

204.3 99PR

Librality
IRC International Water
and Sanitation Centre
Tel: +31 70 30 689 80
Fax: +31 70 36 190 61

**Proceedings of the
11th Asia Pacific and
2nd Commonwealth
Congress of
Environmental
Journalists**

Dhaka - Bangladesh
13 - 17 September 1999



204.3-15988

*Proceedings of the
11th Asia-Pacific and 2nd Commonwealth Congress of
Environmental Journalists*

Water and Environment: The Role of the Media

*The Bangladesh Academy of Rural Development (BARD)
Comilla - Bangladesh.
September 13 to 17, 1999*

*With Compliments from
the Editor in Chief*

Editorial Board;
*Ewyn Testoni, Australia
Quamrul Islam Chowdhury, Bangladesh
Lilanthi Samaraweera, Sri Lanka
Nina Ratulele, Fiji*

*The Asia Pacific Forum of Environmental Journalists (APFEJ)
Sri Lanka.*

LIBRARY IRC
PO Box 93190, 2509 AD THE HAGUE
Tel: +31 70 30 689 80
Fax: +31 70 30 689 64
BARCODE: 1 9 0 1 2 3 4 5 6 7 8 9 0
LC

204.3 99 PR

Published by:
Asia-Pacific Forum of Environmental Journalists (APFEJ)
PO Box 26
434/3 Sri Jayawardenapura
Sri Lanka.
Phone: (+94-1) 827810 (4 lines)
Fax: (+94-1) 826607 / 869340
E-mail: afej@sri.lanka.net
Web: www.oneworld.org/slejf

Printed by: Deelaka Art Printers
Nugegoda - Sri Lanka.

Cover Photos: UNEP / APFEJ and FEJB

Water and Environment: The Role of the Media

ISBN : 955-9161-20-2

© December 1999 by the APFEJ

Note to readers :

- The views expressed in this publication do not reflect the official positions of the Dhaka Congress Supporting Agencies or A PFEJ, CEJA and FEJB. Any part of this publication may be quoted free of charge on written approval of APFEJ, CEJA or FEJB.
- Opening session and closing session statements are presented in chronological order. Statements by country representatives are in alphabetical order.

Dhaka Congress Secretariat

Coordinator : Dinesh Weerakkody
Media Consultant : Saleem Samad
Documentation Manager : Eryn Testoni
Computer Programmer : Shameem Siddiqui
Accountant : Anthony Arulenthiran
Programme in-Charge : Samia Rahman
Computer Operators : Umme Nayeema, Arif ul Islam and Mashur Zaman Khan
Programme Assistants : Farah Zeeba and Touhida Haque
Admin Assistant : Sirazul Islam
Air Travel : Columbus Tours and West Asia Travel

Background of Organizers

● **Asia-Pacific Forum of Environmental Journalists (APFEJ)**

APFEJ was formally constituted in January 1988, at a Regional Conference on Media and the Environment in Asia by the UN-ESCAP. It is the oldest world organization of professional environmental journalists grouping more than 7000 members in 37 countries representing the Asia-Pacific region.

APFEJ work programmes include specialized regional training workshops on environmental reporting, publications such as books on environmental reporting, newsletters, and a clipping service; technical assistance for national chapters (NFEJ) as well as support to selected NFEJ activities journalist exchange programmes, research and study programmes for excellence in environmental reporting. Many NFEJ members have their own work programme. For more information please see APFEJ web site, <http://www.oneworld.org/slejt>

● **Commonwealth Environmental Journalists Association (CEJA)**

CEJA was formed at the 6th World Congress of Environmental Journalists held in Sri Lanka, in October 1998, which was attended by 76 participants from 35 countries. It was initiated with the support of The Commonwealth Foundation and UNEP. Initially CEJA had a membership of 16 British Commonwealth countries, but this number has grown to 26, representing more than 100 media organizations and institutions in its member countries. It aims to create a network of environmental journalists in Commonwealth countries to share ideas, problems and experiences. It also plans to work to increase access to environmental information resources in its member countries and to promote more professional reporting on environmental issues.

Earlier CEJA congresses were held in Colombo, Sri Lanka, and Dhaka, Bangladesh, while the 2001 and 2002 Congresses will be held in Malaysia and Kenya respectively. CEJA's head office is based in Bangladesh. For more information please see CEJA web site, <http://www.oneworld.org/slejt/ceja.htm>

● **Forum of Environmental Journalists of Bangladesh (FEJB)**

FEJB, since its founding in 1983, has been one of the most active and dynamic organizations promoting the green agenda in Bangladesh. FEJB is a founding member of both APFEJ and CEJA and member of Bangladesh's high-powered National Environment Council. FEJB has played a leading role during the formulation of Bangladesh's globally acclaimed National Environment Management Action Plan (NEMAP) through a five-year consultation process and is now one of the 20 sub-implementing agencies of the UNDP's largest global environment program called Sustainable Environment Management Program (SEMP). Under the SEMP, FEJB has been entrusted with the responsibility of mainstreaming environment issues in the media.

FEJB runs the FEJB-SEMP Feature Service, producing Earth Files and television talk shows, publishing regular quarterly newsletters, annual State of Environment Reports, and organizing regular field trips, lecture sessions and training workshops for environmental journalists.

Bangladesh - Fact File

Environment

Located on the Padma River Delta formed by the confluence of the Meghna with the Ganges and the Brahmaputra, Bangladesh is a fertile, alluvial plain where rice, tea and jute are grown. There are vast rain forests and swamps. A tropical monsoon climate predominates, with heavy summer rains from June to September generally accompanied by tidal surge and floods of catastrophic consequences. Natural gas, crude oil and low-quality coal are the only mineral resources. The increase in sea level poses a growing threat to the country. The coastal area along the Bay of Bengal has been severely affected by the discharge of sewage and industrial waste. This pollution, together with indiscriminate fishing to supply both internal and export markets, is leading to the destruction of one of the country's main resources with sea-borne pollution threatening to irreversibly damage the coastal ecosystem.

Society

People: The people of Bangladesh are ethnically and culturally homogeneous, as a result of 25 centuries of integration between the local Bangalee population and immigrants from Central Asia. There are small Urdu and Indian minorities. Presently the ethnic communities are spread in north, north-central and south-east Bangladesh. The largest and diverse ethnic communities live at Chittagong Hill Tracts.

Religions: Mostly Islamic (83%) and Hindu (16%), with Buddhist, Christian and animist minorities.

Languages: Bangla

THE STATE

Official Name: Peoples Republic of Bangladesh (Gana Prajatantri Bangladesh)

Capital: Dhaka (Dacca), 6,844,131 people (1998)

Other cities: Chittagong 2,348,428 Khulna 1,001,825, Rajshahi 5,44,649(1991)

Government: Parliamentary republic.

Single-chamber legislature. Parliament made up of 330 members (300 elected by direct vote and 30 reserved for women, nominated by Parliament, for 5-year terms)

DEMOGRAPHY

Population: 126.5 million (1998)

Annual growth: 2.2% (1998)

Estimates for year 2000: 128,300,000 (1997)*

Annual growth to year 2000: 1.6% (1994/2000)*

Urban population: 20% (1997)

Urban growth: 4.7% (1997)

Children per woman: 3.2 (1996)

HEALTH

Life expectancy at birth: 60 years (1997)

Male: 61 years (1997)

Female: 60 years (1997)

Maternal mortality: 3.0 per 1,000 live births (1998)

Infant mortality: 57 per 1,000 (1998)

Under-5 child mortality: 109 per 1,000 (1997)

Calorie consumption: 88% (1988/90)

4,512 people per doctor (1997)

Safe water: 95% (1997)

EDUCATION

Literacy: 51% (1997)

Male: 50% (1997)

Female: 41% (1997)

School enrolment:

Primary total: 82% (1997)

Boy: 84% (1997)

Girl: 77% (1997)

Secondary:

Secondary Total: 47% (1997)

Male: 50% (1997)

Female: 41% (1997)

COMMUNICATIONS

10 daily newspapers, 47 radios, 7 TV sets and 2.6 main telephone lines per 1,000 people (1994)

ECONOMY

Per capita, GNP: \$ 280 (1998)

Annual growth, GNP: 3 % (1998)

Annual inflation: 5.5 % (1998)

Consumer price index: 133 (1997)

Currency: 51.00 Taka = \$ 1 (1999)

Cereal imports: 952 metric tons (1994)

Food import dependency: 14% (1994)

Fertilizer use: 108.1 kgs per ha (1994)

Exports: \$ 4.0 billion (1996/97)

Imports: \$ 6.8 billion (1996/97)

External debt: \$ 16,083 million (1996), \$ 134 per capita (1996)

Debt service: 11.7 % of exports (1996)

Development aid received: \$ 1,263 million (1997) \$ 12 per capita (1997) 4.8 % of GNP (1994)

ENERGY

Consumption: 64.15 kgs of Oil equivalent per capita yearly (1994), 27.83% imported (1994)

HDI

(rank / value) 144 / 0.368 (1994)

PUBLIC EXPENDITURE

Military expenditure (as % of health and education expenditures): 41 % (1990/91)

LABOUR FORCE

Unemployment: 1.10 % (1995-96)

Women: 16.8 % (1995-96)

Men: 27.4% (1995-96)

Agriculture: 63.2 % (1995-96)

Industrial: 36.8 % (1995-96)

Services: 18 % (1990)

LAND USE

Deforestation: -3.3 % annual (1981/90)

Forest and woodland: 13.2 % of total (1993)

Arable: 65.6 % of total (1993)

Irrigated: 63.75 % of arable (1996)

Contents

	Page
Introduction	7
Our Thanks	8
Executive Summary	9
Comments	10
Dhaka Declaration	12
Congress Proceedings	13
Inaugural and Opening Session	18
Statements by Representatives	
- Australia	37
- Bangladesh	40
- Bhutan	43
- Caribbean	45
- China	47
- India	53
- Indonesia	55
- Jordan	62
- Kenya	65
- Malaysia	72
- Mauritius	74
- Nepal	78
- Pacific	85
- Pakistan	87
- Philippines	89
- Sri Lanka	94
- Thailand	98
- Vietnam	103
Plenary Reports	
- Water and food Scarcity	109
- Refreshing Our Memory on Fresh water	110
- Sustainable Water Supply and Sanitation Service	113
- Second World Water Forum	115
- Internet and Environment	120
- The Role of the Media in Educating the Public About Water Issues	125
- Arsenic Contamination of Water	132
- EIA as a tool for Sustainable Management of Wetlands	134
- World Day for Water, UNEP News Release	135
Closing Session	138
Appendices	
- Green Pen Awards	144
- Asia Pacific Best Environmental Media Awards	145
- APFEJ Exco Members	146
- Countries within the APFEJ Network	147
- APFEJ Constitution	148
- CEJA Three-Year Work Plan	152
- CEJA Executive Committee	153
- Countries within the CEJA Network	154
- Fiji Congress Draft Programme	155

Introduction

It gives us great pleasure to pen this small introduction to the report which contains the proceedings of the 11th Asia-Pacific and 2nd Commonwealth Congress of Environmental Journalists, held at the Bangladesh Academy of Rural Development (BARD) in Bangladesh, from September 13 to 17, 1999

We think you will get to know from the contents of this report what an outstanding success this gathering of environmental journalists, world water experts and observers from supporting agencies was and how much it has achieved.

It is fair to say that this was the most significant congress ever held by APFEJ in terms of strengthening its role in the region and expanding its boundaries. In the past two years APFEJ has grown an enormous amount and CEJA has been formed and is already expanding at a rapid rate.

Much of this growth and success has to be attributed to the previous APFEJ congress held in Colombo, Sri Lanka, in 1998, where APFEJ was revitalized under its secretariat now based in Sri Lanka and CEJA was founded. But the Dhaka Congress has boosted the achievements at Colombo to new levels.

We have much to be proud of, but also remain aware that the road to our goals is a long and tough journey. APFEJ has firmly established itself as a leading regional organization concentrating on both the environment and media. CEJA, despite its youth, is not far behind in terms of establishing itself as a major media NGO in the British Commonwealth of Nations.

On behalf of the co-organizers of the Dhaka Congress, we would like to thank everyone who contributed to the remarkable achievements gained at this congress. APFEJ and CEJA are both well placed to enter the new millennium as dynamic and progressive organizations due to the hard work at this gathering.

Our thanks are also due to all who contributed to this report. You will notice a special section in this book dedicated to the Country Reports from our national forums. These reports are interesting, educational, and at times, saddening to read. We as environmental journalists in the Asia-Pacific and Commonwealth have achieved so much . . . yet our work has only just begun.

● *Dharman Wickremaratne*
Chairperson

Asia-Pacific Forum of Environmental Journalists (APFEJ)

● *Quamrul Islam Chowdhury*
Chairperson

Commonwealth Environmental Journalist Association (CEJA)

Our Thanks

Just like the congress itself, many people have contributed to help make this report a reality. Firstly, we must thank our donors for their generous support for the congress and APFEJ's and CEJA's work.

Our thanks are especially due to the United Nations Development Program (UNDP), United Nations Environment Program (UNEP), The Asian Development Bank (ADB), The World Bank, The Australian Agency for International Development (AusAID), Friends of the Earth (FoE) Australia, The Foreign Ministry of the Netherlands, and the Bangladesh Ministry of Environment and Forests.

Everyone at the Forum of Environmental Journalists Bangladesh (FEJB) deserve special mention for their hard work, dedication and hospitality as the chief organizers of the 11th Asia-Pacific and 2nd Commonwealth Congress of Environmental Journalists.

The staff at the APFEJ Secretariat must also be thanked for their contribution in organizing the congress and putting together this report. All the delegates at the congress contributed so much to the event, whether it be by making presentations, taking part in discussions and decision making or making submissions for this book.

The leaders of all the national forums, many of who have full-time careers as well as their involvement in their forums, gave so freely of their precious time to contribute their country reports, an addition to this report which I'm sure everyone will read with interest.

To everyone who lent a hand during the organization of the congress and production of this report, we wish you all our thanks. I hope you enjoy this book and welcome any feedback you may have to assist us in our goal of constantly improving our publications.

Executive Summary

The 11th Asia-Pacific and 2nd Commonwealth Congress of Environmental Journalists was held in Comilla, Bangladesh from September 13 to 17 with the theme "Water and Environment: The Role of the Media". The congress was jointly organized by the Asia-Pacific Forum of Environmental Journalists (APFEJ), Commonwealth Environmental Journalists Association (CEJA) and Forum of the Environmental Journalists Bangladesh (FEJB).

This report contains the proceedings of the congress. The congress covered wide-ranging water issues - from reconciling economic and social demands for water to wetland and water resources management, from rural water supply and sanitation to arsenic contamination problems, from water privatization and water and food scarcity to the cost of water and the world rivers.

It also worked to strengthen the institutionalization of both APFEJ and CEJA, increasing the role of both these organizations in their international spheres of operation. It is fair to say that the Dhaka Congress was APFEJ's most successful congress in terms of concrete achievements and platforms built to take it into the next millennium.

The full proceedings of the congress are contained in this report, but just a glance at the following highlights will show what an unprecedented achievement this event has been for APFEJ and CEJA. Some of the main outcomes of the congress include

- The gathering of 64 delegates from nearly 25 countries to discuss water issues and the role of environmental journalists in these issues.

- The establishment of six new regional directors in the Asia-Pacific region to expand APFEJ's work.

- The establishment of a permanent secretariat for CEJA in Dhaka, Bangladesh.

- The adoption of a new constitution for APFEJ which will take it into the next century and allow the organization to increase its work and goals in the areas of media and the environment.

- The adoption of a three-year work plan for CEJA, setting up clear goals and outcomes desired by the members and executive committee of CEJA.

- The formulation and adoption of the Dhaka Declaration, a strong document calling for a number of immediate actions following the congress.

- The adoption of a comprehensive constitution for CEJA to allow the organization to establish itself as an autonomous environmental journalist's organization.

- The addition of many new member nations to APFEJ including: - Jordan, Kazakhstan, Australia, Mongolia, Myanmar, Uzbekistan and New Zealand.

Comments

[REDACTED]

"The issues that were covered in the Comilla congress will be of relevance to the governments and people of the Asia-Pacific and the Commonwealth countries. They will be of special interest to the government and people of Bangladesh. The recommendations of the congress, will I am sure, have an important bearing in the formulation of future environment policies in Bangladesh."

Syed Marghub Morshed

Secretary of Environment and Forest Ministry, Bangladesh

"I think I and my organization gained a lot from the participation in the congress. The theme of the congress was very important. Water issues are crucial to the environmental discourse. Still, they don't find as much space in the media as they should."

Dr. Amanda Katilli-Niode

Chairperson, Syarif Foundation for Environmental Communication, Indonesia

"Chairman of the APFEJ, must be congratulated for the kind of leadership he has provided the Asia Pacific environmental journalists. Within no time, he has turned the organization into an extremely vibrant entity. He is moving in a very right direction by concentrating on the institutionalization of the organization. APFEJ definitely has a strong future."

Zaigham Khan

Chairman

Forum of Environmental Journalists Pakistan (FEJP)

"The conference was able to motivate me more to extend extra efforts to get media involved in the issues and lobby in the directions of concrete and real action."

Ziyaf JF Alawneh

Coordinator

Mediterranean Ecological Media Network, Jordan

"I feel it (the congress) was a bridge-building process. Being from Africa, we rarely interact with the Asia-Pacific forum. This networking is crucial for a person with interest in the environment. I gained a lot from the diversity of experience."

Robert M Kihara

Chairman

Media Development Association (MDA), Kenya

"One of the most important findings has been, to me, is that if we do not devise means now and educate our population to save water, we shall leave a barren land for our children."

Soodhakur Ramlallah

President / Union of Environmental Journalists (UEJ), Mauritius

"It (the congress) added a new dimension to the stock of knowledge in the field. It also opened up a new horizon of the seriousness of the problem and the potentials lying ahead of us. The best aspects were the animated discussions of the problems at a level comprehensible to all participants. It is so delightful and fulfilling for us to see APFEJ moving actively again under new leadership"

Aditya Man Shreshta, Nepal
Founder Chairman of APFEJ

"Interaction, sharing, participation, networking, linking and forging stronger partnerships were the highlights of the congress."

Elizabeth C Roxas
Executive Director
Environmental Broadcast Circle (EBC), Philippines

"So far water issues have not been extensively targeted at our media NGO. As a result of this congress, I believe that our project focus will be expanded to include more water issues. Preparations for the congress were very impressive."

Amele Van Den Bos
Program Coordinator
Global Village of Beijing, China

"There is a huge need for continued cooperation in the field of environmental journalism in the Asia-Pacific. Environmental issues are of an urgent and pressing nature, and it is only through the grass-roots actions of people working together across a region that change will occur."

Juliet Fox
Media Representative
Friends of the Earth (FoE), Australia

"Good management, learned resource persons and the headway made in the affairs of APFEJ and CEJA"

Taga Laisa
Chairman
Pacific Islands News Association, Fiji

"To meet with active, interesting and informed people; to hear about their activities and actions; to learn about environment concerns in different countries"

Teoh Telk Hoong
Media Officer
WWF / Asia Pacific, Malaysia

The Dhaka Declaration

The 11th Congress of the Asia-Pacific Forum of Environmental Journalists (APFEJ) and 2nd Congress of Commonwealth Environmental Journalists Association (CEJA) calls for:

1. Strengthening APFEJ and its activities by establishing six APFEJ regional directorates in East Asia, South East Asia, Central Asia, West Asia, South Asia and the Pacific and to develop and strengthen each region through separate regional programmes
2. APFEJ regional directorates to organize, support and collaborate activities and workshops in the Six Asia Pacific regions in conjunction with the APFEJ Head Quarters.
3. This congress appeals to all the development organizations to support APFEJ to initiate public awareness campaigns and educational programmes, to strengthen existing media programmes and developing new programmes for promoting water issues including water resource management.
4. The Asia Pacific Environmental Journalist Forum to support the next UN-ESCAP Ministerial conference on environment and development in Japan on August 2000
5. The honoring of Dr. Kazi Jalal, Chief Environment and Social Development Division, ADB and Dr. Rusaul Karim, Chief Environmental and Natural resources Section of UN-ESCAP for their contribution to the founding and growth of APFEJ during the 12 annual congress in June 2000 in Fiji.
6. To continue the expansion of APFEJ / CEJA member countries and Strengthening of National forums in every country and specially to explore the possibility of expanding the membership in the Pacific region taking in to account the year 2000 Fiji congress.
7. To organize country forums to systematic monitoring of law enforcement in cases of environment policy violations and in environmental degradation related activities, including a campaign to persuade governments to agree on codes of conduct and to pressurize governments to create environment protection policies.
8. This congress appeals to all the development organizations and specially The ADB and GEF to support APFEJ initiatives in the region on environment and water issues by way of supporting APFEJ in organizing workshops for training of trainers, to train journalists in investigative environmental reporting, Eco films, to organize programmes in schools, universities including Go's, NGO's, CBO's and nonformal public education to promote skills capacities in environmental protection.
9. APFEJ and its sub regional directorates to organize and focus its activities on good governance, role of women in environment and media, campaign and lobbying, advocacy, social development, child rights and major regional health issues, especially HIV-AIDS and population related issues.
10. The implementation of CEJA three year work plan (2000-2002) under the CEJA Secretariat with its HQ based in Dhaka, Bangladesh.

● CHINA ● KOREA ● JAPAN ● MACAU ● MONGOLIA ● BRUNEI DARUSSALAM ● CAMBODIA ●
INDONESIA ● LAO ● MALAYSIA ● MYANMAR ● PHILIPPINES ● SINGAPORE ● TAILAND ● VIETNAM
● AFGHANISTAN ● BANGLADESH ● BHUTAN ● INDIA ● IRAN ● MALDIVES ● NEPAL ● PAKISTAN
● SRI LANKA ● AZERBAIJAN ● KAZAKHSTAN ● KYRGYZSTAN ● TAJIKISTAN ● TURKMENISTAN ●
UZBEKISTAN ● JORDAN ● LEBANON ● TUNISIA ● KUWAIT ● OMAN ● SAUDI ARABIA ● SYRIA ●
YEMEN ● UNITED ARAB EMIRATES ● TURKEY ● AMERICAN SAMOA ● AUSTRALIA ● MARIANA
ISLANDS ● COOK ISLANDS ● FEDERATED STATES OF MICRONESIA ● FIJI ● FRENCH POLYNESIA ●
GUAM ● KIRIBATI ● NAURU ● NEW CALEDONIA ● NEW ZEALAND ● NIUE ● MAURITIUS ● PAPUWA
NEW GUINEA ● MARSHALL ISLANDS ● PALAU ● SAMOA ● SOLOMON ISLANDS ● TONGA ● TUVALU
● VANUATU ● ANTIGUA AND BARBUDA ● BAHAMAS ● BARBADOS ● BELIZE ● BOTSWANA ●
BRITAIN ● BRUNEI DARUSSALAM ● CAMEROON ● CANADA ● CYPRUS ● DOMINICA ● THE GAMBIA
● GAHANA ● GRENADA ● GUYANA ● JAMAICA ● KENYA ● LESOTHO ● MALAWI ● MALTA ●
MAURITIUS ● MOZAMBIQUE ● NAMIBIA ● NIGERIA ● ST KITTS ● NEVIS ● ST LUCIA ● ST VINCENT
AND THE GRENADINES ● SEYCHELLES ● SIERRA LEONE ● SOUTH AFRICA ● SWAZILAND ●
TANZANIA ● TRINIDAD ● TOBAGO ● TUVALU ● UGANDA ● WEST SAMOA ● ZAMBIA ● ZIMBABWE
● CHINA ● KOREA ● JAPAN ● MACAU ● MONGOLIA ● BRUNEI DARUSSALAM ● CAMBODIA ●
INDONESIA ● LAO ● MALAYSIA ● MYANMAR ● PHILIPPINES ● SINGAPORE ● TAILAND ● VIETNAM
● AFGHANISTAN ● BANGLADESH ● BHUTAN ● INDIA ● IRAN ● MALDIVES ● NEPAL ● PAKISTAN
● SRI LANKA ● AZERBAIJAN ● KAZAKHSTAN ● KYRGYZSTAN ● TAJIKISTAN ● TURKMENISTAN ●
UZBEKISTAN ● JORDAN ● LEBANON ● TUNISIA ● KUWAIT ● OMAN ● SAUDI ARABIA ● SYRIA ●
YEMEN ● UNITED ARAB EMIRATES ● TURKEY ● AMERICAN SAMOA ● AUSTRALIA ● MARIANA
ISLANDS ● COOK ISLANDS ● FEDERATED STATES OF MICRONESIA ● FIJI ● FRENCH POLYNESIA ●

Congress Proceedings

GUAM ● KIRIBATI ● NAURU ● NEW CALEDONIA ● NEW ZEALAND ● NIUE ● MAURITIUS ● PAPUWA
NEW GUINEA ● MARSHALL ISLANDS ● PALAU ● SAMOA ● SOLOMON ISLANDS ● TONGA ● TUVALU
● VANUATU ● ANTIGUA AND BARBUDA ● BAHAMAS ● BARBADOS ● BELIZE ● BOTSWANA ●
BRITAIN ● BRUNEI DARUSSALAM ● CAMEROON ● CANADA ● CYPRUS ● DOMINICA ● THE GAMBIA
● GAHANA ● GRENADA ● GUYANA ● JAMAICA ● KENYA ● LESOTHO ● MALAWI ● MALTA ●
MAURITIUS ● MOZAMBIQUE ● NAMIBIA ● NIGERIA ● ST KITTS AND NEVIS ● ST LUCIA ● ST VINCENT
● THE GRENADINES ● SEYCHELLES ● SIERRA LEONE ● SOUTH AFRICA ● SWAZILAND ● TANZANIA
● TRINIDAD AND TOBAGO ● TUVALU ● UGANDA ● WEST SAMOA ● ZAMBIA ● ZIMBABWE ●
CHINA ● KOREA ● JAPAN ● MACAU ● MONGOLIA ● BRUNEI DARUSSALAM ● CAMBODIA ●
INDONESIA ● LAO ● MALAYSIA ● MYANMAR ● PHILIPPINES ● SINGAPORE ● TAILAND ● VIETNAM
● AFGHANISTAN ● BANGLADESH ● BHUTAN ● INDIA ● IRAN ● MALDIVES ● NEPAL ● PAKISTAN
● SRI LANKA ● AZERBAIJAN ● KAZAKHSTAN ● KYRGYZSTAN ● TAJIKISTAN ● TURKMENISTAN ●
UZBEKISTAN ● JORDAN ● LEBANON ● TUNISIA ● KUWAIT ● OMAN ● SAUDI ARABIA ● SYRIA ●
YEMEN ● UNITED ARAB EMIRATES ● TURKEY ● AMERICAN SAMOA ● AUSTRALIA ● MARIANA
ISLANDS ● COOK ISLANDS ● FEDERATED STATES OF MICRONESIA ● FIJI ● FRENCH POLYNESIA ●
GUAM ● KIRIBATI ● NAURU ● NEW CALEDONIA ● NEW ZEALAND ● NIUE ● MAURITIUS ● PAPUWA
NEW GUINEA ● MARSHALL ISLANDS ● PALAU ● SAMOA ● SOLOMON ISLANDS ● TONGA ● TUVALU
● VANUATU ● ANTIGUA AND BARBUDA ● BAHAMAS ● BARBADOS ● BELIZE ● BOTSWANA ●
BRITAIN ● BRUNEI DARUSSALAM ● CAMEROON ● CANADA ● CYPRUS ● DOMINICA ● THE GAMBIA
● GAHANA ● GRENADA ● GUYANA ● JAMAICA ● KENYA ● LESOTHO ● MALAWI ● MALTA ●
MAURITIUS ● MOZAMBIQUE ● NAMIBIA ● NIGERIA ● ST KITTS AND NEVIS ● ST LUCIA ● ST
VINCENT ● THE GRENADINES ● SEYCHELLES ● SIERRA LEONE ● SOUTH AFRICA ● SWAZILAND ●
TANZANIA ● TRINIDAD AND TOBAGO ● TUVALU ● UGANDA ● WEST SAMOA ●

Monday - September 13

Pre-Congress Tour

Delegates who arrived early for the congress enjoyed a day tour of the Manamati archeological site and museum situated near Comilla.

An isolated, low dimpled range of hills, dotted with more than 50 Buddhist settlements from the 8th to 12th century AD, known as Manamati-Lalmaj range are extended through the centre of the district of Comilla.

Salban Vihara, almost in the middle of the hill range consists of 115 cells, built around a spacious courtyard, is a fascinating example of early Buddhist architecture. The nearby Manamata site Museum boasts a rich and varied collection of copper plates, gold and silver coins and many bronze and stone objects.

More than 150 bronze statues have been recovered mostly from monastic cells, bronze stupas, stone sculptures and hundreds of terracotta plaques each measuring on an average 22cm to 30cm wide.

Tuesday - September 14

Inaugural Session

The congress theme of Water and Environment: The Role of the Media received close scrutiny at the inaugural session. Welcome addresses and statements were delivered by a number of delegates and supporting agency representatives. This included FEJB Chairperson Quamrul Islam Chowdhury, APFEJ Chairman Dr Dharman Wickremaratne, CEJA Coordinator Angele Luh, Asian Development Bank Environment and Social Development Chief Dr Kazi F Jalal, UNEP Asia-Pacific Director, Nirmal Andrews and Bangladesh Environment and Forest Minister Syeda Sajeda Chowdhury.

The session also saw the presentations of APFEJ's annual Green Pen Awards for Excellence in Environmental Journalism, the APFEJ-ADB Asia-Pacific Award for Excellence in Environmental Journalism and Photo Journalism 1998, and the Bangladesh Green Pen Award.

The congress lecture was delivered on the congress theme by renowned Bangladesh journalist and Holiday Editor-in-Chief Enayetullah Khan. His lecture generated a heated discussion on the media's role in reporting of water issues in Bangladesh and around the globe.

"The green agenda is hopefully unfolding in Bangladesh. The civil society is increasingly getting involved with environmental concerns. The formal state, the NGO sector, the development practitioners, the producers in the fields and factories and the ever-burgeoning human habits across the globe are pondering the question more than ever before: Are there environmental limits to the number of people and the quality of life that this earth can support?"

For the developing and least developed nations, the Malthusian decree, cruel like in a summary trial, portends doom for the poor and the wretch "To the punishment, therefore of nature he should be left, the punishment of want .. At nature's mighty feast, there is no vacant cover for him. She tells him to be gone."

And as the world today enters the six billion mark in population figure, the 2000 - year old apocalyptic prediction of the Reverend Robert Thomas Malthus has mercifully not come true. Human ingenuity and continued improvements in agricultural technology have offset the cruel decree.

Nevertheless, the issue of environmental limits remain. The 1999 UNFPA report on the state of world population states "Because natural conditions, technology, and consumption and distribution patterns are constantly in flux, there is no universal agreement as to the definition of 'carrying capacity', it is unlikely that there will ever be a definitive answer .. The predicted limits fall within a broad range: 4-16 billion people. What will happen .. either globally or locally will depend on human choices - about lifestyles, environmental protection and equity."

Session Two - Water Scarcity and Food Security

Two international water experts - Dr Liqa Raschid Sally from the International Water Management Institute (IWMI) and Dick de Jong, Marketing & Advocacy Manager of IRC International Water and Sanitation Centre - presented educational and startling information on the current and future water crisis in a session chaired by Pacific Island News Association Chairperson Laisa Taga.

Dr Raschid Sally presented a thought provoking seminar on the use and promotion of a special model used to

determine water needs for food production in developing countries in the year 2025. The model determines increasing water demand in 2025 as a result of population growth and changing diets. It gives the user ample opportunity to modify assumptions to the national context and to test different scenarios. The model does not provide hard and fast predictions but rather analyses "what-if" questions. It is hoped this model will be adopted by decision makers as a practical guide to water the priorities in water management and needs for nations and regions should be as populations grow and cultures adapt.

De Jong warned in his presentation on 'Refreshing our Memory of Fresh Water' that the world faces a "worsening series" of local and regional water quality and quantity problems, largely as a result of poor water allocation, water wastage and increasing degradation of water resources.

He pointed out that water use has been growing at more than twice the rate of the population during the past century. Water shortage and pollution are causing widespread public health problems, limiting economic and agriculture development and harming a wide range of eco-systems.

Wednesday - September 15

Session Three - Water and Sustainability

AFEJB Chairperson Quamrul Islam Chowdhury chaired this session, which again teamed up world water experts Dr Liqa Raschid Sally and Dick de Jong. De Jong gave a fascinating insight into the sustainable water management needs around the world in both developed and developing nations.

Dr Raschid Sally delivered a technical presentation on the sustainable management of wetlands, an eco-system that has been under-valued throughout history as a vital part of the water management strategy.

Speakers at the session emphasized the need for having an integrated, low-cost and effective water and wetlands management strategy for the world, keeping in view the demand for water in the next century.

"Following the new developments in the sector, and taking into account the experience of CINARA (Colombia) and IRC, the following approximation of sustainable water supply and sanitation systems emerges: A water supply or sanitation system is sustainable when it:

- Provides an efficient and reliable service at a level that is desired;*
- Can be financed or co-financed by the users with limited*

- but feasible external support and technical assistance;*
- Is being used in an efficient way, without negatively affecting the environment;*
- Is still usable in 25 -50 years by the next generation.*

The management of the system is a crucial aspect that more and more will be placed in the hands of community based organizations. Projects that enhance the management capacity and the self-esteem of communities and make sure that jointly, solutions are adopted that take into account the local conditions and culture and particularly the prevailing sanitary problems, stand a better chance to develop sustainable systems."

Session Four - World Water Forum

Syarifa Foundation for Environmental Communication Chairperson Dr Amanda Katalil-Niode chaired this session which focussed on the upcoming World Water Forum to be held in March 2000 in The Hague, The Netherlands. Water Water Forum Deputy Executive Director Marcel Del Heuvel explained the aims of the event, while Forum Communications Officer Nils Hoffman presented two recently developed press releases explaining some of important issues of the ambitious event.

The government of The Netherlands, together with other donors and international organizations, is supporting the development of the Long Term Vision on Water, Life and Environment in the 21st Century. Initiated by the World Water Council, the Vision is currently being prepared under the guidance of the World Commission on Water in the 21st Century.

The Vision and its accompanying Framework for Action, to be developed by the Global Water Partnership, will be presented in The Hague at the World Water Forum and Ministerial Conference from March 17 to 22, 2000.

The aim of the forum and Conference is to create public awareness and generate commitment at political level. Leading experts and top officials from around the world will convene in The Hague for this historic event, which will focus the attention of all stakeholders on the conditions necessary for implementing the Vision and the Framework for Action at regional, national and global levels. A parallel Ministerial Conference will take place on March 21 and 22 and will be chaired by the Dutch Minister for Development Cooperation

"Water is precious. Water is finite. Just 2.5 percent of the world's water is fresh, rather than seawater, and two-thirds of all fresh water that does exist is locked in ice caps and glaciers. Of the remaining amount, some two-thirds is "lost" to evaporation. From what is left, some 20 percent is in areas too remote for human access, while of the other

80 percent, three-quarters comes at the wrong time or place, through monsoons, hurricanes and floods, and can only be partially captured for human use.

The renewable fresh water supply on land -- water made available year after year by rainfall -- less than 0.08 of one percent of the total water on the planet. Of this tiny fraction of water available for human use, some two-thirds is devoted to agriculture, a figure that rises to more than 80 percent, sometimes 90 percent, in many developing countries, where the real water crunch is coming."

Session Five - Internet and Environment

APFEJ Founding Chairperson and environmental journalist Aditya Man Shreshtha chaired this informative session, which concentrated on the new era of digital and cyber environmental writing and research via the Internet.

APFEJ Documentation Manager Evyn Testoni and IRC International Water and Sanitation Centre Public Information and Advocacy Manager Dick de Jong co-presented the session. de Jong shared his knowledge and experience of presenting environmental information through his organization's website.

He also gave tips to delegates on how to search for environmental information on the World Wide Web and how to utilize the many services on the Internet to gather information. Evyn Testoni, gave a detailed report on the current state of the Internet and the problems and successes of setting up a website

The session generated many questions from the delegates, many of who already use the Internet daily for their work even though many come from developing nations

"The Internet is the fastest-growing communication tool invented. Ten years ago only 100,000 computers were connected to the Internet. Today there are an estimated 36 million personal computers online with 150 million users. More than 700 million people are expected to be using the Net by 2001.

But it is a sobering thought to realize that more than two-thirds of the population of the world have never used a telephone, let alone sent an email message. Particularly among the developing nations of Asia and the Pacific, the statistics on access to the basic item needed to connect to the Internet - telephone lines - are very low."

Thursday - September 16

Session Six- Media and Water Issues

This session, chaired by Forum of Environmental Journalists Pakistan Chairperson Zaigham Khan, included a keynote presentation from Friends of the Earth (FoE) Australia Media Representative and Earth Matters Radio Producer Juliet Fox.

Citing Australian examples, Fox said environmental concerns had been 'mainstreamed', with all major political parties in her country having incorporated environmental issues into their party agenda.

She said environmental organizations no longer have 'ownership' or exclusive representation of environmental issues and this had led to a marginalization of environmental groups and a change in the sort of environment issues covered by the mainstream media.

Fox also added that there had been the so-called 'scientization' of environmental issues as they were increasingly covered as scientific debates rather than from a political perspective.

"The field of environmental journalism is a complex and challenging one. In Australia environment reporting is presently at a low point. Australian university lecturer and author, Sharon Beder, writes that:

Environmental reporting emphasizes individual action rather than underlying social forces and issues. A current-affairs TV show may expose Corporation X for spewing toxic waste into the local waterway, but it will seldom look at the way corporations have lobbied to weaken the legislation preventing such dumping, how under-funded regulators allow corporations to monitor their own discharges; or the lack of personal liability for corporate board members who would put profit first and damn the consequences.

The types of environment stories, priorities and news criteria that the media have rarely carry messages of true environmental sustainability. And it is the mainstream media's structures and agendas that need to be vigorously challenged by both environmental journalists and environmentalists."

Session Seven -

Arsenic Contamination of Water

CEJA Chairperson Quamrul Islam Chowdhury chaired an in-depth session on the tragic arsenic contamination of Bangladesh's tube-wells. Delegates watched two documentaries produced by FEJB which focussed on the, heart rending plight of a Bangladeshi village woman with

arsenic poisoning from the tube-wells and the delicate role of the Bangladesh media in its reporting of the problem.

Presentations were made by representatives from UNICEF, which is at the centre of a controversy about the installation of the tube-wells, and the Bangladesh Ministry officials. Delegates and Bangladeshi journalists then took part in a lengthy and emotional debate on the arsenic problem as UNICEF was on the receiving end for its once acclaimed safe drinking supply program through sinking thousands of tube-wells across Bangladesh in the 1970s and 1980s.

Dr Iftikhar Husain of the Bangladesh Ministry of Health and Family Welfare alleged that UNICEF had known about the problem of arsenic contamination in the groundwater of parts of Bangladesh as early as the 1980s, but failed to warn the public about it and take precautionary measures until 1993.

Many delegates called to question the UNICEF program of tube-well drinking water supply system as well as the government role and asked what measures were being taken to mitigate the situation. However, others were shocked at the aggressive debate and called on the Bangladesh Government, UNICEF and other development agencies to join hands in tackling the problem that has affected millions of Bangladeshi villagers.

UNICEF's Chief of Water and Environmental Sanitation Program, Dr Deepak Bajracharya, shared an update on arsenic mitigation activities and claimed that nationwide testing had found that 22 per cent of tube-wells were contaminated. The community-based arsenic mitigation project supported by UNICEF is now providing the foundation for scaling up nationally, he said.

Dhaka Community Hospital, the Grameen Bank and other agencies were now implementing arsenic mitigation in 500 villages with help from the government. Dr Bajracharya said that the project had demonstrated the speed at which blanket testing can be done - for example in two thanas (districts) more than 20,000 were tested in a month. Masons in 500 villages were now being trained in the construction and installation of alternative systems including rainwater harvesting, sand filters on reserve ponds, and household arsenic removal systems, which community members select.

Friday - September 17

Closing Session

Village-level workers are also being trained to test wells and identify arsenic patients. He also shared the communication strategy with mass media and

interpersonal communication materials that provide people with the information they need on arsenic and the steps they can take to use only safe water.

The final session of the congress included closing speeches from APFEJ Managing Editor Dimesh Weerakkody, FEJB General Secretary Bakhtiar Rana and Chief organizer for APFEJ and CEJA next congress in Fiji, Pacific Forum of Environmental Journalists Secretary Nina Ratulele.

Two important lectures were also delivered by UN-ESCAP Environment Section Chief Dr Razul Karim and Bangladesh Environment Secretary Syed Marghub Morshed.

The achievements and outcome of the congress were also highlighted, including the election of new office bearers for APFEJ and CEJA, the formation of a new constitution and three-year work plan for CEJA, and the adoption of a strengthened constitution for APFEJ which includes the formation of six regions of APFEJ operation, each with its own director. Delegates from each of the countries represented at the congress also delivered small summations of their views of the congress, with many highlighting the success of not only the above mentioned outcomes, but also the knowledge of water issues gained and the strengthening of links between national forums due to the networking opportunities the congress presented.

"I am pleased to announce here at this event the official declaration that the 12th Asia Pacific Forum of Environmental Journalists and the 3rd Commonwealth Environmental Journalists Association Congress will be held in the Fiji Islands next year.

I invite you all to join me at the Suva Congress. This will be an historic event as it will be the first time an APFEJ / CEJA congress has been hosted by a Pacific nation."

Saturday - September 18

Post Congress Tour

More than 30 congress delegates took part in a one day ferry cruise on the river system near Dhaka. The tour highlighted the vital link of life and water in Bangladesh, with examples of natural beauty, water pollution and the close proximity of industry and urban development on the rivers.

During the three hour excursion, delegates took in many sights, from endless green fields on the riverside to jute mills, busy commuter and cargo ships to illegal sand mining and dredging vessels, and sprawling urban developments to serene mosques and historic buildings.

● CHINA ● KOREA ● JAPAN ● MACAU ● MONGOLIA ● BRUNEI DARUSSALAM ● CAMBODIA ●
INDONESIA ● LAO ● MALAYSIA ● MYANMAR ● PHILIPPINES ● SINGAPORE ● TAILAND ● VIETNAM
● AFGHANISTAN ● BANGLADESH ● BHUTAN ● INDIA ● IRAN ● MALDIVES ● NEPAL ● PAKISTAN
● SRILANKA ● AZERBAIJAN ● KAZAKHSTAN ● KYRGYZSTAN ● TAJIKISTAN ● TURKMENISTAN ●
UZBEKISTAN ● JORDAN ● LEBANON ● TUNISIA ● KUWAIT ● OMAN ● SAUDI ARABIA ● SYRIA ●
YEMEN ● UNITED ARAB EMIRATES ● TURKEY ● AMERICAN SAMOA ● AUSTRALIA ● MARIANA
ISLANDS ● COOK ISLANDS ● FEDERATED STATES OF MICRONESIA ● FIJI ● FRENCH POLYNESIA ●
GUAM ● KIRIBATI ● NAURU ● NEW CALEDONIA ● NEW ZEALAND ● NIUE ● MAURITIUS ● PAPUWA
NEW GUINEA ● MARSHALL ISLANDS ● PALAU ● SAMOA ● SOLOMON ISLANDS ● TONGA ● TUVALU
● VANUATU ● ANTIGUA AND BARBUDA ● BAHAMAS ● BARBADOS ● BELIZE ● BOTSWANA ●
BRITAIN ● BRUNEI DARUSSALAM ● CAMEROON ● CANADA ● CYPRUS ● DOMINICA ● THE GAMBIA
● GHANA ● GRENADA ● GUYANA ● JAMAICA ● KENYA ● LESOTHO ● MALAWI ● MALTA ●
MAURITIUS ● MOZAMBIQUE ● NAMIBIA ● NIGERIA ● ST KITTS AND NEVIS ● ST LUCIA ● ST VINCENT
AND THE GRENADINES ● SEYCHELLES ● SIERRA LEONE ● SOUTH AFRICA ● SWAZILAND ●
TANZANIA ● TRINIDAD AND TOBAGO ● TUVALU ● UGANDA ● WEST SAMOA ● ZAMBIA ●
ZIMBABWE ● CHINA ● KOREA ● JAPAN ● MACAU ● MONGOLIA ● BRUNEI DARUSSALAM ●
CAMBODIA ● INDONESIA ● LAO ● MALAYSIA ● MYANMAR ● PHILIPPINES ● SINGAPORE ●
TAILAND ● VIETNAM ● AFGHANISTAN ● BANGLADESH ● BHUTAN ● INDIA ● IRAN ● MALDIVES
● NEPAL ● PAKISTAN ● SRILANKA ● AZERBAIJAN ● KAZAKHSTAN ● KYRGYZSTAN ● TAJIKISTAN
● TURKMENISTAN ● UZBEKISTAN ● JORDAN ● LEBANON ● TUNISIA ● KUWAIT ● OMAN ● SAUDI
ARABIA ● SYRIA ● YEMEN ● UNITED ARAB EMIRATES ● TURKEY ● AMERICAN SAMOA ●
AUSTRALIA ● MARIANA ISLANDS ● COOK ISLANDS ● FEDERATED STATES OF MICRONESIA ● FIJI ●

Inaugural and Opening Session

FRENCH POLYNESIA ● GUAM ● KIRIBATI ● NAURU ● NEW CALEDONIA ● NEW ZEALAND ● NIUE
● MAURITIUS ● PAPUWA NEW GUINEA ● MARSHALL ISLANDS ● PALAU ● SAMOA ● SOLOMON
ISLANDS ● TONGA ● TUVALU ● VANUATU ● ANTIGUA AND BARBUDA ● BAHAMAS ● BARBADOS ●
BELIZE ● BOTSWANA ● BRITAIN ● BRUNEI DARUSSALAM ● CAMEROON ● CANADA ● CYPRUS ●
DOMINICA ● THE GAMBIA ● GHANA ● GRENADA ● GUYANA ● JAMAICA ● KENYA ● LESOTHO
● MALAWI ● MALTA ● MAURITIUS ● MOZAMBIQUE ● NAMIBIA ● NIGERIA ● ST KITTS AND NEVIS
● ST LUCIA ● ST VINCENT AND THE GRENADINES ● SEYCHELLES ● SIERRA LEONE ● SOUTH AFRICA
● SWAZILAND ● TANZANIA ● TRINIDAD ● TOBAGO ● TUVALU ● UGANDA ● WEST SAMOA ●
ZAMBIA ● ZIMBABWE ● CHINA ● KOREA ● JAPAN ● MACAU ● MONGOLIA ● BRUNEI
DARUSSALAM ● CAMBODIA ● INDONESIA ● LAO ● MALAYSIA ● MYANMAR ● PHILIPPINES ●
SINGAPORE ● TAILAND ● VIETNAM ● AFGHANISTAN ● BANGLADESH ● BHUTAN ● INDIA ● IRAN
● MALDIVES ● NEPAL ● PAKISTAN ● SRILANKA ● AZERBAIJAN ● KAZAKHSTAN ● KYRGYZSTAN
● TAJIKISTAN ● TURKMENISTAN ● UZBEKISTAN ● JORDAN ● LEBANON ● TUNISIA ● KUWAIT ●
OMAN ● SAUDI ARABIA ● SYRIA ● YEMEN ● UNITED ARAB EMIRATES ● TURKEY ● AMERICAN
SAMOA ● AUSTRALIA ● MARIANA ISLANDS ● COOK ISLANDS ● FEDERATED STATES OF MICRONESIA
● FIJI ● FRENCH POLYNESIA ● GUAM ● KIRIBATI ● NAURU ● NEW CALEDONIA ● NEW ZEALAND
● NIUE ● MAURITIUS ● PAPUWA NEW GUINEA ● MARSHALL ISLANDS ● PALAU ● SAMOA ●
SOLOMON ISLANDS ● TONGA ● TUVALU ● VANUATU ● ANTIGUA AND BARBUDA ● BAHAMAS ●
BARBADOS ● BELIZE ● BOTSWANA ● BRITAIN ● BRUNEI DARUSSALAM ● CAMEROON ● CANADA
● CYPRUS ● DOMINICA ● THE GAMBIA ● GHANA ● GRENADA ● GUYANA ● JAMAICA ● KENYA
● LESOTHO ● MALAWI ● MALTA ● MAURITIUS ● MOZAMBIQUE ● NAMIBIA ● NIGERIA ● ST
KITTS AND NEVIS ● ST LUCIA ● ST VINCENT AND THE GRENADINES ● SEYCHELLES ● SIERRA LEONE ●
SOUTH AFRICA ● SWAZILAND ● TANZANIA ● TRINIDAD AND TOBAGO ● TUVALU ● UGANDA ●

Statement by Quamrul Islam Chowdhury, Bangladesh
Chairperson, Forum of Environmental Journalists of Bangladesh (FEJB)

Today, it has been a great day for us that we had been looking forward to for months to welcome you all here for this Dhaka Congress. I, on behalf of FEJB, welcome you at the Dhaka Congress.

We had chosen this venue at BARD - the Bangladesh Academy for Rural Development, for a number of reasons. Tucked away quietly in the central southeast of Bangladesh - in an idyllic setting - we had thought that BARD would be the right venue for holding this kind of serious brainstorming conference, away from the din and bustle of any big city. I don't want to pat myself or the FEJB for organizing the congress, but I must express my gratitude to different agencies, including our Ministry of Environment and Forest, UNEP, UNDP, the Asian Development Bank (ADB), AusAID, Friends of the Earth, the World Bank and the Dutch government without whose help we won't be able to be here today.

The theme of this joint congress of the APFEJ and CEJA is "Water and the Environment: The Role of the Media" - a subject so relevant to our situation in Bangladesh. You all know that Bangladesh is a country where the environment is so critically tied with water. Water is part of our life. A land of rivers, Bangladesh and the Bangladeshis live with the on-again off-again floods. Our agriculture is so much dependent on water! Thus, it has been fitting and most appropriate for you having chosen our country as the venue for the congress with such a theme.

In Bangladesh, like in many other countries, environmental issues are being addressed only recently. And I am proud to point out that FEJB, since it was launched in 1983, has been at the vanguard of the environmental movement in the country. Today, it is one of the most active and dynamic forums promoting the green agenda in Bangladesh. But again, I don't want to beat our own drum. As you know, we have been a founding member of APFEJ and CEJA. But more particularly on the national plane,

the FEJB is a member of Bangladesh's high-powered National Environment Council. FEJB has also played a leading role in the formulation of Bangladesh's globally acclaimed National Environment Management Action Plan (NEMAP) and is now one of the 20 sub-implementing agencies of UNDP's largest environment program in the world called Sustainable Environment Management Program (SEMP).

Under the SEMP, being funded by UNDP and executed by the Ministry of Environment and Forest, FEJB has been reposed with the responsibility of mainstreaming environment in the media as well as creating national awareness about the need for protecting the environment. As part of that responsibility, we have been conducting a lot of activities like running a feature service, producing TV footage of Earth File and talk shows, publishing quarterly newsletters, organizing field trips, workshops and seminars for journalists. And we have produced an annual State of Environment for 1998. We will be producing similar State of Environment Reports on an annual basis. These are in a nut-shell what we have been doing or trying to do at FEJB.

Ladies and Gentlemen: I don't want to tell upon your patience for long, but we will be here for the next four days when we will have enough time to dwell on more serious issues concerning environmental journalism as well as different problems facing us and our respective organizations. Before I conclude, I want to assure you that the green agenda is gradually unfolding in Bangladesh, with our media, the common people, the government and policy makers and the political parties increasingly getting themselves involved with conservation concerns.

With these words, I on behalf of FEJB welcome you all at this congress - the Dhaka Congress - which I believe will be a milestone in our common quest for a sustainable future for our respective nations as well as for humankind in general as we all stand on the doorstep of a new millennium. Thank you again, ladies and gentlemen.

Statement by Dr. Dharman Wickremaratne, Sri Lanka

Chairperson, Asia Pacific Forum of Environmental Journalists (APFEJ)

I would like to give my heartfelt thanks to all the people who have worked so hard to make this congress a reality. In particular my good friend Quamrul Chowdhury and his colleagues at the Bangladesh Forum of Environmental Journalists.

I would also like to thank my colleagues at the APFEJ Secretariat and all the supporting agencies who have made this event possible. It has been a lot of hard work, and at times a few small headaches, to bring everything together, but I am sure it will be well worth the effort.

Together we represent 64 people from nearly 25 countries, but more than that each one of us is a messenger about the concerns of the environment and media. We come from different parts of the globe and different avenues of the media and environmental sectors. What we learn and discuss here will be taken back hopefully by each one of you and spread through various means to enlighten, educate and entertain our colleagues, friends and the public at large.

As you know, the theme of this congress is "Water and the Environment: The Role of the Media". This is a very significant subject. Recent reports about water problems around the world range from the violently alarmist at worst to mildly pessimistic at best. It has even been stated that the next century's regional wars will be fought over water. The lack of clean drinking water and enough water to irrigate crops is a major concern, not only in developing nations but even in industrialized nations as well.

It is poignant that this event is being held in Bangladesh where water issues are a major concern. As a country that is basically the delta for the holy and amazing Ganges River, Bangladesh knows only too well the problems water can cause. From polluted wells to floods - life exists around water in Bangladesh.

You will hear many facts, statistics and stories about water and the associated environmental problems facing this life-sustaining liquid. Try and take as much in and add it to your knowledge to spread the news to others about what we must do to avert the predicted water crisis in the future.

At this time I would like to thank some of the sponsors of this year's conference. They include the Bangladesh Ministry of Environment and Forestry, United Nations Development Programme (UNDP), United Nations Environment Programme (UNEP), Asian Development Bank (ADB), The World Bank and Australian Agency for International Development (AUSAID) and FoE Australia. Thank you all for your support. And to all of you who are gathered in this room today I thank you for coming such great distances from all over the world to participate in this year's Congress. One of the greatest benefits of these APFEJ conferences are the friends and contacts we make each year. But also take the opportunity to experience many other things at the congress.

I hope you can catch up with old friends, make new friends, discuss your hopes, fears and problems, rejoice in your successes and most of all enjoy yourself. We will work hard, learn much and sometimes even argue about ideas, but at all times remember we are all sailing in the same ship for the same destination and we should savour every moment along the journey.

Thank you all for coming. Last year we met in Sri Lanka. This year we are meeting in Bangladesh and next year we hope to meet in Fiji. I hope you each gained something from the congress, which you will take home with you and help in your work and life in the future.

I know we are going to have an outstanding conference. Thanks again to Quamrul Chowdhury and the Bangladesh Forum of Environmental Journalists for hosting it.

Statement by Angele Luh, Cameroon

Chairperson, Commonwealth Environmental Journalists Association (CEJA)

It gives me great pleasure to welcome you all to the Dhaka Congress. It is certainly an important event, especially for the Commonwealth Environmental Journalists Association (CEJA)

I must take this opportunity before I go on to especially thank Dr Dharman Wickremaratne and Quamrul Islam Chowdhury for their support and vision to make CEJA a reality. Dharman was the founder and driving force behind CEJA's birth and Quamrul was the founding secretary.

As you may know, CEJA was formed at the historic Colombo Congress last year. It is now one-year young and growing each day, just like a small child. In time we hope it will become a strong and active adult and all signs so far point to this - it will be a success and an important part of the network of environmental journalists across the world.

CEJA's membership has already grown progressively since the Colombo Congress. It now boasts members in 26 British Commonwealth nations and this is expected to increase in the coming months. The Dhaka Congress gives CEJA a chance to strengthen its structure and make plans for the years ahead.

Some people may ask why there is a need for an association linking environmental journalists in Commonwealth countries. But the answer is the same as the need for any environmental association in any region of the world - be it local, national, regional or international.

British Commonwealth nations share many things beside a link to the United Kingdom. They co-operate in political matters, economic issues and, often more excitingly, on the sports field. Therefore, it is natural for

a community of people with a common goal and interest to share experiences, talk about their problems and failures, rejoice in their success and work together for a better future.

This is the main reason CEJA is in existence today. Commonwealth countries cover almost every corner of the world - Africa, Europe, the Pacific, the Caribbean, North America, Central America and Australasia. The countries also represent many different socio-economic groups, races and religions. It is a fascinating and diverse community, which shares a common history and common bond.

This gathering of CEJA members is a tremendous opportunity to establish the infant association and, just like a one-year-old human infant, to help and encourage it learn to walk and talk, giving it a voice and strong presence in the world. This is the first major gathering of CEJA members since Colombo. We will work hard to establish a strong three-year work plan to take CEJA into the new millennium.

Last, but certainly not least, I must thank the supporting agencies who have guided and assisted CEJA in its first year. Our special thanks go to UNEP and The Commonwealth Foundation, who backed the initiative to form CEJA in Colombo. And this year in Bangladesh, other agencies such as AusAID, World Bank, UNDP and the Asian Development Bank have given us more support along with our founding supporters.

I hope you all enjoy the congress, and whether you are from a Commonwealth nation or not - it does not matter. We welcome everyone's opinion and ideas on how CEJA should grow. For that is what journalism and life in general is all about. Communication, working together and helping one another.

**Statement by Honorable Seyda Sajeda Chowdhury, Bangladesh
Minister, Environment and Forest of Bangladesh**

It gives me immense pleasure to be amongst you here today at this august gathering of journalists and experts concerned with environment, some of whom have travelled from far across the continents for the Comilla Congress at BARD. It is indeed a great honor for us to be able to host such a major conference on environment which in recent years has been made a top agenda of the government of Bangladesh. I must thank you all for choosing our country as the venue of this conference. But I must particularly thank the Forum of Environmental Journalists of Bangladesh (FEJB), which had been the main driving force in organizing the congress with support from the Sustainable Environment Management Program (SEMP) of the Ministry of Environment and Forest, UNEP, ADB, The World Bank, Friends of the Earth, AusAID, and the Foreign Ministry of the Netherlands.

Ladies and Gentlemen: The theme of this joint congress is "Water and Environment: Role of the Media", a subject which is so relevant to our situation in Bangladesh - a country whose environment is crucially tied with water, and its people perennially living with water. This land of ours which is situated on the Ganges Brahmaputra Meghna basins experiences regular floods caused by the onrush of water from the upper Himalayan region. Some of these floods were devastating in nature and created havoc engulfing most part of the country, making millions of our people homeless, destroying standing crops, infrastructure and threatening the environment. On the other hand, the country faces serious problems in the lean season when water becomes scarce due to the low flow of waters from the upper riparian countries.

I hope that the participants at this congress will dwell at length on the issues relating to water and sustainable development in different countries of the world, particularly the Asia-Pacific and Commonwealth nations. This congress should give you yet another opportunity for cross-fertilizing your ideas on environment conservation. It should give you a chance to share your experiences and highlight the interfaces of water and environment, related problems and strategies. The moot should provide you with a forum for identifying common grounds in your mission for protecting our mother earth.

Ladies and Gentlemen: Being a developing third world country, Bangladesh has to give a big thrust on industrial development. But at the same time, we are aware that our pursuit for national development does not degrade our environment and disrupt the country's unique bio-diversity. We, in Bangladesh, have been attaching great importance to protecting our environment. Our government, under the leadership of Prime Minister Sheikh Hasina, has a very strong green agenda and as part of that, we have so far undertaken a number of projects and programs on environment and forestry sectors. We have signed or ratified most of the major international protocols and conventions on environment, and have been implementing them nationally. A number of professional bodies and NGOs are also working in the environment sector. Our goal is common - we want to make Bangladesh an environmentally friendly country through concerted efforts of all concerned.

Distinguished participants: There is no denying the fact that the media plays a vital role in creating mass awareness of various issues, particularly the issues related to environment. I believe that the environment conscious editors, journalists, experts and policy-makers who have assembled here at this congress will take up the burning questions on environment and come up with their suggestions for ensuring a sustainable development and a common future for all of us.

Finally, I sincerely wish that all of you will actively participate in the discussions and come up with a "Comilla Declaration", which should help us in formulating our future course of action with regard to environment conservation. I hope that your stay in BARD as well as in Bangladesh will be a pleasant one. I wish the AFEJ-CEJA congress a grand success. With these few words, I declare the Comilla Congress open.

I thank you for kindly having listened to me.
I thank you all again.
Joy Bangla
Joy Bangabandhu

Statement by Dr. Rezaul Karim, Thailand
Chief, Environment Section, Environment and
Natural Resources Development Division,
United Nations Economic and
Social Commission for Asia and the Pacific (UN-ESCAP)

On behalf of the United Nations Economic and Social Commission for Asia and the Pacific, I am very honoured to be present at the 11th Asia-Pacific and 2nd Commonwealth Congress of Environmental Journalists. ESCAP's continuing initiative in the promotion of environmental awareness, particularly with the environmental journalists of the region which led to the establishment of APFEJ underscores our long-term commitment to the promotion of environmentally sound and sustainable development in the Asian and Pacific region. I wish to take this opportunity to express our deep appreciation to the APFEJ, Forum of Environmental Journalists of Bangladesh and all the sponsors for the commendable efforts in promoting this congress.

The establishment of APFEJ was a vision that was achieved in 1988. It is heartening to see many of the dedicated participants in this task present here today. Allow me to mention Dr Kazi Jalal who is currently the Chief, Office of the Environment and Social Development while responsible for the environment program of ESCAP promoted the establishment of APFEJ. It was foreseen that APFEJ would be an independent organization, which it has become. ESCAP takes pride in being form of its formation and would continue to be associated in its activities. But I must mention that the wisdom and dedication of the journalists working on the environment made it possible. This is a unique and pioneering endeavor that is being replicated elsewhere. The success of APFEJ is already evident with the heightened awareness on the environment in the region. Some of the national forums APFEJ are also promoting national efforts in the implementation of Agenda 21.

The Asia-Pacific region is a region of great diversity of economies, cultures, natural resources endowments and the environment. The population in the region in mid-1998 estimated at over 3.6 billion, representing 60 per cent of the world's total in less than one quarter of the land area. In terms of GDP, the estimated vary from US\$200 to US\$25,000. Considering that the rural

population constitutes 63 per cent of the total population, and a billion below absolute poverty, the link between population, resources, development and the environment assumes critical dimensions. The theme of this congress rightly reflects the priority of the region.

Allow me to provide you with a current glimpse of the current environment situation of the region. Despite domestic and international efforts, the region in general continues to be the most polluted and environmentally degraded region while the Pacific region faces the problem of diminishing natural resources and other sustainable development concerns. The range of problems is huge - from degradation of rural lands to the pollution and congestion of urban areas - the so-called megacities. Some areas have unique problems of sea level rise (Pacific). Some environmental problems are local in nature such as air and water pollution. I would like to present some of the critical situations relating to land, forest, air quality, water quality and solid waste.

