



## SUBMISSION TO Uisce Éireann

Public Consultation on the Regional Water Resources Plan for the South East Region.

September 2023

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## Introduction

The Water Forum (An Fóram Uisce) was established in June 2018 in accordance with the provisions of Part 5 of the Water Services Act 2017. The Water Forum is the national statutory body representative of stakeholders with an interest in the quality of Ireland's water bodies. The Water Forum consists of 25 members including representatives from a wide range of organisations with direct connections to issues relating to water quality and public water consumers. As outlined in the Water Services Act 2017, the Forum has a statutory role to make recommendations to Uisce Éireann in relation to the performance of its functions and on any policy document prepared by Uisce Éireann.

The Water Forum welcomes the wide scope of work undertaken by Uisce Éireann (UÉ) to develop the draft Regional Water Resources Plan (RWRP) for the South East Region (herein referred to as 'the draft Plan'). The Forum welcomes the opportunity to respond to the public consultation.

The draft plan is significant for both environmental and socio-economic development in the southeast region over the coming decades. Population growth, climate change, aging infrastructure and spatial-economic changes are increasingly stressing the water resources, and UÉ is challenged to reverse the results of previous approaches and support increasing needs with limited resources, while facing a number of data gaps.

## Scope of the submission

The primary scope of the Forum's submission aims to balance the need for urgency around actions to provide water supply where it is needed, increase the resilience in water supply and water quality in the South East Region, while minimising any environmental impacts of abstractions along a catchment.

In the National Water Resources Plan (NWRP), Uisce Éireann proposed three key pillars, stating *"together these pillars will enable Irish Water to optimise our capital and operational solutions to achieve the best outcomes and react to emerging issues"*. These three key pillars of Lose Less (reducing leakage), Use Less (promoting and supporting water conservation) and Supply Smarter (developing the right combination of infrastructure that provides a sustainable, connected, resilient, long term water supply where it's needed without negatively impacting the environment), have each a role to play in achieving sustainability and resilience in water supply across the South East region. The Forum is concerned about sufficient inclusion of the Use Less Pillar in the draft Plan. Approaching these pillars in a more holistic way, could result in simultaneous improvements at many levels.

Please note specific questions presented by Uisce Éireann for the public consultation have been included in the relevant sections.

## Demand Management / Water Conservation

*Section 4, 7 and 8 of the draft RWRP-SE, and the Technical Appendices 1-3, set out solutions we can undertake to address some of these needs in the interim, while we develop the preferred approaches. Do you have you any comments on this?*

It is the Forum's view that UÉ needs to place a stronger emphasis on water conservation in the South East Regional Water Resources Plan (SE WRP), given the deficits in the supply demand balance (SDB), the future challenges (climate change, population growth, exploitation of nearest resources, inadequate infrastructure) and the current levels of energy used by UÉ<sup>1</sup>. Simulations on the impact of climate projections for drought show that regardless of which Representative Concentration Pathway (RCP) considered, most of Ireland will be drier in the future. Climate models indicate that extended dry periods will become more common, increasing annually by 16% and increases between 21-27% during summer months (Nolan and Flanagan, 2021). An analysis of annual average discharge change from hydrological models Under RCP 8.5, most of Ireland could be 10% drier by 2100 and some catchments could experience flow reductions close to 30%, where the south and east will be more severely impacted (O' Loughlin, 2023)<sup>2</sup>. While the Forum acknowledges that Section 5.3 in the Regional Plan mentions the Use Less Pillar and water conservation, the Forum is of the view that this is Section is short and weak. Despite 'Use Less' being one of the three pillars proposed in the NRWP, there is little focus on water conservation measures within the draft Plan. The Forum is supportive of the statement *"The Use Less pillar focuses on activities to help us to understand water use habits, influence behaviour, encourage change and to promote the use of water efficient devices and appliances."* However, the Forum is of the view that the 6 bullets on Page 135 outlining the current water conservation activities, lacks detail and ambition to support this statement and drive the Use Less Pillar of the Plan. The Forum is supportive of the changes made to the final Regional Plan for the North and West Region, which included more detail on various water conservation measures (relative to the draft Plan) and recommends that the same level of detail is included in the final plan for the South and East Region. Considering that this region will likely experience the most notable increases in spring/summer dry/drought conditions, it should be a key focus of the South and East regional plan.

