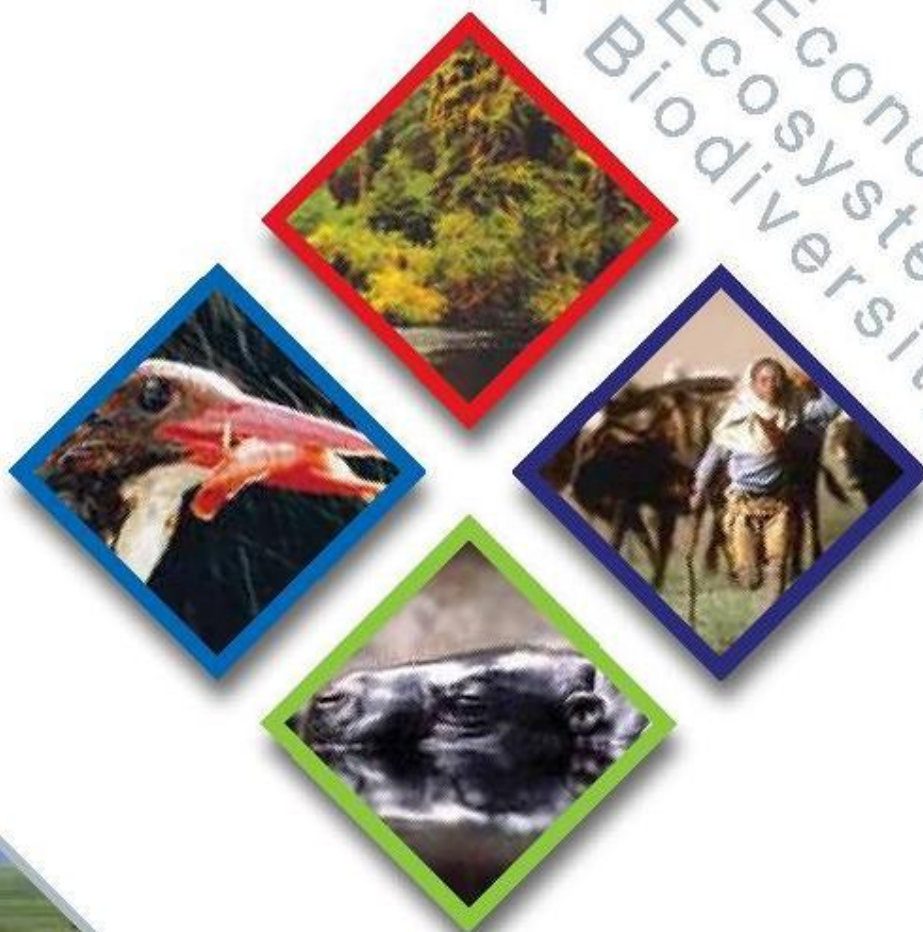


**TRAINING: TEEB FOR WATER AND WETLANDS**

Kampala/Uganda, 25-27 November 2013

The Economics  
& of Ecosystems  
Biodiversity



**UNESCO-IHE**  
Institute for Water Education





## *Dear Participants,*

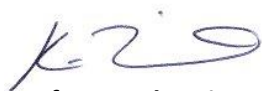
I offer a warm welcome to Kampala and the TEEB for Water and Wetlands training programme.

The pressure on wetlands from agriculture conversion, urban development and a range of pollutants makes them one of the most vulnerable habitats on Earth. A changing climate can magnify those pressures. With increasing needs for national food security in sub-Saharan Africa the loss of wetland habitats is likely to continue apace.

Yet, their value for local and national economies and for global natural capital is grossly undervalued. This workshop provides a basis for estimating the true value of wetlands, that helps political and development agencies better understand the economic benefits of wetland integrity.

The workshop is hosted by UNESCO-IHE, the UNEP TEEB office and the Ramsar Centre for East Africa, with additional support from a number of partners.

I look forward to a stimulating, informative and enjoyable three days,



**Prof Kenneth Irvine**  
*Workshop Organizer and  
WWF Chair of Aquatic Ecosystems,  
UNESCO-IHE*



## Training materials and online resources

During the course you will receive core lecture materials and background information. An expanding set of additional materials will be provided online at [www.wetlandsforum.net](http://www.wetlandsforum.net). The website contains:

### Lecture Slides and Exercises

Electronic copies of all lecture slideshows in PDF format will be provided for download. We also seek to provide our classroom exercises and materials supporting solution templates.

