



**UMIAM LAKE AND SHILLONG'S RIVERS  
IN SPITE OF THE ODDS**

## SYNOPSIS

Umiam Lake, located 16 kms from Shillong has been a bright jewel on the crown of Meghalaya. The lake draws its name from the River Umiam, which was dammed in 1965 to create North East India's first hydel power project.

Umiam Lake though downstream of the city of Shillong, is deeply connected to it, as it is fed by two rivers, Wah Umkhras and Wah Umshyrpi. These two rivers cut across the bustling cityscape and join Umiam downstream. For years, Shillong has derived its identity from these rivers. Localities like Laitumkhras, Pynthorumkhras, Umpling and Wahingdoh owe their names to the Wah Umkhras River. It is a general belief that Wah Umkhras is also divine as it one of the khyndai umtong (nine streams) of mythic origin. These streams emanate from Shillong Peak, which is worshipped as the chief deity of the Khasis.

Khasi poet, Late Bah Victor G Bareh, besides glorifying, also emphasised on the phenomenal role of the river in his poem Ka Wahumkhras: *'La um jakhlia ia tngit pyrthei, Ha pha ki wan b'an theh kyntei, Pha rong ia ki sha trai duriaw.'* (Though turbid waters of the world empty into you, You carry all this to the bottom of the seas).

As these two rivers cleave the city, they carry with them voluminous water that reaches Umiam Lake. This in turn leads to production of electricity for the State of Meghalaya and especially the city of Shillong. Elders recall that Umkhras and Umshyrpi were sparkling clean water bodies. People swam, fished and even drank the water.

Today, Shillong's river systems are a sad story of Paradise Lost. Shillong has turned its back towards its natural ecosystems. Rivers Umkhras and Umshyrpi are little but open drains in summer, where the water is black with sewage and kitchen waste. During monsoons, it is deep brown, carrying huge amounts of sediments as land use continues to change upstream.

The pollution of Shillong's rivers is symbolic of the human world that surrounds it. If Shillong was to revive its rivers, it would have to look inwards. It would require rebuilding social relationships and reviving environmental responsibility.

And it's about time that this happened...

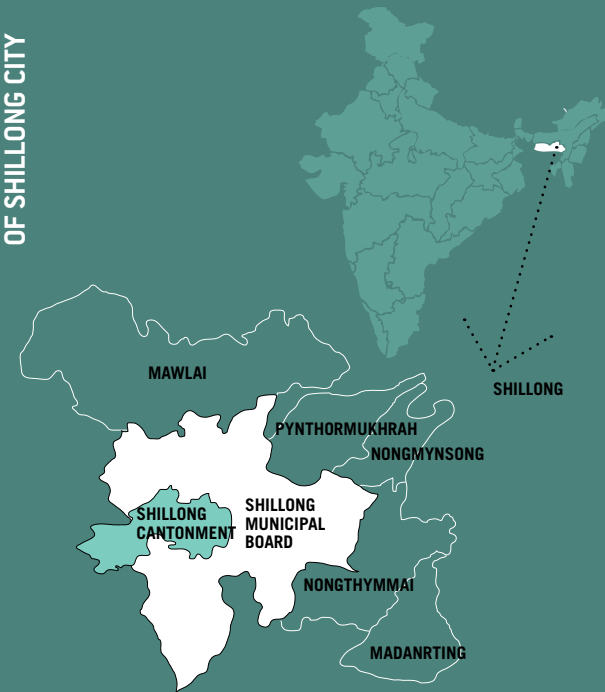
## THE RIVER SYSTEM OF SHILLONG



## DID YOU KNOW?

- Umiam (Lake) has a catchment area of 221.5 sq kms, which is almost double the size of Chandigarh, the capital city of Punjab and Haryana?
- Umiam Lake was created by damming the Umiam River in 1965. It originated as an artificial reservoir for the Umiam Umtru Hydro Electric Power project, the first of its kind in the North East India?
- Umiam River is formed by the meeting of Wah Umkhras and Wah Umshyrpi rivers meet. Both these rivers cut across Shillong city and many people dump their household wastes into them?
- All this is carried to the Umiam Lake which is terribly polluted. The lake water cannot be used for any domestic purpose whatsoever without treatment?
- Umiam Lake is the major source of fresh fish for Shillong city. The rest are imported from neighbouring States and reaches the customer after spending weeks in cold storage?
- Umiam Lake has good potential for sustainable tourism. It can generate local employment for the young unemployed?

