

## TANGENTS

BY IHTISHAM KABIR



Sabera and her filter with Sajida Foundation members.

PHOTO:  
IHTISHAM KABIR

## Pani Purification

In 2011 Sabera Talukder, an American of Bangladeshi origin, visited her ancestral land for the first time. At the time, she was fourteen and had lived her entire life in the US where people drink water directly from the tap and its purity is taken for granted.

Sabera was puzzled by difficulties faced – particularly by poor people - in obtaining clean water.

“Why can't people here have easier access to clean drinking water?” she asked.

Why not indeed? To answer that question she collected water samples from twenty eight different locations in and around Dhaka and requested the laboratories at ICDDR,B and Incepta Pharmaceuticals to analyze these samples.

The results showed high levels of both inorganic and organic impurities. Based on detailed data about the impurities, she set about designing a water filter.

Returning home to Silicon Valley, California armed with the data, she spent the next eighteen months pursuing her project. Her parents Shah and Darlene Talukder, and her schoolteachers helped her.

Sabera had simple but utilitarian goals: the filter should be easy to build, use, and maintain; critical components should cost less than US \$25; and any power requirement must be met using solar power.

Eventually she decided to compete in a science competition for high school students in Silicon Valley. She won the First Prize in the Engineering category as well as three other awards in the Synopsis Science Fair.

Then came the Google Science Fair, an annual science competition. In 2012, 7000 projects competed from all over the world. Among them

was “Pani Purification,” Sabera's project. When judging was over, she had won a spot among the top fifteen finalists from the 7000 projects and named one of the best five from her age group (<http://goo.gl/ftGtd>).

How does Sabera's water purification system work? It has three stages. First, sand is used to remove the larger impurities, both organic and inorganic. Second, Ultraviolet-C light kills bacteria. Finally, a charcoal filter removes smaller inorganic impurities. The filter can be run on solar power or regular electricity.

Sabera was recently in Dhaka to continue work on her project. She has installed two prototype filters at locations of Sajida Foundation, a local NGO, which is cooperating with her. Gathering water from these systems, she tested them at the ICDDR,B laboratories to test and tweak her filter. This water is not used for drinking until the all-clear from Sabera. “There is still a lot more testing and fine-tuning before we are ready,” she said.

What is her ultimate goal? “There are about fifty waterborne diseases. If my system can help eliminate the causes of many of them – if not all – and provide clean drinking water to people who need it most, I will have achieved my goal,” she said.

I asked Sabera about her career goals. “I want to be a neurosurgeon,” she said.

Sabera publishes all her experimental information on her website, so that anyone working on water filtration anywhere can benefit from her work.

We wish Sabera and those working with her speedy success in this endeavour.

[www.facebook.com/tangents.ikabir](http://www.facebook.com/tangents.ikabir)

## Dialogue urgent to solve trans-border water crisis

International conference told

STAFF CORRESPONDENT

A two-day international conference on “Water Resources of South Asia: Conflict to Cooperation” began in the capital yesterday, with particular emphasis on strong political will and continuous dialogues among the countries to solve trans-border water crisis.

The ongoing water crisis in the subcontinent has to be solved through negotiations and cooperation, not conflicts, to ensure water for all, Environment and Forests Minister Hasan Mahmud told the inaugural session of the conference at Dhaka University senate building.

He said conflicts between Bangladesh and India over water sharing has reduced recently because of dialogues, and such conflicts still existed among countries across the world.

An integrated water management system for Bangladesh and India should be put into place, he said, as the two countries share 54 rivers and conflicts are likely to arise over sharing of some of those rivers' water.

The minister said if political leaders felt that the people living in the downstream areas of the common rivers have an equal right to water like the upstream people, they would extend their cooperation.

The use of water has increased globally

due to economic development, but a single drop of water has not increased since the beginning of the Earth, he added.

Bangladesh Poribesh Andolon (Bapa) and Bangladesh Environment Network (BEN) are jointly hosting the event.

At a plenary session, Information Minister Hasanul Huq Inu underscored the need for proper implementation of the bilateral treaties signed among South Asian nations and signing of multilateral agreements to save the region's rivers.

A fair water management can help solve water crisis in South Asia and reduce deaths and harms to the environment, he said.

