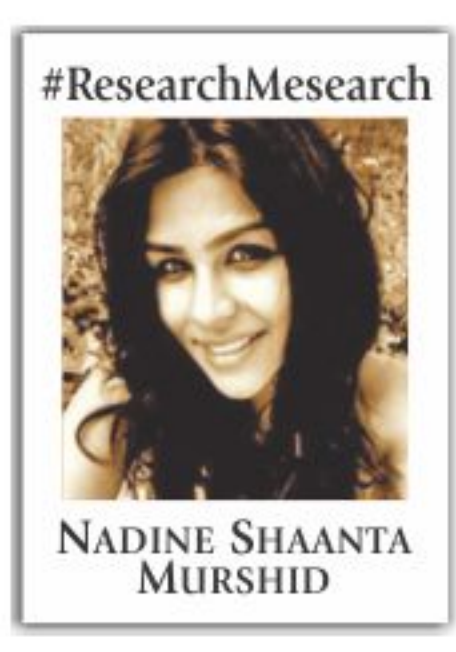


Coal-fired power plants and RELATED STORIES



#ResearchMesearch
NADINE SHAANTA MURSHID

RAMPAL is happenin' g. That's pretty much the key message that we're getting from those concerned. Which means, there is perhaps no point in discussing why Rampal would be a mistake. And, if we do, we will be put in the same box as those 'against development and progress'.

But, let's not, by creating false dichotomies, minimise the complexities and nuances that surround all of these issues.

The problem with the good people of the world is that they think everyone else is good, too. They don't need to come together. They don't need collective action. They merely exist. Until, perhaps, there is a crisis.

And a crisis we have. One that is as close to an existential crisis as we ever have seen (since independence,) notwithstanding the threat of earthquakes. [Hyperbolic? Yes, but only in the short run.]

That crisis is Rampal.

Not only because the Sundarbans are at stake (even though that's reason enough in and by itself as well).

Some thoughts and questions, not completely considered, because this conversation must go on.

ONE

Let's call it what it is: a breach in social justice.

Specifically, this is the making of environmental injustice that will imminently lead to inequity in health, or, in other words: health injustice.

How do I know this? Because:

1) Across the world, coal-fired power

plants have supplied electricity to millions of people.

2) Across the same world, coal-fired power plants have polluted the soil via fly-ash fugitive dust deposition that has affected the local ecology, including the soil, with well-documented negative ramifications on humans in terms of respiratory, cardiovascular, neurologic, and reproductive health (Effect of occupation on lipid peroxidation and antioxidant status in coal-fired thermal plant workers,

people die every year due to the emissions from these plants (At the altar of coal fired plant, *Huffington Post*).

3) Recent research indicates that replacement of nuclear plants with coal-fired plants in the world would have the effect of 150,000 premature deaths per year (From nuclear power to coal power: Aerosol induced health and radiative effects. *Journal of Geophysical Research: Atmospheres*)

TWO

mile, not per capita.

Bangladesh is not an emitter. The per capita emission, given its population size, will never be that high.

But, given the land-mass, a large number of people – upwards of thousands – will be affected by such increases in the number of power plants, because proximity to the power plant will always be an issue.

THREE

Yes. Additional supply of electricity will benefit those who are already marginalised: the poor. Perhaps even the poorest of the poor. Access to electricity will perhaps even mitigate many current health problems that marginalised groups experience. These groups include, I imagine, low-income individuals living in slum and other low-income areas across the rural-urban divide.

That means, they will have access to electricity-based modern technology, including, say, light, mobile telephones, television and media, agricultural technology, the whole gamut.

But, research indicates that they may slowly die of cancer. Or respiratory problems. Or cardiovascular problems. Or neurological problems.

I'm not convinced that's a great trade-off. It might be, of course. But, I need more convincing.

FOUR

Who will be at greatest risk?

The workers who will be employed at the plant.

Those claiming that Rampal will generate employment are not wrong. Not at all.

But, we must ask: at what personal cost? Who will bear the cost of their health? Who will be held personally responsible? Will there be doctors who can identify the symptoms of emission-exposure related health problems? Will

there be treatments available for all workers? Local community members? Will their families be taken care of when they die? Will children born with birth defects directly related to exposure be cared for? By whom? Who will bear their responsibility? How will this intergenerational transmission of ill-health be stopped?

FIVE

And what of people who will be displaced by the power plant? Where will they go? How will they be rehabilitated?

SIX

There is no such thing as clean coal. Coal is not clean. After all, *koyla dhulay moyla jayma*. It's not a proverb without meaning.

Just thought I'd put that out there.

SEVEN

If we believe in social justice, it means we believe in environmental justice. Reproductive justice. Health justice. And, economic justice.

