# Report on

# 2<sup>nd</sup> International Conference on Water and Flood Management

**ICWFM-2009** 

15-17 March, 2009 Dhaka, Bangladesh

Institute of Water and Flood Management
Bangladesh University of Engineering and Technology

May 2009

### **CONTENTS**

Acknowledgement	page iii
Introduction and Background	1
Organization of Conference	1
Announcement	1
Conference Secretariat	1
Organizers	1
Committees and sub-committees	1
Sponsors	2
Registration fee	2
Financial assistance to participants	2
Database	3
Website	3
Papers and Participants	3
Selection of abstracts and full papers	3
Keynote papers	4
Conference proceedings	5
Number of participants	5
Conference Program	5
Distribution of registration kit	5
Venue	5
Inauguration	5
Paper presentation in technical sessions	8
Closing dinner	9
City bus tour	10
Statement of Income and Expenditure	11
Appendices:	
Appendix I List of committee members	
Appendix II List of participants	
Appendix III List of press clippings	
Appendix IV List of sessions with paper title, authors, session-ch	air and rapportiers

### Acknowledgement

The International Conference on Water and Flood Management (ICWFM-2009) was organized as per the decision of the Board of the Governors of the Institute of Water and Flood Management (IWFM) of BUET. The logistics support of BUET during the organizing phase and during conference was of vital importance to arrange the event. This conference would never have been successful without the intense and tireless efforts of some of the individuals and organizations. This endeavor therefore owes a considerable debt to a number of institutions.

We gratefully acknowledge the financial support provided by the Embassy of the Kingdom of the Netherlands. This support has made it possible to arrange the international event at an eminent venue, publish the pre-conference paper volume in an expanded manner and also accommodate more presenters from developing countries through financial support.

Active participation of the members from Department of Water Resources Engineering, BUET, Water Resources Planning Organization (WARPO), Bangladesh Water Development Board (BWDB), Local Government Engineering Department (LGED), Center for Environmental and Geographic Information Services (CEGIS) and Institute of Water Modelling (IWM), in organizing the conference, are gratefully acknowledged.

The members of the International Advisory Committee, the Local Advisory Committee and the Technical Committee are acknowledged for their valuable suggestions and comments.

The wholehearted cooperation provided by the faculty, staff and student volunteers of IWFM are gratefully acknowledged.

Last but not the least, the earnest and enthusiastic efforts by the members of various subcommittees, volunteers from different organizations and media persons are humbly appreciated.

### **Introduction and Background**

On April 23, 2007 in a follow-up meeting of the Organizing Committee for (First) International Conference on Water and Flood Management (ICWFM-2007) it was decided that ICWFM should be organized as a bi-annual event. Later, in 2008 this decision was approved by the Board of Governors of Institute of Water and Flood Management (IWFM), BUET. Accordingly, International Conference on Water and Flood Management, ICWFM-2009 was held during 15-17 March, 2009. This report aims at providing an overview of the conference regarding its organization, papers, programme, and income and expenditure.

Management of water and flood plays a key role in economic growth and social development. Many of the water and flood management projects have not been able to achieve the desired objectives, because of inefficiency in water use, inequitable distribution of project benefits and costs, inappropriate institutional framework, and inadequate legal and regulatory measures. The emerging issues like global warming and climate change would exacerbate the management problems. Thus, there is a need for concerted effort to identify appropriate water policies, strategies and management practices to achieve sustainable solutions to water and flood management problems. The purpose of the conference was to discuss the above problems and issues and to advance knowledge on water and flood management in order to promote environmentally sustainable development.

### Organization of Conference

### Announcement

The first announcement of the conference was made in July 2008. The announcement was publicized through postal mails, group-emails, website and circulation of posters and brochures.

### Conference Secretariat

A conference secretariat was established at IWFM, BUET since the announcement.

### **Organizers**

The conference was organized by the Institute of Water and Flood Management (IWFM) of Bangladesh University of Engineering and Technology (BUET), in collaboration with Department of Water Resources Engineering, BUET, Water Resources Planning Organization (WARPO), Bangladesh Water Development Board (BWDB), and Local Government Engineering Department (LGED).

### Committees and Sub-committees

The following four committees were formed at the early stage and included in the announcement:

- 1. Organizing Committee
- 2. Technical Committee

- 3. Local Advisory Committee
- 4. International Advisory Committee

Later the following sub-committees were formed by the organizing committee:

- 1. Finance Committee
- 2. Registration Committee
- 3. Session Management Committee
- 4. Technical Visit Committee
- 5. Foreign Participants Affairs Committee
- 6. Publication Committee
- 7. Accommodation and Tours Committee
- 8. Internet Committee
- 9. Inauguration Committee
- 10. Refreshment Committee
- 11. Transportation Committee

A complete list of committee members is provided in APPENDIX-I.

### Sponsors

Financial supports for the conference were provided by The Embassy of the Kingdom of the Netherlands, Center for Environmental and Geographic Information Services (CEGIS) and Institute of Water Modelling (IWM). An agreement between The Embassy of the Kingdom of the Netherlands and IWFM, BUET, regarding financial support, was signed on March 4, 2009.

Financial contribution was also made by the LGED who collaborated in organizing the event.

A bank account was opened to operate the financial activities of the conference at Sonali Bank, BUET Branch (Current Account No. 33011231).

### Registration fee

Registration fee for the participants is shown in Table 1. This fee covered registration materials, inauguration ceremony, and refreshment during conference, pre-conference paper volume and closing dinner.

Table 1: Registration fee

Developed countries	U.S. \$300
Developing countries	U.S. \$150
SAARC countries	U.S. \$100
Local participants	Tk. 2000

### Financial assistance to participants

A total of 13 participants from developing countries received local financial assistance. The financial assistance covered registration fee, accommodation, food and local transportation during the conference.

### Database

A central database was developed to keep record of the received abstracts, papers, and their registration and presentation schedules. It was updated from time to time to organize the whole event smoothly.

#### Website

A website was launched for the conference to provide necessary information and updates regarding the event. The link was: http://www.buet.ac.bd/icwfm2009

### Papers and Participants

### Selection of abstracts and full papers

According to the first announcement deadline for abstract submission was 15 September 2008, notification of abstract acceptance 15 October 2008, deadline for full-paper submission 15 December 2008, notification of full-paper acceptance 15 January 2009, deadline for registration 31 January 2009. Finally, 179 abstracts were received from 17 countries.

These 179 abstracts were reviewed by 19 reviewers. A total of 146 abstracts were accepted and the corresponding authors were notified to submit full papers. Respective authors were notified about the status of their abstracts as per schedule. A country-wise distribution of the received and accepted abstracts is given in Table 2.

