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Data Need Assessment of
Nine Project Municipalities *for*

BIPAD Localization and Development of LDCRP

August 2022

Nepali Yuwa in Climate Action and Green Growth

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EXECUTIVE SUMMARY

Understanding the risk and working on Disaster Risk Reduction and Management and Climate Change Adaptation requires reliable and timely access to scientific datasets. Therefore, a platform for an integrated disaster information management system has become crucial for policymaking, planning, and implementing DRRM and CC activities. Identifying the need and touching upon national and international mandates, the Building Information Platform Against Disaster (BIPAD) portal is built upon the concept of creating a national portal embedded with independent platforms for national, provincial, and municipal governments with a bottom-up approach to disaster data partnership. It serves as a platform for fostering data partnerships on a common system for disaster management at multiple tiers of governments and stakeholders. Data can be fed in from the municipal level and accessed by all tiers of governments and stakeholders. Furthermore, local governments have mandates from DRRM Act, 2017, to institutionalize disaster management at the local level to enhance their preparedness, mitigation, response, and recovery activities. Likewise, National Climate Change Policy 2019 have promoted the policy guidance to various levels and thematic areas towards developing a resilient society by reducing the risk of climate change impacts. Information Management System will also aid in deciding Climate Change activities based on the data.

Following the data models, this assessment examines the current state of data gaps and the municipality's needs to localize the BIPAD portal and prepare LDCRP. It is found that very few municipalities (Bahudarmai, Haripur, Garuda, Ishworpur and Phatuwa Bijaypur) have maintained databases on the relief distribution. All the nine municipalities have not maintained and recorded the data of disaster incidents and damages and loss of the past events. The project municipalities have limited data on capacities and resources like education, health, water infrastructures, sanitation, banking and finance, etc. in diverse formats and lacks standards, disaggregated, and unified format. In general, most of municipalities have a poor disaster-related database in their municipality. The overall lesson that runs through this assessment is that there is a need for standardized data collection, validation process at the municipal level, and digitization in the BIPAD portal. The limited information in capacities and resources of the municipality demands the assessment of the capacities and vulnerabilities of the project municipalities. Furthermore, there is a lacking of unifying climate change and disaster in a single plan by the local governments. The development of a Local Disaster and Climate Resilience Plan in the municipalities is necessary to enhance the resilience capacity of the communities. Climate Fellowship will support the nine municipalities of Madhesh Province in the development of LDCRP as per the guideline of MoFAGA.

ACRONYMS

BIPAD	Building Information Platform Against Disaster
CBS	Central Bureau of Statistic
DIMS	Disaster Information Management System
DPRP	Disaster Preparedness and Response Plan
DRR	Disaster Risk Reduction
DRRM	Disaster Risk Reduction and Management
EPRP	Emergency Preparedness and Response Plan
GoN	Government of Nepal
HDI	Human Development Index
HPI	Human Poverty Index
ICIMOD	International Center for Integrated Mountain Development
LDMC	Local Disaster Management Committee
METEOR	Modelling Exposure Through Earth Observations Routines
N/A	Not Applicable
NDRRMA	National Disaster Risk Reduction and Management Authority
SFDRR	Sendai Framework for Disaster Risk Reduction
SOPs	Standard Operating Procedures
YI-Lab	Youth Innovation Lab

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INTRODUCTION

The unprecedented challenges have been bought by the COVID-19 pandemic while we were navigating through the toughest time due to the climate crisis. This has impacted the population and all the sectors in the world. Nepal is no exception. The impact on the economy of the country has been drastic which is evident by the negative economic growth in the fiscal year 2020/21 by 2.1%¹. Along with the health sector, vulnerable and marginalized populations have been hit hard by humanitarian crises such as disasters and climate crises. Among the seven provinces of Nepal, Karnali, Sudurpaschim and Madhesh provinces are at risk of climate-related disasters as these provinces are exposed to climatic stressors and have a low adaptive capacity as compared to the other provinces. To combat the climate issues and enhance the coping capacity, the engagement of the youths at the local level in policies, planning and development, and implementation of programs is essential. Likewise, as a signatory to SFDRR, Nepal is committed to meeting the priorities set in the framework. Climate change is one of the hazard drivers and influences contribution to disasters where exposure and vulnerability exist. SFDRR acknowledges and emphasizes the importance of climate change and sustainable development for DRR and vice versa. Hence, the country is gradually shifting from the traditional approach of disaster management towards risk-based disaster management focusing on risk reduction and preparedness. The disaster datasets become even more crucial for “understanding disaster risk”-the first priority of SFDRR. Reliable

and timely access to information is vital for risk assessment, dissemination and communication. The various dimensions of multi-hazards, the spatial extent of exposure and risk knowledge, real-time digital data, evidence-based social data, and geo-information tools and techniques influence the understanding of disaster risk. Therefore, a platform for an integrated disaster information management system becomes crucial for holding disaster-related datasets to support policymaking, planning, and implementing DRRM activities. National DRR policy (2018), National DRR Strategic Action Plan (2018-2030)², and DRR National Policy 2018³ also have the mandate to develop and operate national, provincial, and local level Disaster Information Management systems (DIMS). Recognizing the need and importance of data and information for effective DRRM and Climate Change Adaptation, the Government of Nepal (GoN) has initiated the establishment of comprehensive and integrated DIMS. Against this backdrop, the BIPAD portal is developed by pooling all credible digital and spatial data that are available within different government bodies, non-governmental organizations, academic institutions, and research organizations on a single platform. The portal is built upon the concept of creating a national portal embedded with independent platforms for national, provincial, and municipal governments with a bottom-up approach to disaster data partnership. It serves as a platform for fostering data partnerships on a common system for disaster management at multiple tiers of government and stakeholders.

¹ GoN/MoF, “Public Announcement of Income-Expenditure Details of Fiscal Year 2021/22” (Government of Nepal/ Ministry of Finance, 2021).

² National DRR Strategic Action Plan (2018-2030) <https://bit.ly/3kHTRam>

³ Disaster Risk Reduction and Management (DRRM) Act, 2017, GoN: <http://drrportal.gov.np/uploads/document/1509.pdf>

Likewise, National Climate Change Policy, 2076 B.S. has been introduced which aims to contribute to the socio-economic prosperity of the nation by building a climate resilient society, promote green economy, make effective technology development and information service delivery related to climate change; to mainstream or integrate climate change issues into policies, strategies, plans and programs at all levels of State and sectoral areas; To mainstream gender equality and social inclusion into climate change mitigation and adaptation programs⁴.

In the new federal structure, municipalities and rural municipalities are the independent local government and are closest to people in every aspect. Therefore, they must have a concrete database of their administrative areas for planning and decision-making. Furthermore, the Disaster Risk Reduction and Management (DRRM) Act, 2017, provides a mandate to the local governments for disaster management and made them responsible for preparedness and response. This situation demands the government to integrate requirements for DRR into the existing planning and budgeting process comprehensively and sustainably. Similarly, local government have the right to prepare local-level disaster and climate change plans and policies as per the scenario of the municipalities.

In the context of Nepal, disaster and climate data and information are scattered, insufficient, and not fully harmonized. There lies a lack of data consistency and data interoperability, a lack of centralized data repository, and data being produced in different formats to meet agencies'

own needs. At the municipal level, disaster and climate change related datasets are not consistent and there exist data gaps. There are neither appropriate data models to collect the data nor any procedures to standardize the process of data collection. Also, there is a lack of capacity of local governments to independently host a technology-based platform like BIPAD. Similarly, the local level disaster and climate related plans by combining the aspects of disaster and climate change is also not practiced in the municipalities. Understanding these gaps and needs, through Climate Fellowship, data models have been proposed to standardize the data collection, validation, and integration process and also support the local level in planning the development of disaster and climate change. The data needs assessment is carried out to assess what data are already available at the municipal level and what needs to be collected to integrate into the BIPAD portal to support its localization and use of those data in planning and informed decision making, and also support in the preparation of Local Disaster and Climate Resilience Plan.

Under this initiative, a cohort of youth will work closely with project municipal leaderships, DRR focal persons, and IT officers for five months to build technical capacities of local government to support the localization of an integrated DIMS locally known as BIPAD in nine municipalities⁵ of Madhesh province and the Ministry of Home and Communication, Madhesh province. The fellows will also assist in identifying data gaps and needs and will support the collection, digitization, and validation of disaster-related datasets at the municipal and provincial levels.

⁴ National Climate Change Policy, 2019.

⁵ Name of the Municipalities: Bahudarmai Municipality, Pokhariya Municipality, Prasauni Rural Municipality, Suwarna Rural Municipality, Garuda Municipality, Phatuwa Bijaypur Municipality, Haripur Municipality, Ishworpur Municipality and Loharpatti Municipality.

OBJECTIVES

The broad objective of this report is to generate baseline information and identify data needs and gaps for the preparation of the Local Disaster and Climate Resilience Plan (LDCRP) and operationalizing the BIPAD portal at the provincial and municipal levels. The assessment is carried out in nine project municipalities of Madhesh Province to assess the availability of datasets related to a disaster such as DRRM policies, plans, incidents, inventory, capacity and resources, documents and relief and alike at the municipal and provincial level.

The specific objectives are:

- To assess the types of data available in BIPAD for nine project municipalities
- To assess data gaps and the need to localization BIPAD Portal at the local level
- To assess the types of data available in municipalities and provinces based on LDCRP guidelines developed by MoFAGA

BIPAD: Building Information Platform Against Disaster

Building Information Platform Against Disaster portal is an integrated and comprehensive Disaster Information Management System initiated by the Government of Nepal, Ministry of Home Affairs, and is managed by the National Disaster Risk Reduction and Management Authority (NDRRMA). BIPAD Portal has the potential to create a systemic shift in disaster governance in Nepal complying with the global principles of the Sendai Framework of Disaster Risk Reduction (SFDRR).

BIPAD Portal consists of six modules: Dashboard, Incident, Damage and Loss, Real-time, Profile, and Risk Info. The data/information in this portal can enhance preparedness, disaster trends and knowledge, disaster communication, response, and especially post-incident coordination. It is built upon the concept of creating a national portal embedded with independent platforms for national, provincial, and municipal

governments with a bottom-up approach to disaster data partnership. The portal is hosted as an independent domain under the GoN: <https://bipadportal.gov.np/>. Currently, it is in the process of rolling out to local and provincial governments.

BIPAD Portal aims to address the gap in the science-public divide in the sector of Disaster Risk Reduction and Management (DRRM) through the use of technology. Disaster-related data/information is one of the most crucial components for policymaking, planning, and implementing DRRM activities. However, disaster data/information is still scattered, insufficient, and not fully harmonized. Therefore, BIPAD is developed by pooling all credible digital and spatial data that are available within different government bodies, non-governmental organizations, academic institutions, and research organizations on a single platform.

BIPAD MODULES AND THEIR DESCRIPTION AND POTENTIAL USE

BIPAD MODULES	DESCRIPTION	POTENTIAL USE FOR THE LOCAL GOVERNMENT
Dashboard	It gives the alerts of recent incidents/events including the data source, hazard causing the alerts, date of alerts, and geospatial location of alerts.	Alerts can help municipalities to stay updated on the potential hazards and provide information to prepare for disasters and they can use the data for response and hazard impact analysis (Municipalities have access to view only)
Incident	Incident data (death, injury, economic loss) coming directly from Nepal Police who is the first responder to any disaster.	Incident data is relevant for emergency response, planning for response, recovery and rehabilitation, hazard impact analysis, loss and damage estimation. (Access to view and comment)
Damage and Loss	Historical data on damage and loss - loss section has six categories – general, people, family, livestock, infrastructure, and agriculture For incidents that are more than a month old, their damage and loss details automatically get recorded in the Damage and loss module. Incident forms are first filled by Nepal Police from the local level and damage and loss data are enriched by concerned officials from the national government.	Damage and loss data are important for analyzing and comparing historical disaster data and identifying which type of incidents are likely to impact which sector (lives, livelihood, agriculture, and infrastructure). (Access to view and comment)
Real Time	Pulls real-time data on rainfall and river watch, earthquake, air pollution, and forest fires. ¹ Stream flow forecast dataset gives 10 days probabilistic forecast information of major rivers and stream flow. ²	Real-Time is relevant for early warning, early action, and response. (Access to view)
Profile	Summary gives an overview of disaster profile, loss information, and demographic profile that is disaggregated by sex and age group. Projects give information on ongoing projects in the DRRM. Contacts contain and allow us to manage the records of all the committee and non-committee members related to disaster risk reduction and management. Document's page is a repository for disaster-related documents such as Acts, guidelines, laws, regulations, and alike.	The profile is relevant for risk-informed development and DRRM governance. (Access to add, edit, and delete for contact and documents section)

¹ Stream flows forecast is pulled from ICIMOD through API integration.

<p>Risk Info</p>	<p>Hazard Flood hazard map from the GoN and METEOR project²; seismic hazard map from METEOR project; landslide hazard from Durham University; flood inundation map from World Food Program.</p> <p>Exposure Visualization Building Exposure Map</p> <p>Vulnerability Human Development Index, life expectancy, Human Poverty Index, Per Capita Income from National Planning Commission. Household data that includes communication, water, toilet, education from Central Bureau of Statistic (CBS)</p> <p>Risk Earthquake and landslide risk map from Durham University.</p> <p>Capacity and Resources Capacity and resources data on educational institutions, health, government institutions, tourism, cultural sites, industries, and communication.</p> <p>Climate Change Climate change scenarios (temperature and precipitation data) of Nepal taken from the National Adaptation Plan report with reference period (1981 - 2010), mid-term (2010 - 2045), long term (2036 - 2065)</p>	<p>Risk info relevant for risk reduction and risk informed-development.</p> <p>For Capacity and Resources section of Risk Info module, municipality can add, edit, and delete)</p>
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² Modelling Exposure Through Earth Observations Routines (METEOR) is a UK Space Agency's project. <https://meteor-project.org/>

METHODOLOGY

For the data needs assessment, the BIPAD Portal was used as a framework, and its six modules provided guidelines in understanding what data would be needed and be valuable for BIPAD Portal localization at the municipal level. BIPAD Portal Technical Handbook for Municipalities and Rural Municipalities and User Handbook were studied for conceptual understanding of BIPAD Portal such as what it constitutes, what information is available to municipalities, and what access municipalities have regarding the BIPAD Portal. In parallel, fellows working at the project municipalities collected information and documents such as municipality profile, DRRM Act, District Disaster Preparedness and Response Plan (DPRP), and municipal red book, and these documents were studied to get a general overview of the

municipalities and actions/activities they have taken in the field of DRRM. Consultations with key informants such as DRR focal persons, departments heads of municipalities, and IT officers for the assessment were also carried out at the municipal level by the project team and Climate Fellows.

