

Response to the SEPA Consultation on the Water Scarcity Plan for Scotland

by the Scottish Environment LINK
Freshwater Taskforce

February 2015



The LINK Freshwater Task Force welcomes the opportunity to respond to this consultation. We are pleased that SEPA acknowledge the rising importance of water scarcity and the need to manage this risk to the environment, society and the economy, however we feel that the proposed water scarcity plan has some significant issues which we lay out below.

Key issues:

- The plan doesn't adequately deal with the impacts of abstraction – it focuses more on impacts on abstraction. It is mainly concerned with impacts of water scarcity on water resource management. There is little mention of the environmental impacts of water use in times of water scarcity and how to make sure these impacts are minimised.
- The plan takes a very reactionary approach, waiting until there are signs of water scarcity before any action is taken. SEPA should be investigating adaptation and mitigation options and land use changes at a landscape scale; and reviewing licence conditions; to ensure that catchments are more resilient to long-term changes in rainfall patterns.
- No information is given on the likely frequency and length of activation of the numerous action steps proposed as water scarcity intensifies. Any consideration of the possible cost-effectiveness of implementation of the proposals is therefore impossible.

Overarching comments

The consultation is seeking views on a series of bureaucratic processes which would be implemented as water shortages develop. It also opens the door to the development of further catchment specific triggers and interactions with licence holders, which would be additional to all the measures described. The focus is on management process. It is disappointing that beyond brief mentions of fish migration, there is little consideration of the environmental impacts of low water levels, effects on Water Framework Directive (WFD) quality classification, or the likely timescales for recovery following drought. The section on 'Impacts of Water Scarcity' primarily considers abstractors, with just a brief mention of fish

and habitat. Other aspects of ecological quality, as considered by the WFD, do not feature in this consultation.

The plan should include a section on long term planning. Raising awareness and understanding of the value and importance of water needs to form an integral part of any water scarcity plan together with plans around building resilience to water scarcity such as increased water storage, not only from reservoirs but through natural land management, such as improving peatlands, to store and hold more water so that times of less rainfall will have less impact on the environment and consequently on abstractors.

The plan does not deal with the importance of leaving enough water for the environment. Biodiversity is vital to life on earth and underpins all other ecosystem services¹. The importance of water scarcity to other Scottish targets such as those for biodiversity needs to be made. Under table 8 (hydro power schemes) it requires operators under extreme water scarcity to "*continue to manage the available resource to ensure water environment is protected during prolonged dry period*" we believe this should be expanded to cover all operators, not only those of hydropower schemes and for abstractions should be included under "significant scarcity". We welcome the proposal that SNH will be required to consider any proposal that has potential to have a significant effect on protected areas or species; we believe this should also cover protected habitats.

Mis-management and over-abstraction of water sources in times of water scarcity imposes reduced flow regimes in times of already high stress and is not adequately covered within this plan. Flow has a huge effect on physical habitat, which in turn is a major determinant of the wildlife living there. Flow also affects connectivity not only regarding fish but horizontal movement of other species including mammals and invertebrates and also vertical migrations within water bodies and is essential to the viability of many species populations. The growth and spread of invasive non-native species can also be facilitated by altered flow regimes. Reduced flows are implicated in the 50% decline of internationally important pearl mussel populations in the River Spey.

The 'Impacts' section does consider climate change. However, despite giving fair consideration to the range of possible outcomes of the climate change which is upon us, (and will only become more apparent in the future); water saving advice and measures are relegated to relatively short Annexes to the main document, and there is no indication given of how they will be implemented or enforced.

- There is no spatial element in the plan. Surely, based on past data, it is important to identify which areas are at greatest risk of water scarcity so that the Annex 1 & 3 actions can be focussed on them?
- While the plan is prescriptive for SEPA, many of the actions for others are voluntary, we believe that voluntary activity and uptake needs to be monitored in order to measure success and seek clarity around how monitoring will be undertaken.

¹ 1UK National Ecosystem Assessment (2011) The UK National Ecosystem Assessment: Technical Report. UNEP-WCMC, Cambridge. <http://uknea.unep-wcmc.org/>

- There is little reference to or linkages with river basin management planning. Prolonged water scarcity in conjunction with inappropriate licence conditions would lead to deterioration of ecological status.
- There is no mention of flood risk management planning, despite dry soils increasing the risk of flash floods if heavy rain follows a dry spell and options for flood risk management to make landscapes more resilient to dry spells. SEPA needs to take a more coordinated, cross-cutting approach to water management
- The rainfall column in Table 3 is back to front and there is duplication in the category limits, this table needs to be corrected and clarified.

Q5. In conjunction with tables 4 - 8, is it clear how we plan to use the water scarcity indices to decide when to take action?

Yes, the very many activities which SEPA hydrologists and other staff would be required to initiate as the potential for water scarcity increased are clearly described.

Question 6

Do you agree with the generic approach we have set out to deal with issues not related to specific sectors in tables 5 - 8?

The approach of doing more as drought worsens is logical.

Question 7

Are there any steps in the tables which should be amended?

Yes.

No information is given on the likely frequency and duration of phases of 'water scarcity identification'. The number of stages may be questioned - should their number be reduced by combining a couple of stages in each hierarchy, to streamline the process and reduce staff workload? If in practice the proposed thresholds give rise to what may be deemed an unexpectedly large number of alerts and subsequent abortive work, the threshold boundaries should be reconsidered. Using existing data, it should be straightforward to hindcast the frequency with which each of the proposed action steps would have been activated. Without this implementation data, any consideration of the cost-effectiveness of the proposed plan is impossible. We seek clarity over the costs of implementing the proposed actions and whether implementation would cause a squeeze on other SEPA activities.

