal's NAPA: <https://unfccc.int/resource/docs/napa/npl01.pdf>

5 <https://english.onlinekhabar.com/terai-madhesh-waste-management.html>

### 3.2. Findings from interviews

For this assessment, four KKI were carried out. This included an interview with representatives from Industry, Tourism, and Forestry Ministry; Social Development Ministry; Environmental Experts, and local NGO working on environmental issues. In the interviews, the following concerns were highlighted.

#### a. Unmanaged Drainage:

Unmanaged dumping sites and unmanaged drainage are the key environmental concerns that have polluted the city. Non-biodegradable wastes like plastic bottles are haphazardly thrown in drainage, says the environmental expert, Ajit Shrivastav, and The Chairperson Life Nepal, Surait Thakur.

#### b. Pollution:

The environmental expert, Ajit Shrivastav shared "summer season is the challenging season. The unmanaged garbage spreads an unpleasant environment resulting in air pollution. The degrading air spread many communicable diseases and mosquitoes which has been directly hampering public health".

In the urban area, there is no proper waste segregation system. People throw garbage by the side of the road and the side of the river. The garbage generated from shop, hospitals, and household is unmanaged.

#### c. Waste Management:

Solid waste is one of the major environmental challenges faced in Janakpur. The existing

practice is not able to deal with the ongoing solid waste issue. The rapid urbanization in Janakpur has increased the problem. There is a lack of awareness among the public and a lack of resources to deal with the challenges of solid waste management. Bio-degradable and non-biodegradable wastes are not segregated. The hospitals produced tons of garbage which has been challenging to manage said the secretary of the Ministry of Social Development, Ima Narayan Shrestha.

The high volume of plastics is generated from shops and commercial area. Lack of public awareness seems major challenge. The sensitization program has been done among public as per The Ministry of Environment Spokesperson, Sujit Kumar Jha. However, the result doesn't seem effective.

The Chairperson of Life Nepal, Surait Thakur said "There are 36 pounds in Janakpur are polluted. People throw household garbage around the pond and do open toilet though it is religiously and culturally valued. There are no public toilets around the ponds. These ponds are the possibilities for tourism destinations. People are not aware of its importance".

He further said "Janakpur needs awareness raising campaigns and advocacy like Green Janakpur, Green Road, and Green School. And needs to promote tourism concept campaigns.

### 3.3. Environmental and climatic concern identified for Digital Advocacy Campaign

Followings are the environmental and climatic concerns identified of Madhesh Province based on the primary and secondary research.

S.N.	Environmental and Climatic Concerns	Remarks
1.	Waste Management	Centered in city areas
2.	Pollution (water and air)	Centered in city areas
3.	Unmanaged drainage	Centered in city areas
4.	Flood	Affected by all districts
5.	Cold wave	Affected by all districts
6.	Drought	Affected by all districts
7.	Storms	Affected by all districts
8.	Unmanaged dumping sites	Centered in city areas
9.	Lack of public sensitization on solid waste management	In all districts

Amongst the concerned identified, issues of waste management can be measured and could be geo-tagged. For instance, waste generated could be weighted and location of waste disposed could be geo-tagged. Further, waste disposed could be audited – what are the types of waste and what type are commonly found.

### 3.4. Target areas for the Digital Advocacy Campaign

The waste management problem has been plaguing the cities of Madhesh province for some years now<sup>6</sup>. For instance, Gaur municipality in Rautahat district has three tractors collecting waste but the city does not have a proper place to dispose it. Like Gaur, Malangawa in Sarlahi does not have a dumping place. The general practice here is to burn the waste that could be burned, and the rest ends up in river and ponds. Like other cities, the province headquarter, Janakpur does not have a proper landfill site. Janakpur alone generates 56.28 tons of waste every day

and above 70% waste is biodegradable.

Given that waste management issues are more prevalent in Janakpur, and the concern has been brought in public attention time and again, Janakpur has been identified as the target area to carry the digital advocacy campaign. Further, Janakpur is also the working area of the consortium partners. In addition, major academic institutions are in Janakpur that would support in outreach event. Hence, Janakpur has been identified as the target area for the campaign.

## 4. RECOMMENDATION AND CONCLUSION

TagMe: A Digital Advocacy Campaign will be carried out in Janakpur on solid waste management. Waste Management Act, 2068 (Amended in 2075) has given the responsibilities to local governments to manage waste and segregate organic and non-organic waste at source. However, waste

management is still a big issue for local governments. TagMe: Digital Advocacy will engage local youth and young professionals through crowdsourcing and capacitating them to use technology to collect evidence of waste issues to communicate for policy change.

6 <https://english.onlinekhabar.com/terai-madhesh-waste-management.html>

## 5. ANNEX

### *a. People Interviewed*

S.N.	Full Name	Affiliation
1	Sujit Kumar Jha	Spokesperson, Ministry of Industry, Tourism, and Forestry, Madhesh Province
2	Ima Narayan Shrestha	Secretary, Ministry of Social Development, Madhesh Province
3	Ajit Shrivastav	Environmental Expert/President of Nepal Environment Society for Madhesh
4	Surait Thakur	Chairperson, Life Nepal