Prof SM Nazrul Islam, vice chancellor of the Bangladesh University of Engineering and Technology (Buet), said Bangladeshi rivers are facing threats now and that the water crisis would become extreme in future if the rivers are not saved from pollution and encroachment through enforcing laws.

Bapa President ASM Shahjahan; BEN member M Khalequzzaman; Chairman of Conference Organising Committee Prof Nazul Islam; Prof Gopal S Chinton of Nepal's Trivuban University; Kelly Alley of Auburn University, USA; and Douglas Hill of University of Otago, New Zealand, also spoke on the occasion.



The newly-elected central committee of ruling Awami League, led by its President Sheikh Hasina, places a wreath on the portrait of Bangabandhu Sheikh Mujibur Rahman in the capital's Dhanmondi yesterday.

PHOTO: STAR

## Police, drug smugglers clash

At least 25 injured

OUR CORRESPONDENT, Benapole

At least 25 people, including 10 policemen, were injured in a clash between law enforcers and drug smugglers in Bhabarber village of Benapole yesterday.

The injured policemen include an assistant superintendent of police and Benapole Police Station's officer-in-charge.

Police and locals said a police team from Jessore raided the Bhabarber village railway station to arrest several accused in a drugs smuggling related case.

Later, police arrested an alleged smuggler Mostafa and beat him up.

At the time of the beating, former president of Sharsha upazila unit Chhatra League Tariqul Alam Tuhin, who was present on the spot, intervened and asked police to take Mostafa away to the police station instead of torturing him, said witnesses.

Angered at the interference, police also beat Tuhin up leaving him seriously injured.

As the news about the police action spread, some smugglers blocked the Benapole-Jessore highway for about two hours. The clash ensued when police went to remove the blockade from the highway, said locals.

Police fired five rounds of bullets when they came under attack and managed to disperse the mob. Law enforcers recovered a bomb and a pistol from the spot and arrested two of the agitators, said police.

Additional police, Rapid Action Battalion (Rab) personnel, and members of Border Guard Bangladesh (BGB) have been deployed in the area to avoid any untoward situation, said police sources.

Police filed a case against 24 men and three hundred unknown people in this connection.

## Gas supply first priority

Rangpur city's first mayor tells The Daily Star

OUR CORRESPONDENT, Rangpur



Sharfuddin Ahmed Jhantu

and creation of jobs. “Rangpur is widely known as a very backward place mainly because it has been neglected for long. Due to unavailability of gas, industries could not be established here,” he told The Daily Star on December 31 last year.

Sitting in his new office in Rangpur city, he said, “Gas connection must be provided in Rangpur in my tenure otherwise people would be mobilised to launch a greater movement over the demand.”

Turned into a city corporation from a municipality in July 2012, Rangpur City Corporation had its first polls on December 20, 2012.

The city corporation is the second largest, with respect to area, among those in the country with 203 square kilometres. Moreover, 9 unions of the sadar upazila have been included in the city corporation.

“I shall continue to build Rangpur as a model city and I also want to establish

Rangpur as a corruption free metropolis. There is nothing more valuable than the love and honour people showered me with in several elections.”

He said he was elected Rangpur sadar upazila chairman in 1990, won the mayoral polls of Rangpur municipality in 1993 and was elected lawmaker from Rangpur-1 constituency in 1996.

“Now, it is my turn to give back my debt to the people by providing civic facilities.”

Many RCC residents feel that Jhantu has a tough job ahead in developing better facilities such as communications, electricity, drainage and sanitation.

He said local governments have little opportunity to develop infrastructure with the low resources they have. “But with experience, devotion and good intention we will overcome the problems.”

“Firstly we need to increase internal resources from taxes. Secondly, we will seek financial assistance from donors to create a modern- and environment-friendly city,” Jhantu said.

However, he said increasing taxes would be hard as his election pledge was not to increase rate of taxation.

Many Awami League leaders of Rangpur claimed that Jhantu, the party's district unit advisory member, has been inactive for the last 12 years and rarely kept contact with them.

Jhantu said despite being an Awami League leader, he was the mayor of Rangpur's residents and his role as the mayor would be nonpartisan.

## BCL leader injured in rival attack

Road blocked in Ctg for an hour

STAFF CORRESPONDENT, Ctg

Bangladesh Chhatra League activists yesterday blocked Prabartak intersection for an hour following an attack on Abdul Malek Chowdhury Jony, convener of BCL south district unit, by their rival group.