### Case examples

Resource persons are asked to provide links to or background materials on case examples presented in class. Please feel free to submit materials on your own case studies for publication on the website.

### Advanced Reading

The course aims to provide an introduction to the opportunities offered by the TEEB approach to water and wetlands valuation for improving policy decisions. Please refer to the reading recommendations below and an expanding list published online for more details on individual topics introduced during the lectures, or technical information and manuals on analytical tools and methods introduced.



## Recommended Reading

### TEEB Essentials

Russi D., ten Brink P., Farmer A., Badura T., Coates D., Förster J., Kumar R. and Davidson N. (2013) The Economics of Ecosystems and Biodiversity for Water and Wetlands. London, Brussels and Gland: IEEP/Ramsar. Online at: [http://www.teebweb.org/wp-content/uploads/2013/04/TEEB\\_WaterWetlands\\_Report\\_2013.pdf](http://www.teebweb.org/wp-content/uploads/2013/04/TEEB_WaterWetlands_Report_2013.pdf)

TEEB - The Economics of Ecosystems and Biodiversity (2013) : Guidance Manual for TEEB Country Studies. Version 1.0. Online at: [http://www.teebweb.org/media/2013/10/TEEB\\_GuidanceManual\\_2013\\_1.0.pdf](http://www.teebweb.org/media/2013/10/TEEB_GuidanceManual_2013_1.0.pdf).

### Wetlands, Biodiversity and Ecosystems

Darwall, W.R.T., Smith, K.G., Allen, D.J., Holland, R.A, Harrison, I.J., and Brooks, E.G.E. (eds.). 2011. The Diversity of Life in African Freshwaters: Under Water, Under Threat. An analysis of the status and distribution of freshwater species throughout mainland Africa. Cambridge, United Kingdom and Gland, Switzerland: IUCN. Online at: <https://portals.iucn.org/library/efiles/edocs/RL-6-001.pdf>

Bruce Aylward, Jayanta Bandyopadhyay, Juan-Carlos Belausteguiotia. 2005: Freshwater Ecosystem Services (Millennium Ecosystem Assessment, Volume 3: Policy Responses). Online at: <http://www.unep.org/maweb/documents/document.312.aspx.pdf>

### Valuation Techniques

Fisher, B., Turner, K., Zylstra, M., Brouwer, R., et al. 2008. Ecosystem services and economic theory: integration for policy-relevant research. *Ecological Applications* 18(8), 2050-2067.

Brander, L.M., Florax, R.J.G.M., Vermaat, J.E., 2006. The empirics of wetland valuation: a comprehensive summary and a meta-analysis of the literature. *Environmental & Resource Economics* 33, 223-250.

McComb, G., Lantz, V., Nash, K., Rittmaster, R., 2006. International valuation databases: overview, methods, and operational issues. *Ecological Economics* 60, 461-472.

### Integrating the value of nature into mainstream economic thinking – opportunities and risks

UNU-IHDP and UNEP, 2012. Inclusive Wealth Report 2012. Measuring progress towards sustainability, Cambridge University Press, Cambridge, online at: [www.unep.org/pdf/IWR\\_2012.pdf](http://www.unep.org/pdf/IWR_2012.pdf)

Harmony with Nature, Report of the Secretary-General to the 68<sup>th</sup> General Assembly (A/68/325), online at: <http://daccess-dds-ny.un.org/doc/UNDOC/GEN/N13/429/08/PDF/N1342908.pdf>

Kinzig, A.P. et al., 2011. Paying for ecosystem services--promise and peril. *Science*, 334, pp.603–4.

