

Reaching publics: tailoring and targeting drought risk communication

Insights from the DRY project

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Introduction: communicating drought and water scarcity in the UK

Engaging the UK public with drought and water scarcity issues is a daunting challenge. Drought is hidden, with a slow onset, and its potential effects on the UK's public water supply may not be obvious to the wider public.

We are not, and hope never to be, in the position faced by Cape Town, in early 2018, with 'day zero' (no water at all) rapidly approaching¹. Nevertheless, 2018 was declared² the joint hottest summer (with 2006, 2003 and 1976) and amongst the 15th driest, in the UK (and fifth driest for England). Demand for water is predicted to rise, with some forecasts suggesting it could outstrip supply by 2050³. All of this points to a need to encourage the British public to move away from assumptions that 'rain is always round the corner' (see Weitkamp et al., submitted⁴) and persuade communities and individuals to think about their water resilience.

Solutions to drought communication challenges

This guide provides insights and possibilities for communicating drought and water scarcity issues, in the UK, with a range of publics. It highlights the need to tailor messages to specific groups of people, rather than considering the public as a single entity.

These suggestions are relevant to organisations, including public authorities and NGOs, who communicate with public groups on water-related issues. This communication activity requires a particular focus on members of the public who are actively engaged with water in an outdoors environment, either through work or through recreation. These public groups include businesses with water abstraction licences and amenity users, such as boaters or allotment holders. However, the suggestions can also inform communications with a broader 'general public'.

How solutions were identified: the DRY research project

These solutions to communication challenges arose from the Drought Risk and You (DRY) research project. The DRY research team, at the University of the West of England (UWE Bristol), identified these approaches through interviews with 17 relevant UK stakeholders, in 2018, as well as extensive work with members of the public in seven case-study, river catchments in the wider DRY project. Stakeholders were questioned on their communication responses to drought and water scarcity.

Stakeholders comprised individuals from regulatory bodies, NGOs and the water industry. In addition, the researchers consulted existing studies to identify examples of drought and water scarcity communications from around the world. They also looked at studies on environmental risk communication and perception, more broadly, for relevant information.

¹ <https://www.scmp.com/business/global-economy/article/2139123/countdown-day-zero-cape-town-contemplates-permanent-water>

² <https://www.metoffice.gov.uk/news/releases/2018/end-of-summer-stats>

³ <https://www.ccwater.org.uk/wp-content/uploads/2017/10/Water-Saving-helping-customers-see-the-bigger-picture.pdf>

⁴ Weitkamp, E., McEwen, L. J. and Ramirez, P. (submitted) Communicating the hidden: towards a framework for drought risk communication in maritime climates.

The DRY project was conducted under the UK Research Council-funded Droughts and Water Scarcity Research Programme⁵ (NERC, EPSRC, ESRC, BBSRC and AHRC⁶, grant number NE/L01033X/1). This work was further developed through the follow-on knowledge exchange project, AboutDrought⁷.

What to communicate and when: three timeframes for talking about drought and water issues

This report groups suggestions for communicating with public groups about drought and water scarcity into three 'timeframes' which can be mapped onto the so-called 'hydro-illogical' cycle⁸ (Figure 1):

1. Long-term, regular approaches to use under 'business-as-usual' weather conditions
2. Tools and approaches to use during dry weather
3. Communicating during drought and emerging drought conditions

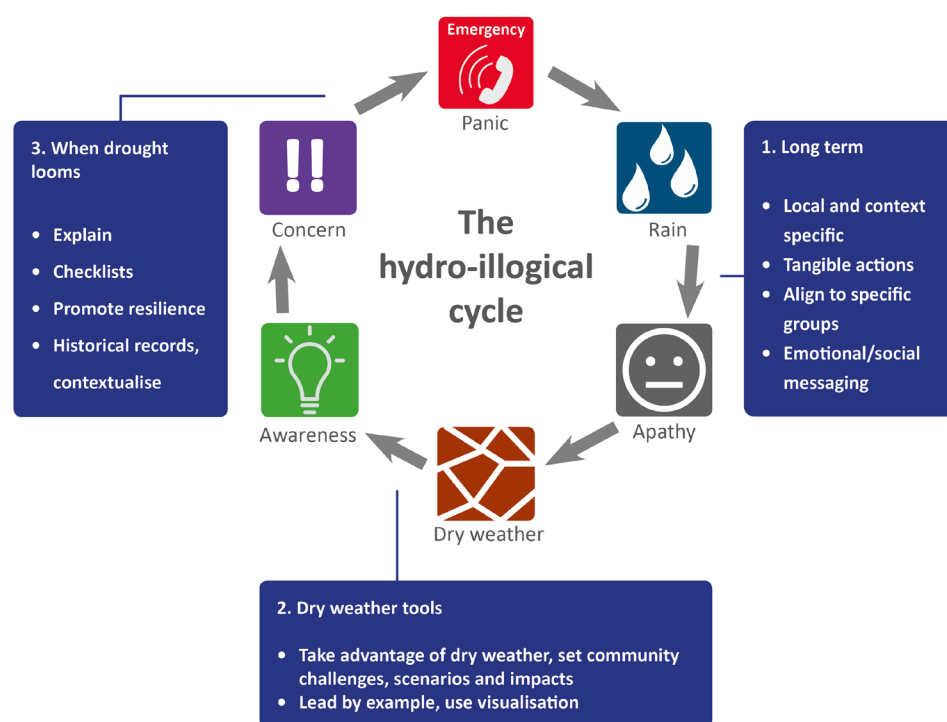


Figure 1: The hydro-illogical cycle offers three timeframes for communicating with public groups about drought and water scarcity.