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<sup>1</sup> UÉ are the largest single user of electricity in Ireland and therefore should be considering all ways to reduce this; water conservation, i.e. less demand from users, less treatment, less pumping, less leakage, less energy is an obvious example (Cotterill and Melville-Shreeve, 2021).

<sup>2</sup> O'Loughlin, 2023; [Projected climate change in Ireland and associated risk to water quantity; a review of national policies, governance and plans for future proofing Ireland's water supply – Research Report – An Forum Uisce \(thewaterforum.ie\)](#)

The Forum recommends that efforts to improve water conservation should occur simultaneously to the proposed increases in interconnectivity between the water resource zones (WRZs) in the region.

In 2021 the Water Forum commissioned research on *A Framework for Improving Domestic Water Conservation in Ireland*, (Cotterill and Melville-Shreeve, 2021)<sup>3</sup>; the research introduced issues around water scarcity in Ireland and the common misconceptions about water availability. Ten policy recommendations were proposed as part of this research where a number of recommendations are relevant to UÉ and the Use-less Pillar and the Forum recommends they are incorporated into the Regional Plan:

- Strengthen water education 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), to bring the necessary behavioural change around a more reasonable water resources management.
- Initiate an awareness campaign to highlight water scarcity in Ireland and potential future threats on our water supply. Educational campaigns can lead to a longer and deeper change in behaviour than traditional policy instruments, so they are considered necessary for the public to understand the challenges and the seriousness of the situation, as well as the benefits for changing certain perceptions and habits.
- The research recommended that a National Water Conservation Team is established, comprised of all agencies and partners responsible for water, to share best practice, skills and knowledge in Ireland. The Forum suggests UÉ will have a leading role in this team once established, along with the Water Forum.
- Introduce smart metering as a non-pricing strategy to raise awareness of how and where water is used – this could be considered for a pilot project for a community in Ireland to determine if it has a positive impact on water use.
- Identify funding for retrofittable water-saving kits which should be provided free of charge to all domestic households – this could be considered for regions in the South East which already have supply demand issues.

Furthermore, there is still poor communication around water scarcity and droughts in Ireland. Research commissioned by the Forum (Antwi et al. 2021)<sup>4</sup>, analysed how drought and water scarcity were communicated by different bodies in Ireland, which found that “water scarcity” and “shortage” in describing drought impact on Ireland's water resources were rarely used. One of the key recommendations from this research is for UÉ to improve their coverage of drought events to increase public interest and conservation action. The Forum recommends that UÉ increase their communications and education strategies to increase awareness of water scarcity and drought in Ireland, as a proactive measure rather than in crises management. The Forum is willing to support Uisce Éireann in these efforts.

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<sup>3</sup> Cotterill and Melville-Shreeve, 2021; [A Framework for Improving Domestic Water Conservation in Ireland - Research Report - An Foram Uisce \(thewaterforum.ie\)](#)

<sup>4</sup> Antwi, H.S., Linnane, S., Getty, D., Rolston, A. (2021). Communicating water availability to improve awareness and the implementation of water conservation measures in the Republic of Ireland. [Communicating-water-availability FULL-REPORT-1.pdf \(thewaterforum.ie\)](#)

In order to increase efforts on community engagement and demand management, the Forum recommends UÉ should increase investment in community engagement through the inclusion of community liaison officers across the country, which will support awareness campaigns and allow two-way communication between UÉ and the public. This would allow communities to be involved and co-create community projects for water conservation, supporting an integrated approach to water management and source protection initiatives. Furthermore, the Forum recommends that UÉ develops local community plans to increase knowledge around water scarcity issues in the region and ways the community can support water conservation measures in the plan.

The Forum welcomes future engagement and collaboration with UÉ in relation to water conservation initiatives. Water conservation is a central pillar of the Forum's Strategic Plan, where one of the Strategic Goals is to 'advocate for the need for and benefits of meaningful public engagement and education on water resource management'. Therefore, the Forum would be happy to support UÉ in future initiatives and communications around water conservation.

### **Recommendations – Demand Management and Water Conservation**

- Enhance water education 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).
- Initiate an awareness campaign to highlight water scarcity in Ireland and potential future threats on our water supply as a proactive measure for demand management, rather than crises management.
- UÉ should establish community engagement liaison officers who could lead community engagement, increasing communication between UÉ and the public and supporting water conservation measures. Develop local community plans to increase knowledge around water scarcity issues in the region and ways the community can support water conservation measures in the plan.
- Pilot a smart metering programme as a non-pricing strategy to raise awareness of how and where water is used in the home, this data could also be very valuable to UÉ in planning and developing future information campaigns.

