

Response to consultation about SEPA's National Water Scarcity Plan, Dec. 2014

1. SEPA is to be commended for taking the initiative to develop a strategic, principled, clear and concise framework for dealing with water scarcity and drought in Scotland.
2. My comments focus on three key related themes. These are, firstly, the assessment of environmental and economic impacts of water scarcity and drought. Secondly, my comments address the relationship between SEPA's National Water Scarcity Plan and Scottish Water's drought plans. Thirdly, I address the development of a risk based approach to preventing and managing water scarcity and drought.
3. SEPA's National Water Scarcity Plan focuses on a specific range of environmental impacts of water scarcity and drought, in particular deterioration in water quality, river fragmentation and fish being stranded (e.g. p. 15). In order to enable planning for mitigation measures for environmental impacts of water scarcity and drought it is important to identify other possible environmental impacts, also from emergency CAR applications, on flora and fauna. How may water scarcity and drought affect key Sites of Special Scientific Interest (SSSIs) including RAMSAR sites in Scotland?
4. It would also be helpful if SEPA's National Water Scarcity Plan would specify in a bit more detail how environmental impacts of water scarcity and drought as well as mitigation measures will be identified, measured and assessed. Environment Agency drought plans for regions in England refer to Strategic Environmental Assessments, Habitats Regulations Assessments and Water Framework Directive Assessments as key tools for water companies to identify drought management options with the least environmental impact. In order for SEPA's National Water Scarcity Plan to demonstrate drought preparedness more information about such assessments already having been carried out by Scottish Water will be useful. Early availability of environmental assessment data will further enhance preparedness for water scarcity and drought also in light of the fact that Scottish Water's Strategic Drought Management Plan aims to have CAR emergency applications in place for e.g. variation of abstractions within seven days. ¹ Moreover, clarification of what routine environmental monitoring, e.g. of groundwater, river flow levels, as well as river and wetland ecology in advance of water scarcity and drought episodes will be carried out by Scottish Water in order to determine a baseline of environmental conditions would be helpful. What routine monitoring will be undertaken by SEPA?
5. SEPA's National Water Scarcity Plan identifies Scottish Water's reservoirs, Scottish Water's river abstractions, irrigation catchments and hydro power schemes as key sectors to focus on in order to build resilience to water scarcity and drought. It would be valuable to get a sense from the National Water Scarcity Plan which sectors in Scotland will be mainly economically affected by water scarcity and drought. This would enable to develop a risk based approach which involves to focus regulatory resources on those hazards of water scarcity and/or

¹ Scottish Water Strategic Drought Management Plan, Oct. 2014, Table 9, p. 2.

drought that are most serious and likely to materialize. More economic, including comparative data on the specific impact of water scarcity and drought on electricity generation, farming, fisheries, including fish farming, drinks manufacturers, paper mills, tourism/recreation etc. would also enhance the transparency of potential trade-offs between different claims to water made during episodes of water scarcity and drought.

6. It would be valuable to see links in SEPA's National Water Scarcity Plan to Scottish Water's Strategic Drought Management Plan, and in particular some comment on how the hierarchy of actions set out in SEPA's plan relate to the principles that inform Scottish Water's Strategic Drought Management Plan.
7. Throughout SEPA's National Water Scarcity Plan there are helpful references to Scottish Water's local drought plans. More detail on the links between Scottish Water's local drought plans and SEPA's national plan may also enhance further synergies between SEPA's and Scottish Water's planning activities. Scottish Water's definition of water scarcity and drought will presumably focus on risks to water resources, while SEPA's remit includes environmental and possibly agricultural drought. Some clarification therefore of how SEPA's water scarcity indices relate to Scottish Water's control trigger curves for available water resources, e.g. in reservoirs would be valuable. Clarification of the relationship between Scottish Water's definition of water scarcity and drought and that of SEPA will also facilitate CAR fast track applications by enabling agreement on what constitutes 'drought conditions' (rather than e.g. inefficient operation), because drought conditions are a requirement for obtaining licence variations.
8. Also in the interests of transparency clarification of how many drought plans Scottish Water has drafted and for which supply zones would be valuable for the development of a National Scottish approach to preventing and managing drought. This would also promote the development of a risk based approach to dealing with water scarcity and drought by pinpointing those catchments considered at most risk. This would also alert citizens and businesses in local communities to the importance of efficient water use in order to secure the long term supply of water resources for their communities.
9. In order to further rank drought management options it would be very valuable if SEPA's National Water Scarcity Plan would contain information about experience with using specific drought management options, e.g. drought orders if such data is available. For example, Anglia's Drought Plan 2014 lists temporary use restrictions for domestic water use such as domestic garden watering as generating about 3-10% reduction in demand for water, while non-essential use restrictions for commercial purposes, such as car washers etc. generates about 14-20% reduction in demand. ² Annex 3 of SEPA's National Water Scarcity Plan provides valuable information about water saving measures, including measures that draw on collaboration between different abstractors in order to use the resource more efficiently, such as scheduling of water abstractions, management agreements and water abstraction groups. In order to rank the significance of these options for preventing and managing water scarcity

² Appendix 2 of Anglia's Drought Plan 2014, http://www.anglianwater.co.uk/assets/media/2014_Drought_Plan_App_2.pdf, p. 2.

it would be valuable to have data on the percentage of reductions in water use, if any, that these collaborative agreements generate.

10. SEPA's National Water Scarcity Plan gives a clear indication that measures for dealing with water scarcity and drought will link to measures taken as part of the River Basin Management Planning Process under the European Union Water Framework Directive. But how do measures for preventing and managing drought as set out in SEPA's National Water Scarcity Plan relate to its Restoring Sustainable Abstraction Program?
11. SEPA's National Water Scarcity Plan lists Scottish Water taking measures to reduce leakage as one drought management option during times of drought watch (p. 18). Clarification of how this relates to the targets for economic levels of leakage set by the Water Industry Commission for Scotland would be valuable. Are the leakage measures taken during the drought watch stage additional to those required by the Water Industry Commission? Is there a case for Scottish Water taking much earlier leakage measures also in light of the fact that strong performance on leakage will help water companies to deliver successful campaigns for demand reduction by their domestic and industrial customers during water scarcity and drought? ³
12. SEPA's National Water Scarcity Plan develops a valuable staged approach to ensure that action is taken which is proportionate to the severity of the water scarcity and/or drought (p. 11). This chimes with a risk based approach to dealing with water scarcity and drought which focuses regulatory resources on those hazards of water scarcity and/or drought that are most serious and most likely to materialize. An important element of a risk based approach are drought risk maps, that show which catchments and communities in Scotland are at the greatest risk of water scarcity and drought in the future. This will also help to inform citizens and businesses about the importance of efficient water use in order to maintain supply of the resource, and will enable to deliver targeted water saving measures.

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³ Will Medd and Heather Chappells (2008), 'Drought and Demand in 2006: Consumers, Water Companies and Regulators', Final Report, April 2008, at: <http://www.lancaster.ac.uk/lec/sites/cswm/Drought/Drought%20and%20Demand%20Final%20Report%20April%202008.pdf>, p. 11.