



WATER FORUM POLICY POSITION ON WATER CONSERVATION

Submitted to the Department of Housing, Local Government and Heritage
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Introduction

A resilient supply of high-quality drinking water is not only essential for every person living in Ireland, it is also critical for future economic investment and development. Population growth, climate change and aging infrastructure will add additional challenges to secure a resilient supply of drinking water to domestic and non-domestic customers. One of the ten strategic objectives of the National Planning Framework is for Sustainable Management of Water Resources, which highlights water conservation as a method of improving sustainability. The Government's commitment to build 33,000 new homes each year over the next decade provides a golden opportunity to ensure future housing and developments are not only energy efficient, but also water efficient. The Water Services Policy Statement 2018-2025 of the Department of Housing, Local Government and Heritage (DHLGH) states that water conservation 'must be firmly embedded at the heart of water services policy' and that further work is needed on education and awareness, stronger building standards and regulations and retrofitting.

Under the Water Services Act, the Water Forum (An Fóram Uisce) has a statutory mandate to advise the Minister for Housing, Local Government and Heritage on water conservation, and the Water Services Policy Statement identifies the Forum's specific role in examining and making recommendations on further strategic policy responses to improve water conservation. To support this role the Forum commissioned research in 2021 on '*A Framework for Improving Domestic Water Conservation in Ireland*', which was completed by Dr Sarah Cotterill, University College Dublin^{1,2}. The research highlighted the need for sustained Government-led buy in to implement water conservation measures in Ireland and presented ten key policy recommendations, which are supported by the members of the Forum. In 2022, the Forum commissioned research on non-domestic water use and conservation, also lead by Dr Sarah Cotterill, UCD, which has recommendations on data transparency, governance and capacity building.

Why Water Conservation is Needed in Ireland

- The Central Statistics Office project population growth of between 18 and 41% in Ireland by 2051.
- There is already a high strain on Ireland's water supply infrastructure, with Uisce Éireann reporting that 58% of their water resource zones have a supply demand deficit in normal conditions and 66% are in deficit during drought.
- Along with national conservation orders in 2018 and 2020, additional water restrictions have been required regionally over the past 4 years due to periods of extended dry weather.
- According to the DHLGH Sectoral Climate Change Adaptation Plan for Water, future climate change will coincide with decreases in summer precipitation, and with increased frequency, duration, and magnitude of summer dry and drought periods.
- Latest research indicates that Ireland will face reductions in precipitation between 3% and 20% by the end of the century (Fealy et al., 2018; Nolan and Flannagan, 2021), while river flows in 37 catchments across Ireland are projected to decrease by 21% during summer periods by the 2080s (Meressa et al., 2022).

¹ <https://thewaterforum.ie/app/uploads/2022/02/A-Framework-for-Improving-Domestic-Water-Conservation-Policy-Brief-1.pdf>

² [A-Framework-for-Improving-Domestic-Water-Conservation-Report.pdf \(thewaterforum.ie\)](https://thewaterforum.ie/app/uploads/2022/02/A-Framework-for-Improving-Domestic-Water-Conservation-Report.pdf)

The Multiple Benefits of Embedding Water Conservation into National Policy

- Reduce water demand and pressure on water infrastructure
- Increase the resilience in water supply to support a growing population
- Decrease volumes of wastewater generated and reduce the pressure on our wastewater infrastructure
- Support climate adaptation and resilience to increased periods of drought
- Reduce carbon emissions from the processes of abstraction, treatment and pumping water
- Decrease energy costs and carbon emissions in the household by minimising waste of heated water
- Protect aquatic ecosystems from the pressures of abstraction, supporting the requirements of the EU Water Framework Directive.

Through commissioned research, workshops and engagements with key stakeholders, the Forum has developed a position on water conservation to provide formal advice to the Minister, as outlined in the recommendations below.

