Kyrgyzstan Talas Turnout
Editorial

This is the first issue of the newsletter under the new name and logo, although much of the rest is the same format, mainly due to the pressures of a new job and therefore a shortage of time, but I still hope to take on board the comments of the readership and bring a new look over the coming issues, see the results of the survey. Thank you to all contributors to the newsletter and to the various discussions following from the last issue.

News & Views is the twice-annual journal of the Irrigation and Water Forum (IWF), the British Section of the International Commission on Irrigation and Drainage. The deadlines for contributions are the end of February and September, for publication at the end of March and October. The views expressed within these pages are those of individual authors and do not necessarily represent any official stance of IWF or ICID International.

IWF operates under the auspices of the Institution of Civil Engineers, London, Registered Charity No. 1010409.
Front Cover

This issue’s front cover is from Kyrgyzstan, photographed by Julian Sparrey (submitted by Tim Fuller).

ICID & IWF Online

ICID website is www.icid.org and the Irrigation and Water Forum (British Section of ICID) has a new website at www.iwaterforum.org.uk

On our site is a list of members with contact email and website links. If you would like to be included, contact Melvyn Kay via the website. Please send us your email address!!! We can then keep you up to date with information from HQ in India and from other national committees, meeting dates, etc.

The Journal of Irrigation and Drainage is also online at: http://www.wiley.com/wileychi/irrigation/editorial.html or at www.interscience.wiley.com.

Facebook

The new IWF Facebook page is now up and running (IWF Facebook), with 25 Likes. Please note that in order to interact with the page, you must have a Facebook account.

LinkedIn

The LinkedIn page is now running (LinkedIn page), with 29 members, again you will need to have an account to interact with the page. Topics posted for discussion have included:

- Announcement of the First World Irrigation and Drainage Prize, 2013
- Government cash for farm technology
- Water & the Green Economy Meeting 8th November
- Job Vacancy at UNESCO-IHE
- Desperate measures
- Water Purification Unit For Rural Areas

Twitter

The Twitter account has also now been established (Twitter), with 41 followers. Tweets should be sent to either Emily Lewis (lewis.emily@gmail.com) or Tim Fuller (Tim.Fuller@ice.org.uk) and they will place it on the account.
A few words from our chairman Bruce Lankford:

Dear IWF members

Since the last newsletter came out we have changed our name from ICID.UK to the 'Irrigation and Water Forum'. This is both a significant and yet small change. It is a small change because nothing substantial has taken place – we have retained the same identity, 'look and feel', members, location, links with ICE, connections with ICID.UK and above all our interests in both irrigation and water. However it is also a significant change – not least because of the hours spent on this topic, including the debate more than 10 years ago about a name-change. More than that, the new name makes for a clearer 'shop-window' clearing away the opaque professional moniker (you had to know what ICID stood for). By selecting the words 'irrigation and water', plus by using the word 'Forum', what we ‘do’ is now ‘on the side of the tin’ (okay, enough mangled PR-speak). Of course, the reason we undertook the name change was to attempt to boost recruitment to our society (alongside other events both on-going and planned). Whether this transpires or not is a different matter, but I am pleased that our new name on balance helps more than it is hinders. With regards to common everyday usage, it may be that we become the IWF, or the Irrigation Forum, or something else.

My thanks to all those who engaged in the debate so energetically. Whether you were for or against a name change, your powerful arguments helped us arrive at a name that I think most of us can live with. I’ve thanked Martin Burton before, but it’s worth saying without his initial drive about two years ago I suspect I would not have taken up the cause.

Via Tim, in early July, we notified Suresh Kulkarni at ICID HQ of our new name and received back a heart-warming letter wishing us every success and noting; “The British National Committee has always been dynamic and keeping pace with the changing needs and aspirations of the professionals in irrigation and water sector”.

In the few months since we selected the new name, we have also changed our logo/header (which you see on this newsletter) plus designed a new website (www.iwaterforum.org.uk) plus via Emily Lewis set up a Facebook and twitter account. So there is lots going on, and lots of ways to get involved.

With regards to other matters, I hope that you enjoyed the two events that have taken place since the last newsletter – the excellent Gerald Lacey Lecture by Charlotte de Fraiture on water and irrigation management in Sub-Saharan Africa in May and full day conference on ‘Water and the Green Economy’ early in November. These exciting programmes are in the newsletter and on our website. I think we can also agree that the new ‘networking events’ held after the seminars are a success. However due to their cost, we will probably drop this to one per year.

I look forward to seeing you at the next event.

Best wishes,

Bruce
Water Storage – Securing our water supply

ICE Water Event, ICE London
26 April 2013

Water scarcity is an on-going concern in the UK, particularly in the South East. Temporal alterations in rainfall mean that water availability will be less predictable and in order to secure water supply alternative have to be looked at.

Water storage has traditionally been associated with the building of large dams and reservoirs; however, new and innovative water storage techniques exist, but have not been noticed by many civil engineers. This seminar seeks to raise awareness of these techniques and alter the misperceptions regarding water storage. And will look to rainwater harvesting, SUDs, ASR and multipurpose reservoirs as methods for addressing this issue of intermittent rainfall.

