

Jute Geotextile: Stands Out in Versatility

It is virtually difficult to imagine modern geotechnical constructions without incorporating geotextiles which is now considered superior in versatility to its synthetic counterparts, says Abdul Malek who is Joint Secretary and Director (Marketing), BJMC.

JUTE geotextile is a most versatile product made of jute by ABC Unit of Adhamjee Jute Mills Ltd of BJMC. It may be considered to be highly prospective from marketing point of view. The main applications of jute geotextiles pertain to (a) Rural Road Reinforcement, (b) Erosion Control and Vegetation Establishment in earthing slopes and (c) Agro-Mulching. There are certain characteristics of jute geotextiles such as biodegradability, in-plane drainage, absorption capacity and drapability which only the jute geotextiles possess and are lacking in geosynthetics. Initial high strength of jute geotextile equal to that of a geosynthetic counterpart is attainable and it is essential to cater for handling and installation stresses and sustain itself. Biodegradation brings about loss of strength and it is not a deterrent to most drainage applications. In vertical drainage applications the pre-fabricated drains kink due to excessive soil settlements and more so when dynamic impacts are applied. Synthetic pre-fabricated drains often rupture and cause the drain to be non-functional whereas jute drain can tolerate kinking without rupture and still permit efficient drainage to take place.

ing countries as much as to use countries of the developed world. Specially in Indonesia there is extensive and popular use of prefabricated jute drain in housing development, reclamation and highway projects.

Recently major applications in Japan are contributing to the popularity of jute drains. A few recent (1996) publications show successful applications of jute drains to projects in Indonesia (Pantai Mutiara Development) and Japan (Hiroshima and Yokohama). In Japan, Fukken Co Ltd and Professor H Aboshi of Hiroshima University are involved in jute drain applications.

In Indonesia there is extensive and popular use of prefabricated jute drain in housing development, reclamation and highway projects.

It has virtually become difficult to imagine geotechnical constructions without incorporation of geotextiles in modern construction practice. While geosynthetics dominate in all spheres of application, the natural jute geotextiles have now proven their mettle to match with geosynthetics in areas involving erosion, filtration, drainage and separation and such areas which constitute about more than 50 per cent of all geotextile applications. In such applications the initial strong desirable factors such as tensile strength, drainage capacity and non-clogging filtration ability count very much.

surface and subsurface drainage related problems.

Jute geotextiles in the woven or non-woven forms permit free flow of water both in normal and interplanar directions. Recent trend in both developed and developing countries very clearly suggest that the role of jute geotextiles importantly exist in fluid control and solid control applications. Fluid control involves filtration and drainage, and solid control involves separation and clogging. A variety of needle punched non-woven geotextiles with jute and polypropylene blending (if necessary) can be produced for various applications. Durability treatment also can be made to retard aging of jute geotextiles. Suitability of various kinds of blends with jute have been tried for filtration, separation, drainage and erosion control applications. The role of jute and coir geotextiles in the control of soil erosion through revegetation and the potential that exist for them in various areas are well known. Coir geotextiles and its composites with jute, sisal geotextiles and bamboo-jute/coir combinations have been used in several places particularly in South and Southeast Asia. Technically feasible, environmentally compatible and economically viable usage in-

Recently major applications in Japan are contributing to the popularity of jute drains.

Involving highways and railways, land reclamation and construction projects can be evolved replacing geosynthetics with jute geotextiles and their composites. The versatility of jute geotextiles and their formulations in adapting to filtration, separation and drainage application deserve attention especially by the jute producing countries. By so doing, these countries can gain in many ways such as promoting large scale usage of their own indigenous natural product, improving the infrastructural facilities to protect the environment, saving foreign exchange, to mention a few. The developing countries of Asia have opened up their economies and their rapid development requires almost instantaneous and unlimited infrastructure development in the areas of roads, railroads, airports, soil reclamation, drainage and other areas. The jute geotextiles potential in such projects has no bounds.

People's Participation in Planning Exercise : Experience from CPP

THE Compartmentalisation Pilot Project, under the Ministry of Water Resources, is being implemented by the Bangladesh Water Development Board (BWDB) and coordinated by the Water Resources Planning Organisation (WARPO). The overall objective of the project is to test the concept of compartmentalisation which accommodates the components of controlled flooding and controlled drainage instead of full flood control measures.

Approaches in people's participation, though complex and labour-intensive initially, can ultimately result into a positive people-project linkage, says **Dr M Rafiqul Islam**, Senior Consultant, Agricultural and Social Sciences Division, Bangladesh Engineering and Technological Services, and former Team Leader (National), Compartmentalisation Pilot Project, Tangail.

