

Water governance and access to water in Hakha Town

Chin State, Myanmar: Towards addressing water insecurity

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Author names: Carl Middleton*, Naruemon Thabchumpon, Van Bawi Lian, Orapan Pratomlek

Contact email: *Carl.Chulalongkorn@gmail.com

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Policy Pointers

Water scarcity is not only a technical challenge, but should also be recognized as a governance challenge

Integrated town planning and watershed planning, including reforestation programs, watershed protection, and construction of mountainside drainage infrastructure, is required to address water insecurity as well as reduce future landslide risks

Design, construction and operation of the municipal water supply from the Timit Dam, now underway, should be coordinated with existing community water user groups

Public discussion on plans to address water insecurity should be promoted, including on the principles and pricing for upcoming municipal water distribution

For those resettled following the June 2015 landslide, ensuring livelihood recovery remains a priority



Hakha's colorful wooden houses lie beneath the Rung Mountain, which is an important water source for the residents.

Hakha town is the capital of Chin State, Myanmar, located in the mountainous Northwest of the country. In recent years, the town's population has faced growing water insecurity. Meanwhile, a major landslide in June 2015 compounded these challenges, when thousands of people had to be resettled. Our research reveals the how water insecurity is the product of both physical and social processes that are often inter-related, including: rising water demand due to a growing population without systematic town planning; deforestation of the surrounding watershed which has reduced water supply; and underinvestment in water supply infrastructure. Water security can be improved through improved town planning, watershed management, and creative approaches to urban water governance that would combine existing community-led water supply practices with plans now underway for a municipal system. Also important is greater transparency on existing plans, and public participation within them, to ensure equitable and reliable water access for all of Hakha's residents.

Introduction

Hakha, the capital of China State, is situated beneath the Rung Mountain that towers over the 600 year-old town. Chin State is one of the poorest states in Myanmar, including in terms of economy, basic infrastructure, and access to health care and education. This reflects a lack of long-term investment in basic services, as well as being the product of Myanmar's long-standing conflict. In Hakha town, three quarters of the 45,000 population live beneath the poverty line. Hakha's economy is primarily tied to agricultural production, small businesses and flows of remittances, with almost no industry in the town.

Water supply to Hakha town is currently via natural springs and streams within the Rung Mountain watershed and nearby. At present, there is no credible municipal water supply. In its absence, the local population has turned to themselves and manage water through a combination of community water groups and small-scale private activities to bring water to the town. However, over the past decade, Hakha town's population has suffered severe water shortages. This has created great hardships for the local population, especially in the dry season. For those who cannot access water from private springs, or afford to buy water, they must queue sometimes for hours to collect relatively small amounts of water. This situation has caused discontent towards the Municipal, State and Union level government, and has also on occasion caused conflict amongst the local population themselves.

One of the principal reasons for the water shortage has been the decreased availability of water from the watershed, which is linked to the watershed's rapid deforestation. Meanwhile, demand-side has also increased as the town's population has grown almost three-fold since the 2000s. To address water scarcity, in a proposal linked to the last election, President Thein Sein initiated construction of the Timit Dam for water supply in 2014, which until now remains behind schedule and incomplete, and faces both technical and financial challenges

Compounding the difficulties faced by Hakha's population, in June 2015, Hakha town suffered a major landslide. As a result, over 4000 people living in at-risk place were moved, many permanently to a new settlement.

In the settlement, the government has provided land or houses, yet basic services including water and schools were lagging behind. In the longer-term, the resettled people, who are mostly farmers, are uncertain about how they can make a living without access to farming land, and a perceived limited support from the government.



Hakha town with the State Parliament building prominent in the center
(Credit: Carl Middleton)

The research presented in this policy brief aimed: to understand the underlying factors and dynamics that has produced water scarcity; to examine how water is governed; and to offer recommendation on how to improve access to water for all. Our research is based on in-depth interviews in Hakha town with government officials, civil society, media, local community leaders, and town inhabitants in May 2014 and June 2016, and review of relevant literature.