The template below was used to compile data for data assessment and later to identify the data gaps and needs. The template is based on BIPAD Portal modules that were briefly described in the table above. The following template does not include the assessment of Climate Change data in the Risk Info module because climate change depicts the change in the temperature and precipitation data at a larger geographical scale rather than the localized one.

DATA ASSESSMENT TEMPLATE

MODULES	DATA AVAILABLE IN BIPAD	DATA AVAILABLE IN MUNICIPALITY
Dashboard	Alerts	
Incident	Incidents (including inventory/stockpile)	
Damage and loss		
Real-Time		
Profile	Summary	
	Projects	
	Contacts	
	Documents	

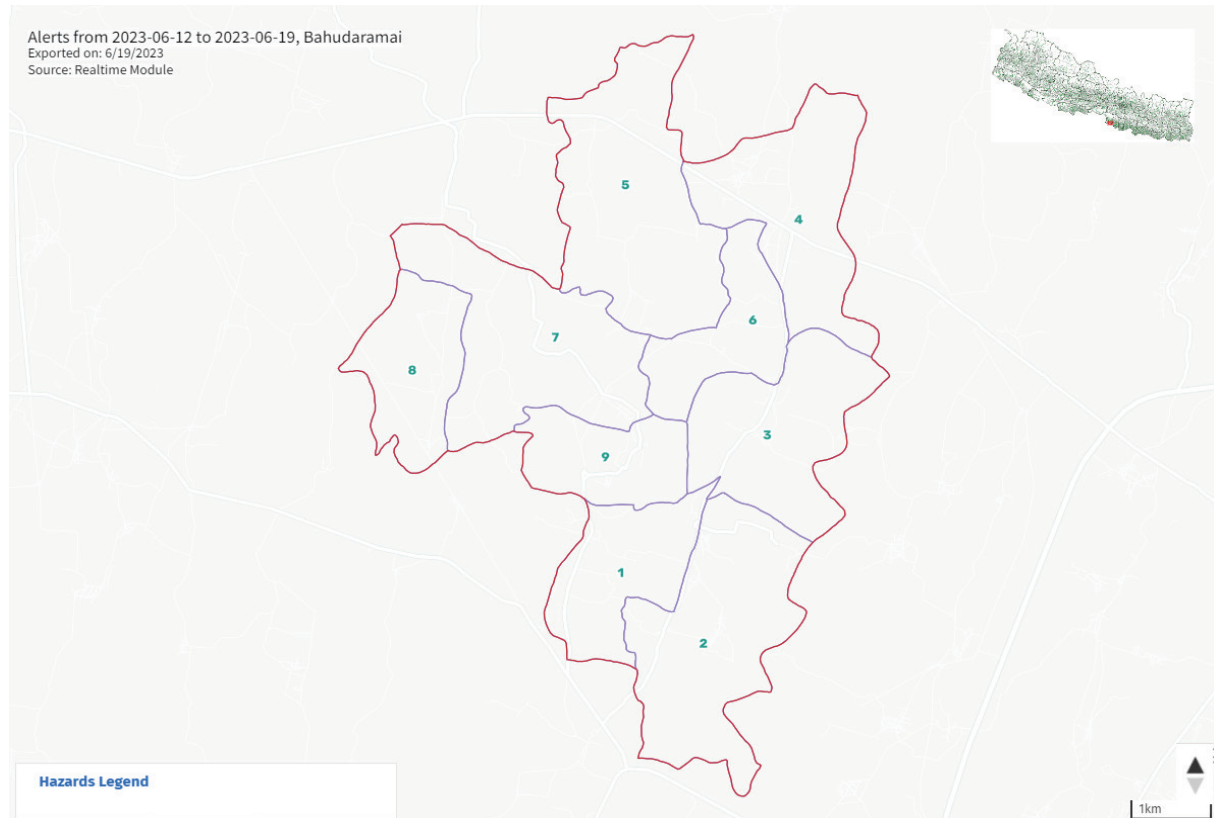
Risk info	Capacity and resources:
	Education
	Health
	Finance
	Governance
	Tourism
	Cultural
	Industry
	Communication
	Exposure
	Vulnerability
	Hazard
	Risk
Relief	

Likewise, to assess the data availability and gaps in the municipality in compliance with the LDCRP guidelines prepared by MoFAGA, the following template was used. The components similar to the above template has been omitted in the template below. On the basis of the template of data need assessment as per the BIPAD portal and guidelines of LDCRP, the data need assessment of the municipality was conducted.

Components	Data needed as per the guideline	Data available in the municipality
Historical records of the disaster events	Past disaster incidents of 30 years data including the location, date of occurrence, damage and loss and affected population.	
Hazard Ranking	Identification of major recurring hazard and its ranking on the basis of its impact.	
Risk Map	Map showing the social aspects of the municipality including the risk and hazard prone areas, and Critical Infrastructures.	
Stakeholder Analysis	The stakeholders of the municipality working in the field of Disaster and Climate Change, their location, distance from the municipality, Contacts and their role in DRRM.	
Calendars	Hazard Calendar, Climate Calendar and Crop Calendar to identify the changes in the occurrence of hazards, changes in the weather and crops, respectively.	

DATA NEEDS ASSESSMENT

For each of the project municipalities and province, data need assessment has been carried out separately to get the picture of what data in relation to DRRM are available in each project areas that would be valuable to incorporate into the BIPAD Portal and LDCRP preparation.



Bahudarmai Municipality

Bahudarmai Municipality lies in Parsa district of Madhesh province and consists of nine wards. The municipality borders Birgunj Metropolitan in the east, Pokhariya Municipality and Sakhuwaprasauni Rural Municipality in the west, Parsagadhi Municipality and Sakhuwapauni in the north and Bindabasini and Birgunj in the south. The municipality covers a total area of 31.55 sq.km geographically and has a population of 39,673.

Bahudarmai Municipality has endorsed the local level DRRM Act in the year 2077 B.S. The municipality profile of Bahudarmai was prepared on 2074 B.S but the document is not currently available in the municipality. Likewise, the district profile of Parsa was published in the fiscal year 2073/74. The Environment and Disaster Management Committee of the municipality was dissolved in the year 2077 and a new committee is yet to be

formed. The budget and work plan for FY 2079/80 has been drafted and a total of NPR 60 crores of the budget has been allocated, out of which NPR 1,250,000 has been allocated for Environment and Disaster Management. There is no information and data on disaster incidents, damage and loss, recovery and reconstruction available in the municipality. The records of distributed relief materials are manually recorded by the municipality.

Data Assessment of Bahudarmai Municipality

The section examines the type of data that is available in the BIPAD Portal (as of 16 August 2022) for Bahudarmai Municipality and what is available on the municipality's website. This gives a picture of what information is already available and what is needed in the BIPAD Portal to make it more relevant to the municipality to support evidence-based decisions for DRRM.

DATA ASSESSMENT OF BAHUDARMAI MUNICIPALITY

MODULES		DATA AVAILABLE IN BIPAD	DATA AVAILABLE IN MUNICIPALITY
Dashboard	Alerts	No alerts reported in past 1 year	N/A
Incident	Incidents (including inventory/stockpile)	<p>Incident data are added in BIPAD portal with the details of data frequency, magnitude, spatial and temporal data in a disaggregated format. Incident data from 2018 onward are available.</p> <p>Data on inventory and stockpile has not been added.</p>	<p>Data on previous and current incidents is not available. The municipality has 1 ambulance, 1 JCB, 30 Belcha, 30 Gaiti and 1 Ladder stored and these inventories are in good condition. Likewise, to use the ambulance service, the municipality pays NPR 50,000 to Pokhariya municipality every month. (Source: Bahudarmai Municipality)</p>
Damage and loss		<p>Damage and loss data in the BIPAD portal are available in the disaggregated format up to ward level categorized by the incident, people's death, estimated loss, infrastructure destroyed, and livestock destroyed.</p> <p>Since 2018, 21 incidents were reported that have caused 4 deaths, and an estimated loss of NPR 6.7 million.</p>	Data on damage and loss due to disaster incidents are not recorded at the municipality.
Real-Time		No real-time stations of rain and river	N/A

Profile	Summary	An overview of resources and loss information and demographic information for the municipality from the 2011 Census is available.	Updated information on demographic, capacity and resources of the municipality is available at the municipality but scattered in different departments and sections and varies in forms and formats.
	Projects	No project data is available.	We need to contact local bodies and organizations working in the municipality and collect and update information on ongoing projects at the municipality.
	Contacts	Data is not available.	The DRR Focal Person has been identified in the municipality even if the committee has not been formed and the details of the contact person are yet to be uploaded to the BIPAD portal.
	Documents	The published documents are not uploaded in BIPAD	The municipality has municipal level disaster management act 2077 and disaster fund mobilization guidelines 2077 available. But the documents are not published.

Risk Info	Capacity and resources:	There is a limited database in capacity and resources (education, health, banking and finance, hotel and restaurants, culture, industry, bridge, transportation and electricity) but scattered, incomplete and not in the standard format.	The capacities and resources available at the municipal level to respond to disasters need to be identified and mapped to all those resources in a standard format.
	Exposure	Visualisation of Building exposure map	Information not available
	Vulnerability	The national vulnerability data is also available up to the municipal level. Data for HDI, life expectancy, HPI, Per Capita Income, and household data such as communication, water, toilet, and education are available for the municipality.	Information is not available.
	Hazard	Has flood hazard and Earthquake information from METEOR Project simulation at the national level, Flood Inundation from World Food Program for the year 2017 at the national scale.	Information is not available.
	Risk	Earthquake and landslide risk scores are from Durham University. The earthquake risk score is available up to the district level, and the Landslide risk score is available up to the ward level.	Information is not available.
	Relief	N/A	Manual records of relief materials distributed are available in the municipality.

Components	Data needed as per the guideline	Data available in the municipality
Historical records of the disaster events	Past disaster incidents of 30 years data including the location, date of occurrence, damage and loss and affected population.	Data is not available.
Hazard Ranking	Identify major recurring hazards and ranking on the basis of its impact.	Data is not available
Risk Map	Map showing the social aspects of the municipality including the risk and hazard prone areas, and Critical Infrastructures.	N/A
Stakeholder Analysis	The stakeholders of the municipality working in the field of Disaster and Climate Change, their location, distance from the municipality, Contacts and their role in DRRM.	N/A
Calendars	Hazard Calendar, Climate Calendar and Crop Calendar to identify the changes in the occurrence of hazards, changes in the weather and crops, respectively.	N/A

Data Gaps and Needs of Bahudarmai Municipality

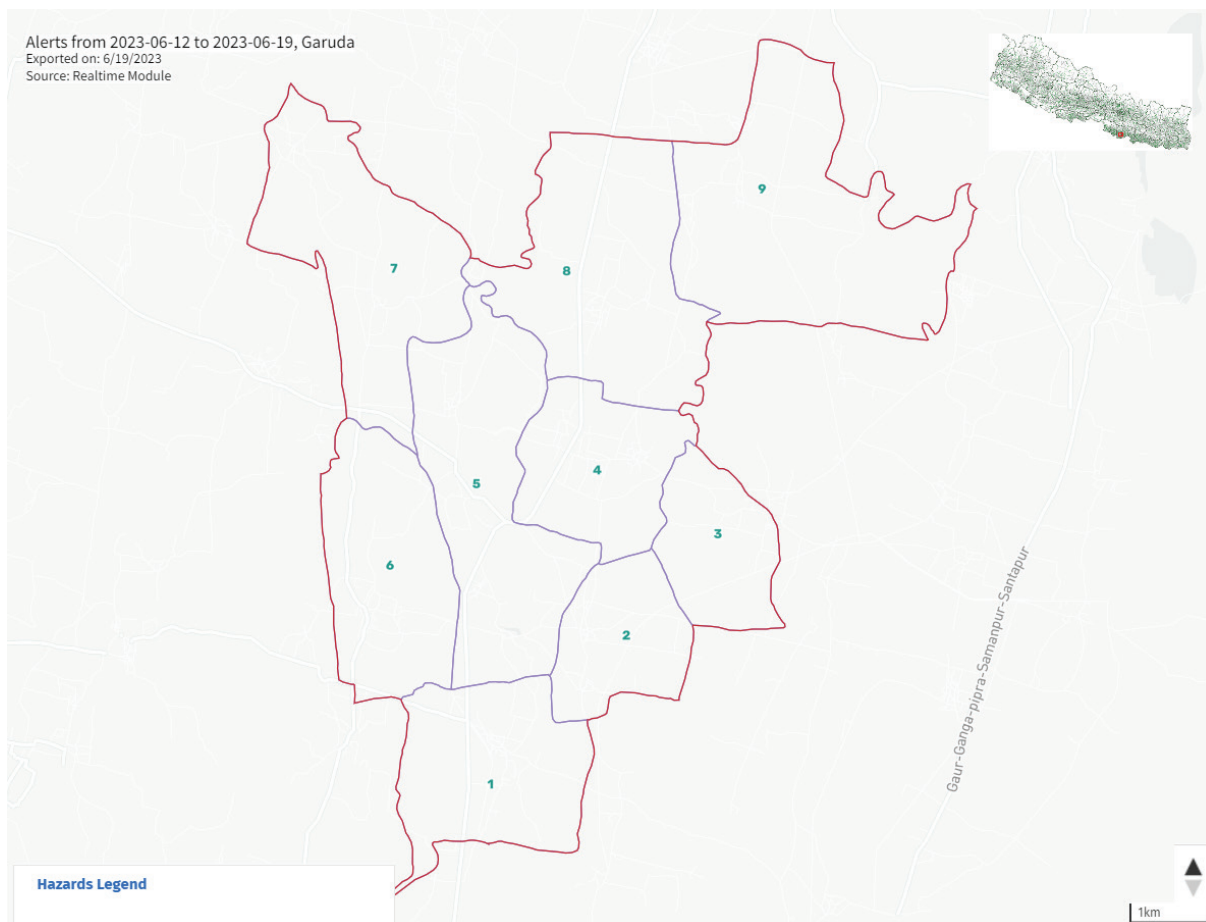
The data currently available in the BIPAD portal for Bahudarmai Municipality is added from the federal level. From the above analysis, it is found that data and information on different modules for the municipality are primarily unavailable and ,when available are outdated and incomplete.

