

Assessment of Gas Reserves and Bakhrabad Disaster

by Muhtasham Hussain

Bangladesh has a large gas deposit compared to her surface area. But the population density is high and the per capita gas reserve is only around 1/10th of world per capita.

THE shortfall in natural gas production from Bakhrabad field has been a bolt from the blue and the country has been caught unawares. As a consequence, vital industries have to be shut down in the eastern part of Bangladesh and electricity generating stations have to idle their machines causing a serious shortage of electricity all over the country. This has cut down industrial and agricultural production and has caused sufferings for millions.

It appears that we were not prepared to switch over to other gas reserves when Bakhrabad gas shortage was detected as the assessment of Bakhrabad reserve by Petrobangla which was accepted by the Government proved to be rather unrealistic. An international publication by a foreign expert, Rainer Schmidt, who worked with Petrobangla and was involved in the assessments gives widely different estimates. If his assessments were taken into consideration the country would not have landed in the present crisis. For future plans for natural gas utilization his work needs a careful examination in order to avoid a total disaster within the next few years.

Table 1 shows the reserves as estimated by Petrobangla and published by government in the Statistical Pocket Book of Bangladesh (1990, 1991 and 1993). For Bakhrabad, the recoverable amount in 1990 book

is 2.78 tcf which shot up to 4.67 tcf in 1991 edition and 1993 book shows that the recoverable proven and probable reserve is 0.867 tcf. 1984-85 edition shows 2.78 tcf as the 'proven' amount. Although Petrobangla have not defined what they mean by 'proven' or 'recoverable' or 'recoverable proven and probable' amounts in terms of statistics the inconsistency in the amounts is misleading and will be hard to explain away. Table 1 contains the widely varying figures for six other gas fields as well.

Table 2 shows the amount of gas reserves according to Rainer Schmidt, who worked with Petrobangla and was involved in the assessments gives widely different estimates. If his assessments were taken into consideration the country would not have landed in the present crisis. For future plans for natural gas utilization his work needs a careful examination in order to avoid a total disaster within the next few years.

Table 1 shows the reserves as estimated by Petrobangla and published by government in the Statistical Pocket Book of Bangladesh (1990, 1991 and 1993). For Bakhrabad, the recoverable amount in 1990 book

'proven + probable' amount, 0.33 + 0.31 or 0.64 tcf. Schmidt used a recovery factor and all his estimates are for recoverable amounts. The exact amount of recoverable gas in a reserve cannot be absolutely determined before its exhaustion but it appears statistically reasonable to use 'proven + probable' reserves of Schmidt as the figure to accept for the higher limit for a reserve and the 'proven amount' as the lower limit. Schmidt gives the maximum conceivable reserve i.e. a reserve with near 0% probability to be 2.30 tcf for Bakhrabad. It makes little sense that Petrobangla's 1984-85, 1990 and 1991 estimates are higher than the maximum conceivable amount of Schmidt.

Table 3 gives the amount of gas recovered up to June 1993 and the amount estimated to be recovered by June 1997 along with Schmidt's and Petrobangla's lowest estimates. It is evident that the depletion which is taking place with the recovery of around 0.5 tcf Bakhrabad gas supports Schmidt's assessment of 0.64 tcf as the higher limit of reserve. Petrobangla's estimate of

even 0.867 tcf appears to be too high.

One should take note of the fact (Table 3) that the known gas fields at Titas and Sylhet may get depleted in a couple of years or so. The nation must be kept prepared for such a possibility if a catastrophe is to be averted. Inconsistencies in the figures supplied by Petrobangla in different years together with Bakhrabad mishap do not allow one to depend on estimates of Petrobangla.

