

Water governance and access to water in Hakha Town

Chin State, Myanmar: Towards addressing water insecurity

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Policy Pointers

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

Integrated urban 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. (Credit: Carl Middleton)

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 July 2015 compounded these challenges, as a result of which four thousand people had to be resettled. Our research reveals how water insecurity is the product of both physical and social processes that are inter-related, including: rising water demand due to a growing population without systematic urban planning; deforestation of the surrounding watershed which has reduced water supply; and underinvestment in water supply infrastructure. Water security can be improved through improved urban planning integrated with 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 water supply 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 Chin 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 township, three quarters of the 45,000 population live beneath the poverty line. Hakha town'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. To address water scarcity, in a proposal linked to the last election, President U 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 July 2015, Hakha town suffered a major landslide. As a result, over 4000 people living in at-risk places 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 are 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 a review of relevant literature.



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



Population growth in Hakha township and expansion of the town's area (Source: Interviews)

Town population growth and migration

Hakha township's population was around 10,000 in the 1980s, increasing to 17,000 by 2001, and to 45,000 in 2015. Of these people, according to the 2014 Census, just over half are classified as living in urban areas, principally Hakha town. 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 an urban 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 mid-1970s, a road was constructed from Hakha to Mudupi Township, and in the early 1980s from Hakha to Gangaw Town, 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 the watershed 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 July 2015 landslide, initiating an urgent and important discussion on urban 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 motorbike 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 urban and watershed planning.

Timit dam and the municipalization of water

Whilst until 2014 the Union and State government's response on water insecurity was limited, in February 2014, in response to a request from the representatives of the elders of Hakha town, President U Thein Sein agreed to fund via Union-level resources the Timit Dam for water storage. Distribution was to be managed by the Municipal Office, such that the project ultimately would established 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, some aspects of the dam's engineering were 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, the dam remains only partially complete. Whilst the project will certainly help alleviate water scarcity in the town, uncertainty remains over when the project will be commissioned, 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 Timit 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 of this study is that addressing water insecurity 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 insecurity should build upon a collaboration between the Municipal Office and the existing local community groups and informal arrangements that exist around water, with constructive support from the various ministry line-agencies. 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 the Union Government

- In the National Water Law, currently under preparation, ensure an integrated approach that acknowledge linkages between urban planning, watershed planning, and maintaining an adequate water supply.
- Clearly delineate the responsibilities of the Union-level and sub-national level government agencies towards ensuring domestic water security. Affirm the key role and authority of the Municipal Office that would enhance its power to ensure an integrated approach to water governance, including coordinating the relevant government ministries towards achieving policy goals on urban water supply.
- Whilst the Municipal Office is expected to raise funds for its work, given that water is a basic human need and recognizing the challenges in Hakha town, consider providing further Union-level resources in support of the Municipal Office's work to ensure access to safe, reliable, adequate and reasonably-priced water for all for domestic consumption.
- Affirm a strong commitment to public participation in water governance.

Recommendations to Chin State Government

- Legislate to integrate urban 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 thus contributing towards a deliberative process of addressing water insecurity.
- Affirm the lead role of the Municipal Office for water supply and distribution in Hakha town, and ensure that other relevant ministry line agencies coordinate effectively with it.
- Install an effective drainage system in the mountain slopes to handle heavy water flows, which would reduce water pressure that can create landslides. Potentially, this water could also be stored for water supply.
- 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 the Municipal Office

- Work towards consolidating the role of the Municipal Office as the central authority for coordinating water for Hakha town.
- Integrate the Timit dam municipal water supply with existing community-led water supply arrangements to ensure robust and reliable all-year around water supply.
- Promote public discussion on the principles and pricing for upcoming municipal water distribution from the Timit dam.
- Identify and develop new water sources for Hakha town.
- Undertake a mass awareness campaign to promote the importance of watershed and town planning, and the associated need to protect water sources.
- Work towards the goal of implementing a comprehensive urban plan to address deforestation and the need to stabilize mountainsides through drainage infrastructure and infrastructure to minimize slope soil erosion.
- Develop and enforce building codes that are consistent with the topography and geology of Hakha town and its surrounding area.

Recommendations to Township Development Affairs Committee

- Ensure broad-based participation of stakeholders in Hakha town, including civil society and affected community, when guiding and managing development projects of the Municipal Office
- 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 Settlement 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.

Read the full report and find other resources here:
<http://www.csds-chula.org/water-security-in-hakha/>

Knowledge Products

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