Kronenberg, J., and K. Hubacek. 2013. Could payments for ecosystem services create an "ecosystem service curse"? *Ecology and Society* 18(1): 10. <http://dx.doi.org/10.5751/ES-05240-180110>



## Workshop Preparation – Assignment

The training workshop “TEEB for Water and Wetlands” will place emphasis on active learning. The amount of background materials presented has been limited to allow time for exercises and discussions related to actual policy problems. To enable such discussion, **all participants are expected to prepare for the workshop!**

### Preparatory Assignments:

- 1) **Introductory reading:** Familiarize yourself with the report “The Economics of Ecosystems and Biodiversity for Water and Wetlands”.
- 2) **Political Context:** Note down the three most visible current policy discussions relevant to citizens in your home country. (Not related specifically to wetlands, but overarching national policy priorities dominating the news or rhetoric of politicians.)
- 3) **Wetlands management:** Select a wetland you are personally familiar with, and make a few notes reflecting on the the following questions
  - a) To what extent are the **values of nature integrated in decision making** regarding this wetland? Is there already good integration, are there obvious opportunities or conflicts?
  - b) What are **issues that need the most policy attention** in your selected wetland? Which environmental, social and/or economic challenges should be prioritized in national policy attention? (Issues might include freshwater availability; desertification avoidance; sustainable rural livelihoods; soil fertility & agricultural productivity; eco-tourism potential; and many more)
  - c) If you were asked to assemble detailed **information about your selected wetland**, how easy or hard would it be to obtain:
    - An overview of the state of knowledge on natural assets – their stock, state, changes and roles?
    - An overview of the relevant stakeholders and their main interests and concerns?
    - A plan of how and when stakeholders are engaged in studies and decision making?
    - Documentation of the governance structure in place outlining the roles of those involved?
    - A communication strategy for policies or protection measures related to the wetland?
  - d) How does/could your selected wetland **contribute to the safety and well-being** of the people in your country? Contributions might include, but are not limited to aspects such as
    - protection against natural disasters, e.g. flooding and soil degradation
    - sustainable food sources through productive ecosystems such as fisheries
    - savings on infrastructure by providing natural services for e.g. pollution control
    - poverty alleviation through provision of reliable livelihoods
    - potential for economic development through touristic use of ecosystems and landscapes
    - culture and heritage as sources of both economic opportunities and pride

## Notes and Discussion

- ### Getting started:

- *What is the most obvious commonality between the issues in your wetland and in each of the others?*
- *What is the most obvious difference between the issues in your wetland and in each of the others?*
- *Which ideas raised for one of the other countries might be interesting to study as input for policy making in your case?*

# Monday, 25<sup>th</sup> November 2013

## Theme 1: The Value of Wetlands

**8:30** Registration

**9:00-9:30**

### Opening Training Workshop “TEEB for Water and Wetlands

Welcome

**Paul Mafabi**

*Coordinator Ramsar Centre for Eastern Africa, Ministry of Water and Environment, Republic of Uganda*

Opening of the Workshop

**Honourable Guest (tbc)**

*Ministry of Water and Environment, Republic of Uganda*

**9:30-10:30**

### Setting the Stage

Workshop Objectives, Policy Context and RAMSAR

**Prof Kenneth Irvine**

*Workshop Convener & WWF Chair for Aquatic Ecosystems, UNESCO-IHE*

Group Introductions, Participant Expectations and overall learning outcomes

**Mr Mathew Parr**

*Senior Advisor Business, Economics and Ecosystems, IUCN NL*

*Tea Break*

**11:00-11:45**

### TEEB and its role in water and wetlands

Introducing TEEB and the TEEB for Water and Wetlands Report

**Mrs Sharon Oseku-Frainier**

*Communications and Outreach TEEB, United Nations Environment Programme (UNEP)*

Overview: The TEEB for Water and Wetlands approach and the Country Guidance Manual

**Dr Andrew Farmer**

*Director of Research, Institute for European Environmental Policy (IEEP)*

- Introduction of subjects to be elaborated later
- Wetlands and their valuation
- Introduction to Indicators and policy instrument
- Q & A sessions



11:45-12:30:

### Discussion & Exercise One

**Facilitator:** Andrew Farmer, with support from other resource persons

- Discussing a familiar wetland: Identifying the importance, ecosystem services and threats
- Exercise “The TEEP Papyrus swamp”
- Learning objective: Linking the local to the regional scale of the wetland for a) its importance and b) the threats

### Lunch Break

14:00-15:30:

### Group Work: Reporting from Exercise One and the participants’ “homework”

**Facilitator:** Ken Irvine, with support from other resource persons

- Report back on Exercise One
- Expanding the principles to a diversity of other wetlands familiar to participants
- Identifying the policy issues that may affect the wetland from local to regional scale
- Reporting on key questions in participants’ home countries: Shared experiences, novel approaches
- Opportunities offered by the TEEB approach

