International Conference on "Water, Environment and Climate Change: Knowledge Sharing and Partnership"

10-12 April, 2018, Kathmandu, Nepal

Patron

MoWS, GoN

Abstract

Jointly Organized by

Department of Water Supply & Sewerage (DWSS), GoN

Society of Public Health Engineers, Nepal (SOPHEN)

Nepal Engineers' Association (NEA)

Co-organizers: Ministry of Forest and Environment, GoN
Kathmandu Valley Water Supply Management Board, GoN

Supported by: NVF, WHO, UNICEF, RWSSFDB, SNV, EAWAG, PID, Water-Aid, OXFAM, KU, CDES, TU, NTA, NTB

International Conference

On

Water, Environment and Climate Change : Knowledge Sharing and Partnership

10-12 April, 2018

Venue: Hotel Yak & Yeti, Kathmandu , Nepal

ABSTRACT

International Conference on "Water, Environment and Climate Change: Knowledge Sharing and Partnership" 10-12 April, 2018

(Venue: Hotel Yak and Yeti, Durbarmarg, Kathmandu, Nepal)

Day 1: 10th April 2018, Tuesday — Program Schedule

7:30-9:00	**REGISTRATION AND BREAKFAST**			
9:00-10:30	**INAUGURATION**			
10:30-11:15	**TEA BREAK/ Opening of exhibition stalls**			
11:15-12:30	**MAIN PLENARY SESSION**			
12:30-13:30	**LUNCH BREAK**			
	PLENARY SESSIONS			
13:30-15:00	**Plenary Session 1: Water**		**Plenary Session 2: Environment and Climate Change**	
15:00-15:30	**TEA BREAK**			
	PARALLEL SESSIONS			
15:30-17:00	Session 1: Water Resource and Sustainable Development Room: Regal 2 WECC 01 - CC 05	Session 2: Technological Trend In Wastewater Management Room: Regency WECC 06 - WECC 09	Session 3: Climate Change Impact on Water Environment Room: Dynasty WECC 10 - WECC 14	Session 4:Sustainable Water Resources Development in Asia Region;AWC/K-Water (Special Session) Room: Regal 1
17:00-17:30	**TEA BREAK**			
	SIDE EVENTS			
17:30-19:00	**WHO & SNV** Room: Regency	**UNICEF** Room: Dynasty	**RVWRMP/RWSSP-WN** Room: Regal 2	
19:00-21:00	**WELCOME RECEPTION FOR INTERNATIONAL PARTICIPANTS**			

Day 2: 11th April 2018, Wednesday

9-10:30	**Plenary Session (Water):** Room:Regal 1		**Plenary Session (Environment & Climate Change)** Room:Regal 2	
10:30-11:00	**TEA BREAK/ POSTER PRESENTATIONS (at the end)**			
11:00-12:30	Session 5: Water Quality Room: Regal 2 WECC15-WECC18	Session6: Environmental Econ. & Social Impact Room: Regency WECC 19-WECC 22	Session 7:Smart Water Management Room: Regal 1 S 01 - S 05	Session 8: Institutional Capacity Building Room: Dynasty WECC 23 - WECC 26
12:30-13:30	**LUNCH BREAK**			

13:30-15:00	Session 9: IWRM Room: Regal 2 WECC 27 - WECC 30	Session 10: Climate Induced Hazards Room: Dynasty WECC 31 - WECC 34	Session11:Rain Water Harvesting Room: Regal 1 R 01 - R 05	Session 12: Innovation On Sanitation Room: Regency WECC 35 - WECC 39
15:00-15:30	**TEA BREAK**			
15:30-17:00	Session 13: Water Quality Room: Regal 2 WECC 40 - WECC 43	Session 14: Innovation on Sanitation Room: Regency WECC 44 - WECC 48	Session 15: Wastewater and Solid Waste Mgmt. Practices; Room: Dynasty WECC 49 - WECC 53	Session 16: Rain Water Harvesting Room: Regal 1 R06-R12
17:00-17:30	**TEA BREAK**			
17:30-19:00	**SIDE EVENTS**			
	SNV&WHO: Room: Regal 2	**HELVETAS** Room: Dynasty	**MUAN & ENPHO:** Room: Regency	

