PRESS RELEASE

*Immediate release*

Heatwaves, drought … time to start thinking big and bold

***Another year of record-low rainfall and unprecedented heatwaves leading to worrying water shortages. Yet water users and authorities, especially in northern Europe, are struggling to understand the threat posed by climate change. It’s time to think big and look for bold solutions.***

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BRUSSELS, 30 September 2019 -- **Greater** **awareness, better forecasting and long-term planning are key to preparing Europe for what could become the ‘new normal’ of extreme temperatures and water scarcity, according to IMPREX experts who have studied the hydro-meteorological risks and their comparative economic impacts on various water users.**

Another summer of temperature spikes across Europe has forced governments to issue drought warnings and introduce sometimes drastic water-saving measures in those regions affected. But experts are calling for bolder, longer-term solutions to deal with prolonged dry periods under climate change.

Droughts can occur anywhere in Europe, in both high- and low-rainfall regions as well as outside the summer months. Yet, according to Marjolein Mens of Deltares in the Netherlands: “*There is a belief in many northern European countries like the Netherlands and Belgium that water reserves are endless. Whether through lack of information or a behavioural disconnect, people don’t appreciate how their water use is affecting and affected by wider forces. To tackle this growing water-scarcity concern, strategic decisions are needed which will have long-term and potentially serious impacts.”*

The problem is really a supply and demand one. Capturing and making better use of the rain that falls is a vital first step. With incentives, households could collect rainfall from their rooftops and store it in water tanks for watering their lawns and washing cars. With the right information, water authorities could better channel or buffer runoff to larger reservoirs, not letting it run freely into rivers and eventually the sea. On the demand side, ill-considered water use is a common problem. Practices like smart irrigation in the agricultural sector and reusing grey water – e.g. discharge from washing machines or industrial cleaning processes – are struggling to catch on.

IMPREX has tackled many of these subjects. Its work is part of a multi-country, multi-stakeholder initiative funded by the European Union’s Horizon 2020 to produce better insights into extreme hydro-meteorological conditions and their impacts in support of risk management and adaptation planning at European, national and regional levels.

Investigations in the Netherlands took a stepwise approach to understanding the problem of water scarcity and how it affects different water users and society in different ways. Some farms in the Netherlands, for instance, are linked to the country’s main water systems, which are holding up reasonably well in the drought. While others relying on groundwater are struggling. This means measures like buffering or redirecting water to low-flow waterways need to be more targeted.

Susanne Groot of HKV Consultants, an IMPREX partner, explains what the Dutch regional cases reveal: *“Foremost we’re learning that local measures and efforts to mitigate climate change are not enough. Measures and impacts have to be considered in an integrated way. We encountered diverse views on what’s working and what’s not, and realised that perceptions change once we complete a thorough risk analysis in consultation with the stakeholder.*”

Being better prepared…

Investment in larger reservoirs in drought-affected areas is one solution. But in the end, a more profound strategic review of land use may be needed, looking at where and what kind of agricultural activity is best suited in terms of freshwater availability. That is a national and even EU-wide discussion which would have huge economic and political ramifications.

On the importance of meteorological forecasting under climate change scenarios, IMPREX’s director Bart van den Hurk notes: *“The 2018 drought really put into context the International Panel on Climate Change’s call to keep global average temperature to ‘well below 2°C above pre-industrial levels’. Climate models need to be improved to project the drought situation. Right now, they are overly focused on rainfall per se, when planners are also looking to be better prepared for droughts.”*

IMPREX’s longer-term seasonal rainfall and water-level and -flow forecasting, as part of its case work on the Rhine in Germany, has a significant role to play in risk analysis and climate change adaptation measures by all of Europe’s major inland waterway stakeholders. Dutch water authorities facing low water levels in a region or across the wider system need to know further in advance when to start buffering. Accurate forecasts in 2018 came too late to prevent the drying out of vital reservoirs.

Unique new solutions

Over the past 30 years, droughts have dramatically increased in number and intensity in the EU. The number of areas and people affected by droughts went up by almost 20 % between 1976 and 2006.

Yet drought forecasting has remained largely unchanged. The solutions developed under IMPREX offer, for the first time, a fresh perspective based on longer-time data series rather than what the experts call ‘characteristic drought events’.

Deltares’ Femke Schasfoort says: “*With this data, we can also see for the first time the impact of droughts on Dutch society. The tools we developed help us understand the impact of water shortages on different sectors like agriculture, shipping, drinking water utilities, and on nature and biodiversity in general. We now have numbers to scale and compare the risks to shipping versus, say, agricultural water users. This is valuable economic data supporting important decision-making under changing socio-economic and climate conditions.”*

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**Note to editors**

Image for editorial is available [here](https://www.dropbox.com/s/456kjdz6r2v8y6f/Ma%2018%20%20Mei%20%202015%20%20Jannes%20Wiersema%20020%20%282200%20x%201236%29.jpg?dl=0)

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***About IMPREX***

IMPREX – Improving Predictions and Management of Hydrological Extremes – is an EU-backed initiative spanning nine countries to improve society’s ability to anticipate and respond to future hydrological extreme events (floods, droughts...) in Europe. It will enhance the forecast quality of extreme hydro-meteorological conditions and their impacts. The knowledge developed by the project will support risk management and adaptation planning at European and national levels.

[www.imprex.eu](http://www.imprex.eu) / @imprex\_eu

***About Deltares***

Deltares is an independent institute for applied research in the field of water and subsurface. The main focus is on deltas, coastal regions and river basins. Managing these densely populated and vulnerable areas is complex, which is why we work closely with governments, businesses, other research institutes and universities in The Netherlands and abroad. Deltares is a not-for-profit organisation based in the Netherlands with 800 employees worldwide and offices in five different time zones around the globe.