Priority Recommendations to the Minister for Housing, Local Government and Heritage on Water Conservation

1. **Develop a committed government strategy for water conservation in Ireland that includes a program for actions to implement water conservation measures nationally.** This strategy should be developed building on international examples, such as the recently published 'UK Water Efficiency Strategy to 2030'. This is in line with recommendations made by the Joint Oireachtas Committee on the Future Funding of Domestic Water Services in 2017, who recommended that 'the Government should develop a cross departmental strategy to increase water conservation. It should focus on education and awareness; retrofitting; stronger building standards and regulations for all new residential builds'.
2. **Establish a national water conservation team with a mandate to lead the development and implementation of a government-led water conservation strategy.** This should include representatives from relevant government departments, Uisce Éireann, the National Federation of Group Water Schemes (NFGWS), the Environmental Protection Agency, Construction Industry Federation, Sustainable Energy Authority of Ireland (SEAI), the Water Forum, academia and NGOs. This water conservation team should develop an implementation plan for the update of building regulations to include mandatory water efficiency targets, water efficiency labelling for fittings and appliances and data access and transparency around future development which impact water resources.

Additional Recommendations to the Minister of the Department of Housing, Local Government and Heritage on Water Conservation

- 3. Ireland's Building Regulations** (Part G (Hygiene) or Part L (Conservation of Fuel and Energy) **should be reviewed and updated to include mandatory water efficiency measures for new buildings**, to specify total water use per building and maximum ratings for fittings. Under the Housing for All Plan and Project Ireland 2040 strategy projections, there will be a need for 300,000 new homes by 2030 (Government of Ireland 2021a) and 500,000 new homes by 2040 (Government of Ireland, 2018, Government of Ireland, 2021b). The introduction of water saving devices during the building of these properties would lead to a reduction in water use of a property, even without a change in user behaviour. This is in line with recommendations made by the JOC on the Future Funding of Domestic Water in Ireland, who called for an 'ambitious amendment to existing building standards and regulations to ensure maximum level of water conservation'.

The use of water saving technologies in new houses could lead to savings of 20-100 litres of water per property every day, where greywater re-use or rainwater harvesting could deliver significant reductions in water demand. Rainwater harvesting would not only reduce the volumes of potable water required to flush toilets and for cleaning, it would also reduce the volume of surface runoff which currently adds pressure to our wastewater infrastructure. Research by Water UK found that without changing building regulations, it would not be possible to cost effectively reduce household consumption below 110 - 115 litres/person/day (Water UK, 2019a). Building Regulations in England and Wales include a requirement that new dwellings must not exceed 125 litres per person per day or in some cases 110 litres per person per day and they also indicate the maximum fitting consumption of fittings and appliances required to meet the specified water use per building (Planning Portal, 2016), which are also broadly in line with requirements in building regulations in the US and Canada.

Furthermore, building regulations could be further strengthened to include water meters in new dwellings to allow water providers to build data on water consumption and support national leakage identification and reduction. It would need to be made very clear to both policy makers and to the public, that the need for water meters in new builds is entirely for the objective of leak detection and water conservation measures, and not to promote future pricing or charging for domestic water. Under Danish legislation, for example, all properties connected to the public supply must have water meters installed at property level, while multioccupancy dwellings such as apartments are only required to install one water meter at property (IWA, n.d.).

- 4.** Under the Climate Action and Low Carbon Development (Amendment) Act 2021, each Local Authority is required to prepare a Local Authority Climate Action Plan for its respective administrative area by 2024. **The DHLGH should provide direction to Local Authorities to include water conservation initiatives in these Local Authority Climate Action Plans**, e.g. to include water conservation technologies in public buildings or community initiatives for water saving devices. This would not only act as a climate adaptation measure to reduce water consumption, it would also support reductions in greenhouse gas emissions through reduced waste of treated and also heated water.

5. **A mandatory water efficiency labelling scheme for fittings and appliances, linked to revised building regulations and fittings standards, should be implemented.** Water efficiency labelling refers to programmes that provide a rating or an indication as to whether the amount of water used by fittings and appliances is efficient, where the purpose of such programmes is to encourage consumer choice towards more water efficient appliances, and also push manufacturer innovation towards products which can deliver a higher water efficiency (Cotterill and Melville, 2021). This approach was highlighted as a best option in an assessment of a series of scenarios to reduce domestic water consumption in the UK, and in 2021, the UK Government announced measures to make regulations to introduce a mandatory, government-led water efficiency label, linked with building regulations and fittings standards (UK Parliament, 2021). It has also proven to be an effective mechanism in Australia, New Zealand and Singapore.

