



**India-Africa Experience Sharing
Workshops on**

MAINSTREAMING SUSTAINABLE WATER MANAGEMENT

25-27 February 2015

**Venue: Tamarind Hall
Core 4B, Upper Ground
India Habitat Centre (IHC)
Lodhi Road, New Delhi**



Centre for Science and Environment (CSE), New Delhi

About Centre for Science and Environment, New Delhi

The Centre for Science and Environment (CSE) is a public interest research and advocacy organization based in New Delhi. CSE researches into, lobbies for and communicates the urgency of development that is both sustainable and equitable. CSE was started in 1980 to analyze and study the relationship between environment and development. Anil Kumar Agarwal was the founder-director of the Centre for Science and Environment, India's leading environmental NGO. Agarwal spent his lifetime advocating policies that involve the people in natural resource management and learn from India's own traditions. CSE has been working across India and South Asia namely Bangladesh, Nepal, Bhutan and Sri Lanka.

CSE's work is widely acknowledged for its intellectual leadership and the institution has grown into one of India's most influential and highly vocal environmental NGOs. Some prominent domestic and international awards include the **Stockholm Water Prize in 2005** and the **Prince Albert II of Monaco Foundation Water Award in 2008**.

Some notable environmental programmes run by CSE include the following:

Sustainable water management that mobilized the country through a water literacy campaign calling for decentralized solutions to water harvesting, water pollution, urban sewage management, catalyzing policy changes at both national and state levels.

Sustainable urban transport and air quality management that has achieved remarkable success in pushing for CNG in all public transport in Delhi and more recently, in pushing for better urban mobility options that have made significant impact on the city's air quality;

Food safety and toxins that has created far-reaching changes in the policies and regulations governing the use of toxins such as pesticides and heavy metals. The two high profile studies (in 2002 and 2003) that found high levels of pesticide residues in bottled water and soft drinks, served to highlight public health concerns and are important contributions in managing the toxic fallout of rapid economic and industrial growth.

Sustainable Industrialization and Environment an innovative programme that rates the environmental performance of industry in high environmental impact sectors, helps motivate industries to make improvements in reducing pollution and improve efficiency of resource use. Green Rating Project (GRP) serves as a model for an alternative form of civil society governance to control industrial pollution in India, and today a good GRP rating is considered as a valuable certification about a company's environment performance. This programme includes mainstreaming best practices of Environment Impact Assessment (EIA), community support, enhancing capacities of regulators and managers.

Sustainable Building is designed to create policy and public awareness for aggressive steps to cut the resource imprint of the building sector. A growing community of regulators, urban designers, planners, architect, building developers and financiers, are increasingly coming within the vortex of this. The programme creates and mobilizes networks for experience and knowledge sharing in the public domain to support and strengthen grass root action.

Climate change and renewable energy is designed to help the country in developing better understanding on climate change impacts, adaptation and mitigation measures. This includes implementing a sound renewable energy policy and programmes that can lead to large-scale

The centre is recognized research and capacity building hub by the Government of India:

- National Knowledge Resource Centre (KRC) in the area rural water and sanitation by the Union Ministry of Drinking Water and Sanitation.
- Centre of Excellence (CoE) in the area of sustainable water management by the Union Ministry of Urban Development.
- Nodal Institute for capacity building of environment regulators by the Union Ministry of Environment, Forests and Climate Change (MoEF&CC).

deployment of renewable energy technologies in different sectors of the economy to meet the twin objective of combating climate change on one hand and energy security, on the other.

Green schools addressing the urgent need to introduce meaningful environmental education at the school and college level in India. The programme goes beyond nature education to get children to evaluate and precisely measure their own environmental footprint using the Green Schools Manual. The Green Schools Network today includes more than 15000 schools across the country. In addition, *Gobar Times*, a monthly magazine for children, keeps students informed and inculcates environmental values.

CSE has worked closely with journalists, recognizing the powerful role the mass media plays in setting public agendas and shaping public opinion. CSE's Environmental capacity building with emphasis on media has several components, from regular briefing workshops for working journalists, maintaining a syndicated feature service to fellowship programmes that enable journalists to take time out to study and report specific issues in-depth.

In the year 2004 Anil Agarwal Green College (AAGC), an education and training initiative of CSE, was established to communicate the science, complexity and politics of environment across India, South Asia and the world. It seeks to build a constituency and cadre of knowledgeable, skilled and committed environmentalists – from students, decision-makers, field-level practitioners, civil society groups, journalists, lawyers, and concerned citizens. As part of this mandate, AAGC serves as a research, academic and capacity building hub that conducts a number of short and long-term courses and training programmes.

The centre regularly conducts training programmes for both state and non-state practitioners. Short-term courses range from technical workshops on how to build rainwater harvesting systems and decentralized wastewater treatment structures to policy briefings on ecological poverty and food safety, to hands-on training on environmental communication, information management and advocacy. Other training programmes – such as Environment Impact Assessment (EIA), Managing Urban Growth and Urban Mobility, seek to actively engage with industry representatives and regulators in the country and across the developing world.

Over the past 6 year, AAGC has conducted more than 180 training programmes, attended by more than 8000 participants from India and around the world. AAGC has conducted several longer-term courses, one set of which targets students and young professionals from India (titled 'Agenda for Survival', and which is held in June each year), and others that target international students (titled 'Challenge of the Balance', which is held once in Winter and once in Summer each year).