⁵ <https://nerc.ukri.org/research/funded/programmes/droughts>

⁶ Natural Environment Research Council (NERC), Engineering and Physical Sciences Research Council (EPSRC), Economic and Social Research Council (ESRC), Biotechnology and Biological Sciences Research Council (BBSRC), Arts and Humanities Research Council (AHRC).

⁷ AboutDrought.info

⁸ The 'hydro-illogical' cycle was first cited by Wilite (2011) National Drought Mitigation Center, University of Nebraska-Lincoln; http://www.ewra.net/ew/pdf/EW_2011_34_01.pdf

These three situations present different needs, in terms of public water behaviour. They also reflect the challenge of engaging public interest in drought and water scarcity during 'normal' British weather conditions, i.e. when we are not faced with imminent drought. We recognise that these stages reflect a continuum of water availability and public attention to water issues, and it is possible to use the suggested tools even when there is no threat of drought.

The report also considers overarching principles of communication, which apply during any weather situation (section 4). Enhanced opportunities for communicating drought-related issues, through networks of stakeholders, are also discussed (section 5).

1. Long-term and regular communication solutions

This section of the report focuses on tools that can be used for regular communication with public groups and communities. These tools may be utilised as part of ongoing ‘baseline’ communication activities, designed to build general awareness of water resources. Better awareness of water resources is needed, not only to reduce overall water consumption, but also to sensitise public groups to water issues in the event of prolonged dry weather or drought.

Stakeholders interviewed in the DRY project highlighted this need to raise awareness of drought and water scarcity among the British public. Their views reinforced Waterwise’s call in 2013 to increase public engagement and knowledge with respect to water services and conservation⁹. Long-term and ongoing engagement of different publics, to build awareness, is particularly critical in light of projections of climate change impacts (such as those appraised by the Drought and Water Scarcity (DWS) programme¹⁰) which suggest an increasing risk of drought in the UK.

Public education: explain how water works

Initiatives are needed to explain how water supply systems work on a local, relevant level. For many consumers, the water system beyond the house is a mysterious black box. The different sources of water used as local drinking water are not often shared, sometimes due to security concerns. How water is sanitised, the carbon costs of clean water and the difference between wastewater and grey water are not well understood.

Public education approaches could:

- Provide information on local river systems and watersheds to help the public place themselves in the wider context of the water system (including sources, storage, transfers).
- Discuss local water demands, detailing the different groups (including the environment) that compete for water resources at the local level. This could help position public water supply in a broader system of human and non-human users.
- Make communications local and relevant by showing, for example, local landscapes that are affected by local public water consumption practices (e.g. local nature reserves).

Motivational messages: tangible, personal and social

Messages need a call to action that is underpinned by a reason to take that action. During the long-term, regular phase of communication, the reason is most likely to be a general appeal to reduce water consumption.

⁹ https://www.waterwise.org.uk/wp-content/uploads/2018/01/2013_Waterwise_Drought_Report.pdf

¹⁰ <https://nerc.ukri.org/research/funded/programmes/droughts>

Messages also need to offer practical advice: publics need to understand exactly what they can do to save water. However, practical tips or messaging about direct actions, alone, may not be enough to trigger changes in behaviour; tips assume that water consumers are motivated and able to cut water usage in the first place¹¹. Moreover, interventions in Los Angeles, USA, suggest that water consumption may even increase, unless actions are linked to social norms and personal or social identity^{12,13}. It is, therefore, useful to align messages and values to specific sub-groups and to move beyond communicating with a homogeneous 'general public' or thinking in terms of an 'average' water consumer.

Appealing to social and personal factors

Messages which appeal on the basis of social and personal factors should:

- Show that reducing water consumption is 'normal' (a 'social norm'). If a behaviour is seen as 'normal' and socially acceptable then everyone starts to take it up (as demonstrated by the case of waste recycling).
- Show that saving water is part of 'who we are' and 'how we act'. This could be achieved, for example, through the choice of pronouns ('we', 'us'). Messages could also relate actions to the characteristics or values of a specific group, nationality or community, such as an organisation's dedication to sustainability¹⁴ (see also: 'The Santa Monica way!' in Box 1, for an example)¹⁵.

