Challenges of water and WASH services in Nepal in a changing climate

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Nepal

SUDURPASCHIM PROVINCE

October floods and landslides c
supply in Bajhang

Around 20,000 families are left without safe drinking wat
diseases.

October floods and landslides disrupt water supply in Bajhang (k

Basanta Pratap Singh

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Around 20,000 families in Bajhang have been facing a short
third week of October, when floods and landslides set off by
of drinking water to the district.

वर्षाले सय खानेपानी योजनामा क्षति

विप्लव महर्जन, सल्यान
आश्विन ३०, २०७९

त्रिवेणी गाउँपालिकाले २०७७ सालमा डेढ करोड रुपैयाँ खर्च गरी योजना निर्माण गरेपछि लुहाम बजारको खानेपानी समस्या समाधान भयो । योजना सम्पन्न भएपछि झन्डै ७ सय परिवारले घरघरमै पानी पाएका थिए । तर एक साताअघि परेको अविरल वर्षाका कारण लुहाम खोलामा आएको बाढीले इन्टेक ट्यांकी पुरिएपछि लुहाम बजार काकाकुल बनेको छ ।

बन्गाडकुपिन्डे नगरपालिका–२ बामेको राइरामा पनि सार्विक जिल्ला विकास समितिले झन्डै एक करोड रुपैयाँ खर्च गरी २०६७ सालमा निर्माण गरेको योजना पनि बाढीले तहसनहस बनाएको छ । अहिले स्थानीय खोलाको पानी त्यो पनि एक घण्टा टाढा गएर ल्याउन बाध्य छन् । बाढीले योजनाको मुहानमा क्षति पुऱ्याएको छ । पाइपलाइन पनि पहिरोले क्षति

ery child

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vere flooding and landslides across South Asia, affecting more than five million

Press release

Monsoon rains bring severe flooding and slides across South Asia, affecting more than five million children

UNICEF scaling up emergency response to support children and families affected

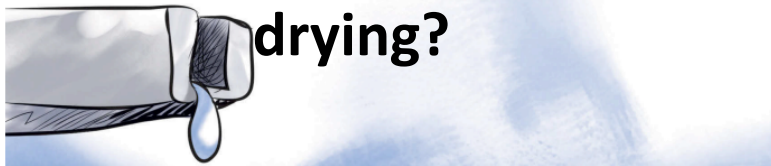
18 July 2019

en children's survival and development, with direct impacts including injuries drowning. Beyond these immediate risks, floods compromise safe water damage sanitation facilities, increasing the risk of diarrhoea and other disease well as impacting children's access to education. Damage to housing ildren's well-being, particularly if emergency shelter is either scarce or also destroys infrastructure, making it difficult to move lifesaving assistance

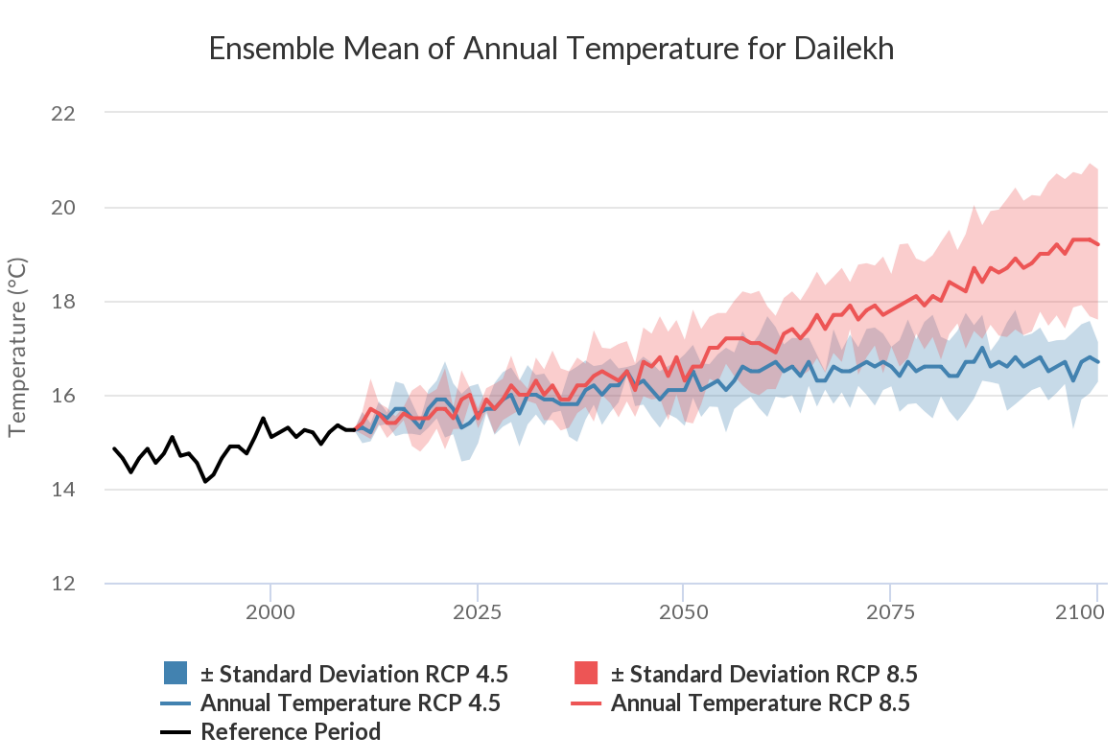
५ पुस, २०७७ (Sunday, December 20, 2020) दृष्टिकोण