Day 3: 12th April 2018, Thursday

9:00-10:30	Session 17: Integrated Water Resource Mgmt. Room: Dynasty WECC54-WECC57	Session 18: Water Governance & Management Policy Room: Regal 1 WECC58-WECC 61	Session 19: Water Leadership Room: Regal 2	Session 20: Faecal Sludge Mgmt.(Global/ Regional Perspectives) Room: Crystal F 01 - F 04	Session 21: Technology & Innovation in Water Management Room: Regency WECC 62 - WECC 65
10:30-11:00	**TEA BREAK**				
11:00-12:30	Session 22:Climate Change Impact on Water Environment Room: Regency WECC66-WECC69	Session 23: Renewable Energy Room: Dynasty WECC70-WECC 73	Session 24: Urban Water Supply and Sanitation (ADB) Room: Regal 1 U 01 - U 05	Session 25: Faecal Sludge Mgmt.(Policy and Approach) Room: Crystal F 05 - F 08	Session 26: Fecal Sludge Management (Practices) Room: Regal 2 F 09 - F 12
12:30-13:30	**LUNCH**				
13:30-14:30	**PANEL DISCUSSION WECC- WATER & CLIMATE CHANGE**				
14:30-15:00	**TEA BREAK**				
15:00-16:30	***VALEDICTORY SESSION***				
16:30-18:00	**CLOSING CEREMONY (Details to be announced separately)**				
18:00-20:00	**CLOSING DINNER**				

11:00-12:30	***Session chair**: Ji-Whan An* ***Coordinator**: Narayan Pd. Khanal* **WECC 15:** Water corrosion and scale formation problems and its solutions in water supply schemes (A case study of Padampokhari and Mahemdranagar WS scheme in Nepal)(H. P. Pandey) **WECC 16:** Crushed over burnt bricks (COBBs) as filter media in filtration process (T.B. Pandey) **WECC 17:** From water source to tap of ceramic filters – factors that influence water quality between collection and consumption in rural households in Nepal. (M. Bhatta) **WECC 18**: Physicochemical characteristics and macrophytes of Beeshazarital and Tamortal of Chitwan National Park, Central Nepal (A. Bhusal)	***Session chair**: Hare Ram Shrestha* ***Coordinator**: Surat Bam* **WECC 19:** Estimating Willingness to Pay for Wetland Conservation: A Contingent Valuation Study of MudunEla and KaluOya Watersheds, Western Province Sri Lanka (P. Serasinghe) **WECC 20:** Healing Bagmati River Basin within Kathmandu Valley (A. Ghimire) **WECC21:** Wastewater management within circular economy model: current perspectives for Nepal (A. Ghimire) **WECC 22:** Case Study on Environment Assessment Procedure for Rural Water Supply Schemes (WSS); Galpaya Rural Water Supply Scheme of Sri Lanka (G. Subasinghe)	***Session Chair:** Gyewoon Choi* ***Coordinator:** Manish Pokhrel* **S 01:** An Efficient Management of Water Distribution Systems using Smart Water Grid Technologies-Juhwan Kim **S 02:** The Estimation of Seismic Phenomena Related to Smart Water Using Hydrometeorological factors and Earthquake Catalog-Suk Hwan JANG **S 03:**IoT Based Smart Metering System-Jongseo PARK **S 04:** A design and implementation of Ultrasonic Water Meter using dToFMeasurement method-YounSik HONG **S 05:** Water Balance Analysis on Multiple Water Resources Using Water Shortage Assessment Program-Dongwoo JANG	***Session chair**: Xun Wu* ***Coordinator**: Namaraj Khatri* **WECC 23:** Stakeholder's participation in community-based water quality monitoring: A case study from Rio de Janeiro, Brazil (A. Gautam) **WECC 24:** Indigenous tools and techniques factors that empowered WASH sector actors in Nepal (K. Adhikari) **WECC 25:** Assessment of Water Quality and Building Local Capacity on Water Safety Plan implementation of Private Water Tankers in Kathmandu Valley (P.M. Pradhan) **WECC 26:**Recovery and resilient WASH initiatives post Nepal earthquake 2015 (K. Pudasaini)
12:30-13:30	**LUNCH BREAK**			
Time	**Session 9: Integrated Water Resource Management** **Room: Regal 2**	**Session 10: Climate Induced Hazards** **Room: Dynasty**	**Session11:Rain Water Harvesting** **Room: Regal 1**	**Session 12: Innovation On Sanitation** **Room: Regency**