Tangible reasons to act

Advice, which normalises water conservation, can be linked to tangible motivations. These will vary, according to the target audience, but the following messages may be effective:

- **Save money.** For some audiences, highlighting how water-saving measures reduce bills may stimulate behaviour change and the installation of water-saving devices and appliances. This approach is taken, for example, by 'Save Water Save Money'¹⁶ (with the strapline 'Surprisingly easy'), a UK organisation that provides water-saving devices. However, it is an approach that may be problematic in business settings, where landlords may not be willing to pay to install a meter or where higher water-use businesses may see metering as adding to their costs. Financial messages need to give specific examples of how much money can be saved by changes in specific types of behaviours and show how the savings become greater when a number of water-wise behaviours are combined.
- **Reduce carbon emissions.** Producing potable water uses energy, which results in carbon emissions. Changing water behaviours can have significant impacts on personal carbon emissions; illustrations that provide concrete examples will help people understand, for example, how using water from a water butt in the garden lowers their greenhouse gas emissions.
- **Protect the environment.** Lowering average levels of human water consumption means that less water needs to be extracted from the environment, in the longer term, thus leaving a larger share for nature. This message can be adapted to outdoor recreational activities that require water, particularly if speaking to interest groups, such as gardeners.

¹¹ <https://doi.org/10.1080/17524032.2017.1288648>

¹² <https://www.sciencedirect.com/science/article/abs/pii/S0272494414001066>

¹³ SSee Grecksch and Lange's (2019) work on Water efficiency in the public sector: the role of social norms. <https://www.law.ox.ac.uk/news/2019-05-30-water-efficiency-public-sector-role-social-norms>

¹⁴ <https://journals.sagepub.com/doi/abs/10.1177/0013916513515239>

¹⁵ <https://www.sciencedirect.com/science/article/pii/S0272494414001066>

¹⁶ <https://www.savewatersavemoney.co.uk>

Message tones: choose carefully

During non-critical weather and water conditions, DRY interviewees suggest that funny and heart-warming messages that appeal to emotions can be effective at getting messages out. The City of Santa Monica, in California, provides an example of how this can be done, in their 'Cash for Grass Rebate' programme (see Box 1). This messaging also provides an example of social norming ('It is the Santa Monica way!') and appeals to local identity ('a beautiful new California inspired garden'). The campaign managers report that their communications have contributed to a fall in water consumption of over 20% in Santa Monica, as part of a suite of efforts which include these communications alongside other measures, such as free water audits and a rebate programme for water-saving technology¹⁷.

There is evidence that, in other contexts, a neutral, fact-based tone of message can also be effective in eliciting behaviour change, as found in parallel research conducted with water companies, under the Drought and Water Scarcity Research Programme¹⁸. Ultimately, the choice of tone may depend on the context, timing, audience and messenger.

¹⁷ S. Isaac & A. Basmajian. Personal communication. 8 August 2019.

¹⁸ About Drought (2019) Water company communications: exploring best practices in the UK. About Drought Brief. Produced for the ENDOWS Project by the Science Communication Unit, UWE Bristol. [Forthcoming]

Box 1: Humorous and social messaging: lessons from the US

Two communication initiatives, in the US, provide examples of water conservation campaigns that draw upon humour and social norming:

Cash for Grass



Image courtesy of the City of Santa Monica

This local government campaign, in Santa Monica, asks residents:

“Can we talk about the elephant in your yard? The one that keeps your water bill high and that you spend all that time mowing, feeding, and watering every week. The City’s new Cash for Grass Rebate program is designed to help you get rid of that water hogging lawn and replace it with a beautiful new California inspired garden. It is the Santa Monica way!”

<https://www.smgov.net/Departments/OSE/categories/water.aspx>

Wasting Water is Weird

This advertising and social media campaign, aimed at consumers, highlighted the social unacceptability of inefficient water use. A comedic character, Rip the Drip, is shown to love wasting water; the campaign was designed to create the perception that only socially undesirable people (like Rip the Drip) use more water than is actually needed, for example, by leaving the tap running whilst brushing teeth. This public service announcement campaign was run by Shelton Group, from 2011 to 2012.

<https://sheltongrp.com/work/wasting-water-is-weird>



Image courtesy of the Shelton Group

Helpful visuals

Visuals can help place water consumption in perspective, providing more impetus to act, while also appealing more to individuals who have ‘visual’ learning styles (as opposed to auditory, for example). For instance, visuals can illustrate the impacts of different water consumption and saving actions. In areas with water metering, it may be possible to provide visuals that compare individual water consumption with local consumption patterns—thus bringing social factors into play.

Visuals can also illustrate water availability. For example, in drought-prone countries, water companies may use a ‘traffic light’ system to communicate with government and regulatory organisations. The same visuals system (or similar icon) could be used in public communications to help raise the profile of water, and its availability for water supply, more generally. Icons, such as this traffic light from Spain (Figure 2), can provide a quick way to illustrate water supply status. In drought-prone countries, this type of tool is also used as part of regular public communication. Potentially, this type of icon could appear on regional weather forecasts, similar to pollen counts and UV indices.

The Climate Visuals programme¹⁹ points to the importance of the choice of visuals, particularly when using photographic images (rather than icons). This project suggests that more diverse images of climate change are needed to further engagement amongst the public. Research from the DRY project also highlights the narrow range of photographic images that are used in drought communication (often relying on empty reservoirs). About Drought is working with Climate Outreach to identify a wider range of images that could be used in drought communication.

The drought traffic light



Figure 2:
The Catalan Water Agency's
visualisation of drought.
Image courtesy of the
Catalan Water Agency.