The "new town" resettlement area, where hundreds of families have been relocated. Houses are under construction, but questions remain over future livelihoods (Credit: Carl Middleton)



Town population growth and migration

Hakha's population was around 10,000 in the 1980s, increasing to 17,000 by 2001, and to 45,000 in 2015. Correspondingly, the town has expanded from 6.2 square miles in the 1980s to 7.9 square miles in 2001, to 33.4 square miles in the 2015. The town's rapid population growth is from births, the growing government sector, and rural-to-urban migration. Regarding rural-to-urban migration, a key driver is the lack of economic opportunity and services in rural areas, and the possibility of work and better access to public services such as health and education in Hakha town. Whilst a town plan exists, and is widely recognized as important, historically until the present only weak town planning has occurred, which has had implications for water scarcity and landslide risk as the town has extended up the mountain slopes.



An abandoned school in the "red zone" area of the landslide, which is now not permitted to be settled (Credit: Carl Middleton)

Access to water

Hakha's annual rainfall is around 1880 mm. Yet, the availability of water for distribution in the town has worsened over the past decade, related to reduced supply from the watershed, a lack of water storage

infrastructure, and growing demand in the town. Almost all of the population suffer water shortage in the dry season, with implications for health, hygiene, and household incomes. Many families must queue for a long time at water wells that reduces time available to work, or must purchase water. Migrants, as new town settlers, tend to be more vulnerable to water scarcity as existing reliable water sources are already allocated to houses in the town, despite an apparent general goodwill to share water with one another.



Houses perched in the watershed of the Rung Mountain, which decades ago was heavily forested and protected (Credit: Carl Middleton)

Watershed transformation and water source decline.

Before the 1960s, there were no roads or houses in the Rung Mountain watershed area, and the forest was deep. Deforestation gradually started since 1965, once Hakha was made the State Capital Town. In the late 1970s, a road was constructed from Hakha to Mutupi, and in the early 1980s from Hakha to Gangaw, which opened up the area to agriculture and house construction. Deforestation, however, rapidly accelerated when two military bases were established on the ridge of the Rung Mountain in 1988, clear cutting the forest at the bases and in the surrounding areas. Much of the forest clearance and house construction has occurred illegally, especially following the intensified military presence in the town. In addition, a lack of grid-electricity in the town until 2014 also led the inhabitants to gather firewood sourced from smaller trees on the mountainside for cooking and house heating.

Deforestation has affected the watershed storage of water, and many springs and streams that were once perennial are no longer so. Furthermore, the deforestation and construction in the watershed was a key factor in the June 2015 landslide, initiating an urgent and important discussion on town and watershed planning.

Local water supply governance

Given the absence of a systematic and comprehensive municipal water supply, a mosaic of community-led practices for water supply has emerged, in particular: local water user committees; private water supplies; public wells and streams; and private bottled water companies.

- Local water user committees manage larger water resource tanks that are distributed within town blocks of approximately 150 households. The committees are elected from and by the community, and their main role is to collect fees to operate the tank's diesel pumps, and to maintain the distribution pipes.
- Some households manage private water supplies from springs located on their land, which often have been owned for generations. The families may sell or freely share the water with nearby houses. For private water supplies, there is no coordination between springs, and no higher-level committee.
- There exists in and around the city some public wells, or open-access streams, from which people may collect water if it is available.
- There are around five bottled water companies who distribute water via Tuk Tuk or truck. These are relatively small companies, selling water for drinking in six gallon jerrycans.

Whilst these arrangements meet the basic needs of the Hakha population, the overall lack of coordination leaves water supplies at risk of overuse, contamination, and also fragmented from important related activities, such as town and watershed planning.