Table 2: Country-wise distribution of received and accepted abstracts

Country	Number of abstracts received	Number of abstracts accepted
Australia	6	6
Bangladesh	88	71
Cyprus	1	1
France	1	1
Germany	3	2
Ghana	1	1
India	28	21
Indonesia	4	3
Iran	10	8
Iraq	1	1
Japan	28	25
Nigeria	1	1
Rwanda	1	1
Sri Lanka	1	1
Turkey	1	1
UK	1	1
USA	2	1
Total	178	146

These abstracts were received under nine themes. A distribution of received and accepted abstracts under different themes is provided in Table 3.

Table 3: Theme-wise distribution of abstracts received and accepted

Theme	Number of	Number of abstracts
	abstracts received	accepted
Agricultural Water Management	20	17
Catchment Processes, Ecosystems and Quality of Environment	63	57
Climate Change Impacts on Water Management	18	14
Coastal Zone Management	24	20
Flood Management	19	13
Management of Shared River Basin	1	1
Urban Water Management	13	9
Water Information Management	12	12
Water Policy and National Development	8	3
	178	146

A total of 95 full papers out of 146 selected abstracts were received. These full paper were reviewed and finally 87 full papers were accepted for the conference.

### Keynote papers

Two renowned researchers from the Netherlands; Mr. G. J. Klaassen and Mr. Ronald Waterman were invited as keynote speaker for ICWFM-2009. Mr. Klaassen prepared a paper on River Erosion, Sedimentation and Bank protection, while Mr. Waterman did the same on Coastal Zone Management. Table 4 shows a country-wise distribution of the full papers of ICWFM-2009. Table 5 shows a theme-wise distribution of the papers of ICWFM-2009. Among the selected papers, no paper was received in the theme 'Management of Shared River Basin' and Water Policy and National Development.

Table 4: Country-wise distribution of full papers for ICWFM-2009

Country	Number of Papers
Australia	4
Bangladesh	43
Cyprus	1
France	1
Germany	1
India	8
Indonesia	1
Iran	2
Japan	22
Malaysia	1
Netherland	2*
Rwanda	1
Sri Lanka	1
USA	1
Total	89

<sup>\*</sup> Both are keynote papers

Table 5: Theme-wise distribution of full papers for ICWFM-2009

Theme	Number of papers
Agricultural Water Management	12
Catchment Processes, Ecosystems and Quality of Environment	28
Climate Change Impacts on Water Management	9
Coastal Zone Management	9*
Flood Management	12
River Erosion, Sedimentation and Bank Protection	7*
Urban Water Management	6
Water Information Management	6
Total	89

<sup>\*</sup>Including a keynote paper

### Conference proceedings

#### Format:

A format for the conference proceedings was circulated among the authors. Suggested maximum page limit was eight on a custom-sized paper with 7.5 x 10 inch and 1 inch margin on all four sides.

The pre-conference paper volume has been distributed ahead of the conference among the authors, delegates, guests and committee members. Some additional copies have been kept to distribute to selected libraries inside the country.

### Number of participants

A total of 100 authors participated during the conference including 45 participants from abroad. Apart from authors, professionals and delegates from Germany and Thailand attended the conference. This time a significant number of local deligates attended the conference. A total of fifty members of various sub-committees of the conference also attended the conference. A complete list of participants: authors, keynote speakers and delegates followed by a separate list of authors who received local financial assistance is provided in APPENDIX-II.

### **Conference Program**

### Distribution of registration kit

Participants from Bangladesh collected their registration materials on 14 March, 2009 at the registration desk of IWFM, while participants from abroad received it from their respective hotel receptions.

### Venue

The conference was held at Bangladesh-China Friendship Conference Centre (BCFCC) at Agargaon.

### Inauguration

The three day event from 15<sup>th</sup> to 17<sup>th</sup> of March began with an inaugural ceremony where around 350 persons attended. Apart from the authors and organizers guests from different

government and non-government organizations attended the inaugural session. Journalists from some of the national dailies and electronic media also joined the inaugural ceremony. Press clippings from some of the newspapers are provided in APPENDIX-III.

After recitation from the Holy Qur'an, Professor Anisul Haque, Director of IWFM, BUET made a welcome speech. It was followed by an address from the Special Guests, Mr. Fritz Meijndert, Head of Development Co-operation, Embassy of the Kingdom of The Netherlands and Professor A. M. M. Safiullah, Vice-Chancellor of Bangladesh University of Engineering and Technology. Then, Dr. Muhammad Abdur Razzaque, MP Honorable Minister, Ministry of Food and Disaster Management, Government of the Peoples' Republic of Bangladesh, made his address as the Chief Guest and announced the inauguration of the conference. Finally, Professor Abul Fazal M. Saleh, Chairman of Organizing Committee, made his address. At the end of inaugural ceremony Professor Saleh, Chairman, ICWFM-2009 handed over conference crests to the Special Guests and Professor Anisul Haque, Director, IWFM, BUET handed over the conference crest to the Chief Guest.



Photo 1: Inaugural ceremony of ICWFM-2009



Photo 2: Left: Conference Chair, Professor Saleh handing over the conference crest to the Special Guest Mr. Meijndert, Head of Development Co-operation, Embassy of the Kingdom of The Netherlands and Right: Professor Anisul Haque, Director IWFM, BUET handing over the conference crest to the Chief Guest Dr. Dr. Muhammad Abdur Razzaque MP, Honorable Minister, Ministry of Food and Disaster Management, during the inauguration ceremony



Photo 3: Some of the audience of the inauguration ceremony of ICWFM-2009

### Paper presentation in technical sessions

Presentation of 89 papers were arranged by distributing them among fourteen technical sessions on March 15 and 16. These technical sessions were accommodated by arranging two parallel sessions on each day.

During ICWFM-2009, two special sessions on 'River Erosion, Sedimentation and Bank Protection' and 'Climate Change Impacts on Water Management' were included. The paper presentation schedule including the paper titles are given in APPENDIX-IV. Fifteen minutes was allotted for every author that included a five minutes discussion period. Table 6 shows the number of technical sessions under each theme.

Table 6: Theme-wise distribution of number of technical sessions for ICWFM-2009

Theme	Number of sessions
Agricultural Water Management	2
Catchment Processes, Ecosystems and Quality of Environment	4
Climate Change Impacts on Water Management	2
Coastal Zone Management*	1
Flood Management	2
River Erosion, Sedimentation and Bank Protection*	1
Urban Water Management	1
Water Information Management	1
Total number of technical sessions	14

<sup>\*</sup>Included a keynote presentation



Photo 4: Keynote Presentations during ICWFM-2009, Left: Mr. G. J. Klaassen on River Erosion, Sedimentation and Bank Protection and Right: Mr. Ronald Waterman on Coastal Zone Management





Photo 5: Presentations during technical sessions of ICWFM-2009

### Closing dinner

A closing dinner for all the participants was held at a BUET Cafeteria from 7:30 pm in the evening on March 16, 2009. Vice-chancellor of BUET, Professor Dr. A. M. M. Safiullah, Mr. Fritz Meijndert, Head of Development Co-operation, Embassy of the Kingdom of The Netherlands and some officials from collaborating and sponsoring agencies also joined the dinner. A 40-minute absorbing cultural program preceded the dinner.