Land

- Less land per capita (0.3 hectares compared to 1.6 in the rest of the developing countries)
- Food production has not matched the population growth rate
- Soil erosion, soil salinization, desertification continues unabated

Forests

- Shrinking by 1.2 per cent per year
- Lost almost half in the past 30 years

Air Quality

- Ten of Asia's 11 megacities exceed WHO guidelines for particulate by a factor of at least 3, four countries exceed acceptable lead levels, three exceed acceptable ozone and SO₂. Thirteen of the 15 dirtiest cities of the world are in Asia.

Water Pollution

Suspended particulate highest in the world (due to deforestation, unsustainable watershed management and agricultural practices)

- Organic wastes (BOD) - 1.4 times world average
- Contains 3 times as much bacteria (fecal coliform) than world average
- The severity varies within Asia i.e in Beijing and Manila only 15 per cent of waste water is treated. These are the best examples in the region

Solid and Hazardous Wastes

A study shows 1 per cent income rise, causes 0.34 per cent rise in municipal solid waste

On average municipalities spend 50-70 per cent of their revenues on waste management. Still, collection services are low - 50-70 per cent at the best

Hazards and toxic wastes are on the rise with new petrochemical industries coming up. (The growth and affluence brings the problems of hazardous wastes)

Environment neglect has had a profound effect on economic development. A recent study has revealed that in China, the environmental damage owing to productivity losses from land degradation, water scarcity and destruction of wetlands amounted to 3.8-7.3 per cent of GNP in 1990, which accrues to 13.9 to 26.6 billion US dollars. In Thailand, the recent health cost related to particulate and lead that contributed to a loss of 2 per cent of GNP. Similar situations are seen in Indonesia, Pakistan and the Philippines ranging from 0.8 per cent to 3.3 per cent of GNP.

Asia's environmental problems can be attributed to two main factors. The first related to delayed action of policy makers who for too long ignored the environmental impact of rapid growth. Concern about pollution or degradation was not accorded due priority. The prevailing government mentality was one of "grow now, clean up later". Intervention from public authorities started with the rise in popular demand for a cleaner environment. Even then private markets did not respond spontaneously who followed reactive management mode based on merely complying with existing regulation.

The second relates to lack of adequate financial and technological capacities. The protection of environment and promotion of sustainable development demands financial and technological resources.

To halt the rate of decline in the state of the environment while maintaining economic growth, it is imperative to develop region-wide strategies to address the major problems and emerging issues. The environment does not abide by political and economic boundaries. Cross-

border problems must be dealt with through cross-border strategies.

Only by cooperation and collaboration between geographic and political groupings of municipalities and countries, of government and the civil society, can we develop an effective agenda to address these issues.

Recognizing this need for a regional approach to addressing environmental issues, ESCAP has been organizing the Ministerial Conferences on Environment and Development in Asia the Pacific every five years with the first one organized in 1985. The second Ministerial Conference was held in 1990, with the theme "communication for the environment". The first NGO/Media Symposium on Environment and Development was held in conjunction with the conference, as well as a Clean Technologies Exhibition showcasing technological developments. The outcome of the conference and associated events formulated the region's input to the Earth Summit in Rio de Janeiro in June 1992.

The third Ministerial Conference, held in 1995, was the first region-wide conference focused on environment and development after the Earth Summit. The objectives of the conference included promoting Agenda 21 and the building of a regional consensus for sustainable development. A major outcome was the adoption of the Regional Action Program, for 1996-2000, as a viable instrument to achieve the common goal of environmentally sound and sustainable development. Decisions were also made on various steps toward implementing the program, including strengthening institutional frameworks and promoting capacity at the regional, sub-regional and national levels. The involvement of the various sectors of society was further expanded to include the private sector. This enabled to solicit input and recommendations on policies regarding trade and the environment.

Distinguished participants, ladies and gentlemen: The ministerial conferences established a process of consultation and regional decision making with commitment for action. This region-wide process must be supported to continue to tackle the ever-worsening environment problems resulting from the fast pace of development. It must address the emerging and persistent issues that will become critical priorities in the new century as well as established a benchmark on the environmental situation defining our actions and commitments.

The Fourth Ministerial Conference, to be held year 2000' in Kitakyushu City, Japan, will take advantage of this timely reflection by focusing attention on the current state of the environment in this region and the direction it takes in the not-too-distant future. This conference is expected

to carry on the commitment generated at the previous Ministerial Conferences by adopting a strategic approach to tackle the critical issues in the next century.

The conference is intended to address a number of important issues, which should include:

- Assessment of the regional state of environment and sustainable development policies together with a review of implementation of global, regional and sub-regional programs;

The key issues the region has to focus on in the upcoming years with adoption of a regional action program for 2001-2005 and identification targets and timeframes for the priority concerns;. Formulate a regional message to "Rio+10" Summit in 2002 with a declaration from the region on our commitment to deal with the regional priority issues of sustainable development.

As the involvement of NGOs, the private sector, academia and other such civil society groups are considered essential in promoting sustainable development, partnership with these groups in environment and development will also be a priority issue at the conference. The participation of stakeholders will be promoted through the NGO/Media Symposium, the Private Sector Symposium, and the Clean Technologies Exhibition. As side events, Youth Forum on Environment and Development, and a photographic exhibition also have to be included. I would like to invite the APFEJ to play a lead role in planning and organizing the NGO/Media Symposium and interact with the conference as appropriate.

Statement by Nirmal Andrews, Thailand

Regional Director and Representative for Asia and the Pacific
United Nations Environment Programme (UNEP)

The first few verses of the Book of Genesis in the Holy Bible state that "in the beginning there was the WORD and the word was made by GOD and the word was GOD." Besides the spiritual significance of these lines, it is the thread of communication through myriad civilizations of human life on Earth that captures our attention as being central to existence. Speech distinguishes human life from others as much as it justifies the phrase that human beings are primarily social, communicative and knit together in social structures through the binding force of language as a means of communications.

Despite the slow down in ODA flow and the lack of progress in the transfer of environmentally sound technologies, there are signs of optimism. The level of progress achieved by individual countries since UNCED and noted in Asia and the Pacific in 1995 in a Ministerial Conference covered afforestation and reforestation programs, wilderness areas legislation, budgets earmarked for conservation and pollution prevention, wilderness areas protected, river revival projects undertaken, and conferences and workshops hosted in support of Agenda 21. Progress in other areas included international consensus building on sustainable development and institutional strengthening at national level. Some countries made progress in phasing out leaded gasoline, on introduction of measures for desertification control, and in curbing urban pollution among others.

The multitude of problems I highlighted raises the important question of the real prospects for sustainability in Asia and the Pacific. Can countries of the region attain their desired level of quality of life within the next two generations? The answer has to be yes, not because of blind optimism but because of the demonstrated ingenuity, resilience, and the determination of countries of the region. In the next two generations, which is the longest meaningful time frame that could be used for looking at sustainable development, humankind will have the increasing capacity and the means to solve the technical problems. Aided by the information technology and increased knowledge base, one can look to the next century with greater optimism. Thank you.

This brings us to the important questions of what is implied by the word language. Is it simply the conglomeration of words or more significantly of reference to the language of art and culture, the language of trust and dependence on communities or the language of mutual human forces set upon confronting challenges of human life? Then again from the definitional standpoint, are we to refer to communication as the written or spoken word through the print or audio-visual media, the present day hi-tech and high speed communication and the mass media advertisement and publicity affecting lifestyles, approaches to living and even attitudes and the value system?

In my view, communication implies all these things and more if we are to distinguish it from pure and simple "Information". Seen in this light, it is the harnessing of all these powerful forces inherent to communication to tackle the environmental communication of the coming century.

Environment encompasses each and every facet of human life and activity and the mutual relationship and well being between the two rests on the balance that can be brought about between environment and development. Many countries around the world as well as in the Asia-Pacific region have developed strategies for environmental protection or sustainable development, but undoubtedly a strategy's success will depend on how many people agree to it and are willing to cooperate in implementing it. In other words it spells out the importance of how well communication and education can play a role with other instruments in the process of strategy preparation and implementation.

A key issue for many countries in the Asia-Pacific region is to integrate environment into development policy and to use communication and education in an integrated way as an instrument of policy. There is a tendency to focus only on formal school education target groups by both governments and NGOs, rather than also to address groups who can make a difference in the policy issues.

The 'National Conservation Strategy' of Pakistan makes a very meaningful reference to the role required of communication in building up an environment strategy. "Communication needs to evolve into something more than brochures, videos and posters to a broader understanding of environment issues, fostered as a means of building support for legislative changes. It needs to be viewed as a way of mobilizing, assisting and giving synergy to other institutions at the grassroots level, the community based organizations, on which implementation depends at the provincial level and to building support in provinces where strategies are beginning to be developed. Communication also needs to be linked to other instruments and accompanied by incentives and penalties for implementing the National Conservation Strategy."

But communication and environmental education, when seen in this light need to be differentiated from information which is put across from scientific journals or the information networks generally. While information brings to notice scientific knowledge, facts and figures and activities, communication has a much wider ambit and scope. Indeed it offers the possibility of reaching out to communities and groups and if carried out innovatively, it has the potential of sending out the appropriate message on environmental issues to those who are ultimately responsible for the conservation of nature.

Unfortunately, planners, environmentalists, conservationists and scientists often forget about these aspects of education and communication because they have the conviction that scientific facts are convincing in themselves.

Certainly scientists build on the knowledge base by exchanging this type of information, but it doesn't necessarily motivate people outside these circles. In seeking to change attitude or behavior, scientific facts and long-winded data may prove to be quite insufficient by themselves. They most often require to be translated into concepts and messages, which make sense to a target audience, are relevant to them and appeal to them.

This means connecting information with more emotional aspects and for personal benefits based on real life situations. Many costly errors are made by planners because the perception of the people is not considered. Recently at a seminar organized during the Eco-Asia Congress, 1999, I was impressed by the statement of the Malaysian Minister of Environment wherein he reflected on the innovational approach to motivate people for tree plantation by relating forest regeneration for its relationship to water resources, which is being done in Malaysia.

We often notice that one of the weaknesses in this area is a tendency to decide on a TV program, poster or any other means of communication without thinking through the issues and the results that are being sought. Looking to the enormous nature of the challenges of environmental issues of the coming decade, it seems almost an imperative that in-depth analysis of the situation is undertaken first before planning the communication strategy, and to involve the target group in the preparation of the strategy.

Much more will need to be done to draw on what people know and to integrate this with government information in such a way that the people are enthused to enlarge the base of their own existing knowledge bringing about a heightened concern for the environment. In this way there would be avoidance of thrusting information upon people but a process of building up cooperation and mutually reinforcing perceptions.

Perhaps we could draw upon the strategies of the marketing world where products are sold on the strength of information that is carefully presented to the consumers with appropriate messages and strategies. Perhaps I could mention the success of the Discovery Channel in this context to say how it has been able to successfully influence the large audiences by sensitively putting across information inter-knitting it to the emotional and mental perceptions of people.

The world is faced with enormous environmental challenges on the global, regional and national levels requiring solutions to match up to these challenges. In the past there have been successful movements to come up with collective approaches. We are today much better placed with regard to the ozone issue. As the principal UN body for environment and the environment-conscience of the world, UNEP has led the movement to build up the world consensus in this and many other such fields including the bio-diversity issue playing the catalytic role based on the bio-diversity assessment carried out in conjunction with the World Resources Institute.

UNEP has carried out the implementation of global conventions as an area of concentration for itself. It must be added that the past success and future catalytic role will continue to depend on the partnerships with local communities, media, youth groups and the NGOs. The strength of appropriate communication will lead to further consensus on issues which would result in the collective will to face up to the challenges.

There have been many success stories in the Asia-Pacific region. In China television has played a pivotal role to foster public awareness, followed by newspapers, books and radio. The program 'Green Civilization and China' has been providing the introduction to green technology, discussion on environmental problems resulting from China's economic development and advocacy for environment-friendly lifestyles. The Global-Village Environment Culture Institute of Beijing works with potential partners to come up with programs on environmental education and communication. It has been cooperating with Beijing Municipal Environment and Sanitation Bureau to establish garbage sorting and recycling system in Beijing. It has also built a partnership with the Capital Women Journalists' Association to establish a "Green Volunteers" network among women journalists.

In both India and Bangladesh the approach of addressing environmental issues through Public Interest Environment Litigation (PIEL) has opened up a new horizon in the concept of environmental protection and conservation. It is not just a mode of enforcement of environmental regulation through the judicial process, but a potential way in creating awareness amongst the members of society about their rights and duties. This kind of litigation can be a unique vehicle for rendering services to those who cannot speak for themselves. It can clarify and promote judicial remedies with better responses as well as providing the interface between environmental issues and the regulatory regime.

The cases pertaining to the violation of the Master Plan of Dhaka as well as the enforcement of regulations of polluting industries and the resultant actions by the High

Court are but a few examples of this powerful force. In India the public litigation pertaining to the Taj and the force of public opinion created through the dedicated journalistic opinion building are all part of a huge movement in this direction.

I would like to congratulate Dr Dharman Wickremaratne, Chairman, Asia-Pacific Forum of Environmental Journalists (APFEJ) and Quamrul Islam Chowdhury, Chairman, Forum of Environmental Journalists of Bangladesh (FEJB) for providing this extraordinary forum for discussions on the environment issues on a continual basis. This year's theme of Freshwater Resources is one of the most important emerging issues which is presently centre stage in the agenda before the Commission on Sustainable Development which came into being after the Rio Summit. It is also an area of concentration for the United Nations Environment Program (UNEP).

Many of the speakers before me have drawn attention to the different aspects of the problem and the status of this subject, especially for the Asia-Pacific region. On my part given the context of my topic, I wish to draw attention to the heightened emphasis of countries in the region in their water policies, from the supply to the demand side management in an effort to improve water conservation. In Beijing, water conservation has become popular in both domestic and industrial sectors and has contributed to savings of up to 30 per cent in overall consumption. The key element, of course, is the involvement of the local communities through decentralized water management and creation of awareness to this issue through communication and education.

At the national level in Bangladesh, the groundwater contamination continues to pose a threat to people's health. This is a very complex issue, which calls for equally resolute and collective responses. The continuing UN wide response as well as the close and coordinated role at the level of the Government of Bangladesh must forge ahead to tackle this vast problem. Along with this there is again the requirement for communication and education to build up community responses. To inform families and communities about the arsenic problem and provide them with useful information on ways to protect their health is very important. A multi-level approach is required for both inter-personal communications as well as the mass media in reaching Bangladesh's poorest and far-flung families. UNEP will continue to collaborate with the other UN agencies active in this field in trying to find the way to face up to this challenge.

Similar challenges in many parts of this region highlight the enormous role for effective communications in the coming future. There is a growing realization that environmental targets will not be reached without the

participation of people in this process. Time and again it has been seen that national conservation strategies will work only if education and communication are not overlooked. Success depends on how people can become partners to facilitate change. The complex and crosscutting nature of the environmental issues makes

the Environment-Communication Challenges of the 21st Century truly daunting and call for an innovative and thoughtful approach by those who are responsible for bringing about the change. Effective communication must indeed become one of the central policy instruments in the coming decades

Statement by Dr. Kazi F. Jalal, Philippines
Chief, Office of Environment and Social Development
Asian Development Bank (ADB)

I am pleased to be with you at the opening ceremony of the 11th Asia-Pacific and 2nd Commonwealth Congress of Environmental Journalists. Aside from homecoming, it is indeed a pleasure for me to see a large number of journalist friends from all over Asia with whom I had the unique opportunity to work several years ago. I admire your selection of the venue, the Bangladesh Academy of Rural Development (BARD), a globally recognized seat of learning about people, their knowledge about environment, and their development needs and aspirations. Let me take this opportunity to thank the Director of the Academy for hosting this congress.

In October 1983, I recall my meeting with a small group of journalist friends coining the idea of establishing and networking of national fora of environmental journalists in Asia. While the group was generally enthusiastic about the idea, it also identified several practical constraints ranging from the support of media leaders to lack of capacity and resources. Consequently a roundtable with media leaders on the need for and benefit of promoting environmental journalism was organized. To build capacity, a group of Asian journalists dedicated to the cause of environment contracted Dr Sharon Freedman, a professor of environmental journalism from Leigh University in Pennsylvania, to write a handbook on environment reporting. These efforts and the motivation behind them gave birth to the Asia Forum of Environmental Journalists (APFEJ) in 1988, which subsequently became the Asia-Pacific Forum of Environmental Journalists (APFEJ). I am, therefore, proud to be associated with its establishment and I am impressed by its impact on the improvement of environment reporting in Asian mass media. I am thankful to the conference organizers, especially the Chairman of the APFEJ and

the local host, the Forum of Environmental Journalists of Bangladesh (FEJB), for inviting me to this congress.

In browsing through some of the country reports prepared by the participants of this congress, I understand that there is an increasing need for journalists to further expand their knowledge on environmental issues so that they can move from reactive reporting to a more investigative approach in informing the public about possible environmental impacts of developing interventions. It is encouraging to note that despite persisting constraints (such as the lack of full support from the editors, lack of funds required for training and investigative journalism as reported in some of your country reports), the environmental journalists of Asia continued with their commitment to raise public awareness on environmental problems and poverty reduction. I noted some of your innovative ideas on investigative journalism on corruption in the water, forestry, and road sectors; video production on South Asia poverty alleviation; and sustainable development education programs. I would like to urge media leaders, governments, and international organizations to extend their co-operation and support to the environmental journalists of the region. From my long experience dealing with environmental problems in the region, I can assure you that supporting appropriate means to promote public awareness is one of the most cost-effective ways of protecting the environment.

In the short time allocated to me, I shall try to present an overview of the environmental problems and challenges of Asia, including the theme of your congress, which is Water and Environment. I will conclude my presentation with a set of policy prescription which, in my view, should be adopted if we have to remedy the environmental situation in Asia.

Problems and Challenges of the Asian Environment

1 I am sure you will agree with me that Asian environmental problems are both due to development and as well as the lack of it. The poor by sheer necessity or survival is polluting the water and degrading the land by overgrazing, overcropping and shifting cultivation. At the same time, rapid urbanization and industrialization, the profit maximization objective of the rich, and lack of environmental safeguards and mitigation measures are also causing environmental degradation. Therefore, unless we can reduce poverty and integrate environmental consideration into all development efforts, at the same time, the environmental problems will persist or become more severe. Since resources of the environment are also the resources for development, it would certainly be difficult to sustain development if the process of environmental degradation continues due to poverty and environmentally unsound development practices.

2. In a world where 82.7 per cent of the global income is shared by 20 per cent of the population, development cannot be expected to be sustainable. Please note that the poorest 20 per cent of the global population share only 1.4 per cent of global income, 1 per cent of world trade, 0.2 per cent of commercial lending, 1 per cent of savings, and 1.3 per cent of domestic investment. What is more alarming is the fact that income disparity between rich and poor is increasing rapidly. Please note that over half the world's poor live in Asia (about 900 million). Measured in terms of dollars, the world has 157 billionaires, some 2 million millionaires and more than 1.3 billion people with an income less than a US dollar per day. A 1990 Bank study entitled *Economic Policies for Sustainable Development* determined the factors contributing to unsustainable development and revealed that poverty was the most common and significant factor contributing to unsustainable development in the region.

3. A culmination of such rampant poverty and unsustainable development over the past decades had turned Asia as the pollution haven of the world. A recent study undertaken by the Bank entitled *Emerging Asia*, reveals how the environment in Asia compares with the rest of the world today. Here are some of the results we found.

3.1 Water and Environment. Asia's rivers are far more polluted than those in the rest of the world. They are typically have four times the world average of suspended solids; 1.4 times the world average of biochemical oxygen demand; and three times the world average of coliform count. They also have 20 times more lead than in rivers in OECD countries, mainly coming from industrial effluents. These pollutants of course are

exacerbating the currently declining water resources caused by lowering of water tables, saltwater intrusion, deforestation of watersheds, and wasteful water use. Today, one in three Asians has no access to safe water supply and one in two Asians has no access to sanitation services. Where sanitation services are available, only 10 per cent of the sewerage generated are treated at the primary level. In Asia, approximately 35,000 children die daily due to waterborne diseases stemming from bacteria, viruses and other pathogens that spread as a result of inadequate sanitation and contaminated drinking water.

3.2 In the area of water and environment, our experts at ADB have made regional projections until 2025, which reveal that:

(i) Demand for urban and rural domestic water supply and sanitation services will increase significantly due to population growth, urbanization and higher incomes,

(ii) Between 1950 and 2025, overall per capital water availability is projected to decline in Asia to about 30 per cent of the per capita value in 1950;

(iii) Assuming that there is no significant increases in irrigation efficiency between 1990 and 2025, irrigation water use in most Asian countries is projected to increase by 70 per cent,

(iv) Water requirements for food production may increase by 100 per cent together with an expansion of irrigated lands by 30 per cent,

(v) Industrial water use may increase up to 7 times;

(vi) Water pollution may increase up to 10 times more in urban areas;

(vii) Watersheds are degraded as widespread deforestation continues,

(viii) Flooding will increase due to watershed conditions and reduced natural drainage because of uncoordinated urbanization;

(ix) Groundwater resources will be increasingly subjected to over-exploitation and to irreversible pollution;

(x) Wetlands will be threatened by land development and water pollution;

(xi) The reliability of water resources is subject to seasonal variations, periodic El Nino events and increased dependency on international rivers;

(xii) Poor people will continue to be hit hardest by the adverse effects of insufficient water services and poor water resources management.

3.3 With the unrestrained population growth and pollution in Asia, inadequate water supply will be the next major crisis in coming years. We in the ADB are well aware of this situation. Recognizing the importance of water resources to sustain economic growth the ADB initiated a process of consultations, discussions, and dialogues in order to jumpstart the formulation of a water policy. Seven emerging principles of the water policy formulated by the ADB are as follows:

- (i) Promote effective national water policies and action programs;
- (ii) Invest in water resource management in priority river basins;
- (iii) Improve water services through autonomous and accountable providers;
- (iv) Foster the efficient and sustainable use and conservation of water in society,
- (v) Increase the mutually beneficial use of shared water resources;
- (vi) Facilitate stakeholders consultation, participation, and partnerships; and
- (vii) Improve governance through capacity building, monitoring and evaluation.

3.4 Air Pollution. Asia is literally choking in polluted air since the air in its cities is three times dirtier than in cities worldwide. The levels of ambient particulates - smoke particles and dust - are generally twice the world's average while lead emissions from vehicles are well above safe levels. The ambient level of sulfur dioxide, which causes acid rain, is 50 per cent higher in Asia than in either Africa or Latin America. Asia's share of greenhouse gas emissions, which is responsible for global climate changes, is increasing due to PRC's and India's high dependence on coal. Efforts to improve air quality should focus on particulates in South Asia and PRC, lead in South East Asia, and sulfur dioxide in East Asia and eastern PRC.

3.5 Solid and Hazardous Waste. One study suggests that across countries, a 1 per cent rise in income equates to a 0.34 per cent increase in municipal solid waste. It is not surprising therefore that Asia's rising income is accompanied by increasing solid wastes. It is worthy to note that while 50 and 70 per cent of municipal revenues on the average are spent on municipal waste management, collection services in Asia remain low with only 50 to 70 per cent of residents receiving any service. A bigger concern is the growing quantities of hazardous toxic wastes that hospitals and certain industrial and commercial establishments generate. About 60 per cent to 65 per cent of these hazardous wastes are put in dumpsites or

landfills, 5 to 10 per cent are dumped in the ocean, and the rest are incinerated or chemically treated. In most cases proper safeguards are absent or largely ineffective.

3.6 Deforestation. Asia is losing 1 per cent of its forest cover every year. With 13 per cent of the world's forestland and half its population, Asia has just one third as much forest per person as the world average, and only one tenth as much forest per person as Latin America. A great deal of forest decimation has already occurred in South Asia, resulting in increased desertification, soil erosion, flooding and bio-diversity loss. Deforestation is particularly acute in South East Asia.

3.7 Land Degradation. Compared to 1.6 hectares in the rest of the developing world and 1.4 hectares in OECD countries, Asia had only 0.3 hectares of agricultural land per person in 1992. Asia's soil is also of poorer quality than elsewhere and less than 4 per cent can be used to grow a variety of crops. Soil erosion is equally severe in South East Asia, South Asia, PRC, and India. Around 130 million hectares of Asian cropland (People's Republic of China, India and Pakistan) are salinized and waterlogged because of poor irrigation practices. Desertification is also an increasing problem with as many as 63 million hectares of rain-fed land and 16 million or irrigated land already lost due to desertification. Denuded forests are being rapidly colonized by imperata grass, which is difficult to eliminate and prevents anything else from growing.

3.8 Bio-Diversity Loss. About 40 per cent of the world's species of flora and fauna are found in Asia. Encroachment on wildlife habitats for agriculture and infrastructure, deforestation, land degradation, and water pollution have severely affected these biological resources and reduced their diversity. Except for Bhutan and Malaysia, Asian countries have lost between 70 and 90 per cent of their original wildlife habitats. Only 7 per cent of Asia's total land area is protected and none of the region's developing countries are particularly effective at managing their protected areas. Asia's mangrove and coral reef systems are among the most diverse in the world. Two-thirds of the world's coral reefs are in Asia. And yet, more than half of the mangroves in the Indo-Malay realm has been cleared and most of the coral reefs have been destroyed due to the use of toxic chemicals and dynamites for fishing and construction purposes.

3.9 The overall environmental problem in Asia is so huge that a study undertaken by ADB and Harvard University in 1994 on environmental indicators placed the cost of cleaning up Asia's environment at US\$35 billion within a period of ten years. With the unrestrained urbanization and economic development in Asia, these environmental issues will remain pervasive unless appropriate policy interventions are made

Concluding Remarks

Mr Chairman,

4. At the turn of the century and the dawn of the new millennium, it is certainly of great concern to us as Asians to see a doomsday scenario of the region's environment. We in the Asian Development Bank believe that if we can move quickly to put together a new environment and development paradigm for the 21st Century, the region has a fair chance of survival and even a reversal of environmental trends. The essential elements of such a new paradigm would be:

- (i) Reduce poverty by targeted intervention;
- (ii) Promote public awareness and participation;
- (iii) Rectify market and policy failures;
- (iv) Develop environmentally sound sector policy;
- (v) Develop flexible and enforceable environmental legislation and standards;

- (vi) Develop and transfer environmentally sound technology;
- (vii) Foster an integrated approach to water services delivery and water resource management;
- (viii) Strengthen cooperation on transboundary environmental problems.

5 These are some of the issues expected to be deliberated upon at the Ministerial Conference on Environment and Development which will be hosted by the government of Japan next year. ADB will be co-sponsoring this millennium event together with the United Nations, the private sector, and the civil society. We would like to solicit your cooperation and support in transmitting messages to the people of Asia as the Asian leaders deliberate upon the environment and development issues at that conference.

Statement by A.Z.M. Enayetullah Khan, Bangladesh

Editor in Chief, Holiday

Water and Environment: The Role of the Media

The green agenda is hopefully unfolding in Bangladesh. The civil society is increasingly getting involved with environmental concerns. The formal state, the NGO sector, the development practitioners, the producers in the fields and factories and the ever-burgeoning human habits across the globe are pondering the question more than ever before: Are there environmental limits to the number of people and the quality of life that this earth can support?

For the developing and least developed nations, the Malthusian decree, cruel like in a summary trial, portends doom for the poor and the wretch. *"To the punishment, therefore of nature he should be left, the punishment of want ... At nature's mighty feast, there is no vacant cover for him. She tells him to be gone."*

And as the world today enters the six billion mark in population figure, the 2000-year old apocalyptic prediction of the Reverend Robert Thomas Malthus has

mercifully not come true. Human ingenuity and continued improvements in agricultural technology have offset the cruel decree.

Nevertheless, the issue of environmental limits remains. The 1999 UNFPA report on the state of world population states: "Because natural conditions, technology, and consumption and distribution patterns are constantly in flux, there is no universal agreement as to the definition of 'carrying capacity', it is unlikely that there will ever be a definitive answer ... The predicted limits fall within a broad range: 4-16 billion people. What will happen ... either globally or locally will depend on human choices - about lifestyles, environmental protection and equity."

And in this regard water is central as it always has been like what Sandra Postel in her Worldwatch book "Pillar of Sand" says: "It is impossible to talk about the history of human civilization without talking about water" and "when it comes to water, nature has dealt a difficult hand." Thus history has seen the rise and fall of many civilizations like those of the Sumerians, Babylonians and Assyrians that thrived in the basins the Tigris and the

Euphrates, that of the habitat and culture around the Nile, the Indus and the Yellow rivers. History has also seen water wars and the use of water as weapons which chequer 5000 years of human history. Ancient legends, myths, scriptural accounts and historical records offer fascinating accounts of water's role in political and military events. Closest to our time and to this land is the Ganges water-sharing dispute, which despite a 30-year agreement coming as if from the blue, may well remain a thorn in the uneven and uneasy relations between co-riparian India and Bangladesh with the latter being at the lower end before the Ganges empties into the Bay of Bengal.

As we entered a post-Marxist and post-modern era and are poised to step into the next millenium of shared peace and prosperity, let us turn to the scriptures to uplift our mind. And in doing so and also for a substantial part of this paper, I will draw heavily from an article of my brother Obadullah Khan entitled "Gentle May the Rivers Flow".

The First Book of Moses, called Genesis, tells the versions of the myth around the creation of heaven and earth. Quoting selectively from Genesis, I shall urge your attention to the following excerpts:

"And God said, Let the waters under the heaven be gathered into one place, and let the dry bud appear.

And God called the dry land Earth, and the gathering of the waters called the seas. And God said, Let the earth bring forth grass, the herb yielding seed, and the fruit tree yielding fruit after his kind whose seed is in itself, upon the earth.

And God said, Let the waters bring forth abundantly the moving creature that hath life and fowl that may fly about the earth in open firmament

And every plant of the earth before it was in the field and every herb of the field before it grew ... there went up a mist from the earth and watered the whole ground.

And the Lord God planted a garden eastward in Eden, and there he put the man whom he had formed ... And a river went out of Eden to water the garden."

If that be the mythical beginnings of the aphorism, water is life, let us bow down to what the Holy Quran reveals: *"Then let man look at his food and how we provide it: for that we pour forth water in abundance and we split the earth in fragments and produce therein corn and grape and nutritious plants, and olives and dates and enclosed gardens, dense with lofty trees and food and fodder - for use and convenience to you and your cattle."* (Abbasa. 24-32)

Or again let me quote from a Vedic hymn - Bhumi Sukta, Hymn to the Earth: *"On whom to flowing waters, ever the same, course without cease or failure night and day May she yield milk, this Earth of many streams, And shed on us her splendor copiously!"*

Coming to the saints in the late fifteenth and early sixteenth century let me quote from a contemporary Indian thinker and activist, Sundar Lal Bahuguna:

"One in snowy Himalayas - Nand Rishi (Sheikh Nuruddin Wala, a Muslim), other in the deserts of Rajsthan - Zambhoji. Nand Rishi has said, there will be enough food till there are forests, meaning thereby that forests are the factories of soil manufacture and mother of rivers. Zambhoji with his experience of severe droughts, concluded that droughts were nature's punishment for misbehavior of human beings." And that brings to my mind a saying attributed to W.H. Auden: "few have died from lack of love and many have died from lack of water."

The following section is plagiarized from an article published elsewhere sometime back. Globally there is more than enough fresh water to meet current and future needs even though much of the planet's fresh water is locked up in ice, deep lakes, and aquifer, flushes off the land in annual flood run-off or moves between sky and oceans in evaporation and rainfall that is unavailable for use. As L'vovich points out, depending on how the terms are defined, all human water uses today touch between one-and two-thirds of the fresh water readily available, although the amount used is only about 1 per cent of the planet's yearly rainfall, which in turn is less than one-tenth of all fresh water stored in the world.

How about Bangladesh? Deltic land as it is, we in Bangladesh are blessed with Ganges-Brahmaputra-Meghna rivers systems. The problem is that we have too much water in the monsoons and too little in the dry season. Unless we can conserve water when it is in excess for use when scarcity follows, the problems of flooding and drought will continue to plague us. Beside, demands for freshwater are growing rapidly in the urban and industrial sectors, in agriculture, in riverine fisheries, in inland navigation and for controlling salinity. Simultaneously, water resources are being degraded by agricultural and industrial pollution, untreated domestic waste and raw sewage. Water-logging and salinity are no longer problems of the coastal area alone but in and around embankments and dams. Construction and flood-control embankments and roads are impeding water flows and both the wetlands and their fishery resources are under threat. "Other pressures on the wetland are from desiccation and encroachment for boro rice in the winter season, especially in the Haor regions in Sylhet and Mymensingh and from reduced dry seasons flows particularly in the South West in the Ganges system."

As for groundwater, the resources countrywide are considerable. In fact today 90 per cent of irrigation coverage is based on ground water mainly through shallow tubewells. The technology has already reached saturation point and become more complex through chemical and even arsenic contamination.

The withdrawal today exceeds the capacity for recharge in some places. In Dhaka city for example, not only the quality but the quantity of available ground water is at risk. The water table had gone down by 20m in the last decade and has probably reached its limits of exploitability.

As Dr Ainun-Nishat succinctly puts it, scarcity, salinity, siltation and contamination constitute threats of different degrees to the economy and human health. How scarce will water be? Here I shall quote from a published document: Bangladesh 2020 - A Perspective Study. "According to the National Water Plan, the total requirement of water for all purposes during March, the peak month of demand for Boro crops in the year 2020 is estimated to be 24,370 million cubic metres. The supply coming from all sources in both surface and ground water is expected to be 23,490 million cubic metres, reflecting a shortage of 880 million cubic metres.

Irrigation is expected to contribute heavily to the surge in demand. Of the total land suitable for irrigation - 7.6 million hectares, only 1.9 million hectares were irrigated in 1985. According to the 1991 National Water Plan, however, irrigation should extend to 5.5 million hectares by the year 2005 and 6.9 million hectares by 2020.

Breaking down the totals highlights the importance of various sectors. The demand for agriculture is 58.6 per cent; for navigation, salinity and fisheries, 40.7 per cent; and for domestic and industrial uses, 0.7 per cent. By 2020, 77 per cent of the demand will be met from surface water and 23 per cent from ground water resources."

If that is the possible future dimension, can we meet the demand? To that I shall come later.

First, a rather sweeping generalization. Some intensive irrigation programs have neglected drainage and proper water management practices leading to water logging, salinization and water wastage. Scientists have estimated that some 32 per cent of the net cultivable land in Bangladesh suffer from salinity problems. Water logging and poor aeration due to inadequate drainage affect almost half the total arable land. Indiscriminate withdrawal of ground water in certain areas had led to falling water tables, decrease in the dry season flow of waterways and intrusion of salt water. Further, induced aquifer recharge has increased the risk of ground-water pollution along with the contamination of chemicals already taking place.

Beside, water, scarce as it is, is flowing uphill to the money. Cities and industries can afford to pay more for water than agriculture can. Yet bulk of the food supplies for the future in Bangladesh will depend on irrigation and water security. Not only is it essential to maintain and increase staple food-production on irrigated land, but it is also important that natural resources management be improved in areas contiguous to river basins supporting intensive farming systems.

In high potential areas, water, as Mao Zedong said, is the lifeblood of agriculture. But, when in some areas water tables are falling, in others they are rising. The result is the serious problem of both water logging and salinization. The common cause, as Gordon Conway points out, is a combination of excessive use of water and poor drainage. Again, small-scale tube wells irrigation systems have several advantages over large scale and bureaucratized irrigation systems. They can be relatively cheap and easy to install, are owned by the farmers themselves and since they occupy little land create few environmental and social problems. But the rate of extraction must be below that of the recharge to the underground aquifers. Of paramount importance in the case of big irrigation projects is participatory management control by the users. A prerequisite will be the stronger linkage of lowland with upland catchment areas, unfortunately most of the latter being outside our borders. However that may be conjunctive use of surface and ground water and adequate drainage are all necessary for maintaining the water levels, minimizing water logging and preventing salt intrusion, particularly in irrigated areas.

Having said all that let me come back to some uncomfortable concerns regarding wasteful water management. Examples abound in neighboring countries where 80 to 90 per cent of the water diverted from rivers by some large irrigation systems is lost before it reaches crop-root zone and do any good. Large savings of water are possible from small investments in irrigation technology, water management and agricultural practices. The examples are adjusting the timing of irrigation to crop needs, grading the irrigated field more carefully and other simple improvements. Now that representative local governments are being set up at union, thana and district levels, an unique window of opportunity has been opened up to involve communities effected directly in improved water management practices. "However, this will only happen if the Water Development Board is willing to move away from its top-down approach and genuinely adopt participatory practices."

Salinity, however, is most severe along our coastline and unfortunately around the single purpose flood-control embankments. This phenomenon has been most

pronounced in the south-western coastal belt where reduced dry season river flows in the Ganges system already permit salt to penetrate both surface and ground water. Fortunately, as Navine Murshid and Ekram Kabir point out in an article of 3 September in *The Daily Star*, the water-sharing treaty between India and Bangladesh will hopefully, I repeat, hopefully help in guaranteeing minimum flows in the dry season. "This" and I quote, "will help restore aquifers, provide needed irrigation water, and maintain sufficient flow to the Sundarbans to reduce the salt water intrusion that has already started to take place."

I was also heartened to read in the same paper an interview with the secretary of the Ministry of Environment and Forest, Marghub Murshed, who asserted that a project for watershed management has been undertaken with FAO/Dutch expertise. The problem of watershed protection however requires a much broader sub-regional plan. The mighty rivers, Ganges, Brahmaputra and Meghna, when they roll down in gentle murmur towards the south, stretches of cropland blossom with the fragrance of alluvium. But when dark and fierce and hungry like Python, they gouge out huge scoops of earth with every swell, widening and changing their courses in the last lap of their long and inexorable journey to the Bay of Bengal, the untold misery of the people and devastation of life and property is known to us all.

The complex factors behind the intensity and long duration of such abnormal water level are summarized as follows. These include:

- (i) A huge inflow of water from upstream catchment areas coinciding with heavy monsoon rainfall;
- (ii) Major rivers converging in Bangladesh and carrying a third of approximately 2 billion tons of rubble and debris into our floodplains thus reducing the depth of the waterways and spilling over the banks;
- (iii) A low floodplain gradient; (iv) Single purpose flood control polders that increase the intensity of flood water outside the protected areas;
- (v) Congested drainage channel and a network of roads and embankments that obstruct the drainage of water whenever they run in east-west direction in opposition to the natural flow of water southwards;
- (vi) Tides and storm surges in coastal areas. Floods in Bangladesh are directly related to the rainfall in the upper catchment outside the country's boundary. Hence a structural solution including watershed protection must be conceived in the sub-regional context and perhaps even beyond including the Tibetan plateau.

Erosion from deforested areas, degradation of watersheds and poorly managed agricultural land have reduced dry season river flows, exacerbated flooding in wet seasons

and diminished ground water recharge. Along with siltation being related to the volume of riverflows, riverbank erosion and inadequate dredging have all contributed to the build up of silt. That incidentally is the most serious threat to the navigability of various parts of the 25,000 kilometres long riverine route. Siltation has also been due to massive road construction and "limited attention to the need for dredging to train rivers and maintain their channels."

Pollution of water resources comes in many forms from the recently detected phenomenon of arsenic contamination to contamination through chemical agriculture and the industrial discharge from tanneries, pulp and paper mills, textile dyeing and other chemical industries. Also the rivers are used indiscriminately as dumps. One can only look at the river Buriganga, which is choked with industrial effluent and untreated sewage through numerous outfalls. In fact like Buriganga, Karnafully in Chittagong and Passur in Khulna are biologically dead. Yet many unfortunate city dwellers bathe in that water and sometime drink the same

As for raw sewage, the hazard is becoming worse every day, particularly with rapid urbanization. Only one half of the urban population has access to reasonably safe water. The remaining half depends on contaminated traditional sources. As a World Bank report of 1996 notes, the quality of water produced per capita in the Greater Dhaka City has not kept pace with the rapid population growth. The magnitude of deficit may be even larger than currently estimated, since although actual water billed is half of the production (729 million litres per day), the level of consumption is higher due to illegal connections, underbilling and other administrative losses.

As for the sewage systems in the city, the picture is even more dismal. The WASA sewage system covers only one third of the metropolitan area. The city's lone sewage treatment system is woefully inadequate. "About 70 per cent of the Dhaka households that are not connected to the sewers have sanitary latrines hooked up to septic tanks, but the rest use open latrines or none at all." As the process of urbanization gains further momentum, the twin problems of sewage treatment and safe drinking water will become more acute. Just one example will be sufficient. The present demand of the urban population comes to 645 million gallons of water per day. The demand in 2020, when the urban dwellers will increase by more than three-fold (nearly 80 million, from the current 24-25 million), the estimated demand will be somewhere between 3300-4200 million gallons. Clearly the only way these needs may be met will be by mobilizing the private sector in the provision of water supplies for both finance and management. Even in poor urban neighborhoods, safe drinking water can be provided through well managed

community supply points at prices that cover costs and are yet affordable. Water is a social good as far as the household needs are concerned, but a scarce resource cannot be priced as if it were free. The question of rational pricing of a scarce resource is even more valid when it is an economic good as an input into further production whether in agriculture or in industry.

The media in Bangladesh has been highlighting these not only for purposes of dissemination of information, but also as an active agent in awareness - and movement building on a number of environmental concerns like the choking of the water bodies in the capital and the urban areas, the strangling of the Buriganga waters by pollutants, sewage and industrial effluents, the scourge of arsenic in ground water in a large part of the country. It has also played a significant role in highlighting the civic concerns of the flood action plan pertaining to the local population and their voiced needs. As more scientists and citizens speak out about the need to protect the river functions and the media reach the messages in intelligible terms, the balance of power governing water use will necessarily tilt in favor of its "natural functions such as delivering nutrients to the seas to sustain marine fisheries, absorbing floodwaters by spreading them over the floodplain, protecting wetlands and their ability to filter

pollutants, providing habitat for a rich aquatic life, maintaining salt and sediment balances, offering myriad recreational opportunities and providing some of the most inspirational natural beauty on the planet."

The extent and damage done to freshwater environment is not trivial as evidence to date suggests. Besides, the wildcard of climate change in the next century adds a whole new dimension to the food and water challenge. It is time to search for a water ethic or even an ideology. The media can help.

Finally, the crisis that we are witnessing today whether in scarcity and pollution of water, degradation of soil, devastation of forests and the spreading extinction of bio-diversity, is essentially a crisis of human spirit. The crisis is engendered by old-fashioned greed. The chanting slogan of the Chipko movement: What do the forest bear? Soil water and pure air is transformed by arrogant 'economism' into: Profit on resin, wood and timber.

Deserts spreading in the Asian Continent at the rate of million hectares a year only mirror the wasteland of our soul. We have sold our souls to Lucifer for a handful of silver.

● CHINA ● KOREA ● JAPAN ● MACAU ● MONGOLIA ● BRUNEI DARUSSALAM ● CAMBODIA ●
INDONESIA ● LAO ● MALAYSIA ● MYANMAR ● PHILIPPINES ● SINGAPORE ● TAILAND ● VIETNAM
● AFGHANISTAN ● BANGLADESH ● BHUTAN ● INDIA ● IRAN ● MALDIVES ● NEPAL ● PAKISTAN
● SRILANKA ● AZERBAIJAN ● KAZAKHSTAN ● KYRGYZSTAN ● TAJIKISTAN ● TURKMENISTAN ●
UZBEKISTAN ● JORDAN ● LEBANON ● TUNISIA ● KUWAIT ● OMAN ● SAUDI ARABIA ● SYRIA ●
YEMEN ● UNITED ARAB EMIRATES ● TURKEY ● AMERICAN SAMOA ● AUSTRALIA ● MARIANA
ISLANDS ● COOK ISLANDS ● FEDERATED STATES OF MICRONESIA ● FIJI ● FRENCH POLYNESIA ●
GUAM ● KIRIBATI ● NAURU ● NEW CALEDONIA ● NEW ZEALAND ● NIUE ● MAURITIUS ● PAPUWA
NEW GUINEA ● MARSHALL ISLANDS ● PALAU ● SAMOA ● SOLOMON ISLANDS ● TONGA ● TUVALU
● VANUATU ● ANTIGUA ● BARBUDA ● BAHAMAS ● BARBADOS ● BELIZE ● BOTSWANA ● BRITAIN
● BRUNEI DARUSSALAM ● CAMEROON ● CANADA ● CYPRUS ● DOMINICA ● THE GAMBIA ●
GAHANA ● GRENADA ● GUYANA ● JAMAICA ● KENYA ● LESOTHO ● MALAWI ● MALTA ●
MAURITIUS ● MOZAMBIQUE ● NAMIBIA ● NIGERIA ● ST KITTS AND NEVIS ● ST LUCIA ● ST VINCENT
● THE GRENADINES ● SEYCHELLES ● SIERRA LEONE ● SOUTH AFRICA ● SWAZILAND ● TANZANIA
● TRINIDAD AND TOBAGO ● TUVALU ● UGANDA ● WEST SAMOA ● ZAMBIA ● ZIMBABWE ●
CHINA ● KOREA ● JAPAN ● MACAU ● MONGOLIA ● BRUNEI DARUSSALAM ● CAMBODIA ●
INDONESIA ● LAO ● MALAYSIA ● MYANMAR ● PHILIPPINES ● SINGAPORE ● TAILAND ● VIETNAM
● AFGHANISTAN ● BANGLADESH ● BHUTAN ● INDIA ● IRAN ● MALDIVES ● NEPAL ● PAKISTAN
● SRILANKA ● AZERBAIJAN ● KAZAKHSTAN ● KYRGYZSTAN ● TAJIKISTAN ● TURKMENISTAN ●
UZBEKISTAN ● JORDAN ● LEBANON ● TUNISIA ● KUWAIT ● OMAN ● SAUDI ARABIA ● SYRIA ●
YEMEN ● UNITED ARAB EMIRATES ● TURKEY ● AMERICAN SAMOA ● AUSTRALIA ● MARIANA
ISLANDS ● COOK ISLANDS ● FEDERATED STATES OF MICRONESIA ● FIJI ● FRENCH POLYNESIA ●



Statements by Representatives
The Asia Pacific Country Reports on Environmental Journalism




GUAM ● KIRIBATI ● NAURU ● NEW CALEDONIA ● NEW ZEALAND ● NIUE ● MAURITIUS ● PAPUWA
NEW GUINEA ● MARSHALL ISLANDS ● PALAU ● SAMOA ● SOLOMON ISLANDS ● TONGA ● TUVALU
● VANUATU ● ANTIGUA AND BARBUDA ● BAHAMAS ● BARBADOS ● BELIZE ● BOTSWANA ●
BRITAIN ● BRUNEI DARUSSALAM ● CAMEROON ● CANADA ● CYPRUS ● DOMINICA ● THE GAMBIA
● GAHANA ● GRENADA ● GUYANA ● JAMAICA ● KENYA ● LESOTHO ● MALAWI ● MALTA ●
MAURITIUS ● MOZAMBIQUE ● NAMIBIA ● NIGERIA ● ST KITTS AND NEVIS ● ST LUCIA ● ST VINCENT
AND THE GRENADINES ● SEYCHELLES ● SIERRA LEONE ● SOUTH AFRICA ● SWAZILAND ●
TANZANIA ● TRINIDAD ● TOBAGO ● TUVALU ● UGANDA ● WEST SAMOA ● ZAMBIA ● ZIMBABWE
● CHINA ● KOREA ● JAPAN ● MACAU ● MONGOLIA ● BRUNEI DARUSSALAM ● CAMBODIA ●
INDONESIA ● LAO ● MALAYSIA ● MYANMAR ● PHILIPPINES ● SINGAPORE ● TAILAND ● VIETNAM
● AFGHANISTAN ● BANGLADESH ● BHUTAN ● INDIA ● IRAN ● MALDIVES ● NEPAL ● PAKISTAN
● SRILANKA ● AZERBAIJAN ● KAZAKHSTAN ● KYRGYZSTAN ● TAJIKISTAN ● TURKMENISTAN ●
UZBEKISTAN ● JORDAN ● LEBANON ● TUNISIA ● KUWAIT ● OMAN ● SAUDI ARABIA ● SYRIA ●
YEMEN ● UNITED ARAB EMIRATES ● TURKEY ● AMERICAN SAMOA ● AUSTRALIA ● MARIANA
ISLANDS ● COOK ISLANDS ● FEDERATED STATES OF MICRONESIA ● FIJI ● FRENCH POLYNESIA ●
GUAM ● KIRIBATI ● NAURU ● NEW CALEDONIA ● NEW ZEALAND ● NIUE ● MAURITIUS ● PAPUWA
NEW GUINEA ● MARSHALL ISLANDS ● PALAU ● SAMOA ● SOLOMON ISLANDS ● TONGA ● TUVALU
● VANUATU ● ANTIGUA AND BARBUDA ● BAHAMAS ● BARBADOS ● BELIZE ● BOTSWANA ●
BRITAIN ● BRUNEI DARUSSALAM ● CAMEROON ● CANADA ● CYPRUS ● DOMINICA ● THE GAMBIA
● GAHANA ● GRENADA ● GUYANA ● JAMAICA ● KENYA ● LESOTHO ● MALAWI ● MALTA ●
MAURITIUS ● MOZAMBIQUE ● NAMIBIA ● NIGERIA ● ST KITTS AND NEVIS ● ST LUCIA ● ST VINCENT
AND THE GRENADINES ● SEYCHELLES ● SIERRA LEONE ● SOUTH AFRICA ● SWAZILAND ●
TANZANIA ● TRINIDAD AND TOBAGO ● TUVALU ● UGANDA ● WEST SAMOA ●

Statement from Australia

Juliet Fox

Media Representative - Friends of the Earth, Australia



Origins and History

Coverage of environmental issues in the Australian mainstream media is largely recognized as having started in the early 1970s. The issues of the early 70s included so-called 'Green Bans' in New South Wales (NSW), where the community, led by building workers from the NSW Builders Laborers Federation (BLF), took action to stop environmentally destructive urban development, and to save remnant bushland. The action was widely successful, and the Green Bans are attributed to the origins of the term 'greens'. It was also during the 1970s in Australia that the first green political party was formed in the island state of Tasmania (the United Tasmanian Group of 1972-76)

Environmental reporting is seen to have reached its peak in the late 1980s and early 90s, due largely to the environmental activism and political conflicts of the time. Key issues of this period included the logging and woodchipping of native forests, the depletion of fauna and flora bio-diversity, and the pollution of water and air. It was during this time that 'environment' also became a media theme in its own right, and traditionally non-environment issues were covered from an 'environment angle' - for example, Aboriginal land rights, mining concerns and Australia's bid for the 'green' Olympics.

Overview of the Australian Media

There are three branches of media in Australia - there are the government broadcasters, the commercial sector and the public and community sector.

Government broadcasters include the Australian Broadcasting Corporation or the ABC, and the Special Broadcasting Services or SBS. The ABC has a national television service and nine metropolitan radio stations, 49 regional radio stations and 4 national radio networks, including Radio National, Classic FM, Triple J and the Parliamentary and News Network). SBS also has a national television service and 2 radio stations, one in Sydney and one in Melbourne, and one national network.

The commercial sector has some 217 radio stations - 42 in metropolitan areas and 175 in regional areas - over 100

suburban newspapers and around 13 capital city or national daily newspapers. There are just 3 metropolitan commercial television stations and numerous regional ones. The commercial sector by far makes up the bulk of media outlets overall in Australia.

The government and commercial sectors are defined as making up the mainstream media in Australia.

Then there's the public and community sector, which has around 130 radio stations around the country and one national distribution service. While community television is currently being developed there are presently no community television license holders in Australia; however, there is the potential for current temporary license holders to be granted community television licenses come June of next year.

Environment Reporting in the main stream Australian media; Print Media

Looking firstly at the mainstream print media, Australia has around 12 environment newspaper reporters or editors, representing daily newspapers - including the national daily 'The Australian' - in every state and territory, except for the Northern Territory. While these reporters are allocated with the 'environment' round, that neither means a story would necessarily appear from them every day, nor would it mean that the story itself came with any kind of sound environmental message.

The print media has some 22 specialist environment magazines, but of these, 8 are from specific environment groups and the rest are government or industry based. There are also some 17 newsletters, but again the majority of these are government or business based with the rest coming from specific conservation organizations. From the array of available newsletters and magazines, there are none that I would classify as journals dedicated to in depth, researched and independent environmental reporting. Disappointing to say the least, for a population of over 19 million living in an incredibly rich, diverse and above all unique natural environment.

Television media

In the area of mainstream television there are as yet no regular programs that I'm aware of specifically dedicated to environmental concerns. There are frequently natural history series, and occasionally environment-focused documentaries on prime time commercial television. Environment stories also appear on regular science based television programs and generalist news and current affairs shows on all stations. However, the focus and angle is of necessity substantially different than if it were a program dedicated purely to environment issues.

Radio media

On mainstream radio there is only one environment program that I know of dedicated to environment issues- albeit often from a scientific perspective 'Earthbeat' is broadcast at the convenient time of 7:30 to 8 on a Saturday morning, a timeslot that reflects the level of prioritization and importance given to dedicated environmental concerns. The show manages to attract an average listenership of just over 50,000 per week.

Environmental Reporting and Public Concerns

The Australian mass media play a key role in disseminating information on environment problems and contribute to the creation of public concerns. While not telling people what to think, the media does shape what people think about and through what types of frameworks they think. Consequently, a correlation can be drawn between levels of media coverage on environment issues and the population's concern about those issues. As a University of Tasmania publication on this issue states:

It would be rather extraordinary, given the saturation of (advanced) societies by print and electronic media, if there were not some close relationship between media coverage of an issue and public opinion on that issue

The media performs an agenda-setting role. This can be seen in a study of environmental print media coverage (involving four major Saturday newspapers in different cities) and environmental public concerns in 1989. Print media coverage of environmental issues hit an all time high in 1989 and this corresponded to an all time high in popular concern about the environment. In addition, the most frequently reported on environment issues in 1993 were water and air pollution, and concerns about toxic waste. 1994 Australian Bureau of Statistics show that air pollution followed by ocean pollution were the top two environmental concerns of the time.

Similarly, the early 1990s is the time attributed to the 'fall' in environmental reporting in Australia and this has a

causal effect to a drop in the population's belief that the Australian environment had deteriorated. The percentage of respondents indicating a belief that the Australian environment had deteriorated dropped from 50% in 1991 to 43% in 1993 - some 38% of respondents in 1991 indicated that the Australian environment had improved, in 1993 this rose to 46%.

The report states that:

We can assert with a fair degree of certainty that press coverage played a critical active role in the rising spiral of attention to the environment, a role that cannot be glossed as a mere 'reflection' of other events

While media coverage is certainly not the deciding factor in determining whether the community is concerned about environmental issues, it certainly is a key element.

Current State of Environment Reporting

The environment is seen to have reached its peak in the Australian mainstream media nearly ten years ago, and now it continues to slip off the agenda. The above mentioned study also illustrates the decrease in environment reporting. It shows that in 1989 in the Melbourne Saturday Age there were 227 environment stories with 9 appearing on the front page, and in the Sydney Morning Herald there were 294 with 19 appearing on the front page. By 1993 this had dropped to 111 in the Melbourne paper with 3 on the front page, and 173 in the Sydney paper with 8 appearing on the front page. Since then there have been rises and falls in environment reporting with an overall continuing decline.

Reasons for this current situation include the decline in the Australian economy, during which the public focus on the problems of unemployment, crime, education and health above the environment. Government action, or inaction, on the environment is another reason. Governments around Australia are a major source of mainstream media environment stories - be it through the release of reports, debate, or decision-making. According to initial findings of a current PhD study it seems that there has been a conscious decision to limit this type of coverage by governments themselves. Interestingly, the ability of environment groups to organize effectively and understand the machinations of the media industry is also seen to be a reason for a decrease in environment issues in the media.

Both Australia's Prime Minister, John Howard, and Environment Minister, Senator Robert Hill, say that nowadays, "everyone is an environmentalist". Howard and Hill are instrumental in Australia securing a net increase in Greenhouse gas emissions, and pushing through with

uranium mining at Jabiluka, against the wishes of the traditional owners and to the potential detriment of a World Heritage area. Such statements are symptomatic of the virtual hijacking of environmental issues by conservative movements.

Environment concerns have been 'mainstreamed', with all major political parties having incorporated environment issues into their party platform. Environment organizations no longer have 'ownership' or exclusive 'representation' of environment issues and this has led to a marginalization of environment groups, and a change in the sort of environment issues covered by the mainstream media

Environment reporting in Australia has become 'routine' - that is, it has become a matter of everyday business, largely absent of any urgent or intense media coverage. This 'routinisation' is combined with a reduction in intensity of public concern and political debate .

There has also been the so-called 'scientisation' of environmental issues; that is, environment problems are increasingly discussed in the context of scientific debates, considerations and findings. Similarly, solutions to environmental problems are increasingly covered as 'technological' rather than 'political' in nature, to be solved by experts and bureaucrats, rather than ideological political shifts. This has a profound effect on the recognition of the social importance and impact that environment issues have. Again, this has pushed many environment groups to the outer and made them just one source amongst many when it comes to environment stories. This has been accompanied by close scrutiny of environment groups' scientific and technical credentials rather than political intentions

Where is environmental journalism in Australia heading?

In conclusion, environmental journalism is presently at a low in Australia, due to economic decline, conservative governments and the 'mainstreaming' of environment concerns. What is of particular concern is that the level of media attention given to environment concerns appears to have a direct affect on the public's concerns on those issues.

On a positive note, a major Tasmanian institution has recognized the importance of environmental concerns. An environmental journalism course has been set up at the University of Tasmania in Hobart - this is the first of its kind in Australia. The outline of the course, which will start next year, is:

Students explore the current issues and the key players in the environment movement from the perspective of the working journalist. The unit includes sources of news, case studies of stories on the environment, analysis of the political and legal background of environmental concerns in Australia and internationally. Trends in industry and governmental response to environmental issues are also critiqued.

Hopefully courses such as this one, and the ongoing work by a wide variety of environment groups around Australia, will challenge the current media paradigm and its level of importance attributed to environment concerns. It is vital for people and the planet that environment issues secure a prominent and firm place on the media's agenda in Australia immediately.

Statement from Bangladesh

Quamrul Islam Chowdhury

Chairperson - Forum of Environmental Journalists of Bangladesh (FEJB)

There is a place in this world - the most beautiful, compassionate. There the green delta is awash with honey-sweet grass. Trees have names like jackfruit, aswattha, banyan, jamarul, cashew. There in clouds at dawn awakes the nata fruitlike red round sun. There Varuni resides at the mouth of the Ganges-and there Varuna yields abundant river waters to the Karnafuli, Dhaleswari, Padma, Jalangi. There a white hawk is as full of movement as betel leaves in the wind. There a spotted owl is as subtly young as the smell of paddy fields.

- *Jibanananda Das*
Poem from Rupashi Bangla

To begin, let me quote Prof. Muhammad Yunus, founder of Grameen Bank in Bangladesh. He said, "Bangladeshi media must reassess its role in the context of the national crisis situation. It may have its own peer-sessions to brainstorm the role they can play. One important role would be to put voluntary restraint on bringing up issues that create political divisiveness.

"Instead, it may emphasize the need for national unity and put the focus on fighting the crisis. Media can play a very powerful role in mobilizing the national effort and keeping it honest by bringing information about people's everyday life around the country. It can act as the engine of the effort, at the same time, as eyes and conscience of the nation.

"This is one occasion government-owned media must demonstrate that it is people-owned media, not party-owned media. As a part of the national unity gesture it can be placed under the management of a non-political national body during the crisis period. It may not sound very attractive to the government at this time, but this is one action that will help the government the most in overcoming the crisis ahead. I would recommend this action to the government very strongly. Among many other benefits, it will help the government remain active, clean, and popular."

Surveillance of environment is recognized as one of the main functions of communications in all societies. Traditionally in social communications, surveillance is concerned with the environment in the total sense of the term, which includes the non-physical social environment. Yet, environmental crises in the past two decades have narrowed the focus of orientation, especially in media communication, towards dramatic problems of the physical natural environment, or individual components of the environment - ignoring the ecological perspective that is basic to real understanding of the total environment

Almost 50 years ago, Harold Laswell identified environmental surveillance as one of the main functions served by communications. As expanded and exemplified further by Wilbur Schramm, surveillance of the environment is related to other functions of communication in a society, that is, consensus, socialization and entertainment. Schramm described how these functions are fulfilled in all types of societies and at all levels of communications - interpersonal, social and mass media communication.

Laswell and Schramm specifically mention surveillance as the communication function related to environment. Schramm's elaboration incorporates everything that exists and occurs in the surroundings, including the social, political or cultural aspects that could effect or influence life and behavior. In the social context, where mass media operate and communication flows, environment is never meant to be limited to the physical natural elements.

Environment Surveillance

People communicate to exchange information on the latest developments; to learn about new threats and opportunities in their surroundings. Information acquired during surveillance is then discussed and evaluated with others in society, to reach some sort of consensus concerning the action to be taken and new norms or rules of behavior to be formed in order to be able to respond to the changes.

The beginning of worldwide concern, which later gave birth to the 1972 Stockholm conference and the environmental movement, for example, was widely credited to Rachel Carson's book, *The Silent Spring*, and the publicity raised by the media on its topic. Subsequent mass media coverage created public awareness of various environmental problems, and the urgent need for the protection of nature and its processes.

The demand for environmental communication in the future will increase in quantity as well as quality. All quantitative growth in the past will change to a more qualitative expansion. Environmental journalism will become more specialized, as audiences demand wider coverage with higher professional quality to satisfy the rising awareness and need for environmental information.

Green Journalism is Biased

Environment journalism falls broadly under advocacy journalism. Green journalism is not free from political bias. Western journalists strongly feel that green journalism should be free from politics. The south journalists have rejected the notion. Green journalism is obviously politics as the angle of the stories are mostly tilted towards the policy makers and concerned citizens

Do environmental journalists take sides? Is there such a thing as 'objective' reporting? Or is it possible that the questions take on different meaning in different cultures?

One school of thought believes that objectivity does not exist. The green journalists are strong in pro-preservation and conservation ethics. Most environment journalists belong to the breed of naturalist or conservationist. For example, those journalists who write on wildlife conservation and natural forest will not compromise with any human interference, even at the cost of increased gross domestic product (GDP). However, most believe "journalism is not supposed to take sides." Perhaps the challenge for environmental reporters is not as simple as advocacy versus fairness or balance.

Responsible Environmental Journalism

Environmental journalism should be interpretative. It has wider responsibility to interpret environment stories. In traditional beats of political economics, interpretative stories on trade and international affairs are accepted.