New gas fields are certainly to be discovered but reserve expectation curves for them and well defined terminology for estimates in terms of statistics must be supplied to the discovery of 1 tcf gas at Sangu fields in the Bay of Bengal (Janakantha, January 12, 1997). Let us hope that the ventures to be started by multinational companies will lead to a substantial improvement in our reserves and in the gas supply. But fantasies like 'Bangladesh possibly having the highest gas reserves on earth' (Janakantha, January 12, 1997) or that 'Bangladesh is floating on gas' must not be nurtured.

As it stands, Bangladesh has a large gas deposit compared to her surface area. But the population density is high and the per capita gas reserve is only around 1/10th of world per capita. Bangladesh then is a country with deficit in natural gas resources. Further explorations should improve the figure. But it would be wise to consider that in accord with Schmidt the total recoverable amount of gas from existing fields is likely to be only around half the amount predicted by Petrobangla. However it is possible that giant gas fields will be discovered in near future to brighten the gloomy scene. Let us hope for the best but let the country prepare for the worst. This would require a thorough revision of the energy plan for Bangladesh up to the year 2020 as gazetted in January 1996.

The writer is formerly, Bosc Professor of Physics, University of Dhaka.

Table 3. Bangladesh natural gas production vs reserve for 7 fields

Gas field	Production Up to June 1993	Estimated Schmidt's proven + probable	Petrobangla's lowest estimate
1. Bakhrabad	0.3281	0.52	0.867
2. Titas	1.0802	1.77	2.100
3. Habiganj	0.3754	0.56	1.680
4. Sylhet	0.1521	0.16	0.266
5. Chhatak	0.0265	0.02	0.300
6. Kailashtila	0.0626	0.11	0.49
7. Rashidpur	-	0.79	1.309

Table 1. Petrobangla's assessment of Bangladesh gas reserves, in tcf

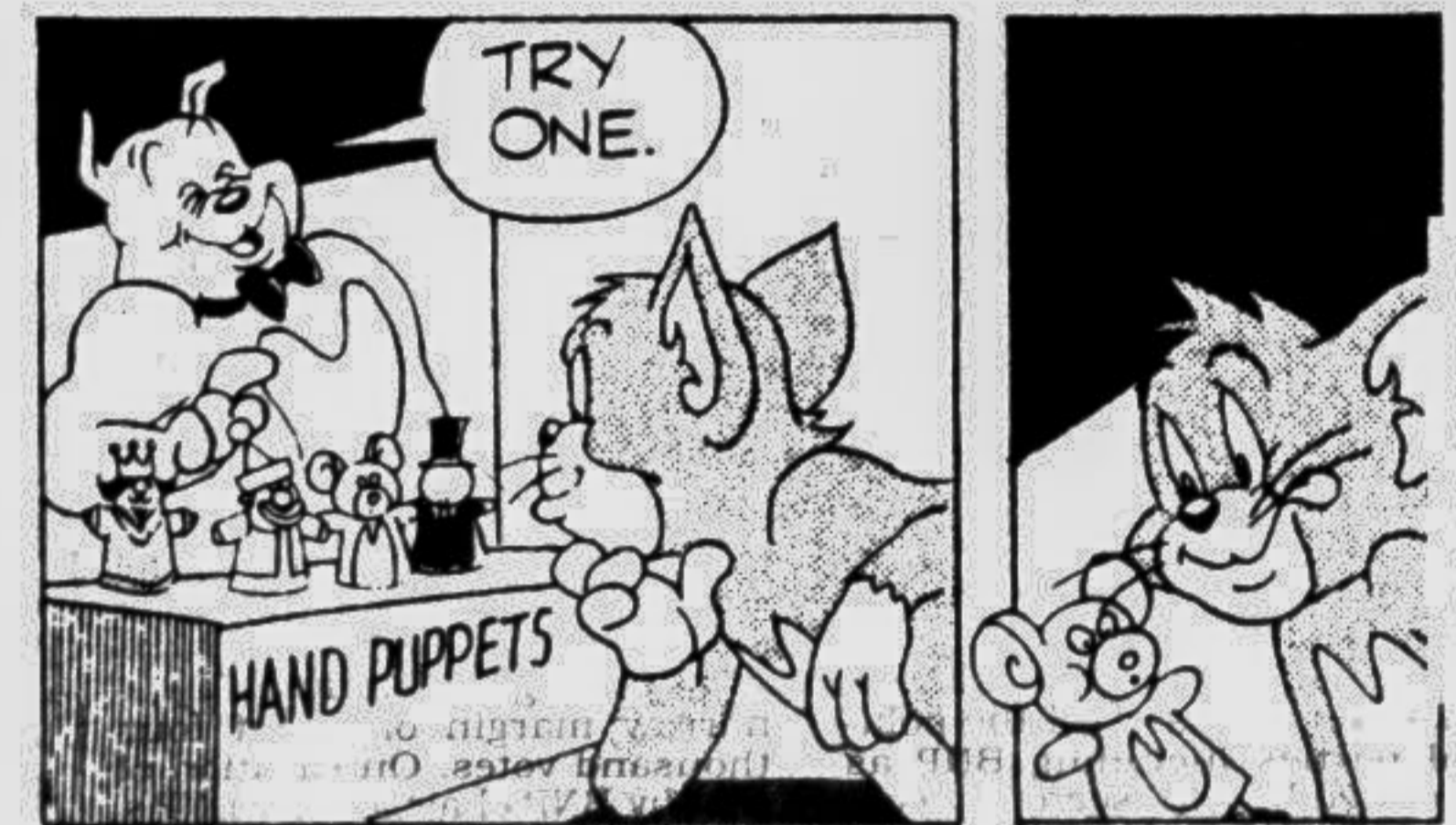
Gas field	1990 Recoverable reserve	1991 Recoverable reserve	1993 Recoverable proven+probable
1. Bakhrabad	2.78	4.67	0.867
2. Titas	2.12	8.46	2.100
3. Habiganj	0.68	2.98	1.895
4. Sylhet	0.39	0.44	0.266
5. Chhatak	0.60	7.17	1.140
6. Kailashtila	2.78	3.66	2.529
7. Rashidpur	1.06	4.45	1.309
Total for 7 fields	10.41	31.83	10.106