In order to upscale the training and capacity building activities, CSE is setting an **Environment Training Institute (ETI)** at *Tijara* block in the Alwar district of Rajasthan. ETI will aim to strengthen capacities within the government, in the civil society, in the private sector and practitioners and the academia, and will be supported by state-of-the-art research, information services and a platform to interact and exchange ideas on best practices. The ETI will conduct short-term and long-term training programmes, tailored for different target groups, on a wide array of environment and development issues and topics.

CSE has been publishing many books, manuals and reports on environmental issues for knowledge dissemination. Some of our recognized publications related water and sanitation are shown below. For detailed information on the publications one can visit CSE Store. Important web addresses of CSE are given below.

CSE's Global Initiative

Over the past years, many countries of the developing world are struggling to find solutions to immediate problems of poverty, hunger, water scarcity and pollution, the entire world is faced with the catastrophe of climate change. Thus, CSE realizes the need to expand its areas of work in the field of environment and most importantly, focus on how the significant changes can be made.

The multi-layered role which CSE plays has given enormous levers to CSE to directly participate in

rule-making processes of the national and state governments in India as well as regional governments in South Asia, where CSE began working in late 2000. Our regional role is located in the demand to understand, share and address common and unique challenges for customised solutions in South Asia. There is a strong demand for intra-regional flow of information thereby interlinking of global knowledge and experience.

The global framework for addressing sustainable development and climate change is transforming rapidly in response to emerging science as well as the evolving trajectory of national policy action in different regions of the world. All streams of concerns—health, climate change, energy security and local imperatives of sustainable development are converging. CSE use knowledge to bring change and are involved in enhancing capacities of different stakeholders for mainstreaming best practices of Sustainable Water Management.

CSE's water programme in India has evolved to help establish policy principles, innovative technologies and implementation strategies for water and wastewater management these efforts have been directed towards meeting the twin goals of laying the foundations for a water prudent society and adapting for climate resilience. The centre is a designated capacity building hub supported by Government of India. We believe this experience needs to be leveraged to share solutions with other countries in the developing world from South America, Africa and Asia to meet the needs of urban populations in the current water and wastewater paradigm which are affordable and sustainable.

The centre has been an important thought-leader in this sector. It has already influenced global policies and strategies to focus on the need for technologies. In 2010, CSE started the South Asia Water Programme supported by Swedish International Development Agency (SIDA). The programme involved three countries viz. Bangladesh, Nepal and Sri Lanka. Important objectives of the programme include awareness generation about environment and development as well as capacity building of societies to understand and deal the environmental issues. This initiative to augment water resources focused on mainstreaming sustainable water and wastewater management focusing on rainwater harvesting and decentralised wastewater treatment including reuse to optimise on benefits.

With strong local roots and deep regional experience the centre can play a crucial role in the interlinking of local and global action, especially in the developing world, and carry that forward to the global level. The key is that this global research will prioritise and emphasise the need for knowledge to be used to influence global and national policy:

- Sustainable urbanization with particular focus on solutions that are equitable, transitional, and sustainable.
- Ensure clean water access and advocate affordable sanitation solutions that do not add to the burden of pollution and health.
- Find answers for energy access for the poorest, including devising national and global strategies for transition to clean and low-carbon energy.
- Sustainable industrialisation by finding pathways of growth where incremental steps are avoided in chemical use and toxins.
- Disseminate findings of research through online and offline publications; workshops and press-briefings. Our existing outreach is powerful and global. We will build on this.
- Provide technical support for implementation in key focal areas (decentralized water and sewage).

We believe global environmental cooperation cannot do without participation and engagement from each other. The approaches and solutions emerging from various countries will sharpen global action. Similarly, global initiative can become effective only if unique challenges and potential of each region and the emerging solutions in different regions are well integrated to catalyse action locally and globally.

PROGRAMME SCHEDULE

India-Africa Experience Sharing International Workshops on “Mainstreaming Sustainable Water Management”

Venue: Tamarind Hall, India Habitat Centre (IHC), Lodhi Road, New Delhi

Day I - February 25, 2015

“Urban Rainwater Harvesting”

Inaugural Session - 10:00 to 11:00

Tea 11:00 to 11:15

Technical Session 1 - 11:15 to 13:00

Lunch 13:00 to 14:00

Technical Session 2 - 14:00 to 17:00

Day II - February 26, 2015

“Septage Management including Decentralised Wastewater Treatment and Local Reuse”

Introductory Session - 10:00 to 11:00

Tea 11:00 to 11:15

Technical Session 1 - 11:15 to 13:00

Lunch 13:00 to 14:00

Technical Session 2 - 14:00 to 17:00

Reception Dinner 18:30 onwards (Venue to be confirmed)

Day III - February 27, 2015

“Identification of Capacity Building Needs and Way Forward”