13:30-15:00	***Session chair**: Dafang Fu* ***Coordinator**: D.P. Chapagain* **WECC 27:** An Introduction to Robust Decision Support (RDS) System for Water Resource Management (M. Shrestha) **WECC 28:** Has the Multiuse Water Services (MUS) any scope in new context after restructuring of Nepal? (P. R. Nepal) **WECC 29:** Rice farmer's adaptation practice in Nepal; exploring linkage to water availability and water governance (N. Devkota) **WECC 30:** Turbidity removal by rapid sand filter using anthracite coal as capping media (G. Tamakhu)	***Session chair**: S.K. Pandey* ***Coordinator:** ArinitaMaskey Shrestha* **WECC31:** Water quality in the Sagarmatha National Park, Nepal: the complex interplay between pollution, climate change, health and tourism. (K. Nicholson) **WECC 32:** Impact of climate-induced hazards on rural water supply functionality - case Nawalparasi (A. M. Liski) **WECC 33:** Cross Sectional Studyof Refrigerant gases in the Kathmandu Valley (S. Shrestha) **WECC 34:** Coping with climate uncertainty in rural water supply systems: RVWRMP experiences (P.K. Shrestha)	***Session Chair:** Suman P. Sharma* ***Coordinator**: Han Heijnen* 13:30-13:50>**R 01**: Introduction of the session and experiences in promoting RWH in Nepal (S. P. Sharma) 13:50-14:05> **R 02:** Making Bhaktapur rain efficient city (S. Duwal) 14:05-14:20>**R 03: :** Developing the Rain City concept in Korea; theory and practice for water security (Mooyoung Han) 14:20-14:35> **R 04:** Feasibility and adaptability of sponge city concept: a case study of Lusaka, Zambia (D. Bwalya) 14:35-14:50> **R 05:** Promoting domestic RWH in Mexico City: Isla Urbana: a successful marketing approach (D. Vargas)	***Session chair**: Tej Raj Bhatta* ***Coordinator**: Prabhat Shrestha* **WECC35:** Innovative Sanitation Technologies for Improved Environmental and Public Health in Developing Countries (S.K. Chapagain) **WECC 36**: Sustainability of open defecation free campaign in GSF supported programme districts, Nepal (UN-Habitat) **WECC 37:** Sanitation on safety planning (SSP) in Nepal; a preventive approach in the reuse of wastewater (S.R. Panthi) **WECC 38:** Impact of Integrated WASH approach on Health: A comparative study of ODF and Total Sanitation communities from Gulariya municipality, Nepal (P. Shrestha) **WECC 39:** Moving Towards City-wide Sanitation Service; The Challenges and The Strategies to Overcome (B. Dixit/ P. Shrestha)
15:00-15:30	**TEA BREAK**			
Time	**Session 13: Water Quality** **Room: Regal 2**	**Session 14: Innovation on Sanitation** **Room: Regency**	**Session 15: Wastewater and Solid Waste Management Practices** **Room: Dynasty**	**Session 16: Rain Water Harvesting** **Room: Regal 1**

CONTENTS

keynote Address

WECC 19

ESTIMATING WILLINNESS TO PAY FOR WETLAND CONSERVATION: A CONTINGENT VALUATION STUDY OF MUDUN ELA AND KALU OYA WATERSHEDS, WESTERN PROVINCE SRI LANKA

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ABSTRACT

Wetland ecosystems are often neglected or undervalued. Few people realize the range of products derived from wetlands and their freshwater habitats. There are a number of social and economic benefits of wetlands and the wetlands are in a serious risk today. Specially, in relation to human activities and in inconvenient utilization, wetlands around the globe are being modified, reclaimed and over-exploited due to high levels of resource consumption, land conversion and also upstream developments that alter the quality and flow of water that feeds into them. Decision makers often have a little understanding of the environmental value of wetlands because wetlands are often perceived as having little or no value compared with uses that yield more visible and immediate economic benefits. In this circumstances, revelation and recognition of value of wetlands and thereafter the valuation their importance has been an essential matter which helps to protect such habitats and also it is useful to utilize the benefits of wetlands in a proper management. The objective of this study is to estimate the willingness to pay (WTP) for conservation of MudunEla and KaluOya watersheds, Western province Sri Lanka using Contingent Valuation Method (CVM). Respondents were randomly selected for data collection through face-to-face interview. The Tobit model was used to estimate the entrance fee to for conservation. The marginal effects on probabilities in the tobit model suggest that postgraduate degree holders, households who are using wetland as education, research and agricultural purposes play significant roles in residents' WTP for protect wetland. Thus, higher educated households was found to have a positive response on willingness to pay for protect wetlands in the country. On the other hand, households who were used wetland for agricultural purposes have a negative response on willingness to pay for wetland protect practices.

KEYWORDS: contingent valuation method, economic valuation, tobit model, wetlands, willingness to pay.