Further ideas for engaging messages: myth-busting and topicality

Possible forms for directing public attention towards drought during wetter weather include ‘drought facts’, ‘myth-busting’ and links to topical water-related events:

- **Drought facts and myth-busters:** short, snappy ‘drought facts’ and ‘myth-busters’ could be used to challenge common misconceptions, such as the belief that drought only occurs in the summer. These might offer a means of engaging public groups in times when drought is not threatening.

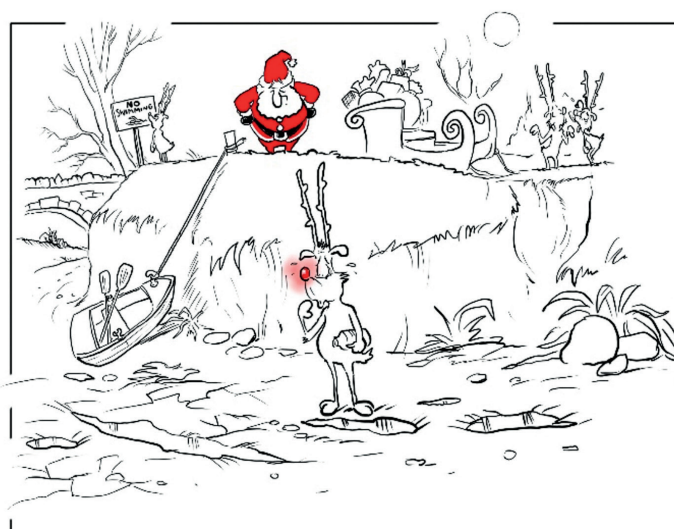


Figure 3:
Myth-busting: droughts occur
in winter too. Image courtesy
of John Elson/DRY project.²⁰

¹⁹ <https://climatevisuals.org>

²⁰ See DRY cartoon bank—dryutility.info/guidance

- **Linking to current/recent events with relatable impacts:** Events such as water bursts from thawing pipes or interruptions to water provision due to building work can highlight possible drought impacts while the critical importance of water supply is at the forefront of people's minds.

Ambient media

Ambient media (e.g. signs, posters) can engage people with water issues in unexpected places. In many cases, ambient media can link water issues to actions that the public can take to reduce their own water use or vulnerability.

Illustrative examples include:

- Riverside signs explaining ecosystem needs, or shorter-term signage pointing out the impacts of low flows (when they occur).
- Publicly accessible properties, like stately homes, gardens or parks, can highlight the measures they take to reduce water consumption, for example, through water-saving toilets or drought-tolerant planting schemes.

Ambient media can take water-saving messages into a wide range of domains, reaching the public in places they frequent. International innovative examples of ambient media include exhibitions in shopping malls in Madeira, and advertising on outdoor billboards, buses and taxis in California.

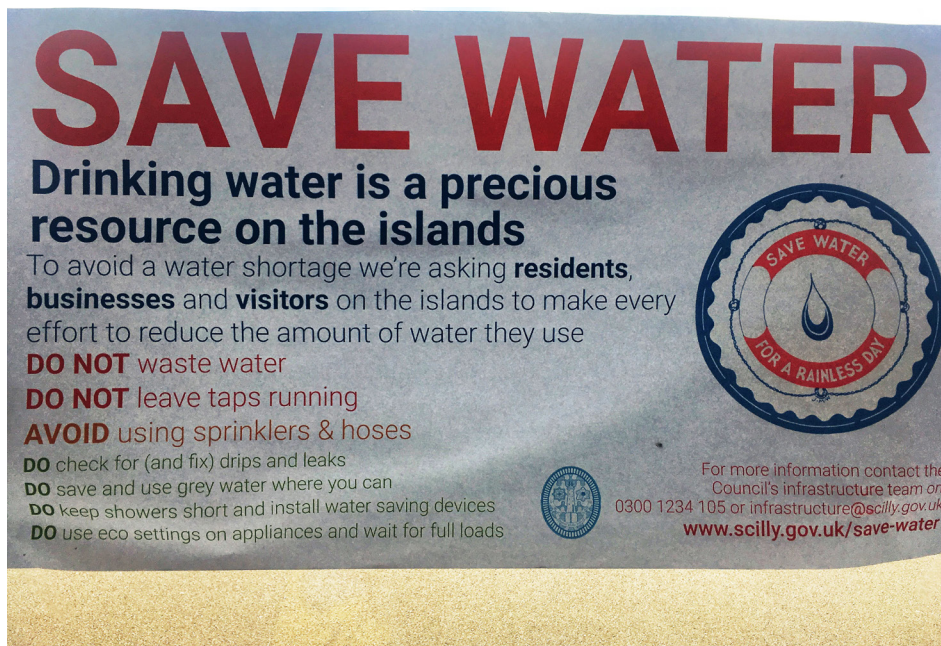


Figure 4: Ambient media: a poster on display at St Mary's Airport, Isles of Scilly, alerts incoming visitors to water-saving measures. Image courtesy of the Council of the Isles of Scilly.

2. Dry weather communications tools

This section provides examples of tools to use during dry (or hot) weather conditions to spread water-conserving messages. These tools may also be relevant to emerging drought conditions.