किन सुक्दै छन् मल ?

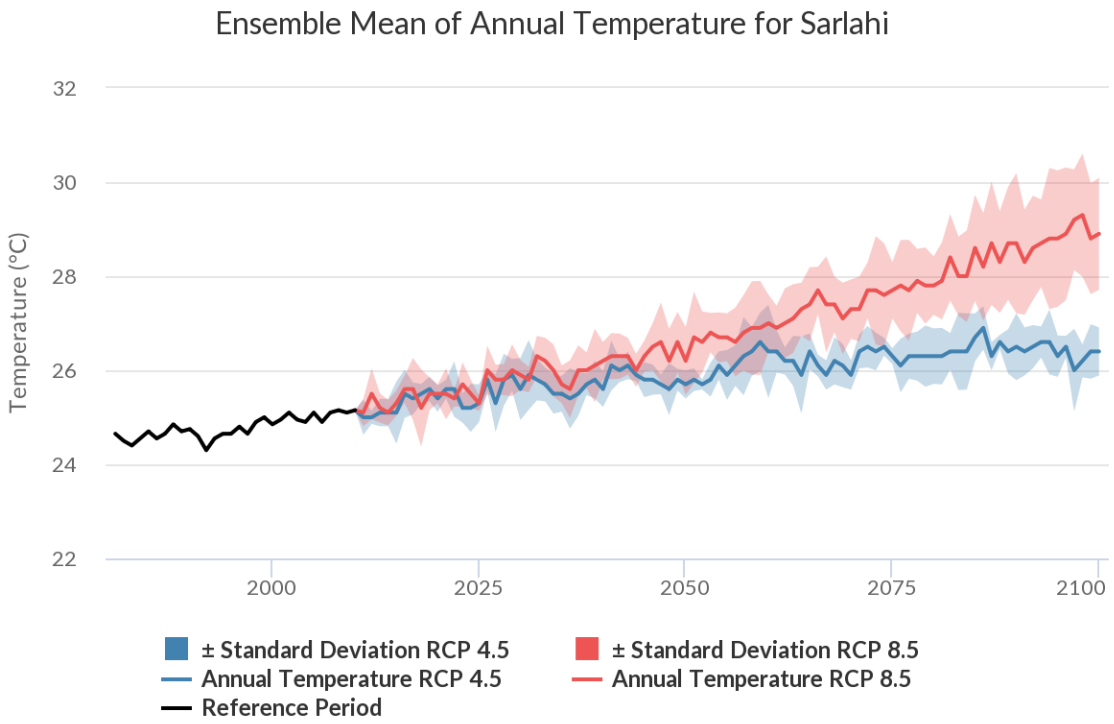
Why springs are drying?



