

## Impact of Recent Flood on Agriculture Some Suggested Interventions

by Quazi Shahabuddin

*It has been observed that although the macro foodgrain balance looks more or less satisfactory, proper timing of imports and timely distribution of imported grains, both through relief and targeted programmes to those who are most vulnerable in the flood-affected areas remains a most challenging task for the government.*

THE massive flood has left behind in its wake damage and destruction of output and assets encompassing all sectors of the economy. It will be quite sometime before one can have a complete picture and reliable estimates of such damage/destruction in the economy. Pending such an enquiry and a comprehensive analysis of the impact of recent flood, one can only make some tentative and preliminary estimates of the damage in the agriculture sector based on rapid appraisal reports, analyse its implications for the economy and suggest some policy interventions to cope with the crisis and mitigate its adverse impacts on the economy both in the short and the medium term.

Although the share of agriculture in total GDP has been declining over the last three decades (from about 47 per cent during the seventies to about 40 per cent during the eighties and further to 30 per cent in the late nineties), the economy still remains essentially agrarian in nature with agriculture sector employing more than 70 per cent of the rural labour force. Within agriculture, crop production with a share of more than 75 per cent of value added in the agriculture sector. And within crop sector, foodgrain (rice and wheat) claims about 80 per cent share of total acreage and 75 per cent share in total gross value of production. In our evaluation of the impact of recent floods in Bangladesh agriculture, therefore, we shall largely concentrate on the crop damage, especially the loss in foodgrain production, both because of its importance and availability of information from rapid appraisal surveys.

**Performance of Crop Sector in Recent Years and Assessment of Crop Damage due to Flood:** The damage to crop sector due to floods can be better analysed against the backdrop of recent growth performance of this sector in recent years. It is widely recognised that after a prolonged stagnation of rice production during the early and mid-nineties (around 18 million tons), there was an upswing in production in 1996/97 (as a result of which total foodgrain production exceeded 20 million tons for the first time), which was more or less sustained despite a production shortfall in aman in the following year largely due to bumper boro harvest (also bumper wheat production) in 1997/98. As against the actual foodgrain production of 20.51 million tons of foodgrain in 1997/98 (with a breakdown of 1.87 million tons of aus, 8.85 million tons of aman, 7.88 million tons of boro and 1.80 million tons of wheat), the foodgrain production target for 1998/99 was fixed at 21.00 million tons (with a breakdown of 1.90 million tons of aus, 9.80 million tons of aman, 7.80 million tons of boro and 1.80 million tons of wheat). This, therefore, envisaged a 2.4 per cent growth in foodgrain production in 1998/99, as compared to the previous year.

What are the prospects of foodgrain production in the wake of the unprecedented flood of the century which has caused heavy damage to both the paddy seedlings and planted area of aman in flood-affected parts of the country? According to a Rapid Appraisal Survey (recently carried out by a BIDS-IFPRI team), the total loss of aman crop (taking into consideration both total and partially damaged area as well as recovery/replanting possibilities after the recession of flood water and additional yield in unaffected regions) is estimated to be 2.10 million tons. With the damage of aus crop estimated to be 3.0 lakh tons, the total rice production in 1998/99 is estimated at 16.80 million tons. The total foodgrain production, with a target wheat production of 1.8 million tons, is thus estimated to be 18.60 million tons — a shortfall of 1.91 million tons from the last year's production level and of 2.40 million tons from this year's target level of production. Of course, the shortfall would be lower if the production of either boro or wheat exceeds their respective target levels.

Before we make an attempt to analyse the implications of this shortfall in foodgrain production for the loss in terms of GDP, agricultural employment (both direct as well as total impact), and for the "food gap" in the current year, a few words about the post-flood agricultural rehabilitation programme may be in order. Although in most of the areas, it is perhaps too late to replant the aman, in some areas where the flood water had receded a little early the prospect was quite bright for replantation of aman and thereby recoup some of the losses in aman production. However, without seeds and seedlings what will be peasant do on his prepared land? All eyes were, therefore, turned on the question of supply of seedlings for transplanted aman and seeds as well as saplings for vegetables and other rabi crops. Aman seedlings are as much in demand as seeds and saplings of other crops, and none of these are readily available. The government agencies like the DAE and BADC should come forward to assist the farmers to cross this hurdle. Apart from recouping at least partially the losses in aman crop, the opportunity of "flood-induced crop diversification" should not be missed. With aus and aman crop damages, the country is relying heavily on rabi crops cultivation to generate a reasonable level of agricultural income and meet nutritional requirements.

