



IAH (Irish Group) 2019 Annual Reports

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IAH (Irish Group) – Annual Secretary’s Report 2019

	Irish National Chapter www.iah-ireland.org																								
Names of 2019 office holders <i>(Date in brackets is when term of office expires)</i>	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">President</td> <td style="width: 30%;">Donal Daly</td> <td style="width: 40%; text-align: right;"><i>(2021)</i></td> </tr> <tr> <td>Secretary</td> <td>Barry Sexton</td> <td style="text-align: right;"><i>(2019)</i></td> </tr> <tr> <td>Treasurer</td> <td>John Dillon</td> <td style="text-align: right;"><i>(2020)</i></td> </tr> <tr> <td>Conference Secretary</td> <td>Sarah Blake</td> <td style="text-align: right;"><i>(2019)</i></td> </tr> <tr> <td>Fieldtrip Secretary</td> <td>Robbie Meehan</td> <td style="text-align: right;"><i>(2019)</i></td> </tr> <tr> <td>Education/Publicity Secretary</td> <td>Sonja Masterson</td> <td style="text-align: right;"><i>(2020)</i></td> </tr> <tr> <td>Burdon Secretary</td> <td>Morgan Burke</td> <td></td> </tr> <tr> <td>Northern Region Secretary</td> <td>Paul Wilson</td> <td></td> </tr> </table>	President	Donal Daly	<i>(2021)</i>	Secretary	Barry Sexton	<i>(2019)</i>	Treasurer	John Dillon	<i>(2020)</i>	Conference Secretary	Sarah Blake	<i>(2019)</i>	Fieldtrip Secretary	Robbie Meehan	<i>(2019)</i>	Education/Publicity Secretary	Sonja Masterson	<i>(2020)</i>	Burdon Secretary	Morgan Burke		Northern Region Secretary	Paul Wilson	
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Co-opted committee members	<p><i>Conference Sub-committee</i> Eleanor Burke, Alison Orr, Orla Murphy, Sara Raymond</p> <p><i>Education/Publicity Sub-committee</i> Damien Doherty</p>																								
Changes to office holders	<p>Secretary: Barry Sexton has completed his term and will be stepping down.</p> <p>Conference Secretary: Sarah Blake has completed one year of her term. Sarah is going on a years leave in the new year, therefore the position of Conference Secretary will be filled at the AGM via an election.</p> <p>Subcommittee positions: All members have agreed to continue.</p> <p>Burdon Secretary: Morgan Burke has agreed to continue.</p> <p>Northern Region Secretary: Paul Wilson has agreed to continue.</p>																								
Membership information (as of Oct 2019)	<p>Total IAH (Irish Group) Membership: 133 (cf 146 members last year). The membership includes:</p> <ul style="list-style-type: none"> 12 student members (19 last year), 2 retired members, 119 regular members and 10 sponsored members in low-income states paid for by the IAH Irish Group. There may be more paid for by ordinary members but due to data regulations these figures are not reported here. 																								
Activities during the year NB Technical Discussion Meetings (TDMs) are organised by Taly Hunter-Williams (GSI) and Alasdair Pilmer (Gavin & Doherty Geosolutions). They are held in the GSI on the first Tuesday of each month	<p>20th November 2018</p> <p>TDM and AGM</p> <p><i>Article 27 of the European Communities (Waste Directive) Regulations, 2011: issues, implications, solutions</i> Pete Rodgers, Associate Director, RSK</p> <p><i>Soil & Stone waste prevention and update on work in progress on acceptance criteria.</i> Kevin Motherway, EPA Waste and Financial Provision Team.</p>																								