Presentations included:

Multipurpose Reservoirs Alex Hamilton, Chief Engineer, Black & Veatch

Rainwater Harvesting Philip Bradbury, South East Sales Executive WPL

SUDs: Beyond Drainage David Evans, Associate Director, Ove Arup & Partners Ltd

ASR Mike Cook, Head of Water Resources, Anglian Water

Joined Up Methods Chaired Discussion – Chaired by Trevor Bishop Head of Water Resources Environment Agency

Closing Remarks from Michael Norton MBE, Chairman ICE Water Panel

Melvyn Kay attended the meeting and thought it was excellent and worth a look, particularly Alex Hamilton’s presentation for a really good historical review of multipurpose reservoirs in the UK and overseas, starting with Mangla Dam on which Alex cut his teeth as a young engineer with Binnies. Also a most passionate presentation from David Evans looking at ways of using what the Americans call green infrastructure and some innovative green engineering going on around Cardiff with Over Arup.

Although the Committee had no input into this event, you may like to listen to the lectures. Click on the link then search for “Securing our water supply” and click on playback:

http://www.ice.org.uk/Events-conferences/Recorded-lectures

Small is bountiful (but messy)

Gerald Lacey Memorial Lecture, ICE London
20 May 2013

There was an excellent turnout to hear Professor Charlotte de Fraiture, Professor of Land & Water Development UNESCO-IHE Delft, give her talk on the thriving informal irrigation sector, analysing its actual and potential contribution to food security and drawing lessons and new directions for food security and further irrigation development in sub-Saharan Africa.

An increasing number of smallholder farmers engage in irrigation using their own resources. They buy or rent irrigation equipment and draw water from nearby sources, such as rivers, canals, reservoirs and groundwater, without depending on or interference from public agencies and Water Users’ Associations.

The individualization of agricultural water management has been ongoing for some decades in South-Asia where most irrigation now takes place from privately owned wells. Recently, this type of irrigation is emerging in Sub-Saharan Africa as well. It is farmer-driven, responds to a genuine demand from smallholders, is highly profitable, contributes and food security and has substantial potential for upscaling.

Not surprisingly, in several African countries the area under informal irrigation is larger than under public irrigation schemes, and still expanding. However, the individualization of irrigation and its spontaneous unchecked spread pose challenges to equitable access to water and sustainable management of the resource.

The lecture is now available for playback at the following link www.ice.org.uk/recordedlectures.

Water and the Green Economy

UEA Water Security/The IWF, ICE London, 8 November 2013

Ben Roberts-Pierel and Sarah Wade, UEA Water Security Research Centre

The UEA Water Security/The Irrigation and Water Forum conference “Water and the Green Economy” came to a successful close on Friday 8th November with an array of delegates taking part. Eleven talks covered projects from all over the world, presented by representatives from many different organisations. The day began with two keynote presentations from Jean-Paul Penrose (DFID) and Mohamed Ait Kadi (Chair, GWP Technical Committee).

A number of themes appeared throughout the conference. The necessity of economic activity for development coupled with acknowledgement that water security is a fluid and debatable issue formed an undercurrent throughout. Another theme was that change is happening now and we need to decide how to adapt whilst realising that there will be trade-offs. It was also
evident that governance and political institutions are an important component of change. Finally, in most cases more evidence in the form of reliable data is required to make informed decisions on water-related development issues.

Jean-Paul Penrose of DFID laid the framework for the day, covering various issues DFID is debating surrounding the implementation and incorporation of the ‘green economy’ concept. He emphasised that for DFID, poverty reduction is vital. Consequently, the green economy must be proven as the best way to achieve this in order for it to become a primary approach to development, something which Jean-Paul advocated. Ensuing discussion focussed on the need for fundamental change in economic approaches to development with the incorporation of natural capital into assessments being vital for a green economy.

The second key-note address was delivered by Mohamed Ait Kadi. He covered the importance of governance and continually evolving institutions to meet the changing demands of the economy and environment, as well as the importance of science and technology in enabling increased efficiency and decreased demand. Dr Ait Kadi highlighted that water security and the green economy are inextricably linked and mutually enforcing, arguing that due to water’s interlinked challenges with other resources, the water community has an opportunity to shape how other resources are managed in the future.

Jochen Frobrich of Alterra Wageningen gave a talk centred on incorporating green growth into the economy. He focused on the importance of looking at green growth as an opportunity for increasing net economic growth, looking at a farming situation in South Africa. Discussion considered the need to develop methods which are suitable for scaling-up.

Michael Gilmont (KCL) looked at the importance of discerning between green and blue water in considering agriculture’s water use. Michael argued that the role of green water is often ignored in policy. His message focused on increasing efficiency, particularly in the use of green water and non-irrigated crops as well as seeking a ‘politically sustainable’ solution to food security challenges.

Phil Woodhouse (Manchester University) delved deeper into discussions over the value and price of water, highlighting that water’s value is not always reflected in its price. He demonstrated that considering water from a river-basin perspective is limiting and concluded that we should move away from striving to manage water within its natural systems, arguing that it should be viewed as an economic commodity. Phil concluded that we should move away from striving to manage water within its natural systems, arguing that it should be viewed as an economic commodity.