The government has announced a post-flood agricultural rehabilitation programme of Tk. 3200 crores to provide credit support to the flood-affected farmers. This is a welcome step in view of the significance of agricultural regeneration and urgency of the situation. The problem here is to ensure that the credit is properly disbursed and the fund is

effectively utilised. In order to monitor the proper disbursement of credit to the needy farmers, high powered committees can be formed with the representatives of local administration, people's representatives, NGOs and social workers in the respective areas. Given the past experience of agricultural credit disbursement through traditional channels, the formation of such a committee assumes special significance to ensure timely disbursement of credit to those farmers who need them most. Needless to emphasize, the farmer's requirements of working capital is far more compelling now than even before.

**Crop Damage and its Implications for GDP and Rural Employment in the Economy:** The shortfall in crop production due to flood damage, as mentioned earlier, is estimated to be about 8.0 per cent of GDP originating from the crop sector, which is equivalent to about 5.5 per cent of agricultural GDP and roughly 1.5 per cent of total GDP in Bangladesh. This only captures the direct impact of crop damage in the economy. If, however, the indirect effects involving sectoral linkages are taken into consideration, then the multiplier effects of crop damage would amount to a loss of about 15 per cent of GDP originating in the crop sector, which is equivalent to more than 10 per cent of agricultural GDP and roughly 3 per cent of total GDP in the country.

Similarly, the direct loss in agricultural employment due to crop damage by recent flood is estimated to be 0.51 million man years, of which 0.31 million man years is hired labour and the rest (0.41 million man year) is family labour of the farm households in Bangladesh. The total loss (incorporating the indirect effects through sectoral linkages) however, is much greater, which is estimated to be 1.00 million man year, of which 0.60 million man years is hired labour and the rest (0.40 million man years) is family labour of the farm households in the country. Thus the recent flood has caused considerable losses to both agricultural GDP and employment in the rural areas. These estimates would appear to be much higher for the Bangladesh economy when both direct and indirect effects through sectoral linkages are taken into account.

**Crop Damage and its Implications for the "Food Gap" in 1998-99:** As we observed earlier, due to the recent floods in Bangladesh foodgrain produc-

tion this year may fall well below the target levels. Prior to floods, the production target of foodgrains for 1998/99 was set at 21.0 million tons compared to the actual production of 20.50 million tons in 1997/98. What implications this shortfall in production have for the "food gap" in the current year? Based on the target foodgrain level of 21.00 million tons, the "food gap" (total foodgrain requirements not met by net domestic foodgrain production) was originally estimated to be 2.65 million tons. This was planned to be largely met through imports of 1.52 million tons (with a breakdown of 3.64 lakh tons under food aid, 3.50 lakh tons under government commercial imports and 8.00 lakh tons under private sector commercial imports), and partly through drawdown of government stock (by 2.68 lakh tons), thereby still leaving a gap of 0.86 million tons. As a result, average daily per capita foodgrain available for consumption was estimated to be 443 gm/day as against the target requirement of 465 gm/day (16.4 oz).

With the shortfall in foodgrain production noted above largely due to loss in aman crop, the "food gap" now is estimated to be 4.80 million tons which turns out to be an "effective gap" of around 4.0 million tons. According to the latest available information, this is

expected to be met through import of foodgrains of 1.5 million tons under food aid/flood relief, 1.0 million tons under government commercial imports and 1.5 million tons under private commercial imports. A shortfall under any of these three channels would only aggravate the situation by enlarging the "effective food gap". It may be noted here that the total commercial imports of 2.5 million tons of foodgrain would cost about \$500 millions, whose macroeconomic implications specially for foreign exchange reserves and external balance need to be worked out. This is the arithmetic at the aggregate level of goodgrain requirement, production and imports. The timing of import arrivals and timely distribution of grains from government stock as relief both through targeted channels and through OMS would obviously play a crucial role in stabilising market supplies and prices. To ensure the timely and effective distribution of imported grains of such huge amount, it is necessary to ensure not only that there is no congestion and problem of unloading (except those which are imported through land route) at the ports, but also that the unloaded grains reach the CSD and LSD, specially the later which are scattered all over the country. This assumes special significance in view of the damaged physical infras-

structure (e.g. roads, culverts etc.) due to prolonged floods this year.