### Tea Break

16:00-16:30

### Experiences from Uganda and the Region

**Paul Mafabi,**

*Coordinator Ramsar Centre for Eastern Africa (RAMCEA)*

- Outline of the wetlands policies and their effectiveness
- The role of RAMCEA

16:30-17:30

### Plenary Discussion: Summary, ideas & key outcomes

**Facilitator: Mathew Parr**

*Senior Advisor Business, Economics and Ecosystems, IUCN NL*

### Joint Dinner

## Tuesday, 26<sup>th</sup> November 2013

### Theme 2: Improving measurement and assessment for better governance and wise use of wetlands

9:00-9:30

#### Plenary Discussion: Recap Day 1 and Links to Economic Techniques

**Facilitator:** Mathew Parr

- Recap of the 5 key points, follow up discussion and objectives for Day 2

09:30-10:15

#### Valuation of wetlands: Introduction to field techniques

**Dr. Thierry De Oliveira**

*Lead Economist, Division of Early Warning (DEWA), UNEP*

- TEEB and wetland valuation options
- Demonstration of diverse examples
- In context of policy questions –and gaps for indicators
- -Choice of indicators

10:15-11:00:

#### Discussion & Exercise Two

**Facilitator:** Thierry De Oliveira, with support from other resource persons

*Tea Break*

11:30-12:00

#### Working with the data: Examples of valuing water

**Teddy Tindamanyire**

*Ministry of Water and Environment, Republic of Uganda*

- Water resource valuation in a tropical swamp
- The hidden cost of everyday water issues

12:00-13:00

#### Group Work: Exercise in valuation

**Facilitator:** Teddy Tindamanyire, with support from other resource persons

14:00-15:00

### Framing Economic Valuation for Ecosystem Services in Policy Context

**Dr. Yong Jiang**

*Department of Integrated Water Systems and Governance, UNESCO-IHE*

- Framing the economic evaluation of wetlands: some basic economic concepts and their links to ecosystems,
- Shaping valuation from the decision making perspective: economic valuation relevant to policy
- Links to concepts and indicators introduced in previous sessions
- Valuation and trade offs: a worked example to help decision making

15:00-16:00

### Group Work: Exercise in valuation

**Facilitator:** Dr. Yong Jiang, with support from other resource persons

16:30-17:30

### Plenary Discussion: Summary, ideas & key outcomes

**Facilitator: Mathew Parr**

*Senior Advisor Business, Economics and Ecosystems, IUCN NL*

*Joint Dinner*



# Wednesday 27<sup>th</sup> November 2013

## Theme 3: Integrating the values of water and wetlands into decision-making

9:00-9:20

### Plenary Discussion: Recap Day 2 and Links to Decision Making

**Facilitator: Mathew Parr,**

*Senior Advisor Business, Economics and Ecosystems, IUCN NL*

- Recap of the 5 key points, follow up discussion and objectives for Day 3

09:20-11:00

### Linking valuation to policy

#### Policy Design and Instruments for specific Policy Decisions

**Dr Andrew Farmer**

*Director of Research, Institute for European Environmental Policy (IEEP)*

- Main policy questions from previous sessions and their link to governance
- Valuation insights to help make specific decisions. How to capture value, the role of indicators and connection with stakeholders
- Regional wetlands, key stakeholders and sectors

#### Capturing valuation in decision making

**Dr. Thierry De Oliveira**

*Lead Economist, Division of Early Warning (DEWA), UNEP*

- Using appropriate analysis
- Pressures and opportunities for wetland management and protection
- “Closing the loop” to case studies presented in previous sessions

11:00 – 12:00

### Discussion & Exercise Three (*incl. running tea break*)

**Facilitator:** Andrew Farmer, with support from other resource persons

12:00-13:00

### Group Work: Dissemination Strategies and Outreach

**Facilitator:** Ken Irvine, with support from other resource persons

*Lunch Break*

14:00-15:30

### Closing Discussion: Bringing valuation to the wetland - Conclusion and plans

**Facilitator: Mathew Parr,** with support of all resource persons

- Total recap of the learning results
- Final discussion, conclusions and next steps
- Evaluation

## Results and Ideas

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## Meet the teachers



**Andrew Farmer**

Director of Research,  
Institute for European  
Environmental Policy (IEEP), London

[afarmer@ieep.eu](mailto:afarmer@ieep.eu)

Andrew is a biologist by training and specialises in EU legislation in relation to water and air pollution, and pollution control policies more widely, including the operation of inspectorates. He has extensive experience of issues arising from EU enlargement, particularly administrative capacity building in candidate and neighbourhood countries.