## ADMINISTRATIVE BOUNDARIES OF SHILLONG CITY



## FACTSHEET ON A CRISIS\*

- Approximately 2,025 million litres of sewage enters into rivers Umkhras and Umshyrpi every year
- An estimated total of 20–25 metric tons of solid waste find its way to the rivers and streams of Shillong every day.
- 42% of sewage generated in the Umkhras River catchment is discharged as either raw or partially treated sewage directly into the river system
- In the dry season, sewage inflow makes up approximately 10% of average monthly river flow in the Umshyrpi River and 20% in Umkhras River
- The rivers Wah Umkhras and Wah Umshyrpi decide the health of the city of Shillong. The stink from the rivers has reduced the real estate value around their banks. Rivers are now breeding grounds for mosquitoes
- Flooding brings up all the filth from the rivers and deposits it right at the doorstep of those living next to the rivers. This has significant public health impact
- Studies peg average loss caused due to flooding and landslips to the order of Rs. 2,500 per household and a loss of 3 to 4 working days
- An estimated 40,000 cubic metres of silt enters Umiam Lake every year
- Umiam Lake produces most of the electricity for Meghalaya even now. As it silts up, it's potential to generate electricity decreases. Shillong has been witnessing severe power cuts in summer for the last 5 years

\*All data has been collated from various scientific and consultancy reports from 2005 onwards.





## VOICES

*“Umiam means crying river in Khasi, and every time I see our polluted rivers, I wonder how long this river will continue to cry”.* Barkos Warjri (IAS), Additional Chief Secretary, Government of Meghalaya

*“The water in Umiam Lake is so polluted that only the toughest fish can survive in it”.* Bah Hep Lyngdoh Nongpyuir fisherman dependent on Umiam Lake for his livelihood

*“The pollution of the rivers show that the citizens of Shillong are not concerned about their own natural assets”.*

*“All the dirt that accumulates in the stream gets washed away in the monsoons. I have been saying that had that not happened, Shillong would have suffered the same fate as that of Surat in 1994 during the plague”.* Oflyn Dohling, Secretary – Synjuk ki Rangbah Shnong, Meghalaya

*“We should not allow any more expansion of polluting industries around Umiam. It must be developed as a pristine tourist area”.* Conrad Sangma, Former Power Minister, Meghalaya

## LEGAL & POLICY

- Create buffer zones around the river, put into action Meghalaya Protection of Catchment Act (1990). There should be a serious effort to develop rules for the same
- Use Legal provisions to ensure catchment friendly quarrying & offer policy incentives
- Explore / Review gaps in present Acts and in their implementation, suggest appropriate methods to plug the same

## TECHNICAL

- Explore possibilities & establish decentralized sewage treatment systems in Shillong
- Control soil loss through participatory watershed activities
- Prioritize sub-catchments as mapped out by North East Space Application Center (NESAC) and appropriately design intervention as a pilot
- Control forest fires in Umiam Catchment through efficient monitoring and response systems
- Explore phyto-remediation options through floriculture to reduce pollutant inflow into lake
- Setting up of environment-friendly recycling units to manage both biodegradable and non-biodegradable waste
- Monitor sediment inflow and control the same at Wah Ro Ro

## SOCIAL & CULTURAL

- Take up a neighborhood and work with the SMB / Dorbars in a neighborhood cleanup campaign, draw learning from earlier efforts initiated by and leverage on the same
- Set up a web-based open access point for all reports and research work on Umiam, Umkhrah and Umshyrpi to enable data based action possible
- Encourage household composting of organic / kitchen waste. Provide incentives for households to do the same
- Convert Shillong Peak into a community conserved area / sanctuary
- Initiate Government and Civil Society collaboration for a campaign aimed towards the Lake and Catchment conservation

*\*These points emerged during a stakeholder learning dialogue which took place in Shillong on 9th and 10th of March 2009. The event was hosted by Peoples Learning Centre (PLC, Shillong) with support from Arghyam, Bangalore.*

## THE CHALLENGE

In 2009, People’s Learning Centre, an NGO based in Shillong, supported by Arghyam, a non profit foundation based in Bangalore, initiated a challenge programme on Saving Shillong’s Rivers and Umiam Lake. Under this programme PLC has initiated a number of activities to tackle the issue of pollution and dumping of solid waste in the river and lake catchment. The work ranges across grassroots awareness campaigns to advocacy at the State level and review of relevant policies. The focus is on bringing together institutions to manage the catchment of the Lake and the city’s river systems, holistically.