Environmental issues can no longer be viewed as purely physical natural issues, but must also be viewed as social non-physical problems. The interrelationship between environment, development and population, and the convergence of global trends in environment with globalization of politics, trade and human rights, require

a more integrated concept of the environment and a better perspective of analysis. The best framework of analysis is to view the eco-system in the three-way perspective of the natural, man-made and social environment.

As an important social institution in the social environment, the mass media have the responsibility to exercise their function in environmental surveillance, consensus building, and socialization, to strive for the protection of a sustainable environment.

Coverage of environmental issues are governed by prevailing laws and, in some countries, governments consider it subversive for the media to discuss issues like rainforest loss, bio-diversity or dam projects

A responsible environmental journalist will not sensationalize an event. He will not challenge. He will rather investigate, talk to authoritative people, interview victims and eyewitnesses.

New Generation Journalists

Many environmental reporters come out of the older, traditional beat of science writers. The focus is on reporting facts that have emerged because of scientific research. Reporting popular science has a general appeal among readers.

The new generation of journalists must have sound scientific background and consummate media skill. It takes a lot of training. The journalist not only has to understand the science of global warming or the theory of demographic transition, but must also be able to de-jargonize the subject and explain the story in reader-friendly fashion with good reporting at the grass roots to back up his conclusions.

Investigative reporting, interpretative journalism, in-depth stories and many more are required. Environment journalism could be investigated and interpreted. Of course, it should be in-depth article to convince the editor to run the story.

The first break in this stalemate came in 1983 when a small group of journalists formed the Forum of Environmental Journalists of Bangladesh (FEJB) to write and report on the environmental problems of the country. The creation of the FEJB was a watershed in arousing mass awareness of the issues of environment through newspaper reports, features, articles and photographic coverage of the state of the deteriorating environment. Old ideas suggesting that we did not have any serious environmental problem began to be replaced by eyewitness reports on such issues as the fast disappearing

forests, desertification of the northern districts, destruction of the coastal mangrove forests and the coral reefs of the Saint Martin's Island, encroaching salinity in the south-western region of the country due to increasing shrimp cultivation, silting of the major rivers as forests were being cleared in the upstream and such other problems began to appear more frequently in the print media as it had never been in the past. The green agenda had been set forth and it caught the imagination of the advanced section of our people.

Since the launching of FEJB, members of this forum have been playing an instrumental role in mounting pressure on the policy-makers and planners to internalize environment in the national planning and policy analysis. Members of this forum have also played a major role in the creation of Environment Ministry in Bangladesh to deal with all environment-related issues.

FEJB is the prime mover of the challenging initiative to bring together environment-conscious editors, journalists, experts, policy-makers, NGOs, professionals and grass roots people on different cross-cutting environmental concerns in the country. For example, it has raised voice against construction of the majestic NAM Conference Centre at the heart of the last garden in the capital city of Dhaka.

The government finally gave in to the pressure from the civil society and environmental activists by revoking its decision to build a massive conference centre at the capital's Osmany Uddyan to host the summit of an antiquated non-aligned movement (NAM) heads of government in 2001.

The FEJB and a number of other organisations regularly took part in the protest meetings. The 'Save Osmany Uddyan' Movement rallied all environment - conscious citizens of Dhaka around it and put such a pressure on the government that it finally bowed down to the popular demand on last 7 November.

FEJB, along with other civil society bodies, had raised concern against awarding different blocks to different oil giants for exploration near the Sundarbans, the largest mangrove forest of the world. The government had to retreat and abandon the exploration plan there.

These are some of our achievements. But, there are also many more failures. Environmental journalists of Bangladesh are yet to succeed in forcing the authorities to clamp down on the polluters, encroachers and poachers. True, the coverage of environment in the print media has been on the increasing trend but electronic media is yet to focus more seriously the conservation issue.

Statement from Bhutan

Tenzing Rigden

Chairperson - Bhutan Environmental Journalists Forum (BEJF)

Nestled in the Eastern Himalayas between India and the Tibetan plateau, the Kingdom of Bhutan possesses extraordinary - and largely untouched biological wealth. Fortunately for the world, this small nation harbors some of the best remaining representatives of Himalayan wildlife and habitat.

A tremendous diversity of species results from the country's wide altitude range, moist climate and position at the junction of two major bio-regions, one temperate and the other tropical. More than 160 kinds of mammals can be found; even more extensive are the number of bird species, with some 770 types known. The country also hosts 5,400 plant species.

As it does in so many fundamental ways, Bhutan presents a unique situation for environmental journalism: on the one hand, reporting on the environment is still in its initial phases here and remains to be developed, while on the other, great importance is already placed on coverage of such issues.

In terms of background, it is necessary to be aware that Bhutan, unlike many nations, has benefited from largely enlightened conservation policies. The Royal Government, under the leadership of his Majesty King Jigme Singye Wangchuck, has exhibited a firm political commitment to preserving the country's bio-diversity. At the same time, it has taken control of both the direction and pace of the development process to ensure sustainability - an opportunity perhaps unique to Bhutan.

So far, these policies have proven instrumental in preventing the extent of environmental degradation that is found elsewhere. They include:

- * Preservation of the intact forest cover, which now stands at more than two-thirds of Bhutan's land area, at a minimum of 60% perpetuity. A higher priority is also given to conserving forest resources for ecological reasons rather than exploiting those resources for short-term economic gain;

- * Establishment of a protected areas system encompassing 26% of the country, which significantly helps to protect the rich variety of habitats and species found here;

- * Establishment of the world's first official trust fund for environmental conservation, designed as an innovative, ambitious tool to provide a sustainable mechanism for conservation funding.

To be sure, it is a remarkable commitment on the part of the government, based largely on the premise of the interconnections - not the mutual exclusivity - of environmental and cultural integrity with socio-economic development. Even so, amid its ecological wealth, Bhutan still faces the potential for negative environmental side effects from development initiatives, and continued vigilance is crucial.

This, of course, is where environmental journalism comes in.

At this point the Bhutanese media are highly limited, consisting of the country's only newspaper, *Kuensel*, a weekly publication, and the Bhutan Broadcasting Service. Both are strongly influenced by the fact that the environment is a vital concern here, among policy makers and the public alike, and are cognizant of the fact that such an issue cannot be ignored.

Thus far, however, neither organization has established a separate beam or sector for environmental reportage. Instead, it is integrated into the main news flow, but made a priority topic. Most stories tend to be "soft" rather than investigative journalism, in part because the government disallows nearly all industry, for example. Indeed, given Bhutan's relatively recent emergence onto the world stage as well as the late start to the development process, both *Kuensel* and BBS have a strong link with environmental education. Many broadcasts and articles are aimed toward generating public awareness of conservation issues.

On BBS, programs in the national language of Dzongkha tend to feature the environment, agriculture, health or religious issues nearly every week on their "Topical Evening". Nepali programs also feature numerous environmental stories, with English programming the least geared in that direction.

About four or five BBS journalists are concentrating on environmental issues, especially government policies, plans and programs. Nevertheless, even though

sustainable development and environmental affairs are major topics of coverage, there has been no move toward specialization among the staff.

Taking a closer look at the last three years, the most recent period for which records are available, BBS has broadcast a total of 76 stories on environmental subjects, 40 in Dzongkha, 21 in Nepali and 15 English Topics included:

Urbanization and related problems; Consumer "green tips" such as environmentally friendly ways of preparing maize fields for cultivation, using insecticides and herbicides on farmland, the medicinal value of plants and animals, the advantages of permanent over shifting cultivation and the proper disposal of domestic waste and used engine oil; so-called "flagship" species found in Bhutan, such as the Bengal tiger and the snow leopard; Buddhism and the environment; and the importance of environmental impact assessments in development planning.

However, in such thoroughness of coverage, BBS has created a rather unusual dilemma for itself. Many of the topics have been thoroughly reported that a plateau has been reached. Producers are looking toward changing their format, and only to remove the considerable repetition found in the three-year list. There it is agreed for several things.

- * To go beyond straight reportage and infuse a sense of responsibility among citizens;
- * To report from a dynamic point of view, with more investigative pieces;
- * To enable the BBS staff to become more trained in environmental issues and coverage.

Whether this actually occurs remains to be seen, but reporters and producers alike are keen to adopt creative new approaches that can enhance their already substantial coverage.

At Kuensel, meanwhile, editorials often hit environmental issues, but again, there is no specialization within the staff. One or two staff members have attended short courses or workshops on environmental journalism in order to familiarize themselves with what other countries in the region are doing

Like BBS, Kuensel is strongly committed to environment-related stories. From July 1996 to October 1997, for example, it ran 40 such pieces, including explanatory stories on topics such as bio-diversity, vehicle pollution, and greenhouse gases and climate change.

It has, however, a more limited audience than does BBS, which is listened to in virtually all households nationwide. Because of limited literacy in the rural areas, as well as the hardships of delivery in the rugged terrain there, Kuensel has a circulation of only about 10,000 in Dzongkha, English and Nepali, although many readers share the weekly edition with people as well.

In addition to the mainstream media, some environmental journalism occurs under the sponsorship of international non-governmental organizations working in the country. A few years ago, for example, WWF Bhutan program gave a small "action grant" to a freelance Bhutanese journalist in order that he could write a series of six articles on conservation issues here. Included in these articles was one on the difficulty of dealing with the widespread problem of wild boars destroying farmers' crops, when the taking of any life is against the nation's strongly held Buddhist beliefs.

Other journalism outside the Bhutanese mainstream also is likely in coming years, it would appear. Officials of WWF Bhutan program, the National Environment Commission and the Royal Society for the Protection of Nature, a Bhutanese NGO, today are encouraging independent reports on environmental issues to be written and disseminated. Increasingly, in their efforts to get conservation messages across to policy makers and the public, they are setting up media interviews with consultants and other visitors to the country as well as attempting to place articles from international sources in the newspaper and on the air.

Thus, the situation that one finds in Bhutan is seemingly simple but, in actuality, rather complex. It is a society and a government that values highly the idea of conservation but nonetheless needs reminders and instructions in the practical realm. It also is a society where journalism in general is not yet mature and its role little understood by much of the public. Media outlets are limited, which is both an advantage and a disadvantage. Now, it seems, it only remains for the country's journalists to seize that opportunity.

Statement from Caribbean

Zadie Neufville

Coordinator - Caribbean Environmental Reporters Network (CERN), Barbados

The Caribbean Environmental Reporters Network (CERN) was officially launched in March 1993 to help raise the standard of environmental journalism in the Caribbean. But that was only one of our objectives

When we started back in Jamaica in the late 80s, it was out of a need to educate not only journalists, but also the people who are the caretakers of our resources--the community CERN started at a time when Jamaicans seem to have forgotten that nature was their mother and friend. It was formed at the top of the Blue Mountains, the highest point on the island, where government and people were working together to restore an area that had been designated a national park

History of Environmental in CERN

CERN started with a small group of Jamaican journalists and scientists who wanted to share the tonnes of information they got daily, with the people who would, and could make the difference. The information sharing ensured that journalists had reliable sources, the scientists could get their information out, and the people could know what was happening in and around their communities

There was also one other significant factor journalists shared information among each other to provide better and more widespread coverage and to build relationships.

CERN has come a long way since then. By and large members are now spread out across the world and communicate with sources, contacts and each other via fax, the Internet and email. The journey to the threshold of the new millennium has been fraught with trials and tribulations and the organization almost died. But we exist to keep environmental journalism alive in the region. These days, however, journalists are no longer fired by passion or responsibility, but by reward, and newspapers see sensationalism rather than the issues surrounding the events

Growth of Environmental Journalism in the Region

The announcement of the 1992 UN Conference of Environment and Development saw a rapid growth of

environmental journalism in the Caribbean region. CERN's activities had been growing since Jamaica's devastation at the hands of Hurricane Gilbert in 1988. The hurricane had exposed the fragility of the environment and emphasized the problems.

In the late 1980s The Caribbean Environmental Network (CEN) as the organization was called then, consisted of a three reporters and two government scientists sharing information with each other. The break through came in May 1989, when the Panos trained news editor and editor of the now defunct Jamaica Record, approved the publication of two Sunday editions dedicated to environmental issues. The paper later committed to a weekly environment feature.

The idea, behind CEN was that by sharing their information the reporters could develop reliable sources, and scientists would know that the information they release would remain accurate. PANOS has done a lot for the organization. In the early days, all CEN's membership, both scientists and reporters were trained by Panos (then Panos Institute) in association with the Caribbean Institute for Mass Communications (CARIMAC), University of the West Indies.

As the training programs increased, so did the interest in environmental reporting. Region wide, media professionals from editors down and spanning press, radio and television were trained in "Responsible Reporting and Environmental Issues". There were very few media houses in the region without environmental reporters. By 1992, all major media houses across the Caribbean employed environmental reporters. Some larger organizations had two and dedicated radio and television programs and newspaper pages.

Reduction in Environmental Coverage

Unfortunately interest in environmental reporting began to wane after the Rio conference. Media houses and reporters found other interests and about a half of the environmental journalists were covering other issues. By the time the Small Island Developing States (SIDS) conference came around in 1994, CERN was finding it difficult sourcing stories from membership for the

Greenwire. The wire service, provided by Caribbean News Agency (CANA) and Reuters, carried CERN stories into newsrooms across the region.

One significant factor affecting coverage of any topic is funding. For journalists to work they have to be rewarded and these days, there is very little funding available for environmental coverage. In the past, reporters were funded to cover conferences, these days, media houses are being asked to pick up the tab. This has caused a lack of interest in environmental journalism, although a few stalwarts remain. No trips or reward, means a lack of interest for many and survival means, that even the stalwarts are unwilling to work unless there is a worthwhile reward.

The situation is exacerbated by the fact that the plethora of independent organizations which once purchased environmental stories have gone off the topic. Some have simply gone out of business because they've lost their funding. Interpress Service has scaled down three times since 1992. Panos and Geimim and scaled down their operations dramatically.

Eulalee Thompson, a CERN member in Jamaica reports that the media houses are no longer interested in specialists. The fact is, however, responsible coverage of the environment calls for patience, knowledge and awareness of the issues surrounding the problems and of course lots of research. Therefore there is a need for people who know where to look and what to look for in order to write accurate and informative environmental pieces.

Sensationalism has its place. It sets the scene, but environmental journalism requires a sustained approach to issues that are often the results of other factors.

Reporters from across the region agree that there is far too much emphasis on sensational reports. This is the downside to the fact that it is now easier to get environmental issues approved by editors. From Bermuda to Barbados to Jamaica, there has been more media and public awareness of the issues. There has also been an increase in the number of reports coming out of Cuba.

Journalists also report a relaxation in the attitudes of Governments towards environmental journalists. There is more awareness and tolerance of the issues and the need to report them. Government owned companies and their private sector counterparts are also more careful of their misuse of the environment and more sharing and open with their information. In Jamaica for instance, it has become compulsory for developers to have environmental assessments done before they begin any work. Companies are also being charged for dumping and causing pollution.

And, of course, journalists want to take some of the credit for the increase in environmental legislation and enforcement

Although there has been a decline in number of media organizations covering environmental issues, more stories are making headlines than ever before. On average, there are more stories per day across the region than in the five years prior to 1994 years. The fall in coverage is due to a significant reduction in the number of specialists and dedicated pages and programs. Quality has suffered where quantity has gained.

At this stage, there is very little CERN can do to change the level of environmental reporting in the traditional media, but like the rest of the world have been using the internet to continue the mission. Private funding has enabled the organization to launch its Internet site. The website was set up in January 1998, but lack of funding has hampered further development. Despite this, CERN now has her own site and email address, but this will not be launched until early next year.

Since it started, the organization has relied on the initiatives of its membership to take it forward. The Greenwire, which existed to carry stories from the membership via the CANA/Reuters wire service into newsrooms across the region has suffered from the lack of member contribution. The reorganization of the Caribbean Conservation Authority (CCA) has left CERN without office space. Fortunately, with the continued support of Panos Washington and Panos Haiti, CERN has managed to keep the fortnightly radio program, Island Beat going. The program is now being edited by Michael Siva in Montego Bay, Jamaica.

The organization also continues to work with Panos and other groups across the region to train regional journalists. This is under the capable management of Terry Alley in Barbados and Jan Voordeau in Haiti. Jan is also responsible for the print publication of Island Beat stories. The Greenwire is edited by Julius Gittens in Barbados

Environmental Journalism in the Caribbean will continue to thrive despite the difficulties because CERN was set up to exist on goodwill. In order to achieve its objectives, output from CERN's membership base is essential. The idea is that reporters participate in and contribute to the projects of the network, as part of their professional contribution to raising the level of environmental and development awareness of the Caribbean public.

To promote harmony between media houses in the region CERN facilitates the dispatching of reporters to international events around the world, and everybody benefits.

Statements from China

● Yang Mao

Chairperson - China Forum of Environmental Journalists (CFEJ)

Newspaper, radio, television and other forms of the press are important channels to disseminate information about environment and important forces to practice environmental protection. China, with a population of 1.2 billion, has over 300 million radios, 227 million televisions and 5,000 types of newspapers with a total circulation of 20 billion copies a year. There are more than 500,000 people working in the press nationwide, the coverage rate of television broadcasting stands at 84.5 per cent. This huge network passes various environment information in China and the world to Chinese public, it plays an irreplaceable part in implementing sustainable development strategy, protecting human rights of survival and development, raising public awareness over environment and treating the earth friendly.

Because of the important position of the press in environmental protection, the State Environmental Protection Administration of China specially set up an information division which keeps in touch with journalists from 30 press units in the capital city. The division releases information, provides news clues, invites journalists to take part in important environmental conferences and organizes interviews and field investigations.

China Forum of Environmental Journalists was established in 1986. Some 73 press at central level and 33 local ones have joined the forum that include the mouthpiece newspaper People's Daily, Xinhua News Agency, China Central Television Station, Guangming Daily, China Daily, China Youth Daily, Legal News, China Environmental News and Central Radio Station. In the last three years, the forum commended 100 journalists for their outstanding reporting efforts and more than 400 excellent environmental reports, and published three books of collections of excellent environmental reports of China. Besides, the forum organized a workshop for environmental journalists each year to provide a floor for them to exchange experiences and organized four training programs for reporters and launched three field investigation and reporting campaigns on major environmental issues.⁵

People's Daily is the largest newspaper in China with a circulation of three million copies a year, the paper has

special environmental journalists and opens special columns to introduce domestic and international environmental information to readers every day. China Central Television has opened special environmental programs such as "environmental weekly", "animal world", "human and nature" and "green space"; the Central Education Television has special program of "environment and ecology".

Environmental protection administrative departments at all levels have published 34 local environmental newspapers with "Chinese Environmental News" as the most outstanding representative which has a circulation of 300,000 copies a year. Due to its outstanding contribution in disseminating environmental information, the paper was awarded a silver medal for environmental protection and a title of "global 500" by the United Nations Environment Program.

Mass media has three functions in China to impact on environmental development. The first function is guidance. The press guide the public to follow environmental laws and regulations and social morals. China has basically formulated a legal system in environmental management that provides legal basis for protecting environment and guide public behavior. The press has made great efforts to publicize good and criticize bad examples in this aspect to tell people what should do and what they should not do. By citing good enterprises in pollution treatment, the press spread new concepts of saving resources and modern environmentally-friendly consumption patterns, therefore, gradually educate the public to adjust their environment-related conducts in accordance with laws and regulations.

The second function is education. To raise public environmental awareness is an important guarantee to preserve a sound environment. The press in China has attached great important in raising public awareness to environmental issues. China Forestry News has been renamed as "Green Times" to enhance its coverage of green protection schemes. China Youth Daily organized a knowledge contest on environmental protection. Beijing Television Station started special children programs titled "love the earth mother". China Science and Technology Daily launched a four-page green weekly to introduce environmental information. China Environmental News

has a special column of "environmental education" to spread basic environmental knowledge targeted at different groups of readers through which to tell them what is environmental pollution, the relationship between human and environment, why rare plants and animals must be protected and why birds are friends to human being. The column won great popularity among the readers, many people voluntarily inform the press of various environmental problems such as where water is contaminated, where noise is troubling residents, where soot is polluting the surroundings and where animals are being poached. Many of the press have special departments to handle letters from readers, some of the letters have been made public through newspapers and many problems have been solved.

The third function is supervision. The press in one hand cite units and individuals who have made great contribution towards environmental protection, on the other hand, they also expose and criticize cases that pollute the environment and damage the ecology. Environmental officials have detected that some units and enterprises are not afraid of criticism by authority or fines, however, they feel worried if their illegal conducts were exposed to the public by the press, so once their cases were reported, they often worked out all measures to solve the problems. The public has great expectation on the presses in solving environmental problems. A survey by the Ministry of Science and Technology showed that the public takes the press as the third most powerful agent to solve environmental problems, the first two are central and local governments. In central China, there is a river called Huaihe River, which runs 1000 kilometers and passes through Henan, Anhui and Shandong provinces. China Central Television first reported water pollution in Huaihe River in 1993. The news disclosed that about two thirds of the river was polluted seriously. The water turned black, fish and shrimp died out, grain output reduced and more than one million residents in the river basin suffered shortage of drinking water, the incidence rate of cancer in the area was 10 times higher than national average. The news grasped concern of the central government. State Councilor Song Jian led a dozen of ministers and governor of related provinces to hold a on-the-spot meeting on Huaihe River pollution control in Anhui in May, 1994. The meeting determined that all enterprises in the basin must discharge wastes on national standard by the end of 1997, those discharge excessive wastes must be closed and the water of Huaihe River must turn clear by the end of 2000. On August 8, 1995, the State Council promulgated a "temporary regulation on water pollution control in Huaihe River basin", the first such regulation in Chinese history and include Huaihe River pollution treatment into legal administration. Later, the State Environmental Protection Administration inspected Huaihe treatment many times and each time

journalists from radio, television and newspapers were invited to take part. On November 1, 1997 - when it was only one month before enterprises were demanded to discharge on standard- major press including the People's Daily, Guangming Daily, Economic Daily, Legal Daily, China Environmental News and China Central Television opened special columns of "count-down on discharge to the standard by 1997" to report development of Huaihe treatment day by day, a total of 300 reports were published and broadcasted in that period. China Central Television established a special reporting team and went to make reports in four provinces, they drove about 300 kilometers every day, interviewing in day time and editing reports at night and then sent the video report to Beijing for broadcasting, each day, they slept for only three to four hours. During that period, China Central Television opened hotlines and received more than 300 phone calls from audience across the country, the audience called the Huaihe action a life-saving project. In the past three years, a total of 1,111 small paper making factories and 3,876 small chemical, leather making and brewery factories have been shut down, all the other 3,000 enterprises came up to national standard in waste discharge at 0 o'clock January 1, 1998.

To effectively play its role in environmental protection, the press should enhance concern and participation into environmental issues, Chinese press are making efforts in the direction. A survey showed that the space coverage of environmental news has been greatly increased in newspapers, investigation among 76 kinds of newspapers (including 21 at central level and 46 local, 9 evening news), they published 22,066 articles on environment in 1997, a great increase as compared with 251 in 1996 and 136 in 1995. That also reflects that journalists have enhanced sense of responsibility in regard to environment issues--only based on which they could strengthen environmental reporting. China Central Television's great success in Huaihe pollution control reporting would be partly contributed to Pan Xiaofeng, a reporter with the station. Pan has a strong sense of duty and dedicated to his profession, he went to Huaihe basin 25 times and conducted investigations in 70 counties in the basin, he even gave his life to the career and died of heart disease while working. His devotedness has won public respect.

Global environmental problem needs concerns of journalists worldwide. Journalists should not only concern domestic problems but also global issues. The Chinese government has been always actively involving in global affairs and help seek out effective solutions for global environmental problems through international co-operations. Chinese press will also strengthen collaborations with governments and non-governmental organizations of other countries to contribute towards environmental protection and work for a better future.

grossly exaggerate threats to the environment, which are figments of the activist's own imagination. When I studied in detail the danger to the Taj Mahal from the Mathura refinery for a book I wrote a decade ago, I found to my dismay that Prof T. Shivaji Rao from Waltair University kept raising completely unfounded fears about the emissions from the refinery, which were duly reported in the press. (In Athens, which is the city whose monuments are most endangered by pollutants in the air, the head of an NGO who was up to similar tricks was jailed briefly for his misdemeanors! NGOs feel that they often get a raw deal at the hands of the press, which misreport their activities. The Delhi-based organization called "Charkha" seeks to correct this by getting activists to write articles, which are then edited by people with journalists' skills and sent to newspapers for publication. I have attended meetings in Mumbai and Chandigarh called by Charkha, where I have expressed my sympathy with their complaints about the way in which the conventional media functions but disagreed with the solution they opt for. In my view, no editor will take anything written by an activist as being objective and most articles will be

rejected. At best, something written by an activist may be published on an "Op-Ed" page -- opposite the editorial page, which represents the paper's opinion, with the author's designation at the end to inform readers of the possible bias.

To complicate matters, many activists are themselves journalists. The classic example is Sunderlal Bahuguna, of Chipko fame, who used to string for a national news agency. How objective would an editor expect his reporting to be? Instead of blurring these roles, it would be best for NGOs and the media to keep a healthy distance from each other. Only this can ensure that each plays its own, distinct, role properly. It is as well that in Mumbai, journalists and activists are to hold workshops on specific issues like the displacement of people by projects to come to a better understanding of their respective functions. This should trigger off an ongoing dialogue, with a free, frank and fearless exchange of views, which can then be circulated to and replicated in other towns and cities throughout the country.

Statement from Indonesia

Dr. Amanda Katili-Niode

Chairperson - Syarifa Foundation for Environmental Communications

The recent economic and political turmoil in Indonesia has opened the doors to unprecedented media freedom and a consequent ballooning of publishing licenses and media organizations.

Although coverage of environmental issues remains well behind that of politics and economics, the new situation could well catapult environmental journalism in Indonesia to a new and exciting stage of development. This paper analyzes the current condition of environmental journalism in Indonesia, first by looking at Indonesia and the country's environmental issues, and then examining the profession itself.

Indonesia in Crisis

Indonesia's political turmoil has brought about a new euphoria in media publishing and especially in the print media. From the pre-1998 level of 289 licenses issued for newspapers, tabloids, magazines, bulletins, and other print media, the number of publishing licenses increased fourfold to 1,168 by July 1999. Indonesia has also seen a similarly remarkable multiplication of press associations.

While the Indonesian Journalists Association (PWI) had served as the sole organization for more than 50 years, there are now 27 associations representing journalists' interests and this number is expected to keep rising.

Unfortunately, the number of publishing license issued does not correlate well with the number of published media, due to constraints in the financial and human resources necessary for any publication to survive. Ideally, the growth in published media would ensure more space for environmental coverage, although no formal observations have been made to establish whether this is the case.

In recent times, Indonesia's media has been preoccupied with the nation's rapidly unfolding political developments. Forty-eight parties contested for parliamentary seats in Indonesia's 1999 general elections, and predictably the media has given heavy coverage to their political and economic platforms. However, most of these parties also claim to champion environmental issues, even if only in general terms. While for the time being the media

continues to focus on the various political and economic positions of the parties, over time the environmental platforms may become an interesting focus.

Unfortunately, in the eyes of Jakarta's policy-makers and Indonesia's population at large, environmental issues have undeniably become progressively downgraded as an issue of priority. Much attention has been focused on the political situation, but inevitably the pressing economic conditions have also contributed to the perceived lesser importance of environmental issues.

Indonesia's economic growth in 1998 is estimated at minus 13.68%, down considerably from the robust 7%-plus growth rate before the onset of the economic crisis. These numbers are based on the 1997 and 1998 Gross Domestic Product statistics issued by the Central Bureau of Statistics, using 1993 constant prices. In 1998, inflation soared to 77.63% but in 1999 this level is expected to ease to 10%.

The economic crisis, increasing threats to physical and economic security has stimulated intensified effort in commercial activity while exacerbating the survival demands of local communities. On the commercial side, there are 437 applications for forest concessions totaling 1.6 million hectares of new plantations, which compares to the 1994 total of only 575 existing concessions. In 1996, Indonesia had 1.1 million hectares of palm oil, 538,000 hectares of rubber and 130,000 hectares of cocoa under cultivation. Alongside this, local communities seeking subsistence from their surroundings have engaged in greater exploitation of natural resources and the environment. In one example, illegal miners exploiting government-owned gold mine in West Java increased from 3000 to 11,000 people resulting in considerable erosion, loss of habitat, and risk to the miners themselves from unsafe conditions. The crisis has thus resulted in several major impacts on the environment:

- * Intensified exploitation of natural resources (minerals, forests, coral reefs, overfishing, poaching)
- * Accelerated conversion of forest lands (for agriculture, plantation, mining and facilities)
- * Increased pollution (industrial and mining waste and domestic waste).

Resources and Environmental Issues

Indonesia's natural resources represent a vast economic wealth, which in combination with the nation's 200 million-some population plays a vital role in development. As the world's largest archipelago, Indonesia boasts 17,500 islands scattered over more than 7 million square

kilometer of ocean, spanning a distance greater than from London to Teheran or San Francisco to New York.

Indonesia is also one of the world's most seismically active areas with 129 active volcanoes and about 10% of the world's earthquake epicenters found within its land and sea area. The ocean lying between the two-shelval regions in Indonesia's territorial waters has depths ranging from 2,000 to 7,000 meters.

In addition to oil and gas, Indonesia has plentiful energy resources such as coal, peat, and geothermal resources scattered along the 5,000-km volcanic arc. The country also produces tin, nickel, bauxite, gold and copper, while chromite and cobalt also show promise. Industrial minerals such as limestone, marble, dolomite, perlite, obsidian, pumice, puzzolan, feldspar, bentonite, zeolite, and dolomite are also abundant.

The Atlas of Bio-diversity in Indonesia states that Indonesia has at least 47 distinct natural ecosystems, ranging from ice fields and alpine meadows in Irian Jaya to the humid lowland forests of Kalimantan and Sumatra. Within this wide diversity are deep lake and shallow slump ecosystems, coral reefs, sea-grass beds and mangrove swamps. Indonesia is home to 350 species of rattan and produces three-quarters of the world's rattan cane while Irian Jaya boasts 2,500 identified varieties of orchids. Because of the isolation of many of its islands, Indonesia also has the highest rate of species and generic endemism in the world.

Several papers have been published on Indonesia's environmental issues. One of the most recent comprehensive reviews is one compiled by the Ministry for Environment and the Environmental Impact Management Agency for the 1999 National Coordination Meeting on Environment. Key issues identified in this paper are:

- * Deteriorating environmental carrying capacity as a result of increased activity brought on by the economic crisis (nature, society, human made environment, environmental standards)
- * Excessive exploitation of natural resources and degradation of the environment (forests, soil, water, bio-diversity, coastal and marine resources, natural hazards)
- * Increased environmental pollution (water and soil, air, coastal and marine resources, hazardous waste management)
- * Limited effectiveness of central and regional institutions

Despite these obstacles, GVB and a handful of other environmental NGOs have survived and are proud of their existence as true independent NGOs. As China undergoes further social and economic reform, the government is more open and tolerant of the formation

of environmental NGOs. GVB has proven that by avoiding confrontations with the government, seeking media support, and securing international ties, NGOs can take root and thrive; indeed for the sake of China's environment, they must

*For more information please visit;
<http://www.gvbchina.org>*

Statement from India

Darryl D' Monte

Chairperson - Forum of Environmental Journalists of India (FEJI), Mumbai

A few years ago, when I was attached to the "The Times of India" in Mumbai, I wrote an editorial, criticizing Medha Patkar and the Narmada Bachao Andolan for threatening to resort to "jal samarpan" and drown themselves in the swirling waters of the Narmada. As I recall, the editorial was titled "Violence To The Cause" and I said that nobody's purpose would be served by carrying out such a threat.

Furthermore, it would undo all the good done by the Andolan over the years, which had welded together a formidable phalanx against the Gujarat government, the Centre and multilateral institutions and prevented them from proceeding with the Sardar Sarovar project. I added that Gandhiji had taught us that the ends were as important as the means and, as activists who professed to swear by Gandhi, the Andolanites should surely be aware that taking their own lives was an act of violence which could not be condoned.

The same night the editorial appeared, I received a call at home from Baroda, where the Andolan has its head-quarters. It was from a sympathizer of the movement who said the activists were "disgusted" by the editorial. I listened silently and put the receiver down. The next day or the day after, my secretary informed me that there was a call from Baroda: it was from Medha Patkar. My first instinct was to dodge the call, because I was in no mood to listen to another tirade on the phone. But I figured that I would sooner or later have to face the music, so I lifted the receiver.

To my immense relief, Medha was her pleasant and cordial self. She told me, without the least trace of rancor, that she thought I had not understood the purpose of the threat and proceeded to detail these reasons at length.

I replied that I respected her views but still did not agree with her position. However, we parted on very warm terms, as we had always done in the past.

I recount this incident at some length because I think it helps to illustrate the often tortuous relationship between activists and the media. The Andolanites had become too emotionally involved in a literally life-and-death struggle to realize that it was unfair on their part to expect a journalist, who was otherwise seen as sympathetic to their cause, to endorse their stand uncritically. It was entirely possible that I was wrong, or I had not been fully apprised of some valid reasons for resorting to this extreme action, but I had every right to make up my own mind as an independent professional.

NGOs often expect that the media, or at least some sections of it which are seen as sympathetic, should stick unswervingly to their cause, come what may. Obviously, in this specific instance, the "fellow-travellers" were guilty of being swayed more than the leader herself -- who would have probably put her own life on the line first, had it ever come to such a pass. Medha displayed the true qualities of leadership by putting aside any personal animus and trying to convince an editor of her point of view in a cool, contained and collected manner.

On the issue of Sardar Sarovar itself, let me explain the contortions that I had to go through as an editor first and an environmental journalist second. Once around a lakh of people from Kutch (and possibly Saurashtra, which are the two thirsty regions which were supposed to receive water from the dam reservoir) staged a morcha in Mumbai in favour of the project. I published a four-column picture of it on the front page. Some Andolanites were aghast. They phoned me and asked:

"Darryl, what are you doing?" My reply that it was something that had occurred in the city, was unprecedented, therefore 'news', and could not be ignored, did not cut much ice. They assumed, I think, that this was a journalist who had sold his soul to a big establishment paper and had crossed over to the other side!

I wrote the editorials on all environmental issues in the paper. The editor in chief would let me, by and large, define the position of the paper on all these issues and not interfere with my viewpoint. I was opposed to the project. However, I placed myself in the 'mind' of the leading newspaper of the country and took a centrist but liberal view on the controversy. I argued at one stage that too much money had already been spent on the dam; it was a fait accompli. Therefore, it would be better to accept that it would be built but there was no reason why its height could not be reduced to diminish the submergence that it would cause, and thereby the displacement of people (mainly in Madhya Pradesh and next in Maharashtra). These views appeared as those of the newspaper, since they were unsigned.

I also wrote articles on Sardar Sarovar in the editorial page of the paper, where I argued against the dam much more vehemently and pointed to the problems of rehabilitation, the displacement caused in addition by building the feeder canals, and so on. I then listed the alternatives that there were to the project.

All these three positions -- sheer objectivity when it came to news, a compromise when it came to editorials and independent opinions when it came to signed articles -- were consistent with my role as a professional journalist, albeit one who was committed to protecting the environment and upholding human rights. Nevertheless, I received a great deal of flak from both sides. As I mentioned, the activists believed that I had sold out. Their worst fears appeared to be confirmed because I refused to speak on public platforms against Sardar Sarovar, unlike when I had been a freelance journalist prior to rejoining "The Times". Like Caesar's wife being beyond suspicion, an editor had to be seen to be fair and neutral.

On the other hand, the Sardar Sarovar Nigam and Gujarat government used to rail at the fact that the Mumbai editor of this newspaper was "biased" against the project and, they inferred, was distorting both news and views on this tricky subject. In Gujarat those days, as probably now, it was virtually impossible to publish anything against the dam, which people saw as their lifeline. When an "Indian Express" reporter in Mumbai once wrote something critical on the project, his story was translated into Gujarati for the group's sister newspaper to imply that he was in favour of it!

Before I rejoined "The Times" and even during the five years I edited the edition, I was variously described -- as I still am -- as a journalist and an environmentalist. I would, however, prefer to be described as an environmental journalist, because that it is the correct depiction of my role. It is to report and analyze developments in what may broadly said to comprise environment and development issues. Now that I am once again a freelance journalist, I do not have the same objection to appearing on public platforms. At the same time, I do realise that speaking at a meeting called by activists who oppose a particular project can on occasion block my access to the other side and thereby circumscribe my role as an independent professional.

Some 15 years ago, I traveled with the fiercely independent journalist, Bharat Dogra, to the Tehri dam site in Garhwal. We stayed with V.D. Saklani, the ageing lawyer from old Tehri town who is the strongest opponent of the project. I then told Bharat that we should meet Jaiprakash Engineering Co (if I recall the name correctly), which was building the dam. He refused, saying he saw no point in meeting the firm, because he was only too well aware of their viewpoint. I respected his stand, but I personally disagreed with it, and went to meet the dam-builders on my own. In my experience, meeting the "opposition" serves several purposes. It defuses the criticism that a journalist's mind has been made up; it also enables the journalist to be fair by reporting, or at least listening to, the other point of view. What is more, the "opposition" often destroys its own case by presenting facts and figures that can be used against it.

The fact is that NGOs and the media have different, though often converging, agendas, and each must respect the other's autonomy. To take NGOs first, they have legitimate reasons to criticize the media for only wanting sensational stories, or only being interested in personalities and events, not processes. Scribes don't do their homework half as well as they ought to, particularly when it comes to technical, complicated environmental issues, like CFCs and pollution-related stories. Journalists tend to swallow what officials from state-run institutions or the private sector tell them uncritically and regurgitate these ill-digested facts dutifully. Many are also loath to travel to remote, difficult terrain to see situations first-hand, because of the lack of creature comforts they get accustomed to by being pampered by the establishment. Their interest in any issue is also difficult to sustain; even if reporters are keen to follow up stories, the desk and editors keep warning them not to get involved in campaigns.

On their part, scribes complain that the NGOs expect them to keep writing about an issue even when there is no "story", as perceived by the journalist. To add insult to injury, some NGOs -- including some one-man outfits! --

1. Television Production

Since April 22, 1996, GVB has been independently producing the regular ten-minute TV program, "Time for Environment", that is aired weekly nationwide on China Central Television Channel 7 (CCTV-7) on Fridays at 18:32 and Saturdays at 13:07. Some "Time for Environment" programs have been broadcast by local TV stations or featured on other prime CCTV channels. In addition, the series' programs also serve as training materials in communities and schools.

"Time for Environment" states the NGO's point-of view by reporting on environmental conditions, following green action, giving policy suggestions, encouraging public participation, and disseminating environmental experiences world wide. The program has won the heart of a large and regular audience and has received two special television awards from CCTV. "Time for Environment" is the only environmental TV series that is independently produced by a Chinese NGO.

GVB's production team is a unique group consisting of environmentalists, environmental education experts, and filmmakers, which has produced over 150 TV programs in the past three years. Topics covered range from local to international environmental issues such as "Environmental Protection in the U.S.", "The China Canada Cooperation Project on Clean Production", "Safeguarding the East Asian Seas", "Environmental Protection in Korea", and "Green Action in Brazil". The purpose of the international programs is for Chinese people to learn from the developed countries' environmental experiences, and not to repeat their mistakes.

Featured guests of "Time for Environment" have included: Caroline Browner, Administrator of the United States Environmental Protection Agency, Gro Harlem Brundtland, former Prime Minister of Norway and Chairwoman of the World Health Organization, Elizabeth Dowdeswell, Executive Director of the United Nations Environment Programme, and Qu Geping, Chairman of the Environmental and Resources Protection Committee of the National People's Congress of China. In the future, GVB is planning to produce the following TV series:

- * Green Life --- Sustainable Consumption Series
- * Clean Production --- Sustainable Production Series
- * Last Legacy --- Bio-diversity and Cultural Diversity Series
- * Safeguard the Environment --- Environmental Law Series
- * Global Environmental View --- International Experience Series
- * Green Civilization and China --- China Environmental Report Series

2. News Articles and Publications

GVB has been featured in and has written for many newspapers which include: the China Daily, Chinese Youth Daily, Chinese Consumers' Daily, and Chinese Women's Daily. Recently, GVB wrote and edited two publications, the Citizen's Environmental Guide and Children's Environmental Guide, which the China State Environmental Protection Administration (SEPA) has endorsed. The guides promote the 5 R's: Recycle, Reuse, Reduce, Re-evaluate, and Rescue, and are distributed in schools and communities to teach the public about how to live an environmentally friendly lifestyle. As China's first two environmental action guidebooks for the public, the books have been reprinted and cited by more than 30 news media groups. Currently, GVB is writing two more books with different target audiences; the Leader's Environmental Guide and Business Environmental Guide will be published next year. GVB also produces environmental education materials such as calendars and posters, featuring colorful drawings, which advocate environmental awareness.

3. Community Activities

In 1996, GVB initiated the first pilot community solid waste recycling project in Beijing. The project was widely reported by the local news media and received the attention of the local municipal government. Using this project as a model, GVB successfully submitted a proposal to the National People's Congress appealing to the government to recycle solid waste.

GVB has mobilized college students from a dozen Beijing universities to form environmental lecture groups to promote public awareness. These groups have gone to both communities and elementary schools in Beijing, promoting environmentally friendly behavior. The lecturers also serve as instructors in the Environmental Education Hall at the Chinese Science and Technology Museum. Through this effort, GVB has educated hundreds of students on how NGOs can function and effectively communicate with the public.

Since 1996, GVB has held the Annual Forum on Journalists and the Environment, which is co-organized with the Beijing Women Journalists Association and local government bureaus. The purpose of the forum is to educate the media community about the serious condition of China's environment and prompt journalists to pay more attention to public environmental issues.

4. Environmental Education and Training Center

Located near the Badaling Great Wall site, 50 km away from downtown Beijing, GVB's Yanqing County

Environmental Education and Training Center features an Exhibition Hall in over 187 hectares of pristine natural area, which includes wetlands, forested lands, cultivated lands, bird habitats, rock formations, and a natural spring. As the first Chinese NGO-established conservation site, the goal of GVB's Training Center is to provide environmental education, consultation, and training programs to the public in a beautiful natural environment. Its current functions and activities are as follows:

* **Training Program:** The participants range from community and NGO leaders to journalists and teachers. Training topics include environmental policy, law, sustainable consumption, and how to raise environmental awareness.

* **Information Service:** The Training Center provides environmental consultation and educational materials such as videotapes, publications, posters, calendars, and brochures.

* **Improving Communication:** Through forums and meetings, the Training Center encourages the exchange of environmental information and experiences on both local and international levels.

* **Studying Nature:** GVB runs nature appreciation and study sessions regularly at its Training Center. Program participants can bird-watch, study wetland, enjoy spring water, and climb mountains. They can also learn about tree-adoption and bio-diversity.

Future Plans include:

* **Green Buildings and Displays:** To increase the capacity of its Training Center, GVB plans to build additional environmentally friendly or "green" buildings. These green buildings will not only serve as models for environmental construction in China, but also as exhibition halls to house eco-art and environmental exhibitions covering subjects such as energy, water resources, waste, eco-farming, and bio-diversity.

* **Promoting Environmental Technology:** By introducing environmental protection technology to the public and organizing environmental technology seminars and contests, the Training Center will also serve as a clean production promotion center.

* **Eco-farming:** GVB will help local farmers and government agencies with understanding and implementing the new concept of eco-farming. In this way, GVB's Training Center will provide Chinese farmers with a model for sustainable agriculture.

In the last three years, GVB has been featured in the media over 200 times by over 80 different Chinese news agencies. With its wide media exposure, GVB has been given many opportunities to spread its environmental message and obtain the support of the government and the public. GVB's efforts have also received international recognition and been featured in media outlets such as Reuters, the Japan Daily, TIME Magazine, BBC, and CNN. These reports enable people everywhere to learn about Chinese NGO activities.

GVB is an active member of the international NGO community and has participated in international environmental activities in North America, South America, East Asia, and Europe. In 1998, GVB was appointed the Global Environmental Facility (GEF) NGO Regional Focal Point and voluntarily serves as a liaison between the Chinese government, international organizations and other Chinese NGOs. GVB uses its international status to fulfill its mission to promote NGO development in China and thereby also advance the development of a participatory civil society.

Conclusion

Despite significant progress in environmental protection, China continues to face a grim environmental situation. Environmental protection still remains a weighty task for China and success will depend on having all facets of society environmentally educated and involved in the clean-up process.

Indigenous NGOs will play a crucial part in the advancement of a "green" society in China. As they are government-independent, not-for-profit organizations, their role in environmental protection is essential and irreplaceable. They are innovative and effective in a way that only small, grass-roots organizations can be, free from the constraints of bureaucracy. They can help to empower the Chinese people to be a force in China's struggle to protect its environment.

Currently, there are very few independent NGOs in China because their existence is limited in several ways. Firstly, the Chinese government requires that any civil organization must have a supervising "mother-in-law" government agency, thereby preventing the establishment of independent NGOs. To sidestep this regulation, GVB has registered as a non-profit private corporation which does not need a "mother-in-law", but must pay annual taxes as a price for true independence. Secondly, GVB's operating budget is funded solely by the support of international organizations such as the UNDP, World Wide Fund for Nature, and Ford Foundation. Since there are no established foundations in China to support NGO activities, GVB has not obtained any domestic funding.

● Sheri Xiaoyi Liao
Chairperson - Global Village of Beijing (GVB), China

The People's Republic of China is a country with a surface area of 9.6 million km² and almost 1.3 billion inhabitants. As the fiftieth anniversary of the founding of the Republic approaches, it is easy to see how much progress China has made in developing its economy and raising its citizens' standard of living; yet it is equally apparent, especially when regarding environmental conditions, that China still has a long way to go.

The Chinese people are becoming increasingly aware of environmental issues and are beginning to seek environmental quality. However, the Chinese public is very uneducated and inexperienced at solving environmental problems. As a result, many Chinese continue to practice environmentally destructive lifestyles and are unable to successfully manage their environmental problems. This ignorance within the community, private and governmental sectors is a major contributor to the declining state of China's environment.

NGOs play a unique role in China's environmental protection, as they are an indispensable connection between the government and the public. The passage below is a brief background to understanding China's need for more environmental NGOs and intensified environmental education.

The Present State of the Environment

(Taken from "Trans-Century Environmental Protection in China", State Environmental Protection Administration, 1998)

1. Water Environment

The water environment now mainly suffers from organic pollution. In recent years, while industrial pollution has been curbed to some extent, household waste pollution has increased gradually. Last year recorded discharges of 41.6 billion tons of wastewater (22.7 billion tons of industrial wastewater and 18.9 billion tons of household wastewater) and 17.57 million tons of COD. Compared with 1995, industrial wastewater discharge dropped by 5.4 billion tons, while household wastewater discharge increased by 2.8 billion tons.

The seven main river systems, some lakes and partial offshore coastal areas have been polluted to varied degrees. In general, the water quality in the main current of Yangtze and Pearl rivers is good, that in the main stream of the Yellow River is passably good, that in Songhua River and the main current of the Huaihe River has improved, and that in Haihe, Luanhe and Liaohe rivers is comparatively poor. A number of freshwater lakes suffer from eutrophication. The pollution in Taihu Lake has been mitigated, and that in Chaohu and Dianchi lakes has [worsened]. The water quality in offshore coastal areas basically remains the same. Inadequate water resources and water pollution in north China's arid and semi-arid regions have become constraints in local socioeconomic development.

2. Atmospheric Environment

Air pollution is mainly caused by smoke from burning coal. The major pollutants are sulfur dioxide and soot. While the discharge amount of the latter is coming down on an annual basis, that of the former is going up gradually. Last year, 23.46 million tons of sulfur dioxide was discharged, exceeding that of 1995 by 1.14 million tons. The total amount of soot discharged was 18.73 million tons, a drop of 1.11 million tons from that of 1995. Pollution by acid rain is relatively serious in central, south and southwest China. Acid rain also occurred in some northern cities, such as Tumen and Qingdao. Areas [affected] by acid rain now account for 30 percent of the country's total land area.

3. Urban Environment

Along with the expedited pace of urbanization and population growth in cities, urban environment problems have become prominent. Air pollution in cities is mainly caused by soot. Some large and medium-sized cities [suffer from] pollution caused by a combination of soot and vehicle emissions. Air pollution in some cities is fairly serious, and the situation in northern cities is more serious than that in southern cities. Urban water pollution is mainly caused by petroleum-matters, permanganate index and ammonia nitrogen organism. Water pollution in northern cities is more serious than that in southern

cities. There is an increase in the number of cities, especially in northern inland areas, where water pollution causes water shortage. Noise pollution in most cities is of the medium level. The scope of domestic noise pollution is expanding, whereas traffic noise is the most conspicuous. The ever-increasing urban garbage has not been put under effective control and treatment. Especially in recent years, "white pollution" caused by plastic packing products has become [very] serious.

4. Resources and Ecological Environment

With population growth, industrial development and irrational use of farm chemicals, the coverage and quality of cultivated land have decreased. Although China has 390 million hectares of natural grasslands, its per capita grassland area is only 50 percent of the world average. Excessive development and utilization have aggravated the degradation and desertification of grassland. Environmental pollution and inappropriate development have cut the acreage of virgin forests, threatening the habitats of 15-20 percent of the nation's animal and plant species. Some rare species, such as white-flag dolphin, are at the brink of extinction owing to drastic decreases in their populations.

Environmental Education Work

Because of the critical situation of China's environment, there are many agencies working toward its improvement. These include not only national and international agencies, but also an emerging third component, non-governmental organizations (NGOs). Promoting environmental education to some degree is a goal of every group working on environmental protection in China today.

1. On the National and International Levels

In addition to the formulation of new environmental legislation and enforcement of existing laws, the Chinese government has promoted the development of clean production and environmental technology in China. It has heavily invested in pollution treatment facilities and eco-agriculture projects as well as established more nature reserves all over China.

Concerning environmental education, Environmental Protection has already been included in the course of the nation's nine-year compulsory education [system], as well as 140 institutes of higher education, more than 100 secondary vocational and technical schools, and central and provincial party schools and administrative colleges. (Taken from "Trans-Century Environmental Protection in China")

International organizations such as the United Nations Development Program (UNDP) are supporting both state and local governments in their efforts for sustainable development. Not only are they helping the Chinese government implement "China's Agenda 21 -- White Paper on China's Population, Environment, and Development in the 21st Century" (1994 government published sustainable development strategy for China), but also for environmental education purposes, they are carrying out the National Action Guidelines for Environmental Protection Publicity and Education. Environmental training programs for officials at various levels, elementary school students, and the public at large are conducted. (Taken from "Implementation of Agenda 21: Review of Progress made since the 1992 United Nations Conference on Environment and Development", UN Commission on Sustainable Development, 1997)

2. The Role of NGOs

As the quality of China's environment worsens, more and more Chinese people and organizations are becoming concerned about the environment. Many want to help protect but do not know how or where to start. Others think it is only the government's responsibility. Even fewer people have heard of NGOs and their ability to play a vital role in protecting the environment. As China struggles to protect its environment, the entire society needs to become involved. Developed countries have shown that NGOs can be a strong force in environmental protection by representing the public's voice. Thus, the development and support of indigenous NGOs is essential to China's fight against environmental degradation.

Global Village of Beijing (GVB)

Founded in 1996 GVB is a non-profit NGO dedicated to promoting public awareness of the need for environmental protection through media, publications, and community activities. As one of few independent Chinese NGOs, GVB plays an important role in environmental protection. Not only does it lobby the government for new legislation and stricter enforcement of environmental laws, it also directly works with community members to encourage individual environmental action. A highly energetic and enterprising NGO, GVB is a pioneer in its work in China. The following are some specific methods used by GVB to achieve its goals of fostering public environmental consciousness, influencing government policy on all levels, and establishing environmental public participation mechanisms to address environmental concerns.

* Lack of progress in participation by the public and Non-government Organization (NGOs, universities, business, political organizations, mass media, human resources development)

* Weak law enforcement and compliance (laws and regulations, human resources, coordination, public awareness, laboratories, proven cases)

* Underdeveloped voluntary mechanism for environmental management (cleaner production, eco-labeling, ISO 14000)

Three key environmental issues facing Indonesia are air pollution, water pollution, and coordination among government agencies.

The principal causes of Indonesia's air pollution are human activities and natural phenomena. As Indonesia has more than 200 volcanoes, eruptions are an inevitable occurrence, in some cases ejecting tons of volcanic ashes, gases, sand, and rocks into the air. In urban centers, the major cause of pollution is motor vehicles, as indicated by a study conducted by the Indonesian Environmental Impact Management Agency (BAPEDAL) of four of Indonesia's largest cities-Jakarta, Bandung, Semarang, and Surabaya. The United Nations Environment Programme (UNEP) ranks Jakarta, the nation's capital, as the third most polluted megacity in the world. A study on Jakarta and its vicinity indicates that vehicles contribute almost 100% of lead; 42% of suspended particulate matter; 89% of hydrocarbons; 64% of oxides of nitrogen, and almost all of the carbon monoxide in the city's air.

A World Bank report projects that 50% of Indonesia's population will suffer problems from urban air pollution by the year 2020 and points to vehicle emissions as the major source. This projection, however, was made at a time when Indonesia was enjoying robust economic growth, before the nation's economic crisis.

Indonesia's rivers are an important source of many basic needs, including drinking water and fisheries. Rivers also provide support for agricultural and industrial activities through irrigation and power plants. In areas with no roads, rivers are crucial to local transportation. Some Indonesian rivers are also famous for whitewater rafting.

Although the importance of rivers is widely understood, they are still carelessly used for disposal of polluting wastes. Rivers are known as polite garbage bins: without complaint, they accept everything thrown into them. Households and industries alike treat rivers as places to dump waste with impunity. People also use rivers to bathe and do household laundry, and wash their animals and vehicles. For sparsely populated areas, activities like these

should not normally pose problems, but in areas of dense population such practices are disastrous. To make matters worse, some industries irresponsibly use rivers for discharging effluents that sometimes include even toxic and hazardous wastes.

The Musi river on the island of Sumatra, for example, carries a heavy pollution burden from industrial plants turning out crumb rubber, fertilizers, petrochemical, plywood, textiles, soy sauce, cooking oil, polystyrene, glue, and cement, as well as sawmills and cold storage facilities.

Recent developments point to weaknesses in the checks and balances of the Indonesian political system, i.e., the executive, legislative, and judiciary. While Indonesia has systems in place for environmental management, implementation has fallen far short of the desired objectives.

Environmental problems have arisen from limited knowledge of technical environmental matters and also non-technical causes. Two key non-technical factors are the bureaucratic authority syndrome and territorial conflicts. Within some sections of the bureaucracy, the pursuit of sector-specific goals tends to take priority over the interests of the environment as a whole. Not all government employees are truly imbued with the spirit of public administration; instead, they frequently lack awareness of their obligation to serve the public interest.

One possible means of bringing about change in the prevailing culture of the bureaucracy is the strengthening of checks and balances through a methodological approach and conscientious application of ethics. Important areas of checks and balances include decision-making, human resources capabilities, the spirit of public administration, and information and communications.

Analysis of information and communications on environmental issues reveals that in many areas, both positive and negative, the public in Indonesia is not adequately informed. For example, not many are aware of the environmental work carried out by Indonesia's armed forces, which includes coral reef protection and environmental awareness programs.

With an area of almost two million square kilometers, the country's administrative jurisdiction consists of 27 provinces, 247 regencies, 63 municipalities, 4,022 districts, and 66,158 villages. Among these levels of administrative jurisdiction, the provincial and municipal levels in particular are concerned with environmental issues and serve as the basis for programs and media coverage in this area.

Environmental Coverage

The Indonesian media is an effective tool for communicating environmental concerns related to the public interest. Several environmental organizations work closely with the media on specific issues. In the eyes of former Environment Minister Emil Salim, the media provides an important means of social control.

Large-scale media usually assign journalists to specific topics, among these the environment. Smaller media may assign one journalist to several news topics. Journalists who cover environmental issues in Indonesia are usually university graduates with majors in various subjects.

Given the particular nature of environmental issues that calls for specialized knowledge and skills, some media may have environmental desks. If there is no special desk, the task of deciding which topics are to be covered falls on the editor. Data from the Syarif Foundation Clipping Service indicates that from December 1997 to June 1998, media coverage of environmental topics in Indonesia dealt most often with conservation and endangered species. In descending order of frequency, other topics were:

- * Science, technology, and the environment
- * Environment, business, and the economy
- * Forest problems (including forest fires)
- * Eco-tourism
- * Pollution
- * Environmental policy
- * Environmental NGOs
- * Environmental education

Journalists rely most heavily on non-governmental organizations and officials of government agencies as sources for news and features. There is a developing trend in which journalists are less likely to regard NGOs as trustworthy sources of information compared to previous years, possibly due to the involvement of some organizations in activities inconsistent with their stated aims. With the political turmoil and abundant donor funding for democratization in Indonesia, many organizations have become involved in political activities. One example of this is WALHI, Indonesia's leading environmental NGO.

Another popular source of information is environmental seminars where journalists usually cover the event and interview resource persons. Training for journalists, although limited, is also a good sourcing opportunity. Other potential but currently underutilized sources of information include consultants and the private sector, embassies and international agencies, environmental study centers, and fairs and exhibitions.

Communicating Through the Media

In the print and electronic media, news and features on environmental issues are covered in bahasa Indonesia, the national language. There are a few locally published English newspapers, mainly the Jakarta Post and the Indonesian Observer. Indonesian television stations have substantial imported programming content as well as their own news services in English.

Bahasa Indonesia was officially adopted as the national language for the future independent Indonesia as far back as 1928. Today, however, 583 languages and dialects are spoken throughout the archipelago and appear strongly set to remain in popular use by future generations. While many of the regions feature local media in ethnic languages or dialects, for the most part the media is published in Bahasa Indonesia for accessibility to a nationwide audience.

Print media is widely available in a variety of forms nationwide, including newspapers, tabloids, magazines, and bulletin. Added to these are internal publications issued by NGOs and government agencies. Indonesia's electronic media is also well developed with an abundance of television and radio broadcasting and new multi-media or Internet publications.

For many years in the past, the state-owned Televisi Republik Indonesia (TVRI) and Radio Republik Indonesia (RRI) dominated broadcasting activities. Private radio stations began to flourish after 1966, but it was not until 1989 that private television stations came on the scene. Even with the mushrooming growth of commercial radio and television stations, TVRI and RRI continue to play an important role in communicating messages to the public, especially to people living in remote areas.

Survey findings released by AC Nielsen in 1998 indicate that radio penetration in 9 Indonesian cities is 40% while for newspapers and magazines the penetration is 37% and 32% respectively. Another study by Survey Research Indonesia (SRI), as advertised in a magazine, showed that 69% of village households have no television, 20% of village people have black and white TV, and 11% have color.

The following table presents the number of media available to Indonesia's 200 million plus population.

Type of Media	Number
Print*	
Newspapers	357
Tabloids	679

Magazines	410
Bulletin	11
* publishing licenses	
Electronic	
Television stations	
National (state-owned TVRI) transmitter/broadcasting relay stations	375
Private TV stations	5
Radio stations	
National (state-owned RRI)	52
Local RRI stations	133
Private commercial stations (non-RRI)	829

Source: ASEAN-COCI (1999) and SPS (1999).

Experience in Environmental Journalism

During the preparation of this paper, several opinions were contributed by journalists on the subject of environmental journalism. Like in many countries, there are generic issues involved. These include limited knowledge on environmental issues, disinterest on environmental subjects on the part of media editors, and the relatively lack of attractiveness of environmental issues as a drawcard for advertising revenue.

All of these factors add to the challenges facing environmental journalists in Indonesia today. Keen personal interest, opportunities for story coverage, and adept reporting skills are crucial to the success of their tasks. Given its interdisciplinary nature, the environmental beat is quite different from others. Education, business, economics and politics, have structured and predictable points of view that make the tasks of journalists substantially easier.

Environmental stories have typically gained more attention when linked to economic and political factors. One example is the one million-hectare peat swamp development initiated during the previous administration. From an environmental perspective, this project was unsound, but it went ahead regardless because of political pressure. An example of an economically linked report on environmental concerns dealt with the importing of sand by Singapore from Indonesia for land reclamation, allegedly in exchange of money.

On television, the environment appears to receive more attention in news reports than in features. Environmental coverage on TPI, one of Indonesia's 5 private TV stations, is far more to be found in its news broadcasts than in

dedicated programming. Among the features that do reach the airwaves, most are from foreign production houses. On the other hand, TVRI has occasionally held talk shows on environment.

Radio coverage of environmental news is almost always tied to political or economic news or issues surrounding the community. Examples are the flood caused by heavy rains and the untreated solid waste in urban areas. One radio journalist commented that most environmental coverage on the radio is unschematic, unstructured, unprogrammed, and non-continuous. Lower middle class listeners do not regard the environment as an important subject. Of much more concern to them is what to eat for the day.

Nevertheless, there are quite opposite cases with the radio stations that cooperate with development agencies or other international organizations, such as World Wide Fund for Nature (WWF) with its Wild Animal Conservation Forum. In Ujung Pandang, a project funded by the Canadian International Development Agency (CIDA) developed programs on environmental issues for radio broadcasting in South Sulawesi. Once the project is completed, however, the radio program may be discontinued.

Many media have neither a specific environmental journalist nor an environmental beat. Their journalists have to cover a wide range of subjects and not all media have a specific allocation of space for environmental coverage.

With the recent political changes in Indonesia, more opportunities have emerged for greater environmental coverage at the provincial and district level. Recently, Indonesia promulgated a new government regulation on local autonomy and with the provinces exercising greater autonomy, the central government is expected to concentrate its efforts on defense and security, foreign affairs, financial and monetary affairs, and justice. This will directly affect the lines of authority and availability of resources for protection of the environment. While in the past officials at the central government level have always played an important role in decision making, this situation will now change and regional officials will take on a wider role.

Packaging of information, as most journalists agree, is of no less value than the information conveyed in the news or feature itself. Radio broadcasts communicate more effectively to their audiences, for example, when their messages are concise and alternated with music. In the print media, a good story involves an object, subject, and conflict. Eco-tourism, for example, lacks interest for readers if there is no conflict or intrigue, such as about how money for investment was raised. Stories should

include a nice touch related to human interest, such as who will be disadvantaged by the eco-tourism activities.

Journalists would do well to avail themselves of the opportunities presenting themselves in the present political and economic situation. Current frequently covered issues are environmental policies and the incessant questioning by NGOs of actions by Indonesian environmental agencies perceived as detrimental to environmental conservation.

Human Resources Development

As several journalists have stated, one needs to be knowledgeable to be active in environmental beat. Training is an important activity to increase knowledge both in environmental matters and writing capabilities.