Looking at the data needs, there is a need for updated, complete, and standardized data. A complete analysis of data gaps and needs for each module is presented in the Table below.

DATA GAPS AND NEEDS OF BAHUDARMAI MUNICIPALITY			
Modules		Data Gaps	Data Needs
Dashboard	Alerts	N/A	N/A
Incident	Incidents (inventory/ stockpile)	The municipality has no record of incidents, however, the BIPAD portal has a historical incident database in disaggregated form.	Need to ensure incident reporting with details of magnitude of the incident, frequency, spatial and temporal data and in disaggregated format by Nepal police. Complete information on inventory and stockpiles in standard format/ template is needed.

Damage and loss	The municipality has no record of damage and loss, however, the BIPAD portal has a historical database in disaggregated form.	There is a need to ensure the collection of damage and loss data by using a standardized collection method at the local level that includes all the historical data and current incidents in a disaggregated format.	
Summary	The municipality has demographic data. Information on resources and loss is available but scattered within different departments of the municipality.	Updated information on demographics, resources and loss from the municipality in standard format needs to be uploaded to the BIPAD portal.	
Profile	Projects	Information on Project is not available.	Need to contact local bodies and organizations working in the municipality and collect and update information on ongoing projects at the municipality.
Contacts	Disaster Management Committee data is not available in BIPAD as the committee has been dissolved.	Need to update contact information of DRR Focal Person of municipal level in BIPAD portal.	
Documents	The documents are not uploaded in BIPAD.	Documents are available in the municipality but only hard copies are available.	
Risk Info	Capacity and resources:	The data is available in tabular form but all available information is not in one place and is not standardized.	The existing capacities and resources available at the municipal level to respond to disasters need to be identified and mapped to all those resources in a standard format.
Exposure, Vulnerability, Risk, and Hazard	Localized hazard information for the municipality is not available.	The data is not available in the municipality.	
Relief	The budget is not updated in the BIPAD portal	The disaster fund allocation guideline of the municipality has allocated 1 lakh per impacted household as relief, but the exact overall budget for relief is not allocated by the municipality. There is a need in the municipality to allocate certain budget for relief.	

There is a need to conduct a Vulnerability and Capacity Assessment to identify the capacities and resources of the municipality to develop LDCRP based on the guidelines.



Garuda Municipality

Garuda municipality is located in Rautahat district, Madhesh province and covers a total area of 44.46 sq.km. The municipality consists of nine wards. The municipality borders Gadhimai Municipality in the East, Katahariya Municipality and Dewahhi Gonahi Municipality in the West, Brindaban Municipality in the North and Madhav Narayan Municipality in the South.

The DRRM committee of the

municipality has not been formed. The total budget of the municipality for the current fiscal year is NPR 591,139,000 out of which NPR 4,000,000 has been allocated for Disaster Management. The disaster-related data is not stored in the municipality other than the relief distribution data. There is no information available at the municipality regarding incidents, damage and loss, and recovery and reconstruction for the municipality.

The municipality has no record of incidents, however, the BIPAD portal has a historical incident database. Based on the data available in the BIPAD portal, from November 2017 to 4 August 2022, 19 incidents are recorded which caused the death of one person and also caused an estimated loss of 3.5 million.

Data Assessment of Garuda Municipality

The section examines the type of data that is available in the BIPAD Portal (as of 16 August 2022) for Garuda Municipality and what is available on the municipality's website. This gives a picture of what information is already available and what is needed in the BIPAD Portal to make it more relevant to the municipality to support evidence-based decisions for DRRM.

DATA ASSESSMENT OF GARUDA MUNICIPALITY			
MODULES		DATA AVAILABLE IN BIPAD	DATA AVAILABLE IN THE MUNICIPALITY
Dashboard	Alerts	No alerts reported in the past 1 year	N/A
Incident	Incidents (including inventory/stockpile)	Incident data are added to the BIPAD portal with the details of data frequency, magnitude, and spatial and temporal data in a disaggregated format. Incident data from 2017 onward are available. Data on inventory and stockpile has not been added.	Data on previous and current incidents is not available.
Damage and loss		Damage and loss data in the BIPAD portal are available in the disaggregated format up to ward level categorized by the incident, people's death, estimated loss, infrastructure destroyed, and livestock destroyed. Since 2017, 19 incidents were reported that have caused 1 death, and an estimated loss of NPR 4 million.	Data on damage and loss due to disaster incidents are not recorded at the municipality.
Real-Time		No real-time stations of rain and river	N/A
Profile	Summary	An overview of resources and loss information and demographic information for the municipality from the 2011 Census is available.	The updated information on demographic is not available in the municipality, capacity and resources of the municipality are available at the municipality but scattered in different departments and sections and vary in forms and formats.
	Projects	No project data is available	N/A
	Contacts	Data is not available.	The Disaster Committee has not been formed in the municipality but DRR Focal Person has been designated.
	Documents	The published documents are not uploaded in BIPAD	N/A

Risk Info	Capacity and resources:	There is a limited database in capacity and resources (education, health, banking, governance, culture, industry, communication, open space, electricity and human resources for Disaster preparedness) but scattered, incomplete and not in the standard format.	The capacities and resources available at the municipal level to respond to disasters need to be identified and mapped to all those resources in a standard format.
	Exposure	Visualization of Building exposure map	Information is not available
	Vulnerability	The national vulnerability data is also available up to the municipal level. Data for HDI, life expectancy, HPI, Per Capita Income, and household data such as communication, water, toilet, and education are available for the municipality.	Information is not available.
	Hazard	Has flood hazard and Earthquake information from METEOR Project simulation at the national level, Flood Inundation from World Food Program for the year 2017 at the national scale.	Information is not available.
	Risk	Earthquake and landslide risk scores are from Durham University. The earthquake risk score is available up to the district level and the Landslide risk score is available up to the ward level.	Information is not available.
	Relief	N/A	Manual records of relief materials distributed are available in the municipality

Components	Data needed as per the guideline	Data available in the municipality
Historical records of the disaster events	Past disaster incidents of 30 years data including the location, date of occurrence, damage and loss and affected population.	Data is not available.
Hazard Ranking	Identify major recurring hazards and ranking based on their impact.	Data is not available.
Risk Map	Map showing the social aspects of the municipality, including the risk and hazard-prone area, and Critical Infrastructures.	N/A
Stakeholder Analysis	The stakeholders of the municipality working in the field of Disaster and Climate Change, their location, distance from the municipality, Contacts and their role in DRRM.	N/A
Calendars	Hazard Calendar, Climate Calendar and Crop Calendar to identify the changes in the occurrence of hazards, changes in the weather and crops, respectively.	N/A

Data Gaps and Needs of Garuda Municipality

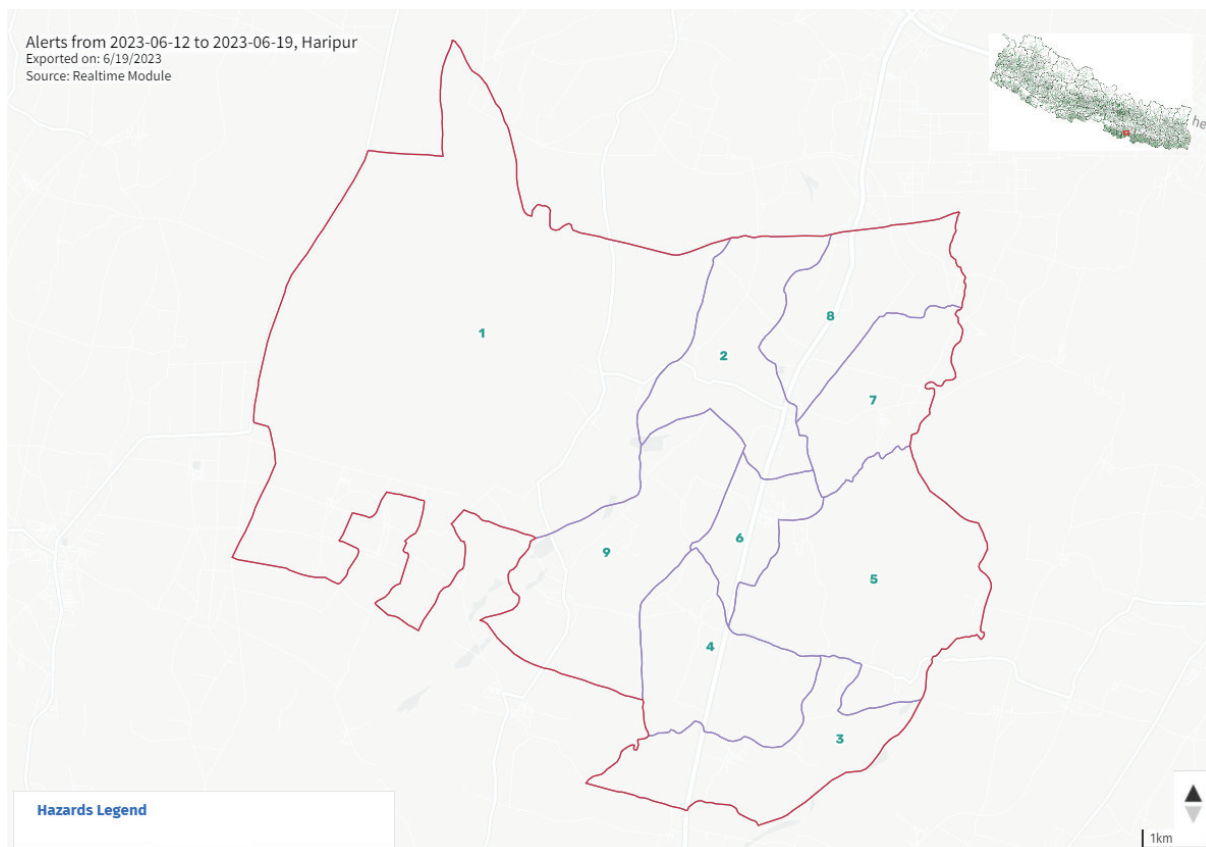
The data currently available in the BIPAD portal for Garuda Municipality is added from the federal level. From the above analysis, it is found that data and information on different modules for the municipality are mostly unavailable and when available are outdated and incomplete.

Looking at the data needs, there is a need for updated, complete, and standardized data. A complete analysis of data gaps and needs for each module is presented in the Table below.

DATA GAPS AND NEEDS OF GARUDA MUNICIPALITY			
Modules		Data Gaps	Data Needs
Dashboard	Alerts	N/A	N/A
Incident	Incidents (inventory/ stockpile)	The municipality has no record of incidents, however, the BIPAD portal has a historical incident database in disaggregated form.	Need to ensure incident reporting with details of magnitude of the incident, frequency, spatial and temporal data and in disaggregated format by Nepal police. Complete information on inventory and stockpiles in standard format/template is needed.
Damage and loss		The municipality has no record of damage and loss, however, the BIPAD portal has a historical database in disaggregated form.	There is a need to ensure the collection of damage and loss data by using a standardized collection method at the local level that includes all the historical data and current incidents in a disaggregated format.

Profile	Summary	The municipality does not have updated demographic data. Information on resources and loss is available but scattered within different departments of the municipality.	Updated information on resources and losses from the municipality in standard format needs to be uploaded to the BIPAD portal.
	Projects	Information on Project is not available	N/A
	Contacts	Disaster Management Committee data is not available in BIPAD.	Need to update contact information of DRR Focal Person of municipal level in BIPAD portal.
	Documents	The documents are not uploaded in BIPAD.	Documents are not available in the municipality.
Risk info	Capacity and resources:	The data is available in tabular form but all available information is not in one place and is not standardized.	The capacities and resources available at the municipal level to respond to disasters need to be identified and mapped to all those resources in a standard format.
	Exposure, Vulnerability, Risk, and Hazard	Localized hazard information for the municipality is not available.	The data is not available in the municipality.
	Relief	The budget is not updated in the BIPAD portal.	Have not allocated budget for relief only but 40 lakhs have been allocated for Disaster Management by the Municipality. There is a need in the municipality to allocate a certain percentage for relief only.

The data on capacity, resources, past disaster incidents, stakeholder analysis and hazard-prone area is unavailable in the municipality. There is a need to conduct a Vulnerability and Capacity Assessment in each ward of the municipality to prepare LDCRP.



Haripur Municipality

Haripur Municipality is located in Sarlahi district and covers an area of 66.86 sq.km. The municipality consists of nine wards and borders Lalbandi Municipality, Chandranagar Sub-municipality and Ishworpur Municipality in the east, Barathawa Municipality and Bagmati Municipality in the

west, Lalbandi Municipality and Harion Municipality in the North, and Kabilashi Municipality and Barathawa Municipality in the South. Lakhandei and Jhim rivers are the main rivers of the municipality.

The municipality has DRRM Act and also has prepared

profile which is available on the municipality's website. The municipality has prepared the Disaster Emergency Fund Act in 2076 B.S. to allocate and manage the budget for different activities in the municipality. Likewise, the municipality has allocated NPR 12,88,900 for Disaster Management.

Data Assessment of Haripur Municipality

The section examines the type of data that is available in the BIPAD Portal (as of 16 August 2022) for Haripur Municipality and what is available on the municipality's website. This gives a picture of what information is already available and what is needed in the BIPAD Portal to make it more relevant to the municipality to support evidence-based decisions for DRRM.

DATA ASSESSMENT OF HARIPUR MUNICIPALITY		
MODULES	DATA AVAILABLE IN BIPAD	DATA AVAILABLE IN THE MUNICIPALITY
Dashboard Alerts	No alerts have been reported in the past 1 year	N/A
Incident (including inventory/stockpile)	Incident data are added to the BIPAD portal with the details of data frequency, magnitude, and spatial and temporal data in a disaggregated format. Incident data from 2011 onward are available. Data on inventory and stockpile has not been added.	Data on previous and current incidents is not available. The inventory data of the municipality is available in the municipality profile ¹ .
Damage and loss	Damage and loss data in the BIPAD portal are available in the disaggregated format up to ward level categorized by the incident, people's death, estimated loss, infrastructure destroyed, and livestock destroyed. Since 2011, 303 incidents have been reported that have caused 53 deaths, and an estimated loss of NPR 131 million.	Data on damage and loss due to disaster incidents are not recorded at the municipality.
Real-Time	No real-time stations of rain and river	N/A
Profile	Summary	An overview of resources and loss information and demographic information for the municipality from the 2011 Census is available. The updated information on demographic is not available in the municipality, capacity and resources of the municipality are available at the municipality but scattered in different departments and sections and vary in forms and formats.
	Projects	No projects data is available N/A
	Contacts	Data is not available. The Disaster Committee has been formed in the municipality and the DRR Focal Person has been designated. The details are available in the municipality.
	Documents	The published documents are not uploaded in BIPAD The limited documents are available in the municipality.