Climate change in Dailekh and Sarlahi



* Based on the report of 'Climate Change Scenarios for Nepal' by MOFE, 2019 (Supported by DHM and ICIMOD)



* Based on the report of 'Climate Change Scenarios for Nepal' by MOFE, 2019 (Supported by DHM and ICIMOD)

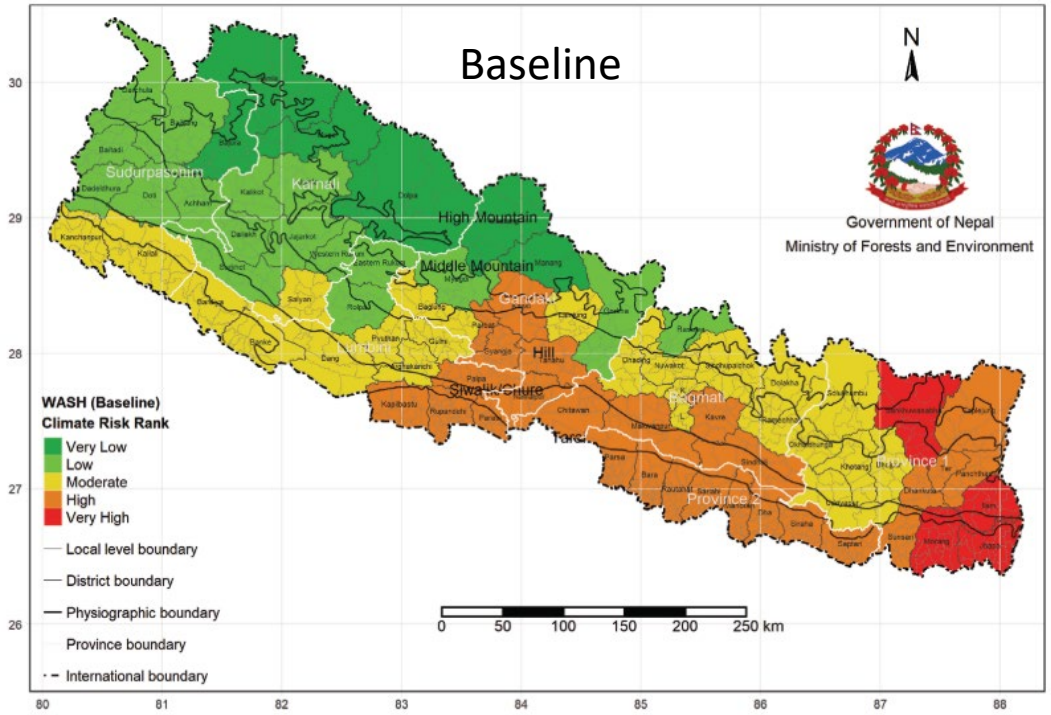
Temperature Change for Dailekh

Scenario	Reference Period (1981-2010)	Medium Term (2016-2045)	Long Term (2036-2065)
	(°C)	Change (°C)	Change (°C)
RCP 4.5	15	0.96	1.38
RCP 8.5	15	1.1	1.85