A new approach: consultation and institutionalisation phases merged together
The procedures remained the same as described above except that during initial consultation meetings with farmers, hawk committees were formed and during combined meetings, SCWMCs were formed. **Lessons learned from new approach:** consultation and formation of different committees simultaneously consumed less time and less man power; awareness of people about project interventions before implementation rose; conflicts minimised between different target groups.



Women participating in Compartmentalisation Pilot Project (CPP), Tangail.

However, the strength, the uniqueness, the distinctive character of this project lies in placing peoples participation as the central element in all phases of project activities. What is actually meant by people's participation? To some, it is the ultimate empowerment of people, to others, it is involvement of people through their elected representatives and to yet others it is simply involvement/participation of people in project activities. It is natural to find people differing on the true meaning of peoples participation. However it is hard to find anyone who does not believe in the need for more people's participation in development projects. In Compartmentalisation Pilot Project (CPP), people's participation is defined as involving people in all phases of project cycle, with the aim that they will operate and maintain this project.

Needs Assessment Phase
The objectives of the needs assessment were: to get a broad, interdisciplinary, descriptive overview of the existing situation; to identify the existing water management situation and constraints; and to find out people's opinion on potential solutions, structural and non-structural, to overcome the constraints identified.

Consultation Phase
The objectives of the consultation phase were: to discuss the preliminary plan (Needs Assessment Intervention Matrix) in a structured and organised meeting; to get feedback on proposed interventions; to stimulate the involvement of PAPs and bring locally elected Union Parishad in the process of involvement.

Lessons learned and recommendations: The needs assessment survey was found very useful to get the view of different interest groups. During group interviews, it was often difficult to separate water related issues from the broader issues of health, education, communication etc. Needs assessment recognised

the importance of local knowledge and valued locally proposed solutions. In the CPP, more than 55 per cent of the planned interventions were proposed directly by local people. Concise reporting was found essential so that key elements could easily be recognised. Reporting of needs assessment at Sirajganj was 20 per cent of total of Tangail. People's assessment of problems focussed towards the hydrological situation of the area over the years. Assessment over two different years is recommended.

Institutionalisation of People's Participation Phase
During the initial preparation of implementation procedures, a separate effort was initiated for the institutionalisation of people's participation. Basic aim was to have:

- a three tier system of representation and management, i.e. hawk, subcompartment and compartment levels. The project area (a compartment) is divided into 5 clusters and 16 subcompartment to accommodate 142 chawks. Subcompartment level institution (Sub Compartmental Water Management Committee-SCWMC) which represents a manageable hydrological unit, was considered central to water management decisions;
- four parties to participate and contribute: a) interest groups (farmer, fishermen, women); b) technical department (BWDB, DAE, BRDB etc.); c) local government (Union Parishad); and d) NGOs;
- Chawk Committees usually consist of farmers only.

Out of 5 clusters, the above procedures were followed in 3 clusters (II, II and III). A number of limitations were identified and lessons learned were accommodated. However, the major limitation identified was absence of linkage between consultation and institutionalisation phases. As these two phases were implemented over more than a year apart, it was difficult to organise same people attend these meetings and a continuity in discussion/dialogue could not be maintained. Hence, a new approach was followed in cluster

Conclusions
Approaches in people's participation, though complex and labour-intensive initially, resulted in a positive people-project linkage. Locally formed water management committees have taken responsibilities for operation of all water control structures according to the need of the area. This minimised conflicts substantially and conflicts were resolved locally. An attitude of ownership is gradually developing. Planning exercise has become a continuous process to accommodate often changing need or hydrological situation. These changes or flexibilities are essential in any project involving people.

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Jute geotextiles are ideally suited for drainage related applications in geotechnical engineering. They may be designed to cater to the needs of specific problems in any of the woven or non-woven jute formulations or in any of the many possible composite forms with other natural or synthetic combinations. Applications in the form of prefabricated vertical and horizontal drainage as well as for slope and bank protection purposes, using jute/jute composite geotextiles, have proven to be dependable success. The jute geotextiles have got proven versatility in varied forms for application in civil engineering infrastructure projects. Research and successful applications over the past decade especially in erosion control and deep soil drainage projects in India, Singapore, Malaysia, Indonesia and Japan, have confirmed the fact that jute geotextiles in their varied forms are a boon especially to jute produc-

The Daily Star Entertainment Guide

Thursday 7th November
(All programmes are in local time. There may be changes in the programmes)