Table 2. Rainer Schmidt's assessment of natural gas reserves in Bangladesh, tcf

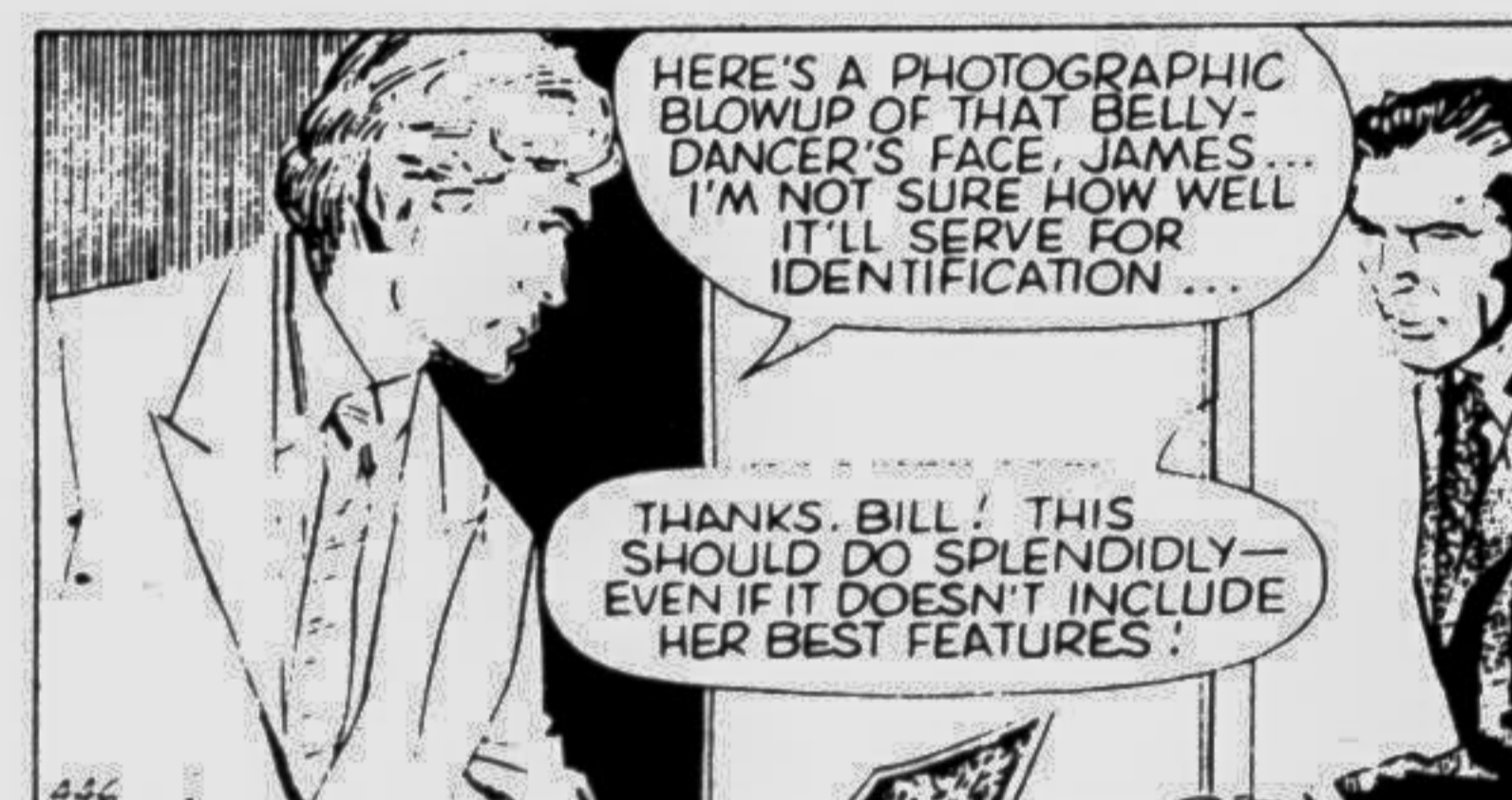
Gas field	Proven* (Probability 90%-100%)	Probable* (Probability 50%-90%)	Possible (Probability 0%-50%)	Total possible (Probability 0% or more)
1. Bakhrabad	0.33	0.31	1.66	2.30
2. Titas	0.99	0.95	3.71	5.65
3. Habiganj	0.60	0.74	2.54	3.88
4. Sylhet	0.11	0.06	0.29	0.46
5. Chhatak	0.02	0.31	1.61	1.94
6. Kailashtila	0.19	0.30	1.31	1.80
7. Rashidpur	0.25	0.54	3.09	3.88
Total for 7 fields	2.49	3.21	14.21	19.91

*cumulative

TOM and JERRY



James Bond



Double Trouble

IT is very well known that alcohol and cigarettes are ancient companions, but the reason for the nicotine and alcohol link is not well understood. Scientists recently discovered that both these chemicals affect the same protein in the brain, explaining why alcoholics are seven times as likely to also be heavy smokers when compared to casual

drinkers. According to researchers, alcohol influences the acetylcholine receptors in the brain, making them less sensitive to the impending influence of nicotine. Since the same receptors give the feel good response from smoking also, they now need more nicotine to get the same feeling of satisfaction.

Proposing for an Islamic Health Organization within the OIC

by Professor (Dr) Mahmudur Rahman

THE Islamic Ummah has judiciously and timely organised itself into an Organisation of Islamic Countries (OIC) for the broad based general purpose of Co-operation for mutual benefit, protection of interests and socio-economic well being of Muslims all over the world.