Andrew also has interest in strategic policy issues such as smart regulation. He is the editor of IEEP's Manual of EU Environmental Policy. Before joining IEEP in 1997, Andrew worked for English Nature as its atmospheric pollution specialist and sustainable development co-ordinator; prior to that he undertook post-doctoral research at Imperial College and at the Universities of Wisconsin and Florida, USA. He has a degree from Oxford University in natural sciences and a PhD in ecology from St Andrews University.



**Kenneth Irvine**

WWF Chair of Aquatic  
Ecosystems  
UNESCO-IHE Institute for Water  
Education, Delft

[k.irvine@unesco-ihe.org](mailto:k.irvine@unesco-ihe.org)

Over 30 years, Ken Irvine has studied aquatic ecosystems ranging from shallow artificial lakes to the African Great lakes, in projects spanning from fundamental research to catchment management responsive to policy needs. The International Wetlandsforum in Kigali in July 2013 and follow-on activities of wetlandsform.net are part of his current focus on developing standards to support Integrated Water Resource Management, and to foster and realise the Wise Use, Smart Plans for African wetlands.

Ken holds a BSc in Biology from the University of Exeter U.K. and PhD from the University of East Anglia, U.K. on Zooplankton ecology. In 2011 he moved to UNESCO-IHE further develop the understanding between human pressures and ecological integrity, focussing on nutrient cycles, management, including the use of constructed wetland for pollution control, and the link between ecological functions and policy.



**Thierry De Oliveira**

Lead Economist,  
DEWA; United Nations Environment  
Programme (UNEP), Nairobi

[Thierry.Oliveira@unep.org](mailto:Thierry.Oliveira@unep.org)

Thierry de Oliveira joined UNEP in 2000 as an economist in Division of Policy Development and Law (DPDL). Among his major achievements is the poverty and environment initiative, one of UNEP's flagships that he had both conceived and spearheaded for three years. In 2006 he teamed up with the Division of Early Warning (DEWA).

Thierry has been involved in the Millennium Ecosystem Assessment as a lead author, as well as in the UNDP Drylands Initiative, and the Convention on Biological Diversity (CBD) SBSSTA where he has worked on the issues of biodiversity and ecosystems valuation. Thierry was trained as a development economist, with a focus on mathematics. He holds degrees from University of Dauphine Paris (BA), the Graduate School and University Center in New York (MBA and MSc), and Columbia University SIPA New York.



**Matthew Parr**

Senior Advisor Business, Economics  
and Ecosystems,  
International Union for Conservation of  
Nature (IUCN), Amsterdam

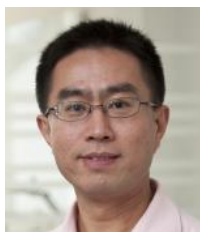
[mathew.parr@iucn.nl](mailto:mathew.parr@iucn.nl)

Mathew Parr is a Senior Advisor in Business, Economics and Ecosystems at IUCN Netherlands. He is the Coordinator for the Economics and Ecosystems Group, and Program Manager for the Responsible Shrimp Improvements Program.

Mathew has initiated, developed and managed many projects within the 'business, economics and ecosystem nexus' including: analyzing value chains, advising leading standards and certification processes, organizing multi-stakeholder sustainability platforms, providing direct advice and training to large corporations on biodiversity and ecosystem management, and building ecosystem based business cases.

He holds has a BA in Economics and Philosophy, and an MSc in Biodiversity Conservation and Management from Imperial College London





**Yong Jiang**

Lecturer in Water Resource Economics  
UNESCO-IHE Institute for Water Education, Delft

[y.jiang@unesco-ihe.org](mailto:y.jiang@unesco-ihe.org)

Dr. Jiang joined UNESCO-IHE in 2012 as a lecturer in water resource economics in the Department of Integrated Water Systems and Governance. His expertise is environmental and natural resource economics. He provides lectures in water resource economics, watershed economics, benefit-cost analysis, and economic and financial analysis for different modules across MSc programs in the Institute.

