

Communicating water availability to improve awareness and the implementation of water conservation measures in the Republic of Ireland

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Key messages

- The Republic of Ireland's climate is changing and this, along with demographic change, will impact the quality and availability of water resources for critical use such as drinking water.
- Improvements in public communication made by the national utility, government departments and agencies, NGOs, Group Water Schemes and the national media regarding water availability and drought conditions are required.
- To analyse the communications relating to the 2018 and 2020 droughts in Ireland, social media posts and comments were reviewed and newspaper articles between 2018 and 2020 also analysed. In addition, interviews were undertaken with 6 key stakeholders consisting of journalists, political representatives, and a water and communications expert.
- Key recommendations include: Improvement in Irish Water responses to public queries and comments on social media. Regular media (i.e. print and electronic) coverage of drought events to increase public interest and conservation action. An Fóram Uisce should also lead a national stakeholder engagement on drought and its impact on water resources and the need for conservation actions.

Introduction

Drought events have been gaining prominence in the media space because of their impact on water resources, infrastructure, and food production and on morbidity and mortality. These impacts are associated with one of the four main categories of drought which are meteorological, hydrological, socio-economic and agricultural drought.

Hydrological drought is related to erratic rainfall, which affects the amount of surface and underground water resources, thereby restricting water supply. Meteorological drought is also connected to a reduction in rainfall over a long period, while agricultural drought is linked to the depletion of soil nutrients, moisture and the overall yield of agricultural lands. Socio-economic drought also involves the effects that inadequate rainfall has on water-related activities like agriculture. It is regarded as the combined effect that meteorological, agricultural and hydrological drought have on human activities.

Defined as a period of 15 days or more for which no one day records 0.2 mm or more of rain, there have been over 45 droughts in Irish history of which, twenty-two (22) were short term drought (less than 10 months), 19 were medium-term (10 to 20 months), and 4 long term drought (over 20 months). Drought conditions accompanied by heatwaves and a rise in temperatures made 2018 the driest summer in 56 years. In 2020, 31 droughts conditions were also recorded across Republic of Ireland from 18th March 2020 to 28th April 2020 during which water resource demand in excess of 20% nationally was also recorded amid COVID-19 pandemic as well as dry weather resulting in increased water demand.

Actions from lessons learnt from the 2018 and 2020 drought events include water conservation to restrict usage during the 2020 drought period, and the EPA-managed national hydrometric bulletin and EPA Maps to promote information sharing on water resources in Ireland. There has also been funded research to understand the **historical trends of drought in Ireland**. Although drought is discussed, in a limited way, in existing policies and legislation in the country, a National Water Resources Plan (NWRP) by Irish Water promises to bridge this policy gap by identifying and assessing water resources throughout Republic of Ireland with one of its aim to increase resilience to extreme events such as drought.

Analysis of Irish Water Communication

Irish Water engages the public more on Twitter than Facebook, despite Facebook being the most popular social media platform in Republic of Ireland and also the platform through which most communities receive their trusted information on water availability.

A sentiment analysis of 1671 tweets by Irish Water (@IrishWater) from 2018 to 2020 were found to be generally positive in nature, although the utility's responses to the public's concerns and comments on social media were limited. Communications to the public about water availability and conservation measures largely came from Irish Water, except for a few institutions like An Fóram Uisce, EPA, DCU-Water Institute and the National Federation of Group Water Schemes who delivered water conservation messages and raised awareness through press releases and reports to promote conservation efforts.

Drought periods are perfect opportunities to educate the public on the impact on water supply and the need for conservation action, however, analysis showed limited conservation messages before and after drought events.

Analysis of Newspaper Coverage

Newspaper coverage of drought and water availability was higher in 2018 than 2020 (Fig 1). The primary cause of the changes in media coverage trend was due to competing interest in the COVID-19 pandemic. Despite this, the Irish Times, Irish Independent and the Irish

Examiner carried more stories on drought and water resources from 2018 to 2020 compared to other newspapers. Nevertheless, certain words including "water scarcity" and "shortage" in describing drought impact on Ireland's water resources, were rarely used in newspaper reportage, while uncertainty and risk remained the most prevalent frame around drought and water resources. Eco-hydrology also emerged as a linkage on the impact of drought on ecology and hydrology.

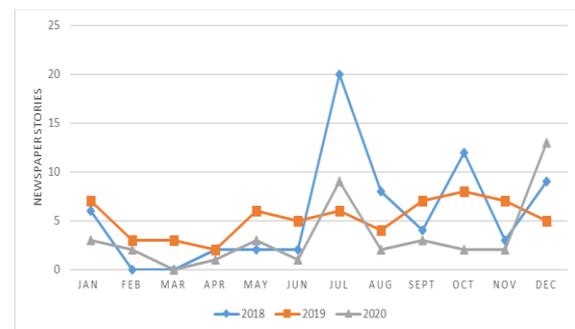


Fig 1: Newspaper coverage from 2018-2020

Policies and Legislation

Unlike the UK, where different laws and legislative instruments exist to protect the water sector against externalities like drought, Irish Water's draft National Water Resources Plan (NWRP) was the only plan addressing drought adaptation and resilience in the Republic of Ireland. There was only limited discussion of drought in sectoral plans such as biodiversity and climate action, making it difficult to have clear, cross-cutting policies and measures in building drought resilience around water resources.