Photo 6: Cultural program on 16 March evening at BUET Auditorium

### City bus tour

Due to security reasons the technical tours were cancelled and instead a city bus tour was arranged for the foreign participants. Local Government Engineering Department (LGED) provided logistical support during the tour.





Photo 7: Participants visiting different historic monuments in Dhaka

### APPENDIX I: LIST OF COMMITTEE MEMBERS

### **Organizing Committee**

Professor Abul Fazal M. Saleh, IWFM, BUET

Professor Jahir Uddin Chowdhury, IWFM, BUET

Professor Anisul Haque, IWFM, BUET

Professor Md. Munsur Rahman, IWFM, BUET

Professor M. Mirjahan, DWRE, BUET

Mr. Md. Shahjahan, Director, WARPO

Mr. Md. Shahidul Haque, Executive Engineer, LGED

Mr. G. M. Shamsur Rahman, Director, PMU-ESPP, BWDB

Dr. Mohammad Asad Hussain, IWFM, BUET

### **Technical Committee**

Professor Abul Fazal M. Saleh, IWFM, BUET

Professor Jahir Uddin Chowdhury, IWFM, BUET

Professor Mozzammel Hoque, IWFM, BUET

Professor Md. Rezaur Rahman, IWFM, BUET

Professor M. Monwar Hossain, DWRE, BUET

Mr. Saiful Alam, WARPO

Dr. K.M. Nabiul Islam, BIDS

### **Local Advisory Committee**

Executive Director, Bangladesh Centre for Advanced Studies

Director General, Bangladesh Institute of Development Studies

Director General, Bangladesh Water Development Baord

Director General, Water Resources Planning Organization

President, Bangladesh Water Partnership

Executive Director, Centre for Environmental and Geographic Information Services

Director General, Department of Environment

Executive Director, Institute of Water Modelling

Chief Engineer, Local Government Engineering Department

Division Chief Agriculture, Water Resources and Rural Institution Division, Planning

Commission

Director General, River Research Institute

### **International Advisory Committee**

Dr. Saleemul Huq, International Institute for Environment and Developmen

Professor Eelco van Beek, Delf Hydraulics, The Netherlands

Mr. Ajaya Dixit, Nepal Water Conservation Foundation, Nepal

Professor Nimal Gunawardena, South Asian Consortium for Interdisciplinary Water Resources, India

Professor Takashi Hosoda, Kyoto University, Japan

Stephan J. Hug, Swiss Federal Institute of Aquatic Science and Technology, Switzerland