Introductory Session - 10:00 to 11:00

Tea 11:00 to 11:15

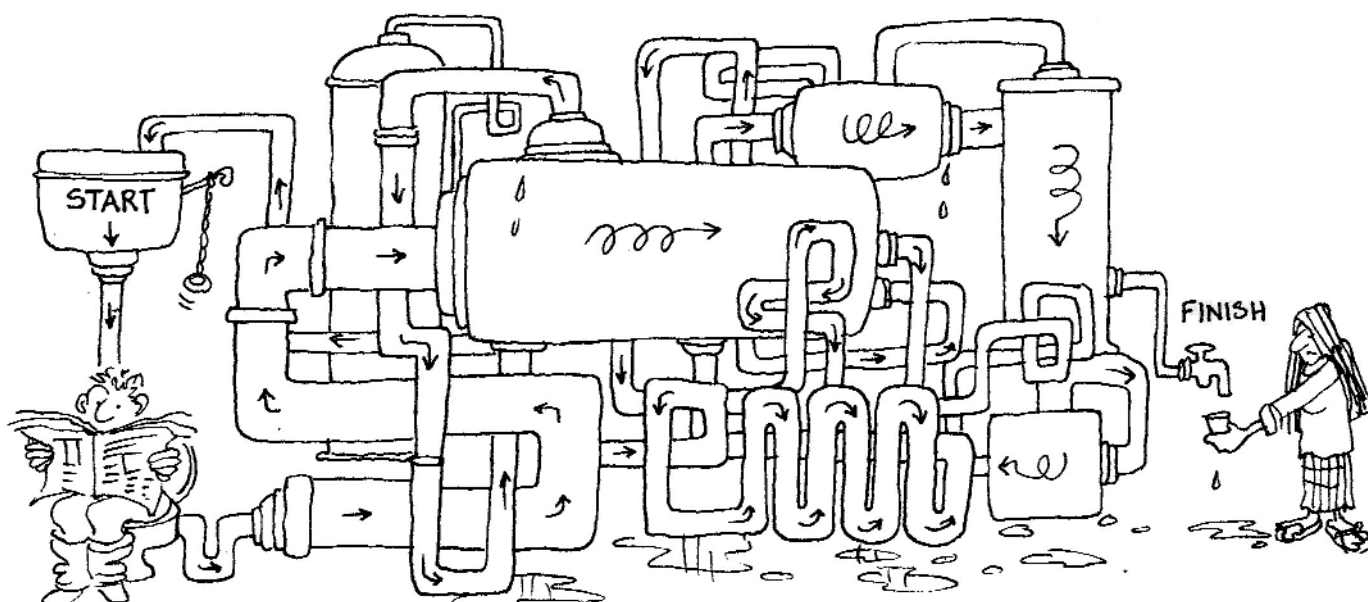
Discussion - 11:15 to 13:00

Lunch 13:00 to 14:00

Day IV-VI 'February 28 to March 2, 2015'

Field visit (Optional)

BACKGROUND



Aim

Mainstreaming sustainable water management and capacity building of practitioners both state and non state actors of Africa in implementing best management practices (BMPs).

This includes identifying capacity building needs required for developing a demand driven 5 year programme with specific multiplier groups both government and non-government in South mainly in Africa.

Thematic Focus and Objectives

The scoping workshop objectives include mapping priority issues/ challenges; experience sharing on status of policies, practices and implementation; developing network of practitioners, regulators and other stakeholder.

Field Visit (optional): 28 Feb to 2 March 2015

A 3 day field visit is organised after the workshop for participants to various rain water harvesting and decentralised wastewater management projects successfully implemented in the National Capital Region (NCR). The list of the case examples is on the following page.

Thematic focus of the experience sharing workshops:

- February 25, 2015 – Urban rainwater harvesting
- February 26, 2015 – Septage management including decentralized wastewater treatment and local reuse
- February 27, 2015 – Identification of capacity building needs and way forward

- ***Rainwater Harvesting in residential neighborhood – Nizamuddin East, New Delhi***

Nizamuddin East is a plotted area consisting of small and medium sized plots. To address the issue of declining groundwater, rainwater flowing through the storm water drains is tapped to recharge groundwater. This case study is an example of rain water harvesting system implementation at urban residential settlement. The project was implemented in year 2004.

- ***Rainwater Harvesting at university campus – Jamia Hamdard University, New Delhi***

Rainwater harvesting system was implemented at Jamia Hamdard University in year 2001. Rainwater from various catchments, such as rooftop, surface runoff from open areas and runoff from the Jahanpanah Reserve Forest is recharged to groundwater to address the declining rates of ground water in the area. This case study is an example of recharging rain water at university level for onsite water augmentation.

- ***Constructed Wetland for wastewater treatment – IARI, New Delhi***

Indian Agricultural Research Institute (IARI) is a premier Institute for agricultural research and education, situated in Pusa, New Delhi. IARI implemented a constructed wetland project in 2012. It treats the sewage generated in the neighbouring residential colonies through a horizontal constructed wetland system. Constructed wetland system at IARI showcases wastewater treatment and its local reuse, thus reducing the fresh water demand for irrigation purposes.

- ***Kacchpura Slum – Agra***

Kacchpura is a low-income group settlement adjacent to the Taj Mahal, Agra. A decentralised wastewater treatment system was developed under a slum upgradation project in 2010. This system treats waste water through the Kacchpura drain and promotes local re-use.

- ***Green CSE – New Delhi***

CSE campus is one of the research institutions which promote sustainable practices for providing infrastructural services at different levels. Various environment friendly practices are implemented at CSE campus for illustration purpose. Best management practices like hybrid solar power system, rain water harvesting system, wastewater treatment and reuse can be best explored and discussed at the campus.

The field visit is organized to provide participants an opportunity to interact with real implementers, users/beneficiaries.