<p>(excluding June to September).</p>	<p>The IAH Irish Group AGM followed the presentation.</p> <p>4th December 2018 IAH TDM <i>Stable Isotopes and Hydrogeology in Ireland</i> Paul Hynds (DIT) and Shane Regan (TCD/NPWS).</p> <p>15th January 2019 Joint IAH/Geotechnical Society TDM <i>Road Design In Karst Landscapes: The M17/M18</i> Les Brown (Arup), Esther Madden (Arup) & Deirdre O’Hare (Barry Transportation)</p> <p>5th February 2019 The David Burdon Memorial Lecture <i>The trials and tribulations of developing groundwater supplies in the Humanitarian sector.</i> Geraint Burrows, Groundwater Relief</p> <p>5th of March 2019 IAH TDM <i>Modelling Karst Environments "Field Evidence in a pipe network model of Irish karst hydrology"</i> Philip Schuler, TCD – delivered by Laurence Gill, TCD. & <i>"Uncovering karst groundwater:3D hydrological modelling of an Irish karst system"</i> Lea Duran, TCD</p> <p>30th April to 1st May 2019 39th IAH Annual Conference Tullamore Court Hotel, Tullamore, County Offaly This year’s theme was: <i>"Groundwater: drought, floods and climate change"</i></p> <p>1st October 2019 IAH TDM <i>Blood Thirsty Ticks and Ravenous Green Aliens</i> John Sherry, Ecologist, TOBIN Consulting Engineers</p> <p>18th – 19th October 2019 Annual IAH Fieldtrip Exploring the hydrogeology of County Clare.</p>
<p>Burdon Update</p>	<p>As stated above the Burdon Lecture took place at the GSI on the 5th February 2019. The lecture was presented by Geraint Burrows of Groundwater Relief and gave a great insight into the on the ground reality</p>

	<p>of trying to deliver reliable and sustainable groundwater supplies in the humanitarian sector. The lecture was well attended and very well received.</p> <p>Update on IAH (Irish Group) ‘Twinning’ with Uganda There has been little progress with the Ugandan Network of Groundwater Professionals in relation to an action plan to implement a ‘twinning’ collaboration with the IAH (Irish Group) but efforts are ongoing.</p>
<p>Other initiatives and achievements during the year</p>	<p>The IAH again availed of the Irish Geoscience Network’s Public Liability insurance policy. The main provision of the policy is Public Liability cover for field trips within the territorial limits (UK/ Ireland), subject to exclusions (the main exclusions being war, terrorism, property belonging to members and asbestos-related claims). The level of cover is €6,500,000. Non-members are also covered for events such as the field trip.</p> <p>A Bursary was awarded to Sean Wheeler to support his attendance at a compositional data analyses course at the University of Girona. Contributing funds were gratefully received from Parkmore Environmental Services, Robbie Meehan, David Ball, CDM Smith, O’Callaghan Moran & Associates and Minerex Environmental Ltd.</p> <p>Sean submitted a report to the committee detailing the course and its outcomes for his research.</p>

Barry Sexton
Secretary (Irish Group) IAH
11th November 2019

IAH AGM November 12th 2019

Conference Secretary's Report

Sarah Blake

The 39th IAH (Irish Group) Conference was held in the Tullamore Court Hotel on April 30th and May 1st 2019. The theme was "Groundwater: Drought, Floods and Climate Change" and was chosen in response to the extremely dry conditions experienced in parts of the country in 2018. The aim of the theme was to explore; 1) the severe threats posed to groundwater systems and water resources by a rapidly changing climate, and 2) the potential solutions to climate change impacts provided by groundwater initiatives and groundwater professionals. The programme consisted of nineteen invited speakers from government, academic and industrial bodies from Ireland, the UK and the USA. Eleven posters showcasing current and recent groundwater research were also presented, and a workshop on QGIS for Hydrogeologists was presented on the second day.

The programme for the conference was arranged into the following sessions.

1. Climate change projections and impacts

This session provided a broad overview of the current projections for climate change on both global and regional/national scales, and included a keynote presentation from Dr. Bridget Scanlon (University of Texas, USA) on the management of water resources in climate extremes.

2. One-minute poster presentations

This short session consisted of eleven very rapid "elevator pitches" to showcase groundwater research posters from students, researchers and consultants, and to kick-start discussion at the posters during the coffee breaks.