Professor Shafiqul Islam, Tuffts University, USA

Dr. Peter P. Mollinga, Centre for Development Research, Germany

Professor Hajime Nakagawa, Kyoto University, Japan

Dr. Ainun Nishat, International Union for Conservation of Nature, Bangladesh

Professor Salim Rashid, University of Illinois of Urbana Champaign, USA

Dr. Olli Varis, Helsinki University of Technology, Finland

Dr. Saleh A. Wasimi, Central Queensland University, Australia

Dr. Claire Welty, University of Maryland, Baltimore

Mr. G. Pichel, DHV Consultants

#### Finance Committee

Professor Md. Rezaur Rahman, IWFM, BUET

Professor M. Munsur Rahman, IWFM, BUET

Professor M. Shah Alam Khan, IWFM, BUET

Mr. Moshiur Rahman, LGED

Mr. Md. Shahjahan, WARPO

Mr. Ahmadul Hassan, CEGIS

Mr. Abu Saleh Khan, IWM

Dr. Mohammad Asad Hussain, IWFM, BUET

### **Registration Committee**

Professor M. Munsur Rahman, IWFM, BUET

Mr. Biswajit Nandi, DWRE, BUET

Ms. Nazmun Naher Chowdhury, WARPO

Mr. Md. Shafquat Hasan, BWDB

Mr. A.S.M. Sumsuzz Joha, LGED

Ms. Jakia Akter, CEGIS

Mr. Sharif Imam Ib-N-E Amir, IWM

### Session Management Committee

Dr. A.K.M. Saiful Islam, IWFM, BUET

Dr. Mohammed Abed Hossain, IWFM, BUET

Dr. Tarekul Islam, IWFM, BUET

Mr. Aminur Rahman Shah, CEGIS

Mr. Tauheed Mahmud Hussain, IWM

### **Technical Visit Committee**

Professor M. A. Matin, DWRE, BUET

Mr. Moshiur Rahman, LGED

Mr. G. M. Shamsur Rahman, BWDB

Dr. Mashfigus Salehin, IWFM, BUET

Dr. M. Shahjahan Mondal, IWFM, BUET

### Foreign Participants Affairs Committee

Professor M Mozzammel Hoque, IWFM, BUET

Dr. Sujit Kumar Bala, IWFM, BUET

Mr. Md. Shahjahan, WARPO

Mr. Md. Shahidul Haque, LGED

Mr. Tarue Abdullah Al Fayaz, BWDB

### **Publication Committee**

Professor M. Shah Alam Khan, IWFM, BUET

Dr. M. Shahjahan Mondal, IWFM, BUET

Dr. M. Ataur Rahman, DWRE, BUET

Mr. Syed Abu Shoaib, WARPO

Mr. Motaleb Hossain Sarker, CEGIS

### Accommodation and Tours Committee

Dr. Sujit Kumar Bala, IWFM, BUET

Mr. Md. Siddiqur Rahman, WARPO

Mr. Badal Mohaldar, DWRE, BUET

### **Internet Committee**

Dr. A.K.M. Saiful Islam, IWFM, BUET

Dr. Mohammed Abed Hossain, IWFM, BUET

Mr. Biswajit Nandi, DWRE, BUET

Mr. Krishna Chandra Bhadra, WARPO

### **Inauguration Committee**

Dr. Tarekul Islam, IWFM, BUET

Dr. Umme Kulsum Navera, DWRE, BUET

Dr. Mohammed Abed Hossain, IWFM, BUET

Mr. Sultan Ahmed, CEGIS

Ms. Fahima Shahadat, IWM

### **Refreshment Committee**

Dr. Mashfiqus Salehin, IWFM, BUET

Mr. Nuruzzaman Sheikh, IWFM, BUET

Mr. Md. Siddiqur Rahman, WARPO

Mr. Robin Kumar Biswas, BWDB

Mr. Sheikh Tareq Jaman, LGED

Mr. Nandan Mukherjee, CEGIS

### **Transportation Committee**

Mr. Md. Belayet Hossain BWDB

Dr. Sujit Kumar Bala, IWFM, BUET

Dr. Ataur Rahman, DWRE, BUET

Mr. A.K.M. Shahidul Islam, LGED

Mr. Md. Shahjahan, WARPO

Mr. Md. Abul Hossain, BWDB

Mr. Syed Ahsanul Haque, CEGIS

Mr. Md. Mohaimenul Islam, IWM

# APPENDIX II: LIST OF PARTICIPANTS IN ICWFM-2009

### **Authors:**

Sl. No.	Name and Address	Abstract ID
	Mohammad Mehdi Heydari	
1	Ph.D Student, Hydraulic Structure	2
1	Department of Sciences And Researches	3
	Azad University, Ahwaz, Iran	
	Md. Alauddin Hossain	
	Senior Scientific Officer (Ad. Ch.)	E
2	River Research Institute, Faridpur-7800	5
	Bangladesh	
	Prakash C Swain	
3	Department of Civil Engineering	
	University College of Engineering, Burla-768018, Orissa, India	
	H J Shiva Prasad	6
1,	Department of Civil Engineering	
4	G B Pant University of Agriculture& Technology	
	Pantnagar-263145, Uttarakhand, India	
	Amal Roy Chowdhury	
	Regional Occupational Health Centre (E)	
5	Indian Council of Medical Research	8
	Salt Lake City, Calcutta – 700 091, India	
	Amit Baran Sharangi	
	Department of Spices and Plantation Crops	
6	Bidhan Chandra Krishi Viswavidyalaya	10
	Mohanpur-741252, Nadia, West Bengal, India	
	Narayan Chattopadhyay	
	Department of Spices and Plantation Crops	
7	Faculty of Horticulture, Bidhan Chandra Krishi Viswavidyalaya,	11
	Mohanpur-741 252, Nadia, West Bengal, India	
	Hojjat Yazdan Panah	
8	Assistant Professor, Department of Geography	12
	University of Isfahan, Isfahan, Iran	
	Gias Uddin Ahmed	
9	Professor, Institute of Forestry & Environmental Sciences	15
	University of Chittagong, Chittagong, 4331, Bangladesh	
	Suresh Kumar Pande	
	Head, Department of Soils and Agricultural Engineering, Higher Institute	
10	of Agriculture and Animal Husbandry (ISAE), Busogo, Post Box-210,	16
	Ruhengeri, Rwanda	
	M. Shahjahan Mondal	
	Associate Professor, Institute of Water and Flood Management,	
11	Bangladesh University of Engineering and Technology, Dhaka-1000	17
	Bangladesh	
12	Salih Gucel	
	Near East University, Institute of Environmental Sciences,	21
	Nicosia, Cyprus	
	Abu Saleh Khan	
13	Institute of Water Modelling, New DOHS,	
	Mohakhali, Dhaka-1206	27
	Bangladesh	
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14	Krishna Prasad Dulal Labratory of Hydraulic Research, Hokkaido University, N-13,W-8,Kita-Ku, Sapporo 060-8628, Japan	28
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16	Md. Yousuf Mamun Graduate Student, Department of Water Resources Engg. Bangladesh University of Engineering and Technology Dhaka-1000, Bangladesh.	
17	Tanvir Ahmed Graduate Student, Department of Water Resources Engg. Bangladesh University of Engineering and Technology Dhaka-1000, Bangladesh.	30
18	Anjuma Tabassum Khan Institute of Water Modelling, New DOHS, Mohakhali, Dhaka-1206, Bangladesh	31
19	Md. Yousuf Mamun Junior Specialist, Flood Management Division, Institute of Water Modelling, House No-496, Road No-32, New DOHS Mohakhali, Dhaka- 1206, Bangladesh.	37
20	Sujit Kumar Bala Institute of Water and Flood Management, Bangladesh University of Engineering and Technology, Dhaka-1000 Bangladesh	39
21	Md. Rezaul Karim Department of Civil Engineering, Khulna University of Engineering and Technology, Khulna-9203, Bangladesh	41
22	Gazi Mohammad Mohsin Consultant, Local Government Engineering Department Dhaka-1000, Bangladesh	
23	Md. Shafiquzzaman Department of Environmental Systems Engineering, Ritsumeikan University, Nojihigashi 1-1-1, Kusatsu, Shiga, 525-8577, Japan	42
24	Bijoy Kumar Ghosh Sher-e-Bangla Nagar Govt. Boys High School and College, Dhaka, Directorate of Secondary and Higher Education, Bangladesh	44
25	Akira Sakai Faculty of Information Sciences, University of Marketing and Distribution Sciences, Kobe 651-2188, Japan	46
26	Grinaldo Dita Maranatha Public Service and Research Centre, Maranatha Christian University, Bandung 40164, Indonesia	47
27	Bishawjit Mallick Institute of Regional Science (IfR), Karlsruhe University (TH), 76131 Karlsruhe (TH), Germany	51
28	Saleh A. Wasimi CQ University, Rockhampton, Queensland 4702, Australia	53
29	Md. Shahjahan Ali Assistant Professor, Civil Engineering Department Khulna University of Engineering and Technology Khulna-9203, Bangladesh	55
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30	Md. Saiful Islam Department of Civil Engineering, Khulna University of Engineering and Technology, Khulna-9203, Bangladesh	56
31	Hiroshi Uyeda Hydrospheric Atmospheric Research Center, Nagoya University, Japan	58
32	Hao Zhang Disaster Prevention Research Institute, Kyoto University, Shimomisu, Yoko-oji, Fushimi-ku, Kyoto 612-8235, Japan	60
33	Kh. Md. Shafiul Islam Department of Civil Engineering, Khulna University of Engineering and Technology, Khulna 9203, Bangladesh	61
34	Andrew Jenkins Planning Directorate III, Bangladesh Water Development Board (BWDB), Hasan Court (7th Floor) 23/1 Motijheel C/A, Dhaka 1000, Bangladesh	
35	A.T.M. Habibullah Planning Directorate III, Bangladesh Water Development Board (BWDB), Hasan Court (7th Floor) 23/1 Motijheel C/A, Dhaka 1000 Bangladesh	63
36	Md. Zafar Iqbal Planning Directorate III, Bangladesh Water Development Board (BWDB), Hasan Court (7th Floor) 23/1 Motijheel C/A, Dhaka 1000 Bangladesh	0.5
37	Alamgir Chowdhury Planning Directorate III, Bangladesh Water Development Board (BWDB), Hasan Court (7th Floor) 23/1 Motijheel C/A, Dhaka 1000 Bangladesh	
38	Md. Amirul Hossain Executive Engineer, Planning-III, Bangladesh Water Development Board (BWDB), 23/1 Motijheel CA (7th & 8th Floor), Dhaka-1000 Bangladesh	64
39	A.H.M. Kausher Chief Engineer, Hydrology, former Project Director, IPSWAM, BWDB, Motijheel CA, Dhaka-1000, Bangladesh	
40	Md. Nazrul Islam SAARC Meteorological Research Centre Agargaon, Dhaka-1207, Bangladesh	72
41	Jayson Peterson Hydro Tasmania Consulting, 89 Cambridge Park Drive, Tasmania 7170 Australia	76
42	Sho SHIBATA Graduate School of Engineering, Kyoto University, Gokasho, Uji, Kyoto, 611-0011, Japan	78
43	Anwar Zahid Ground Water Hydrology, Bangladesh Water Development Board, Dhaka-1205, Bangladesh	79
44	B.R.S.B. Basnayake SAARC Meteorological Research Centre (SMRC), Dhaka 1207, Bangladesh	80
45	Mohammad Nazim Uddin Assistant Professor, Department of Civil Engineering, DUET, Gazipur-1700, Bangladesh	82