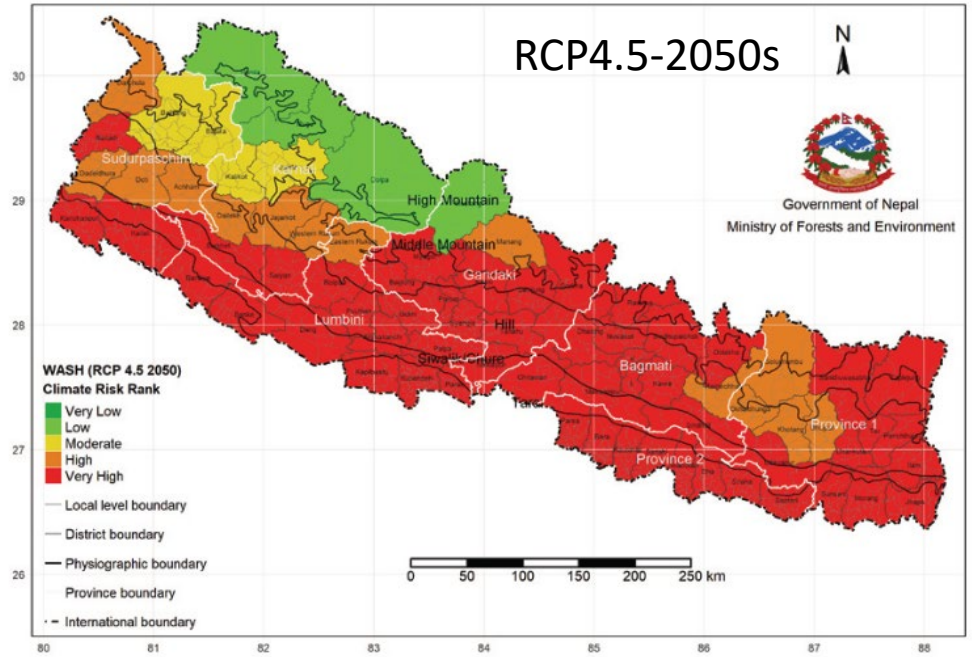
Temperature Change for Sarlahi

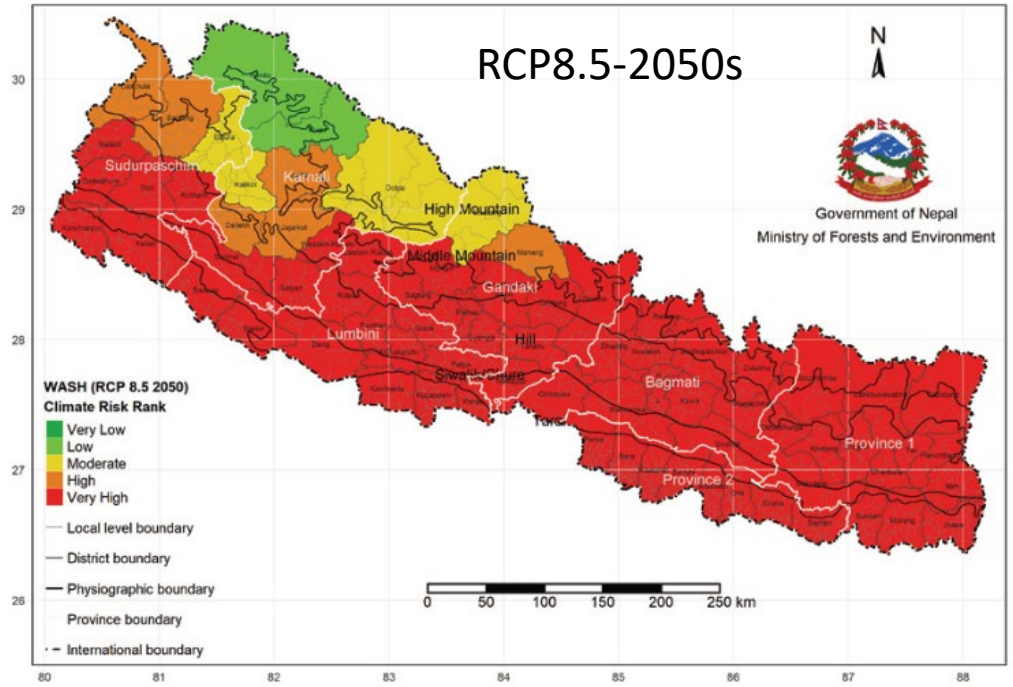
Scenario	Reference Period (1981-2010)	Medium Term (2016-2045)	Long Term (2036-2065)
	(°C)	Change (°C)	Change (°C)
RCP 4.5	24.7	0.85	1.17
RCP 8.5	24.7	1.06	1.77

National Adaptation Plan (NAP): District wise Climate Change Risk Rank in the WASH Sector (MoFE 2021)