Roger Calow (ODI) illustrated many of the themes discussed above through a case study of green economy implementation in Ethiopia. He noted the fast growth and success of Addis Ababa in incorporating these principles but highlighted challenges in the approach which have resulted in more rural populations missing out.

Following a lunch break where networking discussions continued, Mike Young (Adelaide and Harvard Universities) presented on water as an economic resource and noted the high potential of the market to resolve water security issues. Mike drew on the successful experience of Australia in developing a water permit system, where permits can be traded and managed through water accounts.

Aileen Anderson provided insight into South Africa’s Water Allocation Reform Programme. She touched on the fact that social and environmental sustainability may not always be achievable together and looked at the importance of considering land and water transfer as interconnected.

A change of context followed with Jodie Whitehead from Severn Trent Water delivering a presentation on catchment management in the UK. She discussed the challenges of successful management, including the vital need to reduce metaldehyde (a slug pesticide) in agricultural run-off. The company has experienced success working with farmers on a voluntary basis to come up with solutions acceptable to farmers that helped meet water quality targets.

Jamie Skinner (IIED) considered the controversial role of large dams in the green economy. He suggested that we have come a long way in our knowledge and implementation strategies regarding this infrastructure, arguing that dams can play a positive role in future economic initiatives, but that their social and economic impacts must not be ignored. The limitations of dams being ‘green’ is also limited by their proportionally small contribution to global power-generation.

The final talk of the day was delivered by Bruce Lankford of UEA. He introduced the audience to his new book, “Resource Efficiency Complexity and the Commons: The Paracommons and Paradoxes of Natural Resource Losses, Wastes and Wastages.” During his presentation Bruce discussed the need to consider who gains from improvements in efficiency. This lead to a lively discussion on some of the finer points argued by Bruce and we will anxiously await the public response to his book.

Proceedings concluded with closing remarks from several speakers and discussions continued at an evening reception.
Use of Stereoscopic Satellite Imagery for the Planning and Design of Irrigation Projects

John Ratsey

1 The Problem and Solution

Stereoscopic high resolution (nominally 0.5m) satellite imagery was captured and processed using photogrammetric techniques to create a digital elevation model (DEM) and orthorectified images of a gross area of nearly 200,000 ha in Ethiopia as part of a feasibility study for a major irrigation development in Ethiopia. Originally it was envisaged to use kinematic GPS terrestrial survey methods. However, the rate of progress of ground survey was much lower than expected due to broken terrain and vegetation cover and an alternative method for accelerating the progress had to be identified. Aerial photography and LiDAR were ruled out both on cost and the uncertain timescales to obtain permission for flying over the area. Use of satellite data avoided this potential bureaucratic impediment.

The project area was a valley where the flat areas were typically 1% slope. A desk study revealed that the use of stereoscopic imagery was a workable approach although at the time when the work was commissioned the technology was new with few documented cases\(^1\) demonstrating the accuracy of DEMs created from stereoscopic imagery. Stereoscopic satellite imagery comprises overlapping images captured from different angles. The then new generation of satellites with greater sensor mobility made it possible to capture images from different angles in a single pass, thereby minimising the difference in lighting and other ground conditions which would degrade the stereoscopic effect. The imagery is provided as digital files with data describing the satellite position at the time of imagery capture.

One of the uncertainties about ordering satellite imagery is when the capture will be scheduled which gives the risk of clouds obscuring some or all of the ground. The potential problem is with partial cloud. Depending on the terms of supply, cloud cover of up to 10% may be considered acceptable by the imagery provider. However, on stereoscopic imagery the effect of cloud is magnified by (i) the ground obscured by cloud is different between the two scenes and (ii) the shadows from the cloud create dark areas where the quality of the processing is degraded.

The process included: (1) defining the area of interest and ordering stereoscopic imagery to be captured by the satellite; (2) planning the locations and surveying ground control points; (3) processing the data to create a digital elevation model (DEM) and (4) creation of orthorectified images.

ERDAS LPS software was selected for the stereoscopic processing. One reason was that it could be purchased as an upgrade to other software already owned (but the upgrade still cost more than £10,000) although a useful feature was the ability to create one DEM from multiple overlapping tiles. This was relevant since the area of interest comprised about 20 overlapping pairs of images.

The final DEM was available for use within 4 months of ordering the imagery, while a preliminary DEM using only three ground control points was available after only 2.5 months for use in preliminary engineering studies.

An informative analysis was to compare the levels of nearly 11,000 points undertaken by ground survey prior to the DEM being created with the DEM’s height values for the same points, a method which eliminates any subjective selection of favourable conditions. The differences (DEM level - ground survey level) are presented as a histogram. It can be seen that for about 75% of the data the difference is within 0.5m and 90% are within 1m. The histogram is slightly asymmetric with residual effects of vegetation making parts of the DEM higher than the topographic survey points.

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\(^1\) Various papers have been published at [http://www.photosat.ca/experience.php#main=casestudies.php](http://www.photosat.ca/experience.php#main=casestudies.php)
While the heights obtained from processing stereoscopic imagery may not, in absolute terms, be as accurate as spot heights obtained by ground survey, this is offset by the much increased data density which will reveal smaller features not identified by the typical data spacing of large area ground surveys. The example below compares contours generated from the stereoscopic imagery with spot heights from ground survey.

