

# IWA World Water Congress & Exhibition

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09-14 OCTOBER 2016 ▪ BRISBANE ▪ QUEENSLAND ▪ AUSTRALIA



## PROCEEDINGS

### BASIN LEADERS FORUM

**Building Water Security, Climate Resilience and Sustainable Management**

**Held on 12 October 2016**

**At Sky Room, Brisbane Convention & Exhibition Centre, Brisbane, Queensland, Australia.**

## THE FORUM

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Protecting basins and restoring those that are already degraded should be a priority to ensure a balanced approach to development that sustains cities and industries and the ecosystems they rely on. The urgency to share knowledge and experiences and explore viable pathways for sustainable economic, social and environmental development of catchment areas set the stage for the Basin Leaders Forum to debate on how best to manage water resources and services, on the basis of innovative water solutions to be applied at scale.

Held on 12 October 2016 at the Sky Room, Brisbane Convention & Exhibition Centre, Brisbane, Queensland, Australia, this forum brought together around 100 water professionals, business leaders, politicians, engineers, economists, academics and related experts from 17 countries to discuss and deliberate on theoretical and empirical evidence of proven interventions and current practical approaches towards building resilience and fostering sustainability in basins. Diversity of expertise and nationalities ensured that the debate was comprehensive and wide-ranging, with viewpoints and examples shared from the region as well as from across the globe.

The introductory remarks of Dr. Ger Bergkamp, Executive Director, International Water Association set the stage of the Forum. Thereafter the deliberations were structured around panel and round table discussions in two separate sessions. The two sessions focussed on:

**Session A: What are the potential pathways towards strengthening and maintaining resilience of water resource within basins?**

**Session B: How can long term engagement and investment in water resources within a basin be sustained?**

The discussions in session A were aligned with the keynote from the congress plenary on 'Simplifying the complexities of water resources management' which preceded the Basin Leaders Forum on October 12th. While the keynote presentation on 'Too Many Good Intentions? A Common Roadblock to

Sustaining Engagements and Investments in River Basins’ by Dr. Sanjay Pahuja stimulated discussions in session B. The day’s deliberations ended with concluding remarks from Dr. Tom Mollenkopf, Senior Vice-President, International Water Association. The panel discussions and roundtables of peers from different sectors and disciplines shared experience and focussed on a diverse set of case studies across the world. The participants deliberated on the following questions,

**How can we achieve water security and build climate resilience within our watersheds in the coming decades?**

**What actions need to be taken today to achieve sustainable management of basins that also can benefit from growing urban centres?**

The key recommendations from the Basin Leaders Forum will be used to further strengthen the IWA “Action Agenda for Sustainable Basin Management”. This Action Agenda will provide guidance for a bottom up approach to basin management especially involving urban and industrial areas through their actions at the catchment level.

## KEY RECOMMENDATIONS

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- **Investment in data and information systems:** Data and information are very important elements to basin planning and investment. Investing in data and information collection is crucial and fundamental to cover the gaps in understanding and evaluation of basins. Reliable data will help planners and policymakers to cope with uncertainties of models. Investing in data monitoring and modelling systems to resolve scientific controversies and complexities with soft politics is needed. The growing impact of information technology can be used to strengthen cooperation across borders. This will promote increased trust, regional integration, and improved governance, towards greater accountability and transparency. There is also a need to empower people through information dissemination, awareness to be able to achieve a social change.
- **Natural Infrastructure:** Natural infrastructure is effective, economical, and enhances community safety and quality of life. It means planting trees and restoring wetlands, rather than building a costly new water treatment plant. The arrival of environment as a water stakeholder is relatively recent and inclusion is not always institutionalized. This is exacerbated by the hidden nature of environmental services (such as fisheries, biodiversity etc.). It is essential to get better information on the importance and values of these services into basin or watershed planning.
- **Risk-based approach to planning:** In the absence of adequate data and information, making decisions on the basin situation and planning requires a risk-based approach accompanying scenario analysis and source vulnerability assessment. There is a need to move from reactive planning towards proactive planning by better strategic management based on cost benefit analysis and sensitivity analysis.
- **Aligning urban development with basin management:** The implications of increased food and water demand for cities and urban areas need to be factored into development and water planning. This may result in reduced allocation of water for agriculture and food production. Resilient cities should build on the economic opportunity presented by the need for cities to use water more efficiently and to re-use water more effectively. This needs to be driven as part of national planning and investment into the upstream watershed management actions. The reuse of

wastewater and nutrient capture has to be increasingly built into city water management to reduce costs of water transport and capture economic potential of nutrient re-use. Capping entitlements can be considered as a means to incentivize cities to improve water management.

- **Approaches for mitigation and adaptation to climate change and sustainable infrastructure:** Any approach should address both mitigation and adaptation simultaneously. There are real benefits of green infrastructure to improve catchments, reduce nutrient leaching and erosion/sediment runoff. Linking this to climate forecasting and economic modelling can drive management changes at farm and landscape level. This can lead to environmentally and economically resilient farming systems and management of watershed impacts. There are additional, spin-off benefits to environmental services such as biodiversity, fisheries and soil management. Iterative approach is best, with increasing buy-in and commitment from stakeholders/resource users.
- **Stakeholder participation in planning and management:** Reaching neutral decisions is vital after involving all different stakeholders (The Golden Triangle – government, the public sector, and the civil society). Engaging the public sector and civil sector in understanding and translating the basin status and involving them in the decision-making process will create an enabling environment for changing people's behaviour while shedding light on the economic opportunities.
- **Customisation of solutions:** Planners and basin managers need to learn from best practices across different basins. But there is no one size fits all solution, each solution needs to be customised taking into consideration not only physical characteristics but also socio-political and cultural issues.
- **Investment in water solutions:** The virtues of basin planning and participatory approach are well-known. But they take time, and the timeline of individual aspirations in bureaucracies and politics is short. There is a need to follow a phased-approach to investing in interventions as investments need to be optimized through prioritization to maximize benefits. Transparency of trade-offs is needed for investment