The important point to emphasise here, however, is that this macro demand-supply balance does not necessarily ensure food security at the household level. Even in a normal year, this poses considerable problem in a country where almost half of the people are living below the poverty line, in whatever way one defines it. This year, it has assumed critical significance, since the number of people who are exposed to risk of starvation and, therefore, have become extremely vulnerable to malnutrition and even death has increased manifold. In this context, it has become imperative to put into operation the safety-net programmes (such as FFW, VGD etc) on a much larger scale and much earlier than these are usually undertaken. This is particularly because the landless agricultural labourer had been virtually unemployed over the last two to three months and therefore, have little or no income to purchase the required food. Also, these are the groups who have no asset or stock of food to fall back upon in times of crisis. At the same time, the government should immediately start the OMS of rice as soon as the flood water recedes so that prices are kept within the purchasable limits of the low-income groups of

people particularly in the flood-affected areas. Again, the coverage and the magnitude of OMS operation has to be much larger than before. Needless to emphasise here that while carrying out both the relief and OMS operations, the interventions should be calibrated regionally as dictated by the severity of floods, incidence of flood damages and lack of income-earning opportunities (using both poverty as well as flood maps which are readily available). Also, given the country-wide network of NGOs and their demonstrated expertise as well as experience in different poverty-alleviation programmes, the government should seriously consider involving them in the distribution of relief and post-flood rehabilitation programmes.

**Concluding Observations:** The recent flood lasting over a period of more than two months has caused heavy damage to agriculture and other sectors of the economy. An attempt has been made in this paper to assess the impact of crop damage, specially aus and aman on foodgrain production, and on agricultural GDP as well as employment, and the multiplier effects through sectoral linkage in the economy. The need for post-flood agricultural rehabilitation measures has been emphasised, with particular emphasis on the supply of seedlings of aman, as well as seeds and saplings for vegetables and other rabi crops. Proper monitoring and effective utilisation of the agricultural loan has also been emphasised so that the needy farmers do not suffer due to lack of working capital both during the cultivation of rabi crops and, more importantly, in the coming boro season. The government lending and agricultural extension service will

have to be timely and farmer-friendly. Timely supply of fertiliser and diesel for running irrigation equipment need to be ensured so that the farmers can recoup, at least partly, the loss of aman crop through bumper boro harvest in 1999. To be made possible by alluvial deposits that has enriched the soil.

The implications for a shortfall in foodgrain production, specially aman, on "food gap" has also been analysed here. It has been observed that although the macro foodgrain balance looks more or less satisfactory, proper timing of imports and timely distribution of imported grains, both through relief and targeted programmes to those who are most vulnerable in the flood-affected areas remains a most challenging task for the government. At the same time, OMS operation needs to be initiated in time to keep the rice prices within purchasable limit of the low-income groups of people in both the urban and the rural areas. And, as a more reliable estimates of the flood damage in both the crop and the non-crop sectors are made available, a more comprehensive plan for agricultural regeneration could be formulated and implemented, so that the recent upswing in agricultural production that contributed significantly to the overall growth of the economy can be sustained and, if possible, improved upon. Otherwise, the targets of the Fifth Five Year Plan will remain as elusive as ever.

The author is Research Director, BIDS. The article is a revised version of his paper presented in the seminar "Impact of the 1998 Flood on the Bangladesh Economy," recently hosted by American Chamber of Commerce in Bangladesh.