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47	G.M. Tarekul Islam Institute of Water and Flood Management, Bangladesh University of Engineering and Technology, Dhaka-1000 Bangladesh	85
48	Fahmida Hoque Khan Sub-Divisional Engineer, Roads and Highways Department, Sarak Bhaban, Ramna, Dhaka, Bangladesh	86
49	Krishna Prasad Dulal of Hydraulic Research, Hokkaido University, N-13,W-8,Kita-Ku, Sapporo 060-8628, Japan,	88
50	Abu Jafar Md. Saleh Bangladesh Institute of Development Studies, Sher-e-Bangla Nagar, Dhaka-1207, Bangladesh,	89
51	Ichiro Kimura Graduate School of Engineering, Hokkaido University, N13, W8, Kita-ku, Sapporo 060-8628, Japan	93
52	Md. Mobassarul Hasan Post Graduate Student, Department of Water Resources Engineering, BUET Dhaka-1000, Bangladesh	94
53	Mohammed Arifur Rahman Institute of Water and Flood Management, Bangladesh University of Engineering and Technology, Dhaka-1000, Bangladesh	97
54	M. Shahab Uddin Institute of Marine Sciences and Fisheries, University of Chittagong, Chittagong-4331, Bangladesh	98
55	Manjur Murshed Zahid Ahmed Specialist, Institute of Water Modelling (IWM), Dhaka-1206 Bangladesh	99
56	Md. Mobassarul Hasan Junior Specialist, Institute of Water Modelling, Dhaka-1206, Bangladesh	100
57	Dr. M A Sattar Chief Scientific Officer & Head Irrigation and Water Management Division, Bangladesh Rice Research Institute (BRRI), Gazipur-1701, Bangladesh	102
58	Mst. Irin Parvin Research Fellow, Institute of Water and Flood Management Bangladesh University of Engineering and Technology Dhaka 1000, Bangladesh	102
59	Dr. A F M Afzal Hossain PEng. Specialist, Institute of Water Modelling, Dhaka Bangladesh	104
60	Md. Jakir Hossain Irrigation Management Division, Institute of Water Modelling (IWM), Dhaka-1206 Bangladesh	105
61	Akihiro Toyama Graduate schoolof Engineering, Hokkaido University, Kita13 Nishi8, Kita-ku, Sapporo, Japan	107

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62	Yusuke Yamane Pioneering Research Unit for Next Generation, Kyoto University, Gokasho, Uji, Kyoto, Japan	109
63	Toru Terao Faculty of Education, Kagawa University, 1-1, Saiwaicho, Takamatsu, Kagawa 760-8522, Japan	111
64	Akm Saiful Islam Institute of Water and Flood Management, Bangladesh University of Engineering and Technology, Dhaka-1000, Bangladesh	112
65	Yoshihisa Kawahara Department of Civil and Environmental Engineering, Hiroshima University, 1-4-1 Kagamiyama, Higashi-hiroshima, Japan	113
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73	Upain Kumar Bhatia Assistant Professor, Department of Civil Engineering, M.M. Engineering College, Mullana, Ambala, Haryana, 132 203, India	130
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	T	1	
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81	Arun Goel Assistant Professor, Department of Civil Engineering, National Institute of Technology, Kurukshetra, 136119, Haryana, India	151	
82	Dr. Md. Sirajul Islam Department of Environmental Science & Management North South University, Dhaka, Bangladesh	154	
83	Kenji Kawaike Disaster Prevention Research Institute, Kyoto University, Shimomisu, Yoko-oji, Fushimi-ku, Kyoto, Japan	158	
84	Roxana Hoque Graduate School of Urban Environmental Sciences, Tokyo Metropolitan University, 1-1 Minami-Ohsawa, Hachioji, Tokyo, Japan	159	
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87	Ataur Rahman School of Engineering, University of Western Sydney, Locked Bag 1797, Penrith South DC, NSW 1797, Australia	163, 164	
88	Rubayat Alam Assosiate Specialist, Institute of Water Modelling, Dhaka Bangladesh	166	
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93	Md. Mustafa Kamal Bangladesh Water Development Board (BWDB) Executive Engineer, Directorate of Project Evaluation Dhaka-1000, Bangladesh	170	
94	David Mohammed Khan Black & Veatch Corporation, 8400 Ward Parkway, Kansas City, MO 64114, USA	176	

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96	A.A. Mamun Bioenvironmental Engineering Research Unit (BERU), Faculty of Engineering, International Islamic University Malaysia, Jalan Gombak, 53100 Kuala Lumpur, Malaysia	179

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1	Gerrit J. Klaassen Independent Consulting Engineer, River Engineering & Environment (Retd. Specialist WL/Delft Hydraulics & Ass Prof. UNESCO-IHE) The Netherlands	Keynote Paper on River Erosion, Sedimentationn and Bank Protection
2	Ronald Waterman 122 PROF. EVERTSLAAN 2628 XZ DELFT The Netherlands	Keynote Paper on Coastal Zone Management

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3/15	3/2009 Ses	ssion 1 <i>Room:</i> <b>Media Bazaar</b>	Catchment Processes, Ecosystems and Quality of
Environn	nent		
Mondal	Chair:	Prof. Jahir Uddin Chowdhury	Rapportier: Dr. M. Shahjahan
Moridai			