¹ Municipality Website of Haripur: <https://haripurmun.gov.np/>

Risk info	Capacity and resources:	There is a limited database in capacity and resources (education, health, banking, governance, hotel, culture, industry, communication, bridge, transportation and electricity) but scattered, incomplete and not in the standard format.	The existing capacities and resources available at the municipal level to respond to disasters need to be identified and mapped to all those resources in a standard format. The data on the number of people that received training in primary health care and disaster is available in the municipality profile. Likewise, data on open spaces are also available.
	Exposure	Visualization of Building exposure map	Information not available
	Vulnerability	The national level of vulnerability data is also available up to the municipal level. Data for HDI, life expectancy, HPI, Per Capita Income, and household data such as communication, water, toilet, and education are available for the municipality.	Information on the number of families vulnerable to disaster is available in the municipality profile, the data on the household that is built following building code and built without following building code is available in the municipality profile.
	Hazard	Has flood hazard and Earthquake information from METEOR Project simulation at the national level, Flood Inundation from World Food Program for the year 2017 at the national scale.	Information is not available.
	Risk	Earthquake and landslide risk scores are from Durham University. The earthquake risk score is available up to the district level and the Landslide risk score is available up to the ward level.	Information is not available.
	Relief	N/A	COVID-related data is only available in both soft copy and hard copy

Components	Data needed as per the guideline	Data available in the municipality
Historical records of the disaster events	Past disaster incidents of 30 years data including the location, date of occurrence, damage and loss and affected population.	Data is not available.
Hazard Ranking	Identify major recurring hazards and ranking based on their impact.	Data is not available.
Risk Map	Map showing the social aspects of the municipality, including the risk and hazard-prone area, and Critical Infrastructures.	N/A
Stakeholder Analysis	The stakeholders of the municipality working in the field of Disaster and Climate Change, their location, distance from the municipality, Contacts and their role in DRRM.	N/A
Calendars	Hazard Calendar, Climate Calendar and Crop Calendar to identify the changes in the occurrence of hazards, changes in the weather and crops, respectively.	N/A

Data Gaps and Needs of Haripur Municipality

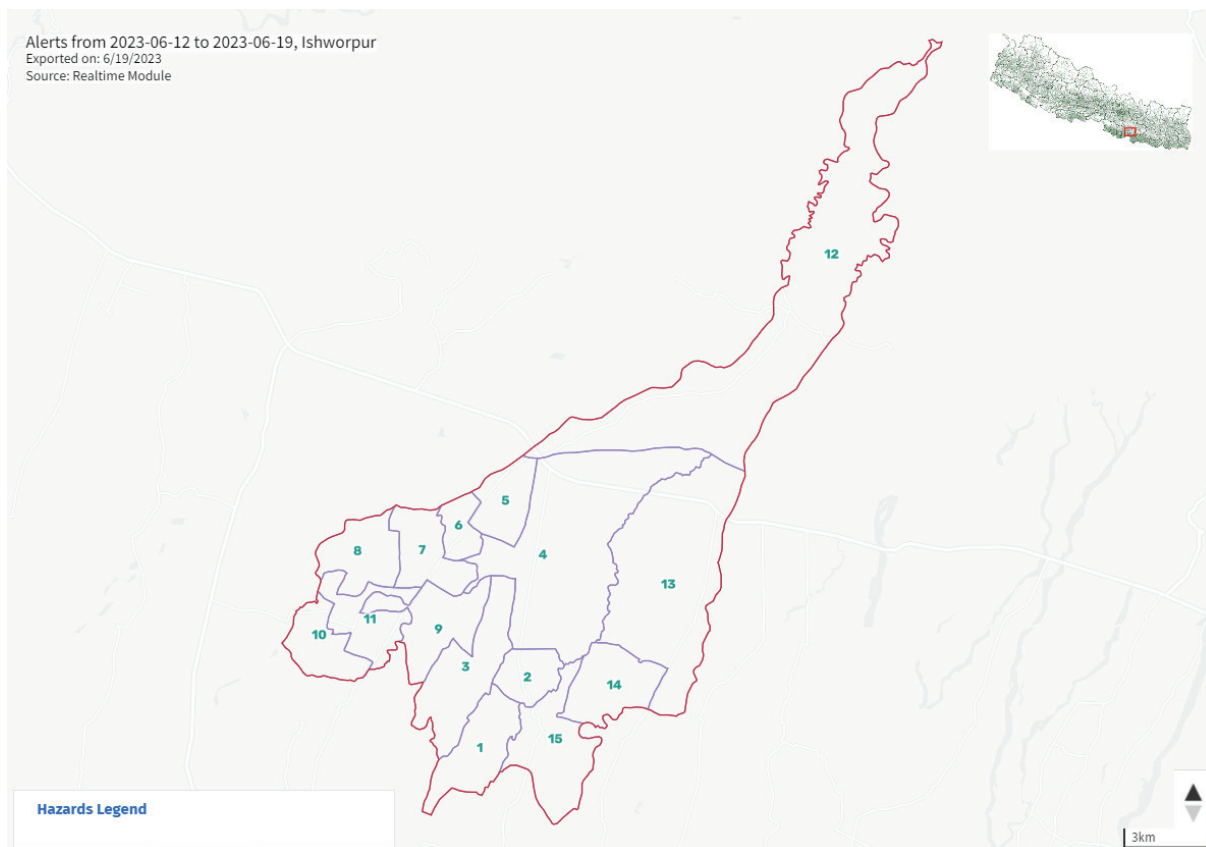
The data currently available in the BIPAD portal for Haripur Municipality is added from the federal level. From the above analysis, it is found that data and information on different modules for the municipality are primarily unavailable and when available are outdated and incomplete.

Looking at the data needs, there is a need for updated, complete, and standardized data. A complete analysis of data gaps and needs for each module is presented in the Table below.

DATA GAPS AND NEEDS OF HARIPUR MUNICIPALITY			
Modules		Data Gaps	Data Needs
Dashboard	Alerts	N/A	N/A
Incident	Incidents (inventory/stockpile)	The municipality has no record of incidents, however, the BIPAD portal has a historical incident database in disaggregated form.	Need to ensure incident reporting with details of magnitude of the incident, frequency, spatial and temporal data and in disaggregated format by Nepal police. Complete information on inventory and stockpiles in standard format/template is needed.
Damage and loss		The municipality has no record of damage and loss, however, the BIPAD portal has a historical database in disaggregated form	There is a need to ensure the collection of damage and loss data by using a standardized collection method at the local level that includes all the historical data and current incidents in a disaggregated format.

	Summary	The municipality does not have updated demographic data. Information on resources and loss is available but scattered within different departments of the municipality.	Updated information on resources and losses from the municipality in standard format must be uploaded to the BIPAD portal.
Profile	Projects	Information on Project is not available.	N/A
	Contacts	Disaster Management Committee data is not available in BIPAD.	Need to update contact information of DRR Focal Person of municipal level in BIPAD portal.
	Documents	The documents are not uploaded in BIPAD.	The available documents in the municipality should be uploaded to the BIPAD Portal.
Risk info	Capacity and resources:	The data is available in tabular form but all available information is not in one place and is not standardized.	The capacities and resources available at the municipal level to respond to disasters need to be identified and mapped to all those resources in a standard format.
	Exposure, Vulnerability, Risk, and Hazard	Localized hazard information for the municipality is not available.	The data is not available in the municipality.
	Relief	The budget is not updated in the BIPAD portal.	They have not allocated budget for relief only but 12 lakhs have been allocated for Disaster Management by the Municipality. There is a need in the municipality to allocate a certain percentage for relief only.

The available data in the municipality on capacity, resources, disaster and maps are incomplete and not in the standard format. There is a need for a Vulnerability and Capacity Assessment of each ward of Haripur Municipality to prepare for the Local Disaster and Climate Resilience Plan.



Ishworpur Municipality

Ishworpur municipality is situated in Sarlahi district and covers a total area of 163.83 sq.km. The municipality comprises 15 wards and borders Mahottari in the east, Lalbandi municipality in the west, Sindhuli in the north and Chandranagar in the south. Fuljor and banke river are the main river of the municipality. The biggest "ban pariyojana"

of Nepal named "Sagarnath Ban Bikash Pariyojana" is in Ishworpur municipality.

The municipality has not prepared a local level DRRM act and neither has its municipality profile prepared. The district-level profile of Sarlahi is available and uploaded on the municipality website. The local level disaster committee has

been reformed recently in the municipality on 5 August 2022. The municipality is currently working on the municipality profile which is estimated to be completed in nine months. The current fiscal year's budget has been prepared but the information on the budget allocated for Disaster Management is not available in the municipality to date.

Data Assessment of Ishworpur Municipality

The section examines the type of data that is available in the BIPAD Portal (as of 16 August 2022) for Ishworpur Municipality and what is available on the municipality's website. This gives a picture of what information is already available and what is needed in the BIPAD Portal to make it more relevant to the municipality to support evidence-based decisions for DRRM.

DATA ASSESSMENT OF ISHWORPUR MUNICIPALITY			
MODULES	DATA AVAILABLE IN BIPAD	DATA AVAILABLE IN THE MUNICIPALITY	
Dashboard Alerts	6 alerts of forest fire have been reported in the past 1 year	N/A	
Incident (including inventory/stockpile)	Incident data are added to the BIPAD portal with the details of data frequency, magnitude, and spatial and temporal data in a disaggregated format. Incident data from 2018 onward are available.	Data on previous and current incidents is not available. Disaster inventories and stockpile is not available.	
	Data on inventory and stockpile has not been added.		
Damage and loss	Damage and loss data in the BIPAD portal are available in the disaggregated format up to ward level categorized by the incident, people's death, estimated loss, infrastructure destroyed, and livestock destroyed. Since 2018, 32 incidents were reported that have caused 3 deaths, and an estimated loss of NPR 19 million.	Data on damage and loss due to disaster incidents are not recorded at the municipality.	
Real-Time	No real-time stations of rain and river	N/A	
Profile	Summary	An overview of resources and loss information and demographic information for the municipality from the 2011 Census is available.	The updated information on demographic is not available in the municipality, capacity and resources of the municipality are available at the municipality but scattered in different departments and sections and vary in forms and formats.
	Projects	No projects data is available	N/A
	Contacts	Data is not available.	The Disaster Committee has been formed in the municipality, and the DRR Focal Person has been designated. The details are available in the municipality.
	Documents	The published documents are not uploaded in BIPAD	N/A except for municipality profile

Risk info	Capacity and resources:	There is a limited database in capacity and resources (education, health, banking, governance, hotel, culture, industry, bridge, sanitation, water supply, human resources, clubs and natural resources) but scattered, incomplete and not in the standard format.	The existing capacities and resources available at the municipal level to respond to disasters need to be identified and mapped to all those resources in a standard format.
	Exposure	Visualization of Building exposure map	Information not available
	Vulnerability	The national level of vulnerability data is also available up to the municipal level. Data for HDI, life expectancy, HPI, Per Capita Income, and household data such as communication, water, toilet, and education are available for the municipality.	Information is not available.
	Hazard	Has flood hazard and Earthquake information from METEOR Project simulation at the national level, Flood Inundation from World Food Program for the year 2017 at the national scale.	Information is not available.
	Risk	Earthquake and landslide risk scores are from Durham University. The earthquake risk score is available up to the district level and the Landslide risk score is available up to the ward level.	Information is not available.
	Relief	N/A	Only the distribution of relief for the selected victim of the disaster data has been recorded.

Components	Data needed as per the guideline	Data available in the municipality
Historical records of the disaster events	Past disaster incidents of 30 years data including the location, date of occurrence, damage and loss and affected population.	Data is not available.
Hazard Ranking	Identify major recurring hazards and ranking based on their impact.	Data is not available.
Risk Map	Map showing the social aspects of the municipality, including the risk and hazard-prone area, and Critical Infrastructures.	N/A
Stakeholder Analysis	The stakeholders of the municipality working in the field of Disaster and Climate Change, their location, distance from the municipality, Contacts and their role in DRRM.	N/A
Calendars	Hazard Calendar, Climate Calendar and Crop Calendar to identify the changes in the occurrence of hazards, changes in the weather and crops, respectively.	N/A

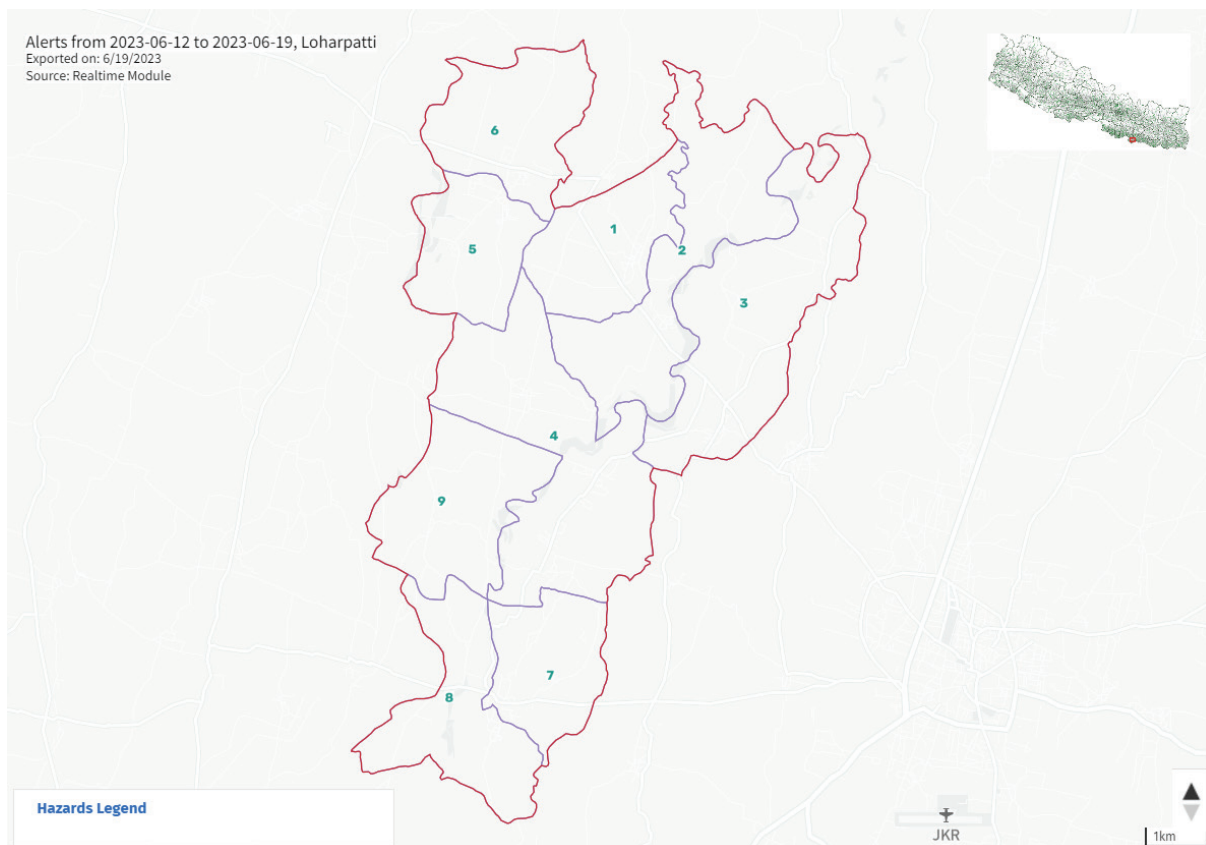
Data Gaps and Needs of Ishworpur Municipality

The data that is currently available in the BIPAD portal for Ishworpur Municipality is added from the federal level. From the above analysis, it is found that data and information on different modules for the municipality are mostly unavailable and when available are outdated and incomplete.