## Jute — a Friendly Fibre

by A F G Mohiuddin

*For storage of food grains and other materials, nothing can be ideal than jute sacks. Being porous, jute bags allow passage of air and thereby help maintain the quality of the produce packed. . . Jute bags are, at the same time, good for flood control, embankment and other constructional purposes. Since these are biodegradable, these enrich the soil by enhancing its organic fertility.*

China supports 22 per cent of the world's population. It needs huge quantity of jute bags for packing grains and for many other purposes. China's jute production fell by about half after 1994 and, therefore, she has been using more and more synthetics in place of jute goods. The following table will show what an insignificant proportion of natural fibre material was used from 17 July to 25 August, 1998 to combat China's worst flood of the century:

Gunny sacks — 5.70 million  
Nylon bags — 96.43 million  
Nylon cloth — 12.60 million square metres  
Adhesive bonded fibre — 2.58 million square metres  
Plastic sheeting — 310 tons  
Source: China Daily's Business Weekly dated 30 August-5 September, 1998

The Prime Minister of Bangladesh Sheikh Hasina visited Gullin when she paid a state visit to China in September, 1996. She was amazed to see the squeaky clean water of the Lijiang river and the enchanting beauty of the mountains on either side. I also took

a riverine cruise through the Lijiang river when I visited Gullin on 29 August, 1998. The water in Lijiang river is so clean that one can see one's face in it. Under order of Comrade Deng Xiaoping, over 300 mills and factories were removed from the vicinity of Lijiang river to keep it pollution free and, therefore, one can see no dirt and filth in the water there. But still I saw some polypropylene things floating in the river. These will float there through eternity, as these are not biodegradable.

Similarly, the synthetics that have been used this time for flood control purposes will float or remain in the Yantze river for eternity, because these will never rot, nor degrade into organic matters. Rather these will degrade the quality of the soil wherever they go and will cause, therefore, irreparable damage to the environment. The money one can save by using synthetics in place of natural fibre products is calculable, but the damage done to the environment and human health is incalculable. Although the numerical cost of using synthetics is low, the social cost

involved is very high, perhaps a thousand times more than what is apparently seen.

The intelligent people of China have already understood this. In Beijing, they have imposed a ban on using polypropylene shopping bags. The ban has not been implemented yet due to the absence of cheap alternatives. But bags made of jute are not very expensive either. A foreign supermarket newly opened in China contracted Bangladesh Jute Mills Corporation which quoted the price of jute shopping bags at below the level of plastic bags sold in this supermarket — RMB 8 per piece. They don't give polypropylene bags for merchandise bought from their stores, but put plastic bags on sale near the cash counters, presumably to discourage mindless use of synthetic bags. The synthetics, even if are burnt for disposal, produce a toxic fume hazardous to health and environment. If left to litter, synthetics can cause serious problems to the municipal waste disposal by blocking the drainage system.

For storage of food grains and other materials, nothing can be ideal than jute sacks. Be-

ing porous, jute bags allow passage of air and thereby help maintain the quality of the produce packed. Jute bags are easily stackable and are reusable, as iron hooks do not create holes in them. Synthetic bags being slippery in nature cause problem in storage. Jute sacks are also ideal for bagging seeds as they contain moisture. Jute bags are, at the same time, good for flood control, embankment and other constructional purposes. Since these are biodegradable, these enrich the soil by enhancing its organic fertility.

Since China has been behaving responsibly with a long-term goal of balanced development for her people, they must shun the use of synthetics as far as practicable for the good of environment and posterity. For this, they may tap the jute resources of Bangladesh to replace synthetics, wherever possible, thereby increasing Bangladesh's exports in the basket of trade between the two countries.

Bangladesh's exports to China stood at 48.63 million US dollars in 1997-98 fiscal year. Of this, raw jute occupied 36.04 million US dollars and jute goods 3.5 million US dollars. China's export to Bangladesh in 1997 stood at 750.25 million US dollars.

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## New Laws Will Fight Disease of Rape

Namibia is fighting an increasing number of child rape cases. Mothers are walking children to school for fear they might be attacked. Reform of the law is being sought and an appeal for help has gone to the UN Development Fund for Women.