This is also accompanied by a visit to Taj Mahal, Agra. Taj Mahal is one among the world's wonder and an UNESCO world heritage site.

Target Participants

The workshop is attended by key policy makers, regulators, managers (concerned water ministry, department and utilities), Non-Governmental Organisations, consultants, international agencies, academic researchers from Africa including select resource persons for experience sharing from India and South Asia.

'Mainstreaming Sustainable Water Management'

Workshop at a glance - List of speakers



Jean Birane Gning
Delvic Sanitation Initiatives,
SENEGAL



Prof. Samy Abdel-Fattah Saad
Ministry of Water Resources and
Irrigation, **EGYPT**



Henrietta Osei-Tutu
Ministry of Local Government and Rural
Development, **GHANA**



Charles G. Mwalabu
Ministry of Agriculture, Irrigation and
Water, **MALAWI**



Save Kumwenda
University of Malawi,
MALAWI



Samuel Tunde Bello
Federal Capital Territory (FCT) Water
Board, **NIGERIA**



Osilama Emokho Braimah
Environmental Protection Board,
NIGERIA



Mukama Daudi-Mukungu
Ministry of Water and Environment,
UGANDA



Nureidin Mohammed Beyan
Ministry of Water, Irrigation and
Energy, **ETHIOPIA**



Ndayisaba Karuhanga Gaston
Rwanda Natural Resources Authority,
RWANDA



Jean d'Amour Gatera
Ministry of Infrastructure,
RWANDA



Sunita Narain
Centre for Science and Environment,
New Delhi **INDIA**



Suresh Kumar Bohilla
Centre for Science and Environment,
New Delhi **INDIA**



Prof. Bancy M. Mati
Jomo Kenyatta University of Agriculture
and Technology, **KENYA**



Martha Wambui Irungu
Kenya Water for Health Organisation,
KENYA



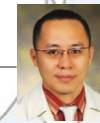
Prakash Amatya
GUTHI, **NEPAL**



Hasin Jahan
Water Aid, **BANGLADESH**



Dr. Abdullah Al-Muyeed
Water Aid, **BANGLADESH**



Dr. Thammarat Koottatep
Asian Institute of Technology,
THAILAND



Tuan Hung Pham
National University of Civil
Engineering, **VIETNAM**



Tran Hieu Nhue
IWEET and Dept of Environment and
Industry, **VIETNAM**



Tanuja Nalika Ariyananda
Lanka Rain Water Harvesting Forum,
SRILANKA



Jerome Kalivala Dukuduku
Tanzania Water and Environmental
Sanitation, **TANZANIA**



Eng. Amani. I. B. Mafuru
Ministry of Water, **TANZANIA**



Rodwell Chandipo
Zambia Environmental Management
Agency, **ZAMBIA**



Jay Bhagwan
Water Research Commission,
SOUTH AFRICA



Dr. Konstantina Velkushanova
University of KwaZulu-Natal,
SOUTH AFRICA

SPEAKERS



Samy Abdel-Fattah Saad

Director, Strategic Research Unit, National Water Research Center, Ministry of Water Resources and Irrigation, Egypt
Email: amysaadhri@gmail.com

Prof. Saad has a wide experience in various water related subjects covering different aspects of hydraulic engineering, industrial hydraulics and water resources management during 26 years of practice in the National Water Research Center in Egypt.

He has managed and taken part in several foreign funded projects as well as local programs in the field of integrated water resources management. He has also participated in establishing a river morphology regional research cluster, working as joint cluster research activities and initiation of local action for Nile basin countries, under the umbrella of the Nile basin capacity building network. He has wide management and technical experiences including working as director of the technical office in the National Water Research Center Headquarter for seven years and deputy director of the Hydraulics Research Institute for three years.



Nuredin Mohammed Beyan

Coordinator, National Water Supply and Sanitation Program; Ministry of Water, Irrigation and Energy, Ethiopia
Email: nuredinmohammed@yahoo.com

Mr. Beyan works in Ministry of Water, Irrigation and Energy, Ethiopia which is accountable for all the water resources including irrigation and energy sector at federal level. He is responsible for the water supply and sanitation (wastewater) aspect and is involved in formulation of Policy, Strategy and other regulations under ministry.

Prior to that, he has also worked in Ministry of Water and Energy, Ethiopia and has coordinated National Water Supply and Sanitation Program in the country. He is one of the leading expert in Irrigation and Drainage Engineering in the country.



Henrietta Osei-Tutu

Public Health Engineer, Ministry of Local Government and Rural Development, Ghana
Email: henriettaot@gmail.com

Ms. Osei-Tutu works with Environmental Health and Sanitation Directorate, Ghana and is responsible for coordination and management of sanitation activities. The major project includes Co-facilitate and Monitor progress of Community Led Total Sanitation in 2 Regions, developing technical designs for behavioral Change & Communication (BCC) Activities and documentation of National Technical Working Group on Sanitation. Prior to

that, she worked as Water & Sanitation Officer for WASH and for SWITCH (Sustainable Water Management Improves Tomorrow's Cities Health) Project Ghana.

She has also written number of research publications including 'Overview of design criteria and application of greywater treatment, with emphasis on adsorption, in an informal settlement of Bwaise III Parish, Kampala'.