2 Coordinate Systems, Transformations and Corrections

Small surveys can make do with a local datum and coordinate system and assume the Earth is flat. Large mapping exercises have to take account of complexities introduced by factors such as the Earth being neither flat nor round. Satellite data is based on a Latitude / Longitude coordinate system and the WGS84 spheroid. National coordinate systems usually use another system and transformations are required. The formulae and parameters needed to do this are built into any good GIS package. A further adjustment is the Geoidal correction, which addresses the height differences between a theoretical spheroid and the heights given by traditional spirit levelling in which a gravitational anomaly (such as a mountain) can deflect a survey bubble. Application of a geoidal correction to a DEM makes it compatible with terrestrial survey equipment such as levels or total stations.

3 Use and Limitations of DEM

All the project mapping data, of which the DEM was one layer, were held in a GIS. Data layers derived from the DEM comprised contours, slopes and catchments. Profile data for canals could be quickly extracted once the alignments had been defined. The potential inaccuracy of the DEM was considered acceptable in the context of the project slopes. The same method would not be appropriate for very flat areas where a 0.5m error could be very significant.

4 Costs

When the work was undertaken in 2010 the total cost was about US$150,000 comprising: (i) US$80,000 for imagery; US$40,000 for ground survey work and US$30,000 for processing (of which about US$20,000 was for purchase of software) representing an overall cost of less than US$100/km² (or US$1/ha).

5 Lessons Learned

Timing and vegetation cover: The greater the vegetation cover then the greater the risk that the DEM will be raised above the ground level by vegetation, so it’s best to time imagery capture for a period when the vegetation has died back. However, in some areas (including rural Ethiopia) dead vegetation is deliberately burnt to encourage regrowth. Relatively featureless black areas degrade the quality of the stereoscopic processing for those areas.
Theoretically, ground control is best located on the overlaps between tiles. However, this means that the ground control cannot be undertaken until after the imagery is available. Identification of good control points on the imagery and on the ground proved to be challenging. Ground control using pre-marked crosses avoids the uncertainty associated with relating ground features with those on the imagery when the control is undertaken after the imagery capture and, by having the control in place when the imagery is captured, means that processing can proceed more quickly. The processing software is capable of automatically identifying tie points between different images and a screening facility using residual errors makes removal of any misidentified points very easy.

Procurement of processing software and the time spent in the stereo processing was about 20% of the total cost because of the large area. For smaller areas the software will become an increasing proportion of the total. However, a number of companies are now offering a service to undertake the process with the end user’s only responsibility being to provide the ground control. The Astrium Elevation 1 DEM\(^2\) is one such product.

Before ordering new imagery it is prudent to check what already exists. Apollo Mapping’s Image Hunter facility\(^3\) is one easy way to do this. With high resolution archive imagery becoming increasingly affordable there’s no reason to not have a good imagery base for any project mapping.

6 A few words about LiDAR

For those who think the answer lies with LiDAR, I will add a few cautionary words. If you can’t walk through the vegetation than don’t expect the laser beam to reliably see the ground. The LiDAR company may promise they can process the data to remove the vegetation but, if the laser beam never hits the ground then they won’t be able to.

The example below shows a height-rendered, hill-shaded DEM created from LiDAR data\(^4\), which is very obvious on the digital elevation model. It is also not very accurate with the neck of a meander being reduced almost to river level - which could have a significant impact on the performance of a flood model.

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\(^1\)http://www.astrium-geo.com/en/4819-elevation4-and-elevation1-highly-detailed-dems-for-local-coverage
\(^3\)http://imagehunter.apollomapping.com/

\(^4\)I recommend the Global Mapper software
which is relatively affordable, easy to use, has excellent 3D data handling and presentation and unsurpassed import and export facilities.
IWF Proposed Training Course on Irrigation for Young Professionals

Background

The global pressure on water resources has led to renewed interest in all aspects of the water sector, and concerns over the impact climate change has given this subject even greater emphasis. Water, food and energy are closely inter-related and all under stress. Curiously this interest in the sector as a whole has not yet been matched by a significant resurgence in interest in irrigation. This omission is all the more perplexing as some 70% of fresh water diversions are for growing irrigated crops, and the majority of food is grown on irrigated land. The UK used to be a world leader in irrigation management, but our skills have declined due to lack of opportunities in recent years. Irrigation has fallen out of favour over the past two decades due to low global food prices and the perceived poor performance of the sector, resulting in far fewer opportunities for UK irrigation professionals. Water for domestic use accounts for a far smaller proportion of total use, but has a much higher profile.

Irrigation is an unusual discipline in requiring an exceptionally cross-disciplinary approach – strong knowledge of engineering and hydraulic structures needs to be coupled with a good appreciation of social, institutional, agricultural, economic and political issues as systems need to be so carefully attuned to their context. The fact that irrigation has been practised for 5,000 years does not mean that it is easy.