Christof Maletsky writes from Windhoek

EVERY school day, Adelia Cloete takes her daughter to lessons and collects her at lunch hour. Not because the 11-year-old girl would stay away from school or because they live far from the school, which is in the middle of a township called Khomasdal. "No," says Cloete. "I am afraid that she will get raped on her way." She is but one of many parents in the city who fear that their daughters will become part of the rising of rape victims in Namibia.

Up to 450 rape cases were reported to the police in 1995, 563 in 1996 and, disturbingly, 797 cases last year.

Hundreds more remain unreported. Around 2,000 cases are estimated to occur in a nation of 1.5 million people each year, suggesting the existence of a cruel rapist society that conducts its organised business even in daylight and at schools.

The Namibia education system is increasingly the target of such acts, with more and more educationalists being identified as culprits.

Recently a 32-year-old school hostel superintendent tried to rape a 14-year-old girl after undressing her and threatening to "break her virginity."

The alleged culprit was taken into custody after another 14-year-old girl told her parents that the man had raped her last February.

Senior police spokesperson Chief Inspector Hophni Hamufungu said increased news media reports on growing outrage against rape might have spurred victims to come forward.

"We have a disease in this country," he said. "We need to do something but maybe the problem is where to start."

A horrifying case of rape and sodomy involving eight handicapped minors was also reported recently from Khomasdal.

kind of conduct shows that our society is fast becoming devoid of moral norms and acceptable human values."

Unconfirmed reports say some witchdoctors are telling patients infected with the HIV virus, which causes AIDS, to defile babies and virgins so that they can be cleansed of the incurable disease.

The regional director of health and social services for the North-Western Region, Dr Naftali Hamata, said that in such instances it was better to test the rapist and the victim immediately after the rape, repeating the procedure after six weeks and then after 12 weeks.

HIV, he said, could be only detected six weeks after someone was infected with the virus, but he doubted whether many young rape victims and their suspected assailants were being tested. The victims' parents needed to authorise such a test before it could be made.

The senior medical superintendent for Windhoek State Hospital, Dr Andreas Obholzer, felt that "the victim has the right to know what the perpetrator is suffering from," adding that "it is within the right of the victim to make request for the accused to be tested."

Obholzer said that if the test was granted, the suspect found to be HIV-positive, and then found guilty of rape, he could further be charged with culpable homicide, because the rape victim — if infected with HIV as a result of the attack — would die in the long run.

However, Chief Inspector Hamufungu said present laws did not stipulate that mandatory testing should be carried out on rape suspects.

Campaigners against rape are calling for an action plan. They claim that police statistics are only the tip of the iceberg. Some parents in rural areas choose not to bring the culprits before court but to demand compensation from them in the form of money and livestock.

The root causes of the problem lie with men and their attitudes to children. Education among men and particularly those abused was a boy of 12. The rest, including two girls, were under 12.

rapists will range between five years and life imprisonment. Rapists can also be requested to pay their victims compensation up to N\$10,000, (1 US\$=6N\$).

Marriage will no longer be a defence for rape when violence or the threat of bodily harm is used by rapists against their spouses; rapists will not be eligible for remission, parole or probation; and rape trials will take place within three months of an arrest.

Prosecutor-General Hans Heyman and High Court Judge Nic Hannah have called for a review in the procedure followed when rape victims have to have to testify.

In some cases child rape victims seem to be so put off when they come face to face with their attackers that they cannot testify, and the case against the rapist collapses.

Heyman and Hannah want a system that allows victims to testify on video or with a screen between them and the alleged rapist.

"It's time that we should try the kind of system that's adopted elsewhere in the United States and the United Kingdom, where complainants, certainly young complainants, are not subjected to the rather terrifying ordeal of appearing in witness box," said Hannah.

Even more importantly, Heyman says, urgent attention must be given to providing treatment for rape victims, who now receive only cursory counselling for psychological scars that can remain with them for the rest of their lives.

Heyman asked: "If the State can pay for the accused's defence, why can't it pay for treatment for the victim?"

The Ministry of Justice has sent a funding request to the United Nations Development Fund for Women (Unifem) to strengthen the prosecution of cases involving violence against women by providing training to prosecutors and members of the Namibian Police Women and Child Abuse Centre.