BTV
3:00 Opening announcement, Al-Quran, Programme Summary
3:10 News in Bangla 3:15 Patriotic Song 3:20
Selected programmes from TV archive
4:20 Cartoon film - Tom & Jerry
4:50 TV Debate 5:00 News in Bangla 5:25 From the Heart of Bangladesh 6:30 Religion & Life 6:50 Nazrul Song 7:00 The News 7:25 Special programme on November 7: 8:00 News in Bangla 8:25 Glimpses from JS 9:00 Arabian Nights 9:30 Musical programme features Haimanti Shukla 10:00
The News 10:30 Glimpses from JS 11:00 The Switch 11:30 News in Bangla 11:35 Friday's programme summary 11:40 Close down

CHANNEL V
6:00am Frame by Frame 7:00 Rewind VJ Sophia 8:00 Frame by Frame 9:00 Big Bang VJ Alessandra 10:30 Frame by Frame 11:30 The Vibe VJ Luke 12:00 Rewind VJ Sophia 1:00 By Demand VJ Trey 2:00 Frame by Frame 2:30 First Day First Show 3:00 BPL Oye 4:00 Planet Ruby 4:30 By Demand VJ Trey 5:30 Music Update Tokyo 6:00pm Rewind VJ Sophia 7:00 Big Bang VJ Alessandra 8:00 Planet Ruby 8:30 The Vibe 9:30 Videoon Flashback 9:30 Top of the Pops 10:00 First Day First Show 10:30 Soul Curry 11:00 Classic Rock 12:00am Jump Start VJ Trey 1:00 Haysat 2:00 By Demand VJ Trey 3:00 Big Bang VJ Alessandra 4:30 BPL Oye

STAR PLUS
6:00am Home and Away 6:30 The Sullivan 7:00 Aerobics Oz Style 7:30 STAR News 8:00 SKY News 8:30 STAR News 9:00 SKY News 9:30 Aerobics Oz Style 10:00 Today's Gourmet 10:00 ET VJ 11:00 Kate & Allie 11:30 The Oprah Winfrey Show 12:30 21 Jump Street 1:30 Santa Barbara 2:00 The Bold & The Beautiful 3:00 Khandaan 3:30 Tehkaat 4:00 Home and Away 4:30 Lost in Space 5:30 Adventures Of Black Stallion 6:00pm Kate & Allie 6:30 Today's Gourmet 7:00 Destinations 'Cornwall' 7:30 STAR News (Hindi) 8:00 Small Wonder 8:30 The Bold & The Beautiful 9:00 Ghatna 9:30 STAR News 10:00 Family Ties 10:30 The X Files 11:30 The Bold & The Beautiful 12:00 Santa Barbara 1:00 Baywatch Nights 2:00 21 Jump Street 3:00 Quincy 4:00 The Oprah Winfrey Show 5:00 Barnaby Jones

BBC
6:00am BBC World News 6:10 Newsnight 7:00 BBC News-World News 7:30 BBC News-World Report/Asia Today/24 Hours 10:00 BBC World Headlines 10:05 World Focus: Around The World In 80 Days 11:00 BBC Newsday 2:00 BBC World Headlines 2:05 World Focus: Wholesome On America 3:00 BBC World News 3:30 Time Out: Holiday 4:00 BBC Newsdesk 6:00pm BBC World Headlines 6:05 World Focus: Horizon 7:00 BBC World News 7:15 World Business Report 7:30 BBC Newshour Asia and Pacific 8:30 Time Out: Jeremy Clarkson's Motorworld 9:00 BBC World Headlines 9:05 Around The World In 80 Days 10:00 BBC World News 10:30 Time Out: Film '96 11:00 BBC World News 11:30 Time Out: Floyd's American Pie 12:00 The World Today 2:00 BBC World Headlines 2:05



STAR SPORTS

6:00am World Cup Table Tennis 1996 1st and 2nd Semi Finals From Nimes, France 7:30 1996 Asian Under 19 Championships 3/4 Place From S Korea 9:00 1996 Asian Under 19 Championships Final From S Korea 10:30 Spanish Football League HL 11:00 Live Singer Champions Trophy 1996 New Zealand v Sri Lanka 2:30 Cricket Hall Of Fame 3:30 Live Singer Champions Trophy 1996 New Zealand v Sri Lanka 7:00 World Wrestling Federation Raw 8:00 Spanish Football League HL 8:30 SDD NBA Japan Games 1996 Oriando Magic vs New Jersey Nets Fm Tokyo, Japan 10:30 Futbol Mundial 11:00 US PGA Tour Merrill Lynch Shootout Day 4 HL 12:00 World Wrestling Federation Raw 2:00 Gillette World Sport Special 2:30 International Motorsports News 3:30 1996 Omega Tour Alfred Dunhill Masters Final Day Highlights