Looking at the data needs, there is a need for updated, complete, and standardized data. A complete analysis of data gaps and needs for each module is presented in the Table below.

DATA GAPS AND NEEDS OF ISHWORPUR MUNICIPALITY			
Modules		Data Gaps	Data Needs
Dashboard	Alerts	N/A	N/A
Incident	Incidents (inventory/ stockpile)	The municipality has no record of incidents, however, the BIPAD portal has a historical incident database in disaggregated form	Need to ensure incident reporting with details of magnitude of the incident, frequency, spatial and temporal data and in disaggregated format by Nepal police.
Damage and loss		The municipality has no record of damage and loss, however, the BIPAD portal has a historical database in disaggregated form	There is a need to ensure the collection of damage and loss data by using a standardized collection method at the local level that includes all the historical data and current incidents in a disaggregated format.

Profile	Summary	The municipality does not have updated demographic data. Information on resources and loss is available but scattered within different departments of the municipality.	Updated information on resources and losses from the municipality in standard format needs to be uploaded to the BIPAD portal.
	Projects	Information on Project is not available	N/A
	Contacts	Disaster Management Committee data is not available in BIPAD.	Need to update contact information of DRR Focal Person of municipal level in BIPAD portal.
	Documents	The documents are not uploaded in BIPAD.	The available documents in the municipality should be uploaded to the BIPAD Portal.
Risk info	Capacity and resources:	The data is available in tabular form but all available information is not in one place and is not standardized.	The existing capacities and resources available at the municipal level to respond to disasters need to be identified and mapped to all those resources in a standard format.
	Exposure, Vulnerability, Risk, and Hazard	Localized hazard information for the municipality is not available.	The data is not available in the municipality.
	Relief	The budget is not updated in the BIPAD portal	N/A



Loharpatti Municipality

Loharpatti Municipality is situated in the Mahottari district and consists of nine wards. The municipality is extended by 50.06 sq. km geographically. The municipality borders Dhanusha district in the east, Ramgopalpur municipality in the west, Vangaha Rural Municipality in the north and

Pipra and Mahottari Rural Municipality in the south. The railway track is extended in the municipality which joins Jainagar to Bijalpura.

The municipality has not prepared the local level DRRM act. The municipality profile of Loharpatti was prepared

in 2074 B.S. The district-level Disaster Preparedness and Response Plan (DPRP) is available but the municipal level is not available. The disaster committee of the municipality has been reformed. The municipality has allocated up to NPR 20 lakhs budget for DRRM.

Data Assessment of Loharpatti Municipality

The section examines the type of data that is available in the BIPAD Portal (as of 16 August 2022) for Loharpatti Municipality and what is available in the municipality. This gives a picture of what information is already available and what is needed in the BIPAD Portal to make it more relevant to the municipality to support evidence-based decisions for DRRM.

DATA ASSESSMENT OF LOHARPATTI MUNICIPALITY		
MODULES	DATA AVAILABLE IN BIPAD	DATA AVAILABLE IN THE MUNICIPALITY
Dashboard Alerts	No alerts have been reported in the past 1 year	N/A
Incident (including inventory/stockpile)	Incident data are added to the BIPAD portal with the details of data frequency, magnitude, and spatial and temporal data in a disaggregated format. Incident data from 2018 onward are available. Data on inventory and stockpile has not been added.	Data on previous and current incidents is not available.
Damage and loss	Damage and loss data in the BIPAD portal are available in the disaggregated format up to ward level categorized by the incident, people's death, estimated loss, infrastructure destroyed, and livestock destroyed. Since 2018, 20 incidents have been reported that have caused no deaths, and an estimated loss of NPR 6 million.	Data on damage and loss due to disaster incidents are not recorded at the municipality.
Real-Time	No real-time stations of rain and river	N/A
Profile	Summary An overview of resources and loss information and demographic information for the municipality from the 2011 Census is available.	The updated information on demographic is not available in the municipality, capacity and resources of the municipality are available at the municipality but scattered in different departments and sections and vary in forms and formats.
	Projects No projects data is available	
	Contacts Data is not available.	The Disaster Committee has been reformed in the municipality and the DRR Focal Person has been designated. The details are available in the municipality.
	Documents The published documents are not uploaded in BIPAD	The limited documents are available in the municipality, like Municipality profile, Local disaster risk management act, 2075.

Risk info	Capacity and resources:	There is a limited database in capacity and resources (education, health, banking, governance, hotel, culture, industry, communication, electricity, sanitation, disaster preparedness materials, human resources and water infrastructures) but scattered, incomplete and not in the standard format.	The capacities and resources available at the municipal level to respond to disasters need to be identified and mapped to all those resources in a standard format.
	Exposure	Visualization of Building exposure map	Information not available
	Vulnerability	The national level of vulnerability data is also available up to the municipal level. Data for HDI, life expectancy, HPI, Per Capita Income, and household data such as communication, water, toilet, and education are available for the municipality.	Information is not available.
	Hazard	Has flood hazard and Earthquake information from METEOR Project simulation at the national level, Flood Inundation from World Food Program for the year 2017 at the national scale.	Information is not available.
	Risk	Earthquake and landslide risk scores are from Durham University. The earthquake risk score is available up to the district level and the Landslide risk score is available up to the ward level.	Information is not available.
	Relief	N/A	No data has been recorded of relief distribution

Components	Data needed as per the guideline	Data available in the municipality
Historical records of the disaster events	Past disaster incidents of 30 years data including the location, date of occurrence, damage and loss and affected population.	Data is not available.
Hazard Ranking	Identify major recurring hazards and ranking based on their impact.	Data is not available.
Risk Map	Map showing the social aspects of the municipality, including the risk and hazard-prone area, and Critical Infrastructures.	N/A
Stakeholder Analysis	The stakeholders of the municipality working in the field of Disaster and Climate Change, their location, distance from the municipality, Contacts and their role in DRRM.	N/A
Calendars	Hazard Calendar, Climate Calendar and Crop Calendar to identify the changes in the occurrence of hazards, changes in the weather and crops, respectively.	N/A

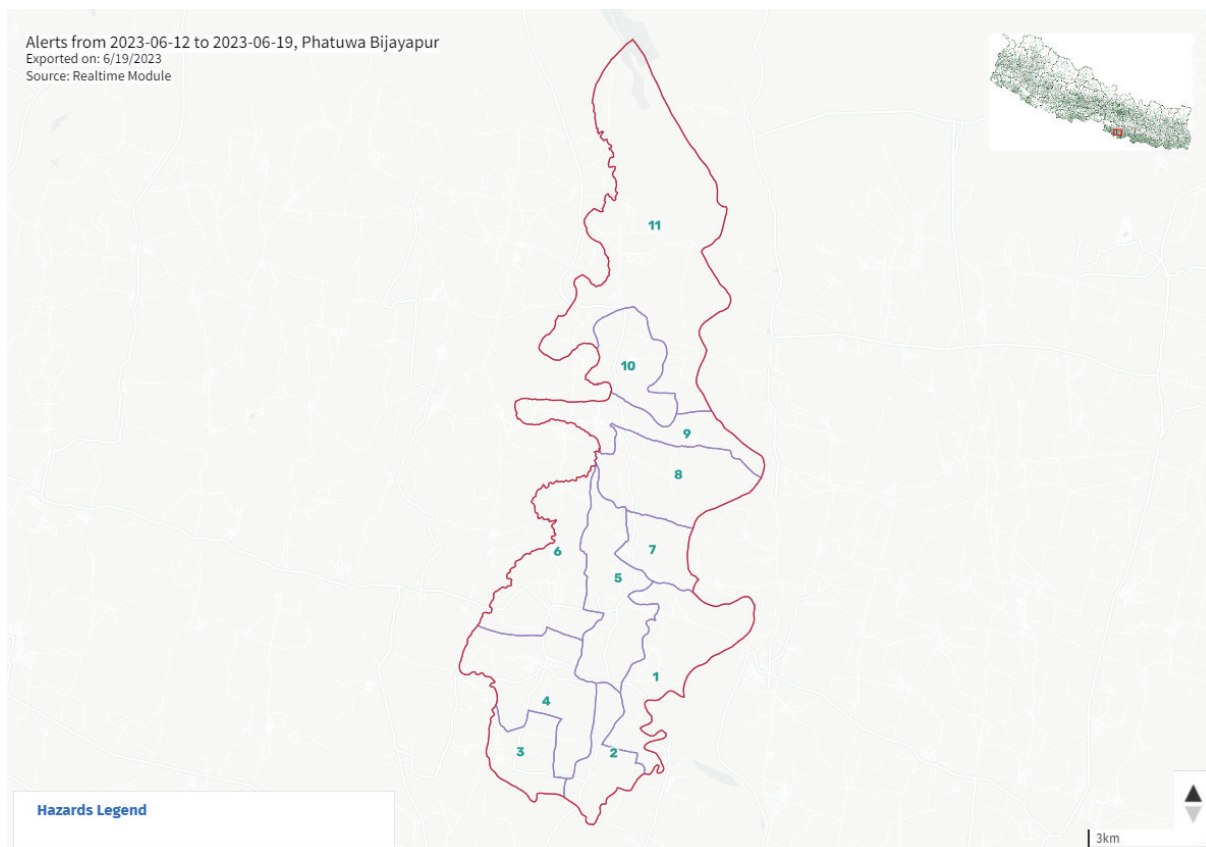
Data Gaps and Needs of Loharpatti Municipality

The data that is currently available in the BIPAD portal for Loharpatti Municipality is added from the federal level. From the above analysis, it is found that data and information on different modules for the municipality are mostly unavailable and when available are outdated and incomplete.

Looking at the data needs, there is a need for updated, complete, and standardized data. A complete analysis of data gaps and needs for each module is presented in the Table below.

DATA GAPS AND NEEDS OF LOHARPATTI MUNICIPALITY			
Modules		Data Gaps	Data Needs
Dashboard	Alerts	N/A	N/A
Incident	Incidents (inventory/stockpile)	The municipality has no record of incidents, however, the BIPAD portal has a historical incident database in disaggregated form	Need to ensure incident reporting with details of magnitude of the incident, frequency, spatial and temporal data and in disaggregated format by Nepal police. Complete information on inventory and stockpiles in standard format/template is needed.
Damage and loss		The municipality has no record of damage and loss, however, the BIPAD portal has a historical database in disaggregated form	There is a need to ensure the collection of damage and loss data by using a standardized collection method at the local level that includes all the historical data and current incidents in a disaggregated format.

	Summary	The municipality does not have updated demographic data. Information on resources and loss is available but scattered within different departments of the municipality.	Updated information on resources and losses from the municipality in standard format needs to be uploaded to the BIPAD portal.
Profile	Projects	Information on Project is not available	N/A
	Contacts	Disaster Management Committee data is not available in BIPAD.	Need to update contact information of DRR Focal Person of municipal level in BIPAD portal.
	Documents	The documents are not uploaded in BIPAD.	The available documents in the municipality should be uploaded to the BIPAD Portal.
Risk info	Capacity and resources:	The data is available in tabular form but all available information is not in one place and is not standardized.	The existing capacities and resources available at the municipal level to respond to disasters need to be identified and mapped to all those resources in a standard format.
	Exposure, Vulnerability, Risk, and Hazard	Localized hazard information for the municipality is not available.	The data is not available in the municipality.
	Relief	The budget is not updated in the BIPAD portal	No exact amount has been allocated for relief but 20 lakhs has been allocated for DRRM. There is a need in the municipality to allocate a certain budget for relief only.



Phatuwa Bijayapur Municipality

Phatuwa Bijayapur Municipality is located in the Rautahat district and has 11 wards. It covers an area of 65.24 sq. km. Lalbakaiya and Aduwa rivers are the major rivers of the municipality. The municipality borders Katahariya municipality in the east, Kolhabi municipality in the west, Gujara municipality

and bara district in the north and Maulapur municipality in the south.

The municipal level DRRM act is not available in the municipality. The municipality profile has been developed in the year 2074 B.S by the municipality. Though the

municipal level DPRP is not prepared, the district level DPRP of the year 2077 B.S. is available. The total budget of the municipality for this fiscal year is NPR 46,94,32,000. As the Executive meeting has not been conducted, the budget for disaster has not been allocated this year.

Data Assessment of Phatuwa Bijaypur Municipality

The section examines the type of data that is available in the BIPAD Portal (as of 8 August 2022) for Phatuwa Bijaypur Municipality and what is available on the municipality's website. This gives a picture of what information is already available and what is needed in the BIPAD Portal to make it more relevant to the municipality to support evidence-based decisions for DRRM.

