



Public Water Forum Submission to the Joint  
Committee on the Future Funding of Domestic  
Water Services in relation to Equity, Fairness  
and Conservation Measures

## Section 1 – Equity & Fairness

In its submission to the Expert Commission, the Forum stressed the following as critical to its concerns;

- Enshrining the public ownership of Irish Water and its assets in the Constitution through a referendum.
- Ensuring that water, as a basic need, is a citizen's entitlement where access should not be determined or circumscribed by ability to pay or that one's water usage should in any way increase the risk or exacerbate the impact of poverty.
- Water as a finite and vulnerable resource needing to be protected and conserved.
- The legacy of decades of under investment in the water network and waste water treatment facilities needing urgent attention.
- The need for a single national authority to manage the asset and the service.

The Forum is satisfied that each of these concerns was adequately addressed in the Commission Report. The Forum recognises that when dealing with the issue of domestic water, it can be difficult to reconcile sometimes competing aims - as for instance providing a guaranteed supply at no charge as a citizen entitlement at a period of acute investment requirements in the water infrastructure. The Forum considers that the Commission navigated this complex landscape in a fair, balanced and reasoned manner. It also supports the Commission's view that the issue of domestic charges be approached within a 'whole of system' perspective where there is agreement, transparency, consistency and compliance in the domain of non-domestic charges.

It appears to the Forum that the Expert Commission's report ultimately crystallised the controversy on water charges to a choice between payment through general taxation or one through direct water charges. The Commission opted for the general taxation route while protecting Irish Water's commercial focus, where the State would purchase its water requirement from Irish Water at a fee set by an independent regulator. While there are differences within the Forum on the preferred choice here, it is recognised that the general taxation route is probably the optimal one as an instrument for securing generalised public acceptance in the contentious debate as to how best to meet the costs of a fit for purpose water supply/ waste water system.

While the Forum considers that this was a sophisticated approach by the Commission to addressing possibly mutually irreconcilable goals, it is not clear to the Forum if this approach will deal with Eurostat requirements re; borrowing from the European Investment Bank. It is clearly essential that this borrowing facility is open to Irish Water if its ambitious and critical investment programme is to be implemented in the most

cost efficient way. There is indeed a sense in which all options under consideration by the JOC should be evaluated against this overriding consideration.

In this regard the Forum suggests that the possibility of water bonds be looked at as a mechanism of funding Irish Water. Water bonds are used in the case of Welsh Water - also a public utility - and their possible application in Ireland merits closer and more detailed analysis.

Overall, therefore, the Forum considers that the Commission dealt adequately with the issue of fairness and equity. It did this while simultaneously addressing issues of conservation, public ownership and maintaining the commercial autonomy of Irish Water. Inevitably, it could not be definitive on the issue of the source of the capital investment requirements of Irish Water in the future.

Regarding the Group Water Sector, it is axiomatic that members of the group schemes are treated no less favourably in any future scenario than applies to all other water consumers. Clearly if water charges are to be met through general taxation, group scheme members cannot be expected to pay twice.

It is useful at this point to recall that the subsidy scheme to group schemes was introduced when general water charges were abolished in the 1990's and only group scheme members were then liable for domestic charges. The subsidy was introduced to provide for equal treatment for group scheme members while simultaneously allowing the members to set a volumetric charge for all usage above that covered by the subsidy.

The Forum considers that this scheme has worked effectively and enabled the group scheme sector to develop as an effective and trustworthy player in the water supply domain. Clearly the specific nature and needs of the sector need to be consciously addressed in the shaping of a final position on domestic water charges but it is presently difficult to conceive of any reason why the existing arrangements should be changed.

With regard to those who paid water bills and those who did not, the principle of equity must apply here also. Ultimately, the decision to pursue or not to pursue those who did not pay will be a political one. The Forum has not yet had an opportunity to look at this issue in detail. It will do so at its forthcoming meeting of March 7th.

With regard to the issue of an adequate allowance for personal use, the Forum considers that this should be calculated retrospectively, based on mean annual usage. Once this is established a differentiated charge would apply for all usage above the mean in, for instance, decile bands where the least charge would apply to the first decile above the mean with an increasing relative charge for each subsequent decile.