Health is one of the fundamental basic rights of a human being, and for the development and growth of a happy, productive and prosperous society, health is now a days recognised as one of the indispensable prerequisites. Any magnitude of multidimensional efforts insulated from health promotion is unlikely to yield optimum results for the prosperity of any group of people.

It may further be pointed out here that just as OIC envisages a socio-economic order in the Ummah according to the dictates of Islam, e.g. interest-free banking, distribution of wealth on the principles of Zakat etc., similarly there are vast and tremendous areas of application of the dictates in the field of Health for the Muslims to shape a healthful living system of their own. To illustrate a few examples, the following may be mentioned.

i) The Holy Quran and the teachings of Prophet Mohammad (SM) are replete with varied instructions on healthful living and hygiene; and also restrictions which could form a basis for sound health.

ii) Apart from specific instructions and restrictions for healthful living and purity of soul, the obligatory acts of Namaz, Wazu, Roza (fasting) etc., have beneficial effects on health recognized by modern medicine.

iii) Modern medicine is fast developing with innovations on organ transplants, test-tube embryos, genetic engineering etc. Islamic Ummah must keep pace with these developments and determine the compatibility or otherwise of these developments as laid out in the Sharia.

iv) To establish and maintain effective collaboration with the OIC, WHO specialized agencies, health administration and professional groups of OIC nations and other organisations may be deemed relevant and appropriate.

v) To assist OIC governments, upon request, in strengthening health services, furnish appropriate technical assistance and in emergencies, provide health services and emergency aid to special groups such as the Palestinian people, Muslim minorities or Muslim groups in non-OIC countries in a fashion compatible with the principles of respect for the sovereignty of nations and non-interference in internal affairs.

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vi) To establish and maintain such administrative and technical services as may be required including epidemiological and statistical services.

vii) To promote and to advance work to eradicate, control epidemic, endemic and other diseases.

Metropolitan

Azeri President, PM greeted

President Justice Shahabuddin Ahmed and Prime Minister, Sheikh Hasina have felicitated their respective counterparts of Azerbaijan on the occasion of the country's Independence Day, reports UNB.

President Shahabuddin, in his message to Azerbaijan President Heydar Aliyev, conveyed warmest greetings to him and through him to the government and the brotherly people of Azerbaijan.

He hoped that the existing friendly relations between the two countries will continue to develop in the years ahead for the mutual benefit of the two peoples.

The President also wished for the Azerbaijan President's good health, happiness and long life as well as for the progress and prosperity of the brotherly people.

In another message, Prime Minister Sheikh Hasina greeted Azerbaijan Prime Minister Fuat Guliyev on behalf of the government and people of Bangladesh.

I am confident that the existing bonds of friendship and cooperation between our two countries will be further strengthened in the years to come," said the Prime Minister.

She also extended her best wishes for the personal health and happiness of the Azerbaijan Prime Minister and for the progress and prosperity of the brotherly people.

Demirel shocked at loss of lives in cyclone

President Suleyman Demirel of Turkey has expressed his shock at the loss of lives and damage to property by the May 19 cyclone, reports UNB.

In a message to President Justice Shahabuddin Ahmed, he expressed sympathy for the bereaved families of the victims.



Participants at the poetry recitation competition of Bangladesh International School held at the school premises at DOHS, Banani in the city yesterday. — Star photo

Matia, Mosharraf visit cyclone-hit areas

CHITTAGONG, May 28: Food and Agriculture Minister Begum Matia Chowdhury today visited each of the cyclone battered villages of Baharchhara Union under Banshkhal Thana in the district to conduct the relief operation, reports BSS.

She distributed relief money to the cyclone affected people. UNB reports says, State Minister for Land Rashed Mosharraf today visited the cyclone affected areas of Lama thana and Chimbuk of Bandarban districts.