DATA ASSESSMENT OF PHATUWA BIJAYPUR MUNICIPALITY			
MODULES		DATA AVAILABLE IN BIPAD	DATA AVAILABLE IN THE MUNICIPALITY
Dashboard	Alerts	No alerts have been reported in the past 1 year	N/A
Incident	Incidents (including inventory/stockpile)	Incident data are added to the BIPAD portal with the details of data frequency, magnitude, and spatial and temporal data in a disaggregated format. Incident data from 2017 onward are available. Data on inventory and stockpile has not been added.	Data on previous and current incidents is not available. One ambulance and 100 tripal are available in the municipality.
Damage and loss		Damage and loss data in the BIPAD portal are available in the disaggregated format up to ward level categorized by the incident, people's death, estimated loss, infrastructure destroyed, and livestock destroyed. Since 2017, 24 incidents were reported that have caused 6 deaths, and an estimated loss of NPR 5 million.	Data on damage and loss due to disaster incidents are not recorded at the municipality.
Real-Time		No real-time stations of rain and river	N/A
Profile	Summary	An overview of resources and loss information and demographic information for the municipality from the 2011 Census is available.	The updated information on demographic is not available in the municipality, capacity and resources of the municipality are available at the municipality but scattered in different departments and sections and vary in forms and formats.
	Projects	No projects data is available	There is no project in the municipality currently.
	Contacts	Data is not available	The Disaster Committee has not been reformed in the municipality but the DRR Focal Person has been designated. The details are available in the municipality.
	Documents	The published documents are not uploaded in BIPAD	N/A

Risk info	Capacity and resources:	There is a limited database in capacity and resources (education, health, sanitation, electricity, banking, water infrastructures, culture, industry, bridge, transportation and natural resources) but scattered, incomplete and not in the standard format.	The existing capacities and resources available at the municipal level to respond to disasters need to be identified and mapped to all those resources in a standard format.
	Exposure	Visualization of Building exposure map	Information not available
	Vulnerability	The national level of vulnerability data is also available up to the municipal level. Data for HDI, life expectancy, HPI, Per Capita Income, and household data such as communication, water, toilet, and education are available for the municipality.	Information is not available.
	Hazard	Has flood hazard and Earthquake information from METEOR Project simulation at the national level, Flood Inundation from World Food Program for the year 2017 at the national scale.	Information is not available.
	Risk	Earthquake and landslide risk scores are from Durham University. The earthquake risk score is available up to the district level and the Landslide risk score is available up to the ward level.	Information is not available.
	Relief	N/A	Manual records of relief materials distributed at the time of disasters are available from the year 2076 B.S.

Components	Data needed as per the guideline	Data available in the municipality
Historical records of the disaster events	Past disaster incidents of 30 years data including the location, date of occurrence, damage and loss and affected population.	Data is not available.
Hazard Ranking	Identify major recurring hazards and ranking based on their impact.	Data is not available.
Risk Map	Map showing the social aspects of the municipality, including the risk and hazard-prone area, and Critical Infrastructures.	N/A
Stakeholder Analysis	The stakeholders of the municipality working in the field of Disaster and Climate Change, their location, distance from the municipality, Contacts and their role in DRRM.	N/A
Calendars	Hazard Calendar, Climate Calendar and Crop Calendar to identify the changes in the occurrence of hazards, changes in the weather and crops, respectively.	N/A

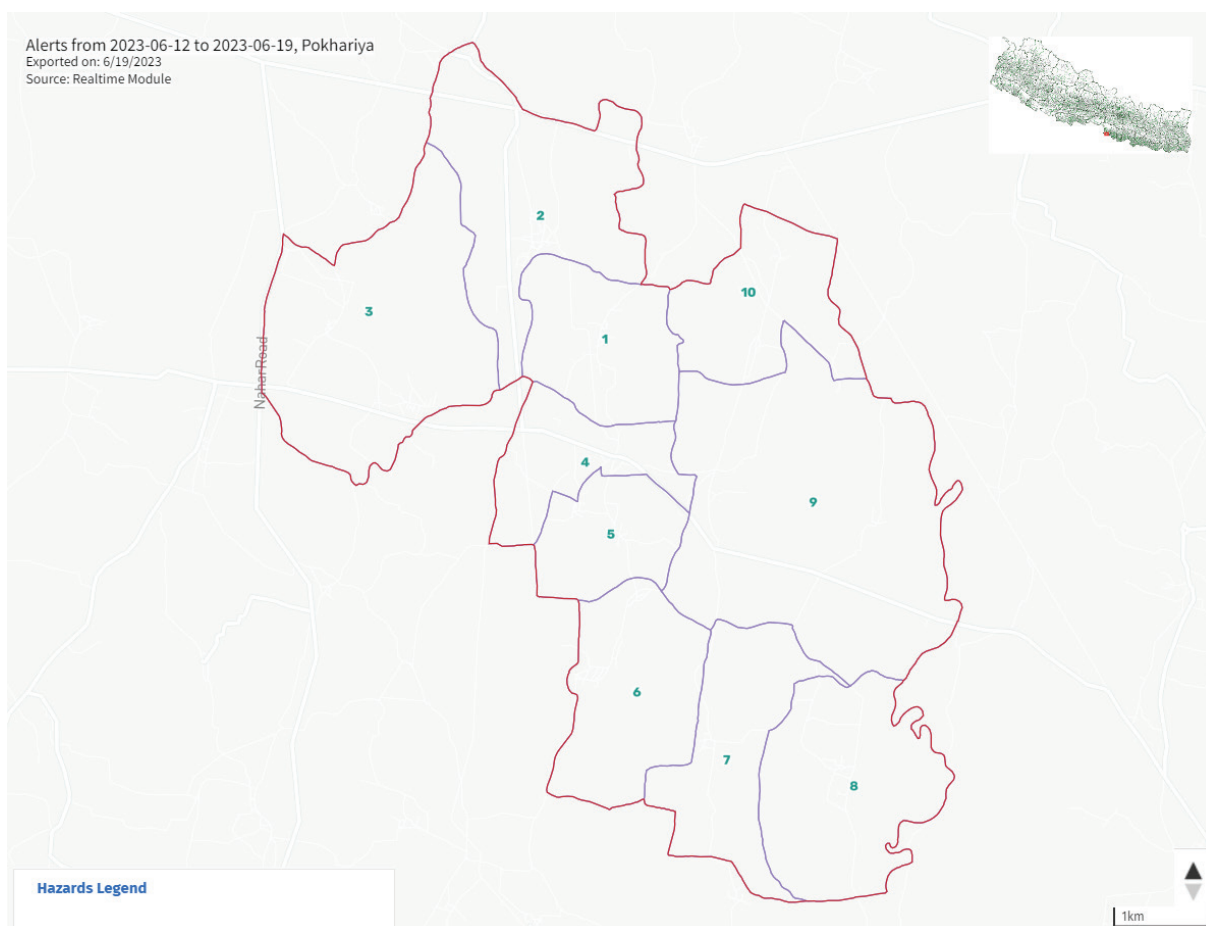
Data Gaps and Needs of Phatuwa Bijaypur Municipality

The data that are currently available in the BIPAD portal for Phatuwa Bijaypur Municipality is added from the federal level. From the above analysis, it is found that data and information on different modules for the municipality are mostly unavailable and when available are outdated and incomplete.

Looking at the data needs, there is a need for updated, complete, and standardized data. A complete analysis of data gaps and needs for each module is presented in the Table below.

DATA GAPS AND NEEDS OF PHATUWA BIJAYPUR MUNICIPALITY			
Modules		Data Gaps	Data Needs
Dashboard	Alerts	N/A	N/A
Incident	Incidents (inventory/stockpile)	The municipality has no record of incidents, however, the BIPAD portal has a historical incident database in disaggregated form	Need to ensure incident reporting with details of magnitude of the incident, frequency, spatial and temporal data and in disaggregated format by Nepal police. Complete information on inventory and stockpiles in standard format/template is needed.
	Damage and loss	The municipality has no record of damage and loss, however, the BIPAD portal has a historical database in disaggregated form	There is a need to ensure the collection of damage and loss data by using a standardized collection method at the local level that includes all the historical data and current incidents in a disaggregated format.

Profile	Summary	The municipality does not have updated demographic data. Information on resources and loss is available but scattered within different departments of the municipality.	Updated information on resources and losses from the municipality in standard format needs to be uploaded to the BIPAD portal.
	Projects	Information on Project is not available	N/A
	Contacts	Disaster Management Committee data is not available in BIPAD.	Need to update contact information of DRR Focal Person of municipal level in BIPAD portal.
	Documents	The documents are not uploaded in BIPAD.	N/A
Risk info	Capacity and resources:	The data is available in tabular form but all available information is not in one place and is not standardized.	The existing capacities and resources available at the municipal level to respond to disasters need to be identified and mapped to all those resources in a standard format.
	Exposure, Vulnerability, Risk, and Hazard	Localized hazard information for the municipality is not available.	The data is not available in the municipality.
	Relief	The budget is not updated in the BIPAD portal	No exact amount has been allocated for relief and disaster management as a municipal executive meeting has not been conducted. There is a need in the municipality to allocate a certain budget for relief only.



Pokhariya Municipality

Pokhariya Municipality is located in the Parsa district and covers an area of 32.47 sq.km. It consists of 10 wards and borders Bindabasini rural municipality, Bahudarmai municipality and Sakhuwaprasauni rural municipality in the east, Kalikamai rural municipality in the west, Jagarnathpur rural municipality in the north and Pakahamainpur rural municipality in the south.

The municipality formed the DRRM act in the year 2078 B.S. named "Pokhariya Municipality Disaster Risk Reduction and Management Act". The municipality profile has not been prepared but the district-level profile was published in FY 2073/2074. The Environment and Disaster Management Unit is active in the municipality but LDMC

has not been formed. The municipality has prepared DPRP but it has not been published to date. The total annual budget for FY 2079/80 is NPR fifty-one crore ninety lakhs and fourteen thousand, out of which NPR five lakhs has been allocated for Disaster Risk Management.

Data Assessment of Pokhariya Municipality

The section examines the type of data that is available in the BIPAD Portal (as of 16 August 2022) for Pokhariya Municipality and what is available on the website of the municipality. This gives a picture of what information is already available and what is needed in the BIPAD Portal to make it more relevant to the municipality to support evidence-based decisions for DRRM.

DATA ASSESSMENT OF POKHARIYA MUNICIPALITY			
MODULES		DATA AVAILABLE IN BIPAD	DATA AVAILABLE IN THE MUNICIPALITY
Dashboard	Alerts	No alerts have been reported in the past 1 year	N/A
Incident	Incidents (including inventory/stockpile)	Incident data are added to the BIPAD portal with the details of data frequency, magnitude, and spatial and temporal data in a disaggregated format. Incident data from 2017 onward are available. Data on inventory and stockpile has not been added.	Data on previous and current incidents is not available.
Damage and loss		Damage and loss data in the BIPAD portal are available in the disaggregated format up to ward level categorized by the incident, people's death, estimated loss, infrastructure destroyed, and livestock destroyed. Since 2017, 21 incidents have been reported that have caused no deaths, and an estimated loss of NPR 8 million.	Data on damage and loss due to disaster incidents are not recorded at the municipality.
Real-Time		No real-time stations of rain and river	N/A
Profile	Summary	An overview of resources and loss information and demographic information for the municipality from the 2011 Census is available.	The updated information on demographic is not available in the municipality, capacity and resources of the municipality are available at the municipality but scattered in different departments and sections and vary in forms and formats.
	Projects	1 project is available in the portal	UNICEF is currently working on a project to prepare LDCRP in the municipality.
	Contacts	Data is not available	The details are available in the municipality.
	Documents	The published documents are not uploaded in BIPAD	The limited documents are available in the municipality.

Risk info	Capacity and resources:	There is a limited database in capacity and resources (education, culture, health, transportation, sanitation, water infrastructures, and governance) but scattered, incomplete and not in the standard format.	The capacities and resources available at the municipal level to respond to disasters need to be identified and mapped to all those resources in a standard format.
	Exposure	Visualization of Building exposure map	Information not available
	Vulnerability	The national level of vulnerability data is also available up to the municipal level. Data for HDI, life expectancy, HPI, Per Capita Income, and household data such as communication, water, toilet, and education are available for the municipality.	Information is not available.
	Hazard	Has flood hazard and Earthquake information from METEOR Project simulation at the national level, Flood Inundation from World Food Program for the year 2017 at the national scale.	Information is not available.
	Risk	Earthquake and landslide risk scores are from Durham University. The earthquake risk score is available up to the district level and the Landslide risk score is available up to the ward level.	Information is not available.
	Relief	N/A	N/A

Components	Data needed as per the guideline	Data available in the municipality
Historical records of the disaster events	Past disaster incidents of 30 years data including the location, date of occurrence, damage and loss and affected population.	Data is not available.
Hazard Ranking	Identify major recurring hazards and ranking based on their impact.	Data is not available.
Risk Map	Map showing the social aspects of the municipality, including the risk and hazard-prone area, and Critical Infrastructures.	N/A
Stakeholder Analysis	The stakeholders of the municipality working in the field of Disaster and Climate Change, their location, distance from the municipality, Contacts and their role in DRRM.	N/A
Calendars	Hazard Calendar, Climate Calendar and Crop Calendar to identify the changes in the occurrence of hazards, changes in the weather and crops, respectively.	N/A

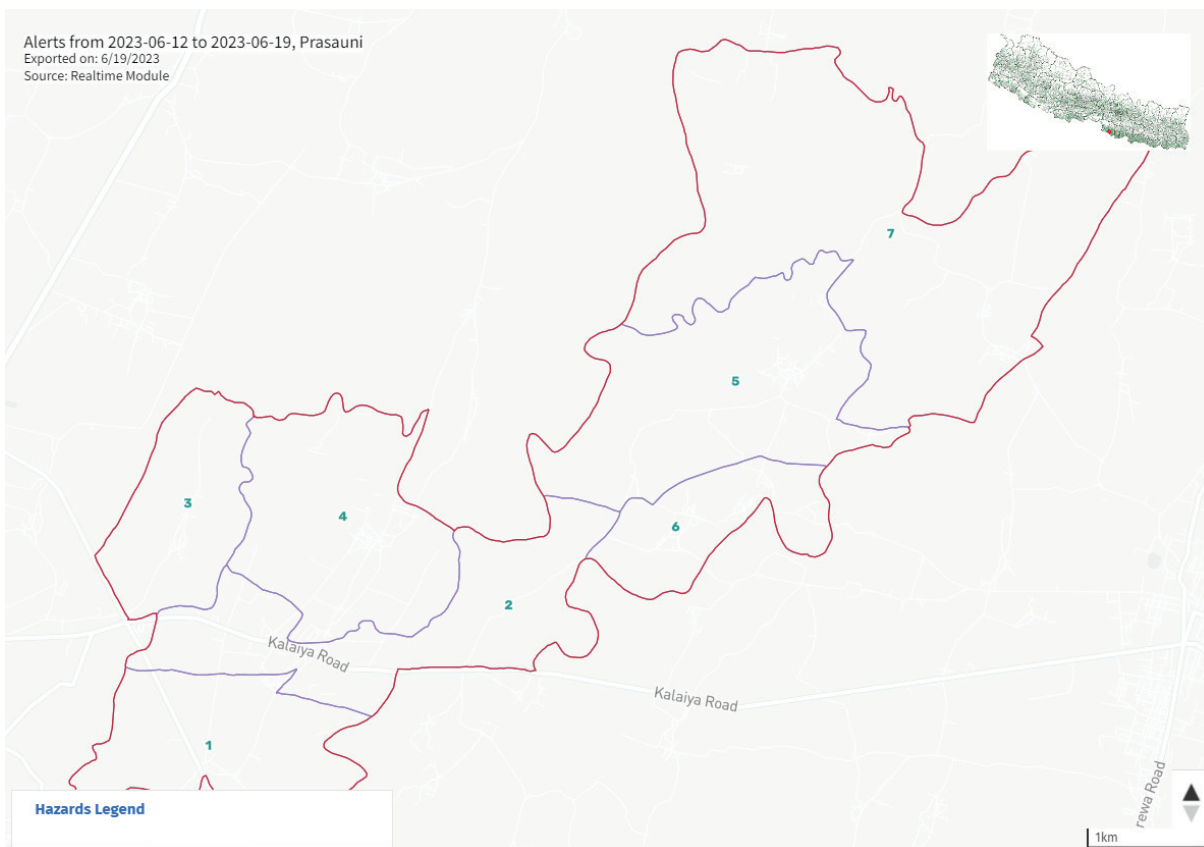
Data Gaps and Needs of Pokhariya Municipality

The data that is currently available in the BIPAD portal for Pokhariya Municipality is added from the federal level. From the above analysis, it is found that data and information on different modules for the municipality are mostly unavailable and when available are outdated and incomplete.