## Agenda

### BASIN LEADERS FORUM –Wednesday, October 12th, 2016

***Session A: What are the potential pathways towards strengthening and maintaining resilience of water resource within basins?***

***10:30-12:15 – Wednesday, October 12<sup>th</sup>, 2016***

This session will focus on innovative approaches and tools that are being applied within basins and how these are building resilience. The discussions in this session will align with the keynote from the congress plenary on ‘Simplifying the complexities of water resources management’ which will precede the Basin Leaders Forum on October 12<sup>th</sup>.

Time	Session A
10:30-10:40	<p><b>Welcome and setting the scene</b> by Dr. Ger Bergkamp, Executive Director, International Water Association</p> <p><b>Introduction To The Session</b> By Professor Paul Greenfield, Emeritus Professor, University Of Queensland</p>
10:40-11:05	<p><b>Chair:</b> Dr. Ger Bergkamp, Executive Director, International Water Association</p> <p><b>Panel discussion</b></p> <p>The panel will focus on the dynamic interrelationships between human, ecological and technological components and how can basins move beyond the concept of ‘engineering resilience’ towards a much more dynamic and flexible system.</p> <p><b>Panelists:</b></p> <ul style="list-style-type: none"> <li>• Prof. James E Ball, Vice President IAHR</li> <li>• Dr. Paul Bowen, Director, Environmental Sustainability, Coca-Cola Company</li> <li>• Dr. Mark Smith, Director - Global Water Programme, IUCN</li> </ul>
11:05-11:50	<p><b>Facilitator:</b> Mr. John Riddiford, Chair, IWA Watershed and River Basin Management Specialist Group</p> <p><b>Roundtable discussions</b></p> <p>Guiding questions include:</p> <ul style="list-style-type: none"> <li>• How can the complexities and dynamic inter-dependencies of the components of resilience be translated into decision making and actions?</li> <li>• What actions need to be taken around management of basins that will <b>sustain growing urban and industrial centres</b> of the future?</li> <li>• What tools and approaches are working (or not) to <b>mitigate the impacts of climate impacts or environmental challenges</b> including floods and droughts?</li> <li>• What is needed to increase investment in <b>sustainable infrastructure</b> including natural infrastructure as part of a resilience approach?</li> </ul>
11:50-12:15	<p><b>Feedback</b></p> <p>The presenter of each case or project will be asked to provide a summary highlighting the key principles highlighted from their discussions which could achieve resilience within basins.</p>

***Session B: How can long term engagement and investment in water resources within a basin be sustained?***

***13:15-15:15 – Wednesday, October 12<sup>th</sup>, 2016***

This session within the Basin Leaders Forum will reflect on transformational actions that have supported development in basins along with obstacles and how they were addressed. Understanding the effects of water crises in the future will require better ways to understand, model and visualize how and where such crises could occur.

Time	Item
13:15-13:40	<p><b>Introduction to Keynote presenter:</b> Katerina Schilling, International Association Of Water Supply Companies In The Danube River Catchment Area (IAWD)</p> <p><b>Keynote Presentation: Too Many Good Intentions? A Common Roadblock to Sustaining Engagements and Investments in River Basins</b> by Dr. Sanjay Pahuja, Senior Water Resources Specialist, World Bank</p>
13:40 – 14:00	<p><b>Chair:</b> Ganesh Pangare, Regional Director Asia Pacific, International Water Association</p> <p><b>Panel Discussions – How can long term engagement and investment within a basin be sustained?</b></p> <p>Presentation of 3 historical timelines of different basins which showcase investments, infrastructure and policies including what has worked and what has not worked and what has enabled long term continued investment into river basin management.</p> <ul style="list-style-type: none"> <li>• H. E. Yue Zhongming, Commissioner of Yellow River Conservancy Commission</li> <li>• James Purtill, Director-General of the Department of Natural Resources and Mines, Queensland</li> <li>• Professor Jane Doolan, Institute for Applied Ecology &amp; ANZSOG Institute of Governance, University of Canberra</li> </ul>
14:00-14:40	<p><b>Facilitator:</b> Dr. John Dore, Senior Water Resources Specialist, Department of Foreign Affairs and Trade (DFAT)</p> <p><b>Roundtable discussions</b></p> <p>Guiding questions include:</p> <ul style="list-style-type: none"> <li>- How has the development of <b>infrastructure</b> been decided? What have been the impacts both positive and negative? How has the infrastructure development specifically affected (benefited) cities and industry?</li> <li>- What <b>policies and management approaches</b> have been successful and why? What have been the impacts? How were approaches taken to scale?</li> <li>- <b>Financial instruments</b> that have driven investment in basin development. How has this affected water resources and the economic development of the basin? What have been the costs and benefits and by which stakeholders?</li> </ul>
14:40-15:00	<p><b>Feedback</b></p> <p>Summary highlighting the key principles highlighted from their discussions which were the premise for successful water resource development across a basin.</p>
15:00- 15:10	<p>Summary of the Forum: Key Messages by Dr. Tom Mollenkopf, Senior Vice-President, International Water Association</p>
15:10–15:15	<p>Vote of Thanks by Dr. Tom Mollenkopf, Senior Vice-President, International Water Association</p>