Transparency and Oversight

6. **The Forum recommends that in the next iteration of the Water Services Policy Statement, there is a clear outline of the roles and responsibilities for the regulatory control of growth, development and expansion of activities which impact water resources, to ensure there is transparency and accountability for water sustainability in the planning process.** There should be clarity in the decision-making process around future planning and economic development which demand water resources to ensure sustainable provision of high-quality water services for all users across all Water Resource Zones.
7. **There should be increased focus on water conservation efforts and transparency in water use in catchments where abstraction has been identified as a significant pressure for waterbodies at risk of not meeting the requirements of the EU Water Framework Directive.** An increased knowledge and understanding of the impact of abstraction on aquatic ecosystems would support water conservation efforts. There should be greater transparency in the cumulative impact of abstractions on catchments to support integrated catchment management.
8. **The Forum recommends that the DHLGH ensure there is greater data transparency around water use and on location of water stressed areas where there are already supply – demand deficits to support sustainable water management.** The JOC on the Future Funding of Domestic Water Services recommended that ‘the principle of open data should be adopted for water research purposes’ and that data collected by Uisce Éireann, the Commission for Regulation of Utilities and the EPA should be provided to the Water Forum and to society for analysis and decision making purposes. Data transparency is particularly important for non-domestic water users, where water efficiency data and targets should be made publicly available via websites or dashboards, for example <https://mosl.co.uk/chart/chartitems/water-efficiency>.
9. While Uisce Éireann has a Water Stewardship Programme for non-domestic customers to promote water conservation. There are many additional private abstractions for industry, mining/quarrying, navigation, aquaculture and agriculture, which are registered with the EPA, some of these are high water users, who do not receive guidance or support for water conservation initiatives. **The Forum recommends there is more structured support to non-domestic users using private water abstractions to enhance water conservation nationally, and most urgently in areas with supply demand deficits.**

Further Research

10. **Further research is required on the cost benefit analysis (both economic and environmental) for the implementation of domestic water conservation measures.** For example, a cost benefit analysis of setting water efficiency targets in new buildings or for water efficiency labelling. This will be important to support the discussion on how these measures will be paid for, and by who. Learnings can be drawn from Scotland and Northern Ireland, where there are also no volumetric water charges. Even without water charges, interruptions to supply due to supply demand deficits could lead to considerable economic and social impacts, therefore financing sustained and consistent domestic water conservation interventions will need to be considered as a long term policy.
11. Following a cost benefit analysis of the implementation of water conservation measures, the national water conservation team should set out to identify funding and grant opportunities to support the inclusion of water conservation technologies and fittings in new builds. Furthermore, funding for low-cost retrofittable water saving kits should be considered, which could be provided free of charge to all public buildings and domestic households.

Education and Awareness on Water Conservation

12. In the absence of volumetric water charges, adoption of water conservation policy relies upon public awareness, in conjunction with standards and legislation. **A national awareness campaign should therefore be developed to support a bottom-up understanding of water**, from the processes that underpin treatment and supply, to the energy and resources required to produce drinking water. This campaign should be developed and delivered by a range of key agencies with experience in water conservation education and awareness (i.e. not solely Uisce Éireann), as research indicates that if there is a lack of institutional trust in the authority delivering the messaging, people will be less likely to cooperate and save water. The JOC on the Future Funding of Domestic Water Services, also highlighted the need for a 'more proactive approach be taken to promoting awareness of the importance of domestic water conservation in Ireland'. Community initiatives for water saving behaviours (e.g. through Tidy Towns or Transition Groups) should be supported, which would identify water conservation 'champions' around the country and build awareness for the need of water conservation.

Conclusion

There is an opportunity now to increase sustainability of water management in Ireland through a government-led strategy on water conservation. Improved water conservation will provide multiple benefits; socially it will reduce demand on existing supplies and increase resilience to support a growing population; environmentally it will reduce the carbon footprint from wasting treated water, while reducing greenhouse gas emissions from heating water; economically it will reduce the energy costs in a household through minimising waste of heated water, while potentially providing savings to the state on the cost of abstraction, treatment and pumping of water to domestic customers.

References

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