11:00	Synoptic Conditions on Severe Local Storm Days during the Pre- nonsoon Season in Bangladesh			109
11:15	Diurnal Variation of Rainfall Intensity in Pre-Monsoon and Monsoon over Bangladesh and the Northeastern India	Toru Terao, Md. Nazrul Islam, Fumie Murata, Yusuke Yamane and Taiichi Hayashi	Abs. No:	111
11:30	Characteristics of Cloud Systems in and around Bangladesh during Monsoon Season	Shunsuke Tsushima, Yusuke Yamane, Toru Terao, Fumie Murata, Masashi Kiguchi and Taiichi Hayashi	Abs. No:	139
11:45	Diagnosis of Sanitation and Local People's Willingness to Improve the Living Environment in a Rural Area of Bangladesh	Akira Sakai, Kunio Takahashi, Sho Shibata, Yoshimi Hagihara, Kiyoko Hagihara and Maiko Sakamoto	Abs. No:	46
12:00	Unsteady RANS Computation of Open Channel Flows with a Rectangular Dead-Zone	Md. Shahjahan Ali, Takashi Hosoda, and Ichiro Kimura	Abs. No:	55
12:15	Simulation of Chracteristics of Precipitation Systems Developed in Bangladesh during Pre-Monsoon and Monsoon	M. Rafiuddin, Hiroshi Uy eda and Md. Nazrul Islam	Abs. No:	58
12:30	Dynamic Analysis of Interaction of Gravity Dam and Hyper Reservoir in Frequency Domain	Mohammad mehdi Heydari	Abs. No:	3
12:45	Community Health Impairment due to the Exposure of Arsenic through Underground Drinking Water	Amal Roy Chowdhury	Abs. No:	8

3/15/2009 Session 2 Room: Windy Town River Erosion, Sedimentation and Bank protection
Chair: Mr. Abul Kalam Mohd Azad, Director General, BWDB Rapportier: Dr. Umme Kulsum
Navera

11:00	Key Note Paper on River Erosion, Sedimentation and Bank Protection	G. J. Klassen	Abs. No:	180
11:30	Flow Field around Sirajgang Hardpoint along the Jamuna River in Bangladesh	Mohammad Nazim Uddin and Md. Munsur Rahman	Abs. No:	82
11:45	Evolutions of Bedforms including Meandering and Bank Erosion in the	Krishna Prasad Dulal and Yasuyuki	Abs. No:	88

	Alluvial Laboratory Channels with Fluctuating Hydrographs	Shimizu		
12:00	Prediction of Water Surface Elevation in a Steep Doubly Meandering Compound Channel using CIP-Based Scheme	G.M. Tarekul Islam, Yoshihisa Kawahara, Tatsuhiko Uchida & Yu Morishita	Abs. No:	85
12:15	Flow Field and Bed Deformation Caused by River-Crossing Structure	Hao Zhang, Hajime Nakagawa, Yasunori Muto and Keiichi Kanda	Abs. No:	60
12:30	Role of Cohesive Sediments on the Evolutions of Meandering Channel	Krishna Prasad Dulal and Yasuyuki Shimizu	Abs. No:	28
12:45	Field Observations on Velocity Distribution around Sirajganj Hardpoint and Jamuna Bridge in Jamuna River	Yasuy uki Baba, Hajime Nakagawa, Hao Zhang and Kenji Kawaike	Abs. No:	149
3/15/ Environm Navera	ent	ses, Ecosystems and Quality of opportier: Dr. Umme Kulsum	c	

14	4:00	Erosion of Left Bank of The Padma River at Maw a-Dighirper Reach and its Socio-Economic Impact	Mohammed Arifur Rahman and Md. Munsur Rahman	Abs. No:	97
14	4:15	Community Level Planning for Arsenic Contaminated Drinking Water in Bangladesh	Sho Shibata, Kiyoko Hagihara, Yoshimi Hagihara and Akira Sakai	Abs. No:	78
14	4:30	Flow paths and Travel Time of Groundw aterfrom Arsenic Contaminated Zone to Deeper Aquifer Units under Different Development Stresses	Anwar Zahid and Muhammad Qumrul Hassan	Abs. No:	79
14	4:45	Utilization of Reliable Seasonal Weather Forecasting Technique as an Adaptive Tool for Sustainable Management of Water Resources in Sri Lanka	B.R.S.B. Basnay ake, M.A.R. Akand and M.K. Das	Abs. No:	80
1	5:00	Uptake of Aluminum by Vegetation from the Sludge of a Water Treatment Plant	Fahmida Hoque Khan and Md. Delware Hossain	Abs. No:	86
19	5:15	Characteristics of Free Surface Oscillations in Open Channel Flows with a Side-Cavity	Ichiro Kimura, Seiya Mino, Takashi Hosoda, Yasuy uki Shimizu and	Abs. No:	93

Toshif umi Shibata

	3/15/200	09 Sess	sion 4	Room: Wind	y Town	Climate Char	nge Impacts o	on Water Management
Isla	-	hair:	Prof.	Rezaur Rahmar	•		Rapportier:	Dr. A. K. M. Saiful
1316	<i>a</i> 111							

14:00	Long-Term Changes in Bright Sunshine Duration in Bangladesh and Its Effects on Crop Evapotranspiration	M. Shahjahan Mondal, Farzana Nasrin, Sinora Zaman and Mollah Md. Awlad Hossain	Abs. No:	17
14:15	Climate Change Implications on Drainage Systemin Coastal Polders of Bangladesh	Md. Sohel Masud and Abu Saleh Khan	Abs. No:	29
14:30	Climate Change Trends in Bangladesh	Saleh A. Wasimi	Abs. No:	53
14:45	Participatory Water Management: A Strategy for Climate Change Adaptation in Coastal Bangladesh	A.T.M. Habibullah, Andrew Jenkins, Md. Zafar Iqbal and Alamgir Chowdhury	Abs. No:	63
15:00	Regional Climate Model for Rainfall Projection in Bangladesh	Md. Nazrul Islam	Abs. No:	72
15:15	Impact Assessment of Climate Change on Monsoon Flooding and Salinity Intrusion	Md. Mobassarul Hasan, Zahirul Haque Khan, Nasreen Mohal and MD. Upal Mahamud	Abs. No:	100
3/15/	2009 Session 5 Room: Media Bazaar	Soastal Zone Management	$\neg$	
0,10,		0 40 5 4 4 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6		
	Chair: Prof. Anisul Haque Ray	pportier: Dr. M. Abed Hossain		
16:00	Chair: Prof. Anisul Haque Ray  Key Note Paper on Coastal Zone Management	pportier: Dr. M. Abed Hossain  Mr. Ronald Waterman	Abs. No:	181
			Abs. No:	
16:30	Key Note Paper on Coastal Zone Management	Mr. Ronald Waterman		61
16:30 16:45	Key Note Paper on Coastal Zone Management  Solar Distillation – A Low Cost Small Scale Fresh Water Management	Mr. Ronald Waterman  Kh. Md. Shaf iul Islam  Salih Gucel, Costas Kadis, Constantinos Kounnamas, Aykut	Abs. No:	61
16:30 16:45 17:00	Key Note Paper on Coastal Zone Management  Solar Distillation – A Low Cost Small Scale Fresh Water Management  Coastal Zone Plant Diversity of Cyprus  Social Supremacy and Location of Cyclone Centre: A Determinant of	Mr. Ronald Waterman  Kh. Md. Shaf iul Islam  Salih Gucel, Costas Kadis, Constantinos Kounnamas, Aykut Guvensen and Munir Ozturk  Joachim Vogt, Bishawjit Mallick and	Abs. No:	61 21 51