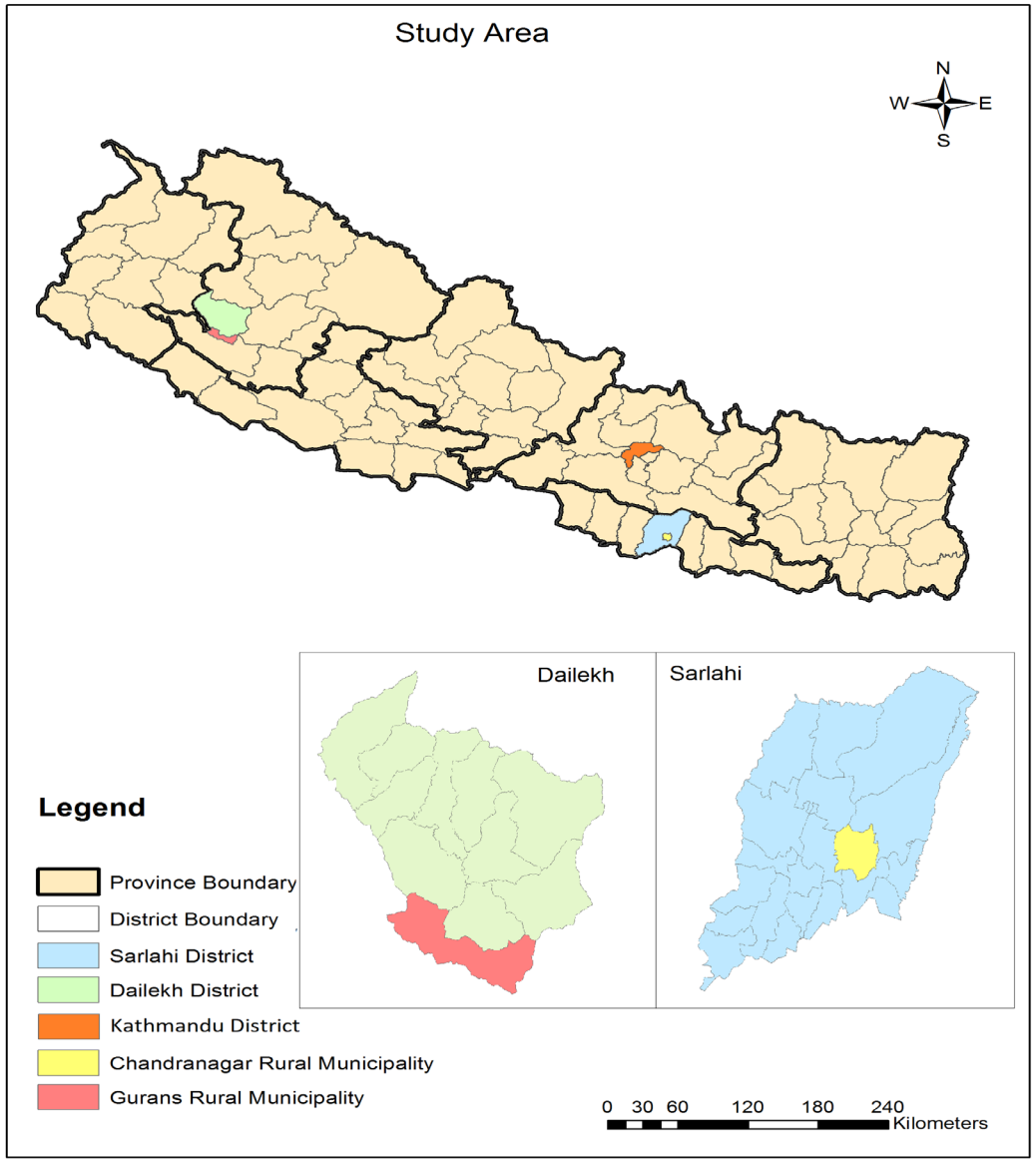
SN	Scenarios	Dailekh	Sarlahi
1	Baseline	Low	High
2	RCP4.5-2030s	Moderate	Very High
3	RCP4.5-2050s	High	Very High
4	RCP8.5-2030s	Low	Very High
5	RCP8.5-2050s	High	Very High





Water access and climate change in the study areas

- Springs in the mid-hills **declined by 30% over the last 30** years (MoFE, 2021).
- In floods and droughts prone Sarlahi district, flood-related **fatalities were higher** among adult women and girls compared to adult men and boys (Pradhan, 2007).
- Only **3.5% of the households** in the Karnali province (one of the study sites) have access to safely managed water services, which is almost five-times lower compared to the national average (19.1%)(CBS, 2019).
- In Gurans rural municipality, **43 out of 85 water sources** that provide water for drinking, sanitation and homestead irrigation were reported to be dried up



Gendered vulnerability of water access and climate change

- **Over 90% women and girls** contribute to manage water in rural households
- Exacerbating **workload for women and girls** in fetching water
- **Yet, women, people with disability** and disadvantaged groups have limited access to safe and reliable water, and no voices in water planning and decision-making (Khadka et al forthcoming)
- **Engineering perspectives** dominate in WASH sector planning and decision-making (Khadka et al. forthcoming)

Policy gaps from climate and GEDSI Lenses

- WASH as a **fundamental right**: the constitution of Nepal, 2015
- **Drinking Water and Sanitation Act 2022:** gender neutral and lacks accessibility issues of people with disability, and climate change impacts to WASH sector
- Local **WASH guidelines** lack GEDSI and water management

In NEPAL

10.8 million people *do not have access to improved sanitation, and*

3.5 million *do not have access to basic water services.*

Only 2**8%** of the water supply is reported to be fully functioning and almost 40% requires major repairs (DWSSM 2019).