3. Impacts of drought in Ireland

The history of drought in Ireland was explored and compared to the impacts of the most recent drought in 2018.

4. Drought response 2018

This session was dedicated to the work of Irish Water in rehabilitating some of their groundwater supplies in the wake of the 2018 drought conditions. Descriptions of the work undertaken by consultant hydrogeologists at several different schemes were provided.

5. Groundwater flooding

This session dealt with groundwater flooding at home and abroad and opened with a keynote presentation from Vincent Fitzsimons (SEPA, UK) detailing the effects and impacts of climate change and flooding in Scotland to date.

6. Groundwater systems in a changing climate

This varied session was split into two parts, national and international, to look at the impacts of extremes of weather and climate on groundwater systems. The keynote speaker was Dr. Mark Cuthbert (Cardiff University, UK) who spoke about groundwater response times to climate extremes.

The event was attended by upwards of 180 delegates. Despite a clash with the iCrag SFI site review on May 1st, which meant that significant numbers of academic delegates could only attend on the

30th, the second day was nonetheless well attended, with over 100 people present on the morning of the 1st. About 30 people participated in the QGIS workshop on the second day.

There was a lively atmosphere in the exhibitor's room during coffee breaks and the wine reception on the first evening, kindly sponsored by City Analysts Ltd., with 17 companies exhibiting this year. The committee of the Irish group of the IAH wishes to thank all the speakers, sponsors, members and friends of the IAH for their continuing support of our annual conference.

IAH (Irish Group)
ANNUAL GENERAL MEETING
 Tuesday 12th November 2019

Education and Publicity Secretary's Report

www.iah-ireland.org	<i>Irish National Chapter</i>
Membership	<p>We have 186 members in the IAH Irish Group, increasing from 146 in 2018. Membership updates are sent from head office approximately bimonthly and new or repaid members updated accordingly.</p> <p>Members are sent an email to confirm they have joined the membership email list, and likewise with the other lists held both if a person leaves or joins the list.</p>
Student Bursaries	<p>Bursary Awards 2019</p> <p>The bursary scheme applications for 2019 went out in the first week of February of this year. This was earlier than has been done in previous years to give applicants time to apply for any courses starting in September or fieldwork over the summer, with the hope of improving applicant numbers compared to previous years. The response rate was low again with only two applicants. Therefore there is just one awardee for 2019, Sean Wheeler who was awarded €700 to part support attendance at a compositional data analyses course at the University of Girona.</p> <p>Some of this may have been due to the change in calls for applicants, as two enquiries were made about the scheme at the end of the academic year.</p> <p>Bursary Funding 2019</p> <p>Due to unused funding from 2018 and the earlier call for applications, it has not been necessary to call for sponsorship in the last round.</p> <p>If a healthy number of applications are received in the next call (February 2020), it is expected that the IAH will seek a new round of funding. Much thanks is due to all our sponsors to date.</p>
Conference	<p><i>Hard-copy Proceedings</i></p> <p>All printed proceedings were used at the 2019 conference, so a reprint of another 23 copies is in process, after which they will be distributed to university and public libraries.</p>
Email Circulars	<p>Notice of IAH TDMs and other IAH events are circulated to members and other interested parties who have subscribed. Relevant lectures, and seminars of potential interest to IAH members were also emailed to members.</p> <p>IAH news continues to be published in the Groundwater Newsletter, thanks to David Drew, Katie Tedd Melissa O'Keeffe and Monica Lee.</p> <p>Compliance with GDPR is ongoing. Members are sent an email when they have been added to an email list and, individuals who have requested to unsubscribe are similarly emailed when taken off the list.</p>