A system of self - declaration of residence to allow for household aggregations would be necessary, but should be possible if the charge is to be collected by revenue.

It would be necessary to develop and codify an appeals process to deal with situations where disagreements arise and with the special circumstances of medical or other need. The Forum, considering its broadly based sectoral representation could potentially be tasked with developing this process and indeed with overseeing it in the future.

The Forum finds it difficult to conceptualise ways in which this process could be applied where all households are not metered. As stated previously the Forum believes that to manage water usage one must be able to measure it. The conservation charge proposed by the Commission presupposes a capacity to establish volumetric usage at the household level .The Forum therefore cannot envisage any situation in which it would be possible for instance to disaggregate from a district meter to the household. While the Forum recognises that there are value for money considerations in completing the metering process, it also recognises the fact that the costs incurred in metering would be essentially set at nought if there is a departure from a household based, volumetric management system.

## Section 2 – Conservation Measures

### Q1. Promoting domestic water conservation

- In what ways could a more proactive approach be taken to promoting domestic water conservation in Ireland? What costs might be involved? What resources might this require?

A good resource to understand water pricing structure around Europe is the Policy Institute's research paper.<sup>1</sup>

The Government could offer tax incentives or grants similar to SEAI to install water saving devices (rain water harvesting, low flow toilets and shower heads) also replumbing houses to use rain water for non-potable uses. Other countries have also offered grants to homeowners to install water saving appliances. See references below.

- What approaches have other countries taken to promoting domestic water conservation? Are there any, in particular, that appear appropriate for Ireland and worth currently considering?

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<sup>1</sup> <http://www.publicpolicy.ie/wp-content/uploads/Domestic-Water-Charges-in-Euroe.pdf>

Many states in the US have adopted measures and grants to encourage the installation of water saving devices. For example:

Metropolitan Water District of Southern California offers the following incentives:

- **High Efficiency Clothes Washer**  
Rebates start at \$85. When almost 15% of the water used inside your home goes to doing laundry, high-efficiency washers can save loads. [Click here to learn more about high efficiency washers](#)
- **High Efficiency Toilet**  
Rebates start at \$100 (for a limited time). The largest amount of water used inside your home--30%--goes toward flushing the toilet. [Click here to learn more about high efficiency toilets.](#)
- **Rain Barrels**  
Rebates start at \$75 per barrel. Collecting and re-using rainwater from gutters and downspouts for lawns and gardens minimizes the amount of water flowing into your storm drains, sewer systems and local waterways.

In Minnesota, the **Washington County Conservation District** offers 50% match grants up to \$5,000 for home owners to improve surface water quality on their property through rain gardens, infiltration trenches, porous pavement.

Portland Downspout Disconnect Program - Property owners in the program area can arrange for free city work or do the work themselves and be reimbursed up to \$53 per eligible downspout. Over 50,000 downspouts have already been disconnected, removing more than 1.2 billion gallons of storm water per year from the combined sewer system

Texas passed a constitutional amendment, Proposition 2, in November 1993 which exempted pollution control equipment, including water conserving equipment at non-residential buildings, from property taxes. Rainwater harvesting equipment at commercial installations is considered water-conserving equipment.

#### **Local Incentives:**

- Austin Rebate Program - Offers a very wide range of indoor and outdoor rebates. Up to \$5,000 rebate on the installation of a cistern.
- **Hayes County** - 1) Property tax reduction: taxable value is reduced by the rainwater collection system construction costs (available from Hays County and other participating taxing entities). 2) \$100 fee reimbursement for new development permitted through Hays County Environmental Health
- San Antonio Rebate Program - Rainwater harvesting projects are eligible for up to a 50-percent rebate under San Antonio Water System's (SAWS) Large-Scale Retrofit Rebate Program. SAWS will rebate up to 50 percent of the installed cost of new water-saving equipment, including rainwater harvesting systems, to its commercial, industrial, and institutional customers. Rebates are calculated by multiplying acre-feet of water conserved by a set value of \$200/acre-foot.