STAR MOVIES
7:30am World Cinema: It Started With Her 15 (English Subtitles) 9:30 Family: A Thousand Heroes 12 (Arabic Subtitles) 11:30 Western: Lone Wolf Macouade 12 (Hindi Subtitles) 1:30 Adventure: Lady of Burlesque PG (Hindi Subtitles) 2:30 Documentary: Charlie Chaplin! A Celebration 12 (Hindi Subtitles) 5:30 Comedy: Mr Saturday Night 15 (Arabic Subtitles) 7:30 Family: Duddy G (Hindi Subtitles) 9:00 US Top Ten 9:30 Romance: No Greater Love 11:30 Thriller: Rainbow Drive 18 (Arabic Subtitles) 1:30 Comedy: When Pigs Fly 18 3:30 Horror: The Omen 18 (Arabic Subtitles) 5:30 Action: The Great Texas Dynamite Chase 18 (Arabic Subtitles)

EL TV
07:30 Pyar Hi Pyar 08:30 Jeewan Ka Rang 09:30 Dance Dance 10:30 The Music Show: Real Countdown 11:00 Nukkad 11:30 Shatrayi 12:00 Top of the Tops 12:30 Brogader Balwant Bhawan 1:00 Suhana Saar 1:30 Nazrana 2:00 Special 3:00 Amar Prem 3:30 Chelra 4:00 Akanksha 4:30 Song Yaatra 5:00 Dear EL 05:30 Special 6:30 Sorry Men Lorry 7:00 Hit Hi Hit Hai 7:30 Hakke Bhakke 8:00 FAUJI 8:30 Liberty Public Demand 9:30 Gambler 10:00 Peoples Club 10:30 Humrah 11:00 Casper Number One 11:30 Filmi Chaat 12:00 Newsline 12:30 Special 1:30 Tarane Aur Fasane 2:30 Party Time

PTV
8:00am Tilawat Aur Tarjuma/Hamd/Naaiz 8:30 Cartoon 8:30 Khabrain 8:45 Cut Piece 9:30 Aahang & Rubins 9:45 Photo Chandi 10:05 Sona Chandi (Drama Serial) 10:30 Buttons & Rustys (Eng. Film) 10:55 Milli Naghma 11:00 Khabrain 11:10 Aabshaar (Music Programme) 11:55 Tele Play (Drama Serial) 1:15 Muqaddar (Drama Serial) 2:05 Puthar (Drama Serial) 2:45 Perspective & Health Focus 3:30 Taleemi Maloomat 4:35 Aurat Aur Qanoon 5:05 Home Economics 5:25 Humayyar Saah 6:25 Adui Cormas 7:05 Mehdi Ali Aana 7:30 Awaak Wala Jinn 7:45 English News 8:05 Jawsan Sangeet 8:45 Endhan (Drama Serial) 9:00 Break for Headline News 10:00

ZEE TV
6:00 News 6:30 Jagran 7:00 ZED 8:30 All Out 9:00 Ghoornat Aaina 9:30 HFF 12:00 17 Shirley Road 12:30 Aur Ek Minute 1:00 ZED 1:30 Asian Sky Shop 2:30 Tara 3:00 Cook Show 3:30 Captain Cook Show 4:00 Helpline 4:30 More Ghat Ana 5:00 ZED 5:30 Tee Kaman 6:00 Hum Honge Kamyab 6:30 Ad Mad Show 7:00 Man-

SONY ET
8:30am Yaadon Ki Baaraat 9:00 The Three Stooges 9:30 Dennis The Menace 10:00 I Dream

DD 7
10:30 Janmadin 10:35 Classical Music 11:00 Dance 12:00 ETV Programme 12:30 Kalkata Bishtra 1:00 Janani (Serial) 2:30 Darpan (Serial) 3:00 Eto Tuko

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10:30 Janmadin 10:35 Classical Music 11:00 Dance 12:00 ETV Programme 12:30 Kalkata Bishtra 1:00 Janani (Serial) 2:30 Darpan (Serial) 3:00 Eto Tuko

Basha (Serial) 3:30 Shreshhi 5:05 Nepali Programme 5:30 News 5:35 Sahitya Samiskriti 6:00 Palli Katha 6:30 Chakri Khabar 6:55 (Serial) 7:30 Bangla Sambad 8:00 Sur Sangeet 8:30 Deaw (Serial) 9:00 Janani (Serial) 9:30 Swaper Bazar (Serial) 10:00 Bengali Movie Club Film Show 1:00 Closed



TOM and JERRY

I WAS SAVING THIS CAKE TO SHARE WITH TOOTS... ...BUT I CAN'T WAIT ANY LONGER.

HELLO, FATSO

HELLO, SHREDDED SHIRT

NEITHER COULD!!