Looking at the data needs, there is a need for updated, complete, and standardized data. A complete analysis of data gaps and needs for each module is presented in the Table below.

DATA GAPS AND NEEDS OF POKHARIYA MUNICIPALITY			
Modules		Data Gaps	Data Needs
Dashboard	Alerts	N/A	N/A
Incident	Incidents (inventory/stockpile)	The municipality has no record of incidents, however, the BIPAD portal has a historical incident database in disaggregated form	Need to ensure incident reporting with details of magnitude of the incident, frequency, spatial and temporal data and in disaggregated format by Nepal police. Complete information on inventory and stockpiles in standard format/template is needed.
Damage and loss		The municipality has no record of damage and loss, however, the BIPAD portal has a historical database in disaggregated form	There is a need to ensure the collection of damage and loss data by using a standardized collection method at the local level that includes all the historical data and current incidents in a disaggregated format.

	Summary	The municipality does not have updated demographic data. Information on resources and loss is available but scattered within different departments of the municipality.	Updated information on resources and losses from the municipality in standard format needs to be uploaded to the BIPAD portal.
Profile	Projects	Information on one Project is available	The details of another project of UNICEF are needed to upload to the BIPAD portal.
	Contacts	Disaster Management Committee data is not available in BIPAD.	Need to update contact information of DRR Focal Person of municipal level in BIPAD portal.
	Documents	The documents are not uploaded in BIPAD.	The limited documents are needed to upload to the portal.
Risk info	Capacity and resources:	The data is available in tabular form but all available information is not in one place and is not standardized.	The existing capacities and resources available at the municipal level to respond to disasters need to be identified and mapped to all those resources in a standard format.
	Exposure, Vulnerability, Risk, and Hazard	Localized hazard information for the municipality is not available.	The data is not available in the municipality.
	Relief	The budget is not updated in the BIPAD portal	No exact amount has been allocated for relief but 5 lakhs has been allocated for DRRM. There is a need in the municipality to allocate a certain budget for relief only.



Prasauni Rural Municipality

Prasauni Rural Municipality lies in the Bara district and consists of seven wards. The municipality covers an area of 20.24 sq. km. Bangari river, Dudhaura river, Kirkichha river and Singha River are the main rivers of the municipality. The municipality borders Kalaiya

sub-metropolitan city and Pheta rural municipality in the east, Parwanipur rural municipality and Parsa district in the west, Jitpur Simira sub-metropolitan city in the north and Pheta rural municipality and Bishrampur rural municipality in the south.

The municipality has prepared the municipal level DRRM act in the year 2075 B.S. The total budget of the municipality of the FY 079/80 486, NPR 775,000. The budget for disaster risk reduction and management has not been allocated due to political issues in the municipality.

Data Assessment of Prasauni Rural Municipality

The section examines the type of data that is available in the BIPAD Portal (as of 16 August 2022) for Prasauni Rural Municipality and what is available on the website of the municipality. This gives a picture of what information is already available and what is needed in the BIPAD Portal to make it more relevant to the municipality to support evidence-based decisions for DRRM.

DATA ASSESSMENT OF PRASAUNI RURAL MUNICIPALITY			
MODULES		DATA AVAILABLE IN BIPAD	DATA AVAILABLE IN THE MUNICIPALITY
Dashboard	Alerts	No alerts have been reported in the past 1 year	N/A
Incident	Incidents (including inventory/stockpile)	<p>Incident data are added to the BIPAD portal with the details of data frequency, magnitude, and spatial and temporal data in a disaggregated format. Incident data from 2017 onward are available.</p> <p>Data on inventory and stockpile has not been added.</p>	<p>Data on previous and current incidents are not available.</p> <p>Data on inventories and stockpile is available in the municipality and is taken care of by AFP. The following tools are available: Bold cutter-2, Chain saw petrol-1, Safety helmet-12, Gum boot-6, Head light-3, Static rope (12 mm)- 100 m, Safety belt- 2, Life jacket- 12, Life buoy ring-12, Fire blanket-6, Reflecting jacket-12, Caution tape (500m)-3, Throw rope- 4, Fire bag pack-2, Fire boot- 2, Fire retardant suit- 2, Gloves- 6, Reflecting raincoat- 2, Fire extinguisher- 1 (Source: APF, Prasauni)</p>
Damage and loss		<p>Damage and loss data in the BIPAD portal are available in the disaggregated format up to ward level categorized by the incident, people's death, estimated loss, infrastructure destroyed, and livestock destroyed.</p> <p>Since 2017, 13 incidents have been reported that have caused 2 deaths, and an estimated loss of NPR 6 million.</p>	Data on damage and loss due to disaster incidents are not recorded at the municipality.
Real-Time		No real-time stations of rain and river	N/A

Profile	Summary	An overview of resources and loss information and demographic information for the municipality from the 2011 Census is available.	The updated information on demographic is not available in the municipality. capacity and resources of the municipality are available at the municipality but scattered in different departments and sections and vary in forms and formats.
	Projects	No projects data is available	There is no project in the municipality currently.
	Contacts	Data is not available	The Disaster Committee has not been formed in the municipality but the DRR Focal Person has been designated. The details are available in the municipality.
	Documents	The published documents are not uploaded in BIPAD	The limited documents are available in the municipality.
Risk info	Capacity and resources:	There is a limited database in capacity and resources (education, health, culture, governance, water infrastructure, sanitation and transportation) but scattered, incomplete and not in the standard format.	The capacities and resources available at the municipal level to respond to disasters need to be identified and mapped to all those resources in a standard format.
	Exposure	Visualization of Building exposure map	Information not available
	Vulnerability	The national level of vulnerability data is also available up to the municipal level. Data for HDI, life expectancy, HPI, Per Capita Income, and household data such as communication, water, toilet, and education are available for the municipality.	Information is not available.
	Hazard	Has flood hazard and Earthquake information from METEOR Project simulation at the national level, Flood Inundation from World Food Program for the year 2017 at the national scale.	Information is not available.
	Risk	Earthquake and landslide risk scores are from Durham University. The earthquake risk score is available up to the district level and the Landslide risk score is available up to the ward level.	Information is not available.
	Relief	N/A	N/A

Components	Data needed as per the guideline	Data available in the municipality
Historical records of the disaster events	Past disaster incidents of 30 years data including the location, date of occurrence, damage and loss and affected population.	Data is not available.
Hazard Ranking	Identify major recurring hazards and ranking based on their impact.	Data is not available.
Risk Map	Map showing the social aspects of the municipality, including the risk and hazard-prone area, and Critical Infrastructures.	N/A
Stakeholder Analysis	The stakeholders of the municipality working in the field of Disaster and Climate Change, their location, distance from the municipality, Contacts and their role in DRRM.	N/A
Calendars	Hazard Calendar, Climate Calendar and Crop Calendar to identify the changes in the occurrence of hazards, changes in the weather and crops, respectively.	N/A

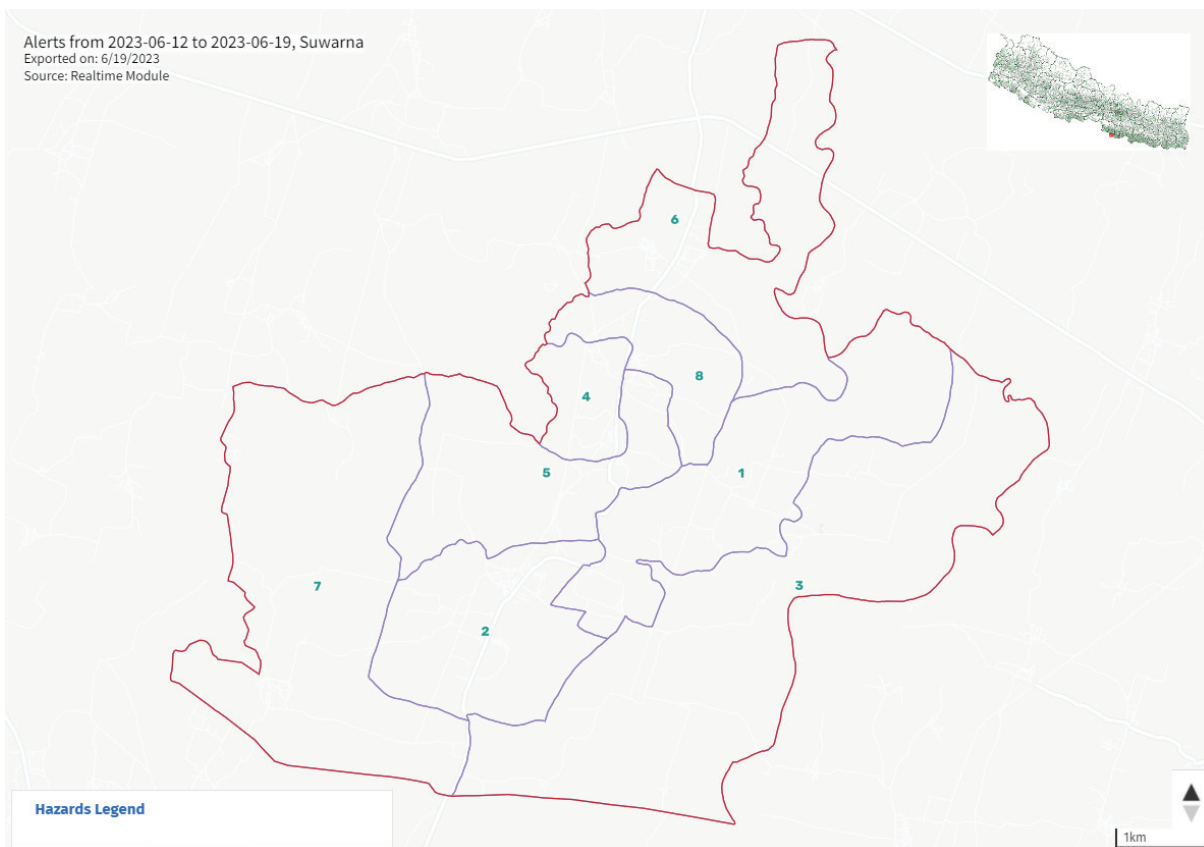
Data Gaps and Needs of Prasauni Rural Municipality

The data that is currently available in the BIPAD portal for Prasauni Rural Municipality is added from the federal level. From the above analysis, it is found that data and information on different modules for the municipality are mostly unavailable and when available are outdated and incomplete.

Looking at the data needs, there is a need for updated, complete, and standardized data. A complete analysis of data gaps and needs for each module is presented in the Table below.

DATA GAPS AND NEEDS OF PRASAUNI RURAL MUNICIPALITY			
Modules		Data Gaps	Data Needs
Dashboard	Alerts	N/A	N/A
Incident	Incidents (inventory/stockpile)	The municipality has no record of incidents, however, the BIPAD portal has a historical incident database in disaggregated form	Need to ensure incident reporting with details of magnitude of the incident, frequency, spatial and temporal data and in disaggregated format by Nepal police. Complete information on inventory and stockpiles in standard format/template is needed.
Damage and loss		The municipality has no record of damage and loss, however, the BIPAD portal has a historical database in disaggregated form	There is a need to ensure the collection of damage and loss data by using a standardized collection method at the local level that includes all the historical data and current incidents in a disaggregated format.

	Summary	The municipality does not have updated demographic data. Information on resources and loss is available but scattered within different departments of the municipality.	Updated information on resources and losses from the municipality in standard format needs to be uploaded to the BIPAD portal.
Profile	Projects	Information on Project is not available	N/A
	Contacts	Disaster Management Committee data is not available in BIPAD.	Need to update contact information of DRR Focal Person of municipal level in BIPAD portal.
	Documents	The documents are not uploaded in BIPAD.	The limited documents should be identified and uploaded to the BIPAD portal.
Risk info	Capacity and resources:	The data is available in tabular form but all available information is not in one place and is not standardized.	The existing capacities and resources available at the municipal level to respond to disasters need to be identified and mapped to all those resources in a standard format.
	Exposure, Vulnerability, Risk, and Hazard	Localized hazard information for the municipality is not available.	The data is not available in the municipality.
	Relief	The budget is not updated in the BIPAD portal	The budget for DRRM has not been allocated.



Suwarna Rural Municipality

Suwarna Rural Municipality lies in the bara district and consists of eight wards. The municipality covers an area of 36.84 sq. km. Bhutai river and tiyar river are the main rivers of the municipality. The municipality borders Pachrauta

municipality in the east, Devtaal rural municipality in the west, Mahagadi mai municipality in the north and India in the south. The municipality has not prepared the local level DRRM act. The Disaster Management

Committee is formed by the municipality but DRR Focal Person has not been identified. The total budget of the municipality for FY 079/80 is 405,328,100 NPR out of which 5 lakhs has been allocated for disaster management.