City of Menlo Park, California offers free water saving fixtures at its city hall for collection:

- Bathroom aerator - uses 1 gallon per minute
- Kitchen aerator - uses 1.5 gallons per minute
- Low-flow shower head - uses 1.5 gallons per minute
- Toilet leak detection tablets (2 tablets per packet)
- Water conserving hose nozzles (with shut-off valve)
- Water efficient landscaping CD. This user friendly CD contains a searchable plant database and information on watering recommendations
- In general, what are the most efficient domestic water conservation measures? What is your assessment based on?

Besides volumetric metering, the following survey done in the States is an interesting read:

- Respondents to a UF/IFAS online survey of 3,000 homeowners in Florida, Texas and California said reducing the price of water-efficient equipment would be the most effective strategy. That was followed by more practical information on household water conservation, easier identification of water-efficient appliances and better landscape irrigation ordinances.
- Additionally, respondents liked the idea of a real-time water use mobile app and more information on the environmental impacts of water conservation.
- "We know that informed homeowners are aware and concerned about the environmental consequences of excessive irrigation water use. However, awareness and concern are necessary, but not sufficient, conditions for resource and water conservation," said Hayk Khachatryan, an assistant professor of food and resource economics and the lead investigator in the survey. "Efforts in promoting the adoption of water-saving irrigation systems and practices will be more successful when environmental conservation measures are combined with economic incentives such as utility or manufacturer rebates on smart irrigation equipment."
- To get better-quality water, 64 percent of survey participants said they're willing to pay higher monthly water bills. Of those, 26 percent said they'd pay less than 5 percent of their current bill; 30 percent would pay 5 percent to 15 percent more and 8 percent were willing to pay more than 15 percent.
- UF/IFAS researchers used the survey to analyse U.S. household water use and irrigation practices. They surveyed homeowners in Florida, Texas and California based on water scarcity issues identified in a U.S. Environmental Protection Agency report from 2008.
- The survey was conducted by Khachatryan, a faculty member at the UF/IFAS Mid-Florida Research and Education Center in Apopka, Florida, and his post-doctoral research associate, Alicia Rihn.
- Many respondents said they were aware of water restrictions in their area, and they know that their water conservation efforts affected the overall water supply.

UF/IFAS researchers asked participants about governmental and non-governmental incentives that may contribute to consumers' purchase and installation of water-conserving items.

- Of those surveyed, more than 80 percent said they do not receive government or utility company financial support for water-conserving purchases.
- Government or utility company incentives to purchase these items were fairly scarce. About 18 percent of respondents said they received an incentive to install low-volume /dual flush toilets. Only 17 percent said they received rainwater collection tanks, and only 16 percent received flow-restrictor taps/low-water shower heads.

Read more at: <https://phys.org/news/2016-12-survey-homeowners-incentives.html>

- How can water customers be helped understand the true value of water with a view to maximising behaviour that conserves water? Is there any evidence regarding what measure, or mix of measures, typically works best in this regard?

Nudge effect.....inform users about their use, the average use in their neighbourhoods. Also develop an app whereby users can easily access the information from their meters.

- Are there any obstacles to improving domestic water conservation measures in Ireland? If yes, how might these be overcome? What resources might this require?

Most countries have trouble with installing water saving devices and encouraging water conservation in rental accommodation. Perhaps there needs to be more communication with landlords to install such conservation devices and educational material for renters.

- What incentive(s) do water users have to conserve water under the proposed funding model in the Expert Commission report? Are these optimal? Could the incentive(s) be improved in any way?

Users consuming an 'excessive' amount will be difficult in houses without water meters. However, this could encourage conservation where there are meters. The average amount of use in Ireland is around 150 litres/person/day. Charging could start after that amount is exceeded. See Public Policy's [paper](#).

- A Water Conservation Grant was available in 2015. Should grants be provided to those who undertake domestic water conservation measures? If yes, how might such schemes operate?

Yes, see above. Should be based on actual water conservation devices installed.

- How effective is pricing as a water conservation strategy? Given the range of potential conservation measures that could be employed, how much of a role do pricing strategies generally play in encouraging behaviour that conserves water?

It definitely plays a role and can be compared to other utilities' experience. Most countries charge for water usage. However, it is not the only avenue to reduce water consumption and should not be approached in isolation from other measures as detailed above.

- Given the overall package of recommendations by the Expert Commission, would other additional water conservation strategies be required compared to under alternative funding models?
- What measures could be taken to encourage domestic water conservation if Ireland adopts the Commission's recommendation to charge users only for "excessive use"?