Currently, he is involved in several on-going capacity building and research projects, and serves as a mentor advising MSc research including valuing ecosystem services in the lower Zambezi river basin. Previously, Yong was a research assistant professor in the Center for Agricultural Policy and Trade Studies (CAPT) at North Dakota State University in the U.S., where he managed research programs in climate change and policy, carbon markets, and agricultural adaptation.



**Sharon Oseku-Frainier**

Communications and Outreach  
TEEB,  
United Nations Environment  
Programme (UNEP), Geneva

[sharon.oseku-frainier@unep.org](mailto:sharon.oseku-frainier@unep.org)

Sharon Oseku-Frainier, holds a Master's Degree in Management and Leadership from Webster University Geneva and a Bachelor's Degree in Mass Communication from Makerere University, Uganda. Previously Sharon was a Fellow with the United Nations Institute for Training and Research (UNITAR) focusing on capacity building and knowledge sharing for groups such as media, researchers and policy actors to address climate change impacts.

Sharon Joined UNEP TEEB Office in January 2013 and focuses on managing and implementing TEEB communication and outreach activities.



**Teddy Tindamanyire**

Environmentalist / Principal  
Environment Officer,  
Ministry of Water and Environment,  
Kampala

[tindamanyiremtt@yahoo.co.uk](mailto:tindamanyiremtt@yahoo.co.uk)

Teddy Tindamanyire works as a Principal Environment Officer for the Ministry of Water and Environment in Uganda on Awareness and Education in wetlands management. She is and a passionate advocate for sustainable wetlands management.

She holds degrees in Education and Human Resources Management and an MSc in Environment and Natural Resources Management. Teddy has worked for more than 15 years in education and public awareness, including engagements as a science teacher at Makerere University and in secondary schools.



**Paul Mafabi**

Director for Environment Affairs,  
Ministry for Water and Environment,  
Uganda, and Regional Coordinator  
RAMCEA, Kampala

[pamfabi@yahoo.co.uk](mailto:pamfabi@yahoo.co.uk)

Paul has over 27 years' experience working on wetland conservation and management issues. He has moved full cycle from doing research on the Grey Crowned Cranes which breed exclusively in seasonal grass swamps to formulating the national wetlands policy for Uganda. He is now preoccupied with setting up the legal and institutional framework for wetland management at national and district levels resulting in the establishment of the Wetlands Management Department which he headed for over five years.

With technical support from IUCN he spearheaded the development of the Wetlands Sector Strategic Plan in 1999. He is at the forefront of the establishment of the Ramsar Centre for Eastern Africa (RAMCEA) and currently serves as its Regional Coordinator. In January 2013 Paul became the Director for Environment Affairs in the Ministry of Water and Environment of Uganda.

## Get inspired – the slightly different reading list

Inspiration and great ideas rarely start with technical instruction manuals. We have asked your teachers to give us some sources of their inspiration, that currently influences their thinking and their approach, or sources they simply think everybody should read. Curious?

### Ken

- WILSON, Edward O. The future of life. Random House Digital, Inc., 2002
- CARPENTER, Stephen R., et al. Science for managing ecosystem services: Beyond the Millennium Ecosystem Assessment. Proceedings of the National Academy of Sciences, 2009, 106.5: 1305-1312.

### Thierry

- CAPRA, Fritjof; The Hidden Connections, Flamingo 2003.
- MCNEILL, John; Something New Under the Sun; Penguin Books, 2000.
- SEN, Amartya; Development As Freedom; Anchor Books; 1999.
- DASGUPTA, Partha; Human Well-Being and the Natural Environment, Oxford University Press; 2001.
- Recommended Website: The Katoomba Group - [www.katoombagroup.org](http://www.katoombagroup.org)

### Mathew

- PEARCE, David William; MARKANDYA, Anil; BARBIER, Edward B. (ed.). Blueprint for a green economy: a report. Earthscan, 1989 (and its newer editions).
- The best 3 min video on TEEB: <http://www.youtube.com/watch?v=HwmQH6HPbaU>
- DIAMOND, Jared M.; ORDUNIO, Doug. Guns, germs, and steel. New York: Norton, 1997.
- BAKAN, Joel. The corporation: The pathological pursuit of profit and power. Simon and Schuster, 2005. (The documentary: [http://www.thecorporation.com/?page\\_id=47](http://www.thecorporation.com/?page_id=47))