Both the workshops and interviews conducted under the DRY research project highlighted the need for regular, long-term communication about drought risk. However, it was recognised that people are less likely to engage with drought and water scarcity information during periods of wet weather, particularly in the winter, as pointed out by stakeholders interviewed as part of the research project:

“One winter, about 5 or 6 years ago, we had very low rainfall through the winter, so the ground was exceptionally dry in the spring, which meant planting and sowing seeds on my allotment was a problem. The summer months later had high rainfall and people thought I was crazy talking about the winter drought.” (Allotment holder)

“You know, there is no point talking about drought, stating the blindingly obvious here, but there is no point talking about both drought and heatwave during December.”
(SW Local Government employee)

These quotes highlight the need to be ready to take advantage of dry (or hot) weather to start conversations about water—particularly its conservation and storage. Hot weather, with its rapid onset, intensity and effect on the senses, tends to figure highly in the public psyche and generate media interest in drought.

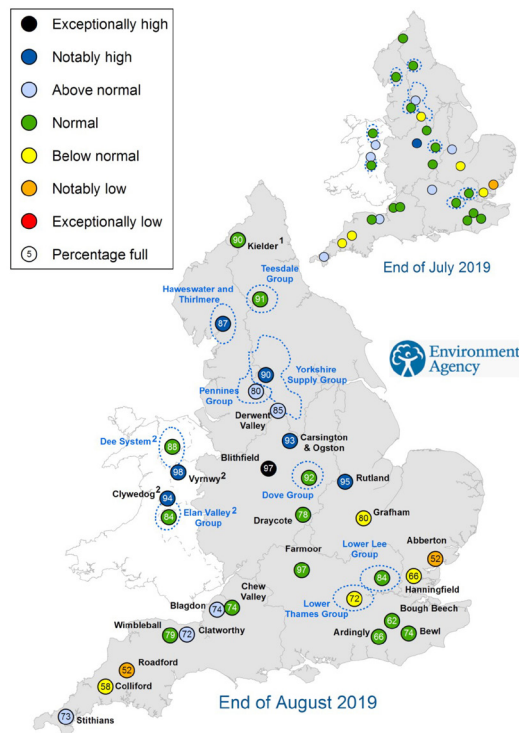
Lead by example

Existing channels of communication (e.g. membership newsletters, social media) can share what organisations are doing to reduce the risk of drought. They can also highlight the potential impacts of drought on, for example, specific business sectors or communities. Although these messages can be distributed at any time, they may be more likely to capture attention during spells of dry weather.

Helpful visuals

As with long-term communication, visualisations are an important means of engaging publics with water during dry spells. While dry riverbeds and fish rescue scenes may get the message across once drought is established, other images may be needed when drought is not threatening. Images with local resonance can connect people to water and challenge their assumptions. For instance, maps and photographs may provide a means of connecting drought impacts to local, familiar places. Maps can also be helpful tools to convey the bigger picture of water, such as those that convey information on the change in water storage in reservoirs, on a national scale (see Figure 5 for an example, for England, from the Environment Agency). An international example is provided by an agency in Brazil for soil drought (see Box 2).

Figure 5: An example of the Environment Agency's reservoir storage maps, as published in their regular water situation reports. Image courtesy of the Environment Agency.



It is important to remember that, while graphs and scientific imagery work for some audiences, they may not appeal to those with less visual learning styles or with less scientific 'capital', so their use should be considered carefully. Scientific imagery can be combined innovatively with stories or images²¹.

Box 2: Soil drought maps in Brazil

Brazil's National Center for Monitoring and Early Warning of Natural Disasters has introduced maps that alert the public to the possibility of crop failure, based upon levels of soil moisture. Red dots indicate there have been seven consecutive days of low soil moisture, while orange dots show there have been three consecutive days of low soil moisture. This system can support agricultural decisions, such as planting dates, triggering of irrigation or harvesting, and is intended to engage citizens, communities and government agencies to pro-actively act on drought mitigation and preparedness plans.

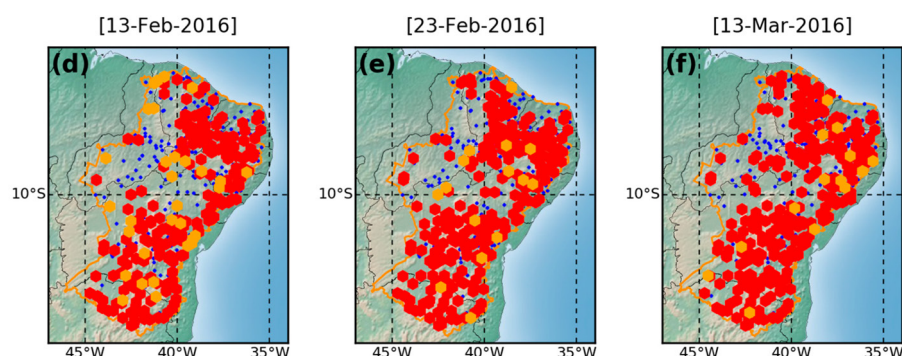


Figure 6: Soil drought maps produced by Brazil's National Center for Monitoring and Early Warning of Natural Disasters. Image source: Zeri, M.; S. Alvalá, R.C.; Carneiro, R.; Cunha-Zeri, G.; Costa, J.M.; Rossato Spatafora, L.; Urbano, D.; Vall-Llossera, M.; Marengo, J. Tools for Communicating Agricultural Drought over the Brazilian Semiarid Using the Soil Moisture Index. Water. 2018, 10, 1421. Published by MDPI.