Zahirul Haque Khan and Md. Mobassarul Hasan

17:45 Role of Coastal Forest to Reduce Storm Surge Area in Bangladesh	Gias Uddin Ahmed	Abs. No:	15
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3/1	5/2009	Session 6 Room: Windy Town	Climate Change Im	npacts on Water Management	t	
	Chair:	Dr. Saleh Wasimi	_	portier: Dr. M. Shahjahan		
Mondal				•		
16:00		al Dow nscaling of Seasonal Monsoon Rai ale Models	nfall Using Global &	Someshwar Das and Sury a Kanti Dutta	Abs. No:	120
16:15		Perception on Climate Change Vulnerabi Bangladesh	lity of South-West	Dr. Md. Salequzzaman, Mahabub-Ur- Rahman, S. M. Tariqul Islam, Dr. M. M. Moniruzzaman, Md. Abdus Salam, Sayka Jahan and Md. Abul Kashem	Abs. No:	134
16:30		on to Climate Change Impacts through Ra ulture of Bangladesh	in Water Harvesting	Md. Mafizur Rahman, Sazia Afreen and Mohammad Asad Hussain	Abs. No:	162
16:45		Climate Change induced Disasters for Ha Bangladesh	tiya and Sandw ip	Md. Mobassarul Hasan and Umme Kulsum Navera	Abs. No:	94
3/1	6/2009	Session 7 Room: Media Bazaai	C-4-1 D	T . 10 II.	c	
	0/ = 00 /	Session / Moone : Icaia Salaa	Catenment Processe	es, Ecosystems and Quality of	f	
	Chair:	Prof. Nakagawa		es, Ecosystems and Quality of portier: Prof. Munsur Rahmar		
9:00	Chair:	Prof. Nakagawa	Rapį			98
	Chair: Dispersic Bay of Be	Prof. Nakagawa	Rapp ver Discharge in The	portier: Prof. Munsur Rahmar  M. Shahab Uddin and Mohammad	1	98 42
9:15	Chair:  Dispersic Bay of Be	Prof. Nakagawa on Pattern of The Ganges-Brahmaputra Rengal	ver Discharge in The	M. Shahab Uddin and Mohammad Zahedur Rahman Chowdhury  Md. Shafiquzzaman, Md. Shafiul Azam, Iori Mishima, Jun Nakajima	Abs. No:	42
9:15 9:30	Chair:  Dispersic Bay of Be  Arsenic I  Numerica Angle of	Prof. Nakagawa on Pattern of The Ganges-Brahmaputra Rengal Leaching Characteristics of Biologically Professional Study on Sediment Production under Di	ver Discharge in The oduced Sludge	M. Shahab Uddin and Mohammad Zahedur Rahman Chowdhury  Md. Shafiquzzaman, Md. Shafiul Azam, Iori Mishima, Jun Nakajima and Quazi Hamidul Bari  Hiroshi Yamada, Yasuyuki Shimizu	Abs. No:	42 124

10:15	Scour Protection around Circular and Oblong Bridge Pier	Vikas Garg, Baldev Setia and D. V. S. Verma	Abs. No:	131
10:30	Assessment of Impacts of Flood Control Interventions on Ecosystemof Haors	S.M. Sanaul Kafi, Mashfiqus Salehin and Shahad Mahbub Chowdhury	Abs. No:	137
10:45	Approach to Assess Environmental Flow for the Karnaphuli River of Bangladesh	Sudip Kumar Pal, Asiful Hoque and Iffat Tarannum	Abs. No:	138
2/2	ICIADOD G O Decembring du Tourn	77.1 377.4 34		
3/.		Urban Water Management Supportier: Dr. M. Shahjahan		
Mondal	· · · · · · · · · · · · · · · · · · ·			
9:00	Integrated Coastal Zone Management (ICZM) in Bangladesh	Niluf a Islam, Mohammad Alamgir and M. Aminul Haque	Abs. No:	167
9:15	Assessment of Urban Water Supply Situation: A Case Study in Khulna City Corporation Area	Md. Rezaul Karim and Gazi Mohammad Mohsin	Abs. No:	41
9:30	Study of Green Infrastructure Concept Design tow ards a Sustainable Development in Bandung Municipality	Grinaldo Dita and Robby Yussac Tallar	Abs. No:	47
9:45	Numerical Simulation of Inundation Flow Considering Stormwater Drainage Process in Urban Area	Kenji Kawaike, Hajime Nakagawa and Yohei Imai	Abs. No:	158
10:00	Stromw ater Management in Kansas City, Missouri to Comply with EPA's Combined Sewer Overflow Control Policy	S David M. Khan	Abs. No:	176
10:15	Numerical Modeling of Urban Flooding due to Storm Surge	Yoshihisa Kawahara, Yukihiro Kinashi and Tatsuhiko Uchida	Abs. No:	113
10:30	Development of a Flood Detection System for Management of the Kuala Lumpur Stormw ater Management and Road Tunnel (Smart)	Jay son Peterson and Craig Ludlow	Abs. No:	76
3/2 Environm	pent	esses, Ecosystems and Quality of capportier: Dr. G.M. Tarekul	•	