### Sharon

- ALLEN, James. As a man thinketh. 1902. Online at: [http://en.wikipedia.org/wiki/As\\_a\\_Man\\_Thinketh](http://en.wikipedia.org/wiki/As_a_Man_Thinketh)
- EHRMANN, Max, Desiderata, 1927. Online at: [http://www.cs.columbia.edu/~gongsu/desiderata\\_textonly.html](http://www.cs.columbia.edu/~gongsu/desiderata_textonly.html)

### Yong

- Atkinson, G., Bateman, I., Mourato, S., 2012. Recent advances in the valuation of ecosystem services and biodiversity. Oxford Review of Economic Policy 28(1), 22-47.
- Freeman, A.M., III, 2003. The measurement of environmental and resource values: theory and methods, 2nd edition, Washington, D.C., Resource for the Future.
- Carson, R.T., 2000. Contingent valuation: a user's guide. Environmental Science and Technology 34, 1413-1418.
- Carson, R.T., Groves, T., 2007. Incentive and informational properties of preference questions. Environmental and Resource Economics 37, 181-210.

## List of Participants

Name	First Name	Affiliation	Country	Mail
<b>Abagana</b>	Ali Laoual	Ministry of Water and Environment	Niger	aliabagana@yahoo.fr
<b>Adey</b>	Samantha	Egerton University	Kenya	samantha.adey@gmail.com
<b>Akwany</b>	Leonard	Wetlands International Kenya Office	Kenya	lakwany@wetlands-africa.org
<b>Amah</b>	Dede	RAMSAR Secretariat	Switzerland	cathyamah@gmail.com
<b>Aruna Sefú</b>	Josué	Association of Farmers Without Borders (AASF) & Societe Civile Environnementale et Agro-Rurale du Congo (SOCEARUCO)	DR Congo	josuearuna@gmail.com
<b>Azab</b>	Amel	Nile Basin Capacity Building Network (NBCDN)	Egypt	a_azab@nbcn.net
<b>Bagyenda</b>	Robert	International Union for Conservation of Nature (IUCN)	Uganda	Robert.BAGYENDA@iucn.org
<b>Balole Bwami</b>	Ephrem	Institut Congolais pour la Conservation de la Nature, Parc National des Virunga (ICCN)	DR Congo	ephrem@gorilla.cd
<b>Bhanderi</b>	Preetika	Wetlands International Kenya Office	Kenya	pbhanderi@wetlands-africa.org
<b>Bukomeko</b>	Hannington	Makarere University	Uganda	hbukomeko@gmail.com
<b>Chigamane</b>	Emmie Madalo	Ministry of Environment and Climate Change Management	Malawi	madaemmie@yahoo.com
<b>De Oliveira</b>	Thierry	United Nations Environment Programme (UNEP)	Kenya	Thierry.Oliveira@unep.org
<b>Fakarayi</b>	Togarasei	Birdlife Zimbabwe	Zimbabwe	toga@blz.co.zw
<b>Farmer</b>	Andrew	Institute for European Environmental Policy (IEEP)	United Kingdom	afarmer@ieep.eu
<b>Gebrewolde</b>	Afewerk Hailu	Ethio Wetlands and Natural Resources Association (EWNRA)	Ethiopia	ewrp@ethionet.et
<b>Hountondji</b>	Fabien C. C.	Global Water Partnership (GWP)	Benin	fabienho@yahoo.com
<b>Irvine</b>	Kenneth	UNESCO-IHE Institute for Water Education	The Netherlands	k.irvine@unesco-ihe.org
<b>Iyango</b>	Lucy	Ramsar Centre for Eastern Africa, Uganda	Uganda	lyangol2010@gmail.com
<b>Jiang</b>	Yong	UNESCO-IHE Institute for Water Education	The Netherlands	y.jiang@unesco-ihe.org
<b>Kaggwa</b>	Ronald	National Environment Management Authority	Uganda	rkaggwa@nemaug.org
<b>Kakuru</b>	Willy	Makerere University	Uganda	wkakuru@yahoo.com
<b>Kane</b>	Abdou Salam	West African Coastal Wetlands Network	Senegal	ak7salam@gmail.com
<b>Kanyambiwa</b>	Sam	Albertine Rift Conservation Society (AR-COS)	UK	skanyamibwa@yahoo.com
<b>Kema</b>	Wande Maduhu	Ministry of Natural Resources & Tourism	Tanzania	wandekema80@gmail.com
<b>Kipkemboi</b>	Julius	Egerton University	Kenya	J_kipkemboi@yahoo.co.uk
<b>Kyambadde</b>	Richard	Ministry of Water and Environment	Uganda	richard_kyambadde@yahoo.co.uk
<b>Mafabi</b>	Paul	Ramsar Centre for Eastern Africa	Uganda	pamfabi@yahoo.co.uk
<b>Makor</b>	Nyasigin Deng Bar	Ministry of Electricity, Dams, Water and Irrigation	South Sudan	yasiginpeter@ymail.com
<b>Manyakaidze</b>	Pascal	Shurugwi Partners	Zimbabwe	pascalm83@gmail.com
<b>Mocuba</b>	Jeremias	Eduardo Mondlane University	Mozambique	mocuba11@gmail.com
<b>Mugisha</b>	Louis	Ministry of Water and Environment	Uganda	louis.mugisha@mwe.go.ug
<b>Munishi</b>	Pantaleo	Sokoine University of Agriculture (SUA)	Tanzania	pmunishi2001@yahoo.com
<b>Musoma</b>	Richwell	Ministry of Agriculture, Mechanization and Irrigation Development	Zimbabwe	richellmsoma@yahoo.co.uk
<b>Nakimbugwe</b>	Ann	Mukono District Local Government	Uganda	annekavuma@yahoo.co.uk
<b>Nasongo</b>	Serena	Victoria Institute for Research in Environment and Development (VIREN) International	Kenya	adedeserena@gmail.com