²¹ Li et al: in review, JCOM.

Beating public indifference

Various tools are available to help overcome low public engagement with drought and water resource issues during dry/hot periods:

- **Turn water-saving messages into a personal or community challenge.** Equally, messages that are inspirational or seek to tap into key values may offer a route through public indifference. Try to connect publics to the way they ‘feel’, linking to emotion and affect, whether that is how they feel about saving money or their local environment. It will be different for different individuals.
- **‘What if?’ scenarios and impacts.** Presenting scenarios about water availability—or scarcity—can help stimulate conversation. However, they need to be carefully targeted to audiences to avoid raising unnecessary alarm. For instance, the term ‘scenario’ may feel alien to many members of the public and the DRY project found ‘What if?’ a more approachable term to start conversations.

Publics are more likely to engage with scenarios when they perceive them as personally relevant, whether that is through connection to local places with which they are familiar, or because they address their specific business sector or interest. Another way to create personal connection to a scenario (e.g. climate change scenarios of the 2030s or 2050s) could be to link it to the person’s age at the time (i.e. how old you will be in 20 years?). Scenarios can also be a useful way to discuss mitigation actions; it is important to offer some solutions or personal actions so people do not feel disempowered.

- **Bank of analogies.** Analogies and metaphors can help bring science to life and make complex concepts, such as drought risk, easier to grasp. In readiness for drought and dry weather, interviewees in the DRY project suggested having a set of analogies to hand that could be drawn on to explain the impacts of dry weather.

Examples of analogies include:

Water is like money. It comes and it goes. We should aim to garden within our watering means²². If you spend more than you deposit into your bank account, you go bankrupt²³.

Rain is like medicine. A single dose of medicine can alleviate symptoms of illness but it usually takes a sustained programme of medication to cure an illness. Likewise, a single rainstorm will not break the drought but it may provide temporary relief²⁴.

²² https://www.scripps.edu/newsandviews/e_20100125/garden.html

²³ <https://blog.nationalgeographic.org/2014/03/05/short-on-water-dont-blame-it-on-the-rain> This blog post nicely shows how to carry the analogy through the writing.

²⁴ https://www.usgs.gov/faqs/why-doesnt-a-drought-end-when-it-rains?qt-news_science_products=0#qt-news_science_products

3. Communication tools when faced with drought

When drought is imminent, communication with a range of stakeholders is likely to escalate. This involves implementing a drought communications plan or other tools, developed in readiness for such a situation, as part of overall drought plans. The suggestions below can be developed, in advance, as part of that planning, but they also offer suggestions for reactive communication opportunities once a drought has begun.

Explain the drought

Explain why a drought is approaching or occurring (depending on the stage of the drought) and that all droughts are different, in terms of severity, duration and spatial extent. There is a persistent myth amongst the public that droughts occur through failure, such as failure of infrastructure or failure of investment, and not because they are a natural aspect of climate variability. Linking to historic incidences of drought could help in this regard. The UK Drought Portal²⁵, for example, shows current meteorological conditions in relation to those over the past half-century and the characteristics of past UK droughts of different durations in different locales.

Checklists and calls to action

It is also important that people understand what actions are necessary when drought is imminent or underway. Checklists can be handy tools to encourage water-wise behaviours, as can specific calls to action, which will vary depending on the stage of drought. Checklists can be framed in terms of actions that individuals could, should or must do. They can also encourage transfers of behaviours from more drought-stressed areas, internationally.

Helpful visuals

DRY project interviewees highlighted the lack of a recognisable tool or logo, in the UK, that could easily signal an impending drought—similar to a flood warning or pollen count. Other means of alerting the public to an impending drought could include showing local reservoir levels on water bills, as practiced in some local and national settings. For example, in some settings, current local reservoir levels are chalked on a blackboard (see Figure 7).



Figure 7: Local reservoir levels posted close to a village in rural South Africa (photo: McEwen)

²⁵ <https://eip.ceh.ac.uk/droughts>

At a different scale, as part of an Australian campaign to cut personal water use, the Queensland Water Commission gave local residents weekly updates on aggregate residential water consumption. In addition, combined dam water levels were integrated into daily weather reports on all news stations and in daily newspapers. It should be noted, however, that in some settings drawdown of reservoirs is seen by water companies as use of 'easy' water so images of lowered reservoirs may cause unnecessary concern.



Figure 8: In the face of drought, use all available communication channels to reinforce messages. Image courtesy of John Elson/DRY project.

Highlight impacts of drought

Capture environmental and social impacts, as they become apparent, to raise awareness of the effects of drought on nature or on water-use intensive industries, such as farming or brewing. This form of communication can help bring the risks of drought to life, even for those not directly affected.