www.iah-ireland.org	<i>Irish National Chapter</i>
Website	The IAH website, managed by Damien Doherty, is continuously updated and improved. A reminder that conference proceedings, fieldtrip guides and TDM's are all available online.
Email Server	We are still with eirhost, although the cpanel system used is still something that should be updated. Considerable time was spent looking at mailchimp and setting up within the mailchimp server as it was suggested this could be a better alternative. Unfortunately mailchimp is designed for marketing purposes and doesn't easily allow one to one mail communication in addition to mass emails. Thunderbird has also been suggested, which has not yet been looked at.
Outreach	<p>It had been hoped that the Uisce Aille Project would be rolled out countrywide with help (financial and otherwise) from the IAH. The student undertaking this project had started working on the QGIS programme to make it generic and therefore applicable to various river basins across Ireland, but this is not being continued at the moment. Tiernan Henry is looking out for another student to take over the project and will let IAH know if it restarts.</p> <p>It is not possible to get details of science teachers in different schools around the country due to GDPR, the main contact (which has already been made but without response) is through the National Science Teachers Association. If any members have contact with a science teacher that would be interested in being involved in any Geoscience programme, please ask them to get in touch with me.</p>
Training Course	A training course has been organised for this year on Pumping Tests, and is coming up in some weeks. Registration for attendance so far is very good with numbers currently at 48.

Sonja Masterson
Education and Publicity Secretary
23/10/2019

The 2019 Annual Fieldtrip of the International Association of Hydrogeologists (Irish Group) to Clare and Galway

'Karst Hydrogeology of the Burren Uplands / Gort Lowlands'

This year the Irish group of the International Association of Hydrogeologists (IAH) held their fieldtrip on the weekend of 19th and 20th October, when almost forty intrepid hydrogeologists met in Counties Clare and Galway. The karst hydrogeology of the region has been long-studied, but the trip focussed on recent and novel work in the area, and several new approaches to examining karst. The idea of the field trip was to examine this rich library of new work, by visiting a wide variety of sites with very different hydrogeological influences.

On the outward journey from Dublin, the weather was relatively clement, which was very different to the previous two years trips. Though delayed on the outward journey from Dublin, when the bus reached Doolin, Dr. David Drew and Colin Bunce took participants on a brisk walk towards the coast, to examine clay wayboards and inception horizons. This led to brief but focussed discussion, before the group were led to the second stop of the morning, where another inception horizon was examined at Fraggle Rock cave. On the way back to the bus, chert localities were observed, and by this time all were well ready for the lunch that followed.

After that wonderful lunch in McDermotts of Doolin, John Paul Moore led us to examine Variscan age veins and adjacent joints, at Murrooghtoohey near Blackhead. These structures had also been discussed that morning at the Fraggle Rock locality. John Walsh had deep insights into the hydraulic fracturing and valving of overpressured pore fluids, and a marvellous calcite quarry was visited. From here, Dr. Bruce Misstear of Trinity College lead a superb presentation and ensuing discussion about Poll Insheen Holy Well, including stories of cures the well has ... toothache, in particular. The final stop of the day was a visit to Irelands only spa tourist attraction; the site of the Lisdoonvarna Spa Wells, where a number of the spa historians brought us through the history of Lisdoonvarna as a town, the various spa wells themselves, and the growth and decline of the industry over a hundred years in the 19th Century. Bruce brought us to a number of the wells, where their properties and settings were discussed, and marvelled at by the contingent.

The group stayed overnight at the Hydro Hotel in Lisdoonvarna, where the colloquial dinner was attended by the majority of the participants.

On the Sunday, the weather was dry and bright. The Sunday morning studies began early, with a talk just after breakfast in the hotel by Philip Schuler and Lea Duran on the Bell Harbour catchment pipe network modelling. Stops at a borehole near Carran in the Bell Harbour Catchment, and at Kinvara Springs, the latter with Dr. Paddy Morrissey, led to vigorous discussion, before Paddy discussed the flooding which may even happen this coming winter in the Kinvara Springs Catchment. All were well ready for a lunch stop at O'Grady's Bar in Gort by the time discussion finished up.