Many organizations exist to provide capacity building for Indonesian journalists. Within the Indonesian Journalists Association (PWI), there is a dedicated environmental working group. Over the years, the Dr. Soetomo Press Institute (LPDS), an organization that regularly conducts journalism training, has hosted environmental seminars featuring environmental journalists and academics from the United States and Europe. The United States Information Service, the Freedom Forum, and the Asia Foundation have participated in sponsoring some of the activities conducted by LPDS. Most of the seminars involve foreign guests and other speakers chosen from a pool of senior Indonesian environmental journalists.

ANTARA, the official Indonesian news agency, has produced *Earth Wire* with assistance from the United Nations Educational, Scientific and Cultural Organization (UNESCO) and publishes environmental news in English and Indonesian. Like LPDS, it also provides journalists with regular training on environmental subjects, ranging from environmental journalism to marine conservation, bio-diversity, national parks, traditional beliefs, and environmental protection, cultural values and sustainable development, and coral reefs management. Many journalists have benefited from *Earth Wire*'s hands-on approach. Most activities consist of lectures, discussions, fieldwork facilitated by experts, and writing of stories for subsequent discussion and analysis by experienced senior journalists.

Press associations obviously represent an important resource for development of the journalism profession. While the number of press associations in Indonesia has mushroomed from the sole organization of more than 50 years' standing to 27 at the latest count, it is not clear what role they will play in encouraging members to participate in environmental activities. Nevertheless, these

organizations have potential for promoting journalism activities in the area of the environment.

Sadly, however, even with the present multiplicity of organizations, there is no Association for Environmental Journalists. The one organization established many years ago, the Indonesian Forum for Environmental Writers (IFEW), has long since ceased activity.

In addition to the press associations there are organizations like LPDS that are concerned with human resources development in the journalism profession. These include the Journalistic Training House (BPJ), Yogya Institute of Research, Education and Publications (LP3Y), the Institute of Press and Development Studies (LSPP), and the Institute for Studies on Free Flow of Information (ISAI).

Projects sponsored by international agencies may offer training or other opportunities for journalists. One method that seems to work well is roundtable discussions on environmental subject. The United Nations Development Program (UNDP) and the Indonesian National Development Planning Agency (BAPPENAS) have a project on environmental governance, for many a new subject. In this, a limited number of journalists are given opportunity to discuss environmental governance issues with the project management team. According to project team leader Elly Rasdiani Sudibjo Ph.D., facilitated roundtable discussions are effective because the journalists get a fair chance to share their knowledge and provide recommendations on environmental governance from their point of view.

International trips and training also present good opportunities to acquire knowledge and instill environmental journalists with increased motivation to play a more active role. It is possible to explore the opportunities published on the Internet, but some will face a language barrier. Indonesia's larger-scale media can afford to pay the way for their journalists, although the number of such media is limited.

The Syarif Foundation for Environmental Communications has organized a program for women journalists with the aim of encouraging them to gain international experience. With assistance from other organizations, the Foundation plays an active role in capacity building for Indonesian women journalists by providing information and assistance for travel to attend environmental activities in other countries. Since the program was established in 1997, the Foundation has extended assistance for two journalists to travel to Thailand at the recommendation of Mr. Manuel Satorre of the Philippines Environmental Journalists Inc., as well as one journalist to travel to the United States, one to

Japan, one to Sweden and two to Sri Lanka. The partner organizations contributing to this program are the United Nations Economic and Social Commission for Asia and the Pacific (UN-ESCAP), the Japan International Cooperation Agency (JICA), the Institute for Further Education of Journalists, Sweden (FOJO), and the United States Asia Environmental Partnership (US-AEP).

Journalists participating in the Syarifa Foundation program have keenly expressed their appreciation of the benefits of participating in these events. All have consistently gone on to cover environmental matters in their reporting and their knowledge of issues has increased dramatically.

There have also been a number of praiseworthy initiatives by environmentally concerned journalists in their individual capacity. For example, Harry Suryadi, an environmental journalist with the Kompas daily, has developed an environmental mailing list to discuss issues. List members include individuals from the private sector, government agencies, and non-government organizations.

For those who had not had a chance to participate in training on environmental journalism, a possible last resort for developing their knowledge may be books on the subject. At present, however, only a limited number of books on environmental journalism are published in the Indonesian language. These are the translated version of Peter Nelson's booklet *Ten Practical Tips for Environmental Reporting* published by The Center for Foreign Journalists and World Wide Fund for Nature, and *The Reporter's Environmental Handbook* by West et al., published by Rutgers University Press in 1995. There are two noted books by Indonesian authors. One is *Introduction to Environmental Journalism* written in Indonesian by Ana Nadhya Abrar and published in 1993 by Gadjah Mada University Press. The other is *Promoting Environmental Issues in the Mass Media*, edited by Atmakusumah et al and published in 1996 by Dr. Soetomo Press Institute and the Obor Foundation.

Concluding Remarks

Despite the numerous challenges and constraints that confront the nascent profession of environmental journalism in Indonesia, the rapid expansion of the media industry in general and newfound press freedoms bode well for the future. Sustained efforts will be necessary to continue to develop the presently limited pool of truly qualified environmental journalists. The various recommendations put forward in this paper may well have been discussed at other meetings, but given that follow up is sometimes slow, there is no harm in raising these points at appropriate opportunities as they present themselves.

One pressing need at this time is encouragement and support for the establishment of an environmental journalists association in Indonesia. Journalists interviewed for this paper expressed the feeling that they lacked the necessary competence to establish an organization like this. Instead, they felt that such activity is better initiated either by a donor agency, university, or educational institution for the press such as LPDS in Jakarta.

There is also urgency for a more in depth assessment of the situation of environmental journalism in Indonesia. This assessment should list and analyze all activities conducted to date and map out future programs.

If Indonesia is able to host major environmental journalism events like the Asia Pacific Forum of Environmental Journalists (AFEJ) symposium, environmental journalism could well be brought into national focus. This would in turn encourage a paradigm shift, especially for editors, media owners, politicians, and decision-makers.

More training is definitely a priority, especially at the provincial and district level. In past years, most international environmental journalists did not visit any further than Jakarta. Although training has been carried out in the regions, local journalists would stand to benefit greatly from more exposure to international figures.

Writing projects such as those initiated by AFEJ and UN-ESCAP provide opportunities to bring forward issues in environmental journalism. A similar method could be developed for all the provinces of Indonesia or large-scale media in the regions.

Practical assistance in terms of funding and materials should be extended to individual initiatives by environmental journalists to promote environmental reporting in Indonesia, as illustrated by the environmental mailing list operated by Harry Suryadi of the Kompas daily. Mere encouragement is not sufficient.

Finally, the establishment of a clearinghouse on environmental journalism in Indonesia will help journalists keep abreast with the latest developments. The clearing house should have books, articles, and any materials related to environmental journalism. The LPDS library has a limited number of publications on the subject and could be expanded along more structured lines with assistance from appropriate agencies.

Given the turbulent political climate in Indonesia over the past two years, public attention has largely been diverted away from environmental issues, not the least

because of critical economic conditions. Nevertheless, with Indonesia's expansive geographical area and large population, the potential impact of carelessness or neglect to environmental issues could be enormous. It is therefore very important that efforts continue to develop

the environmental journalism profession in Indonesia with the aim of keeping the public informed and aware of environmental issues and their importance to the well-being of society and the future of the nation.

Statement from Jordan

Ziyad Alawneh

Regional Coordinator - Mediterranean Ecological Media Network (Med-Ecomedia)

Introduction

MED-ECOMEDIA was established as a regional network to link media professionals and communicators interested in environmental issue reporting, and in promoting environmental awareness. The network was first launched in July 1995 in Geneva following a Mediterranean Environmental Technical Assistant Program METAP II Workshop, but reactivated with support of the Regional Capacity Building Program RCBP in 1997 in Amman, Jordan. Recently the Network registered with the APFEJ to increase its contacts with environmental journalists globally. The world wide Fund for Nature (WWF) provides nowadays technical and financial support to the network in a process that aims at strengthening the network and opening new contacts and venues to other media institutions.

The Network presently is more than 100 members. The Network, since its establishment, was able to expand and contribute to the enhancement of media role in promoting the increase of public awareness in environmental matters. The number of members has both increased in terms of countries and individual members.

MED-ECOMEDIA Establishment

Justification

The Mediterranean Region is degrading at an alarming rate. The environmental degradation of the Mediterranean Region already severe is worsening daily in many areas; in some cases the degradation threatens to be irreversible. Most sources of pollution are land based; contaminating the sea, coastal zones, ground water, and areas of natural beauty and biodiversity. Environmental problems in the Mediterranean have both health and economic impacts.

Pollution in the Mediterranean, as elsewhere, results from the misuse of natural resources, prompted by inadequate institutions, inappropriate policies, low levels of public awareness, low level of media involvement and insufficient investment.

The Mediterranean degradation as a common resource, binds the countries together that collectively share the cost of their past and current neglect of the environment. National and regional concerted efforts are needed to boost the environmental conservation and protection initiatives among of which the MED-ECOMEDIA network .

Objectives

To enhance capacity of environmental media in covering and communicating priority environmental issues through awareness-raising activities; improving access to environmental information; producing newspaper and magazine articles, videos, newsletters and conducting interviews.

Activities Undertaken

* MED-ECOMEDIA in a step to bring together Journalists and Information professionals of all METAP countries and to diffuse through all forms of information in the fields of environmental terminology's, media power, environmental management, nature conservation and to achieve sustainable development for the purpose of alleviating Mediterranean Region environmental degradation and to consolidate the experiences. Right after the Network initiation and reactivation, a meeting took place in Amman during the 27-30 June 1997 organized a Regional Workshop on the Role of Media in Environmental Communications ,

following the organization of the Network's General Assembly. At this time the By-laws of the Network were developed, the workplace of the Regional secretariat was agreed upon and the national teams developed draft work plans. The organizational structure of the network was defined and national coordinators were elected. The Network expanded its membership from the original 7 countries to include 11 METAP countries;

* MED - ECOMEDIA participated in round table discussions, training events and international conferences.

* MED-ECOMEDIA participated in the TRIPARTITE REVIEW 10-15 January 1999 where METAP thought of as a review mechanism for the Regional Capacity Building Program RCBP objectives, progress towards them, and the need for any action to ensure program achievements.

* MED-ECOMEDIA participated in the meeting of Partners and Collaborators for the MEDBRANCH Program where the Network was able to learn about this program and outlines ways in which the media could support the process;

* MED-ECOMEDIA participated in the MEDBRANCH Regional Workshop on Participatory Processes and Planning in July 1997, where the network presented its experience in organizing and covering public hearings and consultations,

* MED-ECOMEDIA was represented at the METAP National Focal Points Meeting in Bled in November 1997 where the Network presented its experience in establishing the organizational structure and operation of the Network;

* A MED-ECOMEDIA member participated in the MEDPOLICIES Regional Consultations held in Bled in November 1997;

* In April 1998, MED-ECOMEDIA member from Tunisia participated in the Sub-Regional NGO Consultation for the Magreb in Tunis and presented the Network and the role of media in supporting activities of NGO's,

* METAP Countries include : Albania, Algeria, Bosnia, Croatia, Cyprus, Egypt, Jordan, Lebanon, Morocco, Palestine, Slovenia, Syria, Tunisia, and Turkey

* The Network was represented in the 6th World Congress of Environmental Journalists in Colombo in October 1998 where the Network registered itself with the AFEJ. Training and Skills Enhancement of Network Members

* 3 Network members participated in June 1997 in a Regional Training for Environmental Media organized by the Federation of Arab Journalists with Al-Ahram and CEDARE in Cairo;

* 2 Network members were selected to participate in September 1998 in a course organized by the World Bank's Economic Development Institute in Ankara, to learn about environmental economics and planning ;

* 2 Network members participated in an Environmental Media Training organized by the International Federation of Environmental Journalists in Colombo in October 1998.

* 1 Network member participated in the MAC-Bride Round Table on "Culture and Communication" in November 1998 in Amman.

* 1 Network member presented a paper titled "Partnership between NGO's and Media" in the Scientific Day Organized by the Moroccan Society for Environment and Development in Rabat in July 1999.

* 2 Network members participated in the "Sustainable Tourism in the Mediterranean and Environmental conservation: potentials, threats and opportunities" in June 1999 in Rome.

* The Network has produced different publications as follows :

* Three posters titled : Contribute to rescue mission towards sustainable development; Accidents' Prevention starts from the information and Pollution Prevention.

* Network membership card

* Network stamps for the 14 METAP countries.

* Fact sheet about the network.

* Calendar about the Network for the year 1998.

* Network By-Laws.

National Action Plans

* The Jordanian group organized a series of public hearings on key themes, training workshops for media, and field visits. Increased media coverage of events such as the National roundtable in Zarka Basin where the problems of the hot spot were given extensive press, TV and radio coverage.

* The Palestinian group reported that it had organized public awareness activities about the environment with

community groups, such as youth and students, it was also promoting effective media coverage of issues as well as engaging in the production of multimedia activities.

* The Albanian group, with support of local NGO's, organized a series of Round-tables with Parliamentarians and the media in order to discuss key environmental issues and concerns facing the country and government efforts in this regard. MED-ECOMEDIA members are also engaged in development of a video library with support from other donors.

* The Tunisian group has extensively written about environmental issues in the press and has held interviews with government officials and institutions.

* The Moroccan group has activated a special committee to consider environmental reporting within the Federation of Moroccan journalists and has covered environmental issues in the press and radio.

* The Turkish group has promoted the Network through different writings and interviews. Al- Hurriyet Daily Newspaper and Green Talking as well as the Turkish Radio Television were among the media promoted the Network.

Results

* Functioning network bringing media and communicators from radio, TV and press in 11 countries.

* Mechanisms to increase public awareness and improve access to environmental information.

* A multi-directional flow of information reflecting concerns of various actors, government and the public.

* Institutional support mechanisms established within press associations and NGO's.

* Training of Network members in Political Economy and Environmental Management.

* Institutionalized and established Network linked with many other networks and organizations and implementing activities in partnership.

Future Activities

* 1 Network member will participate in the 11th Asia Pacific Congress of Environmental Journalists. Comilla - Bangladesh September 13-17, 1999.

* APFEJ West Asia meeting and a Training workshop for the National Coordinators will take place in Tunisia in February 2000.

* 3 National Action Plans are under implementation where funds have been allocated for the year 1999.

* A BI-monthly Newspaper will be circulated as of October 1999.

* Two books will be printed, one documenting the life of the Network initiation and activities and the second the planned meeting in February 2000 in Tunisia.

* Humble budgets were allocated for initiatives by countries to conduct activities and to build the human resources capacity through involving the network members in meetings and workshops.

* Developing and printing a Journalist's Training Guide Book that includes practical tips for environmental reporting and a resource information on major and priority international and regional environmental issues.

Statement from Kenya

Robert M. Kihara

Chairperson - Media Development Association (MDA)

Introduction: Kenya - The Country

Location: Kenya is located in Eastern Africa, the Indian Ocean borders it on its eastern coastline, Somalia borders it to the northeast, Ethiopia to the north, a bit of Sudan on the northwest, Uganda to the west and Tanzania to the south.

Kenya's total land area is 582,650 sq km of which land covers about 569,250 sq km and water the other 13,400 sq km. Kenya has a coastline of 536 km and has maritime claims of 200m depth and an exclusive economic zone of 200 nm and 12 nm of territorial waters.

Climate: Varies from tropical along the coast to arid in some interior parts. The terrain is low plains rising to the central highlands which are bisected by the Great Rift Valley and a fertile plateau to the west.

The lowest point is the sea-level of the Indian Ocean and the highest point is Mount Kenya which at 5,199 m is Africa's second highest mountain after Mt Kilimanjaro which is in Tanzania, along its border with Kenya.

Natural resources: Includes small amounts of gold (not of significant commercial value) and limestone, soda ash, salt barytes, rubies, fluor spar, garnets and wildlife.

Land use: Arable land takes up 7% ; permanent crops 1%; permanent pastures 37%, forests and woodland: 30%). Other use takes up 25% - urban settlements/water etc.

Irrigated land: 660 sq km (1993 est.)

Natural hazards: recurring drought in northern and eastern regions

Environment. Current issues of environmental and media concern are water pollution from urban and industrial wastes; degradation of water quality from increased use of pesticides and fertilizers; deforestation; soil erosion; desertification and poaching.

Kenya is party to the following international agreements that relate to the Environment: Biodiversity, Climate Change, Desertification, Endangered Species, Law of the Sea, Marine Dumping, Marine Life Conservation, Nuclear

Test Ban, Ozone Layer Protection, Ship Pollution, Wetlands. It has signed and ratified the above agreements.

The Kenyan Highlands comprise of one of the most successful agricultural production regions in Africa; there are glaciers on Mt. Kenya and the Nyandarua Mountains (known as the Aberdares) which support abundant and varied wildlife of scientific and economic value in addition to being the main source of rivers that supply a large proportion of the population in Central, Eastern, Nairobi and parts of Rift Valley with drinking water. According to estimates of July 1998 the population was about 28 million. The world's second largest fresh water mass, Lake Victoria straddles Kenya's border with Tanzania and Uganda and is a major source of fish exported by Kenya.

Media:

Newspapers: Main daily papers in order of sales: Daily Nation, East African Standard, The People and Kenya Times. All have Sunday Editions

Radio: Government-controlled Kenya Broadcasting Corporation has widest reach. Newly licensed radio stations in private hands with a capacity to influence trends include Capital FM and Citizen Radio.

Television: Kenya Broadcasting Corporation has widest reach, but influence negated by limited number of households with access to TV. Kenya Television Network (KTN) covers capital city Nairobi and environs and has a respectable measure of credibility. KTN is owned by the same people who own the East African Standard. Stellavision TV is a private station that regurgitates foreign content for most of the day. Other private TV stations are similar to STV and have negligible impact on Environmental Reporting in the country.

Economy: Since 1993, the government of Kenya has implemented a program of economic liberalization and reform. Steps have included the removal of import licensing and price controls, removal of foreign exchange controls, fiscal and monetary restraint, and reduction of the public sector through privatising publicly owned companies and downsizing the civil service. Kenya's real

GDP grew at 5% in 1995 and 4% in 1996, and inflation remained under control. Growth slowed in 1997 and for the last two years this has stalled as the World Bank and IMF continue to withhold aid amid growing concerns at high level corruption.

Political violence prior to the 1997 general and presidential elections damaged the tourist industry, and the IMF allowed Kenya's Enhanced Structural Adjustment Program to lapse due to the government's failure to enact reform conditions and to adequately address public sector corruption. Moreover, El Nino rains destroyed crops and damaged an already crumbling infrastructure in 1997 and on into 1998. Long-term barriers to development include electricity shortages, the government's continued and inefficient dominance of key sectors, endemic corruption, and the country's high population growth rate.

Potential for disputes: Currently, none. However, the administrative boundary with Sudan does not coincide with international boundary though no public dispute has been recorded between the two states.

Illicit drugs: Widespread harvesting of small, wild plots of marijuana and increasingly so in Mount Kenya forest and qat (chat), an amphetamine stimulant akin to the coca leaf of South America are a problem. Kenya is a transit country for South Asian heroin destined for Europe and, sometimes, North America; Indian methaqualone also transits on way to South Africa.

About the Media Development Association (MDA), Kenya

The Media Development Association is an organization dedicated to promoting development of high quality journalism in Kenya and the East Africa region through training of journalists, discussion forums and networking to enhance the capacity of media practitioners to be in the forefront in propagating issues that affect them and their society as a group. The members' activities through their association are meant to positively influence the conduct and thinking of their colleagues and the wider society they serve.

One of the Media Development Association (MDA), Kenya's explicitly stated aim is to 'promote specialized areas of journalism such as Environmental and Development writing'. It also aims to enhance environmental awareness and conservation in Kenya and East Africa through Environmental Journalism initiatives.

Since its formation in 1994, the organization has trained more than 150 newspaper correspondents in various journalism skills, held environmental training sessions in workshops and collaborated with UNEP which is based

in Kenya through the provision of various information materials and resources to journalists. In addition the MDA produces a journal, the 'Media Focus' which has discussed Environmental Journalism and related issues including in the most recent issue of June 1999. Among the speakers in our discussion forums have been the Chief Information Officer, UNEP, Mr Tore Brevik and the former Executive Director of UNEP, Ms Elisabeth Dowdeswell.

It is therefore gratifying for the organization to have been invited to this forum and the gratitude goes to the organizers for giving us a chance to share ideas and experiences. These should hopefully inspire all of us to strive for the highest of environmental ideals for the benefit inhabitants of planet earth, whom I shall refer to as Citizen Earth.

According to my brief from the honorable organizers, my presentation will dwell on the status of Environmental Journalism in Kenya and what the media is or not doing for the Citizen during their watch. I refer to it as watch since the media has a global environmental watchdog role to safeguard the environment.

Environmental Journalism in Kenya; Time to Recycle the Story?

One of the major hallmarks of the environmental clean-up effort worldwide is that Environmental Recycling has become a major employer and ally. It is a lesson that should not be lost on the environmental journalist. In the age of the computer, we have come to associate this technological tool with the renewed capacity it has over the items it replaced - paper, pen, typewriter, desk and trash bin. Many newsrooms in many developed countries however, still spew out lots of paper. For the journalist whose work does not see the light of day, the trash bin is usually the destination. Should the journalist dig further and seek to have the story see the light of day, he has to polish the language, refine the facts and be more objective. He has to make his story newsworthy. This is tantamount to a recycling process. Otherwise, the journalist can at least take joy that his paper article will be best utilized by a recycled paper manufacturer.

In most computers, however, there is a trash bin symbol and in keeping with modern trends it is depicted by rectangular arrows showing the rejuvenation process of conservation. Here comes the comparison - just like the editor who can deep into the trash bin in the newsroom, so can you at least for sometime retrieve information from the icon on the computer to give it a new lease of life. This is what I believe Kenyan Environmental Journalism should do - look at itself afresh and give itself a jolt of life. A rejuvenation, a recycling of sorts. The Kenyan

media just like the environmental movement after Rio, seems to have let the agenda-making shift from it and should try to grab the initiative again to aspire for greater, focused goals and achievements. After all, even the unwavering Greenpeace, which never seems to go out of steam, also does some occasional restructuring.

The desire here is not to discount the successes that the Kenyan media has shared in. No, that would be too harsh, though quite tempting. I had initially thought of equating the state of Environmental Journalism in my country to the garbage heaps that litter its capital city, Nairobi - the less the mounds, the more effective the media! However, I decided that would be diversionary. There are remarkable, effective efforts by the few journalists who are doing a lot to keep the environmental story alive. These have given a good measure of coverage of environmental issues in both print and electronic media in Kenya, though the downside is perhaps I expect them to be more of overt activists. Before blaming the journalist for the garbage mound, I told myself, point at the government that collects taxes for this purpose and fails to deliver!

Rejuvenation is no mean task confronting us on our watch of planet earth. Like in most parts of the world, the ugly face of social neglect and environmental degradation in Kenya seems to rear its head when the garbage heap or the extremes of environmental degradation build in our neighborhood. Then typically, the media raises the call to arms. The hue and cry is heard when the rot stinks to high heaven or if it is as big as Smokey Mountain in the Philippines, but rarely so when the first polythene bag of garbage is dropped. The media should recycle itself into a prevention movement, not a cure movement.

The Success?

To get a better grasp of the Kenyan Environmental Journalist, I will delve into the story of Karura Forest, a habitat of indigenous trees on the outskirts of Nairobi. It is the story of what the media can do for environmental awareness. One evening, late last year, as Nairobi residents were glued to their TVs at primetime news, Linus Kikai, a Kenyan TV journalist from a private station, the Kenya Television Network, appeared on screen to inform the citizenry that prime forest land was being destroyed right under their noses.

As the cameras rolled, we could see workers with saws and construction equipment in the background purring, clearing and destroying highly valued indigenous forest land for a housing project. The cameras rolled on informing us that Karura Forest was being cleared by the behemoth of the kind referred to in Kenya as a private developer, the kind that should be aptly referred to as environmental destroyer, the kind of eco-criminal.

Normally the land that such eco-criminals chop up and feast on is dubiously acquired in a process of little public scrutiny and transparency. This breed of Kenyan eco-criminal targets precious forest land, public parks and children's grounds and at the highpoint of greed, public toilets. In other words, the word public is an anathema to this breed. Wherever he or she sees public land, he/she wants to transform it into private. This is the kind of breed that Linus Kikai was exposing that evening as he sought to wake up the public from its slumber as its property was being 'privatized'

The government had some years back when journalists were in their slumber degazetted the land and given it to wheelers and dealers in the political system. After bidding their time, some of the beneficiaries sold the land to third parties, possibly with the knowledge that the forest was a hot commodity, to be sold off to unsuspecting prospectors. As they set to build houses on prime property (the garbage heap grows into mountain...) the journalist saw what had come to light and blew the whistle. This activity was mockingly taking place just behind the headquarters of UNEP. In the follow-up to this story, environmental activists and human rights groups took up this humble initiative which to this day continues to cause ripples. Soon after, under the glare of TV cameras, protesters invaded the construction site, destroyed and set ablaze Caterpillar tractors and structures housing the construction gang. The nature of the protestors' action became subject to other debate as to whether they were justified in using violence against what they deemed to be a bigger injustice.

Since then, the protest movement headed by Kenya's top environmental activist, Wangari Maathai, has had stand-offs with the government as they stage numerous attempts to storm Karura Forest to plant trees while the government says it has a duty to safeguard private property. Quite some irony since the forest was initially public property, which was irregularly allocated to politically connected individuals. When early this year thousands of university students marched into the site and briefly forced their way in aboard a tractor, the media too was there and the skirmishes which followed showed the brutality of anti-environmental forces. Students were bludgeoned, and those that rushed into the UNEP compound to seek haven were followed there by police in blatant contravention of international law who proceeded to assault them within the UN premises. The images of a female student writhing and bloodied on the ground in the UNEP compound after beatings by the police showed just how ruthless destroyers of the environment could be. This evoked widespread condemnation including from the UNEP Executive Director.

Other attempts to march to the forest have been blocked by police, though the violence against the protestors has

not occurred to the previous scale. While the media brought this environmental story to public attention, as in many instances, the story has since become a 'political story'. The image of Wangari Maathai whose beating at one of the protest marches evoked condemnation by none other than the UN Secretary-General, is seen as that of the moving force representing opposition to a political system that is abdicating its role of being the custodian of the Citizen's environmental heritage.

While due credit goes to the journalist who broke the story. The fact is that in Kenya the environmental story rarely seems to sell and rides on the back of personalities pitted against or for the environment.

The fact that the media still raises awareness of issues at stake clouds the fact that no media can claim to be purposely engaging in environmental activism as part of its role in society. This does not ignore the educative regular column/pullout or radio. No. The fact is that more punch is needed in environmental reporting in the influential private sector media outside governmental control.

There is need to raise the awareness of editors and writers on the need to seek out the environmental issue in a story and give it punch and raise attention of those who can make a difference - activist and the government when it is in position to do so. Current environmental writing efforts/columns, pullouts and documentary efforts seem to be borne more on the initiative of the individual journalist than those of the corporate entity which should strive to have an environmental beat, just like the crime or political beat

The efforts of the journalist who broke the story of the desecration of the forest have had its career rewards too, besides stalling the construction. He moved on to win the 1998 CNN African Environmental Journalist of The Year Award for breaking the story last year and now works for the South African Broadcasting Corporation in Nairobi. Though his interest and judgement were rewarded, chances are that should there be nobody who has that keen eye to replace him at his station and do an environmental story, then the environmental story may as well die with the writer.

The story had a ripple effect in raising awareness of environmental conservation. Thereafter, various communities and political activists elsewhere in Kenya continued to be reported as opposing loggers and other business interests who were destroying forests and water catchments. Wangari Maathai too has moved her focus to Kabirui Forest near Mount Kenya where attention is occasionally focussed on her opposition to clearing of the forest for commercial use. In western Kenya, local

leaders sought to prevent a plywood-manufacturing firm, Rai Ply, from logging of Mount Elgon Forest. The link between the two issues can be subject of research, but as people seek freedom, they too get courage when they hear of the heroic efforts by others. It could well be that having seen and heard through the media about the efforts to rescue Karura, they too could have taken a leaf. The battlelines for Karura forest have spread to other areas.

The construction work at Karura seems to have stalled, though the media have not been allowed into the sector of the forest where it was going on. Here is where the journalist who should be focussing on the environment seems to have run out of steam and lost the initiative again to politicians. Though, a journalist from one of the papers, the East African Standard, earlier this year sneaked into the forest and found out that there were hundreds of guards who had been hired by those allocated the land to prevent demonstrators from infiltrating again, the initial tempo seems to have waned.

When the story broke last year, the Daily Nation, the largest circulation paper in the country hired a plane to fly over this site and take pictures to show the drainage works and the level of destruction from aerial view. The other influential paper, the People gave its bit in support in exposing the beneficiaries. The great failure though was the Kenya Broadcasting Corporation television and radio station for whom the story never seemed to exist unless when airing condemnations of those who destroyed the developers' construction equipment.

It is a station that loses credibility on key national issues despite running educative programs on environmental awareness. On issues such as the Karura Forest issue, it scores a last in credibility since it is seen as a government mouthpiece, ignoring the plunderers of public land since they are of course beneficiaries of the leadership that controls the station. A station that serves as a propaganda tool, spewing out slanted news.

To earn their kudos, when the news was still hot, Kenyan papers even did their investigations and discovered that files showing the beneficiaries had disappeared from the Registrar of Companies and could not be traced. Later when they were found, they reflected the fear of the public that these were just front companies with names akin to 'Ballistic Missile Enterprises' and which seemed to have been registered by one lawyer for the many plots on the about 100 acres. As the saying goes, the plot thickened and the lawyer who had done the transaction lost his partnership with the law firm after he was exposed, the environmental story had started to take its toll. His partner saw exposure as a threat to his credibility as a lawyer. A minister who had been challenged by MPs had earlier declined to say who the

beneficiaries were and received quite a lashing from media commentaries. He was well aware that the allottees were people linked to the ruling party to which he belongs. In the heat of the moment, the media kept the story going, but its staying power has come into question. The print media seems to be a faltering ally. We are yet to see new aerial photos to show us whether the construction has actually stopped. When clergymen and politicians do not seem to be going to this forest or issuing statements opposing its allocation, the media may well be asleep.

The public pressure may well have put off the so-called developers and the construction firms whose equipment was destroyed from the site. The Architectural Association of Kenya has taken sides with threats to deregister architects or quantity surveyors involved in projects that involve grabbing of public land. For the media, the challenge as my presentation is titled, is to rejuvenate and recycle this story, the environmental story, so that the developers do not run the engines of construction equipment again.

While the awareness created on the ground is fine. The media in Kenya should see the window of opportunity in this awareness and hold onto the sparkle. The media creates newsmakers, just like it does politicians and human rights activists. The challenge now is for the media to make and give credence to environmental activists in Kenya. The location or village level man or woman who is rearing tree seedlings or complaining about pollution of a stream by a coffee factory needs to given space in the news columns so that he can become focus of a renewed environmental movement. The challenge is to bring this environmental story out of the closet and make it live so that this ripple effect at national level leads to real awareness on the ground.

In Kenya, the print media remains the most objective form of news dissemination despite overt government controls to subjugate the sector through judicial/quasi-judicial processes. Though radio has the widest reach in league with the limited reach of television, it heavily slants news in favor of the leadership and government which has exhibited glaring helplessness when it comes to dealing with environmental issues. Despite a smattering of laws that should be used by government to protect, rather than abuse the environment, the reverse is normally the case.

The boldness and renewed support given to the Karura Forest issue can be traced too to the changes in the political system which has seen the print media emboldened and willing to stake in with those that challenge environmental degradation.

With the 1990s, came renewed hope and vigor that the freedom that spewed from the end of the Cold War would

lead to better appreciation of freedoms and values. In Kenya, it was marked by renewed confidence to confront the government and political leadership on values that were anti-democratic.

In this initial burst of enthusiasm, in 1990, Kenya then, under one-party rule, saw the ruling party attempt to grab part of a public park to build a 60 story monolith in Uhuru Park (Freedom Park) without due consideration of the environmental hazards and deprivation such a move would lead to Nairobi residents. The media in Kenya - the two main dailies then - The Daily Nation and The Standard - gave voice to renowned environmentalist Wangari Maathai, again, as she took on the mighty and won. The strange phenomenon that history should note then is that the organization that sought to grab a part of a public park, was linked to the other national daily - The Kenya Times owned by the ruling party. What irony, the paper owned by the ruling party KANU was to showcase itself in a public park with a strange bedfellow - Robert Maxwell who siphoned off the Daily Mirror Pension Funds had spread his tentacles to Kenya with a proposition to buy into the Kenya Times newspaper and have a wonderful media monolith called the Kenya Times Complex on a public park. The other mainstream media took to Wangari Maathai's battle and in the end won. One wonders whether Kenya would have been left with a shell of concrete at Maxwell's death some time later when his empire crumpled.

This landmark battle could have been the watershed that has given courage to environmental activists. There could be queries as to whether the courage of the newspapers could have been derived by their desire to wade off a competitor. Were the The Standard owned by Lonrho and the Nation owned by the Aga Khan fighting a dual battle? I guess not, for the people of Kenya, what mattered is that these two papers gave forum to the struggle over the denigration of a public park. Letters to the editor by the public were published in their entirety and with increasing frequency to support the effort to quell the construction. This awareness led to the donor community using their purse strings to the halt of the project and eventually it worked.

Another feather in the cap of journalists a few years back was a group of journalists who actively launched a public awareness campaign on the choking of Lake Victoria by the water hyacinth. Following this campaign, attention was drawn to this growing menace and it drew in the World Bank and attention of UNEP to this problem. However, even now, controversy brews below the hyacinth and the media has been the forum where debate rages about the eradication of the hyacinth with tendering procedures being questioned and the World Bank and UNEP under fire from politicians locally about this process.

Lake Victoria too has not been spared the wrath of the media glare. Some 56 percent of Kenya's fish exports go to the EU and a ban was put in place this year after fishermen were accused of using pesticides to kill fish which they later sold. The issue as usual turned political with the area MPs saying the government ban which reinforced the EU position was meant to impoverish the local communities, any wonder then that environment continues to ride the wave of politicians, any wonder then that the life of the story maybe tied to the politicians momentary whims and misguided loyalties. The Kenyan media has to take the Environment story outside the politicians realm.

However, the striking face of poverty continuously provides a major handicap to awareness. To quote the UNEP Chief Information Officer, Tore Brevi, 'Poor people lack choice. To be poor is not to be able to choose.'

'The woman who cuts the lone tree may be at the end of a long chain of unenvironmentally sound behavior.' Such a woman is not driven by greed. The greatest threat is simply human greed'. That is why the greedy predators should be confronted to deter their acts that lead to the vicious cycle of deprivation.

Training

During a training session for environmental journalists organized by the MDA last year, one of the resource persons, Margaret Karembu, a lecturer at Kenyatta University in Nairobi challenged Kenyan journalists to be the eyes and ears of the people, to educate them on the pros and cons of industrialization which is mooted as a solution to development. She said the media had failed to reach grassroots communities and journalists needed to have a good grasp of environmental issues.

The lecturer said there was need for a problem-solving approach to environmental issues in Kenyan journalism, giving the facts as they are and providing possible solutions. 'To empower communities, journalists need to bring out messages that can help the community internalize issues.'

A news editor with the Daily Nation, Caleb Atemi has at various forums of the MDA challenged journalists to see the environmental story as the story about themselves. 'The Kenyan journalist should package his story interestingly, dramatically and in a punchy way so that the public can see the story as a human rights issue, an inalienable part of their lives. Journalists, he said, should not appear to insult people's cultures in the course of writing the environment, for some of the greatest assets to the environmental movement are traditions and culture carried over time.

The challenge too for the Kenyan Environmental Journalist is to network, to find or lobby for organizations locally or abroad which can use their stories even if their employers fail them. Even to help groups who have justifiable causes. The issue of some residents of Buru Buru Estate in Nairobi who came together and with the support of media coverage led to a nightclub owner being ordered to close down his noisy premises was seen as a plus in what the media can help citizens action groups achieve.

In the field of training the environment journalist still suffers a glaring deficiency. In the University of Nairobi School of Journalism, there is no specialized course on Environmental Writing. Few are the newspapers, which have striven to develop environmental journalists with determination in the past few years. The desire to create environmental writers seems to have petered of with the Rio Conference. To fill the gaps and flows in this system, training of editors/sub-editors and reporters on the significance of the environmental story is an aspect that needs to be reinforced to strengthen the pool of journalists who would wish to specialize and take up Environmental Reporting in Kenya.

In recognition of the strong role the media plays in keeping basic issues of the day in focus, the MDA in March 1996 became one of the first local society/non-governmental organizations to target the rural/out of capital city-based Press Corps for training in basic journalism skills, among them, Environmental and Developmental writing.

Whereas the MDA input was initially skeletal - seeking out the situation on the ground, it did go some way to laying the justification for continuous training in this sector and the need to raise the profile of environmental journalism in the country and the links it has to business/economic realities in the country.

Early this year, members of the MDA were among participants in video-link up discussions with other journalists and experts on environmental issues in Washington, Harare and Kampala through an initiative of the World Bank Institute and the Environmental Economics Network of Eastern and Southern Africa (EENESA). It is the intention of our organization to continue participating and organizing similar initiatives and it is the intention to use the presence here to build on this process of supporting environmental journalism in Kenya.

Next year, it is the Media Development Association (MDA's) intention to launch a public awareness campaign in Nairobi on various aspects of environmental degradation afflicting the city. Environmental Journalism in Kenya will continue to be a major point of focus of our

activities and our association has already started discussions with other organizations in an effort aimed at launching an Environmental Journalism Award in Kenya.

The Stolen Story - need to keep the environmental journalist and his movement going

Kenya is a tale of land grabbing and greed by influence peddlers in the corridors of political power, for these, eco-crimes rank low in their worries. And when the story is written, it is not an environmental story, it is a greed story, the media hits at this maddening greed of our times, but rarely sustains this link to deprivation of natural resources from the majority by the minority.

The Environmental story in Kenya continuously dies at the whims of the political and economic story. It is a sideshow, a side-bar. It is rarely linked to the peoples' environmental rights. Prime beach plots were long ago allocated to political wheelers and dealers who sold them off to monied non-indigenous Kenyans. The result: a Kenyan whose ancestry stretches back in time can be accused of trespass while trying to access prime beaches now a private property. He cannot see, wash or dip into a natural resource, nor sample the salty water in the best areas bequeathed him or her by his ancestry. In Mombasa, Kenya's main port even trying to retain the public beaches in prime locations has been one of the few battles the media rises to on the rare occasion.

Some beach plots or public parks have been allocated to churches, which unashamedly hold their deeds as if in mockery to the environmental right of the citizenry. So too has part of City Park in Nairobi been allocated and a temple put up which was featured two weeks ago as one of the biggest in Africa. This is the untold story - hidden from public view, hidden from public scrutiny, possibly because it won't sell though it squeezes its endangered head in the media pages.

Currently, Kenya has four main dailies - Daily Nation, East African Standard, People and the Kenya Times - which all have striven to give educational environmental issues a good measure of focus. In these organizations, the Daily Nation has a Weekly pullout called the Horizon which focuses on the Environment, The Standard has the occasional pullout but has regular environmental stories especially in its Sunday Edition, while the People and Kenya Times have pullouts on Environment at least once a week. These educational pieces are well put out. In 1993, a study carried out by a local media body among industrialists showed that while they credited the media for increasing public awareness on environmental issues, their consensus was that the media should include

educational information in their output in the print and electronic media. The current coverage is thus welcome.

The industries also felt that there was need for more information on cleaning up of the capital city, Nairobi, which sinks under garbage by the day. They too felt that media coverage on environmental issues could be improved through additional features / news / public information, affordable weekly publications, cooperation with developed nations on information coverage, education in schools, advertisements and use of folklore.

The Way ahead

The media has to educate its own, eradicate the ignorance of the correspondent, the sub-editor, the reporter and the editor. It is a torturous process but we cannot be complacent by saying we have pullouts and radio programs if the media is not linking the every day suffering of the citizen with his poverty and the misdeeds of eco-criminals. That is why we train, teach and invite people from environmental bodies and journalists to our forums to share ideas.

There is need to strengthen and network and share ideas among the media and stakeholders in society, citizen action groups and many others. These can do a great deal to unlock the societal conspiracy which awaits dumping of hazardous waste or another Bhopal.

The media needs to form regional (international) and intranational ties to give direction and even sometimes spur public action through its own campaigns to achieve better environmental management. From our backyard, the MDA is proud to have even facilitated the formation of another journalists association for correspondents, the Kenya Correspondents Association (KCA) to enhance their welfare and enable them to articulate the views of the people with more vigor and confidence.

As a grouping of journalists in Dhaka, we should co-operate further and even set up regional chapters/functions and networks to foster environmental reporting. Despite Kenya being home to UNEP, the grabbing of prime indigenous forestland and attempts to build a housing estate on it and the vigorous public outcry is occasionally taken to mock the presence of such an organization in the country. Definitely if not so, it serves to stir the awareness of the people to the significance of this institution by their spirited defence of the sanctity of nature.

The Media has alerted the public and the donors who give government money that it goes to oil the engines of a corrupt machine out to denigrate the environment. *The media highlighting of eco-crimes in Kenya is most effective as an alarm rather than a surgeon. The media*

needs to be the surgeon removing the contaminant anti-environment figures who for example a few years grabbed thousands of acres of the Tana Delta Wetlands Reserve for some warped shrimp project only for the outcry thereafter which led to suspension of the project.

Yes, the media should continuously spur community involvement. The Kenyan media needs to tell the citizens that they too are custodians against unplanned garbage disposal, contamination of the now clinically dead Nairobi River which straddles the capital and the need to seek alternatives to polythene and the canned drink menace. All these which threaten to drive the ignorant citizen back to the dark ages with the warped logic of modern living through the soda or beer can.

After Rio, have we run out of steam?

We need to bring the steam back after Rio. The big environmental story in Kenya is yet to be told. Poverty, politics and its diversionary tactics has confined it to the newsroom trash-bin. We need hope not despair in the recycle bin, pluck out this story and give it justice

Few are the messengers - committed, aware and determined to put it on the front pages - but still they are holding fort, hoping for new recruits and volunteers. The media houses should begin this recruiting mission and the MDA and others will supplement it, for there is a story out there still waiting to be told.

For more information please visit;

<http://www.myfreeoffice.com/mdkenya/index.html>

Statement from Malaysia

Teoh Teik Hoong

Communications Officer - World Wide Fund for Nature (WWF), Malaysia

Introduction

In recent years, the availability of freshwater has increasingly become a central issue, which in several places has led to social unrest. By the year 2025, more than 3.2 billion people or one out of three persons, are expected to live in 52 "water stress" countries. Most of these "water stress" countries will be in Asia, but the problem will not be confined within national territories as local populations cross international boundaries in search of freshwater.

Over in Malaysia, many have discovered, in the past year, the agonies and tragedies brought on by persistent water crises. It seems ironic that taps run dry when other parts of Malaysia experience abundant rainfall. Even more so when there is no tap water to be had on a rainy day. But there's the catch - the tap water we drink does not come from the rain, which falls around our house.

It comes from a very special place, far removed from towns and suburbs. A beautiful, fragile, lofty world called the highland forest. Highland forests are important water catchment areas - natural "water towers" providing water for the domestic, agricultural and industrial demands of the populated lowlands. More than 90 per cent of Malaysia's water supply originates from the rivers, streams,

reservoirs and lakes flowing out from the highland forests. Acting as natural water filters, these forests help ensure that the water is clean and free from silt and sediment.

At higher altitudes, the highland trees are able to capture and condense moisture from the clouds, thus providing another source of water. Like a sponge, the forest floor also absorbs water - as part of the natural process in the water cycle- and slowly releases the water into our rivers and streams, even during periods of low rainfall.

Highland forest decelerates the flow of rainwater down steep slopes, retaining some of it as well. This prevents torrents of muddy water from eroding the soil and causing landslides and flashfloods. These important functions of the highland forests hang in delicate balance and are easily affected by the slightest shift in environmental conditions.

Current development trends in the highlands are threatening our natural "water towers". Logging at high altitudes and land clearing on steep slopes not only adversely affect soil stability and destroy forest resources and bio-diversity - but also destroy a good, clean water supply!

Degradation, such as excessive clearing of forests, leads to the siltation of rivers and contamination of the very water we need. Water that once emerged from the highlands - pure and mountain fresh, flowing into sparkling rivers full of life - is now being threatened by pollution. "Dead" rivers result, incapable of sustaining life.

Water shortages, landslides and flashfloods are becoming common events in Malaysia. One of the main causes is that Malaysia's highland forests have become the target of unplanned and unsustainable development including such disastrous projects as inappropriate road building and excessive highland resort development. If urgent measures are not taken soon to protect our natural "water towers", good clean water may eventually have to be bought in bottles.

WWF Conservation Actions

In Asia and the Pacific, WWF's freshwater conservation efforts have focused largely on wetland conservation although quite a number of the organization's forest projects are at sites regarded as important catchment and watershed areas. Projects of such nature span over the boundaries of China, Hong Kong, Papua New Guinea, Indonesia, Malaysia, Australia, Vietnam, Thailand, India, Pakistan and also Nepal.

Partnerships with various sector of community, from government and local communities, to the man on the street is placed high on WWF's work priorities. A major component of what WWF does in the region is shared with its audiences via education and awareness activities which could include working through government to incorporate formal and informal programs, workshops, campaigns and public events.

Noting that partnerships are important to ensure any conservation initiative to be successful, WWF hopes to join hands with major "stakeholders" to encourage the concept of environmental protection for economic benefit and incorporate this into planning and decision-making. Together, partners can address problems, threats and opportunities related to montane forest and wetland conservations. Win-win solutions can be identified to give economic and social benefits.

An example of this is elaborated in the following projects, which are ongoing in Malaysia:

Forests for Water, Water for Life

WWF Malaysia has set up an action program called "Forests for Water, Water for Life" (FWWL) with the ultimate goal of changing the way Malaysians think about, use and manage water. FWWL will embark on a step-by-

step approach to heighten awareness, promote action and sustain long-term efforts in proper forest and water management. The approaches that have been designed include bringing vital information to the public, so that they themselves would know what the problems and potential solutions are. The efforts also entail an initiative to upgrade current environmental policies and to steer relevant authorities to activate related procedures, rules and regulations.

Others include building human resource expertise; building model field projects; building public demand by enhancing public awareness and attitude on overall water crisis issues and related aspects; establishing field education operations with emphasis on freshwater issues and promoting and supporting sustainable community use of freshwater resources.

Partners for Wetlands

This project was set in motion in order to support conservation initiatives in the Lower Kinabatangan, Sabah. The State Government of Sabah has already identified the area as a potential wildlife sanctuary and has begun the process of gazettelement. The sanctuary would protect a floodplain corridor for the protection of habitats and wildlife, as well as mitigating impacts of erosion and flooding. This can be assisted by forming alliances that create links between conservation and development, through sustainable-use projects that can serve as models for other areas.

The Lower Kinabatangan's reputation as a nature adventure destination brings home the point that wetlands offer enormous social and economic value to society. Responsible, community-based ecotourism is one of the ways that these benefits can be turned into job opportunities while at the same time conserving water resources and the environment.

The Media

WWF regards the media as an important partner in achieving conservation targets in Asia/Pacific. We rely on the media to help us highlight conservation issues to the masses.

The Malaysian media plays an important role in highlighting environmental issues in the country, playing a vital link between the people and policy makers in the country. In their pursuit to "get down to the truth", the media is faced with many, many obstacles - be it internally or externally. Some of these include the lack of training amongst journalists themselves, as most of the veteran writers picked up on the subject more out of interest.

WWF Malaysia and the Media

For WWF Malaysia, the relationship with the media is equally as important as the fieldwork that is conducted all over the country. We believe that conservation is never achieved if it is not communicated. That is why, the media is an important friend for WWF generally and WWF Malaysia specifically. Many of the major projects carried out in the country consistently get the support from the media (print and electronic media) and this has helped us in many ways.

Many articles have been published on WWF's work, solicited and unsolicited. Project site visits by the Press are done regularly to give an insight into the mechanics of the conservation of a particular potential protected area. Based on the fact that these trips are funded by the Press themselves (as WWF does not usually have a budget for

Press trips), the news value of the particular visit is highly acknowledged.

WWF Malaysia has also worked hard to become a "one-stop information centre" for the local and international Press, providing with accurate and updated scientific data. During the height of the forest fires and haze in the region, WWF Malaysia was overwhelmed with calls right up to the early hours of the morning, at home. In response to this, WWF Malaysia has also initiated a Rapid Response facility to manage fast response mechanisms in order to provide a fast, accurate and effective WWF response to local, regional and international news media, whenever there are important, unanticipated, urgent and / or internationally news-worthy developments related to conservation issues.

Statement from Mauritius

Soodhakur Ramlallah

Chairperson - Mauritius Union of Environmental Journalists (MUEJ)

Environmental Journalism, as in most Third World countries, is fairly a new topic in Mauritius. With a birth rate of around 2.5% and unemployment at 50% in the early 60s, the main priorities of successive governments had been to feed the population and the creation of jobs. Environmental protection ranked only as the third major concern for the government and the population after education and health. Though people were well aware of their responsibilities towards the protection of their environment, however, most of them did not play an active role in its improvement. At the same time the population did not know which authority to contact in case of particular environmental problems except in the case of excessive noise or construction without a valid permit.

In order to alleviate the poverty of the population, Mauritius created a free export-processing zone at the beginning of the 70s, which dealt mainly in the manufacture of garments. With the help of foreign advertising agencies, the island portrayed itself as a paradise for foreign investors due to its geographical location in the Indian Ocean mid way between Africa and Asia.

Another factor that played in favor of this country is that Mauritius is one of the oldest democracies in Africa where free and fair elections are held every five years. Consequently, foreign investors felt secure that their property would not be expropriated by any government in power.

Our efforts proved to be very successful, taking into consideration that Mauritius is the second largest world producer of woolen clothing in the world, though we do not rear a single sheep on the island.

The Export Processing Zone (EPZ) generated so much employment that this country was compelled to import labor from mainland China. More than 5000 Chinese women now work in our EPZ.

Another sector of the economy that has attracted foreign investors has been the tourism industry. Barely 5000 tourists visited the island in the 60s. Last year, Mauritius welcomed more than 570,000 tourists mainly from Europe and it is projected to absorb around 750,000 by year 2002. Mauritius was voted "Best Island" for tourists in the Africa and Middle East region for 1999.

The economic development has been so rapid, unemployment has been eradicated and the standard of living has increased dramatically that Mauritius is now considered a "threshold country". Environmental protection was relegated to one of the last items on the list of priorities. Even journalists had a vague idea about what environmental journalism stood for.

But the last few years have seen a change in mentality. Mauritians, especially journalists, are very much concerned that this pace of development if not planned properly will be a bane to our ecological balance.

More textile factories mean a greater need in electrical power and consequently more power stations and more gas emissions. According to a study by the meteorological department, 95% of gas emissions are emitted from the production of electrical power, coming mainly from fossil sources - mostly benzene, diesel, heavy oil, petrol and liquefied gas. These emissions represent 99.9% of the total emissions of carbon dioxide and 94% of all gas emissions. Sulfur emissions also comes massively from the production of electricity - 65%, industrial activity - 22%, and from the transport industry - 12%. More than 250,000 motor vehicles were registered here last year for a population of 1.1 million - 125,000 two wheelers and the rest cars, buses lorries and tractors etc. Up to now, lead free petrol is not available on the Mauritian market due to the fact that the engines of most vehicles are not adapted to this type of petrol. Secondly, motor vehicles are not adapted with catalytic converters.

It has been suggested that vehicles according to the registration numbers should be allowed only after a certain time in town as it is done in Singapore. Less polluting vehicles should be given a "green sticker" which will allow them certain priorities which could be defined at a later stage.

Officials and journalists studying the problem of gas emissions in this country have warned that if appropriate corrective measures are not taken now, much damage will be done to the coastal regions and to our agricultural basis. The rise in the sea level will provoke the erosion of our beaches, damage to our coastal infrastructure, the degradation of our coastal barrier and mostly the loss of wetland and low level lands on the littoral. It is estimated that the rise in the sea level according to regions would be in the margin of 15 to 95cms by year 2050. More than 1050 hectares of land on the coastline could be affected, amounting to 0.5 of the total land surface of the island. The most threatened regions would be the South West, the North and a bird sanctuary where migrating birds come as far as Siberia.

Another great danger which could affect our tourist industry would be beach erosion which would be caused

by the number of dykes on the beaches, most of which have been constructed illegally. Coastal roads would also be threatened by the rise of the sea level. It is foreseen that more than 1000 houses would be completely inundated. If we consider an average of 4.7 persons per housing unit, 6000 persons would be affected.

The climatic change will certainly play havoc with our coral reef barrier. The rise in temperature of seawater will provoke the death of corals and their bleaching. El Nino has had this effect in the Seychelles Islands not far from Mauritius. At the same time oxygen content of the water will diminish and the growth of algae would be slowed. This process will inhibit the growth of fish and diminish the chances of the survival of larvae and eggs.

A series of measures have been preconised to reduce gas emissions in the atmosphere:

- Reduce the use of benzene and diesel and encourage the use of liquefied gas
- The moderate use of motor vehicles and better control of traffic
- The intensive use of solar water heaters
- The introduction of up to date and energy saving devices in households and offices
- Increase the awareness of the public in energy saving in industry and business
- The banning of sugar cane field burning prior to harvesting
- Reduction in the use of artificial fertilizers

At the individual level, the best way to counter the green house effect would be to plant trees. Five trees planted by each Mauritian would be sufficient. These trees consume a lot of CO₂ during the process of photosynthesis and give away oxygen. These would be forests would act as reservoirs producing oxygen and traps for CO₂. Unfortunately in Mauritius since the last 50 years, due to a great demand for land for human and industrial purposes and a rapid increase in the population in the late 40s and 50s, forests have rapidly disappeared with only 1% of the original indigenous forests remaining.

Foreigners coming to Mauritius are very surprised to find that they can barely buy fresh fish on the market - a result of the unwise exploitation of our marine resources. Before fishermen could be able to catch 50 to 70kg of fish per boat, but the intense use of dynamite has so badly damaged our reefs and marine resources that they would be lucky today if they catch 5 to 7kg daily.

One of the measures preconised has been the banning of coral mining, which has been going on for the last 200 years. Coral reefs play an essential role in buffering the erosive forces of waves. The principal source of lime for the construction industry, the mining of corals became a

very lucrative business in the 80s when a construction boom started on the island.

Much concern has been voiced by environmental journalists watching the pace at which the tourism industry has expanded in Mauritius. Tourism is now one of the main sources of foreign income to this country. It occupies the 3rd place after the Export Processing Zone and the sugar industry. As I have already noted, Mauritius is expected to welcome more than 750,000 tourists by year 2002. Up to recent times, Mauritians have been immune to the influx of tourists, but recent surveys and polls have shown that there is a sense of negative attitude that is taking hold of the population.

The beauty of our lagoons and the diversity of religions and cultures have made of this country a "dream island" for tourists coming mainly from Europe. Tourists come here not only to enjoy the beaches but also to discover its culture and people.

The main cause for concern among the population has been the feeling of being invaded by a too big influx of tourists and by the big hotels, which are encroaching on public beaches. The population has the feeling that sooner or later no public beaches would be left for Mauritians. One of the measures would be to limit the number of hotels to no more than 15 to 20 on the littoral. Secondly, the hotels would be responsible for the safeguarding of their portion of beaches and protect it from erosion.

Another cause for concern has been the number of beach facilities built to attract tourists, the most recent one being the project of setting up a marine park on the South coast. It is argued that the park will protect the environment of the coastline and at the same time generate jobs in the region. Supposedly, its primary objective would be to protect the coral barrier, but would also be a site where people would be able to get acquainted with the diverse variety of marine life along the coast. Fishing would be allowed but in certain zones only. The public beach on the site would be accessible to one and all while the activities of pleasure crafts would be controlled and regulated by a series of diverse rules.

Directly and indirectly, the marine park, if managed properly would be a source of development for the region in way of employment for watchmen, cleaners and guides for visitors. The promoters argue that it will be a major ecotourist attraction which is gaining favor all round the world and will increase the number of tourists visiting the region. They further claim that the fish population increases dramatically in the surrounding waters as it has been noted elsewhere in the world but most particularly in the Philippines.

But what is worrying environmentalists is how the park going to be managed. Though many guarantees have been given to this effect, there is a fear that in the long run control will be very slack.

In a bid to attract rich tourists, especially from Japan, a series of golf courses have been built on the island. Unfortunately, the Environmental Impact Assessment (EIA) of such structures has not been fully studied. A recent project to build a golf course on the Deer Island on the east coast has brought to light the conflicting interests of the hotel industry and the fishermen of the region.

Even before the EIA Committee had pronounced itself and given the green light, a politician had already announced that the hotel will be permitted to go on with the project. So much for political interference. But what has irked mostly the local population is that very little information has leaked from the project.

Those journalists who have followed the situation closely have found out that the project consists of building an 18-hole golf course covering 7000yds where international competition could be held. The project also includes the construction of a clubhouse, a restaurant and an uncovered seating area. Since there is no source of water on the island, a pipeline has to be built to bring water from the mainland. The creation of the course on an area of 47ha will necessitate the deforestation of about 20ha of forest (which is a big area considering that there are almost no forests left in Mauritius), the displacement of about 80,000m² of rocks and sand, the planting of special grass and the building of an irrigation pond.

The deforestation of the island has been the most sensitive question since it is home to many rare indigenous species. A well known German ecologist and journalist for an ecological periodical in Munich working for Mauritian Wildlife who has studied the project has warned of the negative impact on marine life. According to him, during the season of heavy rains and during irrigation, water running into the lagoon will carry a lot of chemical fertilizers which will cause immense damage to the fish colony and to the coral barrier. As it is fishermen's catches have been diminishing from year to year and they are apprehensive that all the chemical compounds that will flow into the sea will make fishing completely impossible.

The public, on the other hand, is more concerned that as the golf course will cover almost 90% of the island, little space will be left on the beaches for their weekend outings.

One source of marine pollution, which has for a long time been neglected to be dealt with, is the amount of debris and plastic containers floating along the coastline. Plastic

are in great demand as they are durable, relatively inexpensive and lightweight. However these same properties can create problems when they are not managed properly. Plastic does not break down readily and therefore tends to remain in the marine environment for three to five years if not longer. Marine life is especially sensitive to the debris. Wildfowl and sea creatures get hurt or killed when they mistakenly eat or become entangled in them. Many cargo vessels in use today were not designed with adequate capacity to store garbage and often tourists and recreational boaters do not bring their trash ashore but just dump it into the sea.

We had at one time organized youth outings on the coastline to collect plastic bags, bottles and bits of wood from the sea, but it was of little success. We have recommended the setting up of facilities and dustbins along the coastline for the use of campers and weekend outing goers.

It is usually said that the youth is the future of a country and what better occasion than Environment Day to bring to them the need to protect our environment. Organized by environmental journalists, a rally attended by college goers has been held for many years. Especially much stress has been laid on the need to keep the island cleaner. Years back, all soft drinks were contained in glass bottles which could be returned to the shops after use. Having joined "the civilized world" most of our beverages are packed in plastic bottles which has turned the island into a big garbage site. "Go for Green" has been the battle cry of the year's rally. Teachers have been advised to set up teaching modules where youngsters would be initiated to the basics of environmental protection.

As mentioned before, Mauritius decided in the late 60s to set up an Export Processing Zone (EPZ) producing mainly textile products. The zone, which was at the beginning mostly concentrated on the outskirts of the capital, has been expanded and special zones are now to be found all around the island. These factories have in their stride brought with them a series of environmental problems mainly refuse generated by them.

An alarming situation has been created due to a lack of dumping grounds. These who were created were located

far from villages and towns. With the increase of population and a great demand for land for housing purposes, many of them are now almost near villages. The practice in this country has always been the burning of refuse, which has become an important polluting and health issue. For some years environmental journalists have decried this practice, but unfortunately it is still in use and the amount of smoke emitted daily is so consequential that it can be observed by sight from far away. Studies have also shown the unsanitary impact of these dumping sites. Industries have been asked to utilize their raw material more judiciously and where possible to recycle them. Unfortunately, the owners of many textile factories coming from the Far East still lack environmental awareness and access to information and expertise. Some also do not care. Their primary aim is to make money as fast as possible. The laws regulating the EPZ are such that they have no incentive to protect our environment. Investors opening a factory in the EPZ do not pay customs duty on their machinery and raw materials and are also exempt from income tax for the first five years of operation. Foreign factory owners can, under certain circumstances claim Mauritian nationality. This has led to a lot of abuse. Some owners, though warned by the competent authorities that their factory is polluting just pretend that they are taking steps to remedy the situation. By the time new checks are made, the proprietors have already closed the factory and gone abroad. Also though there are legal structures which might force firms to pollute less, the supervisory system seems to be lacking behind. Many of these firms just dump their solid and liquid waste in nearby rivers.

What have been the problems faced by environmental journalists in this country? One of the main complaints has been the lack of information available to them. Journalists have to use all types of tricks to pry information from officials. On the other hand, workers are afraid to talk if there is something going on wrong in their factory, for fear of losing their job or being victimised. It may sound funny, but one of the constraints facing journalists is to persuade the editor to publish their article. The reason is obvious. Newspapers depend largely on adverts, and too much criticism may dry out this source of revenue.

Statement from Nepal

Om Khadka

Chairperson - Nepal Forum of Environmental Journalists (NEFEJ)

Nepal, a small country with about 22 million people lies in the Himalayas. The fragile mountains saw many environmental problems such as deforestation, floods, landslides, poverty, lack of safe drinking water and vector borne diseases in 1980s. The decade had been heading towards the chaotic urban environmental problems caused by lack of proper urban planning and migration. Tourism, the country's most important foreign currency earner was also encountering a problem of garbage accumulation in the pristine Himalayas.

Alarmed by the even more acute environmental problems faced by the developed countries, Nepalese journalists formed the Nepal Forum of Environmental Journalists in 1986. The United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) played a very important role in the formation and nurturing of the organization. A meeting organized by ESCAP in New Delhi, India highlighted the need for the formation of national associations of environmental journalists. Journalists from Asian countries attended this meeting. ESCAP had done homework on the objectives, programs and the need for such an organization. As a result, organizations of environmental journalists were formed in Bangladesh, China, India, Indonesia, Maldives, Malaysia, Nepal, Pakistan, Singapore, Sri Lanka and Thailand in addition to a regional networking body - the Asian Forum of Environmental Journalists (APFEJ).