Bancy M. Mati

Director, Water Research and Resource Center, Jomo Kenyatta University of Agriculture and Technology, Kenya

Email: bancym@gmail.com



Prof. Mati has experience of 26 years in the area of water management. She is an established researcher, having conducted many research and development projects in Kenya as well as in Eastern and Southern Africa (ESA) Region.

In addition, Prof. Mati has published 102 publications on water management and related topics, variously in refereed journals, books, book chapters, training manuals, conference papers, workshop and research reports. She has directed, scripted and produced a set of 7 documentary films on innovations in agricultural water management in ESA, which were used for advocacy and capacity building. Prof. Mati has held other leadership positions outside the University, including providing advisory and outreach services. She has served in the Steering Committee of the Global Water Partnership (GWP), as Chairperson of the Kenya Rainwater Association, Council of the Institution of Engineers of Kenya (IEK) and the Advisory Board of the International Rainwater Harvesting Alliance (IRHA). She assessed the policies and institutional frameworks with respect to water management in 9 African countries.

Martha Wambui Irungu

Project Manager, Kenya Water for Health Organisation (KWAHO), Kenya

Email: marhawambui2002@yahoo.com



Ms. Irungu has over 7 years of experience in project management and community development initiatives with projects funded by UKAID, Government of Sweden, UNDP and European Union.

She has been involved in water sanitation and hygiene (WASH) programs, proposal development, training of trainers, data collection and report writing. She also gained hands on experience in community WASH initiatives using Sustainable Livelihoods Approach and Human Rights Based Approach. She has consultancy experience at different capacities as a community development assistant, socio economist and research assistant.

Charles G. Mwalabu

Chief Irrigation Officer, Ministry of Agriculture, Irrigation and Water (Development Department of Irrigation), Malawi

Email: walabu2005@yahoo.co.uk



Mr. Mwalbu is one of the experts in the field of water management in Malawi. He has worked on various projects related to water in Malawi like Shire Valley Irrigation Project (SVIP), Smallholder Irrigation and Value Addition Project and Small farms Irrigation Project (SFIP).

He is presently working with Ministry of Irrigation and Water Department, where his major duties include conducting feasibility studies for sites to be irrigated, water, contracting management schemes and preparing work plans and budgets. He is also involved in capacity building programmes where his main duties are to prepare lesson plans and teaching agricultural students.



Save Kumwenda

Senior Lecturer, University of Malawi, Malawi

Email: skumwenda@poly.ac.mw

Mr. Kumwenda has been involved in the field of water, sanitation and health since 2006. Presently he is Lecturer in Occupational Health and Safety and is also doing PhD in Public Health, College of Medicine, University of Malawi.

He works in capacity building and knowledge dissemination for sectors in Water, Sanitation and Hygiene and Communicable and non-communicable Diseases Epidemiology. He has researched on Community Led Total Sanitation (CLTS) implementation challenges in Malawi commissioned by Concern Universal and has also worked as a Team Member advising on technical issues of CLTS. Moreover he has conducted Baseline survey for Planning Sanitation and Hygiene project in Mulanje District, Malawi and for Mzuzu Water Board's water demand management project. He has also been a technical expert in WASH for water and sanitation areas.



Samuel Tunde Bello

HOD (Admin & supply), Federal Capital Territory (FCT) Water Board, Nigeria

Email: estbee200@yahoo.co.uk

Mr. Bello is head of department of administration and supply, FCT water board, Nigeria and works in the sector of water management and planning. He is also member of professional bodies like Nigeria Institute of Management and Chartered Institute of administration.

He has almost 14 years of experience in environment and water sector. His technical research paper includes water supply administration for better management of water services. He has received number of awards including National youth service corporation, FCT, Nigeria.



Osilama Emokho Braimah

Head, Sewage Division, Environmental Protection Board, Nigeria

Email: osilama101@yahoo.com

Mr. Braimah is one of the government experts of Nigeria in waste water management. He is presently the head of the Sewage Division, Nigeria and is responsible for design of aerobic and anaerobic wastewater treatment plants using static and dynamic models. His areas of expertise include natural and affordable systems in wastewater treatment and advanced applications of micro and ultra-filtration membranes in water/wastewater treatment in large cities.

He has also worked for project design and implementation of water/sanitation component of millennium development goals (MDGs) and remediation of contaminated sites, oil spill management and environmental impact assessment/strategic environmental assessment. He is also the recipient of a number of fellowships and grants like he received the NFP fellow in Municipal Water and Infrastructure at UNESCO-IHE, Delft, (2006-2008).



Ndayisaba Karuhanga Gaston

Project Coordinator, Rwanda Natural Resources Authority, Rwanda

Email: ndagaston@yahoo.fr

Mr. Gaston is presently working with Rwanda Natural Resources Authority for Rain Water Harvesting (RWH) system in high density areas of few districts of Rwanda funded by FONERWA. Since 2006, he has been working in sector of water. He has worked on various other RWH project with ADB, FAO, WFP and MINEDU.

He has also designed and prepared number of RWH projects in Rwanda like the one in high density areas of

Nyarugege and has trained more than 600 stakeholders on RWH and small scale irrigation systems. Around 288 RWH systems of 465 cum total capacity are being implemented under his supervision. He is also member of various committees on implementation of Water and Sanitation projects in Africa.