However, despite the reduction in number of pure irrigation projects implemented by UK firms, irrigation is increasingly a part of wider programmes (for example rural transport in Nepal and Laos, environmental management in Nigeria, trans-boundary water management in southern Africa) and thus is often undertaken by non-specialists. Although much of the detailed design and supervision will be done by junior national staff, there is a need for high level guidance and planning. For this reason there is a need growing need for skilled irrigation professionals, yet UK firms are moving out of the sector as much because of a shortage of suitable staff as due to a shortage of projects,: IWF and its membership should be able to provide the knowledge and skills to inform donors and also private sector investors to ensure that irrigation is neither neglected nor tackled inappropriately.

There are about 10 masters’ courses in the UK which address issues related to irrigation, but irrigation itself is a marginal subject in these courses: remarkably a 10-page MSc prospectus on water and food security does not contain the word irrigation. The courses come from a variety of backgrounds: engineering/water resources; geography; and social/political science and thus attract very different types of people. They have a common interest in water management and security, but they all lack detail on many important issues. For example:

- the practicalities of conveying, controlling and delivering water to fields
- engineering characteristics (types of control structure, design for efficient management etc.)
- an understanding of irrigation efficiencies; the nature and reuse of losses
- effective management of large-scale infrastructure by widely-dispersed under-resourced rural offices
- the role of irrigated agriculture in livelihoods and the impact this has on design and management requirements
- modern techniques for water management – use of communications technology, remote sensing, etc.

Purpose of proposed training programme

In order to meets its wider objective of promoting sound water management for food production, ICID needs to support a sustainable cadre of irrigation professionals in the UK. This will requires providing specialist training to younger professionals, as well as running the programme of specialist meetings which are currently held three times per year.

To this end, we propose to develop a short annual training course to introduce both the broader and specific subjects associated with irrigation design and management to as wide a range of young professionals as practicable to ensure that they are
able to gain a good appreciation of the main issues. The intention is deliver this to UK MSc students or recent graduates during May or September, when then have a good understanding of the wider water issues but would benefit from some practical and more detailed training on particular areas of irrigation and drainage.

The precise contents would be adjusted each year to suit the interests and background of the participants, but would always be aimed at people want to work professionally in I&D.

Programme

Day 1 - Morning
Overview (Bruce):
- why is irrigation important, role of irrigation in food security
- the main irrigated-related issues that all water professionals should understand
Types of irrigation:
- Characteristics
- Storage and conveyance systems: types of control structure
- Efficiencies and losses
- The need for drainage
Agriculture & crop water requirements (Derek)

Afternoon
Irrigation design – new projects (Adrian)
Irrigation design – the challenge of rehabilitation and modernisation

Day 2 - Morning
Economic analysis, financial sustainability (Chris)
Management (Alan)
- Irrigation and river basin management
- Main system management
- Tertiary/on-farm management

Afternoon
Recent developments – use of remote sensing, automatic control, communications
Environmental impacts of irrigation

Evening
Lacey Lecture (Jeremy Bird)

Note: topics, times and dates are purely notional at this stage – to be discussed and agreed. The precise content, format and scale of each session will be designed to suit the background of each course participant in order to stimulate cross–disciplinary thinking as well as to provide a more detailed understanding of important topics.

The materials (lectures notes, bibliography of key literature, links to experienced individuals, etc.) would also be made available online on the IWF website and would be used as a basis for other workshops so that IWF would gradually build up a resource of training materials. This material would be freely available as the difficulty in attending meetings is one of the key constraints that irrigation professionals face to keeping up-to-date. By bringing together students in related disciplines from several universities across the country we hope to stimulate networking and creative thinking in the sector.

Location
ICE, London or at UEA’s London campus

Date
(tentative): 11-12th May, 2014

Participants
10-15 MSc students or recent graduates working or hoping to work in topics related to irrigation

Cost
A small charge will be made for the course – probably of the order of £50 per participant to cover incidental expenses.

Further details
Anyone interested should contact Simon Howarth or Tim Fuller.

Book Reviews

“Investing in Water for a Green Economy” is a new book about opportunities to improve service delivery, infrastructure, policies and management of water resources.

To look inside this book, go to:
http://www.routledge.com/books/details/9780415501262/

Each of 12 chapters offers valuable insights into water management.
- Find out how early intervention could dramatically improve the world’s economy.
- Identify where reform opportunities are greatest.
- Read simple guidelines for investment and pricing.
- Identify how best to govern the use of water.
- Examine case studies on poverty alleviation in the Niger Basin, supplying metered water to the poor in Jakarta, investing in sub-Saharan Africa and making water available free of charge.

In the context of the economies of the world becoming greener, this book provides a global and interdisciplinary overview of the condition of the world’s water resources and the infrastructure used to manage it.

It focuses on current social and economic costs of water provision, needs and opportunities for investment and for improving its management. It describes the large array of water policy challenges facing the world, including the Millennium Development Goals for clean water and sanitation, and shows how these might be met.

There is a mixture of global overviews, reviews of specific issues and an array of case studies. It is shown how accelerated investment in water-dependent ecosystems, in water infrastructure and in water
management can be expected to expedite the transition to a green economy.

The book provides a key source of information for people interested in understanding emerging water issues and approaches that are consistent with a world that takes greater responsibility for the environment.