In Nepal, the then political system refused to grant NGO status to the forum of journalists. As a result it had to be registered with the Department of Industry as non-profit making private company and carried the name Nepal Forum of Environmental Communicators. It was only after a successful 1990 people's movement when a multi-party system was established, that NGO status was granted. The organization's name was then changed to the Nepal Forum of Environmental Journalists (NEFEJ).

Objectives and Structure

NEFEJ seeks to sensitize journalists, politicians, policy and decision-makers, opinion leaders and the general public to environmental and development issues. To

achieve this NEFEJ promotes the participation of mass media to play the role of informant, watchdog and leader in the environmental front.

The members of NEFEJ are Nepali journalists working in both print and electronic media and Nepali environmental experts. Full membership status is accorded to journalists who are interested in environmental issues and experts are honored with associate membership. In the case of the journalists, they must have been writing/producing video or radio programs or assigning reporters to produce programs on environment and sustainable development. NEFEJ encourages those experts who really help journalists in terms of sharing information and knowledge to apply for the membership.

At the Annual General Meeting, the membership reviews the performances of the organization, formulates policy and gives direction to the executive body. It also elects an executive committee for a year.

Relationship between journalists and experts

A special relationship has developed between experts and journalists. This has come about because journalists who often come from social science backgrounds do not know much about complex environmental issues and they need experts' help to understand these issues fully. Only then can they provide the public with correct information. Regular interactions-mostly informal-with experts provide assistance to journalists, from the identification of issues to cross-checking facts and figures. Experts also find this forum very useful in getting the right information passed on to the public.

There are many instances when professionals have approached NEFEJ to help journalists understand issues. On one occasion a journalist once made a serious mistake in an article. As a result, the Nepal Geological Society approached the NEFEJ and together they jointly organized a weeklong seminar on the basics of geology. The workshop also established a good relationship between journalists and geologist. On another occasion the wildlife officials of Nepal found factual errors in

journalistic writings. The officials felt that it was because of the lack of interaction between journalists and wildlife professionals. They invited NEFEJ to jointly organize field trips for journalists. When journalists got first-hand information on wildlife habitats and wildlife management practices their writings improved. These interventions have reduced the gaps between the wildlife professionals and journalists.

NEFEJ is a member of the APFEJ and the World Conservation Union (IUCN).

Programs

NEFEJ runs mainly three categories of programs

- A. Public Information for the general public
- B. Advocacy/Lobbying for policy-decision makers
- C. Promotion of Environmental Journalism for journalists

A. Public Information Programs:

NEFEJ has adopted a multi-media approach to keep the public aware of events, trends and policies. It uses radio, television and print media to achieve the goal of disseminating information and creating public opinion in favor of conservation

1. Radio

Nepal has rugged topography, which makes transportation difficult. About two-thirds of its people are illiterate. Thus radio has better coverage than any other media does. Since buying a radio is a one time and small investment and its signal is accessible country-wide, its effectiveness cannot be questioned. More than 90 percent of the people have access to a radio signal

Realizing the potential of this medium, NEFEJ started a 15-minute weekly slot over Radio Nepal, Nepal's national radio network. The programs covered environment-related news, environmental problems, success stories and critical reviews of current environmental policies and practices and the people's voice.

This slot was very instrumental in uprooting the misbelief that the environment was the concern of the wealthy people and not a priority of the poor people. This slot influenced the public so strongly that people began expressing their concerns over the environmental impact of development activities.

Once the general awareness of the environment was raised, NEFEJ began producing radio programs on specific subjects. It is currently running a 15-minute weekly program on community forestry. A community forest is a widely used natural resource in Nepal. Most of Nepal's

population cannot survive without forest resources. Nepal, over the past two decades, has achieved some success in handing over forest resources to the community. There has been mixed results. In some places people have been able to utilize the forests in a proper way. In some cases there has been failure. The weekly radio programs try to share both success and failure stories of one community with other communities. It also informs community forest users on how they can best utilize these resources and improve their lifestyle. Question-and-answer sessions also allow listeners to ask questions which are of concern to them; one concern for example, was why certain patches of forests had not been handed over to users. This weekly program also informs users about their rights and responsibilities.

The radio programs are also used for non-broadcast purposes. Selected radio programs have been supplied to different user groups for use as training materials.

In mounting this radio program NEFEJ has now collected information on different aspects of community forests, Nepal's most important natural resource. NEFEJ is in the process of documenting all the information it has already gathered on the subject in preparation for publishing a book on different aspects of community forestry.

Radio Sagarmatha FM 102.4: a community radio station

With the introduction of a pluralistic political system in 1990, NEFEJ pressed for a pluralistic media. It lobbied for amendments in policy and for legal provisions regarding participation of the non-government sector in the electronic media. The government then adopted a new policy and law, which allows the non-government sector to establish their own radio and TV station.

Old habits die-hard. It applies to Nepal also. It took four full years for NEFEJ and other partners to break the government monopoly on radio signals. In May 1997 NEFEJ received a license for a community radio station known as Radio Sagarmatha, the Nepali name for Mount Everest, the tallest mountain in the world. NEFEJ in collaboration with other like-minded media organizations --Himal Association, Nepal Press Institute and Worldview Nepal is running Radio Sagarmatha FM station in Kathmandu, capital city of Nepal. The station is governed by a board of directors, which is represented by Himal Association, Worldview Nepal and the Nepal Press Institute.

Radio Sagarmatha broadcasts educational, informative and entertaining programs which includes radio chats, features and opinion forums concerning vital issues which affect the everyday lives of the residents of Katmandu. "Radio Sagarmatha's program have examined Katmandu's

growing air pollution problem, urbanization and its impact on heritage sites and tourism, the threat of HIV/AIDS and the problems of garbage disposal," says Radio Sagarmatha's brochure.

No formal survey has been done so far to assess the impact the radio station. However, Radio Sagarmatha receives regular comments from its audience. One such comment was received from the Katmandu Metropolitan City (KMC) on Radio Sagarmatha's special project on air pollution monitoring. This project monitors Katmandu's air quality, makes the result public by radio and in the press at weekly and monthly intervals respectively. "We are very glad to know that Radio Sagarmatha has launched its Air Pollution Monitoring Campaign. We wish it success," said KMC in its letter to the Radio Sagarmatha.

"Radio Sagarmatha is living proof that public service broadcasting is not only possible, but a necessity for social development. The Radio Sagarmatha model can now be replicated in communities all over Nepal and promote relevant participatory communication at the local level," says Radio Sagarmatha.

2. Television

Though television's reach is limited in Nepal because of its topography, the limited availability of electricity and the purchasing capacity of the low-income majority, television has become an influential medium. Realizing the potential of this media, NEFEJ included audio-visual programs in its regular activities in 1990. After producing some video documentaries NEFEJ felt the need for establishing a full-fledge audio-visual wing with all the human and physical resources available. With partial support from the Canadian Cooperation Office, NEFEJ purchased used U-matic hi-band camera and editing equipment. It organized training on TV program production for print journalists.

When asked to increase coverage on environmental issues, Nepal Television requested NEFEJ to produce regular programs since it had both human and physical resources. NEFEJ and Nepal Television reached an agreement for the production and transmission of a video magazine. Since 1994 NEFEJ has been producing a video magazine on environment, development and social issues. The video magazine *Aankhihyal* is being aired by Nepal Television fortnightly.

The video magazine deals with both success and failure stories on environment and other social sectors, environment friendly technology and interviews with local people as well as with policy makers. This is one of the most popular programs on Nepal Television. It is acclaimed for its investigative approach to issues. NEFEJ

also produces video documentaries on different issues such as food security, environment friendly tourism and human rights.

NEFEJ distributes its video programs produced in Nepal and abroad for non-commercial, educational use. Those who can afford are charged a higher price. Those who can't afford the full price can get it at a subsidized rate. Purchasers of the video include bi-lateral and multi-lateral development agencies, private companies, community-based NGOs, university and journalism training centres. These productions are used for training and sensitization sessions.

3. Print

Wall newspapers were launched in 1990 as one of the means of reaching neo-literate masses. The wall newspaper, Nepal's indigenous medium, is printed on only one side allowing it to be pasted on the wall of public places. It is written in simple Nepali language with illustrations. Local solutions to problems, environmental problems, new technologies and profiles of distinguished community leaders are some of the issues published in the newspaper.

NEFEJ also has a feature service. Earlier the service was not regular. From 1998 the feature service-*jabik bibidhata* (bio-diversity) became regular. The feature service covers the issue of poaching and trade in wildlife parts, problems faced by protected areas and efforts made by Nepal to protect bio-diversity. The Nepali language bi-monthly feature service has been used widely by Nepali media - both national and regional.

NEFEJ also publishes books on different subjects on the environment. Some of the topics deal with the basics of the environment while some of them focus on specific issues such as water resources, problems of drinking water, human-wildlife conflict etc.

The Environmental Resources Centre at NEFEJ has collections on different aspects of the environment. Journalists, students and academics use this facility.

Advocacy / Lobbying. NEFEJ organizes interactive meetings for decision-makers both at the Centre and at the district level. These meetings are meant to help policy and decision makers to understand environmental situations and take prudent decisions on environmental issues. The programs for the policy/decision makers include seminars and field visits. From the very beginning, the NEFEJ was invited to be observers at meetings of the Environment Protection and Natural Resources Committee of the House of Representatives.

At the Centre, seminars are organized for the members of the Committee. NEFEJ also holds meetings with the Speaker of the House of Representatives, Chairperson of the Committee and other members to identify the issues. Normally, such seminars are held once a year. Sometimes it may not take place because of political situations while at other times more than one session is organized. This is especially true if the parliamentarians request extra sessions. For example, the Chairperson of the Committee requested NEFEJ to organize a meeting to discuss the implications, if any, of the Basel Convention on Nepal before it was ratified by the parliament. At the district level, meetings are identified in consultation with the government officials and representatives of the elected local bodies.

Watch groups

The role of watchdog is very important in any society. To play this role, NEFEJ first instituted Pesticides Watch in 1993. The Pesticides Watch (PW) closely monitors the pesticides disposal activities in early 1990s. The PW consisting of journalists and experts found that disposal activities didn't follow safety measures. It published the issue widely and as a result compelled the Asian Development Bank and the government to review the disposal activities. The consultant hired by the ADB to review the process found that NEFEJ's concerns were valid. The PW also lobbied for the enforcement of pesticides regulations. It also gives emphasis to the judicious use of pesticides in agriculture and public health.

There are other watch groups such as Tourism Watch, Public Health Watch, Wildlife Watch and Urban Environment Watch. The Watch groups monitor issues closely and make people alert to the issues through the mass media.

Promoting Environmental Journalism, NEFEJ feels that journalists in a country like ours need support to write on environmental issues. Journalists should understand the issues well and they need expert opinion. They also need incentives such as fellowships, awards, and the development of skills to deal with complex issues. NEFEJ has embarked on the following programs in support of environmental journalists:

1. Fellowships

Journalists need more time and more resources to investigate any issues on which they want to write. However, their parent organization may not be able to bear the cost of such reporting. To fill this gap NEFEJ provides journalists with fellowships to investigate certain issues. In selecting the issues for investigative

reporting fellowships, NEFEJ uses the same criteria used by any editor. These are how serious the issue is, how many people are/will be affected, how timely it is to do the story, can the story be completed within the given time-frame and is the budget enough to do the story?

2. Field Visits

NEFEJ organizes field visits for groups of journalists. These visits provide journalists an opportunity to study a single issue from different angles and to write/produce programs on the issue

3. Training

Journalists need special skills to deal with complex environmental issues. NEFEJ organizes short-term workshops to equip them with such skills. NEFEJ also publishes the Nepali language version of Reporting on Environment-A Handbook for Environmental Journalists published in English by AFEJ and ESCAP.

4. Best Story Award

Established in 1988, this award is given to a journalist for his/her contribution to environmental journalism. This is Nepal's only regular award for journalists.

Sources of Funding

Different foundations, government departments and other organizations support NEFEJ programs. ESCAP has been very supportive during the early stage of NEFEJ's development. The Asia Foundation has provided NEFEJ with institutional support, which includes space, rent, salaries for support staff and consumables etc. UNESCO provided the basic equipment and other costs of Radio Sagarmatha.

NEFEJ has been trying to be self-reliant. The audio visual program has demonstrated that some of the programs can be self-sustaining. The cost of the production of the video magazine is met through income generated from selling NEFEJ's video production services to different organizations. Audio-visual productions also generate income for non-profit activities.

The Best Story Award used to be sponsored by the Kathmandu Municipality. NEFEJ members during the last Annual General Meeting felt the need to create a fund for the Award. They also contributed to the establishment of the fund. The fund does not accept contributions from non-journalists. This is one example of how journalists can contribute to encourage other journalists.

Impact

Recognizing the role played by the Forum, the Government of Nepal honored it with an Environmental Award in 1995. "Forum, as it is popularly known in the fields of environment and media has become synonymous with an organization that is credible, serious, committed and democratic and has thus earned many admirers," says NEFEJ. It is now recognized as the most active environmental NGO in the country.

Below are some examples of the visible impact of NEFEJ activities.

Arun III Hydro-Power

In the early 1990s, Nepal assisted by various donors and lending agencies planned to build the country's largest ever hydropower plant in eastern Nepal. When the plan was not disclosed and discussed publicly, NEFEJ in association with other NGOs demanded that the plan be discussed in public. Later on the issue was raised by both national and international organizations. NEFEJ is given credit for raising the issue first. NEFEJ did not feel the need to pursue the issue since very many organizations took up the issue.

Disposal of Pesticides

"Who is Playing with Poison?" a member of NEFEJ Pesticides Watch asked this question in his article. The question was directed to the pesticides disposal consultants who were hired by the Asian Development Bank (ADB) and the Government of Nepal. The Government assisted by the ADB tried to dispose approximately 200 metric tonnes of obsolete pesticides lying in different parts of the country. The consultants had planned to dispose of the pesticides by spreading them on the land, burying them and burning them in the cement factory. They disposed of approximately 114 metric tonnes of pesticides.

Pesticides Watch monitors the activities of pesticides disposal experts. They found that the pesticides were disposed of haphazardly. A series of articles appeared in the Nepali media exposing their activities. Local people and international organizations like Greenpeace raised the question. Later on the ADB hired a consultant to review the media allegation. The consultant found that pesticides that were not supposed to be buried were in fact buried. He said that safety measures were not properly followed while carrying out disposal activities. He suggested that the plan for using the cement kiln for incinerating pesticides should be aborted.

Nepal tried to import DDT from Indonesia when the Indonesian government banned the use of DDT. The DDT

was supposed to be used against sand flies, which causes *kalajar*, a tropical disease.

NEFEJ also raised the issue. NEFEJ published press releases. Various media covered the issue. With the help of the Pesticides Action Network and the International Consumer Union the issue was also published in Indonesia. The Government's Pesticides Board suggested that the Ministry of Health should search for an alternative.

However, the Government insisted on importing the DDT. The Ministry of Health and the World Health Organization (WHO) pushed for the importation of the DDT. When the media couldn't yield the desired result, NEFEJ handed over the file to the public litigation team. The issue went to the Supreme Court.

The Government told the court that the deal was canceled. Though the government imported the DDT illegally the government never tried to import deadly pesticides again.

Protection of Wildlife

The Wildlife Watch Group (WWG) was formed under the NEFEJ umbrella to monitor wildlife related issues. The first program the WWG undertook was a meeting on the wildlife trade in Kathmandu. Attendees at the meeting included officials of the Department of National Parks and Wildlife Conservation, police, customs and journalists. Following the meeting the government enforced the wildlife act strictly.

Following this meeting, the WWG organized a program of field visits for journalists, monitored the poaching of wildlife and carried out several other activities. The impact of WWG is best recognized in A Report on the Monitoring of Wildlife Trade in Nepal: Case Study of the Wildlife Watch Group published by WWF Nepal Program. The report indicated, "One of the best ways to battling the trade of wildlife species is by educating the public and by raising consciousness among consumers. WWG has been very effective in this regard due to its skillful use of public relations and media."

Similarly, WWG tries to discourage transboundary wildlife trade. "WWG has been central in monitoring the cross-boundary trafficking of wildlife species and parts," says Mingma Norbu Sherpa, Country Representative of WWF Nepal Program in the preface of the same report.

Encouragement

A villager from eastern Nepal visited the NEFEJ office in Kathmandu. He asked the way to Madan Pokhara village. Madan Pokhara lies some 300km west of Kathmandu

valley NEFEJ people wondered why he wanted to go to Madan Pokhara.

The villager indicated that he had read an article on Madan Pokhara's successful community development published in the Wall newspaper. After reading the article he decided to go to the place to learn more about it. He walked three days and traveled in bus for 14 hours. He was also ready to spend another 12 hours traveling by bus on bad roads to learn from villagers in Madan Pokhara. "I will build another Madan Pokhara in the eastern part of the country in few years," he said.

An accountant may look for cost-benefit analysis in terms of investment in publishing the Wall newspaper and for returns from sales or advertisements. But for journalists this case alone may be sufficient to measure the effectiveness of their efforts.

To sum it up, NEFEJ has emerged as an exemplary NGO. Media and development experts use examples of NEFEJ to show the effectiveness of a strong organization. Dr. Arzu Deuba and Bandana Rana indicated that "the formation of NEFEJ in 1986 led to a flurry of articles and awareness-raising features on environmental issues in the print media." They further stated that "journalists were provided training, sensitization, stipends and awards for investigative reporting on environmental issues. NEFEJ even pursued programs such as interactions with legislators and experts to bring to public notice the state-of-the-art of major environmental debates...Groups such as the NEFEJ can be extremely effective in promoting social and development issues with visionary leadership and coordination with organizations seeking to create awareness about numerous issues," (Issues Pertaining to Women and Children in the Print Media: Attempting an Overview. Paper presented to the workshop organized by Nepal Press Institute and UNICEF Nepal in December 1998.)

Challenges

The road ahead is not necessarily smooth. The impact of the media has been well recognized not only by those who are working for the cause of the environment but also by interest groups. One of the great threats to the media is the use of the media by interest groups that want to achieve their vested interests. One such example is the case of Tso Rolpa glacier lake. Some years ago, a group of foreign experts came to Nepal to study the Tso Rolpa glacier lake. They informed the public that the lake was about to burst causing massive floods downstream. The media gave maximum coverage to the issue. There was terror among the villagers living downstream. Other experts who were studying the lake for more than six years indicated that the lake might burst next day or the lake

may survive for a decade. Later on it was found that the experts wanted to get their proposal for "stabilizing the lake" approved by the Governments of Nepal and donor countries. The consultants tried to create havoc through the mass media to influence both the donors and the recipients. The media was misused by the vested interests of the "experts" and the people were terrorized.

Both the media and organizations of journalists should be aware of the possibility of the repetition of such an event. Not only "experts" but also donors, environmental NGOs, business houses and governments have a tendency to misuse the media. This is the concern of journalists all over the world. This is the one reason behind the adoption of the code of ethics for environmental journalists by the 6th World Congress of the Environmental Journalists. The code of ethics warns environmental journalists not to be influenced by such alarmists and to keep distance with NGOs.

Another challenge is sources of funds. This is another problem in the NEFEJ case. When NEFEJ raised issues surrounding the Arun III Hydro-power plant that was later cancelled by the World Bank, the Planning Commission of Nepal compelled IUCN, then NEFEJ's largest funder to discontinue funding NEFEJ.

It has also been observed that the funders look for rewards. They put pressure on the NGOs they fund to play the role of lobbyist for changes in policy, regulations, decisions and practices in their favor. Such changes may not necessarily be favorable to Nepal and her people. Of course, there are some funders with no vested interests. But such funders are part of an endangered species. Since promoting environmental journalism does not earn cash, it is likely that organizations such as NEFEJ will face a shortage of resources to carry out their activities.

Program wise, NEFEJ has tried to reach every layer of the society from central level policy makers to grassroots people. With the exception of activist strategies, NEFEJ has used every mechanism - from discussion to both electronic and print media - in order to influence policy, regulations and practice.

NEFEJ In Brief

- January 15, 1986- Ad hoc committee formed.
- June 9, 1986- First National Convention of NEFEJ held. The convention adopted constitution and programs, formed an executive committee.
- June 2, 1986- A journalists field visit programme, NEFEJ's first public programme organized.
- Jan-March 1987- Commencement of twin projects- investigative reporting fellowship and media coverage survey.

- Oct-Nov 1997- Best Environmental Story Award instituted.
- January, 1988- Office of the Forum established.
- January 1988- Aditya Man Shrestha, General Secretary of NEFEJ elected as the Chairperson of the Asian Forum of Environmental Journalists (which has been re-named as Asia-Pacific Forum of Environmental Journalists.)
- November 1988- NEFEJ got registered as non-profit company with the Department of Industry
- 1989- A 15-minute weekly radio slot over Radio Nepal started.
- May 6, 1990- A familiarization programme held for minister of forests and soil conservation on issues concerning environment protection.
- June 1990- Training for environmental journalists held.
- 1990- Audio-visual component added to the Forum's activities.
- 1990- Batabaran, a Wall newspaper for neo-literate people published.
- 1990- Forum lobbied at different levels for the insertion of a state commitment on environmental protection in the Constitution of Nepal, 1990.
- August 1990- NEFEJ finally registered as an NGO.
- Aug-September 1990- A NEFEJ's member appointed as one of the members of the panel formed by the government to probe the impact of marble quarry.
- September 1990-NEFEJ's President and General Secretary included as members in the government-formed Task Force on Forest Protection.
- October 1990- NEFEJ included as a member in the government's high-level National Preparatory Committee for UNCED.
- December 1990-NEFEJ joined IUCN.
- December 1990-NEFEJ succeeded in convincing different political parties to include their commitment on environmental issues as one of the plans in their election platforms.
- May 1991- Government requested NEFEJ to prepare and execute Special Information Programme aimed at generating awareness for checking forest encroachment during political transition.
- September 1991- Consultative programme with the member of the Natural Resources and Environment Protection Committee of the House of Representative launched.
- Nov-Dec 1991- Forum launched consultative meeting with local level policy makers on environmental issues.
- March 1992- NEFEJ prepared an Environmental Communication Plan to be included in the government five-year plan.
- June 1992- A special briefing programme held for the Prime Minister and Minister of Forests and Environment and other members of the delegation in advance of their trip to Rio to take part in UNCED.

- June 1992- NEFEJ sent its representative to Rio to cover Earth summit. The dispatches from Rio were made available to local media.
- July 1992- NEFEJ teamed up with other nine NGOs to chalk out and later handed over, suggestions to the Prime Minister regarding legislation and agencies best suited for environmental protection in the country.
- December 1992-NEFEJ was selected as the host NGO to administer the Small Grant Programme of the Global environment Facility.
- 1993- A full-fledged audio-visual unit established.
- 1993 NEFEJ with other NGOs organized first public meeting on Arun III demanding public debate on the country's ever largest hydropower project.
- 1993- NEFEJ started preparation for the establishment of FM Radio station, breaking government monopoly on radio signal.
- 1993- Pesticides Watch Group (PW) formed officially. PW published a book "Plying with Poison which deals with the malpractice of pesticides disposal.
- 1993- Wildlife Watch Group formed.
- 1994- Public Health Watch Group formed.
- 1994- Aankhijhyal, NEFEJ Video magazine on environment and development broadcast by Nepal Television launched.
- 1994- Efforts to establish Radio Station continued.
- 1994- Pesticides Watch continued lobbying for the enforcement of pesticides act.
- 1994- Environmental song contest organized.
- 1995- Field visit was organized for Members of Parliament to appraise them of problems faced by Royal Chitwan National Park, the world heritage site.
- 1995- Weekly Radio programme on community forestry launched.
- 1995- NEFEJ was honoured with the prestigious "Environment Award" by the government for "its significant contribution in raising public awareness in the field of environment and sustainable development."
- 1996- Efforts to establish FM radio station continued. Radio Sagarmatha went on air without license after its continued efforts to get it couldn't yield success.
- 1997- Urban Environment Watch and Tourism Watch formed.
- 1997- NEFEJ members went to the street to stop "giftung rhinos" without clear-cut policy. The Constitution of NEFEJ doesn't allow it to play the role of activists.
- 1997- Radio Sagarmatha, a FM station received license. Radio Sagarmatha became first and only private radio station in Nepal.

*For more information please visit;
<http://www.nefej.org.np/>*

Statement from Pacific Islands

Nina Ratulele

General Secretary - PINA Pacific Forum of Environmental Journalists, Fiji

Take 21 countries and territories. Spread them over the 30 million square kilometres of the world's greatest ocean, the Pacific. Put in the large mountainous, volcanic islands of the west. Add the small, often atoll nations to the north and east. The environment stories of this vast area are as diverse as the region.

Problems with loggers. Problems with loss of the rainforests. Problems with water. Problems with land degradation. Problems with waste. Problems with overcrowding. Problems with pollution causing problems for the reefs and coastal habitats. The Pacific Islands environmental journalist has all these and much more to cover.

But across the Pacific Islands there is one story that is bigger than all the others. For it is the story of how some Pacific Islands countries could disappear beneath the waves. It is the story of climate change and rising sea levels. It is the story of today in the Pacific Islands.

It is a story the PINA Pacific Forum of Environmental Journalists takes very seriously. Our recent training efforts have concentrated on this. Through our Forum's efforts a special regional workshop on the impacts of climate change was recently held for journalists from throughout the region, thanks also to support from our partners the Commonwealth Press Union

Through the efforts of the PINA Pacific Forum of Environmental Journalists the industrialized nations of the world are also hearing the story of what global warming and climate change means to Pacific Islanders. For we Pacific Islanders are convinced one of the main causes of climate change is greenhouse gas emissions from the industrialized world.

The most dramatic impact of climate change and rising sea levels would be the drowning of large parts of such low-lying atoll nations as Kiribati and Tuvalu.

But the impacts are being felt already. Some examples:

- Some small uninhabited islets have already disappeared in the atoll countries of Kiribati and Tuvalu.

- In low-lying countries with only limited land, the rising sea levels are gradually making the soil too salty to grow crops.

As well, weather patterns have changed, with unusually severe droughts plus cyclones outside of the normal storm season.

But let us hear this story through the words of one of our members, Robert Matau, a senior journalist who covers environmental issues for Fiji's Daily Post newspaper. He represented the PINA Pacific Forum of Environmental Journalists in Tokyo at a Symposium on Global Warming, hosted by the Sasakawa Pacific Island Nations Fund.

He told this gathering: "Global warming is something all Pacific Islanders worry about. Let me tell you a story about how the rising sea levels caused by global warming have affected me.

"I had a great grandfather who I actually never met. But he was well known by his fellow kinsmen as a champion farmer and a respected figure on the island of Kadavu which lies south of Fiji's main island, Viti Levu.

"Over the years his grandchildren became well established in the village, which lies on the coast beside the sea. They soon became the first people to receive an education, including my father.

"Thanks to this I grew up in the city with a good education and then a good job. I never forgot my great grandfather whose efforts had made this possible. But when I finally returned to the village to pay my respects to a great man my hopes of cleaning his grave were destroyed by the rising sea level. His grave was washed away in the sea even though when he was buried the sea was far away.

"I stand before you today not only as an environmental journalist who has covered the issue of global warming and the rising sea levels, but as a Pacific Islander who talks from experience of the consequence of tampering with the environment.

"The scenario I have painted for you today is a mild occurrence compared to the atoll states of Tuvalu and Kiribati. There, some islands have been devastated by freak tidal waves and rising sea levels.

"If we do not act now we may watch as Mother Nature wipes out small island nations like Kiribati and Tuvalu". Climate change is also having a major impact on the economies of our region. Already Fiji has just scraped through one of its worst droughts. Our sugarcane crop on which our economy is so reliant lost millions of dollars. There was singing and dancing in the farming communities when the first real drops of rain fell.

"So the Pacific Islands watched with hope as the world gathered in Kyoto, Japan, to discuss the reduction in emissions. We hoped there would be serious steps taken.

"But there were many compromises. However, the focus that Kyoto brought to the whole issue was important because unless emissions are controlled in the next few years the consequences are too frightening to speculate.

"We in the Pacific are people of the sea. It is a fact of our daily life. While those loopholes of rights to trade emissions have yet to be straightened out we need the continued support and commitment similar to what Japan has displayed.

"Coastal erosion, land loss, flooding, salination, and intrusion of saltwater into groundwater are among the issues that will affect our islands.

"Tourism, a very important economic activity in the Pacific Islands countries, could be affected through beach erosion, loss of land, degraded reef eco-systems as well as changes in the seasonal pattern of rainfall.

"A warmed earth could also lead to the spread of diseases such as malaria and dengue, which already have a hold in our islands.

"As the politicians and experts argue and debate, my grandfather's grave and many others around the Pacific Islands have disappeared in the sea. Unless we act it won't be just my grandfather's grave which has disappeared. It will be the whole village of my ancestors."

PINA Pacific Forum of Environmental Journalists

The PINA Pacific Forum of Environmental Journalists grew out of a network of journalists who had attended environmental journalism training programs run by the Pacific Islands News Association (PINA).

· Countries and territories covered: American Samoa, Cook Islands, Federated States of Micronesia, Fiji Islands, French Polynesia, Guam, Kiribati, Marshall Islands, Nauru, New Caledonia, Niue, Norfolk Island, Northern Marianas, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, Vanuatu, Wallis and Futuna.

· Main activities: Training (through workshops within the region; fellowships to study within the region and outside); developing and promoting environmental coverage; developing environmental news flow; professional fellowship and cooperation.

· Partners include: UNESCO, World Wide Fund for Nature International, Sasakawa Pacific Island Nations Fund, International Centre for Journalists, Commonwealth Press Union, Pacific Community, South Pacific Applied Geoscience Commission, South Pacific Regional Environment Program.

· Next regional workshop: The Environmental Journalism Story for Editors, to be held in Suva, Fiji Islands.

***For more information please visit;
<http://www.pinanius.org/>***

Statement from Pakistan

Zaigham Khan

Chairperson - Forum of Environmental Journalists (FEJP), Lahore

Pakistan is among the few lucky countries to have a full-fledged National Conservation Strategy (NCS) since 1992. However, the NCS has been an unlucky document as its take-off coincided with the launch of donor-driven Social Action Program (SAP). The latter had addressed at least four out of fifteen areas of NCS. Secondly, both the programs have competed to solicit donors' money to materialize their goals.

In the Eighth five-year plan (1993-98) environment could not attract much resources and emphasis remained confined to mere awareness, advocacy, legal framework and institutional strengthening. However, the approach towards environment in the 9th five-year plan (1998-2003) appears to be a bit different. Environment is seen as an activity cutting across all sectors. Similarly, a need for action has been emphasized over mere awareness because the nation is already paying a heavy cost for inaction.

The country now has comprehensive environmental legislation but a unique apathy exists towards its enforcement. Most of the green non-government organizations (NGOs) and the federal ministry of environment also appear prisoners of reports and research culture. Of course, such a practice produced essential wealth of knowledge to comprehend environmental concerns but can not be a substitute to action.

Mere emphasis on phantom economic growth has further worsened the country's ecological resource base. The result is that the 1990s have been a decade of natural disasters such as devastating floods, water logging and viral attacks on the country's major and medium crops such as cotton and wheat. These disasters have been man-made with their roots in overuse of fertilizers, pesticides, irrigation and reckless removal of natural vegetation.

As much as 26.5 million hectares or 42 percent of the total land is estimated to be suffering to varying degrees from the afflictions like wind erosion, salination, water-logging, nutrients depletion and overgrazing. According to conservative estimates over the past 30 years, use of fertilizers has grown 119 times, pesticides 95 times and

irrigation 100 percent. The juxtaposed reality remains that the country is losing 25% of its potential crop production.

Similarly, industrial pollution is estimated to be worsening at a rate more than twice as fast as the growth of economy. As study of recent 25 years (ie.1963-88) calculated it at 6 to 10 percent whereas the industrial growth rate was just 3 percent out of country's 50,000 industrial units, according to Economic Survey of Pakistan, 1997-98, only 3 percent have proper waste treatment plants or technologies. The rest discharge their untreated effluent into rivers, lakes and sea. The pollutant industry is also reluctant to adhere to National Environmental Quality Standards (NEQS) introduced in July 1996. After series of negotiations, it was expected that NEQS will be voluntarily enforced January 1999 onwards. But the third deadline since July 1996 has once again passed silently.

The country's monitoring and implementation mechanisms are also weak. Though millions of dollars have been spent on strengthening provincial environmental protection agencies, still many do not have proper laboratories and trained staff to handle new realities.

There is plethora of green laws in the country, which make Environmental Impact Assessment (EIA) an essential pre-requisite for all big and small ventures. But motorways are being constructed without any authentic EIAs. Not only this, industrial zones are being promised on agriculturally active lands of the country adjacent to motorways. A catastrophe is in the offing.

Vehicular emissions have also made life miserable in Pakistan. It has been estimated that an average vehicle in Pakistan emits 15-20 times more pollutants than an average vehicle in the developed world. The number of vehicles has also tripled in the last 15 years and it is growing at an annual rate of 11.79 percent. Traffic jams, dust and smoke along with increasing noise pollution are resulting in less patience among people which is adding to urban violence.

Media definitely has a crucial role to play in this scenario. Media in Pakistan can be subdivided into three

main categories: officially controlled electronic media, independent press which can be further subdivided into English and vernacular press and the alternative publications.

Environment is getting more and more coverage on state run radio and television. The reporting of environment on the electronic media, however, remains shallow and is rarely critical of the government or its agencies. The Pakistan Television also occasionally runs such programs as the National Geographic and The Living Planet. Some of these programs are dubbed in Urdu. An independent television channel NTM seems more sympathetic to environmental concerns but lacks the nerve to challenge the government. Radio, which is extremely popular in the rural areas, is still caught in the discourse of the Green Revolution. It can be mentioned here that radio had an important role in the 60s and 70s in teaching farmers the new techniques of agriculture and a number of its programs became very popular with farmers.

There obviously appears need for more airtime on issues of environment and development. But more urgent is the need to make effective use of whatever airtime is available on radio and television. Apart from the official control, another problem with the official electronic media appears to be lack of orientation of policy makers and producers on the environmental issues. Journalists working in official electronic media are usually shunned by journalists in print media who do not consider them genuine journalists and they don't seem to have much interaction with environmental NGOs either Forum of Environmental Journalists Pakistan (FEJP) is trying to bridge the gap by involving professionals from government controlled electronic media in its programs. They are invited to become members of the forum and join in most of the Forum's activities.

Video is one effective electronic medium that is completely out of any official control in Pakistan. World Wide Fund for Nature (WWF) Pakistan and FEJP this year arranged a countrywide Moving Film Festival. This festival started in May and ended in July. It traveled to six cities in the four provinces and was well received everywhere.

Fortunately, Pakistan has a vibrant independent press, which has a strong tradition of criticizing the government and exposing its negligence to the public. The press in Pakistan is unluckily sharply divided in English and vernacular newspapers. English language newspapers and magazine give more coverage to the environmental issues. Among the mainstream English language newspapers daily Dawn and The News International has separate sections on environment while environment also gets good coverage in The Nation. Among the magazines, Herald and Newslines, Pakistan's, the most influential

English language magazines give prominent coverage to environment.

English language publications have produced quite a few journalists who have made their names in the reporting of environment and development. Two such reporters, one from The News and the other from the Newslines, incidentally both women, have won Global 500 Awards.

Though the English language publications are considered very important due to the kind of readership they attract, it is the vernacular press that is read by the common man. The largest number of Pakistani newspapers and magazines with widest circulation are printed in Urdu and Sindhi languages. The situation does not appear as good in vernacular press. Though the environment does get some coverage in Urdu press, the news items are mostly ill informed, out of context and shallow.

Environment appears as a serious political issue in the Sindhi press due to the inter-provincial discords over water resources, particularly distribution of the Indus waters. These newspapers take a regional stand on the issue of water distribution, construction of big dams and the construction of large drainage programs.

Despite all these limitations, print media in Pakistan has at times succeeded in building strong pressure on environmental issues and making some difference. Two years ago, for example, press in Pakistan took a strong stand against construction of a highway through Kirthar National Park in the Sindh province, forcing the government to change its plans. Similarly, press stopped an industrialist from setting up an industrial unit in Lahore, which was based on discarded European technology and was potentially harmful to environment. At the moment, a campaign is on to force government from gas exploration in a national park.

NGOs in Pakistan have experimented with a number of alternative publications. The World Conservation Union (IUCN) brings out two quarterly environmental publications: Way Ahead is in English while Jareeda is in Urdu. Both the magazines are considered excellent specimens of environmental journalism and are very popular among the readers interested in environment. World Wide Fund for Nature (WWF) brings out a quarterly magazine Natura. The magazine usually carries articles written by environmental experts and is a good effort. A number of other NGOs also bring out newsletters in which environment gets prominent coverage.

Green Press, an organization of environmental journalists affiliated with FEJP runs a feature service on environment, Green Wire and a weekly electronic magazine Green News.

It was realized more than ten years ago that an organization of environmental journalists was necessary to sensitize media over environmental issues. An active effort to reactivate the organization was started in 1987. A number of meetings of environmental journalists were held. Environmental journalists agreed to form a countrywide network. The organization first started Pakistan Forum of Environmental Journalists (PFEJ). Later decided to change its name to Forum of Environmental Journalists Pakistan (FEJP). Two organizations of environmental journalists, namely Green Press and Frontier Forum of Environmental Journalists (FFEJP) were formed while the PFEJ was in hibernation. Both these organizations decided to affiliate with the FEJP and are now Islamabad and NWFP chapter of the Forum.

Last two years, FEJP has organized a number of training seminars, study tours and other events. It has been able to turn itself into an effective countrywide network of media people interested in environment and development.

Even as the situation of environmental degradation in Pakistan appears quite gloomy, prospectus of environmental journalism appear bright. More and more journalists are turning to environment and development and FEJP is fast turning into a strong organization.

The National Conservation Strategy was adopted in March 1992. It addresses the critical state of Pakistan's ecosystem and suggests a comprehensive set of actions to preserve and enhance the country's environment. A review of the state of the natural environment is followed by a number of policy options for sustainable development. The document has a complete chapter on communication of green messages through over 300 newspapers, 100 weeklies and monthlies, electronic media and other performing arts. Federal Ministry of Environment, the IUCN and All Pakistan Newspapers Society decorate environmental journalists every year.

*For more information please visit;
<http://www.fejp.hypermart.net>*

Statements from the Philippines

● Manuel S. Satorre Jr

Chairperson - Philippines Environmental Journalists Inc. (PEJI), Cebu

Environmental stories have become part of regular reporting in the Philippines today. For in recent years, media owners - both in print and the electronics media - have become aware of the importance of the environmental beat.

The Cherry Hill Subdivision disaster in Antipolo Hills in Metro Manila very recently got the regular reporters covering what was actually an unfolding environmental story. The subdivision was built very near a hill that caved in after continued heavy rains that poured into Metro Manila for several days. In the lowland, the rains brought floods all over the metropolis, snagging traffic and even resulted in work stoppage in business establishments and the suspension of classes in schools.

While the disaster, which had resulted in the death of hundreds of people who were apparently buried alive when the hillside caved in and buried the residential homes built by a private development, was merely covered at first as just a breaking police story, it later turned into a full environmental report. For journalists who had covered the event asked more questions than just why the subdivision was built in that area that was located very close to a hillside that was unstable.

The additional questions raised were environmental:

1. Why was the developer issued an Environmental Clearance Certificate (ECC) to build in that area?
2. What had weakened the hills that forced its cascading into the housing project?
3. What is the impact in the continued scraping of hillsides for construction of more roads and housing projects?
4. Could the landslide have been prevented?
5. What is the government policy on the development of hillsides for housing projects?

All these environmental questions were suddenly raised in the continuing coverage by journalists of the Cherry Hill disaster. This has made environmental journalism very much alive in the Philippines. Soon after the Cherry Hill disaster came the chemical spill in the West Coast of the island-province of Cebu in Central Philippines. A fish kill was noted in Tanon Strait, the waters between the islands of Cebu and Negros, known to be home to whales and dolphins. This resulted not only in the death of some fish and aquatic animals but also some fishermen and members of their family.

At first, the journalists who covered the story thought it was just a simple case of a "red tide" occurrence in which

dinoflagellates had contaminated the coastal waters due to the red coloration observed. But an in-depth investigation traced the contamination to a huge deposit of pyrite which had become acidic if allowed to oxidize through the presence of impounded water and exposure to sunlight. This came from the Atlas Consolidated Mining and Development Corp. (ACMDC), once one of the biggest copper mines in the world but had suspended operation due to nagging labor problems.

Because the firm had practically stopped all its activities, it had failed to manage its mining sites resulting in the pollution that had caused the fishkill and the death of some people. In other words, an abandoned mining operation was found to be the culprit in an environmental pollution that had threatened aquatic life and humans in a coastal area in Central Philippines.

This story raised a lot of questions:

1. Will the company simply be fined for its negligence?
2. Is the fact that the firm had stopped operation enough excuse not to be able to continue managing its hazardous wastes?
3. Is the fact that the firm had stopped operation enough excuse not to pay the fine?
4. How will the government protect the natural ecosystem from hazardous wastes coming from a mining firm that has already stopped operation due to bankruptcy?
5. What new laws have to be enacted to ensure the protection of the ecosystem from this situation or what new policies are to be adopted?

The coastal waters where the fishkill has occurred is now being declared as being in a "state of calamity." Such declaration however only places greater focus on the pollution problem and does not provide the solution.

Journalists covering the story have suggested that government should see to it that the source of the pollution is plugged. And this is where the pyrite deposits are located, all in the ACMDC mining pits. If the company no longer has the resources to cover the cost of such pollution source control, then they urged government to provide the funds to prevent further damage to the ecosystem.

The Cherry Hill disaster and the West Cebu waters fishkill are the two major environmental stories that hugged the headlines in recent months. But what has kept journalists busy are the continuing environmental issues that had been plaguing the Philippines for years. One of these is the problem of clean air, especially in big cities like Metro Manila, Metro Cebu, and others. The persistent coverage by environmental journalists of this issue has led the Philippine government to eventually pass the Clean Air Act of 1999.

This has provided the mechanism to try to control air pollution in the big cities. As it is however, it is still but a law and has to be properly implemented. The demand for its proper implementation will keep Philippine journalists very busy in the coming years. For as it is, the government still has to provide proper air monitoring systems for the entire country to make the law work. It is only in some parts of Metro Manila that the monitoring system has been installed. None so far in other big cities of the country.

The Philippines today appears to be trying to manage the environment. At least, this is the posture that the administration of President Joseph E. Estrada is trying to show. As a matter of fact, not only has the Clean Air Act of 1999 been passed under his reign, the Estrada government is also bent on coming up with the implementation of a "total log ban." But what disturbs many however is the fact that the country is also working to push for industrialization. This has resulted in the establishment of more and more economic zones all over the country, a move that has converted many virgin agricultural lands into industrial sites.

In the Central Philippine province of Cebu, for instance, several economic zones have been established creating environmental management problems. In West Cebu where the fishkill had occurred, a large portion has been declared as an "industrial zone." Shipbreaking and shipbuilding firms have been put up on this side of the island causing criticisms from environmentalists due to the "pollutive" nature of their operations.

The country's thrust towards more tourism development to bring in more dollar revenues have also spawned major construction of new roads, bridges, hotels and resorts, airports and wharves. All these projects gobble up natural ecosystems creating pollution and other problems. In Philippine urban areas, problems of water and power shortages, waste management, and other environmental concerns have cropped up in recent years. This has happened not only because of industrial and commercial growth but also due to a population surge. The rise in population in big cities in the Philippines has created problems on how to provide for people's basic needs such as food, shelter, clothing, and other important amenities. The Philippines today already has a population of over 70 million and is growing at the rate of 2.3 percent per year. It has only a land area of 30 million hectares distributed in 7100 islands. Nearly all the islands are fully inhabited by people who are bound to make use and disturb the national ecosystem.

All these issues have kept journalists alert in their reporting of the Philippine environment. This has also created an alliance with Philippine non-governmental

organizations that oftentimes provide them with the information and confirmation of scientific and technical data. In addition, due to the gravity of some of the environmental problems, some environmental stories have

even ventured into advocacies beyond the normal tenets of journalism. But if the journalists will not take the lead to force government and other sectors to act and address the pressing environmental problems, then who will?

● Elizabeth C. Roxas

Executive Director - Environmental Broadcast Circle of the Philippines (EBC), Manila

Thirteen years ago, 1986 to be exact, the peaceful EDSA Revolution which toppled down a long and tiring reign of the Marcos regime (others said it was dictatorship) placed the Philippines in the forefront, both in print and in the broadcast media all over the world. People from all walks of life finally realized that power - the real source of power lies on the people themselves. That if the basic sectors bind themselves together, they could create something different. A very strong force. Enough to restore democracy. Enough to generate power. The People's Power!

For a time people thought the fight was over. They were wrong. They realized it was only the beginning.

Right after the very historic event, NGOs and even POs started to mushroom in all parts of the country. Each expressed the desire to do something more. The call was deeply rooted. There was a strong need for rehabilitation. While political, economic, social and cultural impacts were felt, environment and natural resources were heavily damaged.

International funding support poured in. Whether it was multi-lateral or bilateral or any such forms of collaboration, it was overwhelming. Different countries wanted to take part in the early recovery and restoration of the country's resources both human and natural and continue to survive despite the imbalance practices being initiated. Everybody was busy doing something else. Although there were lots of initiatives and efforts undertaken, they were all over. No way of tracking them down. All spread out in different directions. Each one wanted to show they could do something different from the rest. But definitely such principles would not work out. While people thought they were busy doing their own work in the process of recovery and restoration, thereby creating its own niche in the process of growth

and development, the rate of environmental degradation and over exploitation of natural resources continued. All of a sudden there was this presence of a major problem - relating environmental protection and conservation and even rehabilitation to the so-called development.

The Philippines

The Philippines is a tropical archipelago of about 7,100 islands located off the southern coast of the mainland Asia. It has approximately 299,404 square kilometers of land area and its territorial waters covered around 2,200,000 square kilometers. The coastal zone of the Philippines covers about 11,000 square kilometers of land and 267,000 square kilometers of coastal waters. The country's marine territorial waters cover about 2.2 million square kilometers.

In 1995, the population of the Philippines was pegged at about 69 million. Yet growth rate was estimated to about 2.4 percent per annum. It was actually one of the fastest in Asia. If this trend continues, the Philippine population is expected to reach 78 million at the turn of the century. It may even triple in a span of four decades. It was ranked as the 9th populous country in Asia and the 14th in the world. Rapid population growth and imbalances in spatial distribution may continue if policy decision-making at all levels does not recognize and consider the relationship among population, resources, environment and development.

A complex mix of ecosystem and habitat types characterized the landscape and waterscape of the Philippines. These may be due to the following factors:

Varying exposures to the shifting winds and typhoons.
Great heights of numerous mountains.
Peculiar distribution of rainfall.

. The Kuro-Siwo or Japanese current which are warm equatorial waters flowing northward along the eastern coast of the country

The Philippines is also situated in the circum-Pacific Ring of Fire, characterized by volcanoes and earthquakes. It is reported that most of the Filipinos live within a radius of less than 50 kilometers away from a volcano. Except for Palawan, the entire length of the country's islands from North to South is criss-crossed by faultlines where earthquakes can just occur. Not to mention the frequent typhoons that hit the islands. The Philippines experiences an average of 20 typhoons a year.

Most of the islands of the Philippine archipelago are believed to have a very high degree of endemism. About 67 percent of the species in major groups of animals and plants are found nowhere else in the whole world. Of the 500 known species of corals, 400 are found in our seas.

In the 1960's, Filipinos still enjoyed the richness and of the country's natural resource base. But to date, at the rate economic development, urbanization and industrialization are pursued, environment continues to suffer degradation and natural resources depletion.

The Green Environment

Forest degradation already reached an alarming stage. From 1989 to 1995, annual average rate of deforestation has been estimated at about 130,000 hectares. The Philippines used to have about 17 million hectares of forestlands, which were about 57 percent of its total land area of 30 million hectares. As of 1994, only about 5.6 million hectares was left. Some of the pinpointed reasons of deforestation are as follows:

- Mining operations particularly the open-pit mining
- Cutting for timber, paving roads and trails, housing and fuelwood
- Natural calamities such as typhoons and earthquakes

Forest loss has also been attributed to the reduced groundwater causing saltwater intrusion in Cebu, Bulacan and almost all coastal areas in the country where no forest cover is evident. The country's genetic resources and bio-diversity have likewise been threatened by forest destruction causing many species endangered and some at the verge of extinction. As of 1991, 89 species of birds, 44 species of mammals, and 10 species of reptiles are threatened. Among them are the Philippine eagle, tamaraw and the Philippine crocodile. Logging opened up forest areas, which have now become prone to "kaingin" or shifting cultivation and upland agriculture.

Widespread deforestation induced soil erosion. Soil erosion results in the loss of precious topsoil, deterioration of prime agricultural lands, reduced water supply, increased flooding, more incidence and acceleration of siltation/sedimentation of rivers, lakes and reservoirs. Around 219 metric tons of soil per hectare is lost in terms of nutrients per year. Irrigated ricelands are converted into urban settlements and industrial uses at the rate of 2,300 hectares per year. This is true in Central and Southern Luzon, all of the Visayas and some parts of Mindanao. Golf courses started to multiply. Developers nationwide saturated large tracts of lands causing complaints from Antipolo in Luzon, Boracay in the Visayas and in several other areas.

The Blue Environment

Inland Waters - Of the 421 rivers in the country, only 207 are still classified as best in its usage by the Department of Environment and Natural Resources. The increasing siltation and pollution of surface waters and the salinization of groundwater resources are the main problems. Domestic wastes from residential areas, industrial wastewater effluents, pesticides and uncollected solid wastes that find their ways into bodies of water are the main causes of pollution. The decline of the groundwater level resulted to the salinization of coastal aquifers and sinking of low areas which caused flooding. Groundwater potability is threatened by salinity and bacterial contamination from domestic sewage.

Coastal and Marine Resources - Philippines is covered by 267,000 square kilometers of coastal waters. It played an important role in the country's economic development and ecological survival as 60 of the 73 provinces, 1,525 municipalities or 70 percent of the country's municipalities are located along the coast. Hence, the coastal zone is exposed to numerous natural and man-made pressures.

Rate of mangrove destruction is also quite fast when we know for a fact that such ecosystem provides the firm foundation for the country's coastal fisheries. Mangrove conversion to fishponds posed a serious problem. In 1918, mangrove forest used to be at about 500,000 hectares. To date, only 30,000 hectares remained.

More than 400 species of coral are found in the Philippines. But the destruction of such is progressing.

Fisheries experts in the country believe that the limit of sustainability of marine fisheries has been reached. It used to be an 81 billion pesos industry in 1994 producing nearly 3 million tons of fish. Population pressure, sedimentation caused by deforestation, nutrient run-off from agricultural activities, pollution from industrial

discharges, destructive fishing and uncontrolled tourism activities are some of the causes of degradation

The Brown Environment

The major sources of air pollution in the Philippines are classified as either mobile (motor vehicles), stationary (industrial) and area sources (small sources individually emitting insignificantly but collectively may cause severe pollution). Due to limited monitoring equipment, data is not always readily available and therefore not enough information about the quality of air

Solid wastes are another source of pollution usually in the urban areas brought about by the density in population and the intensity of human activities. Seventy percent of solid wastes come from domestic sources and 30 percent from the industries. In 1995, 6,102 tons of solid wastes are generated daily within Metro Manila, 75 percent of which are collected and the rest are left on the streets or dumped into drainage, esteros, canals, creeks and rivers contributing heavily to the problem of flooding

Imports of chemicals including toxins like cyanide, mercury, oxides of manganese, iron, zinc, etc. have grown considerably. Leaching of toxic chemicals and accumulation of heavy metals could contaminate land and underground water for an indefinite period of time. On the other hand, industrial and manufacturing plants are the sources of hazardous wastes. It was a pity that to date there is no inventory or estimates of the quantity of presence of hazardous and toxic wastes in the country. Despite the passage of Republic Act 6969 otherwise known as the Toxic Substances and Hazardous and Nuclear Wastes Control Act, nothing much has improved. Noise and offensive odor also caused a lot of environmental disturbances.

Rapid population growth resulted in increased pressures on the natural resource base, the capacity of which is being reduced. Current population of around 18 million in the uplands may occupy all public lands that are disposable. Metro Manila's population is increasing at the rate of 3.6 percent annually. This may lead Metro Manila to become one of the megacities in the world with a population of 11 million.

Major Cross-Cutting Issues

Global warming is another big issue. The rise in temperature may affect the productivity of rice, corn, wheat and other agricultural products that may cause a great impact in food supply. This may also lower the supply of marine resources. Extreme weather will be

experienced. Typhoons and droughts both ways will definitely be serious disturbances

Mining and quarrying loosen the life-support of the ecosystem. While they may boost the economy and may resolve unemployment, the source of livelihood of farmers, fishermen and indigenous peoples, even our forests, our soil, our water, they all would be at stake.

Sustainable Development

Considering the critical situation and condition of the environment, one cannot help but dig deeper as to the causes of its destruction and degradation. Going back, there was really nothing new. The problems rooted from just one and still the same reason.. development. It was a kind of development that is unsustainable. Ruthless. Voiceless. Rootless. Futureless. Shifting to a positive paradigm would mean the kind of development that gives importance to nature. That it cares for and respects the carrying capacity of the ecological systems that make up the environment. So there is a relationship after all. Environment and sustainable development is not one and the same, but they are inter-related. Without recognizing its relationship, sustainable development could never be attained. In 1992, barely three months after the Earth Summit, the country formed its own Philippine Council for Sustainable Development (PCSD), a multi-stakeholder body created to chart environment and sustainable development initiatives. It came out with its very own Philippine Agenda 21 (PA 21) which embodies the country's national agenda and framework for sustainable development for the 21st century. If implemented, PA 21 envisions a better quality of life for all.

PA 21 and the Environmental Broadcast Journalism

The Philippines has been considered as one of the countries in Asia and the Pacific with a media free to cover a wide range of issues. It could be in politics, economics, social, cultural, and now environment and sustainable development. Going back to 1986, for a while there was suppression. But just like any other beginning, an end was bound to happen. Suffocated, people just joined themselves together and created something different. A strong and forceful people's power. Independence was regained. Democracy was back. There was media hype. Notwithstanding the presence of the print media, the broadcast media then was the driving force. It was intimate. Immediate. People from the broadcast media covered the incident with feelings. Live. Instant. Every minute, every breath was felt in the airwaves. It was radio that brought live the people in EDSA and the power that be. The years after, partnership between the radio and the people working together for change, was

very apparent. The print sustained it. But the broadcast media, especially with the presence of television including the cable nowadays gave life to it. It was moving towards something more than just independence. It was moving for change. For improving the lives of the people. The condition of the environment. And the hope for a sustained development.

The Environmental Broadcast Circle (EBC) was formed in 1995 by some of the people from EDSA. Some people from RIO. Some people from the PCSJ. And mostly from the people who crafted the Philippine Agenda 21 (PA 21). They are media practitioners and educators responding conscientiously to the call of the present generation --- protect the environment and promote sustainable development. So that generations to come would still have their share. Through the broadcast media particular in radio most of the people are given access. Access to research, science and technologies. Access to information. Access to communication. Access to education. Those are very important. They are the answers to the call of the green, the blue and the brown environmental issues and concerns. Even the crosscutting issues of global warming, climate change, mining and quarrying, tourism. The truth behind the Mining Act of 1995, the

questionable Indigenous Peoples Rights Act, the Clean Air Act, the Energy Bill, the presence of toxic and hazardous wastes at the former military bases, the essence of sustainable agriculture versus the modern agriculture, the anti-poverty commission, etc. All of these are offered to the people. Access to media is another form of providing power to the rightful owner. The people's voices are heard. Live Interacting Feedbacking. Reverberating. With a network all over the country which can be heard in some of the more than 500 traditional radio stations whether national or local not to mention the 16 community radio stations built by one of EBC's veteran radio personality and board of director. These community radios are located strategically in places of the country where people thought nothing was happening. In reality, sustainable development is practiced. On the ground. Models and pilot projects are existing and could even be heard on radio. The power of change.

Broadcast media again is immediate. It is intimate. It is within reach. It is right now. Today. And if change has to happen...it should start now. It may not happen tomorrow.

Statement from Sri Lanka

Dr. Dharman Wickremaratne

Chairperson - Sri Lanka Environmental Journalists Forum (SLEJF)

Statement on Climate Change

Introduction

Sri Lanka is an island situated in the Indian Ocean almost at the southern tip of the Indian sub-continent. It has a total land area of approximately 65,610 sqkms with a population of 18.9 million people consisting of different ethnic groups - Sinhalese 74%, Tamil 18.1%, Muslims 7.1% and Burghers 0.8%.

The weather pattern in Sri Lanka is tropical (not humid) which is suitable for any type of vegetation ranging from plantation crops such as tea, rubber and coconuts, as well as rice paddy and other field crops which are systematically cultivated in selected areas of the island.

There are rich tropical rain forests in many parts of the island which have contributed to rich bio-diversity in these forests. The coastal belt is well protected right round the

island. This fact too has contributed in no small measure to the presentation of marine resources.

Environmental protection in Sri Lanka is more or less guaranteed by law and there are certain agencies entrusted with this task, e.g. the Ministry of Environment, the Department of Wildlife Protection, the Department of Coast Conservation, the Central Environmental Authority and so on. Even local authorities such as Provincial Councils, Municipal Councils and Regional Councils are involved in environmental protection, particularly in the area of waste disposal.

Awareness Creation

There are several non-governmental organizations (NGOs) in Sri Lanka devoted to the cause of environmental protection mainly through awareness creation. Their

contribution is commendable. With a high literacy rate (89%), which is considered to be the highest in Asia, Sri Lanka's reading public is quite extensive. There are many newspapers published in Sri Lanka in English, Sinhala and Tamil (12 dailies and 84 weeklies). In addition to the newspapers there are 22 radio channels and 9 TV channels, both state-controlled and private-owned. All these media are patronized by a large segment of the public. While newspapers contribute the major sources of environmental awareness creation, the radio and the TV have made a start recently in this direction.

The mass media in Sri Lanka plays a role as a channel and means for environment education. The fact that the media plays a very significant role in providing information on environment was confirmed by a recent Environment Awareness Study, where most people cited different organs of the media as their primary source of environmental education. A majority of the sample population in both urban and rural areas cited the print press as the primary source of information on the environment. Television was the next major source of information for the urban population, while radio was for the rural population.

The media plays different and multiple roles in relation to information and commentary on environment and development. In a developing country, situations as those that exist in Sri Lanka, the media performs many roles. The media

Reports/Informs - by bringing latest news and information on developments related to environment and development issues and subjects;

Comments - through editorials, feature articles and other means, practitioners of the media comment on the information they help purvey, thus adding perspectives, relating issues to people's lives, and sometimes even providing value-judgements on issues;

Reflects - when a new development takes place in relation to environment/development, some organs of the media remind their audiences of what had preceded this development through background stories, in depth articles or programs;

Probes - through investigative journalism, the media sometimes probes into suspicious developments, misuse of public funds, scandals involving environmental issues. In this process, the media unearths and reveals information which the official guardians of the environment can then follow-up.

Entertains - through its coverage of the rich diversity of nature, natural wonders and man's interactions with

nature, the media provides recreational benefits to its audiences, helping them appreciate the benefits of a cleaner and healthier environment.

Educates - through a combination of all of the above, the media also educates its audience on pressures, risks and trends related to the environment, the most appropriate responses, the type of individual and community action needed, and the relative costs of such action or inaction. In this sense, the mass media is one of the most potent educators on the environment.

Trends in environmental coverage Quantitatively, coverage on the environment in Sri Lanka newspapers (the main source of environmental information) has increased in the past decade. The evidences by:

- A marked increase in the number of items on the environment, as well as the overall amount of column centimetres devoted for environmental items;

- More editorials are written on environment and sustainable development issues, and more feature articles on these subjects appear in the leader (editorial) pages;

- Some newspapers have introduced a weekly page devoted to environmental news and feature articles;

- A number of all-environment newspapers have also appeared.

A recent study team carried out a quantitative study of the number of environmental news articles and features appeared in the Sinhala and English language press in Sri Lanka over a 12-month period.

Sinhala Press

The following newspapers were covered under the study: 3 daily newspapers (Divaina, Lankadeepa, Dinamina); 5 Sunday newspapers (Sunday Divaina, Sunday Lankadeepa, Silumina, Lakbima, Peramuna), 2 weekly tabloid newspapers (Ravaya, and Yukthiya).

Total number of environment related news reports published: 1063, of which 61 per cent covered national issues (including campaigns) and 39 per cent covered provincial issues.

Total number of feature articles: 418

Editorial on environment: 32

Where author's name was identified, gender breakdown in reporters covering environment: Female 9 per cent, Male 91 per cent.

English Press

Three daily newspapers were covered (Daily News, The Island, Mirror) and four Sunday newspapers (Sunday Observer, Sunday Island, Sunday Times, Sunday Leader).

Total number of news reports on environment: 1410, of which 62 per cent covered national issues and 29 per cent provincial issues.

Total number of feature articles: 314

Editorial on environment: 21

Where author's name was identified, gender breakdown of reporters covering environment: Female 16 per cent, Male 84 per cent.

Environmental Education

Until recently environmental education (informally) has been a function of the NGO sector. NGOs have been handling the task of environmental education mainly in the form of awareness creation through publications including the newspapers. Certain NGOs have also conducted seminars, workshops, lectures, photographic exhibitions and other activities. Various donor agencies have also come to the assistance of these NGOs towards their efforts. Because of the role played by the NGO sector in the sphere of environmental education certain state sector agencies have also got involved in this important task in the recent past by seeking the expertise of the NGOs on certain occasions in conducting education programs.

As a result in changing world trends in environmental concerns, the subject of environment has recently found its way into education programs mainly at university level. Environmental topics have also of late been included in teacher training curricula. This augurs well for future trends in environmental education in Sri Lanka.

In the face of the situations that existed during the past few decades in regard to environment education in Sri Lanka, environmental journalism played the all important role of filling the void of not having properly structured programs of environmental education. As stated earlier, at least the basic function of awareness creation in environmental issues owes much to environmental journalism.

Sri Lanka Environmental Journalists Forum (SLEJF)

It is no exaggeration to state that environmental journalism in Sri Lanka owes its present organized state

to the efforts of the Sri Lanka Environmental Journalists Forum (SLEJF) which was found in 1987. The SLEJF is the only professional NGO in Sri Lanka devoted to the promoting of environmentally sound and sustainable development through the powerful and effective channels of mass media, including radio and TV.

The SLEJF has tirelessly pursued the mission of mobilizing mass media institutions and journalists towards effective and meaningful coverage of issues relating to environment and development and to build capacity for their cause. The programs pursued by the SLEJF are aimed at:

- Enhancing public awareness of environment and development issues.