Maybe Rampal makes economic sense. Maybe Rampal will ensure economic justice by creating employment and economic activity in the region. Economic justice may in turn foster other types of social justice – including reproductive justice and health justice, because it allows individuals to access health care, and engage in health behaviors.

But, if we counter these potential positive effects by placing these same people amidst elements that will negatively impact their health, and the health of future generations, it is not merely social injustice, it is a catastrophe.

A catastrophe that we can surely avoid. The writing is on the wall.

Let's all read it.

Those claiming that Rampal will generate employment are not wrong. Not at all. But, we must ask: at what personal cost? Who will bear the cost of their health? Who will be held personally responsible?



A poster collected from social media which reads 'Save Sundarban'.

International Journal of Applied and Basic Medical Research.

Examples: In Delaware, USA, the Division of Public Health found that cancer was 17 percent higher than the rest of the nation, indicating a "cancer cluster" in the community in which the Indian River coal plant is based (Cancer cluster investigations in Delaware Health and Social Services, *dhss.delaware.gov*). In Chicago, USA, two coal plants, Fisk and Crawford plants, continue to cause respiratory problems among residents; about 350

We have to consider the land-mass of Bangladesh and the proximity of people and other life to coal-fired power plants.

Bangladesh is akin to a community in any large-sized country.

Bangladesh is the size of Wisconsin, one reasonably sized state in the United States.

So, when talking about carbon or greenhouse gas emissions and contribution to climate change, we need to talk about emission per square

The writer is Assistant Professor at the School of Social Work, University of Buffalo.

PUBLIC EXAMINATIONS

How can the results be equitable?

ROBIUL KABIR CHOWDHURY

THE HSC pass rate of Jessore board dramatically shifted from 46.45 percent last year to 83.42 percent this year. Are the students who appeared in the HSC examination in 2016 better than the students of 2015? In 2016, the percentage of GPA 5 in Rajshahi board is 11.57 percent and in Sylhet 2.68 percent. Do we think that the students of Rajshahi board are brighter than those of Sylhet board? In 2016, from Dhaka board, 23.68 percent of students scored GPA 5 from science and 0.23 percent from humanities. Is it a fair distribution of GPA 5 for students across the streams? These questions cannot be answered unless and until we make our examination results equitable. If we take into consideration the following example, we will see what happens if the results are not equitable.

If we are asked which one is a better score, 75 out of 100 in History or 40 out of 100 in Psychology, we might laugh at the silliness of the questioner. The answer, we assume, is obvious. Let's assess the merit of these two marks along with their mean value drawn for those two data sets. If the mean value of History is 80, we can presume that 75 below the mean value. If the mean value of Psychology is 30, we can presume that 40 is above the mean value. Thus, when comparing the mean value we find that the performance in Psychology is better than that in History. We, therefore, learn that if the result is published on the basis of this assumption of 'good' or 'bad' marks (called raw marks), the true ability of students will not be reflected.

At present, we publish our results on the basis of raw marks -- untreated marks awarded to any candidate by the markers in an examination. These raw marks are influenced by a number of factors. The marks are heavily influenced by the question set, as questions are not of the same difficulty level. And when questions are difficult to understand, candidates sometimes fail to answer the question as expected by the examiners marking the papers, and thus, their marks suffer.

This leads to my next point. Marks awarded are also influenced by the examiners, as they often have their own interpretation while marking. Some examiners have the tendency to mark leniently, some harshly. Besides, physical conditions under which the examination is held, the candidates' frame of mind at the time of the examination and even the sequencing of questions can all influence outcomes. For this reason, raw marks cannot represent the candidates' 'true' ability. So, when results are published on the basis of raw scores, our assessment of students' performances across boards, years, streams and subjects will not be equitable.

How can we ensure equity in public examination results and minimise the inequality across boards, years, subjects and streams? If we would like to compare apples with oranges, we need to consider their individual characteristics because the two are different in nature. Marks and grades do not bear the same meaning. Marks are only a measurement of quantitative data and do not have any value. But grades are more than a measurement as values are associated with

it. For example, Promit received 80 percent in an English test. This is a quantitative description and does not say anything about his performance. Instead, it says how many marks he has got. But when 80 percent marks denotes that Promit is able to write sentences using correct forms of verbs, spelling, tenses, vocabulary etc. then this is a qualitative description from which we can deduce that Promit is good at English and belongs to the top group of students in English. This is also value associated.

We see reflection of this view in any high stake examinations like the A-level, O-level or Victorian Certificate of Education in Australia after the completion of grade 12. Grades are not merely raw marks in their published result. Grades are values awarded on the basis of standardised scores instead of raw scores. So, the marks used to award GP to a subject are not constant. Sometimes students are in the best performing group for achieving 70 percent, sometimes despite getting over 80 percent, they

fail to get an A grade.