Jean d'Amour Gatera

Water and Sanitation Sector Wide Approach Coordinator, Ministry of Infrastructure, Rwanda
Email: gatera.jeandamour@gmail.com



Mr. Gatera is an international public policy analyst and international development practitioner and is currently Water and Sanitation Sector Secretariat Coordinator working in the Ministry of Infrastructure (MININFRA) in Rwanda. He also works as the Lead Advisor to the Government of South Sudan at the Ministry of Cabinet Affairs. He works on a USAID funded Project for Good Governance in the Republic of South Sudan.

He has experience of over 15 years of working on national and global contemporary issues. He has a proven track record of successfully managing Government businesses coordination and Cabinet Secretariat affairs in two Countries: Rwanda and South Sudan. He has global expertise and was seconded to different countries including Kenya, South Africa, United Kingdom, Ireland, South Sudan and United States of America.

Jean Birane Gning

Director of Partnership Development, DSI (Delvic Sanitation Initiatives), Senegal
Email: jeanbirane@delvic.sn



Mr. Gning is an environmental-economist, expert in water and sanitation specifically in Faecal sludge management.

He is well versed in water and sanitation business approaches. He is a Doctoral candidate at Cheikh Anta DIOP University, Senegal and his area of research is on Sanitation Pricing in Sub-Saharan Africa.

His current occupation is Partnership development director of Delvic Sanitation Initiatives which is a pure commercial company working in collaboration with the Sanitation utility.

From 2012 to August 2014, he was an Associate Director and head of advisory and financial structuring department at headquarter office of the Pan-African Inter-governmental Agency, Water and Sanitation for Africa (WSA, In Burkina Faso). Since 2007, he is a member of a team research led by Water and Sanitation in Developing Countries which belongs (Sandec/Eawag, Switzerland).

Konstantina Velkushanova

Research Fellow, Pollution Research Group, School of Engineering, University of KwaZulu-Natal, South Africa
Email: velkushanova@ukzn.ac.za



Dr. Velkushanova is a Research Fellow at the Pollution Research Group, University of KwaZulu-Natal and currently is the project engineer of the Reinvent the Toilet Challenge, funded by the Bill and Melinda Gates Foundation (BMGF).

She has been working for Pollution Research Group since April 2012 and is involved in a number of water and sanitation research projects and initiatives; a project leader of Mechanical Properties of Faecal Sludge, funded by BMGF, Characterisation of on-site sanitation material and products: VIP Latrines and Pour Flush Toilets and Co-Digestion of sewage sludge and industrial concentrates, both funded by Water Research Commission of South Africa. She has a PhD degree in Civil and Environmental Engineering from the University of Southampton, UK, focused on engineering properties of solid wastes.



Jay Bhagwan

Executive Manager, Water Use and Wastewater Management, Water Research Commission, South Africa
Email: jayb@wrc.org.za

Mr. Bhagwan has more than 20 years of experience in the field of water and sanitation. He currently holds the position of Director of Water Use and Waste Management Key Strategic Area (KSA) at the South African Water Research Commission (WRC), a national research grant making organization. The WRC has a national and international track record in developing innovative and applied solutions to water challenges facing South Africa and the world. Till date he has managed over 100 completed projects, covering technical, social, institutional and policy related aspects of water and sanitation delivery. He is member of various committees, council and campaigns in water sector in South Africa

He has also served on many advisory platforms, including the Chair of the Minister of Water Affairs Advisory Council and Member of the WSSCC Council. He also provides advice to the Bill and Melinda Gates Foundation on sanitation, as well being an expert reviewer on the grant programmes.



Jerome Kalivala Dukuduku

Water Resources Management Expert, Tanzania Water and Environmental Sanitation, Tanzania
Email: jeroduku@yahoo.co.uk

Mr. Dukuduku has around 39 years of experience in Water Resources Assessment (Hydrology) and Integrating Water Resources Management in the Ministry of Water; Environmental Impact Assessment; Personnel Management; Rural Water Supply and Sanitation (including community health and hygiene promotion); Planning, Design and Implementation of Water Supply Projects; Financial Management; Project Proposal and Report Writing. Presently he is working as Project Manager for Save River Basins projects Tanzania.

He has gained experience in all aspects of Hydrology; Water Resources Engineering and Integrated Water Resources Management. He has worked with various stakeholders including Non Governmental Organisation (NGO), Consultancies, UN Agencies, like Ministry of Water; FINN Water, NORPLAN, NORCONSULT, UNHCR, UNICEF, WaterAid UK, CONCERN Worldwide of Ireland, TANESCO, TWESA; PLAN International Tanzania; and Institutes like Water Resources Institute, The University of Dar es Salaam, University of Lands in Dar es Salaam. He is also the Member of Tanzania Meteorological Society.



Amani. I. B. Mafuru

Assistant Director, Ministry of Water, Tanzania
Email: mafuruab@gmail.com

Mr. Mafuru is an experienced Civil Engineer as well as Water Resource Engineer, with extensive experience in working for many integrated community based development projects. During 1995 to 2009, he worked on various post at the local Government Authorities implementing a number of projects, while ensuring sustainability and community management of integrated water, hygiene and sanitation programmes.

Having joined the ministry of water he worked as an Assistant Director in the Directorate of Rural Water Supply. Currently he is working as Assistant Director (Ministry of Water) responsible for service delivery monitoring of the urban water supply and sanitation utilities. He also heads the Ministerial Delivery Unit.

