

### Integrating knowledge for sustaining rivers

Freshwater is among those fundamental resources without which no life is possible. You might think, therefore, that people would be particularly careful to look after our water resources and the natural systems that provide and circulate the water, so that we can continue to sustain ourselves, and the plants and animals on which we depend. There is in fact a very strong recognition, in the water legislation and policies of almost all countries, that water supply, allocation, and conservation of resources must be carefully controlled and protected.

The reality, however, is that water resources worldwide, with very few exceptions, are being degraded, over-exploited and diminished. The ultimate causes of this deterioration are usually seen as over-population, pollution, and climate change, and the traditional responses have been to build structures (dams, canals, treatment works) to contain, distribute and treat water – a “command and control” philosophy which seeks to bend nature to human will. But floods, droughts and hurricanes (among others) show repeatedly and catastrophically that we are unable to sustain this control. The philosophy of sustainable management, that emerged during the 1980’s, aims to integrate classical engineering capabilities with a recognition of the services that natural ecosystems provide, such as flood attenuation and repurification that rivers and floodplains contribute.

Unfortunately, sustainable management is more often described and advocated than it is implemented. This is because it is simpler, in the short-term, to apply the old remedies. Sustainable options require a holistic understanding of the physical, chemical, biological, social and economic drivers that govern the processes and functions in natural systems. They also require a long-term commitment to protect the natural resources and cycles which provide the services on which we depend.

UNESCO-IHE, with its 5 departments, 14 research cores, and scores of partners worldwide, is ideally placed to provide this integrated knowledge and capacity for sustainable management of water resources. Today’s symposium reflects some of the diversity of skills and knowledge that we, our colleagues and partners can assign to this crucial responsibility. It also pays tribute to the men and women who developed the concept for IHE – Institute for Water Education, and who have seen the vision through to reality over the past 50 years.

## INVITATION 10 OCTOBER 2008



Inaugural address of Professor Jay O’Keeffe

Inaugural address of Professor Nigel Wright



# SYMPOSIUM

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### MORNING 9.00 - 12.30

**Prof. Brian Moss,**  
School of Biological Sciences,  
University of Liverpool, UK:  
Sustainable water management:  
A reflection from the Merchant of Venice

**Dr. Klaus Jorde,**  
Entec AG, Switzerland:  
Using hydraulic models to evaluate and  
mitigate the effects of large dam operations  
on downstream river systems

Coffee Break, 10.30 – 11.00

**Dr. Michael McClain,**  
UNESCO-IHE, Delft:  
Intrinsic-purification functions in rivers:  
Enhancing water quality management

**Dr Peter Downs,**  
Stillwater Sciences, Berkeley, California, USA:  
Perspectives on river channel management  
in the twenty-first century

Lunch, 12:30 – 13:30

### AFTERNOON 13.30 - 17.00

**Dr. Lifeng Li,**  
Director Freshwater, WWF International,  
Gland, Switzerland:  
Freshwater conservation:  
Perspectives and efforts of WWF

*Introduction of Jay O'Keeffe*

**Prof. Jay O'Keeffe,**  
Professor of Freshwater Ecosystems,  
UNESCO-IHE:  
Inaugural address  
Sustaining river ecosystems:  
Balancing use and protection

Tea, 15.15 – 15.45

*Introduction of Nigel Wright*

**Prof. Nigel Wright,**  
Professor of Hydraulic Engineering and  
River Basin Development, UNESCO-IHE:  
Inaugural address  
Engineering, educating, empowering

Party, 17.00 – 18.30

Dinner for invited guests, 18.30 on

# INAUGURAL ADDRESS

The Rector of the UNESCO-IHE Institute for Water Education,  
Prof. Richard A. Meganck, PhD, has the pleasure to invite you to:

the Inaugural Address of

**Jay O'Keeffe, PhD,** Professor of Freshwater Ecosystems

on the subject of

## SUSTAINING RIVER ECOSYSTEMS: BALANCING USE AND PROTECTION

on Friday the 10<sup>th</sup> of October 2008, at 14.00 hrs,

the Inaugural Address of

**Nigel Wright, PhD,** Professor of Hydraulic Engineering and River Basin Development

on the subject of

## ENGINEERING, EDUCATING, EMPOWERING

on Friday the 10<sup>th</sup> of October 2008, at 15.45 hrs,

both in the Auditorium of UNESCO-IHE, Westvest 7, Delft.  
There will be a reception in the restaurant of UNESCO-IHE, beginning at 17.00 hrs.  
The dinner for invited guests will start at 18.30 hrs.