**Journals & Papers**

ICE's *Waste and Resource Management Journal* will be publishing papers on the topic of global food management in a themed issue in 2014.

Around the world, rising global food prices and increasing income inequality are making it hard for many people to afford to feed themselves. But while millions are hungry in regions like sub-Saharan Africa, some countries waste billions of kilograms of food each year.

Papers will explore the solutions to what is already a pressing economic, environmental and humanitarian problem worldwide, covering:

- Infrastructure solutions
- Treatment solutions
- Collection methodologies
- Production solutions
- Minimisation techniques
- Legal aspects (e.g. regulations dealing with ‘best before’ date or specific marketing standards etc.)
- Sustainability assessment of impacts from food losses or food recovery
- Education and awareness
- Prioritising prevention and reuse.

To request further details, please contact Jo Squires (Email: jo.squires@icepublishing.com) and see for more information about the journal and the themed Global Food Management issue at: [http://www.icevirtuallibrary.com](http://www.icevirtuallibrary.com)

**Congratulations**

To Geoff Pearce and his colleagues at HR Wallingford on winning the ‘Best Specialist Consultant 2013’ category in this year’s ICE Consultants Awards. This is a very noteworthy achievement and especially in the challenging trading conditions facing the professions and industry in the recent years. – From Tim Fuller

**Others**

Any ideas for short items or additions in this section? Questions, feedback, UKIA news, farewells to members or even irrigation and drainage jokes! All welcomed.
Survey Monkey

Earlier this year a survey of members was undertaken to gather comments about the content and format of the newsletter and identify some possible future changes. The results of the survey are presented below, with some useful observations and criticisms from 22 respondents.

1. Are you aware that ICID.UK now sends out its periodic newsletter (News & Views) by e-mail to all members with e-mail addresses?
   - Yes 100.0%
   - No 0.0%
   - Not Sure 0.0%
   - Good idea, will keep the costs down.
   - Excellent. Very nice, clean and informative.

2. Do you find the newsletter useful?
   - Yes 81.8%
   - No 4.5%
   - Sometimes 13.6%
   - It should be the main way by which members in the UK keep in touch with the international organisation, as well as with each other.
   - More fun than useful.
   - "Useful" in the sense of interesting - Yes.
   - If "useful" means helping to keep in touch with people, events and developments, then yes.
   - It keeps members in touch and provides some interesting articles on irrigation and related topics. Good article from Martin Donaldson.
   - Don't pay much attention.
   - I find it very interesting.
   - To read comments, topics from UK members.

3. Do you tend to read the whole newsletter or scan for the articles of interest?
   - Whole 54.5%
   - Part 45.5%
   - Do not read 0.0%
   - Mostly personal project articles and opinions.
   - Tend to scan I don't read the detail of the meetings, read the articles if I am interested.
   - Read everything.

4. Do you find the newsletter too long or too short?
   - Long 0.0%
   - Short 4.8%
   - About right 95.2%
   - Think it's about right.
   - No reason why there can't be more articles.
   - As long as articles are interesting doesn't matter how long newsletter is.
   - Especially since now electronic and not paper.
   - There would be no harm in it being longer, if more people wanted to contribute
   - All good.

5. Do you feel the newsletter has the right amount of text and images?
   - Right 90.5%
   - Not enough images 9.5%
   - About right, the quality of the photographs at meetings could be improved though!

6. How could the format and structure be improved?
   - Format & Structure about right 85.7%
   - Both can be improved 4.8%
   - Structure can be improved 9.5%
   - Format can be improved 0.0%
   - Needs more topical water management issues.
   - Not too sure about the distinction between format and structure but in general it should avoid becoming too "heavy".
   - About right. I wonder if a section on Who's Doing What and Where might be useful - short paragraph with member's name followed by a brief resume of what work he/she is involved with at the moment.
   - I would suggest that now that N&V is sent by e-mail the structure should be altered to give the index, introduction, news, reports on meetings and coming events etc first and that any articles at the end. More articles could be solicited but if they come in the middle of the issue, bits and pieces at the end get lost.
   - Seems about right to me.

7. Would you like to see the newsletter issued more or less frequently?
   - More 36.4%
   - Less 9.1%
   - No change 54.5%
   - Being resident outside the UK it is the key way for me to keep in touch with the Associations activities.
   - Quarterly would be a good frequency.
   - To be quite honest I am not sure what the frequency is right now, quarterly or 6 monthly. 6 monthly would be about right.
   - 3 per year.
   - However unlikely to get enough articles.
   - More frequently could be a good idea but it is a question of being able to have sufficient matter to make this possible.
   - Maybe three issues per year - at the moment I think there are only two?

