

DHAKA AND HER RIVERS

A beautiful relationship gone sour

ASIF M ZAMAN

DHAKA city, established by the Mughals on the banks of the Buriganga, is surrounded by six rivers like a garland. There are Balu and Sitalakhya on the eastern side, Turag and Buriganga on the western side, Tongi Khal to the north and Dhaleshwari to the south. Tongi Khal connects both Turag and Balu rivers. Dhaleshwari and Sitalakhya join the south of Narayanganj and flow into the Meghna River.

These rivers receive water from the Jamuna (Brahmaputra river) in the wet season, and in the dry season upper reaches of these rivers are slowly replenished by the release of groundwater into the rivers. The lower reaches of the rivers are also influenced by the tidal variations travelling upstream from the Bay of Bengal. In the monsoon season, the river levels reach around 6.5m MSL (mean sea level) and drop to about 2.5m MSL in the dry season (Flood Forecasting and Warning Centre, Bangladesh Water Development Board). The maximum recorded level was around 8m MSL during the 1998 flood.

Once upon a time, these rivers were the lifeblood of the city carrying people, culture, trade and commerce. If we imagine the rivers as arteries, then the internal *khals* are the veins of Dhaka. Since the 1970s, the capital city of a newly born nation began to expand rapidly. The population and businesses grew, and by the 1980s, the arteries and veins started to become blocked and polluted. By the 1990s, some efforts were made to stop the deteriorating condition of the rivers by declaring some of them as Ecologically Critical Areas.

However, nothing changed, and in fact, things got worse. The rivers and *khals* continued to be encroached upon, and more wastewater from houses and industrial units poured into the rivers without any treatment, with several major sources of pollution being outside the city area—in Ashulia, Savar, Tongi and Gazipur. And today, in 2017, what we have of Dhaka can at best be described as a sick patient. You could say that her arteries and veins were filled with cholesterol, and she has diabetes, jaundice and many other diseases. She needs to be in the ICU for dialysis.

However, addressing the symptoms



Rivers around Dhaka face the double whammy of contamination and encroachment on a regular basis, as authorities struggle to find a lasting solution.

PHOTO: SK ENAMUL HAQ

(treating the river water and preventing encroachment) can only be a short-term solution. We need to address Dhaka's underlying diseases to cure her properly. A megacity like Dhaka, home to around 15 million people and serving million others who come and go on a daily basis, requires proper infrastructure. Currently, there is only one sewage treatment plant—Pagla STP—which is not functioning at full capacity as the sewer system is faulty.

In 2012, Dhaka Wasa (DWASA) prepared a Sewerage Master Plan, which proposed a total of 11 STPs in and around the city. One of these is Dasherbandi STP, which will be built through Chinese funding and is expected to be operational by 2020. The other STPs are still in the conceptual or planning stage. These projects need to be fast-tracked and

also the sewer network needs to be built urgently. Once these projects are implemented, the *khals* and rivers have a chance to recover. Industrial wastewater also needs to be treated through Effluent Treatment Plants.

Although some industries have built ETPs, they often do not operate the facilities fulltime. This practice needs to be carefully monitored. Also, more central ETPs are required in industrial estates. Finally, a massive, one-time river and *khal* cleaning project is required. The beds of these water bodies need to be dredged and the waste materials carefully disposed in specially built landfills. Then the waterfront areas around Dhaka can be utilised for recreation and public spaces. The *khals* and rivers can also be used for passenger transport around the city.

The drainage system of the city is also inadequate at the moment. The western part of the city is protected from river flooding by the Beribad (on the west) and DIT-Airport Road to the east. This part of the city suffers from flooding and water-logging due to heavy rainfall and drainage congestion.

Currently, there are only five pumping stations around the city: Goranchatbari (near Mirpur), Kallyanpur, Dholai Khal, Maniknagar (near Kamalapur) and Rampura. Temporary pumps are also used during the monsoon season to manage water-logging in localised areas adjacent to the flood embankments.

The eastern part of the city is still vulnerable to flooding caused by high water levels in Balu River. A flood embankment, with three pump stations, is currently being

considered by Bangladesh Water Development Board (BWDB). Also, a four-lane road and rail line are being considered on this embankment. If urban development in eastern Dhaka is not planned and controlled properly, there is a real risk that the area will experience regular water-logging. Recently, DWASA has also prepared a Drainage Master Plan, which identified priority projects to recover and restore key *khals* in and around the city. Once these projects are implemented, the water-logging problem of the city will be significantly reduced.