Environmental educational activities in schools and the promotion of school environmental clubs.

- Training media personnel in environmental journalism
- Campaigning for greater public participation in environment and development-related decision-making and so on.

Environmental Journalism It has been often stressed that environmental journalism is an important pursuit, but it is by no means a bed of roses. Environmental journalists sometimes have to face many odds including threats to their life from individuals with political connections, particularly when it comes to illicit felling of trees, illicit trade in endangered species of birds and animals etc. This is a feature prevailing in Sri Lanka as well as in many other developing countries.

As much as environmental journalism is an important pursuit, several critical environmental problems and issues relating to Sri Lanka still remain to be addressed comprehensively. Some of the more important issues are:

- Deforestation caused by shifting cultivation in the dry zone areas of Sri Lanka and by illicit felling of trees by timber pirates.

- Soil erosion resulting from deforestation and the resultant loss of productivity in agricultural lands.

- Siltation of reservoirs meant for irrigation purposes.

The list of such problems is fairly long and these problems used to be addressed by the relevant authorities. Environmental journalism has a vital role to play here by highlighting these issues in cause action to be taken. This is the challenge facing environmental journalists in Sri Lanka. Thus the SLEJF has a definite role to play here. Environmental journalism should direct more attention to these problems and issues.

Environmental journalism and the SLEJF are almost synonymous so much so that both depend on each other for progress. Finally, the SLEJF exists for the promotion of environmental journalism and capacity building (empowerment) of environmental journalists in Sri Lanka.

This is where the real challenge exists. Based on its past experiences and achievements, the SLEJF is confident of reaching the desired goal. What is required towards this task will be the interest and dedication on the part of the journalists who seek to be empowered.

Making use of SLEJF's connections and close links with media organizations in other countries, many local journalists have been afforded opportunities for overseas training in environmental journalism. Also the SLEJF has helped in conducting training programs in certain Asia Pacific countries. In addition, the SLEJF has conducted several in-country awareness programs on vital international environmental issues. These programs were carried out through a combination of newspaper articles, special publications, seminars, workshops and competitions. Environmental photographic competitions at national level have also been organized by the SLEJF in addition to these awareness programs.

SLEJF's role in awareness creation does not end with these events. A regular press clippings service operated for the benefit of journalists as well as students is a popular program of the SLEJF. All these activities aimed at raising the level of environmental journalism have been hailed as immensely useful.

During the past few years, the SLEJF has conducted many training programs on various aspects of environmental journalism for the benefit of journalists attached to all sections of the Sri Lanka media. These programs included one-day seminars as well as workshops of longer duration. In addition, the SLEJF published a Sinhala translation of the UNESCAP-APFEJ Handbook on Environmental Reporting. Training programs meant for environmental journalists have been organized in various parts of the island in addition to the above mentioned activities. Exchange programs for journalists have been a special feature of SLEJF training activities and these are still continued.

The SLEJF is perhaps the only environmental NGO in Sri Lanka that makes use of TV and video films for the purpose of environmental education. This is a special program, called 'Soba Cineru Television (SOTV)' of the SLEJF which has become a regular feature.

Networking with similar organizations nationally and internationally was pursued by the SLEJF a few years back with the main objective of utilizing maximum resources for training of environmental journalists. In the same manner, the SLEJF has obtained membership of certain regional and international organizations, eg

Environmental Liaison Centre International, the Centre for our Common Future, the World Conservation Union (IUCN). At national level, the SLEJF has developed very close links with dozens of other NGOs working on environmental issues both in urban and rural areas of the island. These links are expected to yield fruitful results in the future in the area of promoting environmental journalism for the ultimate benefit of the citizens.

In view of the existing economic policies in Sri Lanka, development is taking place at a rapid pace. Therefore it behoves environmental journalists to not only enlighten the public on possible environmental problems likely to crop up, but also to caution the individuals concerned or those agencies responsible for development to ensure that such development is maintained at sustainable levels.

There have already been some instances of environmental concerns emanating from certain development projects undertaken in the recent past. Alert environmentalists and journalists took up the connected issues mainly through press articles compelling the relevant agencies to take remedial and preventative actions. It is a happy situation that the vigor of environmental journalism as it exists in Sri Lanka at the moment was responsible for preventing possible environmental adverse effects resulting from certain development projects. The SLEJF along with certain other active environmental NGOs took the initiative in highlighting the issues involved.

Conclusion

There is a growing demand from the public for more and more information on environmental issues. This is an indication that environmental journalism has had the desired effects over the years. At the last World Congress of Environmental Journalists held in Colombo in October 1998, the Chief Guest at that occasion, Hon Minister of Tourism and Civil Aviation in Sri Lanka stressed the need for raising the level of environmental journalism and emphasized the importance of balanced and informative reporting. He also underlined the importance of environmental education in connection with which the environmental journalists have a vital role to play. This goes to prove that environmental journalism in Sri Lanka occupies an important position and that it also enjoys government patronage. This augurs well for the future of environmental journalism in Sri Lanka and organizations like the SLEJF have an important role to play in promoting vibrant environmental journalism.

For more information please visit;

<http://www.oneworld.org/slejf>

Statement from Thailand

Malee Boonsiripunth

Associate Professor, Faculty of Journalism and Mass Communications

Thammasat University

Introduction

Thailand is known as the land of smiles, full of traditional values, strong cultures and rich in natural resources. Within 513,142 square kilometres in axe shape, the country shares borders with China, India, Cambodia, Burma and Malaysia. Approximate population size is 60 million in which about 10 million are crowded in Bangkok and nearby areas. 'Chao-Phraya' is the biggest and longest river where lives have to rely on for survival one way or another. In the past, the country used to be named the 'Venice of the East' due to a lot of rivers and canals where the people used for travelling. So, water is the major part of Thai people's lifestyles that can still be easily evidenced by the building of houses along canals and rivers. The country faced environment problems after the past government put out a national development plan in the National Social and Economic Plan since the 1960s. The plan had brought about major changes in Thai society, especially ways of living. Series of problems were accumulated along the way of industrialization such as migration, poverty, shelters, health, social values etc.

This paper is proposed to review situations concerning environment and the role of the mass media in environmental reporting particularly focussing on mainstream media in Thailand. This writer will examine some environment situations reflecting the environmental issues appearing in daily newspapers during the past decades.

Development Vs Environment

Since the Thai government initiated its national development plan in the 1960s, the consequences of development on environment was rarely taken in to consideration and mentioned among concerned organizations. All kinds of developments had been rapidly introduced and confidently implemented according to the plan under Western expertise. The Western development concepts were highly concentrated on materialism, construction, and industrialization. The successes of developments were measured by economic

index, per capita income, number of infrastructure, mass media ownership in particular, and etc. Such paths of development had led to market driven development in which 'maximum profits' was the most desirable aim of achievement. The situation brought the temptation of natural resources exploitation as well as the demand of all possible chemical utilization to boost mass production and to introduce mass consumption. Large numbers of developing countries voluntarily jumped in to this circle of exploitation process in order to be categorized as 'well developed'.

Thailand was one of the victims that apparently experienced undesirable side effects of its speedy development. Several incidents have proved that the proud rich natural resources, cultures and traditional values were gradually destroyed by the so-called 'new technology' used for development both in agricultural and industrial production processes that brought about negative impact on ecology, environment, and daily human life. It is also true that development and environment conservation is a paralleled concept in which development needs to be carefully managed along with the consciousness of well-defined conservation of environment. The problem of environment, therefore, should be the major concern of all responsible sectors. In order to secure proper development planning and management, the Ministry of Science and Environment has been set up to be responsible as an institutional decision-maker and planner on every issue that would cause changes to environmental quality. There is also a number of existing non-governmental organizations (NGO) such as Foundation of Environment Conservation, Institute of Thai Environment, World Wild Life Fund of Thailand, and Environmental Reporters Forum which are active in various environment protection activities. They frequently voice out when natural resources were illegally or improperly violated either by government or private sectors. Mass media as their influential position in society have been highly expected to play roles not only in reporting environmental issues but also in inspiring consciousness and motivating participation among the public groups.

Early Stage of Environmental Reporting

The global movement on environment has more or less influenced the environment movement in Thailand. Dated back to around the middle of the 1970s, Thai people began to be aware of environmental problems when several incidents of illicit deforestation, illegal logging, unusual flooding, wildlife violation etc were covered extensively in the mainstream media. Mass media is actually the vital force of encouraging environmental movements and protection in Thai society.

We could estimate the starting period of environmental journalism in Thailand was around 1973, when all mainstream dailies reported an event on a military helicopter collapsed in a conserved national sanctuary in a province near Bangkok. A lot of animal parts were found around the spot. The case finally disclosed the illegally hunting of wildlife by a group of high rank military officials. The media reporting of the scandal widely created strong impact on the awareness of environmental protection among the public. A number of social groups were formed to protect, inform, and educate ordinary people about the value of the environment. Series of public campaigns in natural conservation projects had been drawn to implement by many government and non-government sectors.

A few years later another big incident was reported on public protest against the construction of an American mining plant in a southern province. The event led to unexpected violence that forced the government to abandon the project. A "Committee for Natural Resources and Environmental Conservation" was born accordingly by a group of students from eight universities to protest all kinds of development projects that might affect local environment and ecology. Mass media roles in reporting the situation was prominent as an influential supporter of public awareness.

The situation hit its peak when a senior forestry official, Sueb Nakasathien, committed suicide due to the pressure and discouragement from not having enough authority to fully exercise his duty to protect national forest resources in his responsible area. The violations often came from influenced powerful officials and business groups. His suicide created strong environmental consciousness among Thai people.

Other unending negotiations concerning environment was the conflict between NGO groups and the Electricity Generating Authority of Thailand (GAT) on cases of electrical dam construction in many parts of the country. Such cases obviously reveal the conflict of national development and natural resource conservation. Several projects have to be delayed due to the lack of running proper public hearings and inadequate provision of

essential information on advantages and disadvantages of dams' construction. The pros and cons resulting from scientific study of the conflicting parties were not fairly and transparently presented in the media where people can rely on for decision making. Mass media's function in such cases were unavoidably criticized and questioned about their objectivity and fairness on reporting environment issues. The public thus is usually in the midst of confusion and blur information. Moreover, mass media were, sometimes, blamed for being unable to provide clear, in-depth, technical information concerning the advantages and disadvantages of the projects in terms of both environment and development in simple language. Public decisions are so hardly made under the unclear circumstances. People do expect mass media to pay more attention and as well more concrete roles as most reliable sources of information.

Mass Media Situation in Thailand

Comparing to its neighboring states, mass media in Thailand enjoy their freedom of expression at all levels on various social issues including social, politics, economic etc. There are about 500 radio stations, 11 television channels, plus one private operated channel, throughout the country, whereas the numbers of newspapers are totally about more than 200 issues in which approximately 25-30 are the leading national newspapers based in the capital city. Electronic media are formally owned by either the government or military sectors, only about half of the number are actively operated by either government organizations or the leased private companies. Among the 12 television channels, there are five channels televised nationally, i.e. channels 3, 5, 7, 9 and 11. The only free channel operated by a private company is the Independent Television (ITV) which is rapidly gaining a nationwide audience within three years of its settlement. It is well recognized of its outstanding informative programs and of its investigations/coverage on misbehaving management of government officials.

The print media in Thailand are private enterprises, which its primary concern is to do the best for surviving in the business also to balance the benefit of the organization and of the public. The most influential newspapers are the five biggest circulation dailies based in Bangkok - Thai-Rath, Daily News, Kao-Sod, Matichon, and Phu-Chad-Karn. While the former three could be categorized as 'popular newspapers', the latter are considered of higher 'quality'. News and stories covered by these newspapers always catch high attention from all concerned agencies and other mass media. The Nation and Bangkok Post are the two English language newspapers that successfully market to the elite groups. Provincial newspapers constitute large numbers of newspapers in the nation, but there is also a certain gap

between metropolitan papers and local papers in terms of quality of production, news coverage, management, and technological advancements. It is partly because of the limitation of capital, investment, location, and / or training opportunities. The easy access to metropolitan dailies and other media channels is another factor of provincial newspaper disadvantages.

It is worth mentioning here that, according to the major theme of the Constitution of Thailand 1997 emphasizing the rights and freedoms of the Thai people, Thailand is so currently in the stage of a mass media revolution. Mass media's system and its roles are directly stated to promote human rights and freedom of expression. Additionally, the previously announced Information Act has opened doors for journalists and the public to guarantee individual right of information and to protect the public's human rights. The sections dealing with mass media in the new Constitution mentioned following are the key to mark the significant roles of mass media in the development of the Thai society in all aspects:

"Section 39. Every person has the right to freedom of expression. Restrictions are only possible by virtue of law in the case of national security and public order or morals. The Government is forbidden to close down the mass media (the press, radio or television stations). It is forbidden for officials to censor news or articles before their publication except in time of war or fighting but this is only possible by virtue of law. Media owners must be of Thai nationality. State financial aid for the private media is prohibited.

Section 40. The frequency bands of radio, television and telecommunications are public resources. There will be established an independent public agency to allocate bands and oversee relations with the mass media under the law.

Section 41. Employees of the private media have rights and liberties under the Constitution and must not be ideologically controlled by the State or the owners of the media. The same applies to employees of the State-owned media.

Section 58. Every person has the right to receive information and news from government agencies unless their revelation is contrary to national security.

Section 59. The right to access to information from government agencies is coupled with the possibility of public hearings and inquiries as permitted by law, especially as regards projects affecting the environment and quality of life."

The aforementioned of the Constitution confirms the need to reallocating radio bands to serve the best need of civil

society. Essentially, ordinary people and grassroots are assured to have their own operated local radio channels in order to be able to voice and participate national community needs and activities. Consequently, the concept of 'community radio' as the people's channel of communication and expression. While the issues of environment demands better management and protection, the right of the people to be well informed and to be heard of all development projects possibly effecting their immediate environment and quality of life are among the urgent issues of community interests, awareness, and participation. The suitable workable community radio is, therefore, the topic of interesting debate among scholars, media practitioners, local broadcasters, NGO, and other concerns.

Current Stage of Environmental Journalism

As previously stated, the environmental reporting in Thailand had been recognized and played a role in alerting public awareness since the 1970s. Newspapers played an initiative role of investigation then extensive reporting. Even though the reporting was not intentionally to favor environmental awareness rather than to reveal political influences and power corrupted by high rank officials as all regular news reports may concern. Nevertheless, environmental issues were increasingly appearing in news media in forms of news reports, features, and critical articles. All branches of mass media involved some active roles in environmental journalism.

Looking firstly into print media, specific to national daily newspapers. Apart from events reporting mentioned above, during the passing two decades, a number of Thai newspapers formally opened environment pages/sections/columns especially for environmental reporting. The Manager Group took the lead providing a section for environment in the Phu-Chad-Karn Daily that successfully proved to be an influential source of environment news. Most stories in mass media are presented in feature writing styles to promote values of culture, natural heritages, environment, and valuable local lifestyles. The main theme of most stories is to create appreciation of their immediate environment and also to support the theory of sustainable and self-sufficiency development. The print media does contribute certain efforts for environmental awareness.

It is noticeable that environmental stories will gain much attention when reported on the front pages. That means typical news values are typically applied to environmental stories to attract readers. News editors are more likely to look at value of all news according to its general criteria - conflict, proximity, consequence, human-interest etc. Thus, most front-page environment

stories obtain more or less, elements of political conflict, social conflict, and disaster together the way of sensation presentation is another factor to stimulate higher public attention. To be optimistic at least, this could be an effective strategy to motivate readers' interests and to involve responsible organizations to seriously find ways for better solutions on environment. From passing experiences, people learned values of environment largely from front-page coverage. But it seems that the society does not expect mass media to limit their roles only at news reporting but also to provide educative environment information as well.

To observe electronic media, even though radio does not have a very prominent stance in reporting the environment compared to other media channels. Still many stations devote some airtime to provide environment information and education. Most presentations come in documentary formats, spots, talks, and short features. A lot of broadcasters try to integrate useful environment information into their regular programs. A study shows the biggest radio programs' audience is teenagers and housewives, so radio is trusted as either a companion or an advisor for personal problems. Therefore, environmental think pieces by their admired DJ would be influential to persuade participation at some level. Moreover, there are also increasing airwaves devoted for environment and human rights movements for instances, the Green Waves, Women Waves, Environmental News etc. It could say that radio media is essential as the supporting roles to promote environment consciousness especially to its focal audience. They serve as a bridging role to narrow the information gap between different media habits groups.

Television is apparently the most influential channel of information in this information era. Many environmental programs are presented in almost all TV channels. The degree is varying the each management and content policy. The government owned channels - 3, 5, 7, 9, and 11 - offer some documentaries, such as World of Environment, Our Immediate Environment, Beauty of Nature, and Natural Resource Conservation. However, Channel 11 as the only educative public channel does advocate more degree of environmental education programs than other government channels. But the presenting formats and production techniques seen to be not as attractive as other commercial channels due to limited resources.

The most competitive environmental programs could be in the Independent Television (ITV). As its frontline policy is 'informative, independent and only people's channel', ITV's policy on environment and news investigation is clearly interpreted (apart from regular news program treatments) though its intensive in-depth coverage on both investigative environment issues and informative natural

resources documentaries. For example, programs on the Green Planet, Environment World, Beneath Blue Sky, Lives Under Sea, including environmental talks and interviews. ITV could be ranked as one of the prominent leading channels in environment reporting.

It could be concluded that mass media in Thailand has played an essential role in environmental journalism. They are obviously the prominent factors of inspiring environmental awareness and protection. A lot of environmental campaigns have been fully supported by all branches of the media. The social marketing aspects on environment has been successfully applied to a number of powerful commercials through mainstream media to gain more public participation. It is hoping that mass media itself could continue playing its vital active role in promoting positive public behavior change for environmental protection.

Interestingly, while the mass media proved to be a useful supporter for social campaigns, in the case of environment, some criticisms were heard that mass media does not pay as much efforts to digging in-depth information on particular environmental subjects. Especially when conflict arises, mass media should play a better role as a reliable source of information to educate grassroots and ordinary people to be able to make proper decisions, participate, and as well to appreciate the value of their immediate environment. The roles of environmental journalists is this not only to report news events but also to learn, to invest, to understand and to interpret complicated, in-depth information that can equip regular readers to be able to help protecting their environment and resources. Environmental journalists should put more emphasis on environmental investigation and interpretation in order that people can benefit from his/her environmental reports. Only adequate reliable knowledge/ information can assist the public to change attitudes and behaviors on proper use of natural resources. Hopefully, it could form a powerful public agent to balance undesired political interference and misuse of the natural environment.

Environmental Journalist / Environmentalist

Similar to other nation states, the mass media is always expected to play a role in helping environmental conservation. A group of working journalists is actually fully aware of the critical stage of environmental problems and pay high attention to cover all problematic issues. Many attempts have been done to disclose the intentional or unintentional misuse and/or exploitation of natural resources those consequent national benefits. In doing so, journalists were frequently criticized on their objectivity and fairness. The working culture in the

newsroom and news selection policy is another condition of presenting environmental issues. For instance, competing to other current events news values, environmental news is more likely to be postponed due to its delay impacts and less immediate consequences. Therefore, environmental reporters have to find strategy to get editors' attention on the necessity of environmental news selection and thus to prove their sincerity to the public.

Environmental Journalists Forum in Thailand initiated in 1994 under the PACt support. A group of active reporters were formed to set up an environmental journalists network in order to act as a forum for working environmental journalists in all media branches. The main objectives are to promote environmental journalists, to serve as a centre to exchange ideas in all information concerning the environment, to serve as a supportive body to bring up editors' attention on environmental news selection, to gain better cooperation from environmental news sources, to help improve environment reporting skills, and to mobilize better understanding of environmental issues for news sources and the public.

A series of activities were conducted since the first year of settlement. There were group seminars on the impacts of current environmental issues, news angles in certain topics that would interest readers, publication of manuals for environmental reporting and its news sources, and training programs for environmental reporters at all levels. Some interesting activities were organized on top of regular proposals - a seminar on national environmental policy in the 8th National Plan and a panel discussion on a controversial major dam project. A series of subsequent projects also followed occasionally.

Nonetheless, this author observes that the forum was set up with well intention of a group of young journalists but there was a rather loose gathering of interested reporters that cause low participation in some activities. The working committee has tried to overcome such burdens deriving from the very nature of journalists by putting up constructive organizational structures in which participation could be assured one way or another.

Some years prior to the founding of the Environmental Journalists Forum, in 1988, the Reporters Association of Thailand (RAT) had successfully launched an environmental news contest project named 'Better Life's Award'. The project gained good cooperation from various news media and had been able to continue until a few years later. RAT pushed the same idea to target all practical campus newspapers since 1997. Such supportive roles confirmed the recognition of environmental journalism among Thai journalists.

Again, the question of whether environmental journalists should stick to his/her job as a good journalist or should, at some situations, he/she performs sympathetically involved in the situation for insight reporting? The problem of fair and objective reporting become stronger and controversial when major environmental conflict among various interest groups appeared on the front pages. The bigger the environmental issue covered, the louder the criticism was pressed against environmental reporters on their degree of objectivity. Such circumstances sometimes led to the battle of gaining the public's trust that conflicting agencies tried to employ other media strategies (PR/Advertising) to manipulate public attention. Reliability and creditability of environmental journalists were obviously challenged by concerned parties.

It is rather true that to dig for complicated insight information, reporters need to build a close relationship with news sources and may also need some senses of environmental consciousness. But as a professional journalist, being objective as much as possible is also expected. This dilemma of professionals does create some confusion to most young journalists. When should they be an environmentalist or environmental journalist is the question that needs some experience to answer. The fact is what kind of role that the public expects from being a 'journalist'.

By Way of Conclusion

Environment will catch wide public attention only when it contains strong news values. It always evidences that environmental news on the front pages primarily attracted editors' decision in the value of conflicts more than the value of environment itself. Apart from news coverage, other forms of presentation are regularly appearing in inside pages and columns that may gain less immediate impacts but they do give much more educative, interpretive, and informative information on various environmental subjects. But it is the fact that when the nation has to face the crisis of economic decline, mass media enterprises are the same as any other business that need to reconsider their management policy by firstly minimizing the size of the organization. It is sad that environment sections are among the frontline to be laid off. Although it is obvious that the mass media has played a distinguished role in the environment, the doors to continue exercising such a role is still fluctuating depending upon certain factors such as editor's attitude and business survival.

However, many education institutions and private sectors are increasingly aware of the need to help promoting and inspiring environmental consciousness among the public. Attempts have been made to integrate environment information/ knowledge into their study syllabi as well in

regular activities. Simultaneously, the application of social marketing concepts on the environment into normal product marketing campaigns is frequently visible through electronic media, press, and relevant publications.

Hoping that the future of environmental journalism will continue essential to all concerns. Environmental reporters should be encouraged to apply better reporting strategies for environmental presentation. News media editors and the public should as well take part in improving environmental journalism. Global

environmental journalists forums may pioneer to research the new definition of workable news values/elements on environmental news selection/presentation. In order that environmental journalism can be guaranteed of its continuing existence of higher acceptable position. International environment journalists forums could play a leading concrete role in the matter. It could be an endless process of improving the world environment but it should not be longer to help assuring efficient environmental reporting in the mass media.

Statement from Vietnam

Nguyen Diep Hoa

Vice Chairperson - Vietnam Forum of Environmental Journalists (VFEJ)

Context

In the 1980s and the early 1990s, environmental issues seemed very new in Vietnam. Many people started vaguely recognizing these issues through some sources from outside of the country, including articles translated from international newspapers and republished in Vietnam which dealt with topics such as ozone depletion, air pollution, waste left in space, etc. Some Vietnamese journalists likely gained their first acquaintance with environmental issues understanding from these articles too, and they began to wonder whether Vietnam was also facing the same environmental problems. Also, during that period, international organizations such as UNDP, and leading environmentalists, and the Vietnamese Government began recognizing with concern about the state of the environment.

The situation changed rapidly during the mid 1990s, starting from national programs to assess the environment and to build a national strategy for environmental protection. In 1994, the Environmental Law was approved by the National Assembly. In that same year, Vietnam also ratified important international treaties such as the Bio-diversity Convention and CITES. Meanwhile, under the impact of renovation and the new open door policy, coupled with rapid economic growth, the process of development began to reveal its negative side, which was the depletion of natural resources and increased

environmental degradation. The environment also suffers from the serious pressures of an increasing population, which is now near 77 million. In this context, journalists gradually became aware that environmental problems have become a challenge for the long-term development of the country.

The Media and Environmental Journalism

The printed press, television and radio in Vietnam have become aware of the environmental situation and problems at different times. Articles and programs on the environment from each of these media started initially due to the efforts of a handful of interested journalists. In many newspapers, to focus more attention on the environment has become a new principle, but in some, the articles on the environment appear just by chance.

Voice of Vietnam Radio

Voice of Vietnam Radio (VOV) was the first news agency to set up a specific program on population, natural resources and the environment in early 1990. Initially, this twice a day program was broadcast three times per week, lasting for 15 minutes. After several years, due to the rapid environmental degradation and its impacts on social and economic areas, the program was expanded to be broadcast daily, starting in 1996, with five reporters

specializing environment and population coverage. Additionally, the program worked with many collaborators from the provincial and local radio stations. During the program broadcasts, environmental stories account for about 70-80% of the time, with population covering 10-15%; the remainder of the program coverage is stories dealing with integrated population and environmental issues. Even to the present time, nearly 80% of the population of Vietnam is concentrated in rural and remote areas. Many of these areas still lack power, and many poor families cannot afford a television. Therefore, in the competition for viewers and listeners, radio still attracts 30 to 50% of the potential audience.

Vietnam Television

VTV has two programs dealing with environmental issues. The program "For the Quality of Life" broadcast weekly on Monday evenings, and using a magazine format, it includes reports and investigations on many international and domestic environmental issues, especially focusing on forest protection, bio-diversity conservation, clean water and rural sanitation issues. This program is maintained by a strong team of highly skilled, young environmental reporters from VTV. Many reports broadcast by the program have had a very positive impact by increasing awareness about the environment by people and local authorities at different levels. Additionally, the program also has advertisements for environment protection under a UNDP funded project aimed at increasing public awareness on the environment. Being only a weekly program, "For the Quality of Life" has generated a strong social impact.

After setting up "For the Quality of Life", VTV established a daily program titled "The Environment and Natural Resources" which is broadcast daily in the afternoon. In addition to these specific programs, VTV has several other programs that frequently touch on environmental issues, such as The World of Animals, Dialogue, and Tourism.

For both VOV and VTV, environmental issues are not only highlighted in specific programs devoted to these issues, but are also often integrated into many other programs aimed at different target audiences.

The Print Media and Environmental Journalism

Like a chain reaction, after have appeared in several newspapers or on TV, reports on the environment can often have an immediately impact on reporters working for other press agencies, prompting them also to report on the environment. At the end of 1980s and in the early 1990s, reports on this topic come out only infrequently.

In the period from 1992 to 1994, environmental issues were dealt with in many domestic newspapers, and it became one of the main topics for the local press since the press has aware that the environment was not a separate and distinct issue, but was mixed in with almost every other social and economic issue with a strong impact on the life of people. Lao Dong (Labor) is a leading newspaper in Vietnam which had an early recognition about the threats to the environment. Together with the latest news relating to the environment, about 4 or 5 of the 16 issues of Lao Dong that appear every month have reports or investigations on environmental issues. The newspaper has in many ways become the leading advocate of environmental issues, warning the people about forest loss and calling upon them to conserve bio-diversity. About half of the reports in Lao Dong on the environment deal with nature conservation in Vietnam.

The Khoa Hoc va Doi Song (Science and Life) is another good example. Every issue of this news magazine now contain reports dealing with the environment. Some issues have 3 or 4 articles on environmental topics. In Ho Chi Minh City, Nguoi Lao Dong (The Labourer) and Tuoi Tre (Youth) are the two largest newspapers, with the largest reading audience in the country. They are also very strong in their environmental reporting. Saigon Giai Phong (Saigon is Liberated) is one of the newspapers which publishes frequent articles concerning and warning about water pollution due to increasing population, urbanization and industrial development in the city. The hundreds other newspapers often have reports on a variety of environmental issues.

Social Impact

According to statistics of the Ministry of Agriculture and Rural Development, the Vietnamese press has reports on deforestation, illegal timber trade or wildlife trafficking every day. In this total amount of reports and articles on the environment, 35% to 40% of them touched upon forest protection and bio-diversity conservation issues. Sometimes, the press raise a sensitive or complex issue concurrently, strongly drawing the attention of people and authorities.

There have been some articles or investigations which have forced the authorities to solve the problem immediately after an article appeared in the press. For example, a report by VTV on many tonnes of pesticide, buried many years ago, caused water pollution in a village in Nghe An Province and caused cancer among many villagers as a result. Another report by VTV, dealing with an old hostel sunk in waste water for many years, forced the Hai Phong authorities not to ignore the problem anymore. The investigations by the press on a deforestation case in Binh

Thuan Province in 1996-1997, which was considered to be the worst case of deforestation on record, led to the arrest of the forest destroyers and the provincial officials who abetted them; they were brought to the court for trial in early 1999. In 1997, the media denounced the VEDAN joint venture for dumping MSG waste products into the Thi Vai river in Tay Ninh Province. In 1996, 1997 and 1998, the continuous reports by TV, radio and the press on timber trade, wildlife trafficking, and especially on forest guards, who were not equipped with weapons leading to their injury and sometime even death in the fight against forest destroyers, urged the Government to make a decision to provide weapons for the forest guards and to allow them to use these in their role of protecting the forests. A series of reports and investigations by journalists on deforestation, especially those appearing since 1993 to 1997, contributed to force the Government to close many of the forests, to reduce the annual quota for timber exporting and to move the majority of forestry enterprises, which used to explore wood, to manage and protect forests.

The reports since 1991 to the present on sanitation and safety of vegetable products continuously warn people about misusing pesticides and the consequences on human health, urging the Government to improve management of importing and using pesticides. The reports, which find the gaps in environmental and natural resources management, have had strong social impacts, drawing public attention and concern as well as force among authorities to seek solutions for environmental problems. They have been appearing more and more everyday. For roughly the past 5 years, the media has pushed environmental issues to be one of the greatest concerns among the society.

The media is not strong enough all the time. Why?

Reporters are not supported completely by their editors

Currently, in almost all newspapers in Vietnam there are not any reporters who specialize in covering the environment. The reporters who do cover the environment are likely also to cover other issues like agriculture, aquaculture, science, technology, education, etc. Economic reporters cover only economics, while environmental problems are the negative side of this process. That constrains possibility to concentrate and get in depth of environmental issues by reporters. This pluralism is not recognized enough by editors in chief. However, this pluralism also is originated from small staff. In Vietnam there are not private newspapers yet. Reporters are paid by the Government. While the rule of labor contract has not been applied yet at large, the Government is not able to pay too many professional

journalists, especially, those, who do not work for the agencies, directly under it. TV and the VOV are stronger in reporting on the environment because they have many reporters, paid by the Government, and many of them cover only the environment and science. The state news bodies, including VTV and VOV, which still are completely subsidized by the Government, are very few now. This situation is also because VTV and VOV have specific programs, so they have to have permanently specialized reporters.

Understanding of environmental issues is not deep enough yet

Many journalists agree on that it is quite difficult to report on the environment because it is a large area and many of them are hidden under development issues, which are not easy to be recognized. Therefore, environmental journalists have to have interknowledge and many experiences. In fact, in Vietnam, beside many deep and correct reports on the environment, there are too many reports which are under standard in terms of journalism and environmentalism. A lot of environmental terms are used wrongly. Many environmental issues are touched upon incorrectly and one-sided. Especially, journalists seem still limited in the role of warning the society about environmental threats. They are better in analyzing environmental consequences after they happen, but rarely foresee them. There are not so many articles clearly touching upon the main contradiction of development process, which is that the environment is degraded and scarified by development, which, in its turn, can not be long term. That reduced ability to persuade the public, especially, to cause doubts or displeasure among authorities and environmentalists. This situation also causes chary attitude to journalists by some state agencies or organizations, responsible for management of the environment as well as the companies, who are not able yet to solve environmental problems by them selves, and even international organizations, working in Vietnam.

Still few journalists have been trained on journalism and environmentalism

In recent years, more international organizations concerning about helping journalists to improve journalism skills and environmentalism like IMMF, UNDP, WWF, DANIDA, etc. There are no correct statistics on how many journalists have trained on journalism and the environment. Some organizations realize the need to train journalists to improve their skills in reporting on the environment and that it is much less expensive to organize training courses for them in the country than send them abroad. Further more, if so, not only the journalists, who speak English, but other journalists also could take training. For the training courses organized outside

Vietnam, journalists are selected to be trained based not only on whether they cover the environment, but also whether they speak English. Because of that reason, some journalists, who were selected to go abroad to be trained, in fact, never write about environmental issues. It is surprising that majority of the members of the Forum of Environmental Journalists (VFEJ) are those, who cover the environment, but have never been trained on journalism and environmentalism.

Lack of materials of journalism and environmentalism for journalists to improve their skills by themselves

In the past and current years, in Vietnam there are no trainees specialized in journalism and environmentalism. In addition, there are almost not materials or books targeted on environmental journalists to help them to improve their journalism skills in reporting on the environment by themselves. Some organizations may have some handbooks on how to report on the environment. However, it is very difficult to gain fund for publishing this kind of books. The issue seems very clear and need a small fund for printing, but is not concerned by any organization in Vietnam.

A way to help journalists to get understanding of the environment

In Vietnam, bio-diversity resources are considered the most valuable natural resources of the country. Before 1995, the media rarely dealt nature conservation issues. The MARD did not have yet a clear direction to help journalists to approach these hot issues. In 1992, actually, the press seemed to be abashed, while being informed on Sao La discovery in Vu Quang Nature Reserve. Many newspapers ignored this scientifically important event, which is potentially to wake up a concern of the public to nature conservation, just because of no understanding. Together with finding by journalists about the fierce fight between forest guards and forest destroyers, WWF Indochina Program, having some big conservation projects implemented in Vietnam, has contributed considerably to increase awareness of journalists on nature conservation. The discoveries of the new species under these projects have caused interest and has helped the press to realize the importance of bio-diversity conservation in Vietnam. Since 1996, this organization has been maintaining continuously relationship with journalists to provide them information. This is also the only international organization which has a permanent video source to meet the need of local TVs for shorts of international environmental issues and events. Besides, WWF organized training courses in the country and field trips for journalists to help them to get deeper understanding of conservation issues and maintain their

concern about them. A big rate of the reports on nature conservation compared to the total amount of the reports on the environment (about 35%) now indicates that journalists really are concern about the issue. Contribution of WWF to increase journalist's and public awareness of conservation shows that the press policy of an environmental organization has a special meaning. Continuously providing local journalists with information on conservation and other environmental issues, this organization have the following meaningful activities:

1997: training course and field trips for 25 journalists on the environment and natural resources

1998: workshop on the role of the media and sustainable development

1999: field trips for journalists of biggest newspapers, VTV and VOV to national parks and nature reserves.

1999: second training course (to be organized in November) on conservation and development for 20 journalists in the south.

Regretfully few Governmental agencies, even international organizations, still avoid, or are afraid of making contact with journalists, thinking that they could "make trouble" rather than implement the function to cause and maintain public concern about the hot problems of the society. This constraint also reflects ineffective communications orientations of some organizations, more focusing on their image in the public than draw public attention on the problems they solve. In fact, it is much less possible to have solved problems, especially environmental problems, without large support from society.

What does VFEJ do?

VFEJ was set up in 1998 with active assistance from the WWF Indochina Program, UNDP, the Vietnam Association of Environment and Nature Conservation, ESCAP and APFEJ. The main motivating forces for journalists to establish VFEJ are:

- The increasing contradiction between the environment and development
- Ability of journalists to contribute to solve the contradiction by increasing public awareness to promote sustainable development in Vietnam

With 30 members from the biggest newspapers based in Hanoi and Ho Chi Minh city, Hanoi TV and VOV, VFEJ has identified that the organization is a forum where environmental journalists exchange information, journalism skills and experiences to increase awareness and knowledge of environmental and natural resources issues and to help them to report correctly and in time on the environment.

The main activities of VFEJ are to help journalists to get information on environmental issues under the following forms

1. Dialogue: In fact, in the past years, environmental issues more and more emerge every day in many different areas, however, in many cases journalists are not able to find out and absorb them. That is the main cause of many outdated reports. To overcome this problem, the point of view of VFEJ is that firstly, to contribute to increase public awareness of the environment, journalists have to increase their awareness and improve their understanding of environmental issues. Monthly dialogue held by VFEJ with participation of Governmental officials, managers, decision makers, businesses, and other concerning people on a hot environmental problem, is a quick way to provide many journalists at the same time with general and comprehensive information on each selected issue. In 1999, VFEJ has organized three of the planned dialogues on sanitation and safety of vegetable products, wildlife management and conservation; clean water and environmental sanitation for rural areas. The other to be organized in this year are dialogues on building environmental foundation issue, air pollution in cities, water supplying and natural disasters issues. Actually, after the first successful dialogues, VFEJ started getting different offers from organizations and Governmental agencies to keep holding dialogues with funds from them. The dialogues like that will help journalists better approach practice to find out problems to be solved.

2. Bulletin: Two monthly bulletin is to communicate to the members about VFEJ's activities as well as to share information and environmental journalism among them.

3. Training: Training environmental journalists is considered one of the most important activities of VFEJ. Training is not only aimed to improve journalism skills of journalists in reporting on the environment, but to build and develop a network of VFEJ. That is why VFEJ tries to seek opportunities for as much journalists as possible to be trained on journalism and environmentalism either in the country or abroad.

How does VFEJ exist and operate?

Although being less than one year since it was established, through the activities mentioned above, VFEJ is proving that their direction of development is correct and appropriate for Vietnam, meeting the need to increase the role of the media in the region and the world for promoting sustainable development. Currently, VFEJ's approach is to operate mainly based on voluntary contributions of time and efforts from the members. Activities are funded only when VFEJ solicits direct support from an organization such as WWF. In the long run, VFEJ hopes to develop a long-term project to assist and strengthen the organization, to improve its capacity in organizing and coordinating activities, and to effectively contribute to fostering sustainable development in Vietnam.

● CHINA ● KOREA ● JAPAN ● MACAU ● MONGOLIA ● BRUNEI DARUSSALAM ● CAMBODIA ●
INDONESIA ● LAO ● MALAYSIA ● MYANMAR ● PHILIPPINES ● SINGAPORE ● TAILAND ● VIETNAM
● AFGHANISTAN ● BANGLADESH ● BHUTAN ● INDIA ● IRAN ● MALDIVES ● NEPAL ● PAKISTAN
● SRI LANKA ● AZERBAIJAN ● KAZAKHSTAN ● KYRGYZSTAN ● TAJIKISTAN ● TURKMENISTAN ●
UZBEKISTAN ● JORDAN ● LEBANON ● TUNISIA ● KUWAIT ● OMAN ● SAUDI ARABIA ● SYRIA ●
YEMEN ● UNITED ARAB EMIRATES ● TURKEY ● AMERICAN SAMOA ● AUSTRALIA ● MARIANA
ISLANDS ● COOK ISLANDS ● FEDERATED STATES OF MICRONESIA ● FIJI ● FRENCH POLYNESIA ●
GUAM ● KIRIBATI ● NAURU ● NEW CALEDONIA ● NEW ZEALAND ● NIUE ● MAURITIUS ● PAPUWA
NEW GUINEA ● MARSHALL ISLANDS ● PALAU ● SAMOA ● SOLOMON ISLANDS ● TONGA ● TUVALU
● VANUATU ● ANTIGUA ● BARBUDA ● BAHAMAS ● BARBADOS ● BELIZE ● BOTSWANA ● BRITAIN
● BRUNEI DARUSSALAM ● CAMEROON ● CANADA ● CYPRUS ● DOMINICA ● THE GAMBIA ●
GAHANA ● GRENADA ● GUYANA ● JAMAICA ● KENYA ● LESOTHO ● MALAWI ● MALTA ●
MAURITIUS ● MOZAMBIQUE ● NAMIBIA ● NIGERIA ● ST KITTS AND NEVIS ● ST LUCIA ● ST VINCENT
AND THE GRENADINES ● SEYCHELLES ● SIERRA LEONE ● SOUTH AFRICA ● SWAZILAND ●
TANZANIA ● TRINIDAD AND TOBAGO ● TUVALU ● UGANDA ● WEST SAMOA ● ZAMBIA ●
ZIMBABWE ● CHINA ● KOREA ● JAPAN ● MACAU ● MONGOLIA ● BRUNEI DARUSSALAM ●
CAMBODIA ● INDONESIA ● LAO ● MALAYSIA ● MYANMAR ● PHILIPPINES ● SINGAPORE ●
TAILAND ● VIETNAM ● AFGHANISTAN ● BANGLADESH ● BHUTAN ● INDIA ● IRAN ● MALDIVES
● NEPAL ● PAKISTAN ● SRI LANKA ● AZERBAIJAN ● KAZAKHSTAN ● KYRGYZSTAN ● TAJIKISTAN
● TURKMENISTAN ● UZBEKISTAN ● JORDAN ● LEBANON ● TUNISIA ● KUWAIT ● OMAN ● SAUDI
ARABIA ● SYRIA ● YEMEN ● UNITED ARAB EMIRATES ● TURKEY ● AMERICAN SAMOA ●
AUSTRALIA ● MARIANA ISLANDS ● COOK ISLANDS ● FEDERATED STATES OF MICRONESIA ● FIJI ●

Plenary Reports

FRENCH POLYNESIA ● GUAM ● KIRIBATI ● NAURU ● NEW CALEDONIA ● NEW ZEALAND ● NIUE
● MAURITIUS ● PAPUWA NEW GUINEA ● MARSHALL ISLANDS ● PALAU ● SAMOA ● SOLOMON
ISLANDS ● TONGA ● TUVALU ● VANUATU ● ANTIGUA AND BARBUDA ● BAHAMAS ● BARBADOS ●
BELIZE ● BOTSWANA ● BRITAIN ● BRUNEI DARUSSALAM ● CAMEROON ● CANADA ● CYPRUS ●
DOMINICA ● THE GAMBIA ● GAHANA ● GRENADA ● GUYANA ● JAMAICA ● KENYA ● LESOTHO
● MALAWI ● MALTA ● MAURITIUS ● MOZAMBIQUE ● NAMIBIA ● NIGERIA ● ST KITTS AND NEVIS
● ST LUCIA ● ST VINCENT AND THE GRENADINES ● SEYCHELLES ● SIERRA LEONE ● SOUTH AFRICA
● SWAZILAND ● TANZANIA ● TRINIDAD AND TOBAGO ● TUVALU ● UGANDA ● WEST SAMOA ●
ZAMBIA ● ZIMBABWE ● CHINA ● KOREA ● JAPAN ● MACAU ● MONGOLIA ● BRUNEI
DARUSSALAM ● CAMBODIA ● INDONESIA ● LAO ● MALAYSIA ● MYANMAR ● PHILIPPINES ●
SINGAPORE ● TAILAND ● VIETNAM ● AFGHANISTAN ● BANGLADESH ● BHUTAN ● INDIA ● IRAN
● MALDIVES ● NEPAL ● PAKISTAN ● SRI LANKA ● AZERBAIJAN ● KAZAKHSTAN ● KYRGYZSTAN
● TAJIKISTAN ● TURKMENISTAN ● UZBEKISTAN ● JORDAN ● LEBANON ● TUNISIA ● KUWAIT ●
OMAN ● SAUDI ARABIA ● SYRIA ● YEMEN ● UNITED ARAB EMIRATES ● TURKEY ● AMERICAN
SAMOA ● AUSTRALIA ● MARIANA ISLANDS ● COOK ISLANDS ● FEDERATED STATES OF MICRONESIA
● FIJI ● FRENCH POLYNESIA ● GUAM ● KIRIBATI ● NAURU ● NEW CALEDONIA ● NEW ZEALAND
● NIUE ● MAURITIUS ● PAPUWA NEW GUINEA ● MARSHALL ISLANDS ● PALAU ● SAMOA ●
SOLOMON ISLANDS ● TONGA ● TUVALU ● VANUATU ● ANTIGUA AND BARBUDA ● BAHAMAS ●
BARBADOS ● BELIZE ● BOTSWANA ● BRITAIN ● BRUNEI DARUSSALAM ● CAMEROON ● CANADA
● CYPRUS ● DOMINICA ● THE GAMBIA ● GAHANA ● GRENADA ● GUYANA ● JAMAICA ● KENYA
● LESOTHO ● MALAWI ● MALTA ● MAURITIUS ● MOZAMBIQUE ● NAMIBIA ● NIGERIA ● ST
KITTS AND NEVIS ● ST LUCIA ● ST VINCENT AND THE GRENADINES ● SEYCHELLES ● SIERRA LEONE ●
SOUTH AFRICA ● SWAZILAND ● TANZANIA ● TRINIDAD AND TOBAGO ● TUVALU ● UGANDA ●

Statement by Dr. Liqa Raschid Sally, Sri Lanka

Water Specialist, International Water Management Institute (IWMI)

████████████████████

Water and Food Scarcity

Background

The policy dialogue model is developed as part of the Vision 2025 exercise through a joint effort by IWMI (International Water Management Institute) and IFPRI (International Food Policy Research Institute).

The model builds upon IWMI's previous research on food and water demand, described in: "World Water Demand and Supply, 1990 to 2025 Scenarios and Issues" by David Seckler et al. (IWMI Research Report no. 19, 1998). This report can be downloaded from IWMI's website (www.cgiar.org/iwmi). At a later stage, the results from IFPRI's model IMPACT will be used to validate and refine IWMI's model. At present these results are not available and data from international databases such as FAOstat, WRI, IIRRI/Huke and USDA are used.

This model will be used during regional consultation meetings as part of Vision 2025 exercise. It will:

- Provide an analytical framework to structure discussions about future water and food demand issues
- Generate critical issues which needs further attention and research

What the model does

The model determines increasing water demand in 2025 as a result of population growth and changing diets. It gives the user ample opportunity to modify assumptions to the national context and to test different scenarios. The model does not provide hard and fast predictions but rather analyses "what-if" questions. For example, it helps analyzing and answering questions such as: "If India's population in 2025 will consume 3000 Kcal per capita per day, what does this imply for grain requirements, what does this require in terms of rain-fed and irrigated grain production and ultimately, what does this mean for irrigation policy and water requirement? Will water and land resources be sufficient to produce the required food, or should the country import more grains? And what if the calories intake rises up to 3600 KCal (US level) and people start eating more meat? The user can modify all major variables and directly monitor the effects of these

changes on water demands. This feature makes the program a very suitable tool for scenario testing and sensitivity analysis.

For whom

Policy and decision-makers involved in natural resources management are increasingly confronted with questions concerning food and water scarcity. They may find this tool useful to determine future directions in policy. For example, if India's Government aims at a certain level of food intake in 2025, what are the paths to take to achieve this goal. yield increase, augment irrigation cropping intensity, cereal area, increase imports etc. What is the appropriate mix of policy measures? The program raises the issues without addressing site specific questions such as how to increase yields, or how much investments would be needed. This makes it an excellent starting point for further in-depth discussions among stakeholders.

Students and people interested in food and water demand issues might find this program a suitable tool to increase their knowledge and insight in food and water issues.

How

After selecting a country, the program loads default data and assumptions. The program uses 1995 as a baseyear. By default, 2025 predictions are based on historical growth rates (1985-1995) derived from the FAO database. At a later stage results from IFPRI's IMPACT model will be used as default predictions. It should be stressed, however, that users can change all major variables and modify assumptions and predictions according to their own insights and local conditions. The computation process consist of three steps: The first step is to determine the grain requirements (food as well as feed) based on user defined assumptions concerning calories intake and diet composition in the year 2025.

The second step computes the production of the required cereals using data and estimates of yields and cultivated areas with and without irrigation.

The third step converts this predicted grain production into irrigation water demands and compares this irrigation water demand with actual withdrawals in 1995 and available renewable water resources. Further, it

assesses expected adverse impacts of increased water withdrawals on the groundwater balance. The program takes into account water needs for domestic and industrial uses.

Statement by Dick de Jong, The Netherlands

Marketing & Advocacy Manager

IRC International Water and Sanitation Centre

Refreshing Our Memory on Fresh Water

1. Introduction

The UN Secretary General's Report to the Commission on Sustainable Development "Comprehensive Assessment of the Freshwater Resources of the World" (1997), shows that in many countries in the South and the North, current pathways for water use are often unsustainable. The World faces a worsening series of local and regional water quantity and quality problems, largely as a result of poor water allocation, water wastage and increasing degradation of water resources.

Water use has been growing at more than twice the rate of the population increase during this century. Water shortages and pollution are causing widespread public health problems, limiting economic and agricultural development and harming a wide range of ecosystems. There is a steady increase in the number of regions in the world where demands are outstripping available water supplies, affecting particularly the poorer part of the population.

For many cities of the developing world, the top environmental priority remains - the improvement of access to clean water and sanitation. As the World Bank concluded in 1992, doing so would be the single most effective means of alleviating human distress. To this it can be added that the International Drinking Water and Sanitation Decade did not even come close to its original objectives of providing adequate water and sanitation facilities to all by 1990, it just made the gap between the 'haves' and the 'have nots' a little smaller. The Decade

however has provided us with important lessons and it has helped to establish an international platform for debate amongst the ESAs, National Governments and NGOs involved in the sector.

2. Key principles in Water Resources Management

Several important international conferences have taken place since the end of the Decade which have placed emphasis on lessons learned and which try to bridge the gap between water supply and water resources management. The International Conference on Water and the Environment (Dublin, 1992) and the United Nations Conference on Environment and Development (Rio de Janeiro, 1992), both challenged existing management practices of water resources as being unsustainable from an economic and environmental perspective. This was reconfirmed in the 1994 Ministerial Conference in Noordwijk and several guiding principles emerge from these meetings. The Noordwijk meeting indicated that human resource development and a more human centred approach are perhaps the most crucial as for development in the sector to ensure enhanced efficiency and more sustainable systems. This meeting also re-enforced the important shift of governments changing their role from provider to facilitator (VROM, 1995).

This implies an enormous challenge because capacity building consists of three elements (IHE, 1991):

- Creating an enabling environment with appropriate policy and legal frameworks;

- Institutional development, including community participation;

Human resource development and strengthening of managerial systems

In response to the principles and pressure from international banks, governments in the South are trying to come to terms with some of these principles. Many have opted for decentralization and are shifting more of the burden to communities in that they promote community management, without providing the necessary support. Also they are increasingly supporting private sector interventions, although often this does not work smoothly as the private sector has little experience in communities in rural and low-income urban areas.

Some key principles for water resource management on the 1994 Ministerial Conference in Noordwijk, (Saunders et al 1996)

Integrated management of water, taking into account all the implications that water has for health, the environment, social and economic policy and the interaction between land and water, involvement of all stakeholders, reflecting the different needs of men and particularly women and involving all sections of society in resolving the problems that affect them. This can be facilitated by adopting the river basin as the natural boundary for WRM; capacity building to develop an enabling institutional environment, which optimizes the use of available resources and helps to establish responsibility for integrated management of water at the lowest appropriate level and accommodates a system of demand-driven approach, dealing with water resources as a social and economic commodity, in order to ensure efficient allocation, use and protection of water searching for innovations, technological and non-technological, to bridge the gap between the physical, human and financial resources and the escalating demand for water and need for sanitation in the developing world.

3. Searching for sustainable solutions

Also in water and environmental sanitation sustainability is the key issue. For the WSS sector the following definition helps to clarify this.

A water supply system is sustainable when it:

Continues to provide an efficient and reliable service, at a level which is desired,

Can be financed or co-financed by the users,

Can be maintained with limited but feasible external support and technical assistance, and;

Is being used in an efficient way, without negatively affecting the environment, conserving it for the generations to come

The search for sustainability implies that a match is needed between four dimensions, the community, the environment, the technology and the legal and institutional context.

In this the community dimension includes its capacity to manage, operate and maintain a system; the availability of skills, its capacity and willingness to pay, its cultural and social structure, its health awareness and hygiene behavior; and its gender balance. The environmental dimension includes the availability of fresh water resources (in quantity and quality), its proper management, protection and conservation. The technology dimension includes, the available technology, the capacity to respond to present and future demands and consumption patterns; its capital and maintenance costs; its impact on environment, its complexity and the availability and cost of spare parts

These dimensions are set within an overall legal and institutional context of regulations and availability of technical/financial assistance and support that can best be accessed through a partnership between the community and public or private institutions, most of the developing countries today are going through important institutional changes, transferring responsibilities to decentralized and deconcentrated levels. The role of the central government changes from provider to facilitator and regulator; this means devolving responsibility for management of water supply and sanitation services to the lowest possible level, while government remains responsible for policy development and the establishment and enforcing of the legislation. This institutional "change", concerns also the involvement of the "formal" or "informal" private sector. It may be questioned whether privatization is the universal solution, particularly because the private sector is weak in many countries. Also it is not clear if privatization caters for the needs of the urban and rural poor where profit margins may be small.

Searching for sustainable solutions requires therefore integrating all the consequences that these institutional changes are inducing, in terms of roles, responsibilities, and capacity. Through an informed dialogue with the stakeholders sustainable solutions can be found that are based on a clear understanding of the different perceptions of the problems and demands that exist and the possible solutions that are available, prerequisites of a demand-driven approach.

Commission on Sustainable Developments (CSD)

The United Nations Commission on Sustainable Developments in its sixth session in 1998 adopted Decision 6/1 (CSD, 1998). Strategic approaches to

freshwater management. In this it urged governments to address the numerous gaps identified on the road to integrated water resources management, protection and use. Areas that require further attention include:

- (i) Meeting basic health education needs and raising awareness of the scope and function of surface and groundwater resources;
- (ii) The need for human resources development and participatory approaches, notably including women and local communities and integrating freshwater issues into local Agenda 21 processes;
- (iii) The role of ecosystems in the provision of goods and services,
- (iv) Balancing structural and non - structural approaches;
- (v) Explicit linkages with socio-economic development, for equitable utilization and efficient freshwater allocation and use,
- (vi) Improved sanitation and waste-water treatment and recycling;
- (vii) Conserving the biological diversity of freshwater ecosystems;
- (viii) Conservation and sustainable use of wetlands;
- (ix) The understanding of hydrology and the capacity to assess the availability and variability of water resources;
- (x) Mobilization of financial resources and mainstreaming of gender issues into all aspects of water resources management; and
- (xi) Wasteful water usage.

Strategic and integrated actions are still needed in order to adapt to ever-changing social and environmental circumstances and to address fundamental concerns for combating poverty, ensuring adequate provision of public health, food security and energy, and to protect the environment better. International cooperation and action needs to address effectively the above issues, building on existing consensus for the successful implementation of integrated water resources development, management, protection and use, the CSD wrote in its decision.

The Commission also encouraged "riparian states to cooperate on matters related to international watercourses, whether transboundary or boundary, taking into account appropriate arrangements and/or mechanisms and the interests of all riparian States concerned..." After this decision was adopted five countries put on record reservations about the wording "international water courses" as well as "appropriate arrangement / mechanisms": India, and Turkey preferred "transboundary watercourses", which they consider the proper term as it is widely accepted and used in legal instruments. The use of "international" watercourses has no legal consequence.

Uganda, Ethiopia and Rwanda emphasized that the agreement on this language does not affect States' capacity to use their resources as they see fit. They expressed hope that acceptance of the language "appropriate arrangements and/or mechanisms" is not taken as a precedent and will not create undue legal obligations on States.

4. Key issues for the future

Water resources management problems are so complex that an integrated, inter-institutional and interdisciplinary approach is needed to cope with them. Water resources are still deteriorating in most countries with the related health and economic consequences. As this does not only concern local governments, but has strong linkages with agricultural and industrial production and also involves conflicts between neighboring states over surface water sources, water resources management needs to be high on the political agenda.

If we draw the lessons from the past some very essential issues for the future include:

Setting objectives and indicators; and agree upon them with the stakeholders, so a transparent and objective process can be followed where responsibilities can be set as well. It is important that the indicators also include qualitative issues, so not just number of projects, meters of pipeline or number of people having access to water supply systems (coverage). Having a tap in your house does not mean you get good quality water. Few water supply systems in rural communities in the South do consistently produce potable water (Visscher, 1996). Existing irrigation systems may deliver less than 30 per cent of the water to the plant, the other part just seeps away in the system. So targets should be set in terms of good functioning systems that are properly managed and effectively used;

· Polluters pay principle; needs to be introduced effectively as this can very much stimulate the introduction of water saving methods, improvement of waste treatment and an efficient use of resources as waste is turned into a resource for new products;


· Capacity building and technology transfer; need to be supported from a learning perspective. Not a one way process, but establishing a learning environment in which academic knowledge and community experience is equally valued and shared in a dialogue that allows the adaptation of technologies and methodologies to the local environment;

· Gender specific approaches; need to be encouraged, as rights and interests of men and women often are very

different when it comes to water resources. They also have different responsibilities, access to and control over resources that need to be taken into account when projects are developed. Projects have sometimes increased the burden on women by almost forcing their involvement but not ensuring an equal sharing of the burdens between men and women;

- Platforms for decision-making and resource negotiation; need to be created or strengthened to establish the dialogue between stakeholders and ensure a better distribution of resources and benefits. In this context it is particularly important to enhance the bargaining powers of men and women in communities, to make them a better match in the discussion with the other stakeholders.

Statement by Dick de Jong, The Netherlands
Marketing & Advocacy Manager
IRC International Water and Sanitation Centre



Sustainable Water Supply and Sanitation Services

Following the new developments in the sector, and taking into account the experience of CINARA (Colombia) and IRC, the following approximation of sustainable water supply and sanitation systems emerges. A water supply or sanitation system is sustainable when it:

Provides an efficient and reliable service at a level that is desired;

- Can be financed or co-financed by the users with limited but feasible external support and technical assistance;

Is being used in an efficient way, without negatively affecting the environment;

Is still usable in 25 -50 years by the next generation.

The management of the system is a crucial aspect that more and more will be placed in the hands of community based organizations. Projects that enhance the management capacity and the self-esteem of communities and make sure that jointly, solutions are adopted that take into account the local conditions and culture and particularly the prevailing sanitary problems, stand a better chance to develop sustainable systems.

The definition indicates that sustainability implies a match between the political, socio-economic, legal and institutional frameworks in which the systems need to operate, and that it involves three strategic inter-linking

dimensions as indicated in Figure 3.1 (Galvis, 1993; Galvis et al, 1994).

The Community and the Local Institutions

This dimension concerns different groups of people with some common but often also some conflicting interests and ideas and different socio-economic and cultural backgrounds. The water supply system may be one such common interest, but at the same time can be a major source of conflict. Their history and their socio-economic and environmental conditions shape the identity of the people in the communities. Some of them, often the economically better off, may be better informed, may know more of the world, but may on the other hand, have certain interests in keeping the status quo and therefore may not be willing to solve certain problems. Women may have interests different from those of men and may not have been heard in the past, or their position may make it difficult to achieve changes on their own.

The community dimension includes issues such as the capacity and willingness to pay for the required service level, possibilities of national or international institutions to finance or co-finance the initial investment and the management capacity at local level. It also includes the possible existence of resources and of institutions that can

provide support and assistance. This may concern issues such as technology development, water surveillance and control, environmental, conflict management, hygiene promotion and environmental education.

The environment, the boundary that shapes the community and dictates the risks it faces and the local resources it can draw from to meet its needs. In water supply projects these risks often relate to issues such as: the available water resources; their pattern over the year; their level of pollution; sanitation practices of the community; and land and water use patterns. The possible effect a water supply system may have on the environment, for example, by producing wastewater and chemical sludge, also needs to be reviewed. Furthermore it is essential to get a good insight in the level of contamination and the sanitary risks involved. The interface between the environment and the community represents the risk the community has to overcome in relation to, for example, its water supply. The risk-analysis helps to establish and prioritize actions to reduce the risks.

Science and technology, reflected in the knowledge, the culture, the infrastructure and the tools actors can use to reduce the environmental risks the community is facing.

The interface between environment and technology represents actions that can be taken to reduce the contamination in the water sources or reduce or eliminate them by treatment. In the interface between the community and the environment priority activities can be identified that focus on change in behavior in relation to for example management of the catchment areas but also including personal hygiene. It encompasses discussions with the community concerning the best possible water sources (rain water, surface water or ground water) possibly combining them to ensure an effective use. The interface between technology and community deals with the type of solutions the community is expecting is willing and able to manage and sustain and that are in line with the technical, socio-economical and environmental conditions and capacities of the community. The activities related to risk reduction can only be sustainable if the community adopts the solution and gains ownership of it by making it their own.

Conceptual framework underpinning the search for sustainability Solutions that match the three interfaces and the overall political, legal and institutional framework are most promising in terms of sustainability. This requires joint problem solving with the different actors involved and a clear role of the community and the local level in decision making. The conceptual framework presented, is a simplification of the elements involved in the process and serves to illustrate the diversity of the variables. The complexity of reaching sustainable solutions is often underestimated because of lack of information, restrictions in the interdisciplinary approach and difficulties in introducing research and development activities in the sector. Although science may not be able to provide immediate solutions in a specific project environment, it does provide the tools and techniques to initiate the search for them and ensure quality results. The resulting benefits of such research activities, if properly shared with sector agencies and communities, often outweigh by far the investment required to undertake them.

Development programs in the Sector thus need to enhance the research and development capacity of the institutions involved, and strengthens the network of organizations in search of sustainable solutions. Some of the answers may already exist in the communities or local institutions. This calls for good communication between the actors involved and stimulation of their creativity and initiative. Technologies that are traditionally used in a region often are an important part of the solution, calling for a participatory review of local experience. If 'new' technology has to be introduced, testing is needed to allow for the necessary adaptation to the local conditions and to ensure that adequate operation and maintenance can be taken care of, before promoting large-scale application. This also includes a review and adaptation of training materials for the different levels of education involved in the use of the technology.

Just focusing on water supply is not sufficient to reach an adequate health impact and truly contribute to development (Esrey, 1990). It is essential to combine water sector interventions with activities to improve basic sanitation, hygiene behavior and environmental education.

Statement by Marcel Van Del Heuvel, The Netherlands

Deputy Executive Director / Executive Officer

Second World Water Forum and Ministerial Conference

Second World Water Forum

Syarifa Foundation for Environmental Communication Chairperson Dr. Amanda Katalih-Niode chaired this session which focussed on the upcoming World Water Forum to be held in March 2000 in The Hague, The Netherlands. Water Water Forum Deputy Executive Director Marcel Del Heuvel explained the aims of the event, while Forum Communications Officer Nils Hoffman presented two recently developed press releases explaining some of important issues of the ambitious event.