Promote personal/community resilience

Encourage the public to think about what actions they can take to be more resilient as individuals, communities or businesses. This approach could be modelled on local resilience forums which, in the UK, comprise key emergency responders and specific local agencies and include behavioural and lifestyle changes. Actions could range from personal reductions in water use to installation of water storage schemes in community buildings. Once the importance of personal/community resilience has been communicated during a drought event, this messaging could be developed, through regular/long-term communication, to increase resilience for future drought events. Community resilience approaches could also be linked to campaigns aimed at community pride (i.e. in collectively reducing water consumption).



Figure 9: It is important to promote personal resilience during drought conditions. Image courtesy of the City of Santa Monica.

Gather personal accounts

Public groups may respond more to personal and 'local' (place-based) accounts of the impacts of drought that have specific resonance, or to 'trusted' voices explaining why they should reduce their water use (and how to do so). The concept of local drought impact indices was trialled in DRY (e.g. drought conditions which affect salmon, where that species has particular local interest and traction with the public), and requires further investigation as a communicative approach.

This approach has also been practiced in Cape Town. For example, during the water crisis, the 'For Love of Water' (FLOW) storytelling campaign (see Figure 10) sought to get South Africans talking about water conservation²⁶.



Figure 10: South Africa's 'For Love of Water' (FLOW) campaign aimed to get people talking about water conservation. Image courtesy of FLOW <https://www.flow.org.za>

Link to history and local drought heritage

Place current or emerging drought in a historical context (e.g. the situation is similar to [recent previous drought]) or use historical context as a means of making drought relevant. A readily accessible archive of local/regional resources (including visual) could help here. This approach may be particularly appealing to older sections of the population, for example, those who recall the UK drought of 1976 and the sense of collective public responsibility ('in it together') at the time²⁷.

Use negative framing with care

No-one likes to be told that they are doing the wrong thing; there is evidence emerging from climate change communication that negative framing can leave people feeling disempowered^{28,29} and fail to lead to the desired behavioural changes. However, there are some examples of social shaming that have been effective in cases of severe drought. For example, California's 'Save our Water' website³⁰ invites residents to report individuals who waste water, e.g. watering their garden at the wrong time of day. Complaints are then sent to local government agencies.

²⁶ <https://www.flow.org.za/portfolios/storytelling>

²⁷ <https://www.ccwater.org.uk/wp-content/uploads/2013/12/Understanding-Drought-and-Resilience.pdf>

²⁸ Spence, A. and Pidgeon, N. (2010) Framing and Communicating Climate Change: the effects of distance and outcome frame manipulations. *Global Environmental Change* 20(4): 656-667 <https://doi.org/10.1016/j.gloenvcha.2010.07.002>

²⁹ Van der Linden, S., Maibach, E., Leiserowitz, A. (2015). Improving Public Engagement with Climate Change: five 'best practice' insights from psychological science. *Perspectives on Psychological Science*, 10(6): 758-63. <https://doi.org/10.1177/1745691615598516>

³⁰ <http://www.savewater.ca.gov>

4. Good communications principles, whatever the weather

This section highlights overarching considerations for communicating drought and water-resource issues, regardless of the drought timeframe.

Basic communication principles

While drought may be complex, it is important not to forget the basics of communication. These include the following principles:

- KISS – Keep it short and simple
- Target your message to specific interests and groups
- Find a hook – something specific which grabs your audience from the outset
- Consider all available channels
- Consider how you use language and frame the message. Avoid ambiguity, jargon and complex language to reduce the risk of misunderstanding. Consider using everyday language and stories of resilience, referring to everyday-life activities and evidence of drought (in addition to scientific evidence) to help make the message more relatable
- Combine communication tactics

Who is your audience?

There is no such thing as the ‘general public’. Messages need to be tailored and find a specific point of relevance for each public group, depending on their links with water in different phases of the hydro-logical cycle (see Figure 1). Some groups have more connection to drought impacts (e.g. allotment holders, gardeners may recognise deficits in soil moisture levels; anglers and canoeists may notice drought impacts on river levels), and so may be easier to reach or may be looking for specific information. It may also be possible to mobilise these more engaged groups to cascade messages to wider groups within their communities.

Channels of communication

Use all available – and appropriate – communication channels. Social media can be useful for reaching those who use these channels and are already connected to an organisation, while information on a website reaches those who are looking for water-related information. Specialist media (e.g. news sites targeted at a specific industry or sector) is likely to pick up a drought impact story earlier and will be interested in how it may affect their readers. Mainstream media has the broadest reach but may only become interested as the effects of drought or water shortage become more apparent (during the ‘event’ phase of the extreme weather adaptive cycle). Good communications look for interactivity between channels, as well as broadcast approaches.

Combine messaging strategies

No single tool, whether it be providing scientific evidence of drought, offering practical water-saving tips or socially normalising water-saving behaviour, is likely to be effective in isolation. Evidence suggests that a combination of mutually reinforcing tools is better for achieving desired effects, such as reduced water consumption³¹.