Following lunch, a visit was made to the Beagh Sinks and the adjacent Devils Punch Bowl just outside Gort. Paddy and Dr. Laurence Gill examined the three dimensional hydrogeology and hydrology of the area, and finished off the field trip at Years Tower near the Thoor Ballylee Hammerhead Sinks. At this stage, a minibus picked up those that had to be transported back to Lisdoonvarna, while the Dublin contingent headed home.

The IAH would like to thank all the contributors to this year's field trip. Thanks also to all landowners in north Clare and south Galway for giving us permission to visit their lands, and thanks also to

McCaffrey coaches, and the bus driver Daniel, for getting us there, around and back safely. Malcolm Doak is thanked for the attached photographs.

The outlay on the trip was as per usual generally, with the one extra, unusual outlay being the minibus back to Kinvarra and Lisdoonvarna on Sunday afternoon. As we could not do a 'looped' route on the Sunday, this had to be accounted for.

This, and other issues, meant that the trip overall worked out relatively expensive, compared to other years. The minibus back to the Burren was booked for 15 people initially, and only 5 were there to use it (for various reasons there were many cancellations from the western contingent). Overall, actually, we had a lot of cancellations, well over double figures between those from the west and those travelling from Dublin.

Which, overall, means I think we as an organisation need to move to online booking for next year. That will mean that if people say they are going to attend the trip, regardless of whether they do or not the IAH do not lose funds. It also gives people an extra incentive to come on the trip, having paid for it, and it is less easy to cancel. I personally wasn't against this idea before, as the cancellations were usually only 3 or 4 each year (approx. 10% of attendees), so it was not a major problem. But as we forewent over €700 in attendance payment this year, which would have meant we were only down the money for the bus (and not all of it either), it is probably something that requires changing.

As an aside, we are always usually down the money for the bus each year, owing to the fact that we pay hotel, dinner and lunches for the contributors, the bus driver and the field trip secretary.

Dr. Robbie Meehan, IAH Fieldtrip Secretary



Colin Bunce discusses caves, wayboards and inception horizons.



Much of the Saturday morning involved walking, which is a welcome relief to hydrogeologists.



David Drew and Colin illustrating how wayboards work.



The Lisdoonvarna Spa Wells.



A beautiful Sunday morning at Kinvara Springs.

IAH (Irish Group)
2019 ANNUAL GENERAL MEETING
Tuesday 12th November 2019

Burdon Secretary Report

Annual David Burdon Memorial Lecture – 5th February 2019

The invited guest speaker this year was Geraint Burrows from Groundwater Relief. The presentation was entitled “*The trials and tribulations of developing groundwater supplies in the Humanitarian sector*”.

Update on IAH (Irish Group) ‘Twinning’ with Uganda

There has been little progress with the Ugandan Network of Groundwater Professionals in relation to an action plan to implement a ‘twinning’ collaboration with the IAH (Irish Group) but efforts are ongoing.

Burdon Groundwater Network for International Development (IAH-BGID) – Activities Update

- The IAH-BGID Free Book Scheme was successfully run during the year with thanks to the BGS for a generation donation.
- A *Wikipedia edit-a-thon* was held at the 46th IAH Congress in Malaga in September 2019. The purpose of this event was to create “Hydrogeology of...” pages for every country in Africa based on the content of the Africa Groundwater Atlas. The Africa Groundwater Atlas is an online portal providing a synthesis of the groundwater resources of Africa at a country scale.
- The first IAH-BGID keynote was delivered by Prof. Alan McDonald, Co-Chair of the IAH-BGID, at the 46th IAH Congress. Alan presented on the topic of Groundwater Sustainability and Governance.
- IAH-BGID is currently compiling a book for the IAH-Series. It will be entitled “*Groundwater, resilient livelihoods and equitable growth*”. The aim of the book is to provide a comprehensive evidence base for how groundwater has contributed to reducing poverty, increasing resilience to climate and environmental change and helping to develop equitable growth. The book will present a collection of key studies from Africa, Asia and Latin America on how the development of groundwater is transforming communities, both in reducing poverty and also promoting economic growth.

Morgan Burke
Burdon Secretary