Question 8

Is there anything else you would recommend in relation to the aforementioned sector?

Yes. The frequency of occurrence and duration of each of the stages implemented should be monitored to enable their cost-effectiveness to be assessed. In particular, if SEPA seeks to convene resource-consuming 'Water Scarcity Groups' involving outside operators with what these operators see as excessive frequency, their enthusiasm to participate in them will be seriously reduced.

Question 9

Do you agree with the approach we have set out to deal with issues related to public water supply reservoirs?

The 'Close Monitoring' and 'Watch' stages could be combined?

Question 10

Are there any steps in the tables which should be amended?

As above, plus after any severe event, the potential need for reservoir improvement and/or alternative/additional resources should be considered, especially if the drought event is seen as a consequence of climate change which will continue to intensify.

Question 11

Is there anything else you would recommend in relation to the aforementioned sector?

Future potable water supply demand scenarios, which presumably already exist, need to be considered so that supply sources are adjusted in time to avoid potentially excessive future abstraction pressures on environmental quality.

Compensation flows and freshets, which in normal operations result in river flows greater than would be naturally present without the reservoir(s) and controls upstream, are briefly mentioned in Annex 3, but not in this table. As they are a key influence on the downstream ecological quality, we believe they should be included in table 5 to show they would be affected by the measures taken.

Questions 12, 13, 14.

Do you agree with the approach we have set out to deal with issues related to public water supply river abstractions?

Are there any steps in the tables which should be amended?

Is there anything else you would recommend in relation to the aforementioned sector?

The approach and stages in Table 6 re Scottish Water river abstractions are broadly agreed but, dependent upon the perceived value added as a consequence of activation of each stage, consideration should be given to reducing the number of steps, and/or altering the level at which they are implemented.

In the absence of upstream storage controls, straight river abstractions have a more direct influence on downstream ecological quality, so post-event consideration of alternative or additional water sources is even more essential.

Questions 15, 16, 17.

Do you agree with the approach we have set out to deal with issues related to irrigation?

Are there any steps in the tables which should be amended?

Is there anything else you would recommend in relation to the aforementioned sector?

The actions listed under 'Moderate' and 'Significant' scarcity are not entirely different, and again the idea of reducing the number of steps, and the thresholds at which they are introduced, should be reconsidered in the light of past data and operational experience, to ensure optimum cost-effectiveness.

As with Table 6, downstream ecological quality is directly dependent upon the water flow remaining post-abstraction. Contracts for many crops are dependent

upon the availability of irrigation sources. Therefore following all severe drought events, consideration should be given for the requirement to introduce storage so that water abstracted at times of high flow can be used when drought conditions occur, in order to protect ecological quality. This could be through constructing wetlands and providing benefits for biodiversity which could be funded through rural development funding. Such wetlands could at other times provide flood mitigation thereby serving a number of valuable roles.

Question 18

Do you agree with the approach we have set out to deal with issues related to hydro power schemes?

As the smaller 'run-of-river' schemes are catered for by Table 4, Table 8 must refer only to larger hydropower schemes with reservoirs and perhaps also inter-catchment transfers. Compensation flows are directly considered in Table 8; these are what will influence down-stream environmental quality, though there is no mention of the latter here or in the text.

Question 19

Are there any steps in the tables which should be amended?

Maybe, but it is hard to judge when no indication is given of the frequency with which particular steps are likely to be implemented. Without this data, it is impossible to say whether the 'Water Scarcity Management Groups' should be called as the 'Alert' or 'Moderate' thresholds are passed.

A normal range of water scarcity conditions must be catered for by the CAR licence under which every scheme is operated. Further intervention should only be necessary in relatively extreme circumstances; thus even the proposed 'Operator Response' under conditions of 'Significant Scarcity' should already be described in the CAR licence conditions.

Question 20

Is there anything else you would recommend in relation to the aforementioned sector?

No, this sector is different in that water is only moved, not consumed, and effects of adjusting licence conditions are essentially financial, rather than (except in site specific instances) potentially affecting potable water supply.

Question 21

Is there additional information that we could provide which would be useful to include on our website or in our current situation reports?

The website proposals look fine.

Question 22

Please suggest information which would be useful to manage prolonged dry spells for those who irrigate.

There is no mention of 'Best Practice Guidelines for Irrigation'. These also deserve prominence in Annex 1 to ensure that practices such as irrigating at night are adopted.

Especially if climate change follows the current 'best guess' trends, the growing of alternative, less water-demanding crops may be desirable (or even necessary) to reduce irrigation demands.

Question 23

Do you agree with the water saving measures outlined in this annex?

Water saving 'Advice' is given in Annex 1, and 'Measures' in Annex 3. Both have an important part to play in reducing demand, especially when the resource is limited. The more effective the demand reduction is, the less will be the impact on the receiving environment and its ecology. It is therefore disappointing that this point is not more clearly made, as it could provide added incentive to adopt the advice/measures outlined.

Water saving advice for households is vitally important, however, this annex should also include water saving advice for industry and agriculture.

Question 24

Are there other measures you feel SEPA should consider?

Yes.

SEPA has done much to get SUDS systems accepted and implemented as part of new developments. As climate change becomes increasingly apparent, a similar prolonged and energetic drive is now required to get all new plumbing systems modified to get rain and/or grey water used for purposes for which potable quality water is not required. This would eventually minimise abstraction demands, and hence their adverse environmental impact.

If SEPA has elsewhere a long-term plan for dealing with the predicted effects of climate change on the environment and abstractors, it needs to be referenced. If it doesn't have such a plan, then it should be developed.

This response has been jointly prepared and edited by a range of environmental NGO involved in Scottish Environment LINK's Freshwater Task Force and is specifically supported by:

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