The government of The Netherlands, together with other donors and international organizations, is supporting the development of the Long Term Vision on Water, Life and Environment in the 21st Century Initiated by the World Water Council, the Vision is currently being prepared under the guidance of the World Commission on Water in the 21st Century.

The Vision and its accompanying Framework for Action, to be developed by the Global Water Partnership, will be presented in The Hague at the World Water Forum and Ministerial Conference from March 17 to 22, 2000.

The Forum and Conference aim to create public awareness and generate commitment at political level. Leading experts and top officials from around the world will convene in The Hague for this historic event, which will focus the attention of all stakeholders on the conditions necessary for implementing the Vision and the Framework for Action at regional, national and global levels. A parallel Ministerial Conference will take place on March 21 and 22 and will be chaired by the Dutch Minister for Development Cooperation.

The World Water Gap

World's Ability to Feed Itself Threatened by Water Shortage. The water equation is simple but deadly: some 20 percent more water is needed than is available to feed the additional 3 billion people who will be alive by 2025, warns the newly formed World Commission on Water for the 21st Century.

The World Commission's statement, issued to commemorate World Water Day, 1999 (March 22) marks the first time that a major effort is being made to link global water scarcity with food security -- the ability of a country to feed itself.

"Water is life. Shortage of fresh water is looming as the most serious obstacle to food security, poverty reduction and protection of the environment," says Ismail Serageldin, Chairman of the Water Commission and World Bank Vice President for Special Programs.

"Even if we do everything we can to make irrigated agriculture more water efficient, humanity will still need at least 17 percent more fresh water to meet all its food needs than is currently available . . . the world water gap," says Dr. Serageldin. "If we follow business-as-usual, all water sectors will need 56 percent more water."

The Commission warns: "We are facing a world water gap right now, this minute, and the crisis will only get worse. The consequences of failing to bridge the world water gap will be higher food prices and expensive food imports for water scarce countries that are predominantly poor. Already, 800 million people are going hungry because they cannot afford to buy food."

The World Water Commission was formed to call public attention to the water crisis and to find solutions. While more water is needed to feed ourselves, we already face severe water-related problems, such as.

- * 1.4 billion people live without clean drinking water;
- * 2.3 billion people lack adequate sanitation;
- * Seven million die yearly from diseases linked to water;
- * Half the world's rivers and lakes are seriously polluted;
- * Important rivers like the Yangtse do not flow to the sea for much of the year because of upstream withdrawals;
- * Food shortages could create millions of environmental refugees.

Currently, nearly 450 million people in 29 countries face water shortage problems, a figure that is projected to jump to nearly 2.5 billion people by 2050.

Two-thirds of the world's population live in areas receiving only one-quarter of the world's annual rainfall. For example, about 20 percent of the global annual rain runoff each year occurs in the Amazon Basin, a vast region with fewer than 10 million people, a tiny fraction of the world's population. Similarly, the Congo River and its tributaries account for about 30 percent of the entire African continent's annual runoff, but the watershed contains only 10 percent of Africa's population.

The entire Mediterranean region, including parts of southern Europe, North Africa and Middle East, India, parts of China, most of Sub-Sahara Africa and major regions in North and South America, especially the western United States, will face severe water shortages in the coming years. Europe also faces serious problems. Already, half of its lakes, an important source of fresh-water, are eutrophied.

The World Commission on Water for the 21st Century, supported by all agencies of the United Nations and the World Bank, has been set up to bring together the work of thousands of scientists, economists and members of civil society from across disciplinary boundaries to devise solutions to the water crisis and alert decision-makers of its dangers. Government sponsors include Australia, Belgium, Canada, Denmark, France, Japan, Luxembourg, the Netherlands, Sweden, the United Kingdom, the United States.

The Commission will guide the development of the World Water Vision and Framework for Action, a program that will be presented at the 2nd World Water Forum and Ministerial Conference, scheduled for World Water Day, 2000, March 17-22, in The Hague, Netherlands. This conference is aimed at converting public awareness on water into political commitment.

The World Water Commission, which includes Nobel laureates, eminent scientists and policy makers, says that "water scarcity, not shortage of land, will be the main constraint to increased agricultural production in developing countries in the coming years."

In the last thirty years, the world has been able to feed its burgeoning population only because the science-driven Green Revolution more than doubled food grain production. The increase came mostly on irrigated lands, which comprise less than a fifth of all cropped area but produce some 45 percent of the world's food. As a result, the number of people eating less than 2,100 calories per day, a standard index of malnutrition, has fallen by three-quarters.

But these gains are threatened. Irrigated agriculture will have to provide 70 percent of the increased food needed for an additional 3 billion people expected by 2025. But

even if irrigation reaches water use efficiency levels of 70 percent at the basin level everywhere (from an average of 45 percent) we would still need 17 percent more water. That is the basis of the water gap."

Depending on rain-fed agriculture would cause massive environmental damage: more land would have to be cleared; forests would be lost; habitats would be destroyed, and bio-diversity would be threatened. Every hectare of irrigated land represents 2.5 hectares of pasture or forest that need not be developed for agriculture.

"Competition for water from growing cities, industry and the environment means that irrigated agriculture is not likely to get any additional water, even though our best-case estimates call for a 17 percent increase," says Dr. Serageldin.

Urban populations of the developing world are expected to triple in the next thirty years. In 1950, there were less than 100 cities with a population in excess of 1 million; by 2025, that number is expected to rise to 650. Now, some 23 cities -- 18 of them in the developing world -- have populations exceeding 10 million. Soon, half of the world's people will live in urban areas.

Some of the world's largest cities, including Beijing, Buenos Aires, Dhaka, Lima and Mexico City, depend heavily on groundwater for their water supply, but dependence on aquifers, which take many years to fill, is not sustainable. Groundwater from aquifers beneath or close to Mexico City, for example, provides it with more than 3.2 billion liters per day, but already, water shortages occur in many parts of the capital. Bangkok, which is depleting its aquifer for drinking and sanitation, is literally sinking. Most of the world's megacities are on the coast, where aquifer depletion leads to salt-water intrusion and the contamination of precious fresh water.

"Thus, these megacities will be competing for agricultural water," Dr. Serageldin says.

Agriculture itself is dependent on aquifers, which are being used at an unsustainable rate. For example, India is using twice as much water from its aquifers as is being replenished naturally. That country could lose a quarter of its total food production by 2025. Libya consumes 3.7 times its renewable water resources, 75 percent of it for agriculture.

Asia's agriculture faces the most severe water problems of any continent. Slightly more than 50 percent of Asian agriculture is irrigated. Agriculture accounts for 87 percent of China's water consumption. In India, agriculture consumes an estimated 93 percent of all renewable water.

"Severe conflicts due to competing claims for water may erupt from what are increasingly rancorous disputes over water," warns Mr Serageldin, whose 1995 call to arms over water, and the dangers of war, spurred a new momentum on international collaboration in managing water. The Global Water Partnership and the World Water Council were created and led to the foundation of the World Water Commission.

Solutions

The international community and the Commission have outlined a set of recommendations to ensure better management of scarce water resources. These include better institutional arrangements, water pricing and forcing polluters to pay. However, the Commission says, radical and more innovative solutions will also have to be found to increase water supplies and reduce losses.

Some of these possible solutions include:

- * making desalination affordable;
- * using remote sensing to find the much great quantities of ground water that is thought to exist;
- * finding more efficient and more affordable ways to recycle waste water;
- * finding more useful collect technologies for rainwater;
- * finding ways to replenish groundwater;
- * developing toilets that don't use water to deal with human waste,
- * developing technology to transport fresh water over long distances, including across oceans,
- * using biotechnology to breed less thirsty and more drought-resistant plants;
- * using computers to integrate the different uses of water.

The key, however, is to generate public awareness, and from it behavioral change and the political will to create a better water future.

Water is Precious

Water is finite. Just 2.5 percent of the world's water is fresh, rather than seawater, and two-thirds of all fresh water that does exist is locked in ice caps and glaciers. Of the remaining amount, some two-thirds is "lost" to evaporation. From what is left, some 20 percent is in areas too remote for human access, while of the other 80 percent, three-quarters comes at the wrong time or place, through monsoons, hurricanes and floods, and can only be partially captured for human use.

The renewable fresh water supply on land -- water made available year after year by rainfall -- less than 0.08 of one percent of the total water on the planet. Of this tiny

fraction of water available for human use, some two-thirds is devoted to agriculture, a figure that rises to more than 80 percent, sometimes 90 percent, in many developing countries, where the real water crunch is coming.

The Poor Pay Much More for Water...

Use Much Less - Often Contaminated Poor people in the developing world pay on average 12 times more per liter of water bought than fellow citizens connected to municipal systems; these poverty-stricken people use less water, much of which is dirty and contaminated, according to information collected by the World Commission on Water for the 21st Century and confirmed by world-wide consultations

In some cities, the poor pay huge premiums to water vendors over the standard water price of those hooked up to municipal systems: 60 times more in Jakarta, Indonesia; 83 times more in Karachi, Pakistan, and 100 times more in both Port-au-Prince, Haiti and Nouakchot, Mauritania

In slums around many cities, the cost of water accounts for a large part of household expenses - 18 percent in Onitsha, Nigeria and 20 percent in Port-au-Prince, Haiti, for example

Many cities subsidize water services in order to benefit the poor. Invariably, this results in inadequate services with many of the rapidly growing poor neighborhoods going without municipal services $\frac{3}{4}$ in effect rationing the poor out $\frac{3}{4}$ who then end up buying water of unknown quality from water vendors at 4 to 100 times the subsidized price the rich pay for treated, piped water.

"It is stunning that the poor pay more than 10 times as much for water as the rich do, and get poor quality water to boot," adds Ismail Serageldin, Chairman of the World Commission on Water for the 21st Century and a Vice President of the World Bank. "A direct link exists between this lack of access and a host of diseases that attack the poor in developing countries "

Some 1.2 billion people around the world lack access to safe water. Dr. Serageldin warns that unless action is stepped up, the number of people without access to safe water will increase to 2.3 billion by 2025.

Some 3.4 million of these people die each year from water-related diseases, caused either directly by infection through the consumption of contaminated water or food, or indirectly by disease-carrying organisms, such as mosquitoes, that breed in water. These diseases include diarrheal diseases (2.2 million deaths annually); malaria (1.1 million annual deaths); trypanosomiasis, or sleeping

sickness (40,000 annual deaths); intestinal nematode infections, such as hookworm or roundworm, (17,000 annual deaths); dengue fever (15,000 annual deaths); and schistosomiasis (7,000 annual deaths).

Contributing to the problem is the quality of water sold by vendors in developing world cities who respond to a need for water in the absence of satisfactory formal services. The water is usually sold from trucks that draw their water from polluted rivers and other, unknown sources, generally without any quality control. Most of these deaths are caused by poor hygiene practices, and safe water is a requisite for proper hygiene.

"It is clear that many municipalities constructed and have maintained water systems with government funds in order to help the poor, but the real effect has been to give subsidies to the middle class and wealthy, along with many working class families," says William Cosgrove, Director of the World Water Vision Unit. "Millions of poor urban dwellers have been left without water supply and sanitation in the rapidly growing cities of the developing world. The poor are often forced to pay exorbitant unit prices for untreated water, much of it deadly."

The World Commission findings result from a worldwide consultation among water professionals and users as part of the World Water Vision process, begun just a year ago. The consultation has reached water professionals and users in both developed and developing countries.

"Water is scarce and our research supports the contention that it should be priced according to what it costs to provide the service. Although conventional wisdom holds that poor people cannot afford to pay for the household water they need, a survey shows that both rural and urban poor are willing to pay higher fees in order to have a reliable and safe water supply," William Cosgrove adds. "This policy, if adopted by governments that now provide large water subsidies siphoned by the rich, would actually enable many more poor to have access to safe, reliable water at much lower cost than they now have to pay."

In the Northeastern part of Pakistan, households paid as much as 40 percent more per month for a new, dependable service than the existing (unreliable) service. In Jakarta, Indonesia, residents connected to an unreliable piped water system were willing to pay 30 percent higher water fees to have a dependable service.

The first results of the Vision exercise will be discussed during the Second Meeting of the World Commission on Water for the 21st Century, to be held in Stockholm August 9-10, 1999. The Stockholm meeting, to be chaired by Dr. Serageldin, will guide the development of the World Water Vision and Framework for Action, a program that

will be presented at the 2nd World Water Forum and Ministerial Conference, scheduled for World Water Day, 2000, March 17-22, in The Hague, Netherlands. This conference is aimed at converting public awareness on water into political commitment.

The information gathered by the World Water Commission shows that consumers connected to water systems pay widely divergent prices for water around the world. A 1998 survey showed consumers in Canada pay the least amount for their water among residents of the industrialized world, with an average price of \$0.31 per cubic meter (pcm), while Germans pay the most, \$2.16 pcm, about five times as much. If the disposal of wastewater is included, Germans pay about \$5.71 pcm. Residents of Jakarta, Indonesia, on the other hand, pay just \$0.09 pcm, but few developing country cities have proper wastewater disposal.

Other nations surveyed in 1998, in descending order of price, include Belgium, \$1.55 pcm; France, \$1.35 pcm; Netherlands, \$1.30 pcm; UK, \$1.28 pcm; Finland, \$0.77 pcm; Italy, \$0.70 pcm; Sweden, \$0.69 pcm; Ireland, \$0.61 pcm; Spain, \$0.47 pcm; the United States, \$0.040-0.80 pcm; and South Africa, \$0.45 pcm.

Some 1996 municipal water system prices in the developing world include: Algeria, \$0.27-0.57 pcm; Botswana, \$0.28-1.48; India, \$0.01-0.82; Madagascar, \$0.392; Namibia, \$0.22-0.45; Pakistan, \$0.06-0.10; Sudan, \$0.08-0.10; Taiwan, 0.25-0.42; Tanzania, \$0.062-0.24; Tunisia, \$0.096-0.53; and Uganda, \$0.38-0.59.

The World Water Commission is assembling its data from a wide variety of sources, including its own research, World Bank reports, UN data, private sector surveys, non-governmental organizations and other internet sources. The findings are preliminary rather than definitive, but do show trends.

In the absence of municipal services, people in the developing world have to provide their own services, often at high cost. A review of water vending in 16 cities has shown that the unit cost of such water is always much higher - typically from 4 to 100 times, with a median of about 12 - than the cost of a unit of water from a piped city supply.

The situation in Lima, Peru is typical. A poor family pays a vendor \$3 per cubic meter of water, more than 20 times what a middle class family pays for water via a house connection. The poor family uses only one-sixth as much water as a middle-class family, but its monthly water bill is three times that of the family connected to a municipal water system.

In Abidjan, Cote d'Ivoire, the poor pay five times more than people connected to the public system; in Cali, Colombia and Tunis, Tunisia, 10 times more; in both Nairobi and Lagos, 11 times more; in Lima, 17 times more, in Guayaquil, Ecuador, 20 times more; in Dhaka, Bangladesh, 25 times more, in Cairo, 40 times more. A minimum of 40 liters per day is recommended by the World Commission on Water as a basic human need.

By 2000, there will be 21 cities in the world with more than 10 million inhabitants, and 17 of them will be in developing countries. By 2030, global urban populations will be twice the size of rural populations. Developing world cities as a whole will grow by 160 percent over this period, whereas rural populations will grow by only 10 percent

According to information collected by the World Commission on Water for the 21st Century, water subsidies have rarely benefited the poorest households simply because they tend to live away from piped services or irrigation perimeters. Thus, the removal of a subsidy may have limited or no impact on those not connected, because they have few water assets to lose.

"The health benefits provided by better water and sanitation services are huge. When services were improved in industrial countries in the 19th and 20th centuries, the impact on health was revolutionary," says John Briscoe, Senior Water Advisor at the World Bank and Advisor to the World Commission on Water for the 21st Century. "For example, life expectancy in French cities increased from about 32 years in 1850 to about 45 years in 1900, with the timing of this advance corresponding closely to changes in water supply and wastewater disposal "

In the early 20th century, some cities in the Ohio River valley used untreated water while others in the valley treated their water. Over a 10-year period, death rates from typhoid fever were constant in the former group, but declined by more than 80 percent in cities that treated their water.

The poor are often forced to pay even more in order to purify this "street water." The United Nations

Development Program estimated in 1992 that households in Jakarta, Indonesia spend a combined total of up to \$50 million per year to boil drinking water, an amount equal to one percent of the city's gross domestic product

"But many others are too poor even to be able to afford to boil their water, which means they will consume an unsafe resource, or use even less water," Dr. Serageldin says.

In Bangladesh, for example, boiling drinking water would take 11 percent of the income of a family among the lowest earning 25 percent of all households. With the outbreak of cholera in Peru, the Ministry of Health urged all residents to boil drinking water for 10 minutes. The cost of doing so would have amounted to 29 percent of the average household income in a squatter settlement - such people found the recommendation too tough to meet.

"Improved water supplies also provide economic benefits. For many rural people, especially women, getting water is time-consuming and heavy work, taking up to 15 percent of women's time," Dr. Briscoe says. After one improvement project in a village on the Mueda Plateau in Mozambique, for instance, the average time that women spent collecting water was reduced from 120 to 25 minutes a day.

"That reduction translates into a gain in well-being for women and their families, whether the time is used to cultivate crops, tend a home garden, trade in the market, keep livestock or care for children," adds Dr. Serageldin

Unfortunately, the cost of providing universal water access by 2010 is high, between \$31 billion and \$35 billion annually. The poorest developing countries are unlikely to have the funds, even through international aid, to finance such development.

"Clearly unit costs of providing water must be reduced," says Dr. Serageldin. "The 'appropriate level of service' is an important part of this."

Statement by Evyn Testoni, Australia

Documentation Manager, Asia Pacific Forum of Environmental Journalists (APFEJ)

Internet and Environment

Introduction

This paper is designed to give readers some basic information about the Internet and its uses. The Internet is the fastest-growing communication tool invented. Ten years ago only 100,000 computers were connected to the Internet. Today there are an estimated 36 million personal computers online with 150 million users. More than 700 million people are expected to be using the net by 2001.

But it is a sobering thought to realize that more than two-thirds of the population of the world have never used a telephone, let alone sent an email message. Particularly among the developing nations of Asia and the Pacific, the statistics on access to the basic item needed to connect to the Internet - telephone lines - are very low.

For example, in Cambodia it has been reported that there are more than 100 people for every telephone. By contrast, most developed nations have a ratio nearing that of one telephone for each person. Currently, most Internet users live in the West and 30% have a university degree. The United States alone has more computers than the rest of the world combined.

The industrialized nations, with only 15% of the world's population, contain 88% of all Internet users. South Asia, home to one fifth of the world's population, has less than 1% of the total Internet users. Even if telecommunications systems were put in place in the developing nations, without literacy and basic computer skills most of the world's poor would still be excluded.

Many nations in the Asia-Pacific region have high rates of illiteracy. Even if they could read, they would discover that 80% of websites are in English, a language understood by only one in 10 people in the world. The Internet will expand rapidly in developing countries in the coming years, but the real battle will be to address the education and access deficit suffered in many nations.

A recent UN report stated: "The typical Internet user worldwide is male, under 35 years old, with a university

education and high income, urban-based and English speaking - a member of a very elite minority."

But the Internet is still a very powerful tool, even in developing nations. It is a fast and efficient means of communications and a valuable means of sharing information. For environmental journalists, the Internet represents an avenue for research, displaying work, networking, promoting causes and, in some cases, overcoming state censorship.

What is the Internet?

There is a lot of hype and excitement about the Internet. It has been described as the 21st century's equivalent to the telephone. The Internet is the largest computer system in the world. It is often called the Net, the Information Superhighway or Cyberspace.

Where did it originate? Computing and creating computer networks gained momentum after World War II with the onset of the Cold War between the USA and Russia. In the late 1960s, the US Defense Department funded a research group called the Advanced Research Projects Agency (ARPA).

The government wanted to create a network that covered a large geographical area and could withstand a nuclear attack. If part of the network failed, information could still find a new route around the disabled computers. Luckily we never had to find out if the system could have worked, although distributed data systems via a network are less vulnerable than centralized ones.

The original network started through the ARPA research quickly grew to include scientists and researchers across the US. Eventually, schools, businesses and libraries around the world were on the Internet.

Electronic mail (e-mail) is the most popular feature on the Internet. E-mail is a fast, efficient and relatively inexpensive form of communication. The Internet gives users access to a vast amount of information on every

subject imaginable. There are countless media and environment sites, as well as newsgroups, which are discussion groups where you can ask questions, discuss problems and read interesting articles.

World Wide Web

The World Wide Web is part of the Internet. The Web consists of a huge collection of documents stored on computers around the world. The World Wide Web is also called the Web, WWW or W3.

- * A Web page is a document on the Web. Web pages can include text, pictures, sound and video.
- * A Web site is a collection of Web pages maintained by an organization, company, university, government agency or an individual.
- * Each Web page has a unique address, called the Uniform Resource Locator (URL). You can instantly display any Web page if you know its URL.

You can instantly determine a number of things from the URL or address of the Web page, including the domain and country code.

There are nine top-level domain codes which designate the type of host or organization it is: gov means government; int means international organization; net means networking organization; co identifies a company or commercial enterprise; com is an American company; mil is military; edu or ac is an academic institution; and org is a non-commercial organization.

The international domains are the two letters of a country's name, as in au for Australia, sl for Sri Lanka, uk for United Kingdom or zw for Zimbabwe.

Web pages are hypertext documents. A hypertext document contains highlighted text that connects to other pages on the Web. You can select highlighted text on a Web page to display another page located on the same computer or a computer across the city, country or world.

Highlighted text allows easy navigation through the vast amount of information by allowing you to jump from one Web page to another.

Searching the Web

Search tools were developed to help people quickly find information they need on the Web. Often called search engines, these tools let you look for a specific topic of interest or browse through categories such as arts, media, sports or business.

Each search tool uses a different method to find and catalog Web pages. This means that each search engine may give you a slightly different result. Popular search engines include:

- * AltaVista - <http://www.altavista.digital.com>
- * Infoseek - <http://www.infoseek.com>
- * Yahoo - <http://www.yahoo.com>

Often all you need to enter to search for a subject or Web site are a few words. Some engines narrow down the search in categories or search the entire Web. The engines mainly work by matching your search entries to a list of description words encoded into each Web page.

Web Browsers

A Web browser is a program that lets you view and explore information on the Web. Netscape Navigator - <http://www.netscape.com> - is currently the most popular graphical Web browser. Microsoft Internet Explorer - <http://www.microsoft.com> - is the second biggest browser.

Most browsers have similar features, including the ability to bookmark favorite Web pages and keep track of all the pages you have visited.

Getting Connected

Most people need an Internet Service Provider (ISP) to get access to the Internet. An ISP is a company that offers access to the Net, as well as email access. Many providers offer access to the Internet for a certain number of hours for a monthly fee. Other providers offer unlimited access for a flat fee.

Many colleges and universities offer free Internet access to students. You may also be able to get the Internet at work. The costs of ISPs vary from country to country. In many developed countries the costs of connecting to the Internet can be quite cheap due to the amount of competition among many ISPs, all offering the best deal and services to win business.

It can be a completely different story in some developing nations where the costs can be exorbitant due to the lack of quality ISPs. Some nations, like Sri Lanka, also have timed local calls, which vastly increases the cost of being on the Internet. In Australia there is a flat fee for local calls and it doesn't matter if you are connected to the Internet for two minutes or two days - the cost is the same.

A good ISP will offer you not only a Internet connection, but an e-mail address, space to host Web pages and, very importantly, technical support. Many countries where the Internet is new or phone connections are bad can

experience frustration at the time it takes to use the Internet and problems such as bad connections and drop outs.

Like anything else in life, it is best to take the time to investigate and shop around for the best deal and the best way to make the most of the Internet connection if the cost is high.

Many community organizations and donor agencies are now recognizing the importance of the Internet. If you are involved in a non-commercial organization it is worth finding out if there are any schemes or programs which aid in your efforts to use the Internet or to establish your own presence on the Internet.

Publishing Web Pages

Publishing your own pages on the World Wide Web allows millions of people around the world to view your information. An organization can place pages on the Web to inform people about its activities. Some companies spend huge amounts of money to create very large Web sites that are visited by thousands of people each day, for example CNN.

Creating a Web presence is relatively simple and can be quite cheap. You can create and publish Web pages that are devoted to a specific subject or theme. You can use your Web pages to display information about an organization or event. You can include detailed information about the goals of the organization, a schedule of coming events and anything else you can think of. Some services that make pages available on the Web let non-profit organizations display their pages free of charge.

Web pages should be easy to understand, entertaining and aimed at a specific audience that you want to get your message to. Recent statistics showed some interesting points about Web users. More than two-thirds of users are male. The average age is 33 years. English is the native language of more than 85% of users and 60% have completed college or university. They have an average income of US\$59,000 and most use the Web for browsing, entertainment and work. These statistics will change as the Internet expands around the globe. But the basics will remain the same for a time as computers, Internet access and phone lines are beyond the reach of many people in the world.

You can create your Web pages yourself at your home or office. With current software, this is quite simple. School children in many countries are designing Web pages as school projects or as part of computer classes. Designing Web pages can be time consuming though. Sometimes you may have to weigh up whether it is easier or more

economical to get a professional company or Web designer to do the work for you. Again, like anything else, the quality of Web designers varies, but a bit of investigation will find you what you want. As a rapidly growing field, Web designing companies are springing up everywhere and you can often get good deals which allow you total control of what you want and ongoing help for future updates.

Planning

You should carefully plan your Web pages. Well-designed pages containing useful information will always be popular. Planning is probably the most important aspect of producing Web pages. You must decide on a theme, gather and organize the information you want as the contents of the pages, design the layout and style you like and then start the work of building the pages or dealing with a Web designer.

There are many things you should consider when creating and maintaining Webpages. You should examine other Web pages and take a close look at some of your favorite sites. Determine what you like about the pages and consider how you can use these ideas in your pages.

Always include information that is valuable to the reader on each page. This will encourage them to return to your site again. Even if your Web pages are aimed at a specific audience, you should provide general background information to allow readers to understand the contents of the pages.

Just like writing articles for newspapers or magazines, good Web pages hold true to many aspects of journalism. Good organization is important for creating great Web pages. Always display the most important information at the top of each Web page. Some readers who are just browsing will not scroll through a document and your main message could be missed. For this reason also, try to keep Web pages no longer than five "Page Down" button hits unless you have a long page for a specific purpose. Use headings and use paragraphs. Also ensure you proofread your pages and correct mistakes. Mistakes, no matter how minor, can reflect on the pages as being unprofessional and can turn people off using your pages.

The home page is the main page in a collection of Web pages. It is usually the first page people read. Always place a summary of your Web pages on the home page. You should state the purpose of the Web pages and never assume readers will understand what your pages are just by reading the title. Make sure you also give readers an opportunity to contact you by email to allow feedback and questions about your pages.

HTML

Hyper Text Markup Language (HTML) is a computer language used to create Web pages. Documents viewed on the Web are HTML documents. HTML is relatively easy to learn. There are many HTML editor software packages, such as FrontPage, available to help create Web pages. An HTML editor provides a visual way of creating Web pages. Many simple to understand training books are available to help people create Web pages using HTML editors. As with many guidebooks on using computers, the more graphics and step by step instructions the book contains, the better it usually is to use.

Web Presence Providers

There are many companies that can store or host your Web pages and make them available all over the world. These companies store thousands of Web pages on computers called Web servers. Web servers monitor and control access to Web pages.

ISPs usually offer a certain amount of space on their Web servers where customers can publish their Web pages. Many ISPs offer this space free of charge after you have signed up for Internet access.

If the company you are with cannot publish your Web pages, there are a few places that will store your Web pages for free. Two of the most popular places to store Web pages for free are:

- Geocities - <http://www.geocities.com>
- Cybertown - <http://www.cybertown.com>

There are a few things you should consider when selecting a Web presence provider to store your Web pages. A Web presence provider should have a technical support department to answer your questions and fix any problems. Make sure the provider is reliable. Ask for references from other organizations. Choose a provider which lets you store at least 1MB (megabyte) of information, which is approximately equal to 10 Web pages. 5-10MB is preferable if you are hoping to expand your site in the future. Make sure you have no problems linking your email to the site and that you have access to your pages on the server to allow easy updates.

Censors, Hackers and Viruses

Censorship is a big issue surrounding the Internet. On the one hand, the Internet gives people a worldwide outlet for their news, views and information. For people and organizations operating under repressive regimes, the Internet is a place without boundaries where they can get their message out.

On the other hand, or perhaps for this reason, many governments and regulatory bodies throughout the world, are worried about the amount of free speech available on the Internet. Admittedly they are worried about pornography (particularly child pornography), terrorist organizations and many other assorted oddballs which lurk on the Internet.

Both the Singaporean and Australian Governments have recently attempted to introduce laws to crackdown on porn on the Net. In the case of Singapore, the Government even ordered some Internet service providers to go through tens of thousands of e-mail accounts and scan for porn. While this is not the avenue to discuss the rights of free speech, if Governments work out ways to crack down on sections of the Internet, it obviously follows they will then use these powers to censor anything they don't like. Thankfully so far no one has been successful in policing the Internet.

Hackers take great delight in breaking into Internet sites and private computer systems which are often protected by complicated security software called firewalls. Access codes to exclusive private servers are encrypted, and hackers find it entertaining to break the encryption, leaving behind some digital footprints or trace of their presence, sometimes harmless, sometimes not. It's the equivalent of digital graffiti.

Unfortunately, vandalism on the Internet is not limited to hackers. The Internet and e-mail are a terrific way to distribute rogue software programs that have been written with the specific purpose of causing damage. This problem is magnified in developing countries due to the amount of cheap pirated software. They are often excellent and illegal copies of original programs, but after being copied and passed around countless computers, they are also often riddled with viruses.

How much damage viruses cause varies, but whether it's a trivial or traumatic matter, BEWARE VIRUSES. Worry about them, because although there's more fuss about viruses than there ought to be, they are very, very, very annoying.

Always use virus protection, such as an anti-virus program. There are many of these, including Norton, Dr Solomon and McAfee. And make sure you install the anti-virus software BEFORE you start using your computer.

Useful Websites

Here are some useful environmental, media and NGO sites
<http://www.icjf.org> - International Center for Journalists
<http://www.amic.org.sg> - Asian Media Information & Communication

<http://www.himalmag.com> - Himal Magazine South Asia
<http://www.ens.lycos.com> - Environmental News Service
<http://www.worldpressphoto.nl> - World Press Photo Foundation
<http://www.oneworld.org/cba> - Commonwealth Broadcasting Association
<http://www.pressasia.org/PFA/index.html> - Press Foundation of Asia
<http://www.abu.org.my/> - Asia Pacific Broadcasting Union
<http://www.compressu.co.uk/> - Commonwealth Press Union
<http://www.ifj.org> - International Federation of Journalists
<http://www.ijn.net> - International Journalists Network
<http://greenpeace.org> - Greenpeace
<http://www.oneworld.org/slejf> - Sri Lanka Environmental Journalists Forum (SLEJF)
<http://www.wetlands.agro.nl> - Wetlands International
<http://www.nceet.snre.umich.edu> - Environmental Education on the Net
<http://www.iucn.org> - The World Conservation Union (IUCN)
<http://www.nwf.org> - National Wildlife Federation (NWF)
<http://www.panda.org> - World Wide Fund for Nature (WWF)
<http://fejp.hypermart.net> - Pakistan Forum of Environmental Journalists
<http://www.sej.org> - USA Society of Environmental Journalists
<http://www.pinanius.org/> - PINA Pacific Forum of Environmental Journalists
<http://www.unep.org> - United Nations Environment Program (UNEP)
<http://www.unep.org/unep/regoffs/roap> - UNEP Regional Office Asia-Pacific (ROAP)
<http://www.unesco.org/webworld> - UNESCO
<http://www.oneworld.org/> - OneWorld Online
<http://www.nationalgeographic.com> - National Geographic Society
<http://www.indexonensorship.org> - Index on Censorship
<http://www.foundation.reuters.com> - Reuters Foundation
<http://www.oneworld.org/cse> - Center for Science and Environment
<http://www.oneworld.org/panos/> - PANOS Institute
<http://www.thomfound.org> - The Thomson Foundation

Common Internet Terms

Byte

Eight bits (binary digits - 0 or 1, on or off, yes or no) form one byte, and different patterns of eight bits give you enough combinations to represent most of the standard alphanumeric and punctuation characters. A kilobyte is 1024 bytes (and not 1000 bytes), and a megabyte 1,048,576 bytes. Most of the megabyte figures are approximate.

FAQ - Frequently Asked Questions

Generally a document posted on the Internet for the specific purpose of helping new users.

FTP - File Transfer Protocol

A means of transferring files from one computer to another across the Internet, and one of the main tools on the Internet. The three other key functions are email, newsgroups and the Web.

HTML - HyperText Markup Language

The formatting commands which are used to create documents on the Web. It is the basic building blocks that make up the Web.

Hypertext

This is a method of presenting information that allows the user to jump between places in the document, typically by clicking on either a highlighted word, phrases, icon or image, rather than being forced to navigate it line by line

Internet

This is a non-commercial, self-governing network with the ability to link up 36 million computers and 150 million users worldwide. A computer joins the Internet simply by adopting the standards and software setups which tell the Internet that it's available to take part in a range of Internet services, such as email between users, the Web, FTP file transfers and newsgroups.

ISDN - Integrated Services Digital Network

This is a way of transmitting digital, rather than analog, signals down standard phone lines. The results are faster, and there is more chance of an error-free connection being made. In practice, ISDN is an extra-cost service offered by providers which will require an ISDN modem and perhaps some special software at your end.

ISP - Internet Service Provider

You will need to sign up with one of these if you want to have access to the Internet and email.

Modem - MODulator/DEMulator

A device which allows a PC to communicate and exchange information with other modem-equipped computers via normal telephone lines.

Packet

This is a unit of data, which is typically a part of a file, prepared for transmission across a network.

POP - Point Of Presence

The location of the nearest node for an ISP. This is the number you dial to connect to the Internet.

TCP/IP - Transmission Control Protocol/Internet Protocol

This is the standard governing communication between all computers on the internet. TCP/IP works by sending packets of information across multiple networks.

Statement by Juliet Fox, Australia

Media Representative, Friends of the Earth Australia

Producer / Presenter of Earth Matters, Public and Community Radio's National Environment Program

The Role of the Media in Educating the Public About Water Issues

Overview and Introduction

Friends of the Earth Australia is a community based organization working towards an ecologically sustainable and socially equitable future. In Australia, we're a network of 13 groups and globally we're a member of Friends of the Earth International, which has member groups in 59 countries and is collectively the largest environmental federation in the world.

I'm also the producer and presenter of an environmental radio program called Earth Matters, which is broadcast right around Australia on public and community radio stations. Earth Matters is a half-hour weekly environment show that I produce at 3CR Community Radio in Melbourne.

The field of environmental journalism is a complex and challenging one. In Australia environment reporting is presently at a low point. Australian university lecturer and author, Sharon Beder, writes that:

Environmental reporting emphasizes individual action rather than underlying social forces and issues. A current-affairs TV show may expose Corporation X for spewing toxic waste into the local waterway, but it will seldom look at the way corporations have lobbied to weaken the legislation preventing such dumping; how under-funded regulators allow corporations to monitor their own discharges; or the lack of personal liability for corporate board members who would put profit first and damn the consequences.

The types of environment stories, priorities and news criteria that the media have rarely carry messages of true environmental sustainability. And it is the mainstream media's structures and agendas that need to be vigorously challenged by both environmental journalists and environmentalists.

Today I'm going to talk about water issues in Australia: how water has been overused and undervalued since white

colonialists arrived; current water problems; environment reporting in Australia, and the crucial role the media plays in shaping and influencing public opinion and awareness of environment issues.

Australia - the driest inhabited continent on earth. Australia has a landmass of some 7.7 million square kilometres and two-thirds of that area is arid or semi-arid. It is the lowest, flattest continent, with an average annual rainfall of just 450 millimetres (less than any other continent, including Africa) which makes Australia the driest continent on earth, apart from Antarctica. Water, therefore, is an extremely precious element.

(Generalist map of the all-year-round inland water systems - permanent rivers and streams flow in only a small part of Australia ..)

It is estimated (white anthropologists) that Australia has been inhabited for some 40 - 50,000 years, and the Australian indigenous population (the Aborigines) had - and continues to have - a strong and very respectful connection with land and country. Their recognition of the value of water as a life giving resource was essential in their survival, as much of the population inhabited the central and northern arid and semi-arid regions. White invasion and colonization of Australia occurred over 200 years ago, and with it came a determination to dominate nature and the land, and to exploit the natural resources. Water was a key factor as to where the colonizers settled, culminating in a range of settlements along the eastern coast where the rainfall is highest.

In 1865 a surveyor named Goyder attempted to establish a clear line to divide the country into where adequate rainfall fell and agriculture could be established, and where drought prevailed - an amazing concept in itself considering the diverse and uncontrollable nature of the environment. Following a period of high rainfall in the late 1870s, Goyder's Line was challenged and the notion that "rain follows the plough" was considered 'proven' as settlers pushed forth inland to cultivate new areas.

Clearing, ploughing and working the land was thought to actually bring on the rain - an idea that has been continuously debunked as nature's cycle of drought and flood continues.

White invasion had brought with it a distinct lack of knowledge and respect for water as a limited and precious force, along with the idea that nature could be tamed and regulated to suit the population's needs. While attitudes have certainly changed, it would be reasonable to argue this is still the most prevalent mentality in Australian society today.

Australia is largely an overdeveloped, affluent society, with a present population of just over 19 million. It is highly urbanized country with some 85 percent living in urban areas or towns of over 10,000 people concentrated mainly along the eastern seaboard. Australia's per capita water consumption levels are higher than those of the Netherlands, Sweden or the United Kingdom at 840 cubic metres per year.

Domestic water consumption accounts for somewhere between 50 - 70 per cent of all water used in Australian cities, depending on which city you look at. Urban Australians on the whole use in excess of the fresh water resources available for their region and in Melbourne nearly 10 per cent of fresh, drinkable domestic water is flushed down the toilet. Again, depending on which city you look at, of the total domestic water consumption - around 30 per cent for Sydney, 38 per cent for Melbourne and 60 per cent for Perth is used for garden watering. Australians have an obsession with the lawn, and many urban residences would have both a back and a front lawn. And this trend does not seem to be something that we are moving away from - domestic water consumption has risen over the past 20 years not only because of a rising population but also because of increased use per head. Within the population of Sydney - Australia's largest city - consumption per head (domestic and industrial) rose some 25 per cent between 1970 and 1990. This reflects both the population's unrealistic expectation of continuing high levels of fresh water on demand, and a distinctly Euro-centric attitude toward the Australian environment. Fancy expending that amount of fresh water on maintaining lawns of non-native grasses which serve no functional or ecological purpose in the driest inhabited continent on earth!

Current water problems in Australia

The problems facing Australia's inland water systems are many and varied, and are only one aspect of the overall water concerns that Australia faces - keeping in mind that Australia has marine coastal waters right along some 60,000 kilometres of its coastline. Today, however, I am

only focusing on inland, freshwater and groundwater issues.

Scarcity, poor quality, rising groundwater and associated salinization, sedimentation, nutrient loads and algal blooms, over-consumption, cold water pollution (whereby water held in, then released, from dams is considerably colder than it normally would be), waste water disposal, water weeds and general pollution are just some of the threats currently facing Australia's water systems. Nearly every Australian lake and river is suffering from the effects of either agriculture, urbanization or industrial development. Which is no mean feat considering that this immense and often irreversible destruction has been achieved primarily within this century.

Australia's rivers and streams have been dammed, diverted, stored, consumed, and simply destroyed in a major show of domination over and above nature. The result has been the alteration and destruction of natural flows; the degradation of native habitats, wetlands, floodplains and water quality, and the inability of rivers to adequately flush out impurities due to a decrease in flow.

The Murray-Darling Basin

The Murray-Darling River system is the longest river system in Australia. The Murray is about 2,250 kilometres long and the Darling and Upper Darling together are also just over 2,000 kilometres long. Parts of the states of Queensland, New South Wales and a large part of Victoria drain into the Murray-Darling, whose flow reaches the sea in south-eastern South Australia. The Murray-Darling was probably the first river to be the focus of colonial control and regulation for agricultural purposes early this century. As a direct consequence it is now in a state of unprecedented degradation, with only 20% of its original flow reaching its final destination - that is, 80% of the river system is diverted. In December 1991, the state of New South Wales declared a state of emergency and created a special Task Force to deal with the crisis caused by the world's largest known toxic algal bloom in the Murray-Darling Basin. The blue-green algal blooms occurred due to a range of human-induced factors, including high nutrient conditions (particularly phosphorous from sewerage treatment plants, agricultural run-off and intensive animal industries such as pig, cattle and dairy farms), reduced flows, stagnant water, and high light availability. Because of the algal blooms the army was called in to provide emergency filtration equipment and to provide alternative supplies of water. The Murray-Darling Basin continues to experience habitat destruction, salinity problems and erosion, poor management, algal blooms and the general over-use of its water.

Unfortunately, the state of the Murray-Darling river system is not an isolated example. Other rivers right around Australia are experiencing similar treatment and changes to frequency, magnitude and pathways which also has wide-ranging and detrimental affects on surrounding dependent native vegetation and species, and on estuaries and the sea. The Snowy River, an Australian icon, presently has less than 1 per cent of its original flow. An inquiry found that the river requires at least a 28 per cent flow for the ecological functions of the river to be maintained - yet no clear action on meeting that target has yet been made.

Water from the Murray-Darling Basin continues to account for 75 per cent of all water used for irrigation in Australia, and some 90 per cent of the water from the Murray-Darling goes to agriculture. On one level the current state of the Murray-Darling Basin represents Australia's continuing inability to work with rather than against nature, or to treat Australia's inland river systems as anything more than irrigation channels

Water and Mining in Australia

Groundwater and the Great Artesian Basin Of the total amount of water in the world, just over 97 per cent is sea water and only 2.7 per cent is fresh. Of the fresh water not frozen at the north or south poles, 95 per cent is ground water. About 60 per cent of Australia lies above ground water and about 80 per cent of Australia is dependent on groundwater supplies. In an average year 65 per cent of all water used in Perth, the capital of Western Australia, comes from groundwater. Some 600 small communities around Australia depend mainly on groundwater for their domestic water supply.

As the Australian State of the Environment report stated in 1996, groundwater is a vital but neglected resource:

Groundwater is inextricably linked to the surface environment. It sustains many wetlands, allows streams to flow through long dry periods and supports vegetation. It is also affected by disturbances to these surface environments. Because groundwater lies invisible, beneath the surface, it is poorly understood and often abused. We do not appreciate its vulnerability to over-development and pollution .

Mining activities have been the focus of many environmental campaigns in Australia, both because of their use of traditional lands and their general impact on the environment. Their activities have also come in to question because of their potential to pollute waterways and wetlands and their large use of water in processing particularly groundwater.

(Map showing position and size of Great Artesian Basin ... with Australian states and territories listed? ...Great Dividing Range...)

The Great Artesian Basin is Australia's largest body of groundwater, underlying over one-fifth of the country and reaching a depth of 2 kilometres. The water is recharged primarily from rain run-off along the western side of the Great Dividing Range in New South Wales and Queensland. The age of the water in the Great Artesian Basin is estimated to be at least 1-2 million years old, and the water is currently being used at a greater rate than it is being replenished. There are currently over 4,700 bores drilled in the Great Artesian Basin extracting over 5 million megalitres of water per year. 500,000 megalitres of that water is used by the pastoral industry and 300,000 megalitres is wasted in seepage and evaporation from around 850 bores which flow continuously into bore drains. There is currently a program of bore capping which will gradually reduce the waste, but the environmental consequences are already significant. Mining company Western Mining is the largest single user of the water from the Great Artesian Basin.

Roxby Downs/Olympic Dam mine

Western Mining (WMC) mines copper, uranium, silver and gold at its Olympic Dam mine in South Australia, where it has invested some 2 billion Australian dollars. Because of its extraction of more than 20 million litres of water from the Great Artesian Basin per day, it is also seen to be 'mining' water. WMC has been mining the Great Artesian Basin since 1993 and currently has government approval to extract some 42 million litres of water per day

The environmental effects of WMC's activities have been the focus of much campaigning, particularly by Friends of the Earth Australia. Of primary concern is the desecration of the traditional lands of the Arabunna and Kokotha people, including the range of local mound springs. Mound Springs are natural springs that well up on the southern, south western and western edges of the Great Artesian Basin. They are of historical and continuing cultural significance to the local Aboriginal communities. They are also oases in an otherwise dry, desert environment and support flora and fauna that are often endemic just to that area. The massive use of ground water from the Great Artesian Basin is seen to have a direct correlation to the complete drying up of a number of Mound Springs, as well as the decline of others. Such damage is both unjustifiable and irreversible.

In Situ Leaching (ISL)

In the same region approval was recently granted to Heathgate Resources (fully owned subsidiary of nuclear multinational General Atomics of the USA) to mine the Beverley uranium deposit in South Australia using the in situ leaching process. This process involves:

.. drilling a series of groundwater bores (or wells) into a uranium deposit, injecting and extracting corrosive chemicals to dissolve the uranium ... within the ore zone, and attempting to control their movement in order to pump back the uranium-laden solutions. The method can only be applied to uranium deposits located within a ground water or confined aquifer, commonly in .. (old buried river beds).

There is a risk of contaminating the groundwater, including the Great Artesian Basin, with both radionuclides and heavy metals. Again the out-of-sight out-of-mind nature of groundwater is treated as a poor resource worthy of contamination risk and threatened permanent poisoning. Remember this is a slow moving underground water system, potentially interconnected with an array of other aquifers which never experience roaring floods to flush out their systems. Contamination could be both incredibly widespread and long lasting.

In Situ Leach mining of uranium is not a new process, but it is a cheap one. It's also one that has experienced many problems at mining ventures right around the world.

Billa Kallina national radioactive waste dump

The Billa Kallina region is the area appointed as the place for Australia's "national waste repository" or radioactive waste dump. While Australia doesn't use nuclear energy, it does have a research reactor in south west Sydney operated by the Australian Nuclear Science and Technology Organisation (ANSTO). And it's here that Australia has managed to accumulate a significant amount of low, intermediate and high level radioactive waste and indeed it plans to continue doing so. The reactor, Lucas Heights, is due to be decommissioned, but approval for a replacement reactor has already been given.

Billa Kallina is also one in a range of options currently being considered by Pangea - a company looking to establish an international radioactive waste dump to accommodate the world's radioactive waste. Again outback and central Australia are seen as a wasteland - devoid of people, culture, water or ecological diversity - an appropriate place to dump extremely toxic waste.

When the Kupa Piti Kungka Tjuta - a group representing senior Aboriginal women from the area - were told of the plans they asked, "Are they trying to kill us?"

Billa Kallina also extends over the Great Artesian Basin and again the risk of groundwater contamination is present. Leakage of high level radioactive waste, poisonous for more than 250,000 years, would prove impossible to contain once it has seeped into the groundwater and migrated over long distances.

Jabiluka uranium mine

Wetlands are not only vital purifiers of water, they are also areas of immense biological diversity. In the state of Victoria wetlands cover some 2 per cent of the landmass, but support 30 percent of the threatened plant and animal species. Yet, like groundwater, wetlands are frequently treated as a kind of wet wasteland - a fact evident in my city of Melbourne, where all of the sewerage treatment plants occur in areas which were formerly natural wetlands.

The wetlands of Kakadu in the Northern Territory are much greater in size than those found down south, yet they are still treated with disdain - this time from potential pollution and poisoning by the proposed Jabiluka uranium mine, not to mention the existing Ranger mine. Many of you may have heard of the struggle to protect Jabiluka by the traditional owners, the Mirrar, and social justice and environment campaigners from around Australia and indeed the world. The fight continues, despite the World Heritage Commission refusing to put Kakadu on the In danger List earlier this year.

Again like uranium mining and the potential for ground water contamination, wetlands face significant threats from leakages and underground seepages from tailings dams. Presently some areas of Kakadu experience increased low level radiation contamination due to mining activities - a situation of grave concern to the local people and of significant impact to the surrounding environment.

Timbarra gold mine

And it's not only uranium mining that poses threats to water around Australia. In New South Wales a campaign continues to try and protect the high altitude wetlands of Timbarra against pollution and destruction caused by gold mining. The region is recognised for its cultural importance for the local aboriginal people. It is also an area of high conservation value and is home to over twenty nine rare and endangered species, including a type of mountain frog for whom Timbarra is its only known habitat.

The combination of developments such as irrigation and mining has seen approximately 30 percent of wetlands in inland New South Wales lost, with an estimated additional

20 percent likely to disappear from too much or not enough flooding and excessive grazing. Some seven fish species native to inland NSW are classified by the International Union for the Conservation of Nature as 'threatened' and three of these are in danger of extinction due primarily to cold-water pollution and flow regulation.

An open cut mine at Timbarra, extracting gold and using sodium cyanide, hydrochloric acid and caustic soda has obvious detrimental implications for a sensitive high altitude wetland, and the headwaters of the nearby Timbarra and Clarence Rivers.

Public concern regarding water and the environment in Australia. Australians are concerned about freshwater particularly its pollution. In 1998 freshwater pollution ranked second amongst the populations' highest environmental concerns, with nearly 30% of those surveyed choosing freshwater pollution, along with air pollution, and ocean pollution as part of their top three. However, this concern simply does not seem to translate into equivalent levels of responsible behavior or government action in relation to water conservation and environment policy.

Again and again the problems of Australia's water degradation and pollution come back to public knowledge and understanding of the issues. Since white invasion and colonization there has been a distinct absence of any type of strong connection or respect for Australia's life giving water systems. In fact, what there has been is a strong history of misuse and abuse which continues right up to this day. And how do people learn about these issues in order to develop a deeper sense of respect and awareness about the value of water? Well, obviously a major part of most peoples' knowledge base is through information dispersal via the mainstream media

Overview of the Australian Media and Ownership

There are three branches of media in Australia - there are the government broadcasters, the commercial sector and the public and community sector.

Government broadcasters include the Australian Broadcasting Corporation or the ABC, and the Special Broadcasting Services or SBS. The ABC has a national television service and nine metropolitan radio stations, 49 regional radio stations and 4 national radio networks, including Radio National, Classic FM, Triple J and the Parliamentary and News Network). SBS also has a national television service and 2 radio stations, one in Sydney and one in Melbourne, and one national network.

The commercial sector has some 217 radio stations - 42 in metropolitan areas and 175 in regional areas - over 100 suburban newspapers and around 13 capital city or national daily newspapers. There are just 3 metropolitan commercial television stations and numerous regional ones. The commercial sector by far makes up the bulk of media outlets overall in Australia.

These first two sectors - the government and commercial - are defined as making up the mainstream media in Australia.

Then there's the public and community sector, which has around 130 radio stations around the country and one national distribution service. While community television is currently being developed there are presently no community television license holders in Australia; however, there is the potential for current temporary license holders to be granted community television licenses come June of next year. It is the public and community radio sector that I work in.

The Australian commercial mainstream media is essentially owned by a handful of players, who maintain an incredible monopoly over print and broadcasting. The Rupert Murdoch owned News Limited, for example, controls a total of 66.8 per cent of total circulation of Australian capital city and national daily newspapers, as well as nearly 50 per cent of total circulation of Australian suburban newspapers and 22.8 per cent of total circulation of regional daily newspapers. In Queensland, South Australia, and the Northern Territory there is only one capital city daily newspaper, and they are all owned by News Limited. Australia only has one national daily newspaper and that too is owned by News Limited.

The concentration of media ownership by big business in Australia has, I believe, a massive effect on the quality, ethics, rights and responsibilities of journalism in Australia. Diversity and choice are key elements of democracy and the Australian mainstream media fails to adequately provide either of these things in the array of newspapers, radio and television stations currently on offer. And while the interests of big business continue to be at odds with the interests of environmental conservation one would expect that this would be reflected in the level and the integrity of environmental reporting and indeed it is.

Environment Reporting in the mainstream Australian media. As stated in the briefing paper on environmental journalism in Australia, environment reporting is currently in a state of decline in Australia having reached its peak in the late 1980s and early 1990s.

Print Media

Looking firstly at the mainstream print media, Australia has around 12 environment newspaper reporters or editors, representing daily newspapers - including the national daily 'The Australian' - in every state and territory, except for the Northern Territory. While these reporters are allocated with the 'environment' round, that neither means a story would necessarily appear from them every day, nor would it mean that the story itself came with any kind of sound environmental message. The print media has some 22 specialist environment magazines, but of these 8 are from specific environment groups and the rest are government or industry based. There are also some 17 newsletters, but again the majority of these are government or business based with the rest coming from specific conservation organizations. From the array of available newsletters and magazines, there are none that I would classify as journals dedicated to in-depth, researched and independent environmental reporting. Disappointing to say the least, for a population of over 19 million living in an incredibly rich, diverse and above all unique natural environment.

Television media

In the area of mainstream television there are as yet no regular programs that I'm aware of specifically dedicated to environmental concerns. There are frequently natural history series, and occasionally environment-focused documentaries. Environmental stories on regular science based television programs and generalist news and current affairs. However, the focus and angle is of necessity substantially different than if it were a program dedicated purely to environmental issues.

Radio media

On mainstream radio there is only one environment program that I know of dedicated to environmental issues - albeit often from a scientific perspective. 'Earthbeat' is broadcast at the convenient time of 7:30 to 8 on a Saturday morning, a timeslot that reflects the level of prioritization and importance given to dedicated environmental concerns. The show manages to attract an average listenership of just over 50,000.

The role of the media in environmental issues in Australia. Community education and awareness is a key element of any healthy democratic process. I believe the media - in all forms and on all levels - should be taking an active and conscious role in disseminating all information relating to issues of significant public concern. In Australia - particularly in the case of environmental reporting - this is, unfortunately, simply not the case.

Priorities of the media

As is made clear from above, the level of specifically focussed environmental programs, papers or journals is very low in Australia, which means that coverage of environmental issues is largely left to the news and current affairs services. The mainstream media as a whole have a very clear agenda as to what qualifies as 'news worthy' for their news and current affairs. This criteria primarily consists of conflict, government policy and its various machinations, and so-called human interest. So while environment stories may well get a running from these criteria, the crux of the story will rarely be the actual environmental implications or public concerns, but rather the dramatic element of conflict between 'greenies' and miners or 'greenies' and loggers, or the government promises of safety and "no environmental impact".

Environmental challenges versus Australia's western capitalist society. It is widely recognized that the environmental problems faced by much of the world today, don't just require minor alterations to the way we currently create energy, produce food or use resources, but in fact require a significant and extremely challenging overhaul. The consequences of unabated Greenhouse gas emissions and the resulting global warming are a prime example, where in Australia the Great Barrier Reef - the longest coral reef in the world stretching over 2,000 kilometres - has been given just 30 years before an expected rise in water temperature will render it dead. This is not a situation requiring the gradual implementation of alternative energies or only a small increase in net greenhouse gas emissions nationally (which Australia managed to secure at the 1997 Kyoto Climate Change Conference) - it is a situation which requires urgent and immediate change. Unfortunately, national (and world) precedent seems to indicate that yet again, such change is unlikely to occur.

I believe the media have a vital and crucial role to play in our current predicament. Towards this end, a challenging educational and informational format is what I seek to develop within the community media sector. How will a public be actively caring and responsible on environmental issues when they simply don't know about them?

Significantly however, the intricacies of the living environment and the desperate need to change our way of living in order to conserve it are at distinct odds to the everyday 'newsworthy' criteria adopted by the mainstream media. Be it our mode of transport, levels of consumption or our attitudes toward the natural environment, such bigger picture concerns are tossed in the too hard basket or simply considered too boring for an audience already largely fed a neatly packaged diet of 'info-tainment'.

In addition, any issue that sufficiently challenges society's present structures and priorities, while simply not coming under any of the headings of 'newsworthy', also presents a clear and defiant challenge to the status quo, to the ruling elite and to big business - in which the media is a clearly a major player. The mainstream media are also involved in automatically screening out the intake of any new or apparently contradictory information which challenges our existing or established concepts and understandings. At the same time they readily allow, accept and thus reinforce information which simply confirms established concepts and prejudices.

So while it is certainly not excusable, it is also little wonder that the mainstream media on the whole fail to play either a responsible or active role in adequately reporting environmental concerns in Australia.

The Green Backlash

A more disturbing element in the recent decrease in environment reporting in Australia, is its connection to a so-called 'Green Backlash' - a suppression of environment issues in response to the raising of environmental public awareness and concern. As well known India activist Vandana Shiva says:

I think one has to know that if you are being effective, there will be backlash. In fact, that backlash is occurring is a tribute to the environmental movement, because it shows that the environmental movement is making a difference. If someone does not make a difference, there is no backlash.

During the late 1980s there was a period of heightened environment reporting in Australia. According to Australian environmental journalist Bob Burton, this was when industry bodies realized that they had to become involved in the debate, and counter some of the environmental gains.

The media played a key role in this backlash. Especially in taking on the 'green backlash' language. Suddenly eco terrorists, green extremists, and adical environmentalists were the terms used to describe environmental activists. Language representative of conflict and thus certainly qualifying as 'news worthy'.

Such action by and manipulation of the media also contributes to an overall decline in the trust and respect the population has for press and broadcasting outlets in Australia. Such mistrust is extremely problematic when the media tries to disseminate important environmental information.

The marginalization of community media on environment issues. As mentioned earlier, I work at 3CR Community Radio in Melbourne and produce a program call Earth Matters which is broadcast nationally on over 20 public and community radio stations around Australia. The show is dedicated to environmental concerns, from a strong social justice perspective, firmly based upon the premise that social and environmental issues should not be separated from each other, but instead remain intrinsically linked. And when I use the term 'work' I have never been employed as the producer of Earth Matters or as a journalist at all. I do the show, and have done it every week for over 3 years, primarily as a volunteer.

I am an environmentalist and the show reflects and acknowledges that bias openly. The idea that a journalist is not 'bias' has never made much sense to me, as every person comes into their work with their own set of experiences, beliefs and prejudices. Which is not to say that one should not strive to be fair, accurate and honest in reporting on issues, but the ability to remain 'unbiased' and 'objective' is at best a questionable one.

Community radio in Australia was established to provide a voice for those under-represented or ignored by the mainstream media. One consequence of this is a prevalent disparity in the level of recognition attributed to 'journalists' working in the community sector as opposed to the commercial or government sector. While reporting on a forest protest in a remote part of East Gippsland in Victoria last year, a commercial television worker introduced the term 'the official media', while looking sideways at me and the community television worker present there. Did this now mean that we were the 'unofficial media'?

The mainstream media seek to perpetuate a perception that they are independent and merely messengers of the news - which in my opinion could not be further from the truth.

On one occasion more recently I witnessed a reporter from Melbourne's most widely circulated daily newspaper harass and bully Jabiluka activists in the city as he argued in favor of the mine going ahead. He then presumably went back to the office and wrote up his 'objective', 'unbiased' report for the following day's edition.

Currently the most pro-active and educational sphere of media on environmental issues is I believe the community and public one. It is the one closest and most accessible to communities in all parts of the country. Yet this is not a sector well supported or recognized by either governments or the public as a whole. This can certainly be seen in the fact that the government has still not granted a full community television license anywhere in Australia.

The Way Forward

Australian author, Alex Carey, writes:

The Twentieth Century has been characterized by three developments of great political importance; the growth of democracy, the growth of corporate power, and the growth of corporate propaganda as a means of protecting corporate power against democracy.

While some people may think this sounds a little too much like a conspiracy theory, I know that in the work that I do as an environmentalist and the producer of an environmental radio program that the influence of corporate power is strong and substantial. And why wouldn't it be? Corporations largely rely on the constant taking of the earth's resources for profit - an aim that

is in stark contrast to environmental protection and conservation

Yet people do care. Given the information people care intensely about the health of their children, the purity of their food, the air they breathe, the water they drink. All of which are intrinsically connected to the health of their environment. I firmly believe that with adequate, accurate and honest reporting on environment issues that the public will act, and ultimately it is only with the help of the majority of the public that true environmental sustainability will be achieved. To this end, the comprehensive dispersal of environment issues through the media is the challenge for environmental journalism into the future.

Arsenic Contamination of Water

CEJA Chairperson Quamrul Islam Chowdhury chaired an in-depth session on the tragic arsenic contamination of Bangladesh's tube-wells.

Delegates watch two documentaries produced by FEJB which focussed on the heart rending plight of a Bangladeshi village woman with arsenic poisoning from the tube-wells and the delicate role of the Bangladesh media in its reporting of the problem.

Presentations were made by representatives from UNICEF, which is at the centre of a controversy about the installation of the tube-wells, and the Bangladesh Ministry officials. Delegates and Bangladeshi journalists then took part in a lengthy and emotional debate on the arsenic problem as UNICEF was on the receiving end for its once acclaimed safe drinking supply program through sinking thousands of tube-wells across Bangladesh in the 1970s and 1980s. Dr Ifukhar Husain of the Bangladesh Ministry of Health and Family Welfare alleged that UNICEF had known about the problem of arsenic contamination in the groundwater of parts of Bangladesh as early as the 1980s, but failed to warn the public about it and take precautionary measures until 1993.

Many delegates called to question the UNICEF program of tube-well drinking water supply system as well as the government role and asked what measures were being taken to mitigate the situation. However, others were shocked at the aggressive debate and called on the Bangladesh Government, UNICEF and other development agencies to join hands in tackling the problem that has affected millions of Bangladeshi villagers.

UNICEF's Chief of Water and Environmental Sanitation Program, Dr Deepak Bajracharya, shared an update on arsenic mitigation activities and claimed that nationwide testing had found that 22 per cent of tube-wells were contaminated. The community-based arsenic mitigation project supported by UNICEF is now providing the foundation for scaling up nationally, he said.

Dhaka Community Hospital, the Grameen Bank and other agencies were now implementing arsenic mitigation in 500 villages with help from the government. Dr Bajracharya said that the project had demonstrated the speed at which blanket testing can be done - for example in two thanas (districts) more than 20,000 were tested in a month. Masons in 500 villages were now being trained in the construction and installation of alternative systems including rainwater harvesting, sand filters on reserve ponds, and household arsenic removal systems, which community members select. Village-level workers are also being trained to test wells and identify arsenic patients. He also shared the communication strategy with mass media and interpersonal communication materials that provide people with the information they need on arsenic and the steps they can take to use only safe water.

At the media briefing, many delegates were astonished to hear senior Bangladesh government health officer Dr Husain alleging that the country was "a victim of UNICEF aggression" and that this was a case of "criminal negligence". This UN agency had supported the construction of tubewells by the Department of Public Health Engineering (DPHE) following the devastating

cyclone of 1970 and the war of liberation soon after. Its objective was to provide a safe source of potable water in a country where there is literally a lot of water but hardly a drop to drink. As is well known, an overwhelming proportion of disease in these situations is water-borne. It was only some six years ago that water being pumped out was found to contain a very high level of arsenic.