## Future-proofing water services

*Section 3 of the draft RWRP-SE and the Technical Appendices 1-3 outline the Need in terms of water quality, quantity, sustainability and resilience across the region and in each of the Study Areas. Do you have any comment on the Need (Deficit)?*

### Drought Management Plans

In line with requirements set out by the European Commission, drought management plans need to urgently be developed for Ireland to better adapt to projected increases in drought during summer months. This is particularly relevant to the Regional Plan for the South and East.

As outlined in the draft plan, the South East region includes only a few areas where average annual rainfall exceeds 2,000 mm. Most of the highest populated areas experience annual average rainfall less than 1,200 mm. Climate models indicate that the South-East will be more severely impacted by an increase in dry/drought conditions, with greater reductions in river flows than elsewhere in Ireland (O’ Loughlin, 2023)<sup>5</sup>.

During the droughts in 2018, 2021 and 2022, several raw water sources were impacted in the south east region. Water levels in rivers dropped significantly for many supplies including Kilkenny City, Borris, Fews and Ballymacarbry, Gorey, Sow Regional, South Regional, Bennetsbridge and Wexford Town.

Since the beginning of June 2023 there has been numerous calls to the public in Wexford, Waterford and Tipperary to conserve water to protect supply and reduce the risk of outages. UÉ urged the public to reduce hose use and avoid power washing, while overnight restrictions were put in place in several areas including Silverfort, Fethard, Galtee Regional Supply Scheme, Ardfinnan and Enniscorthy among others (source UÉ website).

As outlined in the draft plan, there are 111 individual Water Resource Zones (WRZs) in the South East Region. Fifty-seven percent (57%) of these WRZs have a SDB Deficit, even in normal weather conditions. Many of UÉ’s existing supplies do not meet current or future needs in terms of source availability, water treatment plant capacity or demand growth requirements. This means that customers could experience interruptions to supply, particularly during extreme weather events. It also indicates that UÉ could have difficulty supporting projected growth and economic development in these areas.

In 2019 the Department of Housing, Local Government and Heritage (DHLGH) developed a sectoral climate change adaptation plan for water<sup>6</sup>, which outlined the future projections of climate change in Ireland (Page 8); this reported projected decreases in summer precipitation, with increased frequency/duration/magnitude of summer dry/drought periods. It is therefore crucial that our water service providers develop detailed drought management plans, specific to different regions, to increase resilience to supply for the future.

The Forum is aware of Appendix E in UÉ’s NWRP which outlines a high-level overview of drought management within UÉ. The Forum is of the view that there should be detailed Drought Management Plans specific to the South East region, included in the South East Regional Plan. The European Commission stated that all Member States should develop Drought Management Plans<sup>7,8</sup>, which is still currently not addressed. The Forum recommends that UÉ add an urgent action in the Regional WRP to support the development of these

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<sup>5</sup> O’Loughlin, 2023; [Projected climate change in Ireland and associated risk to water quantity; a review of national policies, governance and plans for future proofing Ireland’s water supply – Research Report – An Forum Uisce \(thewaterforum.ie\)](#)

<sup>6</sup> [dhplg\\_sectoral\\_adaptation\\_plan\\_final\\_en.pdf \(old.gov.ie\)](#)

<sup>7</sup> [https://ec.europa.eu/environment/water/water-framework/pdf/5th\\_report/SWD\\_2021\\_250.PDF](https://ec.europa.eu/environment/water/water-framework/pdf/5th_report/SWD_2021_250.PDF)

<sup>8</sup> <https://www.eureau.org/resources/briefing-notes/5111-briefing-note-on-the-impact-of-drought-on-drinking-water/file>

Regional Drought Management Plans. These plans should be made publicly available and indicate how much capacity there is throughout the region during extended drought periods.

The Forum acknowledges that UÉ have outlined the learnings from the 2018, 2020 and 2022 events in the regional plan (Section 2.4.2). However, the learnings presented are more crises management (reactive) as opposed to proactive measures to reduce the impact of the crises. The Forum is supportive of the activity outlined in Box 2.4 (Page 52) for “Tracking drought indicators and planning responses and activities”. The Forum recommends that there is early intervention in response to these indicators in attempt to reduce the extent of the crises, rather than planning for crises management. The proposed “Communication campaigns to promote water conservation;” should be initiated early to inform the public about potential water shortages, highlighting water conservation measures, and it should be targeted to communities, industries and stakeholders who will be most affected.

