



Report: The daunting challenge of canal irrigation reform for water productivity and food security

On 21 February 2014, the “The Irrigation & Water Forum” (ICID.UK) and “UEA Water Security Research Group” held a very interesting half day technical meeting at Institution of Civil Engineers, ICE, in London. (The event was also made available on-line by ICE).

The meeting explored the appropriate design and reform of canal irrigation systems and services under the guise of irrigation rehabilitation and modernisation. The rationale for the meeting came from an understanding that the improvement of irrigation performance, underpinned by design that offers better manageability, will support increases in water and land productivity necessary to meet future food demands – yet without having to default to pressurised irrigation systems such as sprinkler and drip. Paradoxically, and to remind readers, it is perhaps somewhat disappointing that the draft 2013 publication “Solutions for Sustainable Agriculture and Food Systems” prepared by the Sustainable Development Solutions Network failed to refer to the challenges and rewards of canal irrigation instead highlighting the popular but nonetheless risky solutions of micro-scale irrigation technologies.

Following a brief opening by the Chair of IWF (Bruce Lankford), John Hennessy provided an enlightening and enjoyable introduction to the keynote speaker, from one of the most foremost specialists working in the field of canal reform, Hervé Plusquellec. In some respects John’s introduction was a microcosm of the whole afternoon, showing the immense intellectual and practical battles and debates held around irrigation in the last 40 years, some of which are now passing into history. The grave danger is that without continuity, a new generation of irrigation scientists and engineers may have to relearn many lessons.

After John’s introduction, Hervé (recently of the World Bank) gave his a keynote presentation entitled “Improving performance of canal irrigation systems in developing countries is long-overdue: Hope or desperation?”. His presentation gave an excellent overview of the challenges, promises and policy options for global irrigation. Hervé then admirably drew the middle path offering both hope but also considerable caution if global donors do not switch more decisively towards supporting canal irrigation.

Following Hervé, Martin Donaldson (Independent Consultant and long-standing member of IWF/ICID.UK, including on the committee) reflected on his “Experiences of Irrigation Rehabilitation and Modernisation in Vietnam” including covering both new technologies but also lessons learnt.



Next Adrian Laycock (Independent Consultant and also very well known to members of ICID.UK for his long tenure on the UK committee) gave a talk entitled “Directions and degrees for canal modernisation; more or less? (With references to Pakistan, Sudan and Armenia)”. As well as covering new technologies and designs, Adrian’s presentation highlighted some colourful examples of what can go wrong (or awry) with irrigation rehabilitation.

The meeting was then honoured to have two other international speakers. First Robina Wahaj from the FAO gave a fascinating summary of recent work with her talk “Performance of irrigation management: Analysis from 60 irrigation systems in the world”. Her conclusions included the finding that productivity was extremely variable, and perhaps more surprisingly the presence and strength of water users associations do not influence irrigation performance. Robina’s presentation and findings sparked an interesting debate about how to research performance, what factors help determine performance and what lessons can be inferred from research.

Finally Beau Freeman (who flew in from Germany being based with Lahmeyer International) gave a spirited final presentation titled “Inconvenient truths: irrigation modernization in transition and lessons from the Western U.S.” His message of the rich detail of water dynamics and management on irrigation systems and districts was well received by the audience – but also pointing to the conclusion that much of today’s irrigation research does not answer the types of questions and insights Beau was highlighting.

There then followed a panel discussion to until close of play. The essence of this discussion, perhaps not unexpectedly was that canal irrigation was both considerably being ignored, but also a vastly complex topic for policy makers and researchers to engage with.

In summary the audience enjoyed within the space of about 3.5 hours, an array of talks giving an insight to the rich field of canal irrigation. The presentations of Martin, Adrian and Beau offered an important regional, country- and scheme-level analysis that grounded and explicated the global presentations of Hervé and Robina.

Bruce Lankford, Chair, IWF