So, the result of public examinations should be standardised, giving weight to values. The standardisation process is an attempt to make marks more equitable across subjects, across years and, where applicable, across boards. This never affects the ranking order of candidate marks in any examination, but takes into account students' ability.

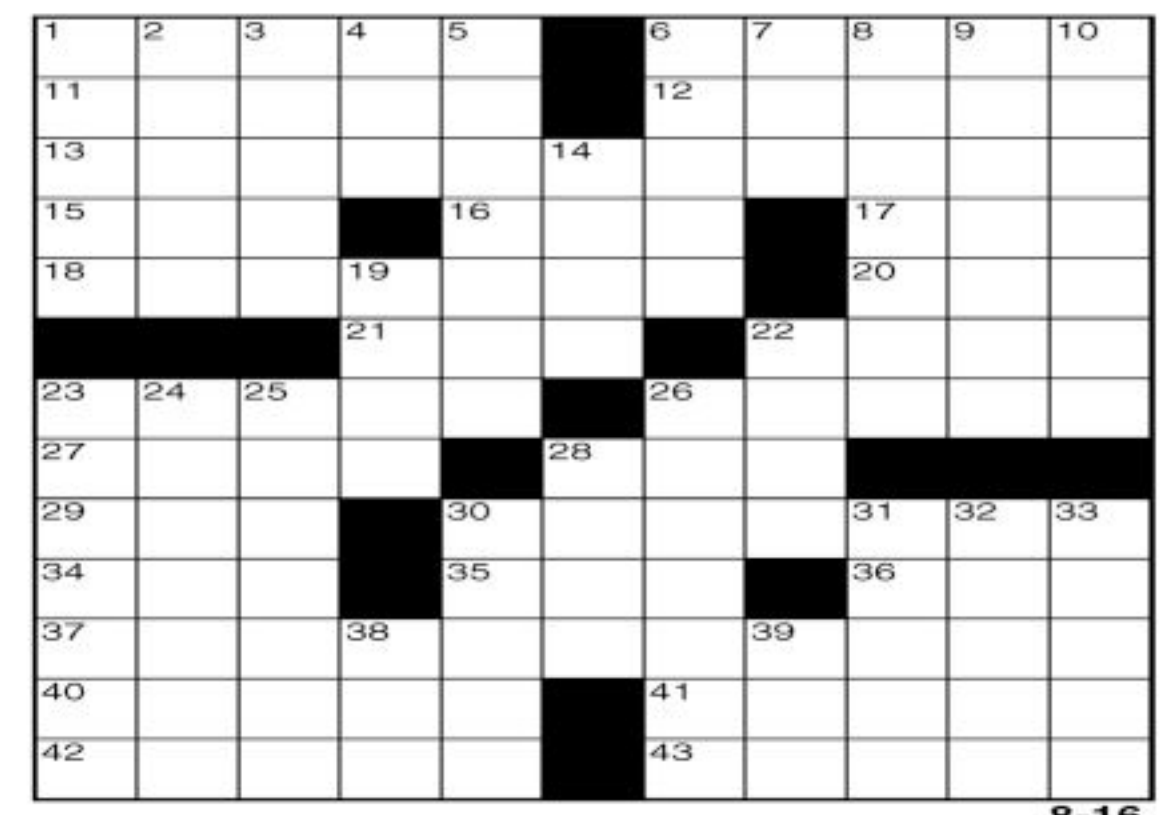
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The writer is senior examiner and evaluation specialist, Bangladesh Examination Development Unit, SESIP BISE, Dhaka.

If we would like to compare apples with oranges, we need to consider their individual characteristics because the two are different in nature. Marks and grades do not bear the same meaning.

CROSSWORD BY THOMAS JOSEPH

- ACROSS**
- 1 Pesto herb
 - 6 Energy
 - 11 In the know
 - 12 Find darling
 - 13 They may be made with cutout letters
 - 15 Auction signal
 - 16 Maiden name indicator
 - 17 In the past
 - 18 Thwarts
 - 20 Combat
 - 21 Pen fill
 - 22 Gasp for air
 - 23 Degrade
 - 26 Decks
 - 27 Price tag info
 - 28 Musician's job
 - 29 Barracks bed
 - 30 Pied Piper's town
 - 34 Mex. neighbor
 - 35 "As I see it," in texts
 - 36 Music's Yoko
 - 37 Some office squares
 - 40 Spine-tingling
 - 41 Eccentric
 - 42 Intense fear
- DOWN**
- 1 Fishhook parts
 - 2 Anticipate
 - 3 Baseball's Koufax
 - 4 Auditor's org.
 - 5 Like Simba
 - 6 Wind indicators
 - 7 Marrying words
 - 8 Escaped
 - 9 Pizza herb
 - 10 Vacation spots
 - 14 Timid
 - 19 Rainbow maker
 - 22 Book unit
 - 23 Charged with a crime
 - 24 Ardent fan
 - 25 "Top Hat" star
 - 26 Japanese gowns
 - 28 Like venison
 - 30 Followed a trail
 - 31 Led Zeppelin's "Whole -- Love"
 - 32 Like neon
 - 33 Snouts
 - 38 Spying org.
 - 39 Unconscious



