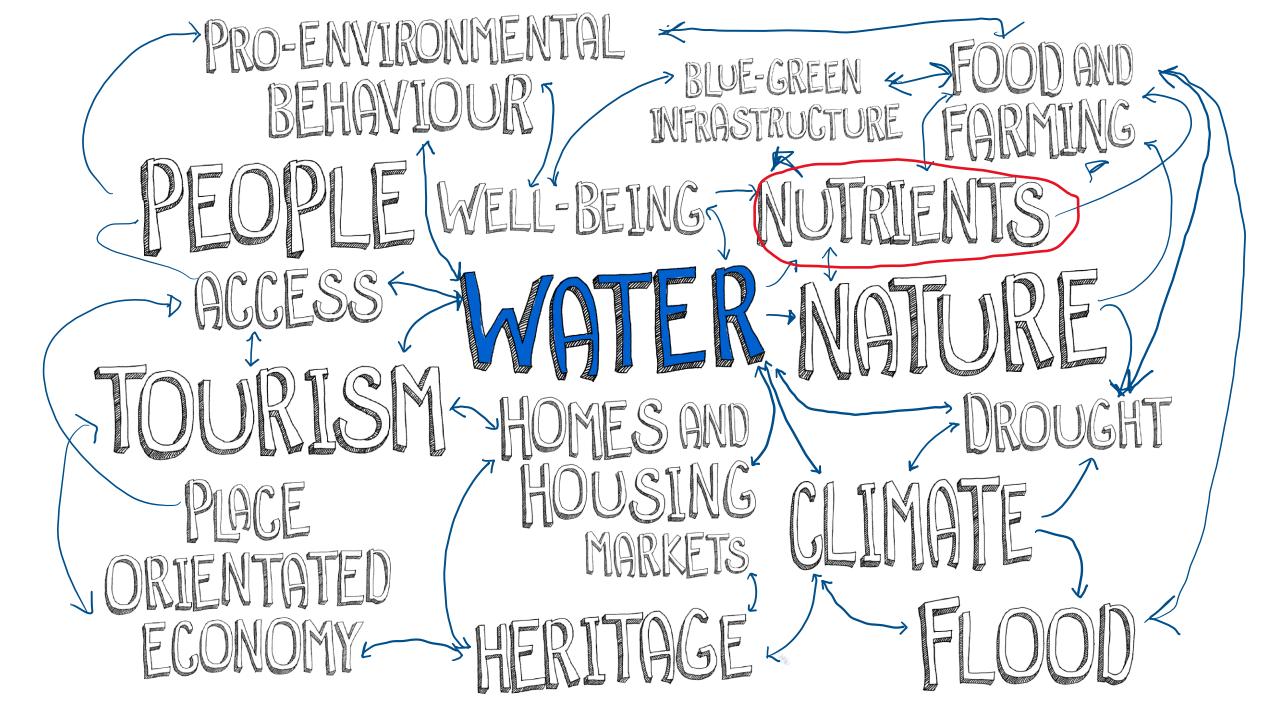


Figure 2 - Phosphorus apportionment by source.

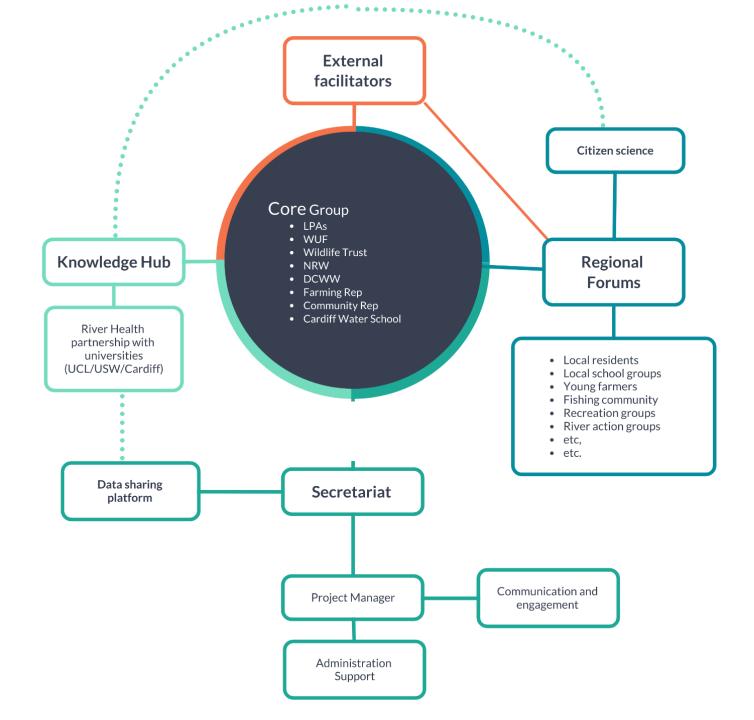
Draft subject to ongoing quality assurance by NRW.