## GUIDING OBJECTIVES

- Promote water literacy across all stakeholder groups
- Create a dedicated, environmentally conscious youth base that will speak to people through their efforts
- Facilitate dialogue between traditional institutions (dorbars) and Government Departments for decentralized solid waste management
- Promote catchment friendly policies and practices through documentation and advocacy
- Facilitate citizen’s action in reduced river and lake pollution



## STEP BY STEP: WORK DONE TILL NOW

- 2 inter college debate competitions on Shillong's environment hosted by PLC at Don Bosco Youth Centre in 2009 and 2010 on the topics related to Shillong's environment
- 11 interactive public education campaigns have taken place in Polo Bazaar, Bara bazaar, CRPF Camp, Police Bazaar, MUDA Complex, Umshyrpi College, St Anthony's, St. Edmunds, Laitmukhrah
- 1 Convergence Meeting in 2009 at the Main Secretariat, Government of Meghalaya, as a follow up to the stakeholder learning dialogue. This meeting brought together the then Chief Secretary and Commissioner, Planning, Government of Meghalaya and representatives from various Government departments, dorbar heads, NGOs and the business community
- 1 training on mapping the lake catchment and geo tagging photographs of pollution points attended by college lecturers, journalists, representatives of local dorbars
- 1 training on Bokashi method of composting organic waste and its economic potential for local livelihoods imparted to Dorbar representatives from Pynthor and Lawmali
- 1 Shared Learning Dialogue (SLD) facilitated between Shillong Municipal Board (SMB) in collaboration with Bethany Society, Shillong, Meghalaya Pollution Control Board (MPCB) and Dorbars representatives from Pynthor, Lawmali and Jaiaw Shyiap
- 1 informal discussion between PLC and NEHU professors and research scholars on application of University research in use in mitigating river pollution in Shillong
- 1 planning meeting between PLC, dorbars and NEHU professors where Dr. Syiemlieh, professor Geography Department, NEHU strongly suggested amendments to the Meghalaya Protection of Catchment Areas Act
- 2 cross-dorbars meeting in July and August 2010 where PLC and the dorbars that are already collaborating on the Save the River Wahumkhrah project shared about their efforts and proposed the involvement of other dorbars in this initiative



## MILESTONES

In 2009, PLC organized a two-day Stakeholder Learning Dialogue on Umiam Lake Conservation. It witnessed participation from Government Departments, Dorbars, NGOs, Citizens Groups, Media, Academic and Research Institutions and representatives of various citizens groups. At the end, a citizen's plan of action was developed.

Post workshop, the Office of the Chief Secretary, Government of Meghalaya convened a meeting inviting representatives of line departments to discuss the follow up to the citizens plan of action developed at the Stakeholder Learning Dialogue. Some of the important recommendations unanimously agreed upon following the discussions were:

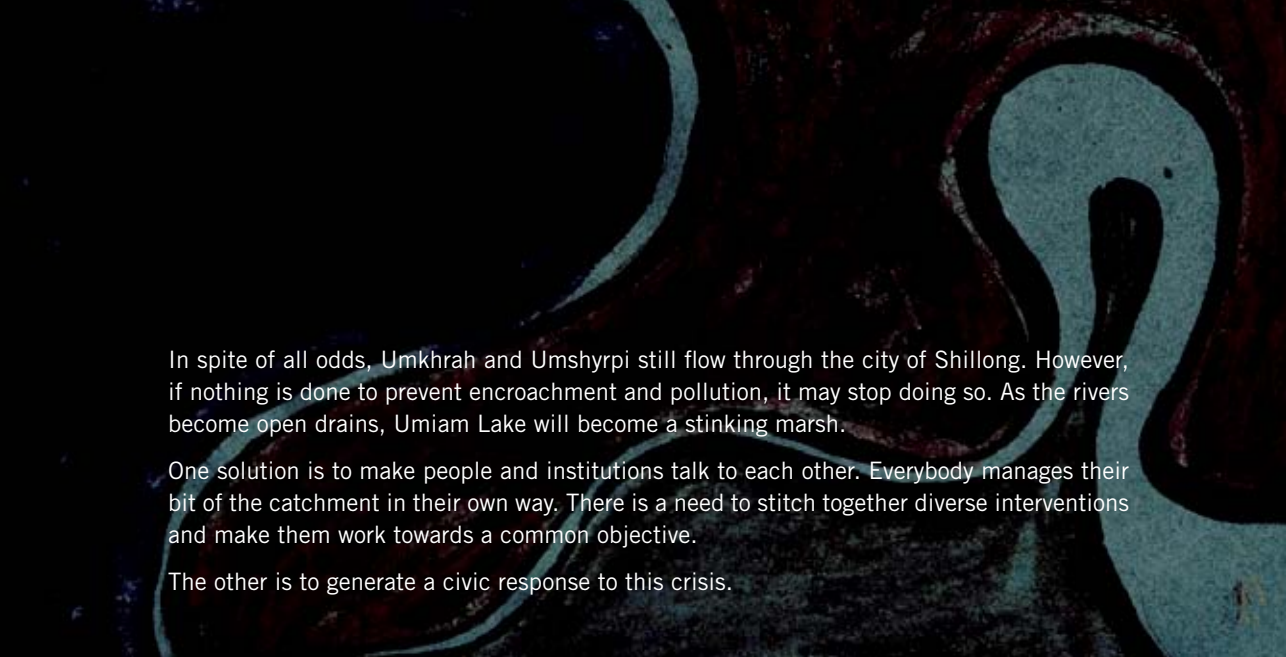
- Empowering local Dorbars by directly involving and entrusting them to protect the rivers that flow and ultimately drain into the Umiam Lake
- Formation of a Common Fund with resources pooled in from line departments (forestry, public health, urban affairs, MeSEB—presently MECL) to initiate implementation of the Action Plan
- Formation of a Core Committee comprising of representatives from line departments and non-govt organizations to follow-up and carry the meeting resolutions forward

Pynthor Dorbar was inspired by the idea of contributing to citizen initiatives to solid waste management. Hence, from March 2010 a women's SHG with the support of the dorbar began collecting, composting and selling organic household kitchen waste. The end goal is to turn Pynthor into a zero waste disposal zone. Hopefully, soon enough, Pynthor would have emerged as the first Dorbar that has managed to keep its stretch of River Umkhrah free from garbage dumping and accumulation.

A number of meetings took place between various dorbars. The agenda was to come to a consensus on managing garbage dumping in Umkhrah. The dorbars reiterated that they needed support from the Shillong Municipal Board (SMB). Hence, a dialogue between the dorbars and SMB was convened by PLC in 2010. These two institutions sat across the table and discussed how they can help each other for river conservation. The then CEO of SMB, was very positive on a collaboration between dorbars and the government. The scientists from the Meghalaya Pollution Control Board, committed to bring out the 'dos' and 'don'ts' regarding pollution in the Khasi language and distribute these to all dorbars. It was also decided that a team comprising of PLC members and some dorbar representatives would meet with the Chief Secretary to track the Working Committee that was formed a few years ago mainly for the revival of Umkhrah.

At MUDA complex, adorning its walls is a unique sight of painted tiles. Each depicts contemporary environmental issues, such as river and industrial pollution and deforestation. This was a result of an inter-school Painting Competition organized by PLC. By putting these issues up front at the centre of consumption in Shillong, young school kids sent out a serious message.





In spite of all odds, Umkhrah and Umshyrpi still flow through the city of Shillong. However, if nothing is done to prevent encroachment and pollution, it may stop doing so. As the rivers become open drains, Umiam Lake will become a stinking marsh.

One solution is to make people and institutions talk to each other. Everybody manages their bit of the catchment in their own way. There is a need to stitch together diverse interventions and make them work towards a common objective.

The other is to generate a civic response to this crisis.

**WE URGE YOU TO...**

**REACT**

To people who carelessly dump their household garbage in the river  
To authorities to devise better waste disposal management system

**SUPPORT**

Institutions making an effort to address this crisis  
Public debates by attending meetings and voicing your opinions

**INITIATE**

Peer groups who believe in a clean Shillong and work towards it  
Dialogue with your local representatives on their role in this issue



**AT EVERY STEP OF THE WAY, REMIND YOURSELF THAT NOTHING CAN BE WORSE THAN LEAVING BEHIND A FILTHY CITY FOR THE NEXT GENERATION**

**CONTACT US**

Together we can make a change!

**PEOPLE'S LEARNING CENTRE**

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