### **Recommendations – Drought Management**

- Drought Management Plans specific to each water resource zone (WRZ) should be included in all Regional Water Resources Plans.
- Drought Management Plans should be made publicly available and indicate how much capacity there is throughout the region during extended drought periods.
- Proactive and early intervention, with communication campaigns to promote water conservation should be initiated in response to tracking drought indicators in attempt to reduce the extent of the crises, rather than planning for crises management.

### **Level of Service**

As mentioned in the draft plan Uisce Éireann need to incrementally transform all of their water supplies and have set an initial Level of Service target of 1 in 50, or a 2% probability of supply interruption (most European utilities strive for 1 in 100-year LOS, or 1% probability of supply interruption).

Many areas of the South East are experiencing ongoing boil water notices and disruptions to water supply. This follows on from the disinfection issues and significant disruption to supply during the Gorey Incident in 2021, which put public health at risk. According to the draft plan the level of service in a number of areas in the South East is currently less than 1 in 10 under normal conditions (i.e., Normal Year Annual Average) and this number of areas increase under dry conditions (Dry Year Critical Period). The Forum is concerned over the significant improvements required to reach the 1 in 50 LoS target in the South East and recommends engagement with the public on proposed improvements in the regional plan, to build trust with the communities in this region. Furthermore, the Forum recommends that Uisce Éireann ensure strong engagement and communication with the public during disruptions.



## **Recommendations – Level of Service**

- Engagement with the public on proposed improvements in the regional plan, to build trust with the communities in this region.
- Ensure strong engagement and communication with the public during disruptions.

### **Flood Management Plans**

As acknowledged in Section 2.4.3 of the Regional Plan, climate projections over the next century indicate an increased likelihood of river and coastal flooding in Ireland (EPA, 2020, EPA 2021<sup>9</sup>). The Regional Plan refers to the Flood Risk Management Plans required by the Floods Directive and the responsibilities of the OPW with the Catchment Flood Risk Assessment and Management (CFRAM) Programme. The OPW flooding maps, clearly indicate a high possibility of flooding in many areas across the South East region. The Flood management plans of the OPW referenced in the text, do not refer to any management relevant to water treatment plants or disruption to water supplies.

The Forum therefore recommends that Flood Management Plans, specific to the water resource zones and water treatment plants of the South East region, should be included in the South East Regional Plan.

## **Recommendations – Flood Management**

- Flood Management Plans, specific to the water resource zones and water treatment plants of the South East region, should be included in the Regional Plan. Training should be provided to personal on requisite procedures.

### **Planning for Sea Level Rise**

Any proposed upgrades to infrastructure in the Regional Plan will be long-term investments, going beyond the 25-year horizon of the draft Plan. A level of futureproofing is recommended to be considered into the plan, particularly in the face of climate change as part of the design studies of those works (e.g. design life usually considered for 50 or 100 years for such works). This will have multiple benefits, economically and environmentally, and also related to the future resilience of the infrastructure assets. The consideration of sea level rise should be included in UÉ's planning processes for upgrades of water treatment plants in coastal areas of the South East Region to support resilient water services in the long term (i.e. >100 years).

## **Recommendations – Sea Level Rise**

- Sea Level Rise Management Plans specific to relevant WRZs should be included in Regional Water Resources Plans and considered in the development of new capital projects.

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<sup>9</sup> EPA 2021; [The Status of Ireland's Climate, 2020 – EPA Research Report 386](#)

## Planning for Future Population and Economic Growth

*In Section 2 of the draft RWRP-SE we set out information on the current situation in the Region in respect of the population growth and economic development and how we considered this in our water resource planning approach. Do you have any comments on this?*

As outlined in the draft Plan, the overall regional population growth is 28% from 2019 to 2044. All Study Areas in the South East Region have a projected growth rate that exceeds the 12% national rate observed in the 10-year period from 2006 to 2016.

Study Area K (County Kilkenny, Limerick, Tipperary and Waterford) has the highest projected growth rate at 30%, which is driven by the East Waterford Water Supply Scheme and Clonmel and Environs forecast growth of 44% and 47% respectively by 2044.