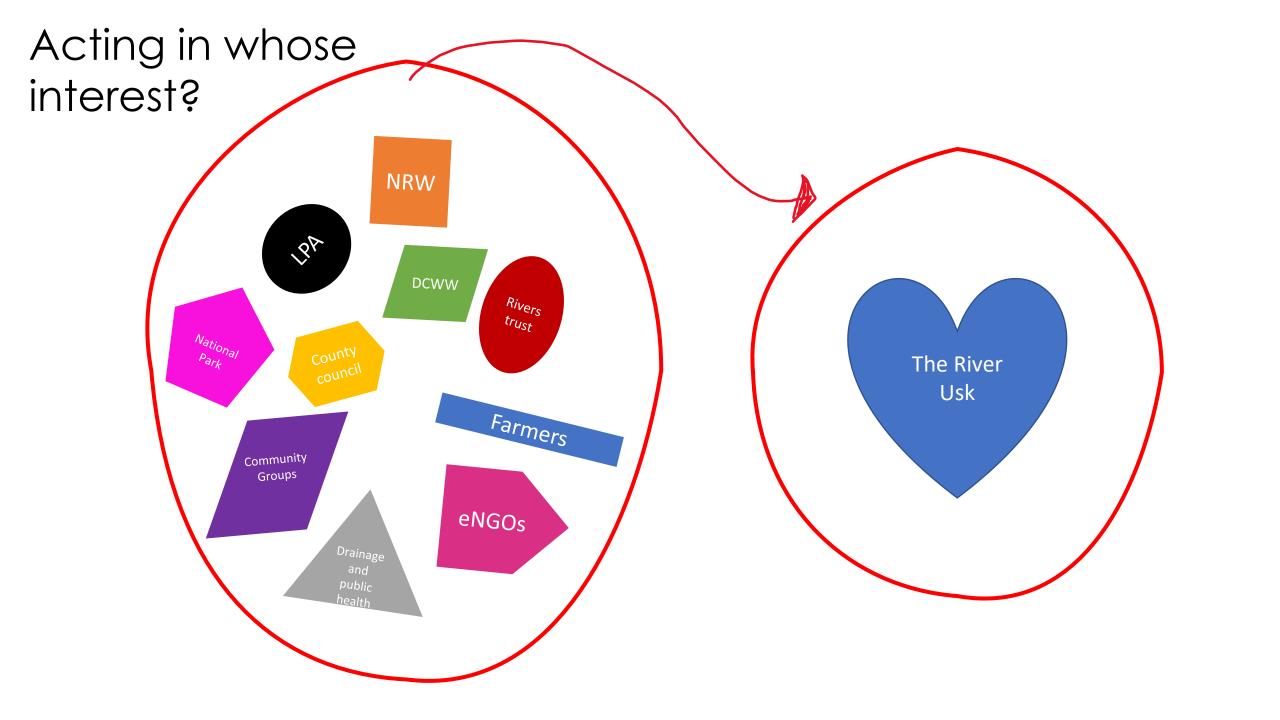


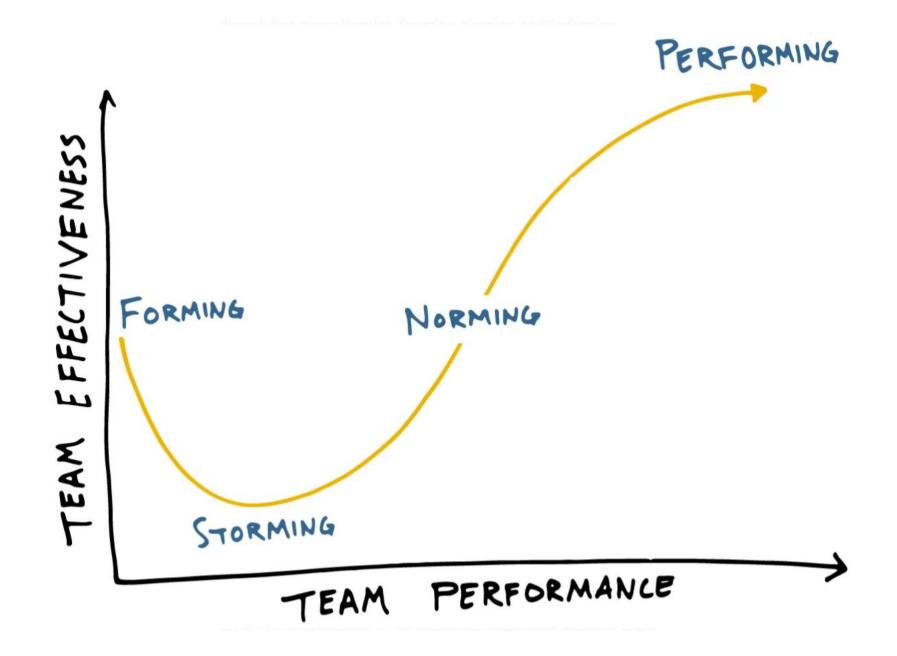
## Delivering long term solutions to the challenges the river faces by transforming catchment land management practices and societal behaviour to:

- a) Reduce nutrient levels within the catchment (e.g., levels of phosphate, nitrates, ammonia and other contaminates from agricultural sources, wastewater treatment discharges, storm overflows, poorly maintained septic tanks and river bank erosion).
- b) Manage Water Quantity (including the impact of climatic changes and water extraction for the canal, drinking water and agricultural use).
- c) Provide opportunities for understanding and responsible enjoyment of the River.
- d) Improving ecological integrity (improving biodiversity, habitat quality and removing invasive non-native species) and;
- e) Adapt to and mitigating climate change (including increased rainfall, movement of surface water, flooding, changes to habitat etc).









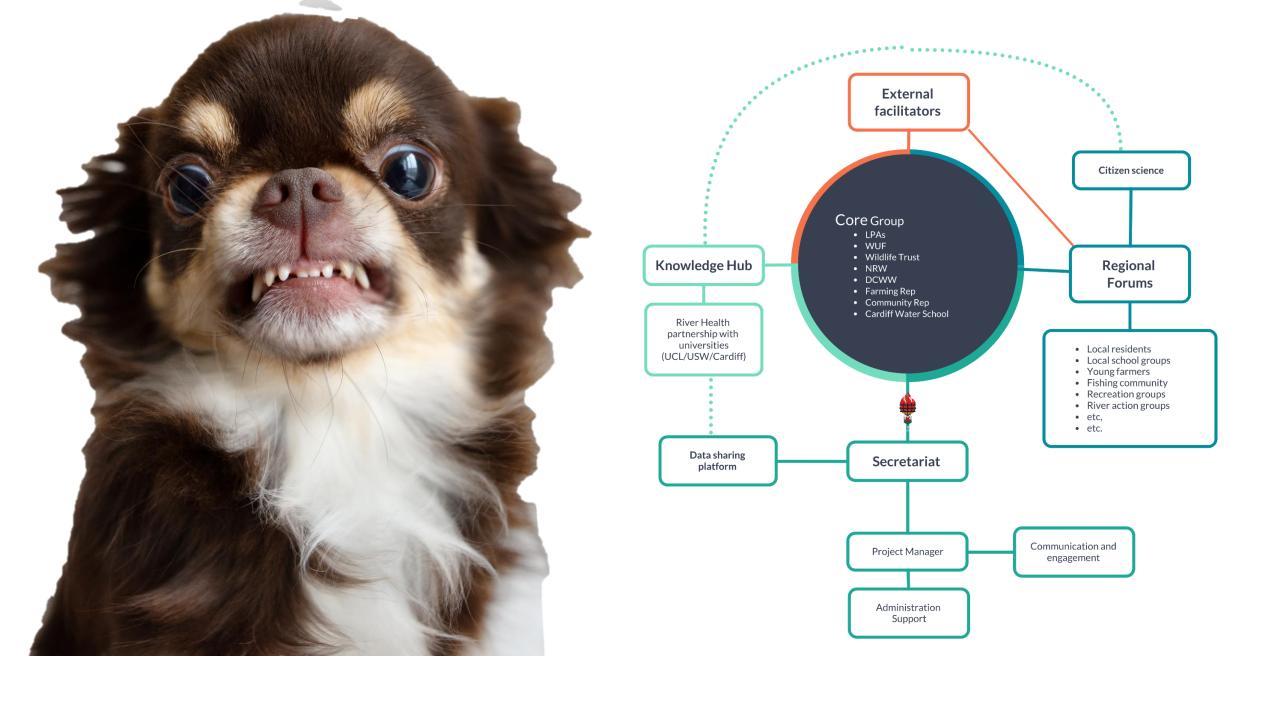






## **PROVOCATIONS**







human behaviour





## Why time poverty matters for individuals, organisations and nations

Laura M. Giurge <sup>1,4</sup> Ashley V. Whillans <sup>2,4</sup> and Colin West<sup>3</sup>

Over the last two decades, global wealth has risen. Yet material affluence has not translated into time affluence. Most people report feeling persistently 'time poor'—like they have too many things to do and not enough time to do them. Time poverty is linked to lower well-being, physical health and productivity. Individuals, organisations and policymakers often overlook the pernicious effects of time poverty. Billions of dollars are spent each year to alleviate material poverty, while time poverty is often ignored or exacerbated. In this Perspective, we discuss the societal, organisational, institutional and psychological factors that explain why time poverty is often under appreciated. We argue that scientists, policymakers and organisational leaders should devote more attention and resources toward understanding and reducing time poverty to promote psychological and economic well-being.