According to OECD Studies on Environmental Policy and Household Behaviour Greening Household Behaviour, 2011 Survey:

*The survey's results "show that, in the opinion of households, the availability of 'less expensive water-efficient equipment', 'easier identification of water-efficient appliances', the provision of 'practical information on things you can do to save water at home' and 'more information on water consumption by my household' are the most important factors that encourage people to reduce their water consumption. More than 80% of the respondents rate them as either fairly important or very important. Other factors, including 'more information on environmental impact of water consumption', 'finding my household uses more water than similar households' and 'high water price' are found to be relatively less important. Clearly, there may be an important strategic bias in the responses to the latter question, particularly in light of the overwhelming evidence in the literature on the positive impacts of water pricing on water conservation. These results justify the importance of both price and non-price policies in encouraging people to reduce water consumption. In particular, public information and education campaigns that provide people with more information on the environmental impact of water consumption, the things they can do to save water at home, and the ability to identify water efficient equipment; a clear water billing mechanism that provides households with accessible information on their water consumption and charges" are important.*<sup>2</sup>

The Survey also found that they eco, water saving labelling of appliances to be very effective in Australia, Israel and the Netherlands. They recommend an easily understandable and *"trustworthy labelling scheme concerning the environmental impacts of products also has a positive relationship with the adoption of water-saving devices."*<sup>3</sup>

Additional findings include:

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<sup>2</sup> Greening Household Behaviour: Overview from the 2011 Survey, OECD 2014, p. 175

<sup>3</sup> Greening Household Behaviour: Overview from the 2011 Survey, OECD 2014, p. 174

- *“Low-income households more frequently engage in water-saving behaviours, but are somewhat less likely to invest in water efficiency improvements. Need-based grants for water efficiency investments could provide an important means of improving water conservation by targeting this income group.*
  - *Households who rent rather than own their homes engage less often in water-saving behaviours and make fewer financial investments in water efficiency. Programmes for increasing awareness and promoting water-saving investments among tenants could be a useful way to correct this economic distortion.*
  - *Households’ concern for various environmental issues and level of community involvement is significantly correlated with adoption of water-efficient devices. A higher level of concern about natural resource depletion and environmental issues, supporting or participating in an environmental organisation, having votes in the past six years, and having a higher level of trust about claims regarding the environmental impacts of products, are factors that are associated with a higher likelihood of conservation.”<sup>4</sup>*
- Are there any other stakeholders apart from Irish Water who could play a role in promoting water conservation? What role could they play? What resources might they need to fulfil this role?

Education and public awareness should be done on a community basis and through local groups, both environmental and community-based. In the role out of Saorview, the Government worked through the Wheel organisation who engaged with local groups. This role out was relatively easy as a result.

Additionally, Sustainable Water Network (SWAN) is an umbrella organisation where many of its members are local groups concerned with local water initiatives. The Local Authority Water Coordinating Office (LAWCO) is also working on the ground on development and implementation of river basin management plans. Water, as a resource, must be viewed in a holistic manner as source protection is the most effective method to protect our drinking water.

Lastly, the Public Water Forum is hiring a community engagement officer to work on a local level. It is essential that Irish Water work in conjunction with them.

## **Q2. Potential role of Irish Water**

- What type of advice could Irish Water give to water users regarding water conservation? What water conserving devices could Irish Water provide access to?

See suggestions above.

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<sup>4</sup> Greening Household Behaviour: Overview from the 2011 Survey, OECD 2014

- What would be the costs and benefits of Irish Water providing access to water conserving devices? Who should be responsible for meeting the costs of this? What financial implications might this have for both the State and households? If costs would arise for the State, how should this be funded?

The costs depend on how much the offer is taken up. Research on this could be done in countries where they have offered such grants. The benefits arising from such conservation include a lessening of stress on the current water infrastructure and the reduction in the need to build new water treatment plants. The investment in reducing the amount of storm water entering the water system would also ease the burden on the over-stretched sewage treatment plants.