11:30 Seasonal Variation of Fish Migration in Sariakandhi Fish Pass

Bijoy Kumar Ghosh and Anisul
Haque

Abs. No: 44

Islam

11:4	Experimental and Numerical Study on Dune Development and Transition Under Unsteady Discharge Condition	Akihiro Toyama, Satomi Yamaguchi, Wandee Thaisiam, Ichiro Kimura, Yasuyuki Shimizu and Sanjay Giri	Abs. No:	107
12:0	Modeling of Stage Discharge Curve of Indian River by Support Vector Machines	Arun Goel	Abs. No:	151
12:1	An Algorithm for Derivation of Design Rainfall Temporal Patterns for Short and Long Duration Storms	Ataur Rahman, Mazharul Islam and Touhid Bhuiyan	Abs. No:	163
12:3	Impact Assessment of Sea Level Rise on Coastal Flooding and Livelihood	Rubay at Alam, Zahirul Haque Khan, Md. Sharif Imam Ib-N-E Amir and Shume Akhter	Abs. No:	166
12:4	5 Environmental Challenges and Management of Water Pollution through Drainage Improvement Adjacent to Dhaka Mega City: A Case Study of DND Project	Murshed Ahmed, Md. Mustafa Kamal, Abu Sale Mohammad Tofahel Chowdhury	Abs. No:	170
3,	16/2009 Session 10 <i>Room:</i> Windy Town <i>A</i>	gricultural Water Management		
	Chair: Prof. M. Mirjahan	Rapportier: Dr. Sujit Kumar Bala		
11:3	A Study on Tubew ell Spacing for Groundw ater Management in Bangladesh	A.F.M. Af zal Hossain, Sardar M Shah-Newaz, M A Karim, Sabina Sadek	Abs. No:	104
11:4	Water Saving and Cost Reduction in Boro Rice with Alternate Wetting and Drying Irrigation Technology	Md. Rezaul Hasan, Abul Fazal M. Saleh, A.F.M. Afzal Hossain and S.M. Shah Newaz	Abs. No:	129
12:0	Study on the Irrigation Water Management in Cyimpima Developed Sw amp of Rw amagana District in Rw anda	Canisius Kay itera, Suresh Kumar Pande	Abs. No:	16
12:1:	Improvement of Drainage Condition for Proper Operation of Irrigation and Drainage System-A Case Study of Naotara Siphon in Teesta Barrage Project	Md. Hazrat Ali, A. F. M. Afzal Hossain, Zahirul Haque Khan and S M Shah-Newaz	Abs. No:	148
12:3	Sustainable Water Management for Irrigation Development using Surface Water and Groundw ater Interaction Model: Case Study for Chalan Beel Area	Md. Jakir Hossain, Sabina Sadek, Sardar M Shah-Newaz and A. F. M. Afzal Hossain	Abs. No:	105
12:4	Irrigation Intervention as a Tool of Socio-Economic Advancement: A Case Study of the Kaw raid River Rubber Dam Project, Gazipur, Bangladesh	Abu Jafar Md. Saleh and M. Shahjahan Mondal	Abs. No:	89
3,	16/2009 Session 11 Room: Media Bazaar	Flood Management	$\neg$	
	Chair: Prof. Monowar Hossain	Rapportier: Prof. Munsur Rahmar	,	
			_	

28

Abu Saleh Khan, Md. Sohel Masud & Abs. No: 27

**14:00** 1-10 Day Flood Forecasts under the Climate Forecasts Application

14:15		g Flood Vulnera ebase for Flood	ability Index for the Impro Preparedness	ovement of	Anjuma Tabassum Khan, Abu Saleh Khan and A. K. M. Zeaul Hoque	Abs. No:	31
14:30		of Vulnerability ay Project, Ban	to Flood for Proposed gladesh	Dhaka-Chittagong	Abu Saleh Khan, Md. Sohel Masud, Md. Yousuf Mamun and Wahid Palash	Abs. No:	37
14:45	Flood Leve Mathematic		nd Conceptual Design o	f Barrier Using	N. K. M. Nanseer and L.V. Talagala	Abs. No:	121
15:00		ted Approach c elling and GIS	of Flood Damage Asses	sment of Dhaka City	Farhana Ahmed, Zoran Vojinovic, Arthur My nett and Malik Fida A. Khan	Abs. No:	125
15:15			S, A Free Systemfor S eformation and Bank E		Jiro Miyatake, Yasuyuki Shimizu, Kunio Ezaki and Yoshikazu Yoshida	Abs. No:	115
						_	
3/1		Session 12	Room: Windy To		icultural Water Management		
	Chair:	Porf. A.F.M.	Saleh	Ra	pportier: Dr. Sujit Kumar Bala		
14:00	Review on	n Water Manage	ment in Coconut		N. Chattopadhy ay and A.B. Sharangi	Abs. No:	11
14:15	Water Mar	nagement in Ch	illi and Sw eet Pepper: A	A Review	Amit Baran Sharangi, Narayan Chattopadhyay and Pradip Kumar Sahu	Abs. No:	10
14:30		ube Well Irrigati ana of Tangail I	on Business in Banglad District	lesh: Field Study in	Md. Alauddin Hossain and Md. Abul Ala Moududi	Abs. No:	5
14:45			ver Water Containing He i Upazila, Dhaka	eavy Metals on Soil	Masudur Rahman and M. Shahjahan Mondal	Abs. No:	178
15:00	Assessme Krishna Ri		ield and Crop Plans in \	edavathi Sub-Basin of	A. D. Thube and D. K. Srivastava	Abs. No:	84
15:15		le T. Aman Rice	lity of Drought and its Re Production in the Sele		M A Sattar and Mst. Irin Parvin	Abs. No:	102
3/1	6/2009	Session 13	Room: Media Baz	aar	Flood Management		
	Chair:	Mr. Gerard F	Pichel	Ra	pportier: Dr. M. Asad Hussain		

Md. Saif ul Hossain

Network (CFAN) Project

16:00 Weather Insurance for Farmers: A Proposed Methodology for Insurance Md. Sirajul Islam and Mizan R. Khan Abs. No: 154

### against Crop Damage in the Context of Bangladesh

16:15	Sensitivity of Flood Damage Evaluation for Different Settings in Flood Vulnerability Assessment	Julian Eleuterio, Anne Rozan and Sy Iv ain Pay raudeau	Abs. No:	161
16:30	Design Streamflow Estimation for Ungauged Catchments in Victoria: Uncertainty Analysis using Boot Strapping	Ay ub Hossain, Ataur Rahman and Khaled Haddad	Abs. No:	164
16:45	Natural Dam Failure and Estimation of Resultant Flood Hydrograph	Hajime Nakagawa, Ripendra Awal, Kenji Kawaike, Yasuyuki Baba and Hao Zhang	Abs. No:	169
17:00	Improvement of Existing Water Quality Index in Selangor, Malaysia	A.A. Mamun, S.N. Hafizah and M.Z. Alam	Abs. No:	179
17:15	Development of Least Maintenance Household Surface Water Treatment Filter	Md. Saiful Islam, Quazi Hamidul Bari, Mst. Nasrin Akter and Md. Forhad Hossain	Abs. No:	56
2/1	6/2009 Session 14 Room: Windy Town W	Vator Information Management	7	
3/1	•	Vater Information Management Rapportier: Dr. G.M. Tarekul		
Islam				
16:00	Sediment Assessment in Reservoirs using Satellite Remote Sensing	Prakash C Swain, H J Shiv a Prasad and J B Mahapatra	Abs. No:	6
16:15		·		
	Assessment of meteorological drought using SPI model and GIS in Qom, Iran	H. Yazdanpanah and S. H. Tabatabaei	Abs. No:	12
16:30		H. Yazdanpanah and S. H.	Abs. No:	12
	Qom, Iran	H. Yazdanpanah and S. H. Tabatabaei Md. Yousuf Mamun, Rubaida Islam Joya, Md. Tarikul Islam and Tanvir		
16:45	Qom, Iran  GIS Application to the Groundw ater Table Study of Barind Area  Performance of Flood Control Works around Dhaka City during Major	H. Yazdanpanah and S. H. Tabatabaei  Md. Yousuf Mamun, Rubaida Islam Joya, Md. Tarikul Islam and Tanvir Ahmed  Sujit Kumar Bala, AKM Saiful Islam, Jahir Uddin Chowdhury, Md. Rezaur Rahman, M. Anisul Haque, M. Shah	Abs. No:	39