75.3% of all water sources and 89.7% of those used by the poorest quintile contaminated with Escherichia coli bacteria. (CBS 2019)

Inclusive, climate resilient WASH Development

ensure that **WASH infrastructure and services** are sustainable and resilient to **climate-related risks**, and

WASH contributes to building **community resilience** to **climate change**.

Tackle institutional and structural barriers for women and marginalized groups to access WASH services and have voice in decision-making

Water supply facilities (springs, taps, handpumps, wells)
Sanitation and Hygiene

Slow onset disasters (temp increase, precipitation change, drought, sedimentation)
Rapid onset disasters (earthquake, flash floods, floods, landslides, debris flow)

- Ability of communities to withstand, adapt to, and recover from adversity (i.e. climatic shocks)
- Able to deal with crises in the absence of external support
- Sustainable solutions
- Institutional capacity
- Local resources
- Gender, diversity and inclusion in resilience interventions

Adapted from: Strategic Framework on WASH Climate Resilience – GWP (GWP and UNICEF, 2022; Khadka et al forthcoming)

Water for Women- Phase 2

Addressing Climate Vulnerability in Nepal through Resilient Inclusive WASH Systems (RES-WASH)

1	**Vulnerability and risk assessment**
2	**Gender and social vulnerabilities**
3	**Capacity building**

What are the vulnerabilities and risks to WASH resources and infrastructure in a changing climate context?

What are gendered and social vulnerabilities related to WASH experienced by marginalized women, girls, people with disabilities?

What strategies are needed to strengthen the institutional capacity of WASH service providers and local communities in achieving inclusive climate-resilient WASH ?

Multi stakeholder partnership approach:

- National Association of Rural Municipalities in Nepal (NARMIN)
- Bagmati welfare society Nepal (BWSN)
- Everest Club (EC)
- Global Institute for Interdisciplinary Studies (GIIS)

Ways forward

- **Change in climate** is impacting on water availability and flows
- Limited access to water is **exacerbating existing gendered inequalities** in the study area
- Integrating gender and social inclusion **action plans** in local adaptation and water management practices must
- **Water management** with consideration of gender, disability and social inclusion are key to reduce climate-related water risks, health risks to water risks, and build community resilience for water supply services.
- **WASH, climate change and GEDSI** nexus is a key approach to tackle water access challenge and related gender, equity and exclusion issues

“ Climate crisis is a water crisis and vice-versa. Water management and WASH in a changing climate require transformative pathways in the water and WASH sectors”