8. Do you find the articles on previous technical meetings and events of interest?
   - Yes 100.0%
   - No 0.0%
   - This question should also refer to technical articles relating our members' experiences... from both UK and international projects...but they should not be too long.
   - Provide a more comprehensive technical summary.
   - This as a key function of the newsletter. Reporting of meetings and events should be specifically aimed at encouraging discussion and participation in future events (many of the reports do this but some can be a bit flat).
   - Moderately - I don't read the articles myself though I think it important to have "minutes" of the meetings for those that want to read them. Hyperlinks to useful references given in the presentations might be useful (could be supplied to the editor as a list at the end of the presentation).
   - Often of limited interest.
9. Would you like to have a section for members’ letters, comments and discussions on the technical articles?
   Yes 86.4%   No 13.6%
   • Try it.
   • Definitely. It is hard to get people to write in but worth the effort. This is not a professional journal - it is a society newsletter. It should aim to be lively, personal and stimulating - encouraging exchange between its members.
   • Not particularly - but the opportunity should be there for someone to write in and comment on, or add to, a presentation if they wish to.
   • Letters and comments in the first sections, discussion on technical articles.
   • Good idea to give opportunity for discussion.
   • Important.
   • Why not. If people want to contribute?
   • Good idea - or collate comments from the website as a record of that if we have a social media section on a new website.

10. What else would you like to see in the newsletter as regular items?
   • The newsletter should be used to promote more discussion among our members. If the editor solicits some contributions to a "Comments & Discussion" section, I think members would soon begin to offer their input.
   • Occasional reports from related societies would be good.
   • It's good as it is.
   • The title is "News and Views" I would like to see more in the way of personal views on cutting edge issues. Perhaps the Working Group Members could be encouraged to provide some lively feedback on what their groups are tackling and why.
   • No particular suggestions.
   • A few more short technical articles.
   • Short paragraph from members describing where they are and what they are doing at present.
   • Job opportunities training opportunities for personal development.
   • New members page - 100 words and photos?

11. Does the What’s On section give adequate coverage for the next 6 month period?
   Yes 95.0%   No 5.0%
   • It seems comprehensive to me but I am not in a strong position to judge.

12. Do you find the Tail End pages of use and what would you like to see featured here?
   Yes 66.7%   No 33.3%
   • In general, we fail to put the ordinary members in touch with the activities of the ICID internationally. More senior members know all that, but for a new young member there is little in N & V to give awareness of the main organisation, or how that member might participate. Members of ICID working groups should be asked to provide occasional short articles, letting the rest know what that group does. Also, it might be useful to identify which working groups exist but do not have a UK member. Also, the list of names needs checking. There should not be any entries of names as members of working groups, if those names don’t show up on the general list of members of ICID.UK.
   • Particularly appreciate the list of members.
   • "of use" is probably not the right phrase. I think it is necessary to list the committee members and the other material has its purpose.
   • But note comments about layout. Placement of ads needs careful consideration.
   • Job vacancies.
   • Internship opportunities for young members.

13. Would you or your organisation consider advertising at the rates indicated?
   Yes 23.8%   No 61.9%   Maybe 14.3%
   • Currently not active.
   • I’m not currently working in the irrigated agriculture sector.
   • I do not have any need for advertising.
   • No benefit to me advertising in the newsletter.
   • I’m basically retired now.
   • We might do but not at the moment.

14. Do you find the list of individual and corporate members page of use?
   Yes 86.4%   No 9.1%
   • Should this include contact details?
   Yes 50.0%   No 36.4%
   • Not necessary to show it in every issue -- once a year would suffice.
   • Should be able to get contact details through sec.
   • Contact details would of course have to be optional.
   • Useful to see the list, certainly don’t want my contact details given out in this way. You could include details of what the person does - e.g Independent Consultant, but then you might find that there are too many in the "Retired" category, so perhaps that wouldn’t work. Could phrase it as "Current or previous sector of work"?
   • Suggest these are put right at the end of the issue.
   • Be aware of data protection constraints on open provision of contact details.
   • If individuals agree.
   • Even a bit more text - say 20 key words per person?

In summary, the newsletter appears to provide an important and well-regarded service to members; more short articles would be better, and “news & views” should be encouraged, rather than peer-reviewed articles, whereby, if a controversial view is being expressed, we should try to have an alternative view presented by someone else as well.
The daunting challenge of canal irrigation rehabilitation for water productivity and food security

At the Institution of Civil Engineers, from 14.00 to 17.30.

The Irrigation and Water Forum and UEA Water Security are hosting a half-day technical meeting on the appropriate design and reform of canal irrigation systems and services under the guise of irrigation rehabilitation and modernisation. The improvement of irrigation performance, underpinned by design that offers better manageability, is a vital part of the anticipation that water and land productivity will have to rise over the next few decades to meet future food demands — yet without having to default to pressurised systems. To set the stage, it is perhaps remarkable that the recent 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. This programme starts with a keynote presentation from one of the most foremost specialists working in this field.

1:45 pm Arrival and register (for a prompt start)
2:00 pm Welcome by Bruce Lankford (IWF & UEA Water Security Research Centre)
2:10 pm Introduction to the keynote speaker by John Hennessy
2:30 pm Keynote: Herve Plusquellec (Recently World Bank). Improving performance of canal irrigation systems in developing countries is long-overdue: Hope or desperation? Followed by Q&A.
Approximately 3.15 pm Coffee, tea, biscuits
3.45 pm Martin Donaldson (Independent Consultant) Experiences of Irrigation Rehabilitation and Modernisation in Vietnam
4.10 pm Adrian Laycock (Independent Consultant) Directions and degrees for canal modernisation; more or less?
4.35 pm (FAO presentation hopefully)
5.00 pm Panel discussion to 5.30 pm.