Dr Husain went on to ask, rhetorically, whether "UNICEF was for Bangladesh, or Bangladesh was for UNICEF", implying presumably that it had experimented carelessly with this technology and not cared about the catastrophic consequences. Further, he demanded to know how when officials in West Bengal state, across the border in India, had known about this problem since 1983, UNICEF had failed to act.

Some Bangladeshis have now actually filed a case against UNICEF for aiding the tube-well program without taking adequate precautions! Even the field kits supplied by UNICEF to test whether tube-wells were safe - the taps of the contaminated ones are marked red and the safe ones green - were condemned as unreliable

The truth is that geological factors are responsible. Over the centuries, arsenic contained in rocks eroded from the Himalayas have found their way deep into the sediment at the 'final resting places' in West Bengal and ultimately Bangladesh. However, it was only when the public health authorities in both countries started building tube-wells that these layers came into contact with the air and underwent chemical reactions, releasing the toxins into the groundwater. UNICEF's only 'crime' was to have assisted this program in a major way in Bangladesh, for which the authorities ought to have been grateful, for there could self-evidently be no ulterior motive.

The fact is that not much is known about the causes of this fatal contamination, which has officially killed ten people but obviously more, and harmed thousands of others, as well as its mitigation. It affects the skin, sensitive organs like the tongue and gradually consumes the rest of the body. The first need is to survey the affected areas. According to UNICEF, 59 out of 64 districts in the country are affected, exposing a staggering 75 million people to possible risk. The DPHE and UNICEF conducted a survey of nearly 400 thanas, in a little over half of which no arsenic was detected. About one in every five tube-wells were affected, which has also led to a fierce controversy.

There are 4.5 million tube-wells in the country, only a quarter built by the government, and it will be plainly difficult to survey all of them, which means that it is not clear how many are dangerous. While shallow tube-wells are thought to be more susceptible, those which have been

sunk deeper do also contain arsenic, like the case cited of ten deep tube-wells near Calcutta. Instead of leveling charges in such a cavalier manner, government officials, as some Bangladeshi journalists observed, ought to accept their own responsibility for this environmental catastrophe and act quickly to mitigate it. The reckless diversion of groundwater for irrigation has accentuated the process.

Now, there seems little alternative to testing the tube-wells regularly. So far, the DPHE and UNICEF have examined 25,000 wells and have the capacity to test some 1,850,000 more. The World Bank is providing \$32 million to the government to conduct more tests as well. The country's largest NGO, the world-renowned Bangladesh Rural Advancement Committee (BRAC), has also started testing the wells and found only 5 per cent were unsafe. These are being replaced. BRAC has developed alternatives to tube-wells, which rely on community management of safe water options, including pond sand filters and rainwater harvesting.

Tragically, there is as yet no known remedy for the patients. The national and international media has highlighted the case of a woman victim who was interviewed on video and cited by the New York Times as being ostracized by her own husband, which was allegedly false. She later succumbed to her affliction, but has become a symbol of the curse visited on a country already reeling under severe environmental degradation. Dr Husain expressed his anguish that the government was only doling out palliatives like vitamins and could do little to ease the suffering of patients, let alone cure them. He mentioned the use of anti-oxidative agents and more recently, the prescription of algae in diet as possible remedies, but wondered how many people could be treated in this manner. He believed that surveys ought to be conducted to identify patients, while testing tube-wells was secondary, but the two are inextricably linked

What does seem clear from this tragedy is that all agencies ought to bury their differences and work with each other instead of trading charges. The problem is acute and one of the world's worst environmental disasters. It needs to be surmounted with every means at the disposal of the national government - not least, the involvement of the country's well-organised NGOs - as well as the international community. It was the British Geological Survey which first traced the cause to sediments from the Himalayas; Swedes are researching arsenic in ground water. In India itself, Prof Dipankar Chakraborty, formerly of Jadavpur University, has conducted extensive studies, worked in Bangladesh as a consultant and now comes there on his own. Eight districts in West Bengal are similarly affected, so this is a unique case for co-operation, not recrimination.

Statement by Dr. Liqa Raschid - Sally, Sri Lanka

Water Specialist - International Water Management Institute (IWMI)

Environmental Impact Assessments as a tool for Sustainable Management of Wetlands

This morning according to the original program, Dr Ainun Nishat of the IUCN would have given us an understanding of wetlands and integrated water resources management. What I had planned to do was build upon his presentation and take us further forward in our reflection on the importance of managing wetlands properly. As it is I shall present a few concepts related to wetlands and carry on from there.

IWRM has become the catchword of the water world. It is almost looked upon as the 'OPEN SESAME' of Ali Baba's cave, capable of resolving our water problems.

And this is true to the extent that we are one step further along the way of managing our water better if we apply the principles of IWRM.

To start with let me recapitulate what wetlands are, why it is important to manage them sustainably and how integrated water resources management and environmental assessment fit in. We shall then explore EA as a management tool and finally to close up I shall explain some of the work IWMI is doing to study the impacts of irrigation water and agricultural inputs on wetland ecosystems.

What are wetlands? Almost any type of accumulated water is a wetland according to the broad definition of wetlands, and it is estimated that 6 per cent of the earth's land surface is wetland. They need to be conserved because they are amongst the world's most productive environments.

They also perform a variety of other functions because of the way the physical, biological and chemical components which compose a wetland ecosystem are linked. Some examples are: water retention and flood control, groundwater recharge, waste assimilation, besides being a centre of food production and a storehouse for biodiversity. How do we achieve this? Are there any magic formulae for doing it? Unfortunately, given the importance of what has to be wisely used, NOT REALLY.

However there is hope in that certain principles and tools when applied get us closer to doing this job better.

From the definition one can see that the ideas behind the two notions are very similar. In fact EA is the forerunner to IWRM - it was conceived with the intention of improving development actions through a coordinated vision of the consequences of such actions on environmental and human systems. In other words if the Environmental Assessment process is applied to development actions concerning water related ecosystems we can be sure of achieving integrated water resource management and thus the sustainability of the system is ensured.

What constitutes this process of evaluation? Many countries are now subject to EIA legislation. (I am not aware of the situation in Bangladesh) Other Asian countries including my own (Sri Lanka) have EIA legislation.

In its simplest form this is a special body of legislation which requires that certain types of development actions are subject to a scrutiny in order to predict adverse impacts and ensure their mitigation in some form or the other.

The steps of an EA process may vary depending on the legislation in the country concerned. But typically, an EA process applied to assessing a major action centred around a wetland would comprise a number of steps.

Ideally in deciding whether an action should be executed or not and under what conditions, the decision-maker should have access to all relevant information. Prescribed forms for presenting the information are indicated in most EA legislation. However it is important to keep in mind that information needs to be presented in an easily assimilable form which is conducive to decision making. Another key aspect of these assessments is that alternatives to the action need to be considered. There is never any single path to arrive at a destination. There is

always an alternative and the pros and cons of these alternatives must be considered before coming to decision.

What are some of the typical Policy issues that are raised in evaluating development projects? The best way to make sure that problems are solved is to identify them early on and make the necessary modifications before completing the development action: How do you integrate EA of wetlands into the project development cycle?

To conclude I would like to present some research work that the International Water Management Institute is doing to study the impacts of irrigation water/agriculture systems on wetland ecosystems.

For those not familiar with the IWMI, it is one of the member centres of the consultative group on International Agricultural Research and its headquarters are in Sri Lanka. In this region it has country offices in Pakistan and Nepal as well. In keeping with IWMI's new focus of better management of irrigation and water basin systems, it has recently undertaken research to try to quantify the relationships between irrigation/agriculture systems and wetlands. The study site itself is in the south-east Sri Lanka

in what is known as the intermediate/dry zone, in the river basin system known as the Kirindi Oya. The tradition in Sri Lanka has been dry zone tank agriculture even from the times of our ancient kingdoms. The Lunugamvehera is one such ancient reservoir which was subsequently developed under the more modern irrigation program in the 1980's.

The system of interest to us is the two tank system comprising Lunugamvehera and Badagiriya. Without going into the details of the irrigation system, suffice to say that the drainage water presently drains into the two brackish water lagoons which are part of a nature reserve The Bundala National Park. This reserve is also designated as one of the RAMSAR sites.

The result of this is a change in the wetland ecosystem. The lagoons which were brackish, because of seawater coming in at high tide have become fresh water ponds because of the irrigation drainage water. (They open only intermittently to the sea when the sand bar is breached). A thriving prawn/shrimp fisheries activities has come to a standstill and the local fisher communities who lived by this have to now go out to sea or fish the fresh water fish which now abound in the lagoon.

World Day for Water

UNEP News Release, 22 March 1999

Unsafe Water: 3.3 Billion Illnesses and 5.3 Million Deaths Yearly
Price Tag for Safe Water: \$US50 to \$US105 Per Person

Clean, safe water can be brought to the 1.4 billion people around the world without it for as little as \$US 50 per person, which can prevent many of the 3.35 billion cases of illness and 5.3 million deaths caused each year by unsafe water, says United Nations analysis.

At any given time, an estimated one half of people in developing countries are suffering from diseases caused either directly by infection through the consumption of contaminated water or food, or indirectly by disease carrying organisms (vectors), such as mosquitoes, that breed in water. These diseases include diarrhea,

schistosomiasis, dengue fever, infection by intestinal worms, malaria, river blindness (onchocerciasis) and trachoma (which alone causes almost six million cases of blindness or severe complications annually).

The UN warns that unless action is stepped up, the number of people without access to safe water will increase to 2.3 billion by 2025, with the number of those who die from unsafe water expected to jump sharply as well.

Right now, 20 percent of the world's population in 30 countries face water shortages, a figure that will rise to 30

percent of the world's population, in 50 countries, by 2025, according to the UN, observing World Day for Water on March 22. The theme of World Water Day 1999 is: "Everyone lives downstream," meant to convey that problems in one part of a watershed, or even in a country abroad, can affect people great distances away.

In many countries, water shortages stem from inefficient use, degradation of the available water by pollution and the unsustainable use of underground water in aquifers, the UN says. For example, 40 to 60 per cent of water used by utilities is lost to leakage, theft and poor accounting.

How bad is the water crisis:

- * Every 8 seconds, a child dies from a water-related disease;
- * 50 percent of people in developing countries suffer from one or more water-related diseases;
- * 80 percent of diseases in the developing world are caused by contaminated water,
- * 50 percent of people on earth lack adequate sanitation;
- * 20 percent of freshwater fish species have been pushed to the edge of extinction from contaminated water.

"Not only is the toll a human tragedy, but it means these people are less able to carry on productive lives, and this undermines social and economic development," says Klaus Toepfer, Executive Director of the United Nations Environment Programme (UNEP). Mr. Toepfer notes that women and girls in developing countries spend more than 10 million person-years in aggregate each year fetching water from distant, often polluted sources.

Ironically, most available fresh water is found in developed nations, which have one-fifth of the world's population. Nearly all of the 3 billion increase in global population expected by 2025 will be in developing countries, where water is often already scarce, or comes in monsoons, hurricanes and floods, draining off the land quickly.

Getting Water to the Poor

The estimated capital cost to provide safe water in rural areas is \$US50 per person; \$US105 per person in cities, the UN says. Providing sanitation can be done for an additional \$US30 or less per person in rural areas, \$US145 in urban areas.

The UN estimates the overall price to bring low-cost safe water and sanitation to all those who need it today (and will in the next decade, given population growth) in rural and low-income urban areas at \$US23 to \$US25 billion

per year over eight to 10 years. Current world investment is \$US8 billion per year, leaving a \$US15 to \$US17 billion shortfall -- an amount roughly equal to annual pet food purchases in Europe and the USA.

Water can be provided with these funds in rural and low-income urban areas through the utilization of low-cost technologies that include handpumps, gravity-fed systems and rainwater collection, which would be built to serve entire rural villages or urban neighborhoods, rather than bringing indoor plumbing to individual houses. The provisions would include pumps, pipes, the training of workers, and the development and strengthening of water management practices.

"This is the absolute minimum that the world community must provide to the world's poor without water," says Dr van Ginkel. "It will save countless lives, and greatly lessen the burden on millions of those, mostly women and children, who must trudge miles each day to bring water to their homes."

The Coming Water Crisis

The consequences of the increasing global water scarcity will largely be felt in the arid and semi-arid areas, in rapidly growing coastal regions and in the megacities of the developing world. Water scientists predict that many of these cities already are, or will be, unable to provide safe, clean water and adequate sanitation facilities for their citizens -- two fundamental requirements for human well being and dignity.

The problem will be magnified by rapid urban growth. In 1950, there were less than 100 cities with a population in excess of 1 million; by 2025, that number is expected to rise to 650. By the year 2000, some 23 cities -- 18 of them in the developing world -- will have populations exceeding 10 million. On a global scale, half of the world's people will live in urban areas.

Some of the world's largest cities, including Beijing, Buenos Aires, Dhaka, Lima and Mexico City, depend heavily on groundwater for their water supply, but it is unlikely that dependence on aquifers, which take many years to recharge, will be sustainable. Groundwater from aquifers beneath or close to Mexico City, for example, provides it with more than 3.2 billion liters per day, but already water shortages occur in many parts of the capital.

The UN University says that as urban populations grow, water use will need to shift from agriculture to municipal and industrial uses, making decisions about allocating between different sectors difficult. Water scarcity is aggravated by four principal human failures:

- * Reluctance to treat water as an economic as well as a public good;
- * Excessive reliance in many places on inefficient institutions for water and wastewater services;
- * Fragmented management of water between sectors and institutions, with little regard for conflicts between social, economic and environmental objectives; and
- * Inadequate recognition of the health and environmental concerns associated with current practices.

"Instead, we must adopt a new approach to water resources management in the new millennium so as to overcome these failures, reduce poverty and conserve the environment -- all within the framework of sustainable development," says Dr van Ginkel

The UN also warns of emerging trends that indicate the world is approaching a 'water crisis' in several regions -- most notably the Middle East and North.

"The main constraint to agricultural production in many areas in the near future will be the availability of water, not land," Dr. van Ginkel says.

Water Wars?

Hydrologists have carefully plotted the water equation. The amount of fresh water on the planet is finite -- less than a million cubic kilometers. That was enough in 1700, when less than a billion people shared the planet, and in 1900, when some 2 billion people were alive. Now, there are more than 6 billion people and the freshwater supply is stretched to the limit. By 2025, the same amount of water must feed an additional 3 billion people.

The populations of water-short countries, today estimated to be 550 million, are expected to increase to 1 billion by the year 2010. Water shortages will be especially adverse for agriculture, which takes 70-80 percent of all

available fresh water in the world. Without stepped up effort, "common sense tells us that national tensions over water could jump perilously," says Dr. van Ginkel. "Conflicts over water, both international and civil wars, threaten to become a key part of the 21st Century landscape "

According to Klaus Toepfer a future war over water is a distinct possibility. Repeating a view he has made before, Toepfer says he is "convinced that there will be conflict over natural resources, particularly water." The UNEP Executive Director advocates monitoring worldwide reserves of drinking water, establishing cooperative agreements on the use of water and economic instruments to stimulate new technologies to promote water conservation.

Geography will also contribute to the water conflicts. Nearly 47 percent of the land area of the world, excluding Antarctica, falls within international water basins shared by two or more countries. There are 44 countries with at least 80 per cent of their total areas within international basins. The number of river and lake basins shared by two or more countries are now more than 300. In Africa alone, there are 54 drainage basins covering approximately 50 per cent of the total land area of the continent, including their water resources.

In the coming decades, accelerating environmental pressures could transform the very foundations of the international political system. There are at least 25 million environmental refugees today, a total to be compared with 22 million refugees of the traditional kind. They are mainly located in sub-Saharan Africa, the Indian sub-continent, China, Mexico and Central America. The total may well double by the year 2010, as increasing numbers of impoverished people press ever harder on their already degraded environments, including their water resources.

The theme for World Day for Water on 22 March 2000 is "Water for the 21st Century", focusing on the challenges faced by humanity in holistic water resources development and management in the next century. This theme was selected to coincide with the completion of the World Water Vision and the Framework for Action to implement the vision, which will start at the 2nd World Water Forum and Ministerial Conference to be held in the Hague (the Netherlands) 17 - 22 March 2000. For more information please visit; <http://www.unesco.org/science/waterday2000>

● CHINA ● KOREA ● JAPAN ● MACAU ● MONGOLIA ● BRUNEI DARUSSALAM ● CAMBODIA ●
INDONESIA ● LAO ● MALAYSIA ● MYANMAR ● PHILIPPINES ● SINGAPORE ● TAILAND ● VIETNAM
● AFGHANISTAN ● BANGLADESH ● BHUTAN ● INDIA ● IRAN ● MALDIVES ● NEPAL ● PAKISTAN
● SRI LANKA ● AZERBAIJAN ● KAZAKHSTAN ● KYRGYZSTAN ● TAJIKISTAN ● TURKMENISTAN ●
UZBEKISTAN ● JORDAN ● LEBANON ● TUNISIA ● KUWAIT ● OMAN ● SAUDI ARABIA ● SYRIA ●
YEMEN ● UNITED ARAB EMIRATES ● TURKEY ● AMERICAN SAMOA ● AUSTRALIA ● MARIANA
ISLANDS ● COOK ISLANDS ● FEDERATED STATES OF MICRONESIA ● FIJI ● FRENCH POLYNESIA ●
GUAM ● KIRIBATI ● NAURU ● NEW CALEDONIA ● NEW ZEALAND ● NIUE ● MAURITIUS ● PAPUWA
NEW GUINEA ● MARSHALL ISLANDS ● PALAU ● SAMOA ● SOLOMON ISLANDS ● TONGA ● TUVALU
● VANUATU ● ANTIGUA ● BARBUDA ● BAHAMAS ● BARBADOS ● BELIZE ● BOTSWANA ●
BRITAIN ● BRUNEI DARUSSALAM ● CAMEROON ● CANADA ● CYPRUS ● DOMINICA ● THE GAMBIA
● GAHANA ● GRENADA ● GUYANA ● JAMAICA ● KENYA ● LESOTHO ● MALAWI ● MALTA ●
MAURITIUS ● MOZAMBIQUE ● NAMIBIA ● NIGERIA ● ST KITTS ● NEVIS ● ST LUCIA ● ST VINCENT
● THE GRENADINES ● SEYCHELLES ● SIERRA LEONE ● SOUTH AFRICA ● SWAZILAND ● TANZANIA
● TRINIDAD AND TOBAGO ● TUVALU ● UGANDA ● WEST SAMOA ● ZAMBIA ● ZIMBABWE ●
CHINA ● KOREA ● JAPAN ● MACAU ● MONGOLIA ● BRUNEI DARUSSALAM ● CAMBODIA ●
INDONESIA ● LAO ● MALAYSIA ● MYANMAR ● PHILIPPINES ● SINGAPORE ● TAILAND ● VIETNAM
● AFGHANISTAN ● BANGLADESH ● BHUTAN ● INDIA ● IRAN ● MALDIVES ● NEPAL ● PAKISTAN
● SRI LANKA ● AZERBAIJAN ● KAZAKHSTAN ● KYRGYZSTAN ● TAJIKISTAN ● TURKMENISTAN ●
UZBEKISTAN ● JORDAN ● LEBANON ● TUNISIA ● KUWAIT ● OMAN ● SAUDI ARABIA ● SYRIA ●
YEMEN ● UNITED ARAB EMIRATES ● TURKEY ● AMERICAN SAMOA ● AUSTRALIA ● MARIANA
ISLANDS ● COOK ISLANDS ● FEDERATED STATES OF MICRONESIA ● FIJI ● FRENCH POLYNESIA ●

Closing Session

GUAM ● KIRIBATI ● NAURU ● NEW CALEDONIA ● NEW ZEALAND ● NIUE ● MAURITIUS ● PAPUWA
NEW GUINEA ● MARSHALL ISLANDS ● PALAU ● SAMOA ● SOLOMON ISLANDS ● TONGA ● TUVALU
● VANUATU ● ANTIGUA AND BARBUDA ● BAHAMAS ● BARBADOS ● BELIZE ● BOTSWANA ●
BRITAIN ● BRUNEI DARUSSALAM ● CAMEROON ● CANADA ● CYPRUS ● DOMINICA ● THE GAMBIA
● GAHANA ● GRENADA ● GUYANA ● JAMAICA ● KENYA ● LESOTHO ● MALAWI ● MALTA ●
MAURITIUS ● MOZAMBIQUE ● NAMIBIA ● NIGERIA ● ST KITTS AND NEVIS ● ST LUCIA ● ST VINCENT
● THE GRENADINES ● SEYCHELLES ● SIERRA LEONE ● SOUTH AFRICA ● SWAZILAND ● TANZANIA
● TRINIDAD ● TOBAGO ● TUVALU ● UGANDA ● WEST SAMOA ● ZAMBIA ● ZIMBABWE ● CHINA ●
KOREA ● JAPAN ● MACAU ● MONGOLIA ● BRUNEI DARUSSALAM ● CAMBODIA ● INDONESIA ●
LAO ● MALAYSIA ● MYANMAR ● PHILIPPINES ● SINGAPORE ● TAILAND ● VIETNAM ●
AFGHANISTAN ● BANGLADESH ● BHUTAN ● INDIA ● IRAN ● MALDIVES ● NEPAL ● PAKISTAN ●
SRI LANKA ● AZERBAIJAN ● KAZAKHSTAN ● KYRGYZSTAN ● TAJIKISTAN ● TURKMENISTAN ●
UZBEKISTAN ● JORDAN ● LEBANON ● TUNISIA ● KUWAIT ● OMAN ● SAUDI ARABIA ● SYRIA ●
YEMEN ● UNITED ARAB EMIRATES ● TURKEY ● AMERICAN SAMOA ● AUSTRALIA ● MARIANA
ISLANDS ● COOK ISLANDS ● FEDERATED STATES OF MICRONESIA ● FIJI ● FRENCH POLYNESIA ●
GUAM ● KIRIBATI ● NAURU ● NEW CALEDONIA ● NEW ZEALAND ● NIUE ● MAURITIUS ● PAPUWA
NEW GUINEA ● MARSHALL ISLANDS ● PALAU ● SAMOA ● SOLOMON ISLANDS ● TONGA ● TUVALU
● VANUATU ● ANTIGUA ● BARBUDA ● BAHAMAS ● BARBADOS ● BELIZE ● BOTSWANA ● BRITAIN
● BRUNEI DARUSSALAM ● CAMEROON ● CANADA ● CYPRUS ● DOMINICA ● THE GAMBIA ●
GAHANA ● GRENADA ● GUYANA ● JAMAICA ● KENYA ● LESOTHO ● MALAWI ● MALTA ●
MAURITIUS ● MOZAMBIQUE ● NAMIBIA ● NIGERIA ● ST KITTS AND NEVIS ● ST LUCIA ● ST VINCENT
AND THE GRENADINES ● SEYCHELLES ● SIERRA LEONE ● SOUTH AFRICA ● SWAZILAND ●
TANZANIA ● TRINIDAD AND TOBAGO ● TUVALU ● UGANDA ● WEST SAMOA ●

Statement by Bakhtiar Rana, Bangladesh

General Secretary, Forum of Environmental Journalists of Bangladesh (FEJB)

I have no words to express my gratitude to you all those who are present here today as well as the others who were here but have left a day earlier for making this Comilla Congress a success. I would say - thanks to you all - the congress achieved a substantial success.

I am overwhelmed by the generous gesture of my colleagues and friends in CEJA for having elected FEJB Chairperson, Quamrul Islam as the new chairman of this organization - a responsibility he will try his best to perform. I am also thankful to my friends in CEJA for having decided to establish the CEJA secretariat in Dhaka.

The theme of this Dhaka Congress was Water and Environment: The Role of the Media. There could not be any other subject more pertinent than this. I believe we achieved quite a considerable success in highlighting the core issues of the theme which is, so relevant for us in Bangladesh - a land of rivers and a nation whose fate is so

closely linked with water. The Dutch government is going to hold a World Water Forum in The Hague, sometime in March next year, and I believe it will be a major conference at which we - from both the APFEJ and CEJA, as well as from FEJB, my primary organization - should make a strong presence.

The last few days have been some of the most wonderful and, of course, most useful for me as well as my fellow colleagues at FEJB for being able to host you here, as BARD-Comilla. I don't want to tell upon your patience, but before I conclude I must thank Syed Marghub Murshed, Secretary, Environment and Forest, for his unstinted support for holding this congress.

Before I conclude, I express my heartfelt thanks and gratitude to all the members of FEJB and our staff and consultants who worked so very hard for holding this congress against all constraints and odds. With these few words, ladies and gentlemen, let us draw the curtain on the Dhaka Congress. Thank you once again.

Statement by Dinesh Weerakkody, Sri Lanka

Managing Editor, Asia - Pacific Forum of Environmental Journalists (APFEJ)

We have come to the end of another successful gathering of environmental journalists. This event is something I think that everyone involved in APFEJ and CEJA can be proud of. The 11th Asia - Pacific and 2nd Commonwealth Congress of Environmental Journalists has been an outstanding occasion.

Let me simply run through some of the many achievements you have all taken part in over the past five days

The gathering of 64 delegates from nearly 25 countries from around the world to discuss and analyze many

pressing issues to do with water and the role the media has to play.

- The adoption of a constitution for CEJA.
- The adoption of a comprehensive three-year work plan for CEJA, including the establishment of a CEJA Secretariat in Dhaka to be overseen by the hard working team at the Forum of Environmental Journalists of Bangladesh.
- The election of a new executive committee for APFEJ and CEJA, including the significant step of appointing six regional directors of APFEJ's activities - allowing for the organization to build upon its already solid base.

The strengthening of APFEJ's constitution which will take it soundly into the new millennium.

The adoption of the Dhaka Declaration, which is a strong document calling for many actions that have resulted from this gathering.

These are just the highlights and I'm sure you will all take home something special from this event which will be of benefit professionally and personally.

I would like to take this opportunity to once again thank Quamrul and all the staff at FEJB for their dedication and

hospitality they have provided to all of us. I also want to thank my colleagues at the APFEJ Secretariat, along with the resource people who took part in the congress and the supporting agencies that helped us achieve our goals. I thank you all.

Now we can look forward to putting into action all we have learned and discussed here. I hope to see you all and many more at our next congress to be held in Fiji in 5 to 9 June 2000.

Statement by Syed Marghub Morshed, Bangladesh Secretary, Ministry of Bangladesh Environment and Forest

It is a privilege for me to be in your midst this morning. I thank the organizers of today's function for inviting me to the concluding session of the 11th Asia-Pacific and 2nd Commonwealth Congress of Environmental Journalists and for giving me the opportunity to say a few words in the congress being held at the picturesque campus of the Bangladesh Academy for Rural Development or BARD, in Comilla. I am grateful to my comrades, the environment journalists, for selecting the campus of BARD as the venue of their congress. For me, any visit to this campus, my erstwhile home and place of work, is a special occasion.

I was overwhelmed by feelings of nostalgia, whenever I return here. This campus is also an extremely evocative place for all those interested in rural development and poverty alleviation. Terms like 'integrated rural development' and 'micro credit' were coined in this campus and later passed on to the lexicon of development studies. I, therefore, think that it is an appropriate setting for the congress, that will end after this morning's valedictory formalities, the first such congress to be held in Bangladesh and the last of its kind, in the current century.

Ladies and Gentlemen: I do not think I am adequately qualified to speak in this gathering of the representatives of the media, most of who are extremely well informed about matters concerning the environment. We, in the government of Bangladesh, like governments elsewhere

in the world, want to take the environment for granted. We are grateful to our friends in the media for awakening us and for making us conscious of environmental problems. The discovery or, more aptly, the rediscovery of the environment, in the recent past, was largely due to the hue and cry raised by our friends, the environmental journalists. They helped to persuade governments to adopt policies that were environment friendly and implement sustainable development programs. Sustainable development, like enlightened self-interest, takes into account the interests of all, particularly those of future generations. The resources of Planet Earth, we must bear in mind, are finite and have to be used optimally, for the greatest good of all, for the greatest good of our children and our children's children.

The theme of the congress - "Water and the Environment" - had been rightly chosen at a time when the world is stepping into the new millennium. Water and the environment are inextricably linked. The availability of safe water in sufficient quantities will be an important subject in the environmental agenda of the coming century and the coming millennium.

The issues that were covered in the Comilla congress will be of relevance to the governments and people of the Asia-Pacific and the Commonwealth countries. They will be of special interest to the government and people of Bangladesh. The recommendations of the congress, will I am sure, have an important bearing in the formulation of future environment policies in Bangladesh.

In this assembly of environmental journalists, I would like to inform the audience in front of me of the fact that the Government of Bangladesh is most sincerely committed to the implementation of programs that are eco-friendly. Among the issues that we, in the Ministry of Environment and Forests, have tried to address during the past one year include.

- 1 Banning the use of leaded petrol and making lead-free petrol available
- 2 Banning the use of high sulfur diesel and making clean diesel available.
3. Initiating catalytic converters in all new petrol driven vehicles.
- 4 Introducing filters in diesel driven vehicles
5. Phasing out three-wheelers running on two-stroke engines.
6. Encouraging the import of buses and other motor vehicles using compressed natural gas (CNG) that is plentifully available in Bangladesh, though the introduction of preferential tariff and other fiscal measures.
7. Encouraging the import of air-conditioners, refrigerators and cold storage equipment that use new generation refrigerants and do not emit ozone-depleting substances
- 8 Putting in place a belt of forests along the coast of Bangladesh that will protect a calamity prone country from the fury of tropical cyclones
9. Making safe arsenic free drinking water available.
10. Establishing Environmental Courts

We cannot claim to have tackled successfully all the problems that we have tried to deal with. We have only made a modest beginning in our efforts to remedy the environmental wrongs that we have inherited. We trust,

however,

that with the help of our friends working in the media, we shall, in the not too distant future, be able to approximate our avowed objectives. We need the support and the co-operation of the media to reach the goals that we have placed in front of us. The environmental journalist, we hope, will assist us by sensitizing the public at large about the things we are trying to do.

In addition to the measures I have just spoken of, the government is implementing projects like the Sustainable Environment Management Program (SEMP) with the assistance of UNDP, the Bangladesh Environment Management Program (BEMP) with assistance from Canadian CIDA, the National Conservation Strategy with assistance from NORAD of Norway as well as projects with funds from the Asian Development Bank, the World Bank and the Global Environmental Facility (GEF). We have involved government agencies, non-government organization (NGOs) and the representatives of the civil society in Bangladesh in the implementing of these projects.

The government of Bangladesh is pledge bound to protect bio-diversity and to prevent environmental degradation in the country. The environmental problem, however, is in its entirety, a global and international problem. The government of Bangladesh has, therefore, signed and ratified most of the important international conventions and protocols on environmental matters. We are in a process of harmonizing our national and our municipal laws with the conditions stipulated in these conventions and protocols. In various international fora, we have spoken, forcefully and unambiguously, about the need to implement, strictly, the terms of these conventions by all countries, particularly, by the industrialized and developed countries.

I must not prolong my speech any further. I should return to my seat and make way for the other guests. But before I do so, let me thank, once again, the organizers of this function for inviting me here and the people in front of me for listening to me very patiently. I wish the foreign delegates attending the congress a very pleasant stay in Bangladesh and hope this congress is a huge success.

Suva Congress Declaration Speech
Statement by Nina Ratulele, Fiji

It is wonderful for me to be in Bangladesh taking part in the Dhaka Congress with so many friends and colleagues from around the world. I want to thank Quamrul and Dharman for all their hard work in making this meeting possible.

I am pleased to announce here at this event the official declaration that the 12th Asia Pacific Forum of Environmental Journalists and the 3rd Commonwealth Environmental Journalists Association Congress will be held in the Fiji Islands next year

This event will be held from June 5-9, 2000, in our beautiful capital Suva and will be hosted by the PINA

Pacific Forum of Environmental Journalists, which represents more than 20 Pacific Island nations and territories.

I invite you all to join me at the Suva Congress. This will be an historic event as it will be the first time an APFEJ / CEJA congress has been hosted in a Pacific nation.

I hope to see you all, and maybe some new members and friends of APFEJ and CEJA, at the Congress, where you can discover first hand the famous beauty of the Pacific Islands and the friendship and hospitality of the Fijian people.

● CHINA ● KOREA ● JAPAN ● MACAU ● MONGOLIA ● BRUNEI DARUSSALAM ● CAMBODIA ●
INDONESIA ● LAO ● MALAYSIA ● MYANMAR ● PHILIPPINES ● SINGAPORE ● TAILAND ● VIETNAM
● AFGHANISTAN ● BANGLADESH ● BHUTAN ● INDIA ● IRAN ● MALDIVES ● NEPAL ● PAKISTAN
● SRI LANKA ● AZERBAIJAN ● KAZAKHSTAN ● KYRGYZSTAN ● TAJIKISTAN ● TURKMENISTAN ●
UZBEKISTAN ● JORDAN ● LEBANON ● TUNISIA ● KUWAIT ● OMAN ● SAUDI ARABIA ● SYRIA ●
YEMEN ● UNITED ARAB EMIRATES ● TURKEY ● AMERICAN SAMOA ● AUSTRALIA ● MARIANA
ISLANDS ● COOK ISLANDS ● FEDERATED STATES OF MICRONESIA ● FIJI ● FRENCH POLYNESIA ●
GUAM ● KIRIBATI ● NAURU ● NEW CALEDONIA ● NEW ZEALAND ● NIUE ● MAURITIUS ● PAPUWA
NEW GUINEA ● MARSHALL ISLANDS ● PALAU ● SAMOA ● SOLOMON ISLANDS ● TONGA ● TUVALU
● VANUATU ● ANTIGUA ● BARBUDA ● BAHAMAS ● BARBADOS ● BELIZE ● BOTSWANA ● BRITAIN
● BRUNIE DARUSSALAM ● CAMEROON ● CANADA ● CYPRUS ● DOMINICA ● THE GAMBIA ●
GAHANA ● GRENADA ● GUYANA ● JAMAICA ● KENYA ● LESOTHO ● MALAWI ● MALTA ●
MAURITIUS ● MOZAMBIQUE ● NAMIBIA ● NIGERIA ● ST KITTS AND NEVIS ● ST LUCIA ● ST VINCENT
AND THE GRENADINES ● SEYCHELLES ● SIERRA LEONE ● SOUTH AFRICA ● SWAZILAND ●
TANZANIA ● TRINIDAD AND TOBAGO ● TUVALU ● UGANDA ● WEST SAMOA ● ZAMBIA ●
ZIMBABWE ● CHINA ● KOREA ● JAPAN ● MACAU ● MONGOLIA ● BRUNEI DARUSSALAM ●
CAMBODIA ● INDONESIA ● LAO ● MALAYSIA ● MYANMAR ● PHILIPPINES ● SINGAPORE ●
TAILAND ● VIETNAM ● AFGHANISTAN ● BANGLADESH ● BHUTAN ● INDIA ● IRAN ● MALDIVES
● NEPAL ● PAKISTAN ● SRI LANKA ● AZERBAIJAN ● KAZAKHSTAN ● KYRGYZSTAN ● TAJIKISTAN
● TURKMENISTAN ● UZBEKISTAN ● JORDAN ● LEBANON ● TUNISIA ● KUWAIT ● OMAN ● SAUDI
ARABIA ● SYRIA ● YEMEN ● UNITED ARAB EMIRATES ● TURKEY ● AMERICAN SAMOA ●
AUSTRALIA ● MARIANA ISLANDS ● COOK ISLANDS ● FEDERATED STATES OF MICRONESIA ● FIJI ●

Appendices

FRENCH POLYNESIA ● GUAM ● KIRIBATI ● NAURU ● NEW CALEDONIA ● NEW ZEALAND ● NIUE
● MAURITIUS ● PAPUWA NEW GUINEA ● MARSHALL ISLANDS ● PALAU ● SAMOA ● SOLOMON
ISLANDS ● TONGA ● TUVALU ● VANUATU ● ANTIGUA AND BARBUDA ● BAHAMAS ● BARBADOS ●
BELIZE ● BOTSWANA ● BRITAIN ● BRUNIE DARUSSALAM ● CAMEROON ● CANADA ● CYPRUS ●
DOMINICA ● THE GAMBIA ● GAHANA ● GRENADA ● GUYANA ● JAMAICA ● KENYA ● LESOTHO
● MALAWI ● MALTA ● MAURITIUS ● MOZAMBIQUE ● NAMIBIA ● NIGERIA ● ST KITTS AND NEVIS
● ST LUCIA ● ST VINCENT ● THE GRENADINES ● SEYCHELLES ● SIERRA LEONE ● SOUTH AFRICA ●
SWAZILAND ● TANZANIA ● TRINIDAD AND TOBAGO ● TUVALU ● UGANDA ● WEST SAMOA ●
ZAMBIA ● ZIMBABWE ● CHINA ● KOREA ● JAPAN ● MACAU ● MONGOLIA ● BRUNEI
DARUSSALAM ● CAMBODIA ● INDONESIA ● LAO ● MALAYSIA ● MYANMAR ● PHILIPPINES ●
SINGAPORE ● TAILAND ● VIETNAM ● AFGHANISTAN ● BANGLADESH ● BHUTAN ● INDIA ● IRAN
● MALDIVES ● NEPAL ● PAKISTAN ● SRI LANKA ● AZERBAIJAN ● KAZAKHSTAN ● KYRGYZSTAN
● TAJIKISTAN ● TURKMENISTAN ● UZBEKISTAN ● JORDAN ● LEBANON ● TUNISIA ● KUWAIT ●
OMAN ● SAUDI ARABIA ● SYRIA ● YEMEN ● UNITED ARAB EMIRATES ● TURKEY ● AMERICAN
SAMOA ● AUSTRALIA ● MARIANA ISLANDS ● COOK ISLANDS ● FEDERATED STATES OF MICRONESIA
● FIJI ● FRENCH POLYNESIA ● GUAM ● KIRIBATI ● NAURU ● NEW CALEDONIA ● NEW ZEALAND
● NIUE ● MAURITIUS ● PAPUWA NEW GUINEA ● MARSHALL ISLANDS ● PALAU ● SAMOA ●
SOLOMON ISLANDS ● TONGA ● TUVALU ● VANUATU ● ANTIGUA ● BARBUDA ● BAHAMAS ●
BARBADOS ● BELIZE ● BOTSWANA ● BRITAIN ● BRUNIE DARUSSALAM ● CAMEROON ● CANADA
● CYPRUS ● DOMINICA ● THE GAMBIA ● GAHANA ● GRENADA ● GUYANA ● JAMAICA ● KENYA
● LESOTHO ● MALAWI ● MALTA ● MAURITIUS ● MOZAMBIQUE ● NAMIBIA ● NIGERIA ● ST
KITTS AND NEVIS ● ST LUCIA ● ST VINCENT AND THE GRENADINES ● SEYCHELLES ● SIERRA LEONE ●
SOUTH AFRICA ● SWAZILAND ● TANZANIA ● TRINIDAD AND TOBAGO ● TUVALU ● UGANDA ●

International Green Pen Award 1998



The International Green Pen Award 1998 has been presented to three leading individuals who made significant contributions in the field of environmental journalism in the past year. They are,

- Dr Dharman Wickremaratne
Chairperson, Sri Lanka Environmental Journalists Forum (SLEJF)
Sri Lanka

- Nina Ratulele
General Secretary, PINA Pacific Forum of Environmental Journalists
Fiji

- Zaigham Khan
Chairperson, Pakistan Forum of Environmental Journalists (PFEJ)
Pakistan

They received their awards at the opening ceremony of the congress.

Bangladesh Green Pen Award 1998



The Forum of Environmental Journalists of Bangladesh presented the Bangladesh Green Pen Award 1998 to Bangladesh Daily Star Editor Mahfuz Anam for his outstanding contributions to Environmental Journalism.

Anam, one of the leading editors of the Asia-Pacific region, received the award at the congress opening ceremony.

1998 Asia - Pacific Awards for Excellence in Environmental Journalism and Photo Journalism

APFEJ is pleased to announce the two winners of the 1998 Asia-Pacific Award for Excellence in Environmental Journalism. The winners of the two categories are,

Environmental Journalism

Alex Rey V Pal, Philippines

Alex's entry was chosen due to its diverse range of environmental stories, which were written in a balanced and education tone. Alex is a multi talented journalist. He work both in the print and electronic media, is a correspondent for the *Philippine Daily Inquirer* and is also the vice-present of the *Philippines Environmental Journalists Inc.*

Environmental Photo Journalism

Abu Taher Khokon, Bangladesh

Abu is the chief photographer of the English Daily Financial Express and a member of the Bangladesh Forum of Environmental Journalists. He is a highly respected photographer who takes highly expressive imaged of the environment and world around him.

The award was organized by APFEJ with support from the Asian Development Bank (ADB) Office of Environment and Social Development (ADB-OESD).

APFEJ received 68 outstanding entries from 21 countries in the region. The quality of the entrants was very high and the work of the judging panel was very difficult.

The awards were presented on Tuesday, September 14, at a special ceremony at the 11th annual Asia-Pacific Forum of Environmental Journalists (APFEJ) congress in Dhaka, Bangladesh. Each winner received a US\$500 cash prize, support to attend the congress and an award certificate the full prize will nearly USD 2000.

The 1999 Asia-Pacific Award for Excellence in Environmental Journalism will be presented at the APFEJ Fiji Congress to coincide with World Environment Day on June 5, 2000.

Asia-Pacific Forum of Environmental Journalists (APFEJ)

New office-bearers of the APFEJ Executive Committee elected at the Dhaka Congress.

- Chairperson:** Dr. Dharmnan Wickremaratne, Sri Lanka
(Chairperson - Sri Lanka Environmental Journalists Forum)
- Deputy Chairperson:** Nina Ratulele, Fiji
(Secretary - PINA Pacific Forum of Environmental Journalists)
- Regional Directors (6):**
- APFEJ East Asia - Yang Mao, China
(Chairperson - China Forum of Environmental Journalists)
- APFEJ South East Asia - Manuel Satorre, Philippines
(Chairperson - Philippines Environmental Journalists Inc)
- APFEJ South Asia - Mangal Man Shakya, Nepal
(General Secretary - Nepal Forum of Environmental Journalists)
- APFEJ Central Asia - Lida Astanina, Kazakhstan
(Editor - Greenwomen Ecological News Agency)
- APFEJ West Asia - Ziyad Alawneh, Jordan
(Regional Coordinator - Med Eco Media Network)
- APFEJ Pacific - Juliet Fox, Australia
(Media Representative - Friends of the Earth (FoE) Australia)
- Secretary General:** Quamrul Islam Chowdhury, Bangladesh
(Chairperson Forum of Environmental Journalists of Bangladesh)
- Assistant Secretary:** Zaigham Khan, Pakistan
(Chairperson, Pakistan Forum of Environmental Journalists)
- Executive Members (7):**
- Aditya Man Shrestha, Nepal
(Founder Chairperson - Asia Pacific Forum of Environmental Journalists)
- Philip Mathews, Malaysia
(Assistant Director General - Institute of Strategic and International Studies)
- Vijay Menon, Singapore
(Secretary General - Asian Mass Communication Research & Information Centre)
- Dr. Amanda Katilli, Indonesia
(Chairperson - Syarifa Foundation for Eco Media)
- Darryl D' Monte, India
(Chairperson - Forum of Environmental Journalists of India)
- Malle Boorsiripunth, Thailand
(Associate Professor, Faculty of Journalism and Mass Communications,
Thammasat University)
- Shigeyuki Okajima, Japan
(Chairperson - Japanese Forum of Environmental Journalists)
- Auditors (2):**
- Soodhakur Ramlallah, Mauritius
(Chairperson - Mauritius Union of Environmental Journalists Forum)
- Nguyen Thi Diep Hoa, Vietnam
(Vice Chairperson - Vietnam Forum of Environmental Journalists)

Countries within the APFEJ Network

● EAST ASIA

China, Korea, Japan and Mongolia

● SOUTH EAST ASIA

Brunei, Cambodia, Indonesia, Lao, Malaysia, Myanmar, Philippines, Singapore, Thailand and Vietnam

● SOUTH ASIA

Bangladesh, Bhutan, India, Iran, Maldives, Nepal, Pakistan and Sri Lanka

● CENTRAL ASIA

Azerbaijan, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan

● WEST ASIA

Afghanistan, Jordan, Kuwait, Lebanon, Oman, Saudi Arabia, Syria, Yemen, Iran and United Arab Emirates

● PACIFIC

American Samoa, Australia, Mariana Islands, Cook Islands, Federated States of Micronesia, Fiji, French Polynesia, Guam, Kiribati, Nauru, New Caledonia, New Zealand, Niue, Mauritius, Papua New Guinea, Marshall Islands, Palau, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu

Statute of the Asia Pacific Forum of Environmental Journalists (APFEJ)

Article 01: Name and Headquarters

The Organization shall be known as the Asia-Pacific Forum of Environment Journalists (APFEJ).

APFEJ headquarters is located at P O Box 26, 434/4 Sri Jayawardenapura, Sri Lanka This office may be transferred to all other countries decided by the General Body.

Article 02: Emblem

The emblem and/or motto of the APFEJ shall be such as may be decided by the General Body. The General Body shall prescribe the manner of which, and by whom, the emblem and/or motto will be used.

Article 03: Aims and Objectives

To create and promote a greater awareness of environmental issues among public and journalists in the Asia Pacific region;

· To organize dialogues with decision-makers in the media with a view to giving greater emphasis to environmental issues;

To encourage greater exchange of ideas and information on environmental issues in the region among journalists.

· To create a network of journalists in the Asia Pacific region through whom to stimulate public concern for the state of the environment.

To promote the activities of its members;

To organize international, regional workshops, seminars and study tours for journalists on environmental matters;

· To encourage institution of a system of awards for excellence in the promotion of environmental awareness;

To undertake any other activity that the APFEJ may consider appropriate

· To make APFEJ a financially stable, effective, efficient networking organization.

· To co-operate with other GOs, NGOs, and UN agencies to improve the cause of protection of environment.

· To provide public and journalists with information/resources in order to encourage them to promote international cooperation between professionals of media, by developing contacts between members and by informing them in various ways (e-mail list servers, web sites, international bulletins, trips, ...) about events or problems they are aware of.

Article 04: Membership

(a) The APFEJ has three member categories.

(i) Full Membership. open to the national fora of environmental journalists or any Similar Bodies.

(ii) Associate Membership: can be offered to legally constituted international, regional, sub regional and national NGOs or journalists associations and bodies whose interests are similar to those of APFEJ

(iii) Individual Membership: shall be open to working/freelance journalists or writers in Asia Pacific countries. Anyone outside of the Asia-Pacific region who wants to become an individual member can do so, but does not retain voting rights and must accept the terms and reference under APFEJ exco approval.

(b) Membership of APFEJ:

Membership of APFEJ shall be approved by the Executive Committee on behalf of the General Body, Every application for membership shall be submitted to the secretariat, which shall obtain the decision of the Executive Committee on the

same by means of a circular letter or other forms of communication. If the Executive Committee approves the membership, the secretariat shall communicate the approval to the member within 45 days of the decision. If, in the opinion of the Executive Committee, the application for membership is not acceptable it will submit the name for the decision of the General assembly at its next congress meeting.

(c) Every applicant whose application has been approved as aforesaid shall be admitted as a member of the AFEJ and shall be entitled to all the privilege of membership as under Articles 5.

(d) Nominees: Every member can send as many nominees as it deems fit to participate in the activities of the Forum. Full members, Associate Members and individual members have right to one vote.

(e) Annual membership dues: Members pay annual membership dues, before the annual congress meeting. The amount of the Full membership and Associate membership fee is USD 50 and the enrolment fee is USD 50. Individual membership fee is USD 10 and the enrollment fee is USD 40. The host country of the annual congress or a meeting of the general body will not have to pay the membership fee.

(f) Dismissal: The dismissal decision of membership will be decided by the Executive Committee. However in non-payment of membership dues for two calendar years without prior notice and without proper reason will eventually be dismissed.

(g) Resignation Any member who wishes to resign from the Forum shall give three months notice in writing to the Secretary general and shall pay up all outstanding dues, but the membership fee shall not be refunded.

Article 5: Rights and Privileges of Membership

(a) Members (Full , associate and individually) shall have

(i) The right to participate in the activities of the Forum and to make use of the facilities provided;

(ii) The right to speak and vote at all meetings of the Forum;

(iii) The right to stand for elections, to hold office, to vote, propose and nominate or second candidates for elections;

(iv) Any other privileges as the executive committee may, from time to time, prescribe

(v) Individual members from outside the Asia-Pacific region cannot stand for office bearer positions at elections and do not retain the rights to vote.

Article 6: General Body

(a) The supreme authority of the Forum is vested in the meeting of the General Body of its members. Ten (10) full members at least representing ten (10) countries of the total members of the Forum must be present at the meeting of the General Body for its proceedings to be valid and to constitute a quorum.

(b) A meeting of the General Body of the Forum shall be held once every year.

(c) The General Body shall be the principal review and deliberative body of APFEJ and shall be responsible for determining policy and work program

(d) There shall be an election of an Executive Committee comprising a Chairman, Deputy Chairman, six regional directors (One each representing the regions of Central Asia, South-East, West Asia, East Asia, South Asia and the Pacific), a Secretary General, Assistant Secretary, 2 Auditors and 7 other members, each will hold office for three consecutive years

(e) The Annual Report of the Forum including the financial report since the previous General Body shall be tabled;

(f) Deliberate on administrative and budgetary matters and any other matters that may be put before it;

(h) The meeting of the General Body shall elect an Executive council comprising of 19 members for three-year term. All members present at the General Body (Full, Associate and Individual) who have paid their annual membership can vote to elect the members of the Executive council. When voting a member can vote in one category only (i.e. either as Full, Associate or Individual). Each member will have 4 votes. But all votes cannot be voted to one person, it will be as one vote to one person basis by secret ballot.

(i) Executive council comprising of 19 members will be as follows, 10 representatives from full members, 5 representatives from associate members, and 4 individual representatives.

(j) The Executive council elected by the General Body shall in turn elect an Executive Committee comprising a Chairman, a Deputy Chairman, six regional directors (One each representing the regions of Central Asia, South-East Asia, West Asia, East Asia, South Asia and the Pacific), a secretary general, Assistant Secretary, auditors and 7 other members. The Executive Committee shall hold office until such time the new Executive Committee is elected.

(k) Executive council will be elected by a secret vote.

(l) Executive Committee shall be elected by the Executive council by way of a democratic election generally by way of showing of hands unless voting by secret ballot decided by the majority of the Executive council members. Each Executive council member will have one vote each to elect a position. Each position category (i.e. Chairman, a Deputy Chairman, six Regional Directors (one each representing the regions of Central Asia, South-East Asia, West Asia, East Asia, South Asia and the Pacific), a Secretary General, Assistant Secretary, 2 Auditors. Automatically the other 7 members will be exco members

(m) Eight weeks notice shall be given to the member for the meeting of the General Body. The notice shall in every case be accompanied by a provisional agenda, which will be approved by the Chairman or Secretary. All documents for discussion shall be made available to the members before the congress.

Article 7: Extraordinary Meeting.

An extraordinary Meeting of the General Body of the Forum shall be convened

(a) Whenever the Executive Committee of APFEJ deems it desirable, or

(b) At the joint request in writing of less than two - third of exco Members, stating the objects and reasons for such a meeting The Chairman or secretary general shall circulate the objects and reasons for such a meeting to all Members.

Article 8: The General Body may formulate its own rules of procedure

Article 9: Function of the Executive Committee

(a) The Chairman shall during his term of office preside at the meeting of the General Body and shall be responsible for providing policy guidance to the Forum The functions of the APFEJ secretariat will be a main duty of the Chairman who will raise funds for its activities including annual congress and other projects. The appointments for the secretariat will be the discussion of the chairman.

(b) The deputy Charman shall act accordingly when the charman ceases to function.

(c) Regional directors shall strengthen the sub- regional activities in consultation with the APFEJ secretariat.

(d) The Secretary general can operate specific projects and will assist the APFEJ secretariat to implement the decisions of the General Body including its work programs. .

Article 10: APFEJ recognize the fact that the Forum was constituted on the initiative of ESCAP at the Regional Media Conference on Environment and Development held in New Delhi, India during 18-21 February 1985.

Article 11: Program and Budgetary Matters

1 The General Body, at its meeting, shall approve biannual work programs and budget for the Forum. All financial contribution to the Forum would be received by the Chairman or Regional Directors on behalf of the Forum and deposited into an accounts operated by the name of the "Asia- Pacific Forum of Environmental Journalists".

2. The chairman shall be responsible for operating these accounts and shall submit a financial report to the meetings of the Governing Council. The APFEJ HQ bank accounts will be operated by the secretariat accountant and APFEJ chairman. Regional directors also can start Bank accounts with prior approval from the chairman on specific projects.

Article 12: Audit

1. Two members, appointed by Executive Committee, shall be Honorary Auditors. They shall hold office till the new auditors are appointed by the General Body. However, they shall not be re-appointed for the following term.

2 The Auditors shall be required to audit the accounts of the Forum from time to time.

Article 13: Amendment of Rules or of the Constitution. These rules may not be altered or amended except by two-thirds majority resolution of a General body.

Article 14. Amendments of Rules or of the Constitution Proposals for amending the constitution may not be forwarded to the general body by the executive council unless they are passed by a two-thirds majority of the council. These may not be altered or amended except by two third majority resolution of a executive council meeting.

Article 15: Interpretation In the constitution, unless the context otherwise requires.

(a) "Forum" means the Asia-Pacific Forum of Environmental Journalists (APFEJ).

(b) "Executive council" means the elected 19 members from the general body of the Asia-Pacific Forum of Environmental Journalists.

(c) "Executive Committee" means the Executive Committee of the Asia-Pacific Forum of Environmental Journalists.

(d) "General body means " means the full, associate and individual members who have paid due fees.

CEJA Three Year Work Plan



The Three-Year (2000-2002) Plan of Action to be launched on January 1, 2000, by the Commonwealth Environmental Journalists Association (CEJA).

1. Creating and promoting public awareness on environmental issues and strengthening the green agenda in Commonwealth countries. CEJA chapters in different Commonwealth countries will, in collaboration with different environmental groups and forums - including national environmental journalist associations - will help sensitize and mainstream the conservation issues in the national media.
2. Holding of workshops, seminars, round tables, training programs for journalists at national and district levels (local levels) in different Commonwealth countries.
3. Arranging three regional conferences - One in South Asia, one in the Asia-Pacific and one in Europe. Besides this, CEJA will try to hold a grand Congress to be participated by delegates from the member countries in the last quarter of the year 2002. The venues of these congresses and the ways and means for materializing these will be discussed at the three regional conferences taking lessons learnt from national and district level workshops, roundtables and seminars.
4. Organizing field trips at national level to help CEJA members to investigate and prove environmental problems and report those in the national media. CEJA national chapters, with help from CEJA's headquarters, the Commonwealth Secretariat, and different funding agencies that will support such programs.
5. Organize inter-country exchange programs and study tours for CEJA members among different Commonwealth countries. National governments, particularly environment ministries in different countries, the Commonwealth Secretariat, the DFID of the British Government and different environmental NGOs in the Commonwealth countries should be of help in organizing such exchange programs and study tours.
6. To come up with a Commonwealth State of Environment Report at the end of this three-year action plan. Inputs of the report will be drawn from national forums. The report will be presented at the CEJA Congress planned for the last quarter of the year 2002.
7. Will bring out CEJA half-yearly newsletters and run a monthly CEJA environmental feature service - with contributions from writers from CEJA national chapters. CEJA will also establish a CEJA website on the Internet.

Commonwealth Environmental Journalists Association (CEJA)

New office-bearers of the CEJA Executive Committee elected at the Dhaka Congress.

Chairperson: Quamrul Islam Chowdhury (Bangladesh)

Vice Chairpersons (3): Robert Kihara, Kenya
Zafrullah Khan, Pakistan
Zadie Neufuvelle, Barbados

Secretary General: Nina Ratulele, Fiji

Assistant Secretary: Angele Luh, Cameroon

Executive Members (5): Dorothy Hatgeva, Solomon Islands
Eryn Testoni, Australia
Teoh Teik Hoong, Malaysia
Darryl D' Monte, India
Dharman Wickremaratne, Sri Lanka

Countries within the CEJA Network

Antigua and Barbuda
Australia
Bahamas
Bangladesh
Barbados
Belize
Botswana
Britain
Brunei Darussalam
Cameroon
Canada
Cyprus
Dominica
Fiji
The Gambia
Ghana
Grenada
Guyana
India
Jamaica
Kenya
Lesotho
Malawi
Malaysia
Maldives
Malta
Mauritius

Mozambique
Namibia
Nauru
New Zealand
Nigeria
Pakistan
Papua New Guinea
St Kitts and Nevis
St. Lucia
St. Vincent and the Grenadines
Seychelles
Sierra Leone
Singapore
Solomon Islands
South Africa
Sri Lanka
Swaziland
Tanzania
Tonga
Trinidad and Tobago
Tuvalu
Uganda
Vanudia
Western Samoa
Zambia
Zimbabwe

12th Asia-Pacific and 3rd Commonwealth Congress of Environmental Journalists Fiji Islands, June 05-09, 2000 / Draft Agenda

Theme : CLIMATE CHANGE AND SMALL ISLANDS

Venue : Raffles Tradewinds Hotel, Bay of Islands, Suva

JUNE 5, MONDAY

- 09:00 Opening of the AFEJ/CEJA Joint Congress, Raffles Tradewinds Convention Centre.
Master of Ceremonies: Mr Yaminiasi Gaunavou, Secretariat of the Pacific
Community Regional Media Centre.
- 09:00 Fiji Islands Minister for Environment, Dr Ganesh Chand, arrives
- Arrival of President Gaston Flosse, of French Polynesia.
- Opening prayer Father Seluini 'Aka'uola, of the Pacific Regional Seminary
- Fijian ceremonies of welcome performed by the Republic of Fiji Military Forces
- Welcome by William Parkinson, PINA President
- 09:30 Greetings by Dr Dharman Wickremaratne, APFEJ Chairman, Sri Lanka and
Mr Quamrul Chowdhury, CEJA Chairman, Bangladesh
- 9.40 Opening of the APFEJ/CEJA 2000 Congress by Dr Ganesh Chand
- 10:00 Morning tea
- 10.30 Pacific Keynote address by President Gaston Flosse, of French Polynesie
Speeches by Guests of Honour.
- Dr R. Karim, Environment Unit Chief, UN-ESCAP, Bangkok
- Dr K.F. Jalal, Environment and Social Development Chief,
Asian Development Bank, Manila
- 11:30 Presentation of International Green Pen Awards
- 11:40 Presentation of Asia Pacific Best Environmental Journalists Awards
- 11.50 Presentation of Pacific Islands Green Pen Awards
- 12:00 Keynote Address by Mr Nirmal Andrews, Director, UNEP Asia Pacific
"Role of UNEP in Supporting Countries in the Asia Pacific region to address Climate Change"
- 12:20 Address by supporting agencies
- 12:30 Vote of thanks - Dr Dharman Wickremaratne, APFEJ Chairman, Sri Lanka
- 12:40 Photo session
- 12:50 UNEP/UN ESCAP & ADB Press Conference for Asia-Pacific journalists
- 13.00 Lunch

Session I

- 14:30 Small Islands and rising seas.
- 14:50 Climate Change and Kyoto protocol.
- 15:10 Climate Change Partnership (CCP). Projects for sustainable
development in Asia Pacific & Small Islands.
- 15.30 Afternoon tea
- 15 45 Report on the intergovernmental panel on climate change
- 16:05 International public evaluation of the outcome of fourth session of the UNFCCC
conference of the parties (COP4).
- 16.25 17:00 Summary/Discussion/Resolution in group sessions
- 17 30 CEJA Meeting
- 18 30 Evening reception

JUNE 6, TUESDAY

Session 1

09:00 Climate Change and the associated sea level rise

09:30 Marine protection and Climate Change.

10:00 Multilateral environmental agreements.

10:30 Morning Tea

11:00-12:30

Session 2: UN Climate Change convention. Summary and discussion

Session 3: Affected coral reefs and the effects. Summary and discussion

Session 4: How small nations can develop sustainable strategies to address climate change problems

Session 5: Small Islands developing states: GEF funded programmes. Summary and discussion

12:30 Lunch

14:00 -14:45 Ozone layer protection and effect of global warming on human health?

14 45 - 15.30 Community based mangrove rehabilitations for environment management.

15.30 Afternoon tea

16:00 - 17:00

Session 6: Forestry for sustainable development.

Session 7: Tourism and sustainable development.

Session 8: Air pollution management and the Asia Pacific.

Session 9: Media's role in climate change issues. Workshop for Training the Trainers

17 30 APFEJ meeting

18.30 Evening reception

JUNE 7, WEDNESDAY

09:00 - Case studies of programs undertaken by Government, NGO's and Private sector in Asia-Pacific & Commonwealth countries on climate change activities (Case study reports presented by participants. 10 minutes each country.)

10:30 Morning tea

11:00 Evaluation of APFEJ 3-Year Strategic Management Plan

12:00 Working groups. APFEJ & CEJA Meetings

12 30 Adoption of recommendations and Fiji Congress declaration

13:00 - Lunch

Afternoon free for sight-seeing

18.30 Reception

JUNE 8, THURSDAY,

ON TOUR (Education tour for practical information on the effects of climate change and rising sea levels)

07:00 Bus departs hotel for western Viti Levu by Kings Road. Enroute visits including tour and lunch at gold mine

17:30 Arrive at the Fiji Mocambo Hotel, Nadi

JUNE 9, FRIDAY - ON TOUR

07:00 Breakfast

08:30 Bus departs for Port Denarau for departure for full day island tour.

17 00 Return to hotel

19.00 Sa Moce Fiji congress - closing reception.



Supported by:



Bangladesh Ministry of Environment and Forest
United Nations Environment Programme (UNEP)
United Nations Development Programme (UNDP)
Asian Development Bank (ADB)
Australian Agency for International Development (AUSAID)



The World Bank

Friends of the Earth (FOE) Australia, and
The World Water Forum, Netherlands.



WORLD
BANK

**Asia Pacific Forum of
Environmental Journalists (APFEJ)**

P.O. Box 26

434/3 Sri Jayawardenapura

Sri Lanka.

Tel: (+94-1) 829519 (4 lines)

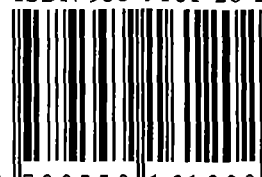
Fax: (+94-1) 826607/869340

E-mail: afej@sri.lanka.net

www.oneworld.org/slejf/



ISBN 955-9161-20-2



9 789559 161202