Manohara Khadka

WATER & WASH FUTURES 2023
Achieving SDG6 in a Changing Climate

Thank you

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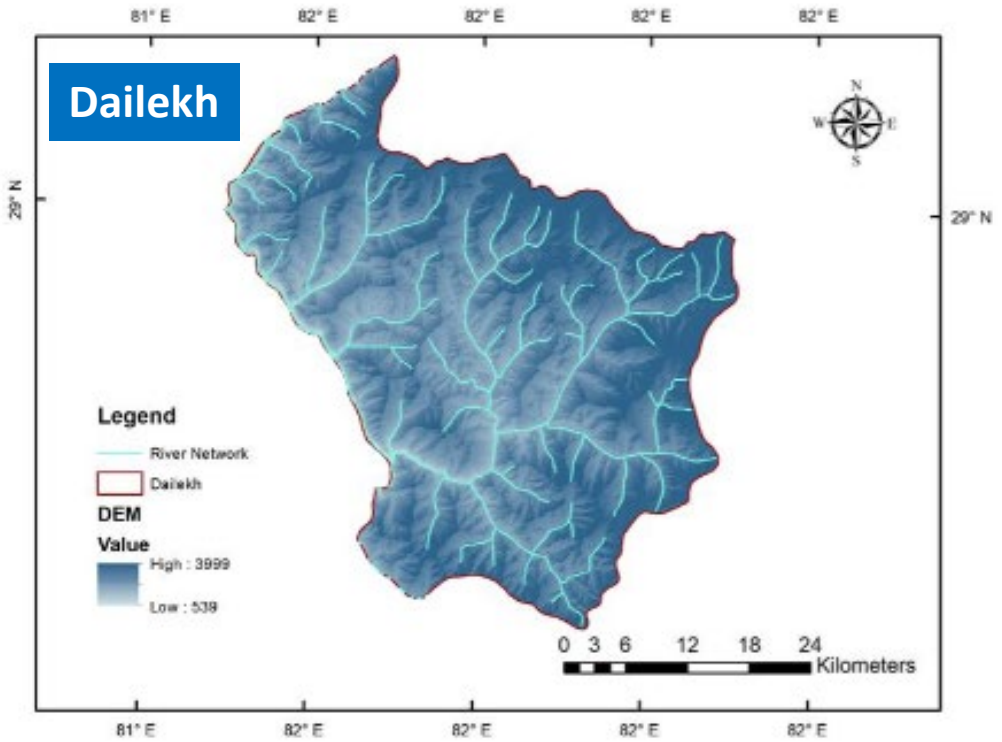
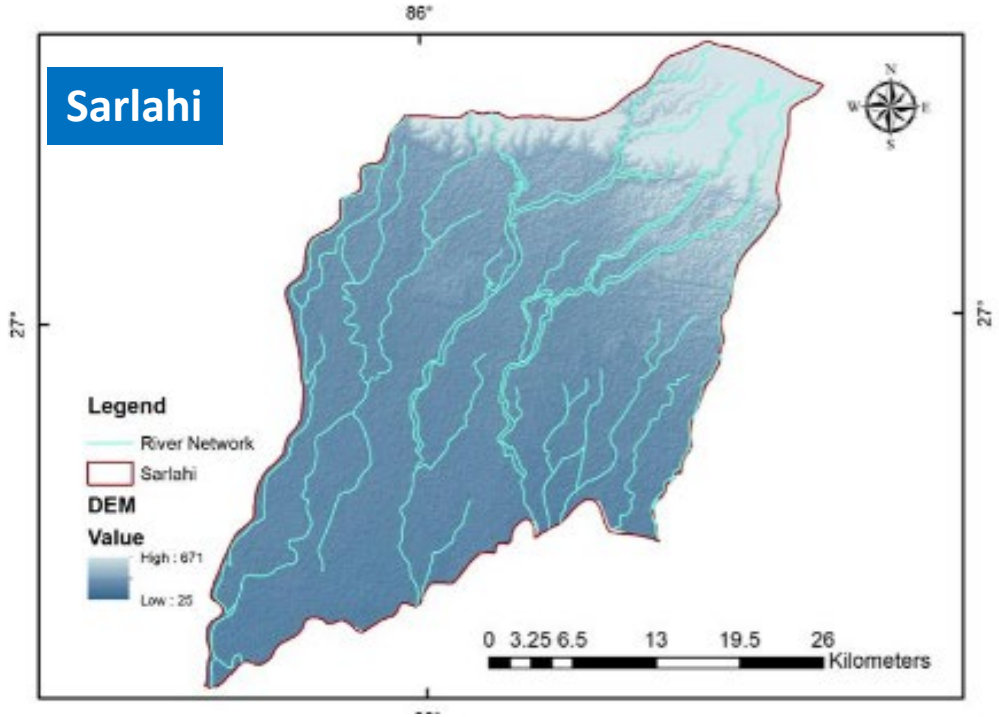
WATER & WASH FUTURES 2023
Achieving SDG6 in a Changing Climate


Dailekh
81° E
82° E
29° N
Legend
River Network
Dailekh
DEM
Value
High : 3999
Low : 539
0 3 6 12 18 24
Kilometers


Sarlahi
86°
27°
Legend
River Network
Sarlahi
DEM
Value
High : 671
Low : 26
0 3.25 6.5 13 19.5 26
Kilometers


Thantikandh Gaunpalika
Chamunda Bindrasaini Nagarpalika
Bhairabi Gaunpalika
Mahabu Gaunpalika
Naumule Gaunpalika
DAILEKH
Narayan Nagarpalika
Dullu Nagarpalika
Bhagawatimai Gaunpalika
Dungeshwor Gaunpalika
Gurans Gaunpalika

Data: NWASH


Hariwan Nagarpalika
Lalbandi Nagarpalika
Bagmati Nagarpalika
Krishnachok
Lalbandi
Haripur Nagarpalika
Barahathawa Nagarpalika
SARLAHI
Basbariya Gaunpalika
Kabilasi Nagarpalika
Chakraghatta Gaunpalika
Kaudena Gaunpalika
Malangawa Nagarpalika
Bishnu Gaunpalika