Mukama Daudi-Mukungu

Sanitation coordinator, Ministry of Water and Environment, Uganda
Email: mukamadm@yahoo.co.uk



Mr. Daudi-Mukungu has more than 20 years of experience in the water, health and environmental sanitation sector. Presently he is working with Ministry of Water and Environment, Uganda and is responsible for overall planning, coordination and management of public health programmes (Hygiene, health water and sanitation promotion activities) of the ministry.

He is involved in managing overall planning, coordination and management of public health programmes (Hygiene, health water and sanitation promotion activities) of the ministry. Also involved in offering technical and management backup support to local government district staff of mid-central region. Moreover he has also worked as Sanitation Officer for the overall planning, co-ordination and supervision of community mobilisation activities for public health (Hygiene, sanitation and health). He has wide experience in Planning, designing and implementation of public health interventions (hygiene, sanitation and health campaign programmes at both national and district levels).

Rodwell Chandipo

Environmental Inspector, Zambia Environmental Management Agency, Zambia
Email: rchandipo@zema.org.zm



Mr. Chandipo has wide experience in environmental compliance and legislation integrated water resources management and natural resources management. Presently he is working with Zambia Environmental Management Agency, wherein he is responsible for compliance monitoring of facilities with environmental licenses based on environmental legislation.

Prior to that, he worked as National Project Coordinator with CABI Africa. He has also worked on various projects under United Nations Environment Program (UNEP) and Zambia National Farmers Union (ZNFU). He also presented research papers in stakeholder's forum.

Hasin Jahan

Director Programmes, Water Aid, Bangladesh
Email: hasinJahan@wateraid.org



Ms. Jahan is a development professional having specialized work experience in water and sanitation sector. She worked for Local Government Engineering Department (LGED), Danida, WSP - the World Bank and deputed to ITN-BUET.

Currently she is working for WaterAid Bangladesh as the Director Programmes and Policy Advocacy. She provides strategic directions, leads design and implementation of the projects/ programmes of WaterAid. She determines the policy agenda for WaterAid in Bangladesh, tables relevant advocacy issues and remains engaged in policy dialogues. She has her vibrant presence in the media, national level events and dialogues as a part of her advocacy portfolio.



Abdullah Al-Muyeed

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Dr. Muyeed's professional experiences cover graduate and post graduate level teaching and research in renowned universities of Bangladesh and abroad since 2003. He has more than 35 technical papers in National and International Journal and Conference Proceedings. He also worked as Environmental Consultant in different World Bank donated projects. He also worked as honorary editor and reviewer in distinguished journals of international publishers. He worked as Reviewer in the research project funded by University Grant Commission, Bangladesh. He is also a distinguished Specialist on Solid Waste Management of International Training Network (ITN)-BUET. He also authored three text books titled, 'Solid and Hazardous Waste Management', and 'Water and Environmental Engineering' and 'Environmental Sanitation, Wastewater Treatment and Disposal' in environmental engineering discipline.



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Mr. Amatya is a familiar name in the Water Supply Sanitation and Hygiene (WASH) sector in Nepal for his contribution in advocating the rights of the urban poor, promotion of rainwater harvesting and its utilization for the freshwater conservation. Mr. Amatya accomplished M.Sc. in Microbiology in 1998, and attended post graduate diploma in Environment Management in 1999 from Israel. He has proficiency in Journalism and recently completed MBA (executive) degree from the Kathmandu University in 2010.

He served Kathmandu Metropolitan City for more than four years at different capacities related to decentralized governance, capacity building, poverty reduction, information empowerment etc. from 1997 to 2002. Since September 2002, he worked as Executive Director at NGO Forum for Urban Water and Sanitation (NGOFUWS) responsible for the coordination of the civil society movement for pro-poor policy reforms in urban water supply and sanitation. Presently he is a technical advisor to GUTHI.



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Ms. Ariyananda is a hydrobiologist with a PhD in Environmental Science from University of Kelaniya, Sri Lanka; M.Sc. in Aquatic Resource Management from King's College London; & B.Sc. (Honours) in Applied Biology from University of Wales, UK.

She is the Director of Lanka Rain Water Harvesting Forum since its inception in 1996. President (2008-2012) of International Rainwater Catchments Systems Association, IRSCA.



Thammarat Koottatep

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Dr. Koottatep has 20 years of relevant experience in environmental engineering, wastewater treatment and decentralized sanitation technologies and planning. He has specialized in natural treatment systems for waste and

wastewater, applications of eco-engineering technology, decentralized waste/wastewater management and resource recovery with emphasis on fecal sludge. He has published 42 articles in international-refereed journals, more than hundred articles in international conference/workshop proceedings and book chapters.

As an Associate Professor at the Asian Institute of Technology (AIT), he has supervised 13 PhD and 55 MSc students and served as a Regional Coordinator in Southeast Asian region of the Swiss-funded National Center for Competence in Research North-South (NCCR) program during 2002 - 2013. Presently, he is leading several research projects, one of which supported by the Bill & Melinda Gates Foundation with a budget of 5 million USD on the project entitled 'Sustainable Decentralized Wastewater Management in Developing Countries'.

Tuan Hung Pham

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Mr. Pham has been working in water sector since 10 years. He has done many research projects related to water and sanitation with Ministry of Science and Technology, Vietnam like 'R&D of water supply options for coastal and island communities' and 'R&D of on-site modular waste water treatment technologies and equipments suitable to Vietnamese condition'. He was also involved in capacity building programme with Swiss Agency for Development and Cooperation – SDC, Capacity Strengthening Program.