Peace, discipline in banking sector underlined

Awami League presidium member Amir Hossain Amu yesterday underlined the need for maintaining peace and discipline in the banking sector, reports BSS.

"Peace and discipline could only be established in all other sectors if the banking sector could be streamlined," Amir Hossain Amu said while addressing a function organised by Uttara Bank Employees Union in the city.

Animal husbandry pisciculture course ends

State Minister for Youth, Sports and Cultural Affairs Obaidul Quader yesterday said the development of the country, in true sense, was impossible keeping the vast women community away from the development programmes launched by the government, reports BSS.

Quader was addressing the closing and certificate giving ceremony of three-month long animal husbandry and pisciculture course participated by 74 women at the Savar Youth Training Centre.

'Dr Momtazuddin Memorial Gold Medal' set up

In order to establish 'Dr Momtazuddin Memorial Gold Medal' award at the Department of Philosophy of Dhaka University a cheque of Tk one lakh fifty thousand was handed over to Vice-Chancellor Prof A K Azad Chowdhury by Mahmuda Rahman, daughter of Dr Momtazuddin Ahmed, at a simple ceremony at the office of the VC yesterday, says a press release.

Out of the income of this amount, one "Dr Momtazuddin Memorial Gold Medal" will be awarded every year to a student securing First class first position in MA final examination from the Department.



Dr Kasiruddin's death anniversary

The 26th death anniversary of Dr. Kasiruddin Talukder will be observed today. On this day in 1971 Dr. Talukder, a renowned physician of Bogra and MLC of undivided Bengal, was brutally killed by the occupation army for treating the wounded freedom fighters of '71 Liberation War by opening a free clinic for them and leading the physicians' procession during non-cooperation movement in March '71, says a press release.

CRCS donation for cyclone-hit people

The Chinese Red Cross Society (CRCS) has donated 20,000 US dollar to Bangladesh Red Crescent Society (BRCS), reports UNB.

On behalf of CRCS, the Chinese Ambassador in Dhaka, Wang Chunglin, handed over the cheque to BRCS Chairman Maj Gen (ret'd) Abdus Salam MP yesterday.

The donation was made for the relief and rehabilitation of the people affected by the recent cyclone that hit Bangladesh's coastal-belt and off-shore islands.

Chinese Embassy Councillor Du-lion Cheng, BRCS Vice Chairman Tawhidur Rahman, Treasurer M A Zinnah, Acting Secretary General A S M Akram and its board members were present.

Directive to take tough action against child trafficking

Home Minister Rafiqul Islam directed tough measure against women and children trafficking, and arms and drug smuggling, reports UNB.

He emphasised effective co-ordination among the law-enforcing agencies and gearing up the activities of regional and district task forces to check smuggling.

The Home Minister was presiding over the 16th meeting of the National Smuggling Resistance Committee yesterday.



Obituary

Md Kamaluddin, joint secretary, Establishment Division (OSD) died on Tuesday, at Red Crescent Holy Family Hospital in the city. He was 51, says a press release.

He left his wife, two sons, one daughter and a host of relatives to mourn his death.

His namaz-e-janaza will be held today after Asr prayers at Boro Masjid, Mirpur Section 11. His qukhwan will be held tomorrow after Asr prayers at House No. 5, Avenue-3, Line-5, Section 11/A, Mirpur.