Panchlaish police told The Daily Star that Jony was attacked by the faction of the unit while he was celebrating BCL's founding anniversary in Awami League office at Anderkilla in Chittagong city.

Jony was admitted to Medical Center on GEC intersection.

The BCL activists put up barricades on the intersection at around 11:00am, halting vehicular movement for about one hour, said witnesses.

Mohiuddin Mohi, joint convener of the unit, claimed the junior activists from different upazilas launched the attack as they were not invited to deliver speech.

## NEWS IN brief

### 11 bombs recovered in Benapole

OUR CORRESPONDENT, Benapole

Rapid Action Battalion (Rab) recovered 11 bombs and a gun from Bhabarber village under Benapole Port Police Station in Jessore yesterday.

Acting on a tip-off, a team of Rab-6 conducted a drive in the area around 1:00pm and recovered the arms and ammunition.

No one was arrested in this connection.

### Man kills wife in Netrakona

OUR CORRESPONDENT, Netrakona

A woman was allegedly killed by her husband in Magharkanda village of Netrakona on Thursday night.

The deceased was identified as Mina Begum, 35, wife of Abu Lass Mia.

According to police and locals, Abu Lass Mia's family of five was poverty stricken and on Thursday night there was no food in their house.

Husband and wife quarrelled regarding this issue and Abu hit his wife with a sharp weapon, leaving her dead instantly, they said.

On information, police recovered the body yesterday and arrested Abu.

### Construction worker dies in Ctg

STAFF CORRESPONDENT, Ctg

A construction worker was killed at his workplace at Bakalia in Chittagong city yesterday.

The deceased was Ripon Islam, 18, son of Abdul Barez of Tarakanda upazila of Mymensingh.

Ripon was critically injured when an iron pipe fell on him during piling of an under-construction building in Kalpolok residential area of Bakalia around 2:00pm, said Jahidul Alam, a constable of CMCH police camp.

He was rushed to Chittagong Medical College Hospital (CMCH) where duty doctors declared him dead around 3:00pm.

### Jubo League activist shot in Natore

OUR COTRESPONDENT, Natore

A local Jubo League activist was shot by criminals in Kanaikhali area of Natore town on Thursday night.

The victim was Mohammad Minu, 28.

Police said some five to six unidentified criminals knocked the door of Minu's house and asked him to come out on that midnight and shot him.

Critically injured Minu was rushed to Natore Sadar Hospital and later shifted to the Rajshahi Medical College and Hospital.



#### Rally

National Committee for Protecting Oil, Gas, Mineral Resources, Power and Ports will stage a rally protesting an increase in oil, gas, and electricity prices; Venue: In front of Jatiya Press Club; Time: 3:30pm.

#### Human chain

Paribesh Bachao Andolon will form a human chain demanding relocation of tannery from Hazaribagh area; Venue:

Before Jhigatola Bus Stand, Dhanmondi; Time: 11:00am.

#### National conference

Sujan will organise its national conference; Venue: Shishu Academy auditorium; Time: 10:00am.

#### Human chain

Samajtantrik Mohila Forum will form a human chain in protest against repression on women; Venue: In front



WEATHER  
TODAY

### Dry weather likely

UNB, Dhaka

Weather is likely to remain dry with temporary or partly cloudy sky over the country in 24 hours till 6:00pm today.

Moderate to thick fog may occur over the river basins and light to moderate fog elsewhere over the country during midnight till morning, said Met Office.

Night and day temperature may remain nearly unchanged over the country.

The sun sets in the capital today at 5:26pm and rises tomorrow at 6:43am.

Country's highest temperature 23.2 degree Celsius was recorded yesterday at Sitakunda and lowest 09.6 degrees at Srimangal.

Highest and lowest temperature and humidity recorded in some major cities and towns yesterday were:

	Temperature in Celsius		Humidity in percentage	
	Max:	Min:	Morning	Evening
Dhaka	25.6	14.8	70	68
Chittagong	26.7	13.5	83	76
Rajshahi	24.4	11.6	90	79
Rangpur	24.9	11.6	88	81
Khulna	26.0	15.0	97	91
Barisal	26.2	13.8	91	75
Sylhet	25.6	13.6	81	67