Timit dam and the municipalization of water

Whilst until 2014 the government's response on water insecurity was weak, in February 2014, in response to a request from the Hakha Committee of Elders, President Thein Sein agreed to fund via the

Union-level the Timit Dam for water storage. Distribution was to be managed by the Municipality, such that the project ultimately would establish a municipal water supply in Hakha. However, the project was rushed, as it was intended to be commissioned within one year for the 2015 election. As a result, an environmental assessment was not completed, the engineering of the dam was poorly designed, and there was limited consultation with local people including on the location of water storage tanks in the town. At the time of writing (May 2017), the dam remains only partially complete. Uncertainty remains over when the project will be commissioned, including the distribution system throughout the town, how much water will be available, the cost of water given that the water requires pumping using electricity, and how the municipal water supply will coordinate and complement the existing community-managed water supply arrangements.



Tens of exposed and entangled pipes distribute water to individual houses (Credit: Carl Middleton)



The pipeline and large storage tank that will connect to the Tikit Dam, and deliver municipal water to Hakha once commissioned (Credit: Carl Middleton)



A spring source that distributes water to multiple houses in a block in the town (Credit: Carl Middleton)

Recommendations:

Our overarching recommendation is that addressing water scarcity in Hakha town should not only be approached as a technical and engineering challenge, but should also be recognized as a governance challenge. Thus, decision making towards addressing water scarcity should build upon the existing committees and social arrangements that exist around water. This, ultimately, would increase the likelihood that the challenge of urban water insecurity is met in a way that is informed, inclusive, fair and effective.

Recommendations to Chin State Government and political parties

- Legislate to integrate town planning and watershed planning in Hakha Township, including measures to reforest and protect the watershed area for water security and to reduce future landslide risk. Ensure that all legislation is based on broad-based consultation and participation with Hakha town residents.
- Install an effective drainage system in the mountain slopes to handle heavy water flows, which would reduce water pressure that can create landslides.
- Explore restoring watershed areas, including areas that have extensive construction that could destabilize the slope or town undermine water security.
- Consider migration patterns from a holistic perspective, thus supporting migrants who work or settle in Hakha town including to access basic services, whilst also supporting rural livelihood programs at places of origin.
- Allocate sufficient budget to enable equitable and affordable water distribution across Hakha town from the Timit dam.

Recommendations to Hakha Municipality

- Coordinate with existing community-led water committees and other local committees in finalizing water distribution across Hakha town and ensure equitable and affordable access across the town.
- To ensure robust and reliable all-year around water supply, integrate the Timit dam municipal water supply with existing community-led water supply arrangements.
- Promote public discussion on the principles and pricing for upcoming municipal water distribution.



The old town area of Hakha in the shadow of the June 2015 landslide (Credit: Carl Middleton)

Recommendations to Committee of Elders

- Ensure broad-based participation of stakeholders in Hakha town, including civil society and affected community, when guiding and managing urban and rural development projects.
- Work with the media to encourage discussion on urban and rural planning, and to gather diverse opinions of the town inhabitant's aspirations for Hakha town.

Recommendations to Civil Society and media

- Ensure that projects are well coordinated across civil society, with government, and with project beneficiaries, including in the New Resettlement Area.
- Continue to encourage watershed restoration, including via the ongoing project to voluntary plant trees on slopes affected by or at risk of landslides.
- Continue to build the capacity of civil society to engage with government, local committees and the private sector, including for research that can support evidence-based policy making.

Knowledge Products

The Center for Social Development Studies (CSDS) is within the Faculty of Political Science, Chulalongkorn University. We produce interdisciplinary critical research on social development in Southeast Asia, engage in policy-making through building partnerships, and provide a public forum for debating critical issues.

Contact

Center for Social Development Studies (CSDS),
Faculty of Political Science,
2nd Floor, Building 2
(Voraphakphibul Building),
Henri-Dunant Road, Pathumwan
Bangkok 10330, Thailand

Tel: + 66 2 218 7313

Email:
csds.chulalongkorn@gmail.com



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