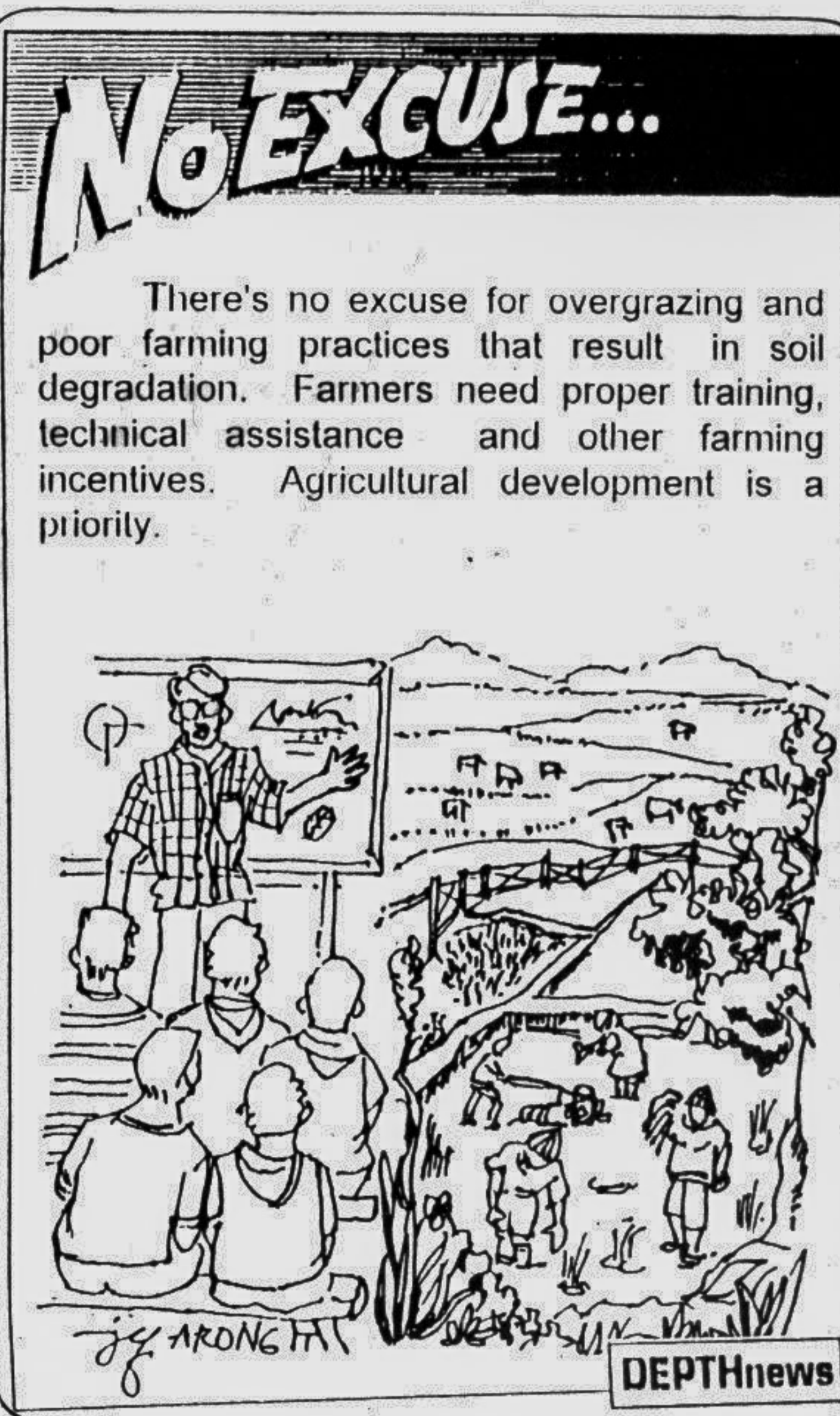


SW Lakitullah, an eminent lawyer and politician, died of old age ailments in the city yesterday. He was 85, reports BSS.

Lakitullah, the younger brother of noted lawyer, politician and author BD Habibullah, left behind his wife, three sons and six daughters. His eldest son Dr Salamullah is a medical practitioner in Dhaka.

He will be buried at Mirpur Graveyard after namaz-e-janaza at Baitul Mokarram National Mosque after Zohr prayers today.

Lakitullah entered legal practice in Barisal in early 1940s. His qukhwan will be held at his residence at 68, South Laboratory Lane, New Elephant Road after Asr prayers on Saturday.



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