Data Assessment of Suwarna Rural Municipality

The section examines the type of data that is available in the BIPAD Portal (as of 16 August 2022) for Suwarna Rural Municipality and what is available on the website of the municipality. This gives a picture of what information is already available and what is needed in the BIPAD Portal to make it more relevant to the municipality to support evidence-based decisions for DRRM.

DATA ASSESSMENT OF SUWARNA RURAL MUNICIPALITY			
MODULES		DATA AVAILABLE IN BIPAD	DATA AVAILABLE IN THE MUNICIPALITY
Dashboard	Alerts	1 event has been reported in the year 2019	N/A
Incident	Incidents (including inventory/stockpile)	Incident data are added to the BIPAD portal with the details of data frequency, magnitude, and spatial and temporal data in a disaggregated format. Incident data from 2017 onward are available. Data on inventory and stockpile has not been added.	Data on previous and current incidents is not available.
Damage and loss		Damage and loss data in the BIPAD portal are available in the disaggregated format up to ward level categorized by the incident, people's death, estimated loss, infrastructure destroyed, and livestock destroyed. Since 2017, 18 incidents have been reported that have caused 2 deaths, and an estimated loss of NPR 8 million.	Data on damage and loss due to disaster incidents are not recorded at the municipality.
Real-Time		No real-time stations of rain and river	N/A

Profile	Summary	An overview of resources and loss information and demographic information for the municipality from the 2011 Census is available.	The updated information on demographic is not available in the municipality, capacity and resources of the municipality are available at the municipality but scattered in different departments and sections and vary in forms and formats.
	Projects	No projects data is available	There is no project in the municipality currently.
	Contacts	Data is not available	A Disaster Committee has been formed in the municipality but the DRR Focal Person has not been designated. There is a need in the municipality to identify a DRR Focal Person.
	Documents	The published documents are not uploaded in BIPAD	N/A
Risk info	Capacity and resources:	There is a limited database in capacity and resources (education, health, culture, sanitation, water infrastructure, governance and transportation) but scattered, incomplete and not in the standard format.	The capacities and resources available at the municipal level to respond to disasters need to be identified and mapped to all those resources in a standard format.
	Exposure	Visualization of Building exposure map	Information not available
	Vulnerability	The national level of vulnerability data is also available up to the municipal level. Data for HDI, life expectancy, HPI, Per Capita Income, and household data such as communication, water, toilet, and education are available for the municipality.	Information is not available.
	Hazard	Has flood hazard and Earthquake information from METEOR Project simulation at the national level, Flood Inundation from World Food Program for the year 2017 at the national scale.	Information is not available.
	Risk	Earthquake and landslide risk scores are from Durham University. The earthquake risk score is available up to the district level and the Landslide risk score is available up to the ward level.	Information is not available.
	Relief	N/A	N/A

Components	Data needed as per the guideline	Data available in the municipality
Historical records of the disaster events	Past disaster incidents of 30 years data including the location, date of occurrence, damage and loss and affected population.	Data is not available.
Hazard Ranking	Identify major recurring hazards and ranking based on their impact.	Data is not available.
Risk Map	Map showing the social aspects of the municipality, including the risk and hazard-prone area, and Critical Infrastructures.	N/A
Stakeholder Analysis	The stakeholders of the municipality working in the field of Disaster and Climate Change, their location, distance from the municipality, Contacts and their role in DRRM.	N/A
Calendars	Hazard Calendar, Climate Calendar and Crop Calendar to identify the changes in the occurrence of hazards, changes in the weather and crops, respectively.	N/A

Data Gaps and Needs of Suwarna Rural Municipality

The data that is currently available in the BIPAD portal for Suwarna Rural Municipality is added from the federal level. From the above analysis, it is found that data and information on different modules for the municipality are mostly unavailable and when available are outdated and incomplete.

Looking at the data needs, there is a need for updated, complete, and standardized data. A complete analysis of data gaps and needs for each module is presented in the Table below.

DATA GAPS AND NEEDS OF SUWARNA RURAL MUNICIPALITY			
Modules		Data Gaps	Data Needs
Dashboard	Alerts	N/A	N/A
Incident	Incidents (inventory/stockpile)	The municipality has no record of incidents, however, the BIPAD portal has a historical incident database in disaggregated form	Need to ensure incident reporting with details of magnitude of the incident, frequency, spatial and temporal data and in disaggregated format by Nepal police. Complete information on inventory and stockpiles in standard format/template is needed.
Damage and loss		The municipality has no record of damage and loss, however, the BIPAD portal has a historical database in disaggregated form	There is a need to ensure the collection of damage and loss data by using a standardized collection method at the local level that includes all the historical data and current incidents in a disaggregated format.

Profile	Summary	The municipality does not have updated demographic data. Information on resources and loss is available but scattered within different departments of the municipality.	Updated information on resources and losses from the municipality in standard format needs to be uploaded to the BIPAD portal.
	Projects	Information on Project is not available	N/A
	Contacts	Disaster Management Committee data is not available in BIPAD.	Need to update the contact information of the DRR Focal Person at the municipal level in the BIPAD portal after the municipality identifies the focal person.
	Documents	The documents are not uploaded in BIPAD.	N/A
Risk info	Capacity and resources:	The data is available in tabular form but all available information is not in one place and is not standardized.	The existing capacities and resources available at the municipal level to respond to disasters need to be identified and mapped to all those resources in a standard format.
	Exposure, Vulnerability, Risk, and Hazard	Localized hazard information for the municipality is not available.	The data is not available in the municipality.
	Relief	The budget is not updated in the BIPAD portal	No exact amount has been allocated for relief but 5 lakhs has been allocated for DRRM. There is a need in the municipality to allocate a certain budget for relief only.



Madhesh Province

Madhesh Province borders Province 1 in the east, Bagmati province in the north and west, and India in the south. The province consists of 8 districts- Saptari, Siraha, Dhanusa, Mahottari, Sarlahi, Rautahat, Bara and Parsa and covers an area of 9661 sq. km. Koshi, Bagmati, Kamala, Lakhandei and Bishnumati rivers are the main rivers of the province. A total of 6,126,288 population lives in Madhesh province.

Madhesh province consists of 1 metropolitan city, 3 sub-metropolitan cities,

73 municipalities and 59 rural municipalities. The province prepared Disaster Management Act in the year 2075 B.S and the Province level Disaster Victim Rescue and Relief Guidelines in 2075 B.S. The province has allocated a budget of NPR 46 billion 889 million and 46 thousand.

Data Assessment of Madhesh Province

The section examines the type of data that is available in the BIPAD Portal (as of 16 August 2022) for Madhesh province and what is available

on the website of the province and the assessment done by Climate Fellow stationed at the Ministry of Home and Communication. This gives a picture of what information is already available and what the BIPAD Portal can provide to make it more relevant to the province to support evidence-based decisions for DRRM. For now, Province does not have access to upload any data and information to the BIPAD portal. A total of 6140 incidents have been recorded in the BIPAD portal since 2011 to 16 August 2022.

Districts	Population
Saptari	713203
Siraha	748416
Dhanusha	873274
Mohottari	715040
Sarlahi	857360
Rautahat	825623
Bara	743975
Parsa	649397

Table 1 District-Wise Population
(Source: Madhesh Province Website)

Inventories: The inventories are bought by the ministry of home and communication and are later distributed to the Armed Police Force, Nepal Army and Nepal police as per the requirement and decisions.

Name	Quantity	Unit
Body Worn Camera	120	Pcs
Safety helmet	400	Pcs
Rescue Ring	400	Pcs
Life jacket	400	Pcs
Motor Boat	3	Pcs
Rubber boat	3	Pcs
Semi-static rope	160 roll (30 m)	Meter
Throw Bag	400	Pcs

Table 2 Data on Inventories
(Source: Madhesh Province Website)

Projects: The ministry does not have any information regarding all projects within the province. Only major disaster-related projects initiated by the ministry or coordinated with the ministry are recorded.

Data Gaps and Needs of Madhesh Province

The data that is currently available in the BIPAD portal is from the Municipal level to the ward level of Madhesh Province and is added from the federal level. The province does not have access to upload documents and contact information in the BIPAD portal. From the above analysis, it is found that data and information on different modules for the municipalities of Madhesh Province are mostly unavailable and when available are outdated and incomplete. Looking at the data needs, there is a need for updated, complete, and standardized data at the local level to maintain the data quality of the province itself.

CONCLUSION

The DRRM Act of 2017 mandates municipalities for disaster management and to form a disaster management committee. It further mandates the local government to institutionalize a disaster management system at the local level to enhance their preparedness, mitigation, response, and recovery activities on their initiative. With the current structure of governance, municipalities have the authority to make independent decisions for development & service delivery for their region. Against this backdrop, the BIPAD portal is developed by pooling all credible digital and spatial data that are available within different government bodies, non-governmental organizations, academic institutions, and research organizations on a single platform. Currently, in the BIPAD portal, data for municipalities are mostly added from the federal level. The data and information on different modules are unavailable and when available, are outdated and incomplete in the BIPAD portal.

The increasing effects of climate change exacerbate disaster risks and disproportionately affect the most vulnerable, which include women, girls, persons

with disability, gender minorities, single women, senior citizens and socially excluded groups. Even though climate change and disaster risk reduction and management are treated as separate thematic issues at both the international level, as well as in national level policies and practices, MoFAGA has developed the plan to combine disaster and climate change as the climate change is one of the drivers of hazards. This assessment was conducted to identify the available data and information regarding disaster, climate change and capacities of the municipalities.

Few municipalities have positively responded to the mandate of the government and have taken DRRM-related initiatives at the local level. Out of nine project municipalities, four have endorsed the DRRM act and nine have formed municipal level Disaster Management Committee. Based on the assessment, eight out of nine municipalities have assigned DRR Focal persons and all nine municipalities have IT officers. At the province level, Madhesh Province DRRM act has been endorsed and the DRRM committee has been formed. The province has assigned a DRR Focal person and IT officer.

Table 3 Summary of DRRM Governance at Municipal and Provincial Level

S.N	Name of Municipality/ Province	Status of Local DRRM Law	DRRM Committee at the Municipal/ Province level	DRRM Committee at the Ward level	Status of LEOC/ MEOC
1	Bahudarmai Municipality	Endorsed	No	No	No
2	Garuda Municipality	Not prepared	Yes	No	No
3	Haripur Municipality	Endorsed	Yes	No	No
4	Ishworpur Municipality	Not Prepared	Yes	No	No
5	Loharpatti Municipality	Not Prepared	Yes	No	No
6	Phatuwa Bijaypur Municipality	Not prepared	No (the previous one was dissolved and the new one is yet to be formed)	Yes	No
7	Pokhariya Municipality	Endorsed	Yes	No	No
8	Prasauni Rural Municipality	Endorsed	No (Previous LDMC committee is available but has not been reformed)	No	No
9	Suwarna Rural Municipality	Not prepared	Yes	No	No
10	Madhesh Province	Endorsed	Yes	-	-

Table 4 Summary of Human Resources and Capacity for DRRM at the Municipality and Province

S. N	Name of Municipality	Environment and Disaster Management unit	IT Department	Assigned DRR Focal person	Assigned IT Officer
1	Bahudarmai Municipality	The previous committee has been dissolved and new is yet to be formed	Yes	Yes	Yes
2	Garuda Municipality	No	Yes	Yes	Yes
3	Haripur Municipality	Yes	Yes	Yes	Yes
4	Ishworpur Municipality	Yes	Yes	Yes	Yes
5	Loharpatti Municipality	No	Yes	Yes	Yes
6	Phatuwa Bijaypur Municipality	No	Yes	Yes	Yes
7	Pokhariya Municipality	Yes	Yes	Yes	Yes
8	Prasauni Rural Municipality	No	Yes	Yes	Yes
9	Suwarna Rural Municipality	No	Yes	No	Yes
10	Madhesh Province	Yes	Yes	Yes	Yes

The above assessment identifies data gaps and needs to localize the BIPAD portal at the municipal level. From the review of available data at the municipalities through primary and secondary sources, it is found that municipalities' information available in their municipal profile, disaster management committee, and DRRM act provide foundational data to the input in the BIPAD portal. The municipalities that had developed municipal profiles, emergency preparedness and response plans had some data on capacity and resources, and incidents. However, that data was limited to the names of the resources and their details were not available including geo-tagged location and there is a need to verify with the municipalities if they have data available in the format compatible with the portal. Likewise, all the project municipalities had some information

on capacity and resources which are scattered within different sections and departments of municipalities.

The province has recordings of the incidents and damage and loss data of the districts which have been provided by DAO to the province. The municipalities have no provision to record disaster incidents data. The municipalities do not have access to the demographic data of the census 2021 as the data entry is ongoing in CBS and disaggregated information on the demography has not been finalized. There is a very limited practice to record and share data and documents related to DRRM with the public and include updated information on the official websites and social media of the municipality. Likewise, the municipality has limited documents related to the disaster.

Table 5 Summary of Damage and Loss from 2017 to August 16, 2022 (Source: BIPAD portal)

S.N	Name of Municipality	Number of Incidents	Total Number of Human losses	Total Estimated Loss	Number of Infrastructure destroyed	Number of Livestock destroyed
1	Bahudarmai Municipality	21	4	7 million	10	3
2	Garuda Municipality	19	1	4 million	7	4
3	Haripur Municipality	79	17	34 million	36	7
4	Ishworpur Municipality	32	3	19 million	10	0
5	Loharpatti Municipality	20	0	6 million	7	7
6	Phatuwa Bijaypur Municipality	24	6	5 million	8	0
7	Pokhariya Municipality	21	0	8 million	14	16
8	Prasauni Rural Municipality	13	2	6 million	3	0
9	Suwarna Rural Municipality	18	2	8 million	190	0
10	Madhesh Province	4525	568	4 billion	3974	6949

From this assessment, it is clear that there is a need for updated and detailed disaggregated data. Based on the secondary review, there are some indications that some municipalities have data available to them but there is a need to work with them to compile the available data, support them to collect comprehensive and inclusive data, and incorporate them into the BIPAD portal. Hence, this fellowship project

will be value-added for the localization of the BIPAD portal since they will be working with the project municipalities to incorporate available data in the disaggregated form and integrate the validated data into the BIPAD portal. There is a lack of disaster and climate change plans in the municipality. The Climate Fellowship will support the municipalities to develop Local Disaster and Climate Resilience Plan.