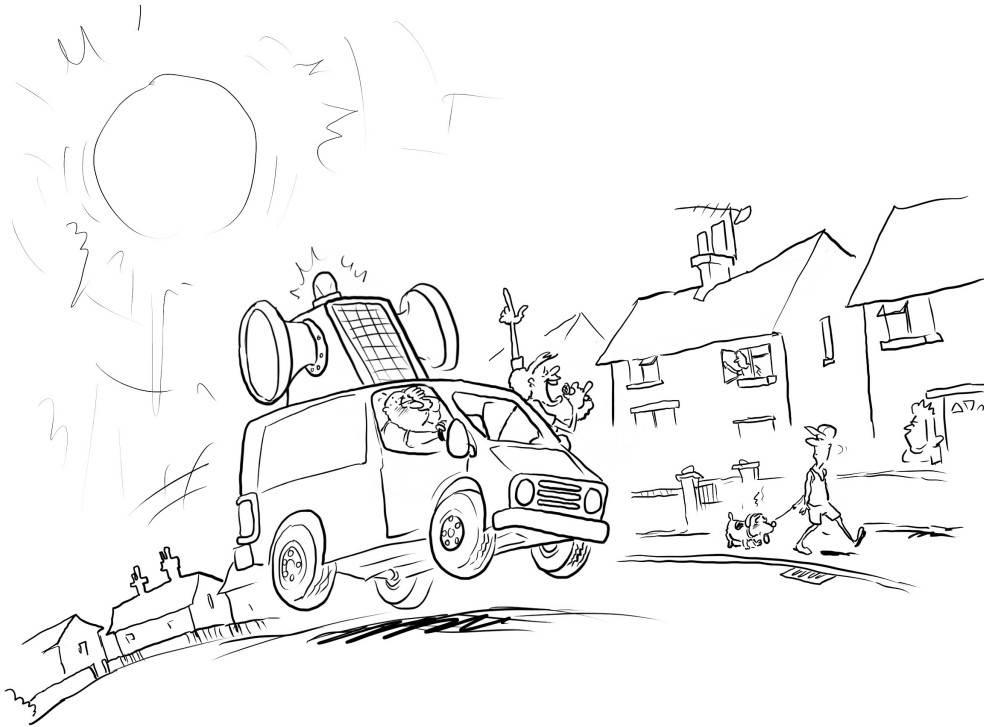


Figure 11: Broadcast the message. Image courtesy of John Elson/DRY project

³¹ <https://journals.sagepub.com/doi/abs/10.1177/0013916513515239>

5. Beyond single organisations: networks for cohesive communications

DRY research also recognised that the large number of organisations (statutory; non-statutory) involved in drought-risk communication can cause challenges, particularly when drought tends to occur on a regional level. Some coordination between these organisations is needed to ensure that messages are consistent across regions, sectors and organisations.

There was a general feeling, amongst organisational stakeholders interviewed, that the public do not understand the water system very well. This is in the context of the natural water system (i.e. from rain to river, the flood-drought continuum), as well as the water delivery system (how water gets to your tap).

A water communications network could provide opportunities for organisations to work together to promote public engagement with water resources more widely, and provide a consistent way of improving the public's understanding of water systems, linking up water stewardship with awareness of water risk, through communications. A recently launched UK initiative, Love Water³², is an important example of such a network. Led by the Environment Agency and involving more than 40 environmental groups, charities, water companies and regulators, it aims to raise awareness of the importance of water and the role that everyone plays in protecting it.

Networks could also enable smaller organisations (e.g. river trusts) to use readily available resources and tailored material on water systems, which they could share through their other networks to support their conversations with their publics. Those interviewed in the research project pointed to a lack of such resources.

A network could produce resources for schools (which might link to the geography, science or other curriculum areas), as well as organisations who work directly with public groups, such as environmental NGOs. The DRY and AboutDrought projects are currently producing drought-awareness raising resources for UK primary and secondary schools.

³² <http://www.water.org.uk/love-water>

Summary

Research from the DRY project has revealed a wealth of insights and practices from across the UK water sector—and further afield—to inform drought communications practices. These solutions can help bring drought out into the open and highlight its impacts on society and the environment. They can also encourage more sustainable and efficient use of water, in order to mitigate some of drought’s worst impacts.

The research also shows how drought communication messages can, and should, vary, according to the weather, in order to maximise their impact. However, there are also a number of common themes throughout the proposed solutions. These include the importance of tailoring, localising and visualising.

Many messages in this report mirror those found in parallel research (under the NERC Droughts and Water Scarcity programme⁴) conducted with water companies³³, as well as research conducted by Consumer Council for Water with water users³⁴. For example, all show that water is not ‘front of mind’ with the public, and that water conservation is not a social norm. Such commonalities may further strengthen the case for a joined-up approach to communicating water sustainability, to bring together the full raft of relevant stakeholders, including the water industry, public authorities and NGOs, working with different publics.

³³ About Drought (2019) Water company communications: exploring best practices in the UK. About Drought Brief. Produced for the ENDOWS Project by the Science Communication Unit, UWE Bristol. [Forthcoming]

³⁴ <https://www.ccwater.org.uk/wp-content/uploads/2017/10/Water-Saving-helping-customers-see-the-bigger-picture.pdf>



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