Another key infrastructure system of this megacity is the water supply facilities. There are only four water treatment plants (WTPs), in Saidabad, Chandnighat, Godnail and Shonakanda. Only the Saidabad WTP, producing 450 million litres per day (MLD), can be considered for its contributions to meeting the huge water demand of about 2,500 MLD. The remaining water supply comes from over 600 deep tubewells (DTWs) scattered around the city. This is probably the largest groundwater well field in the world. The water table continues to decline on an annual basis due to over-pumping in and around the city.

DWASA's Water Supply Master Plan envisages reducing the reliance on groundwater by building more surface WTPs. However, due to the polluted conditions of the peripheral rivers around Dhaka, water is being sourced from the Padma and Meghna rivers. This clearly means additional costs to transfer the treated water to Dhaka. Already, the work for a 450-MLD treatment plant in Jashaldia (Munshiganj District) and a 500-MLD plant in Rupganj (Narayanganj District) are under way. These are expected to be operational by 2020-25. Further expansion of Saidabad (Phase 3, 450-MLD) is being planned by DWASA. With the shift to river water, pollution control measures need to be urgently put in place.

If we want to make Dhaka a more liveable city, both for us and our next generation, then we have to repair the damage caused to Dhaka's rivers. With strong political will supported by sound technical knowledge and public awareness, we can achieve this.

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Ball, bribe, birthday, bridges and beef



NIZAMUDDIN AHMED

CHINTITO SINCE 1995
I had been heralded last month that Bangladesh has moved up two notches in FIFA ranking. Wow! You sit up to bask in the glory that we could be,

say thirty-four places behind Germany or Brazil, Spain if you fancy Flamengo, because in a classroom situation that's how at worse fares the untalented and unruly student. They make great "politicians" though.

Owing to my sports journalism experience, not to my surprise though, I find that we are one hundred and ninetieth (as of yesterday). That's a lot of football-playing countries. Not many, including those with other humbug backgrounds know that there can be so many countries in the world. Now, thanks to Bafufe's uphill playing field, we know there are at least 192. The attentive geography student will tell you there are about 220 topographical expanses identified as countries.

With Bangladesh Football Federation's (that's Bafufe in Bangla) development programme, competition schedule and international performance at arguably their lowest

ebb, the only reason we had moved up two places was because some other countries slipped more than us. While we can sympathise with those fallen foreign counterparts, we owe them a big thank you.

Infield skill and off-the-pitch organisational management do not always reside in the same person. The world does not have too many instances of great players graduating to become successful administrators.

It is better not to draw the parable of France's iconic footballer Michel Platini. As an administrator, look where he has dragged his boss, the equally disgraced president of the world body, Sepp Blatter, serving a six-year ban from FIFA since 2015. *Lesson learnt: a footballer should keep his eye on the ball.*

Another newflash that belies arithmetic is an officer arrested cash-handed while receiving Tk 13 lakh from a desperate job-seeker. As a school teacher, the briber's earnings would be around Tk 10,000-20,000 including salary and private tutoring. What he can save after paying for rent, bills and other monthly expenses is as simple as two plus two. Assuming that he is not eating half the month, remains a bachelor, strictly no dates, and lives and eats off his rich father-in-law, he may save around two grand. Oh, and no smoking.

If you are bothered how he could be unmarried and still have in-laws, it

gives me immense pleasure because you are paying attention. In doing maths, that is necessary.

It would take the teacher, teaching his students not to take *ghush*, about 50 years to recover the bribe money. Of course, the payback time could be reduced considerably if he asked for pecuniary help for helping his beloved students with leaked question papers and undeserved enhanced grades. Or if he married a working woman, who hopefully got a job without spending a penny.

This should have been sad even if it was the only stray case. But, there are other teachers doing likewise. Earlier in May 2017 the Anti-Corruption Commission caught an inspector of the Education Ministry red-handed while he was taking Tk 2 lakh bribe from a school headmaster, helpless he may have been. *Lesson learnt: you can't get caught if you want to be a teacher.*

Once upon a time birthday parties were fun. They ought to be. Cake cutting at 5pm, okay 10pm, but the house was full of people. I have never been part of a couple in a dark room at a birthday party. These days are not good for birthdays. Some birthday boys, not man enough though, seem to have this spoilt-child understanding that their big day is a license to invite girls over well after dinnertime with malintentions. What appears more surprising is that there are girls willing or enticed to land up at such

hellish situations, often with bag and baggage. *Lesson learnt: don't go unless the guy knows no means no.* The question is how you will know.

One certain way is not to tread into unknown waters; actually I mean property. If you do not know each other, meet at daytime in a public place. Oh! So you are working. In that case it should be early to bed, your own bed.