He also provides consultancy and professional service with number of International agencies like World Bank, Viet Nam Industrial Pollution Management Project-VIPMP, Red River Real Estate Investment JSC, Vietnam and CaiLan Port, Ha Long city, Viet Nam.

Tran Hieu Nhue

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Mr. Nhue is leading expert in Water Supply and Sanitation in Vietnam and working in this sector since 1966. He has work experience in Vietnam, Russian and France. Presently he is Vice Director and Director of the Institute of Water Engineering and Environmental Technology (IWEET) and Vietnam Association for Conservation of Nature and Environment (VACNE), respectively. Apart from working with government of Vietnam, he has experience in number of research and management projects in water sector with agencies like JICA, CIDA, IUCN and DANIDA. He has collaborative research experience with a number of agencies like DANIDA, UNICEF.

He holds credit in publishing papers, technical reports for over 40 subjects and 14 books related to water and environment. He also has vast consultancy experience and has actively cooperated with Hanoi Water Supply Company, Hanoi Drainage and Sewerage Company and Urban Environmental Company, as the other company in different towns industrial Areas above-mentioned branches over the years.

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Sunita Narain

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Ms. Narain has been with the Centre for Science and Environment (CSE) since 1982. She is currently the Director General of CSE and the Director of the Society for Environmental Communications and publisher of the fortnightly magazine, Down To Earth. She is a writer and environmentalist, who uses knowledge for change. She was listed among the world's top 100 public intellectuals by foreign Policy Journal, was awarded the Padma Shri in 2005. Ms. Narain serves on several important policy bodies in India, including the Prime Minister's Council for Climate Change, the National Security Advisory Board and the National Ganga River Basin Authority. In 2012, she has authored the 7th State of India's Environment Reports, Excreta Matters, which presents a comprehensive analysis of urban India's water and pollution challenges.



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Dr. Rohilla coordinates the Water Programme at CSE. He has over 20 year experience in planning and development of sustainable water and wastewater, drainage, environment improvement and area development/township projects aimed at mainstreaming environmental sustainability in the urban context. Some of his earlier assignments include – Director, Environment and Development & Head Living Ganga Programme, WWF India (2007-2009); Associate Professor in Environment area, ASCI Hyderabad (2006-07), Lecturer – University of Bradford, U.K (2006-07); Asst. Director – NCR Planning Board, Ministry of Urban Development, Govt. of India (1997-2005); Director – Natural Heritage Division, INTACH New Delhi (1994-96).

He holds a doctoral degree from Queen's University Belfast, North Ireland. He was a Fulbright Fellow affiliated at University of California, Berkeley in 2012 and Chevening Fellow at University of Bradford, U.K in 2001. He has been nominated as the expert member of the various committees set up by Central / State Governments and international professional bodies.

Uday Bhonde

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Dr. Bhonde is doctorate in Geology. His main work involved understanding geomorphic processes and their relationship with landform development in early stage of his career. He has worked for projects of Department of Science and Technology, New Delhi and Space Application Centre, ISRO, Ahmadabad. In the projects, extensive data analysis using Remote Sensing and Geographical Information System (GIS) was done to prepare thematic maps.

Since past four years he has remained engaged in programmes related to impacts of climate change on water sources and has prepared adaptation measures to reduce its impact. He has published several articles in national and international journals.

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Dr. Matto is doctorate in Environmental Biotechnology from Aligarh Muslim University, India. She has published 9 international research articles in the area of industrial wastewater treatment by enzymes in reputed journals like Journal of Hazardous Materials, Chemosphere, and Journal of Molecular Catalysis B: Enzymatic, etc. She also has experience in journal production and research. She has supervised post graduate students in their summer research projects at Department of Biochemistry, Aligarh Muslim University, India from 2005-2008. Presently she is engaged in research and training various stakeholders in the area of sustainable water management.

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Ms. Jain is an architect and Master in Environmental Planning from School of Planning and Architecture, Delhi.

Presently, she is working with the Water Team at CSE on Urban Water Management and training programs for municipal functionaries, practitioners, academicians, policy makers etc. Her previous experience includes training and research on urban metabolism and growth with field of research focusing on evolving strategies for storm water drainage and resource management in urban areas.

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Ms. Sharda is graduate in Biotechnology and Masters in Environmental Engineering. She also holds a PG Diploma in Urban Environmental Management and Law. She has been involved in research and training programs for municipal functionaries, practitioners, academicians, policy makers on aspects of sanitation and decentralized wastewater treatment. She has researched (field experience) for compilation of case studies on decentralized wastewater treatment systems from all over India for over a year.

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Ms. Gupta holds a Masters degree in MSc Environment and Development, from the London School of Economics and Political Science. She has researched on the complexities of the linkages between environmental and economic development and has an understanding of environmental policy, management and evaluation in the developing country context.

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Mr. Luthra holds a Masters degree in Environmental Engineering and Management from Indian Institute of Technology Kanpur. He is involved in research and training on subject related to decentralized wastewater treatment and septage management. His field of interest includes sanitation, water and wastewater treatment (conventional/non-conventional methods), septage treatment.

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Mr. Varma is graduate in Urban and Regional Planning and did his post graduation in Infrastructure Planning (CEPT University). He is involved in research and training on septage management. His major field of interest is water and sanitation.