The link to the Overview of Water Treatment Plants (WTPs) provided with the consultation documents is very useful, [SE EPA WAB Report v1.xlsx \(water.ie\)](#), which gives a list of the WTPs in the region, details of the plants, with a rating for SDB deficit. It also indicates the interim and long-term plans for the WTPs. The Forum is also supportive of the water supply register available on UÉ's website, which gives an indication of the available capacity for water supply in each Local Authority area, e.g. for Waterford [Waterford | Water Supply Capacity Register | Uisce Éireann \(formerly Irish Water\)](#). The Forum would like clarity on whether this information is used by Local Authorities in the review of planning applications, or if the responsibility lies with UÉ to assess whether new applications should be granted planning based on water supply capacity in a region.

In relation to the process of new connection enquiries carried out by UÉ as part of the planning process with Local Authorities, the Forum recommends that UÉ provide further detail on its role on regulatory control of growth, development and expansion of activities (i.e. their capacity to refuse new domestic and non-domestic connections depending on the necessary infrastructure required to allow their optimum water allocation, ensure their sustainable operation and provision of high-quality water services), to ensure there is transparency and accountability for water sustainability in the planning process.

The Forum acknowledges that UÉ have both a role in economic growth and environmental protection, and is therefore of the view that there should be more transparency in where trade-offs are required between the two.

### **Recommendations – Population and economic growth**

- UÉ should provide further detail on its role on regulatory control of growth, development and expansion of activities to ensure transparency and accountability for water sustainability in the planning process.

## Sustainable provision of high-quality water services

*Section 4, 7 and 8 of the draft RWRP-SE, and the Technical Appendices 1-3, set out solutions we can undertake to address some of these needs in the interim, while we develop the preferred approaches. Do you have you any comments on this?*

The Forum recommends that a more holistic, integrated approach is adopted in the context of Integrated Catchment Management and Framework for Integrated Land and Landscape Management (FILLM)<sup>10</sup>, which should include source protection measures. This could reduce dependencies on infrastructural and treatment solutions to achieve adequate water quality (i.e. end of pipe approaches). The Forum recommends that UÉ outline the necessary engagement with leading agencies to address these source protection measures, with more consideration of ‘front of pipe solutions’. This transition will require skilled personnel; the Forum therefore recommends the UÉ increase their staff capacity to include scientists with expertise in integrated catchment management. Furthermore, there are additional responsibilities and commitments for Uisce Éireann under the Recast Drinking Water Directive<sup>11</sup> which requires a preventive approach to source protection, favouring actions to reduce pollution at source by introducing the risk-based approach. The Forum recommends that these commitments should be reflected in the regional plan, outlining how UÉ will implement source protection in the South East region.

The Forum supports that UÉ will invest in their human asset base to improve their Level of Service; i.e. having sufficiently trained personnel to manage infrastructure and to provide the best possible services. Following on the transition from the current service level agreements with Local Authorities to UÉ being the single public utility, the Forum recommends that UÉ outline their planned quality control of the production of drinking water, in particular the quality control for the operation of water treatment plants. For example, the Forum recommends water treatment should be akin to food service provision and there should be regional quality control managers who can provide oversight to quality control and quality assurance across water treatment plants in a region.

### **Recommendations – high quality water services**

- Uisce Éireann’s Regional Plans should adopt a more holistic, integrated approach in the in the context of Integrated Catchment Management and Framework for Integrated Land and Landscape Management (FILLM), which should include source protection measures.

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<sup>10</sup> The Water Forum (2021). Framework for Integrated Land and Landscape Management. <https://thewaterforum.ie/framework-for-integrated-land-and-landscape-management/> FILLM (Framework for Integrated Land and Landscape Management) supports a ‘whole-of-environment’ approach, agreed by AFU.

<sup>11</sup> Directive (EU) 2020/2184 of the European Parliament and of the Council of 16 December 2020 on the quality of water intended for human consumption (recast) [EUR-Lex - 32020L2184 - EN - EUR-Lex \(europa.eu\)](https://eur-lex.europa.eu/eli/dir/2020/2184/oj)

- The Regional Plan should reflect the additional requirements in source protection under the Recast Drinking Water Directive. UÉ should outline how it will implement source protection in the South East region to reflect these required commitments.
- UÉ should increase their staff capacity to include scientists with expertise in integrated catchment management and to augment the implementation of ‘front of pipe’ solutions.
- UÉ should provide detail on their planned quality control of the production of drinking water and operation of water treatment plants, following the transition to Uisce Éireann being single public utility for public water.