- How much water would you expect different domestic conservation devices, such as rain harvesting systems and shower, tap and cistern fittings, to save? Which devices typically save the most water? Which offer best value for money?
  - Changing the shower heads could save around 100 litres/shower (or approx. 73,000 per year for a 2-person household)
  - Investing in an 'A' rated washing machine saves 50-70 litres per wash (or approx. 22,000 per year for a 2-person household)
  - Change the toilet cistern to a low flow or dual flush system could save 4 litres per flush (or approx. 12,000 litres per year for a 2-person household)
  - Watering the garden can use up to 700 litres, which can be offset by installing a water barrel (water twice/week over summer months could use around 5,000-10,000 litres per year). This water could also be used for other outdoor activities such as washing the car.
  - Investing in a rain water harvesting system for non-potable house uses could also have a dramatic impact on the amount of piped-in treated water. Such systems would require replumbing of the house to use rainwater for toilets, showers and washing machines.
- In terms of water supply, what measures could be considered in attempts to conserve water? What work to date has Irish Water taken in this regard? Are there any plans for undertaking measures in future? How does this relate, if at all, to the issue of funding improvements in water infrastructure?
- What progress has been made in identifying water leaks? Are there any obstacles to making (further) progress in this regard? Is the onus on Irish Water and/or households if leaks occur between the property and footpath?

Metering has been an effective tool to discover water leaks. However, if a household is not paying for the water it uses and the leak is located in the house or on the property, there is no incentive for the householder to pay the plumber to repair the leak, unless it is affecting the house or foundation. There should be a grant in place to help finance the repairs of such leaks and an educational programme along with this initiative.

- How can education campaigns to raise public awareness help in promoting water conservation? How much water might be conserved through encouraging lifestyle changes by water users, e.g. turning off taps when brushing teeth?

There have been educational efforts in the past, especially with Taptips.ie. However, a simple leaflet or website won't have the desired effect. There must be an effort to work in the communities, engage individuals and groups in understanding and appreciating our water as a valuable resource. Green Schools have been effective in educating children, who transfer this knowledge and actions to their parents, but we can't rely totally on this initiative. Effort must be made to engage local communities and groups.

- Who should be targeted by measures to promote domestic water conservation?
- What is your assessment based on?
- What role, if any, can water meters play in domestic water conservation? If yes, do the costs of meters typically outweigh the benefits or vice versa?

Currently, there are nearly a million water meters installed and it would be tragic if the information from these meters is not used in a beneficial way.

Sustainable Water Network (SWAN) conducted a workshop and made the following recommendations:

*“Domestic water use: Future decisions about water policy, and domestic water charging specifically, must also be underpinned by robust data, facts and evidence that have been lacking so far. Firstly, while meters have prompted vehement opposition as a pricing tool, they could deliver significant benefits as an information tool, and we recommend that those that are already in place be used to:*

- *Better understand the level and drivers of consumption across different types of households;*
- *Raise awareness among households of their usage and how it compares to benchmarks (e.g. the average consumption in the neighbourhood). There is evidence that this could be an effective behavioural incentive for reducing consumption;*
- *Compare the impact of consumption reduction campaigns/incentives in metered vs non-metered areas.*

*This could be done as a number of pilot projects carried out as part of the public engagement programme. Moreover, any household that has a meter should be able to easily access their usage information, through web, phone app, and quarterly email.”*

- What benefit(s) could potentially be offered to households that make use of water meters and use less than average amounts of water?

The Government could provide a property tax credit or other incentive should the householders use less than the average amount of water to encourage consumption.

### **Q3. Consideration of potential further measures**

We support all the recommendations below.

- The Expert Commission suggests considering a requirement that new domestic buildings incorporate water conserving fittings. What would be the costs and benefits of this? Would there be likely obstacles to this?
- Have other countries a requirement that new domestic buildings incorporate water conserving fittings. If yes, what lessons could be learnt from their experience with this requirement?
- How might the Building Energy Rating (BER) Scheme be extended to incorporate water conservation? Who would be responsible for overseeing this?
- What would be the costs and benefits of extending the Building Energy Rating (BER) Scheme to incorporate water conservation? Have other countries adopted similar measures? If yes, have these been successful in conserving water?
- Is there any example of a city/country that has produced good results in terms of promoting domestic water conservation?
- Should any aspects of water conservation in public buildings be considered as part of this analysis of domestic water conservation?

Yes, definitely