uman beings have always faced resource constraints driven by crises such as plagues, famine and drought. Consistent with our species struggle to obtain enough tangible assets to survive, policy decisions have primarily focused on increasing material prosperity. Historically, this focus has been driven by the general belief that material wealth results in greater welfare<sup>23</sup>, a perspective that is exemplified by the fact that the gross domestic product has been used as the primary tool for measuring country-level welfare since its development in 1934.

More recently, however, this narrow focus on material resources has been challenged. In the 1970s, the economic Richard Easterlin discovered a paradox: while economic growth in the US had steadily increased over the previous decades, citizens' happiness had remained largely unaltered. Initially debated by some scholars, the 'Easterlin Paradox' was confirmed in recent years and across countries. Following from these findings, policymakers have come to recognise that non-monetary factors, such as societal trust and optimism, are also critical in shaping citizens' well-being and societal progress. In this Perspective, we argue that policymakers also need to consider the role of time affluence. Although wealth has risen around the world, material prosperity has not translated into an abundance of time; on the contrary, rising wealth often exacerbates feelings of time powerry.

Defined as the chronic feeling of having too many things to do and not enough time to do them<sup>16,17</sup>, time poverty is increasing in society. Data from the Gallup US daily poll—a nationally representative sample of US residents—shows that, in 2011, 70% of employed Americans reported that they "never had enough time," and in 2018, this proportion increased to 80% (ref. "i). Coinciding with these societal trends, researchers across academic fields have started to systematically study this phenomenon. In social psychology, a growing body of literature finds that people who are more time-affluent experience greater psychological well-being<sup>18–21</sup>. Organisational behaviour research documents the role of workplace structures in shaping how people think about and use their time<sup>222</sup>. Legal scholars are starting to consider the full welfare costs of the time burdens imposed by social structures (i.e., unpaid labour burdens incurred by women<sup>23</sup>) and government processes (i.e., paperwork and administrative burdens<sup>23</sup>). Political

theorists are urging scholars to study wasted time in political institutions, such as how wait-times at voting booths or in court influence democratic processes. Developmental economists are advocating for the systematic study of time-use and associated stressors among the working poor. The common thread across these diverse disciplines is that time poverty may be as important as material poverty in shaping human welfare.

Today, time poverty and 'busyness' are often seen as signals of productivity, success and high status<sup>10,13</sup>. Yet, recent scientific evidence provides compelling evidence that feeling time-poor can adversely affect subjective well-being (for example, life satisfaction, positive affect), mental health, work performance, creativity and relationship quality (see Table 1 for some of the documented negative consequences of time poverty). Building on this work, the aim of the current paper is to analyse the causes of time poverty and discuss potential solutions.

First, we focus on the societal, institutional, organisational and psychological factors that contribute to time poverty at work and outside of it. In doing so, we provide an explanation for why policymakers, companies and individuals tend to overlook or exacerbate time poverty. Second, we discuss the potential role of social scientists, policymakers and organisational leaders in reversing the upward trend in time poverty worldwide.

## Societal drivers of time poverty

There are two important changes in society that have contributed to increased time poverty<sup>32</sup>. First, changes to social structures that shape time have accelerated the speed of life<sup>33</sup>. Family structures are no longer stable: they are increasingly punctuated by divorce<sup>34</sup>. Careers are no longer passed down from generation to generation: people now change jobs an average of 11 times<sup>35,33</sup>. Second, the Internet and mobile phones provide people with access to an infinite number of experiences and the opportunity to "live a multiplicity of lives within a single lifetime."<sup>32,33</sup> Thus, people increasingly worry about missing out, which can increase feelings of time powerty<sup>33</sup>.

Along with the acceleration of time, the shifting nature of work and its relationship with time contribute to time poverty<sup>37</sup>. Marx<sup>38</sup>

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Organisational Behaviour Department, London Business School, London, UK. Negotiations, Organizations, and Markets Unit, Harvard Business School, Boston, MA, USA. 'Anderson School of Management, University of California, Los Angeles, Los Angeles, CA, USA. 'These authors contributed equally: Laura M. Giurge, Asheley V. Whillians. "e-mait, Igiurge@london.edu; awhillans@mbs.edu



While humanity has prospered immensely in recent decades, the ways in which we have achieved such prosperity means that it has come at a devastating cost to Nature. Estimates of our total impact on nature suggest we would require 1.6 Earths to maintain the worlds current living standards.

Sir Partha Dasgupta