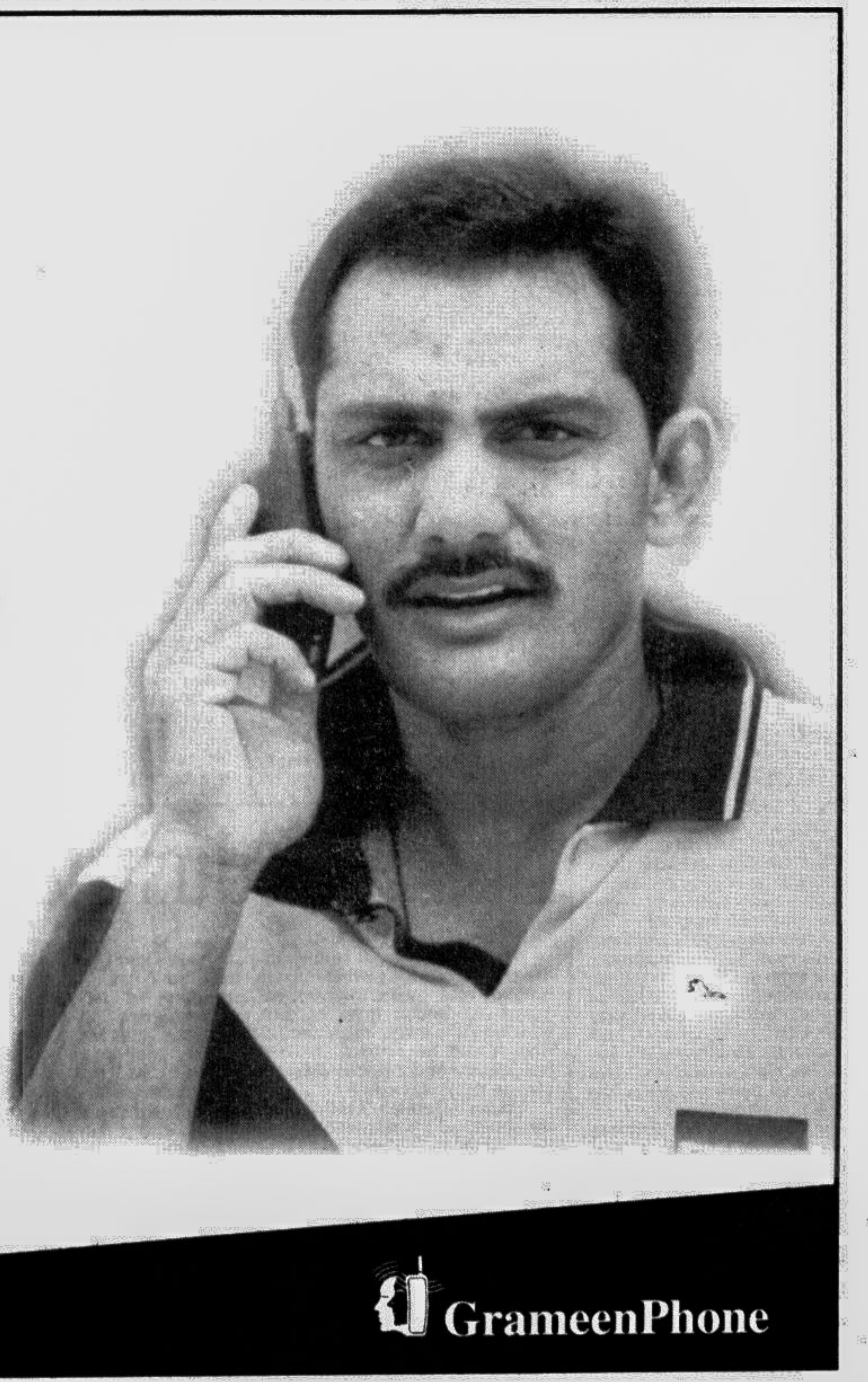
The proposal stresses: "It is of the utmost importance that a form of emotional and psychological support should be provided for the traumatised victim, and that a victim friendly atmosphere be cultivated in the criminal courts of Namibia."

— GEMINI NEWS  
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