## Data transparency

*Section 6 and the Technical Appendices 1-3 of the draft RWRP-SE summarise our process for developing options to address the Needs in the SE Region. Do you have any comments on this process?*

*Section 7 sets out how we identify our Preferred Approach to addressing the Need at WRZ and Study Area level. Each of the Technical Appendices for Study Areas 1-3 (K-M) and the Environmental Reviews for Study Areas 1-3 (K-M) will set out how the Preferred Approach has been identified in more detail. Have you any feedback on this?*

The Forum recommends that measures to increase the transparency in data available to or used by UÉ in the assessment of their proposed plans for the South East Region are included in the final Plan.

Addressing the current data limitations is crucial for having more transparent and informed decisions, in particular data gaps around catchments and water bodies, with the consideration of the broader environmental capacity (catchment-based assessments), rather than just the infrastructure capacity. Furthermore, the accumulative impacts of abstractions should be assessed in a catchment (i.e. an integrated catchment management approach) for greater resilience and environmental protection.

### **Recommendations – Data transparency**

- UÉ should include scheduled actions in the Regional Plan to address current data gaps to accurately assess hydrological balances and supply-demand estimates, with a clear outline of tangible goals and timelines. Details should be included of the relevant external cooperation requirements (e.g. formal collaboration between UÉ and the EPA, GSI, ongoing projects such as the GW3D project).

## Summary of Recommendations

### **Recommendations – Demand Management and Water Conservation**

- Enhance water education 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).
- Initiate an awareness campaign to highlight water scarcity in Ireland and potential future threats on our water supply as a proactive measure for demand management, rather than crises management.
- UÉ should establish community engagement liaison officers who could lead community engagement, increasing communication between UÉ and the public and supporting water conservation measures.
- Pilot a smart metering programme as a non-pricing strategy to raise awareness of how and where water is used in the home, this data could also be very valuable to UÉ in planning and developing future information campaigns.

### **Recommendations – Drought Management**

- Drought Management Plans specific to each water resource zone (WRZ) should be included in all Regional Water Resources Plans.
- Drought management plans should be made publicly available and indicate how much capacity there is throughout the region during extended drought periods.
- Proactive and early intervention, with communication campaigns to promote water conservation should be initiated in response to tracking drought indicators in attempt to reduce the extent of the crises, rather than planning for crises management.

### **Recommendations – Level of Service**

- Engagement with the public on proposed improvements in the regional plan, to build trust with the communities in this region.
- Ensure strong engagement and communication with the public during disruptions.

### **Recommendations – Flood Management**

- Flood Management Plans, specific to the water resource zones and water treatment plants of the South West region, should be included in the Regional Plan. Training should be provided to personal on requisite procedures.

### **Recommendations – Sea Level Rise**

- Sea Level Rise Management Plans specific to relevant WRZs should be included in Regional Water Resources Plans and considered in the development of new capital projects.

### **Recommendations – Population and economic growth**

- UÉ should provide further detail on its role on regulatory control of growth, development and expansion of activities to ensure transparency and accountability for water sustainability in the planning process.

### **Recommendations – high quality water services**

- Uisce Éireann’s Regional Plans should adopt a more holistic, integrated approach in the context of Integrated Catchment Management and Framework for Integrated Land and Landscape Management (FILLM), which should include source protection measures.
- The Regional Plan should reflect the additional requirements in source protection under the Recast Drinking Water Directive. UÉ should outline how it will implement source protection in the South East region to reflect these required commitments.
- UÉ should increase their staff capacity to include scientists with expertise in integrated catchment management and to augment the implementation of ‘front of pipe’ solutions.
- UÉ should provide detail on their planned quality control of the production of drinking water and operation of water treatment plants, following the transition to Uisce Éireann being single public utility for public water.

### **Recommendations – Data transparency**

- UÉ should include scheduled actions in the Regional Plan to address current data gaps to accurately assess hydrological balances and supply-demand estimates, with a clear outline of tangible goals and timelines. Details should be included of the relevant external cooperation requirements (e.g., formal collaboration between UÉ and the EPA, GSI, ongoing projects such as the GW3D project).