The final programme is subject to adjustments, but will be available to watch on-line to registered participants using the ICE website. Contact Tim Fuller for further details and guidance on attendance and pricing. See www.uea.ac.uk/watersecurity for updates.

11-12th May, 2014 (tentative), IWF Training Course “Irrigation for Young Professionals” ICE, London or at UEA’s London campus. For further details contact Simon Howarth or Tim Fuller.
THE TAIL END

British National Committee 2012-2013

Chairman: Dr Bruce Lankford
Vice Chairman: Simon Howarth
Honorary Secretary: Geoff Pearce
Honorary Treasurer: Peter Johnson
Elected Members: Julia Brown, Derek Clarke, Martin Donaldson, Emily Lewis (SocialMedia), Ian Tod
Nominated Members: Peter S Lee (ICE)
Dr R Ragab (Vice President ICID)
John R Hennessy
Position Vacant (CIWEM)
Ex-officio: Dr Ragab Ragab
Peter S Lee
Sub-Committees: Finance & Membership
News & Views
Meetings & Seminars
John Hennessy
Peter Johnson (01223 262708)
Oliver Taylor (01244 319413)
Geoff Pearce
Bruce Lankford
Co-opted Members: Oliver Taylor
Marieke Nieuwaal
Ian Johnson (Environment Agency)
Melvyn Kay (UK Irrigation Association)
Secretary: Tim Fuller
British National Committee ICID
Institute of Civil Engineers
Great George Street
London SW1P 3AA
Tel: 020 7665 2234
Fax: 020 7799 1325
Tim.Fuller@ice.org.uk

IWF Members serving on ICID Work Bodies
Felicity Chancellor: African Regional Working Group
Permanent Observer
Peter Lee: Committee on Public Relations and Publications
Member
Working Group on Technology and Research Uptake And Exchange
Permanent Observer
Working Group on Modernisation of Irrigation Services
Permanent Observer
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Working Group on Technology and Research Uptake and Exchange
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John Hennessy: President Honoraire ICID
Member
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Member
Charles Abernethy: Working group on the History of Irrigation
Member
Ragab Ragab: Vice President ICID
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Working Group on Crop & Water
Working Group on Use of Poor Quality Waters for Irrigation
Working Group on Water Management in Water Stressed regions
Member
Tom Franks: Special Work Team on Lake Chad Basin
Member
John Dunn: Working Group on On-Farm Irrigation Systems
Member
Chris Perry: ICID Journal Editorial Board
Member
Bruce Lankford: ICID Journal Editorial Board
Member
Keith Weatherhead: Working Group on Global Climate Change and Agricultural Water Management
Nominated
Oliver Taylor: Committee on Public Relations and Publications
Editor, News & Views

International Office-Bearers
Peter S Lee (Past President) peterlee-icid@spamarrest.com
John Hennessy (Past President) johnhennessy@icid.freeserve.co.uk

ICID exists to foster the exchange and development of technical information and expertise in irrigation, drainage and flood control and related fields. Members receive this magazine and the quarterly ICID Journal, invitations and advance information about technical meetings, and information from ICID central office and other branches from time to time. Corporate members receive six copies of this magazine and the Journal, and exposure to members and organisations in 70 countries world-wide.

Contributions and Advertising
Contributions to News & Views are always welcomed, in the form of articles, photographs, letters or brief reports.
Advertisements may be part or full page. Leaflets can also be carried. For more details and rates contact the Secretary, Tim Fuller, or the Editor, Oliver Taylor.

Standard advertising rate is £75.00 per half page, single entry, or £130 double entry. Colour ads £125 and £200 respectively. Business cards £20.00 per appearance. Corporate members are entitled to a free advert and Individual Members can place their business cards for free.

Contributors and advertisers may wish to bear in mind that News & Views reaches ICID representatives in over 70 countries, as well as British members at home and abroad. This extended distribution is at the request and by courtesy of the ICID Secretary General in Delhi.

The next issue, No. 56, should reach members in March 2014. The last date for receipt of copy is 28 February 2014. Please send your contributions to the Editor:

Oliver Taylor,
Email: oliverctaylor@live.co.uk
6 Hoole Park, Chester, CH2 3AN
Tel 01244 319413, 07977782345,

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Email: alaycock@sol.co.uk

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<td>or <a href="mailto:oliver.taylor@snclavalin.com">oliver.taylor@snclavalin.com</a></td>
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Irrigation water management specialist
Technical writer and editor

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**Application for IWF Membership**

IWF membership for 2011 is £60 which gives you a reduced or free entrance to future meetings and access to the ICE, One Great George Street. For full time students, the annual fee for ICID membership is £15. However for students, by paying the £15 fee for the seminar, ICID membership for one year is then automatically included. From 2012 there will be a new grade of Young Professionals, at half the price of full individual membership.

To: Tim Fuller  
Secretary, IWF  
Institution of Civil Engineers  
Great George Street  
London SW1P 3AA

Membership rates:

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I wish to join the British Section of ICID. I enclose a cheque made payable to “ICE” which covers our/my subscription for one year. (Please use block capitals).

Full Name__________________________________________

Organisation________________________________________

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