YESTERDAY'S ANSWER



Government of the People's Republic of Bangladesh
Bangladesh Television
Headquarters Building
Rampura, Dhaka-1219

Expressions of Interest (Firm)

| 01. Ministry/division | Ministry of Information. | | | | | | | | |
|---|---|-----------------------|----------------------------|-----------------------|----------------------------|--------------------------|-------------------|----------------|----------------|
| 02. Agency | Bangladesh Television. | | | | | | | | |
| 03. Procuring entity name | Director General, Bangladesh Television. | | | | | | | | |
| 04. Procuring entity code | Not used at present. | | | | | | | | |
| 05. Procuring entity district | Dhaka. | | | | | | | | |
| 06. Expression of interest for selection of | Consulting Firm. | | | | | | | | |
| 07. Title of service | Environmental Impact Assessment (EIA) of "Establishment of 05 (five) Full Fledged TV Stations of Bangladesh Television." | | | | | | | | |
| 08. EOI Ref. No. | 15.54.0000.023.14.603.15 | | | | | | | | |
| 09. Date | 30-08-2016 | | | | | | | | |
| KEY INFORMATION | | | | | | | | | |
| 10. Procurement sub-method | Quality and Cost Based Selection (QCBS). | | | | | | | | |
| FUNDING INFORMATION | | | | | | | | | |
| 11. Budget and source of funds | Annual revenue budget of BTV (GOB). | | | | | | | | |
| PARTICULAR INFORMATION | | | | | | | | | |
| 12. EOI closing date and time | 19-09-2016 at 3:00pm. | | | | | | | | |
| 13. Place of submission | Bangladesh Television, Headquarters Building, Engineering Conference Room (401), Rampura, Dhaka-1219. | | | | | | | | |
| INFORMATION FOR APPLICANT | | | | | | | | | |
| 14. Brief description of assignment | The main objective of the assignment is to provide Environmental Impact Assessment (EIA) report on the basis of TOR and presentation at Department of Environment (DOE) for getting Environmental Clearance Certificate (ECC) and required for execution. The study should embody a detailed yield a comprehensive report on environmental aspects of the project. | | | | | | | | |
| 15. Experience, resources and delivery capacity required | The application should contain at least the following information: (i) Background of the firm(s) with general and overall experience; (ii) Firm(s) names, address & legal commercial documents; (iii) Availability of appropriate skills among staff (list of professional staff with CV); (iv) Summary of experience of the firm(s) under Government & private sector in similar assignments; (v) History of litigation (if any) in courts or any arbitration proceedings; (vi) Availability of resources and demonstration of capacity of handling such large assignment. | | | | | | | | |
| 16. Other details (if applicable) | A consultant will be selected in accordance of PPA-2006 & PPR-2008. | | | | | | | | |
| 17. Association with foreign firms is | If needed (all attested documents of associated firm to be attached). | | | | | | | | |
| 18. EIA of "Establishment of 05 (five) Full Fledged TV Stations of Bangladesh Television" on the basis of TOR | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>Assignment</th> <th>Location</th> <th>Indicative start date</th> <th>Indicative completion date</th> </tr> <tr> <td>Rangpur, Khulna, Barisal</td> <td>Rajshahi, Sylhet,</td> <td>December, 2016</td> <td>February, 2017</td> </tr> </table> | Assignment | Location | Indicative start date | Indicative completion date | Rangpur, Khulna, Barisal | Rajshahi, Sylhet, | December, 2016 | February, 2017 |
| Assignment | Location | Indicative start date | Indicative completion date | | | | | | |
| Rangpur, Khulna, Barisal | Rajshahi, Sylhet, | December, 2016 | February, 2017 | | | | | | |
| CLIENT DETAILS | | | | | | | | | |
| 19. Name of official inviting EOI | Md Manirul Islam. | | | | | | | | |
| 20. Designation of official inviting EOI | Maintenance Engineer. | | | | | | | | |
| 21. Address of official inviting EOI | Bangladesh Television, Headquarters Building, Rampura, Dhaka-1219. | | | | | | | | |
| 22. Contact details of official inviting EOI | Tel: +880-2-9360702, Fax: +880-2-8312927 | | | | | | | | |
| 23. The procuring entity reserves the right to delete-reject all EOI's | The purchaser reserves the right to reject all tenders or annul the tender process. | | | | | | | | |

Md Manirul Islam
Maintenance Engineer
On behalf of Director General

GD-1741