Information Access

As part of lessons learnt from the drought in 2018 and 2020, Republic of Ireland has created accessible information sites where updates on droughts and water resources are available. This includes the National Hydrometric Bulletin developed by EPA since May 2020 to provide summary on river flows, lake levels and groundwater levels. EPA Maps and the catchments.ie website also provide data and interpretation on flow levels, protected areas, pressures and activities and hydrogeological status of all 46 catchments, 583 sub-catchments and 4845 waterbodies are updated. While these platforms help bridge the

information and data gap on water resources and the impact of droughts on their availability, a national drought information management system is needed because the impact of droughts are expected to intensify in the years ahead.

Reaction to Communication on Conservation

The public's responses to water conservation communication reveal a perception that Republic of Ireland is a wet country and, consequently, actions regarding water

conservation measures are not prioritised. Drought concerns and their impact in the media were mainly by research institutions/academia and organizations such as the Sustainable Nation Ireland, Climate Change Advisory Council, Met Éireann and individuals/environmentalist.

Drought and water resources were infrequently referred to by political parties with the exception of the Green Party who were the most outspoken of all organisations in issues related to water and drought events.

Conclusion

Drought events are anticipated to become more prevalent in Ireland, and consequently, continuous public education, and awareness on droughts events and their impact on water resources are needed to promote home water conservation efforts. This should be driven through a collaborative approach involving Irish Water, the media, policymakers and, above all, the An Fóram Uisce.

Recommendation for Policy Consideration

1. Irish Water communication strategy should offer the public a chance to interact and to have a say in conservation measures and actions by improving its responses to public queries and comments on social media. A toll-free number for the public to report suspected water-related issues like leakage or excess usage is required. Enabling a two-way communication approach would improve consumers' engagement as advocated under Article 14 of the Water Framework Directive on public engagement and involvement (European Union, 2000).

2. A consolidated National Integrated Drought Information System is needed. This should coordinate, monitor, forecast and help plan and inform regional, county and local levels of drought issues and should serve the general public, stakeholders, policymakers and the media. Such an information system should be managed by the EPA given their experience and vast data repository. The national integrated drought information system should also be accessible online, user-friendly and designed to

provide actionable, shareable and easy to understand information and visuals/maps that highlight present and historical drought conditions across different parts of the country. It should also provide disaggregated data on the impact of all types of drought on other sectors of the economy, such as agriculture, manufacturing and production etc. It should also contain a learning and research tab where one can get basic information about drought, the latest research and information, and personal measures the public can take to conserve water and adapt to drought conditions.

3. A national drought plan that examines drought governance, preparedness, responses and recovery to bolster adaptation and mitigation while enhancing resilience in the water sector to meet drought-driven water scarcity situations is also required. The process towards the plan should be led by An Fóram Uisce and developed to meet regional and local needs with the involvement of local authorities. The plan should be statutory and integrated into broader river basin management plans and national development frameworks. It should also identify actions, roles, communication channels, and overall responsibilities for all relevant institutions.

4. Regular media (i.e. print and electronic) coverage of drought events is needed to increase public interest and conservation action. As a link between policymakers and the public, the media should publicise government policies, plans, and interventions relating to the

water sector's drought and climate change effort. Having a constant media spotlight on Ireland's progress regarding drought resilience will impel policymakers to remain committed to climate efforts in general. The media should also continuously engage the scientific community to increase drought awareness and simplify discussions around drought and water resources. An increased media attention on drought events would influence behavioural changes towards water conservation and national policies towards drought mitigation and adaptation.

5. Environmental interest institutions should see drought communication as an emergency that requires collaborative efforts in promoting public awareness. Irish Water should not be left alone to carry the task of communicating to the public on the impact and threat of drought on water supply. Institutions like the Commission for Regulation of Utilities (CRU), Local Authority Waters Programme (LAWPRO), An Fóram Uisce, Sustainable Water Network (SWAN), research/academic institution and the local councils should help educate the public on water conservation and measures during drought periods by collaborating with Irish Water. Such collaboration can also lead to an evidence-based approach to communication backed by empirical studies.

6. To ensure that drought resilience around the water sector is built not as crisis management but as a proactive approach will require active stakeholder engagement involving state institutions and the private sector, individuals, academic institutions, and financial institutions. An Fóram Uisce should lead a national stakeholder engagement on drought and its impact on water resources and the need for conservation actions. Such engagement should be before, during and after drought to encourage commitment to long-term actions and resilience building.

infrastructural development, particularly in drought-prone regions as part of resilience building. This should be matched with public education as the public feedback points to a limited appreciation for the work that ensures water supply. The amount of work behind the tap is a mystery to many of the public. An Fóram Uisce should lead this public awareness campaign and education at the national level.

8. As a statutory body committed to facilitating stakeholder engagements on all water issues in Ireland, An Fóram Uisce should increasingly subject policy makers to scrutiny by assessing their policies, plans and interventions towards the water sector, on drought and climate change efforts and make policy submission for improvement and amendments where possible.

9. Considering the impact of water metering in promoting water conservation and the long-term sustainability of water supply amidst uncertainties driven by factors such as drought, An Fóram Uisce should also facilitate participatory stakeholder engagement and communication strategies that can drive a move towards achieving consensus in discussing water conservation and the climate benefits of domestic water metering.

ABOUT THIS BRIEF

This brief is one of nine topics announced under an early stage researcher's bursary application by An Fóram Uisce aimed at addressing key topic areas of importance to inform the forum's policy positions, and to identify future foci for further research by the Forum.