Name	First Name	Affiliation	Country	Mail
<b>Netshithothole</b>	Tshilidzi Edward	Department of Environmental Affairs	South Africa	enetshithothole@environment.gov.za
<b>Nimpamya</b>	Jane Gubare	UNDP South Sudan	South Sudan	jane.nimpamya@undp.org
<b>Opaa</b>	Benard Onyango	National Environmental Management Authority	Kenya	benopaa@gmail.com
<b>Oseku-Frainier</b>	Sharon	United Nations Environment Programme (UNEP)	Switzerland	sharon.oseku-frainier@unep.org
<b>Ouadba</b>	Jean-Marie	Institute for Environmental and Agricultural Research (CNRST/INERA)	Burkina Faso	jmouadba@yahoo.fr
<b>Parr</b>	Matthew	International Union for Conservation of Nature (IUCN)	The Netherlands	matthew.parr@iucn.nl
<b>Rotich Kosgei</b>	Job	Egerton University	Kenya	masultiony@gmail.com
<b>Rukera Tabaro</b>	Simon	National University of Rwanda	Rwanda	simon.rt@gmail.com
<b>Sadiki</b>	Laisser	Ministry of Natural Resources and Tourism	Tanzania	laisssersadiki@yahoo.com
<b>Simukonda</b>	Chuma	Zambia Wildlife Authority	Zambia	chumasimukonda@yahoo.com
<b>Tindamanyire</b>	Teddy	Ministry of Water and Environment	Uganda	tindamanyiremtt@yahoo.co.uk
<b>Tumwesigye</b>	Gard	Makarere University	Uganda	gardtumwesigye@gmail.com
<b>Tumwesigye</b>	Robert B.	Pro-biodiversity Conservationists in Uganda (PROBICOU)	Uganda	tumwesigyeus@yahoo.com
<b>Umutoni</b>	Augusta M. C.	Energy, Water & Sanitation Authority, Rwanda	Rwanda	augumutoni@gmail.com
<b>Wathigu</b>	Francis Kagema	Nature Kenya	Kenya	nkcoast@naturekenya.org



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***"In the face of rising water demands for energy, agricultural, industrial and social development, securing sufficient water to sustain the life-supporting functions and services of the world's rivers, lakes and wetlands is among the most significant challenges of the 21st century."***

*The Global Water Crisis: Addressing an Urgent Security Issue  
(InterAction Council, 2012)*

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## **Wetlandsforum.net - Project Office**

UNESCO-IHE - WSE  
Westvest 7  
2611 AX Delft  
The Netherlands

T: +31 15 215 1 873

[TEEB@wetlandsforum.net](mailto:TEEB@wetlandsforum.net)

<http://www.wetlandsforum.net/>