Another tactic is to fix an early time for dinner, always healthy, and maintain that schedule when some half-known guy or a stranger is having a do. If a known guy jumps around and starts fooling around without as much as consent, revert him to 'unknown' status.

Yet another policy is not to be invited or to accept an invitation over telephone. When talking face-to-face, you can in most cases observe and infer from a person's attitude, eye story and body language unless he is some actor and can act his way

through. But, a woman can see through a man like muslin unless she is hand-in-glove with the late-night sojourn.

A collapse is not a happy sight. Exception being the tumbling of wickets when your side is fielding. This bridge in Chittagong did not actually collapse. But we Bangalees thrive on exaggeration. It was reported in mid-July that a 60-ft bridge on Dhopachharhi Canal (Chandanaish Upazila, Chittagong) costing Tk 60 lakh was on the verge of collapse about two months after it was built. Now that's bad news for people looking forward to improved communication. However, as bad construction would have it, huge cracks surfaced within three weeks.

The local MP missed a golden opportunity to show off that it was his dream come true for the welfare of the people, as pledged at election rallies by all the candidates. But, in order to do that, he had to ensure

beforehand through local coordination that all aspects of bridge construction were being maintained. Oh! Is that not his work? Well, neither is refusing to inaugurate a sagging bridge.

It is a disaster of sorts and appropriately so because the bridge was built (or was it?) under a disaster management ministry project. *Lesson learnt again and again: Never compromise on technical support in technological works.*

I will be very brief about my final B because it is beyond my understanding. Reported in NDTV (India), July 10: Maharashtra's specially trained policemen will be equipped with a kit (cost: 8,000 rupees) to instantly test whether meat that they have seized is beef or not. For God's sake, ask me!

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A WORD A DAY

DEMESNE
noun
Land attached to a manor and retained for the owner's own use

CROSSWORD BY THOMAS JOSEPH

ACROSS

1 Miss Midler
6 Peony part
11 Peer
12 Caribbean resort
13 Sudden swell
14 Mystical deck
15 Light metal
16 201, in old Rome
18 Bolt partner
19 Count start
20 Excessively
21 Hydrocarbon suffix

DOWN

1 Grant
2 Horsey
3 Made a fresh start
4 Luggage ID

29 Mixed nuts choice
32 Sturgeon eggs
33 USO attendees
34 Quarterback Manning
35 African viper
36 PC key
37 Keg attachment
38 Heat setting
40 Best of the best
42 Silver bar
43 Bill add-on
44 Oozes
45 Calls for

5 Sent to Washington
6 Cookout site
7 Geological period
8 Changed defeat into victory
9 Be rife
10 Barista creations
17 Will add-on
23 Conk out
24 Braying beast
26 New York's time zone
27 Pal of Porthos
28 Secant's reciprocal
30 Ecstatic
31 They have rubber blades
33 Paces
39 Custodian's tool
41 Fiction

YESTERDAY'S ANSWER

G U S T O S P O U T
O N I O N L E A S E
D O N N A E A T E N
K E R N E L
A C H O O P G O T
T R O O P S C O P Y
B U L L E T H O L E S
A D E E R E N F R O
Y E S S I X H A N
M I L A N O
T O P A Z G I L L S
A R I S E O N E A L
R E N T S N A S T Y

খুলনা বিশ্ববিদ্যালয়, খুলনা
রেজিস্ট্রারের কার্যালয়
(একাডেমিক শাখা)

স্মারক নং: খবি/একা-১৯৫/২০১৭-৫২২(ক) তারিখ: ০২/০৮/২০১৭খ্রি.

২০১৭-২০১৮ শিক্ষাবর্ষে প্রথম বর্ষ স্নাতক/স্নাতক (সম্মান) শ্রেণিতে ভর্তি বিজ্ঞপ্তি

খুলনা বিশ্ববিদ্যালয়ের ডিটি স্কুল এবং চারুকলা ইনস্টিটিউটের অন্তর্ভুক্ত ২৮টি ডিসিপ্লিনের ২০১৭-২০১৮ শিক্ষাবর্ষে প্রথম বর্ষ স্নাতক/স্নাতক (সম্মান) শ্রেণিতে নিম্নবর্ণিত সময়সূচি অনুযায়ী ভর্তি পরীক্ষা অনুষ্ঠিত হবে:

স্কুল/ইনস্টিটিউটভিত্তিক আবেদনের ন্যূনতম যোগ্যতা এবং পরীক্ষার তারিখ ও সময়

স্কুল/ইনস্টিটিউট ও আবেদন ফি	ন্যূনতম জিপিএ/জিপি	ডিসিপ্লিন/বিভাগ	সময় ও তারিখ
বিজ্ঞান, প্রকৌশল ও প্রযুক্তিবিদ্যা স্কুল এবং জীব বিজ্ঞান স্কুল (ইউনিট -A) (টাকা ১০৫০/-)	এসএসসি/সম্মান-৪.৫ এইচএসসি/সম্মান-৪.৫ এইচএসসি-তে পণ্ডিত-৪.০, জীববিজ্ঞান-৪.০, রসায়ন বিজ্ঞান-৪.০, পদার্থ বিজ্ঞান-৪.০ ও ইংরেজি-৩.০	স্থাপত্য, কম্পিউটার সায়েন্স এন্ড কমিউনিকেশন ইঞ্জিনিয়ারিং, নগর ও গ্রামীণ পরিকল্পনা, পণ্ডিত পদার্থবিজ্ঞান, রসায়ন বিজ্ঞান, পরিসংখ্যান এপ্রোচেকনোলজি, বায়োটেকনোলজি এন্ড জেনেটিক ইঞ্জিনিয়ারিং, এনভায়রনমেন্টাল সায়েন্স, ফিশারিজ এন্ড মেরিন রিসোর্স টেকনোলজি, ফরেস্ট্রি এন্ড উড টেকনোলজি, ফার্মেসি, সয়েল ওয়াটার এন্ড এনভায়রনমেন্ট ইংরেজি, বাংলা ভাষা ও সাহিত্য, ইতিহাস ও সভ্যতা	সকাল ৮:৩০ - ১০:০০মি. ১১/১১/২০১৭খ্রি.
কলা ও মানবিক স্কুল, আইন স্কুল এবং চারুকলা ইনস্টিটিউট (ইউনিট -B) (টাকা ৬৫০/-)	এসএসসি/সম্মান-৪.০ এইচএসসি/সম্মান-৪.০ বাংলা ভর্তিচ্ছদের এইচএসসি-তে বাংলায়-৩.৫ ও ইংরেজিতে ভর্তিচ্ছদের এইচএসসি-তে ইংরেজি-৩.৫	আইন ও বিচার	বিকাল ৩:০০ - ৪:৩০মি. ১১/১১/২০১৭খ্রি.
ব্যবস্থাপনা ও ব্যবসায় প্রশাসন স্কুল এবং সামাজিক বিজ্ঞান স্কুল (ইউনিট -C) (টাকা ৬০০/-)	এসএসসি/সম্মান-৪.৫ এইচএসসি/সম্মান-৪.৫ এইচএসসি-তে ইংরেজি-৩.০	ব্যবসায় প্রশাসন, হিউম্যান রিসোর্স ম্যানেজমেন্ট (HRM), অর্থনীতি, সমাজবিজ্ঞান ডিভিশন/পেমেন্ট স্টাডিজ, গণযোগাযোগ ও সাংবাদিকতা	দুপুর ১২:০০ - ১:৩০মি. ১১/১১/২০১৭খ্রি.

ক) ২০১৬ অথবা ২০১৭ সালে এইচএসসি/সম্মানের পরীক্ষায় উত্তীর্ণ শিক্ষার্থীরাই আবেদন করতে পারবে। খ) আবেদনের তারিখ: ১০/০৮/২০১৭ থেকে ০৯/১০/২০১৭খ্রি. তারিখ পর্যন্ত। গ) ভর্তি সংক্রান্ত প্রয়োজনীয় তথ্যসমূহ খুলনা বিশ্ববিদ্যালয়ের ওয়েবসাইট www.ku.ac.bd এবং kuadmission.online এ পাওয়া যাবে। এ ছাড়াও ভর্তি সংক্রান্ত যে কোন তথ্য সংশ্লিষ্ট স্কুলের ডিন/ইনস্টিটিউটের পরিচালকের অফিস থেকে জানা যাবে। ঘ) পরীক্ষার সময় মোবাইল ফোনসহ অন্যান্য যোগাযোগ ডিভাইস সংশ্লিষ্ট আনা যাবে না। অনালো তাকে বহিস্কার করা হবে। ঙ) ভর্তি পরীক্ষার আবেদন ফরম পূরণ সংক্রান্ত যেকোন সমস্যায় ০১৭০৬৬১১০৯, ০১৭১২৩৫৯৬০৮ এবং ০১৫৬৬৩২৭৪০৬ মোবাইল নং এ অফিস চলাকালীন (সকাল ৯:০০টা থেকে বিকাল ৫:০০টা পর্যন্ত) সময়ে যোগাযোগের জন্য অনুরোধ করা হলো।

প্রফেসর ড. সরদার শফিকুল ইসলাম
রেজিস্ট্রার (ভারপ্রাপ্ত)

জিডি-১৫৮৮