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Hursthouse, Andrew

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Reaching SDG6: Societal impact is core to all our work



The Source

By: Guest contributor, Thu Mar 17 2022

In honour of World Water Day (March 22nd), we have invited a few field specialists to share their thoughts with us on the nature of their work and their commitment to addressing the SDGs. These experts translate science into realities that can provide solutions to our challenges and nurture the grass-root community collaboration. We asked how they address issues directly related to Sustainable Development Goal (SDG) 6 – Clean Water and Sanitation. Here we are sharing thoughts from Prof. Andrew Hursthouse, University of the West of Scotland, UK who is also Associate Editor of *Environmental Monitoring and Assessment* (<http://link.springer.com/journal/10661>)

Author: Guest
contributor

What is the focus of your research work?

Our research focuses on the mobility and environmental impact of potentially toxic elements and compounds, particularly in the aquatic

environment, but also across compartment boundaries. We study the impact of historical activities – for example from mining, industrial processing and effluent discharges and their potential impact on the food chain. This is particularly relevant to protecting human health and part of wider risk assessment of substances. Research strategy can be loosely framed around the “source-pathway-receptor” concept widely used in environmental assessment; this is a powerful tool to help drive research objectives. Water forms a critical component of this relationship, acting as a pathway for discharges, leachates and mobilizing substances for wider dispersal. It can also be viewed as a receptor, and maintaining its quality and supply is critical for preservation of wider ecosystem services. We study the mechanisms influencing transport, including chemical reactivity, and using this knowledge we aim to develop management strategies to protect and enhance water quality, including research into novel water treatment methods or stabilization of sources, such as waste materials.

How important is societal impact to your research? Why?

Societal impact is core to all our work. Research at the interface between humans and their environment wraps you up within society. So, the research you pursue on one hand addresses the critical issues of pollution and degradation of the living environment, trying to identify critical pathways and zones, the order of magnitude of effects. On the other hand, our research feeds into policy and regulatory support to inform strategies and identify key issues needed to protect and

enhance the quality of life. We should also not forget that the water cycle is intrinsically part of earth's life support systems which are affected by climate change – increasing the frequency of disruptions and extreme events, challenging future water security. Understanding these issues directly impacts on the resilience of society and therefore our research.

What methods do you use to evaluate the societal impact of your work?

Our societal impact can be judged on the application of research findings, to individual, localized cases, or adoption by or changes to policy, regulations and impact on decision making by different groups. This can be through specific project work to deal with discharges to the environment from industrial operations, where industry can modify processes through “knowledge transfer”, for example addressing wastewater treatment processes in agri-food sector can be both through improving treatment conditions and by working within the production process to reduce waste production. The wider societal impact can also be measure by the engagement of important stakeholders in dissemination activities. The traditional conference approach is less important here, with priority for “understandable” policy briefs and impact statements. We look for opportunities where personal development activities are provided for professionals and stakeholders in relevant sectors, including policy makers. We also need to ensure the general public can understand the impact of our work and find ways to engage in public events.

What do you believe are the most effective ways of communicating your research?

To be able to communicate you need to have defined the impact. Collecting evidence and making reasonable connections between your research findings and the wider context – in the case of SDG6 the global water cycle is the foundation for all of this. Communication methods provide a spectrum of opportunities and platforms for this dissemination activity. Particularly more recent development online and in virtual, digital worlds, in response to our global health challenges have opened new ways to reach both local and global audiences and social media should not be overlooked for “sound bite” summaries of your impact. The links between your research and impact may offer visually appealing opportunities – fly through footage, animations through to full visual documentary work. Academic publication will still be the foundation of communication but seeking out points to engage and presenting a story suited to the audience provide the basis for this. Be enthusiastic, clear, and understandable and make sure it is a continuous process and not a “one off” event.

What advice do you have for researchers who are looking for ways to make societal impact, in other words, impact beyond their scholarly circle/academia?

Remember firstly that you will often be part of an increasingly interdisciplinary team, communicating with and for others. You need to balance your deeper academic expertise with gaining confidence

in delivering your expertise to those who may not fully appreciate or understand. Think carefully about what message can come from your work – how strong a claim, how high is the uncertainty around your findings as this may be a challenge to give a clear message. Identify a network of stakeholders who may need to know about it and be prepared to attend events/participate in activities removed from your traditional academic platform. These could include: public speaking, science fairs, trade shows, schools and community groups, press and TV interviews. Most organizations with research focused activities have communications officers and contacts who can work with you to engage with appropriate communities. Initially their advice may seem strange, but by building a rapport, the two-way dialogue will generate mutual understanding helping open those pathways.

What do you see as the role of publishers when it comes to addressing the SDGs? How can they best support researchers?

There are great opportunities for publishers to enhance the impact of the work they curate. The current debate on open access and funding is put to one side here.

The SDGs are a multidisciplinary pool of actions focused on a critical goal. Academic work is often produced in focused and deep topic areas and always needs to be evaluated in appropriate specialist domains and ensuring reliable science underpins publications is always a top priority. However, an effective and efficient publishing processes needs to continually evolve, picking up

new work patterns and routes to the appropriate and relevant audience. The SDGs can be viewed as an audience and publishers should identify relevance of the many disciplines and encourage authors to also look up and around at the SDGs to inspire the dissemination of their work. This might be through gathering insight from metadata associated with the publication, simple submission questions identifying relevance through to the use of editorial boards to highlight contributions.

Adding digital resources to embellish journal sites, specific topic promotion in social media and bite size commentaries could be proactively developed to address SDGs in a specific manner.

Visit our SDG6 hub for selected research content and more discussions around clean and safe water and sanitation. (<https://www.springernature.com/gp/researchers/sdg-programme/sdg6>)

About Andrew Hursthouse



Professor Hursthouse is a Professor of Environmental Geochemistry at the University of

the West of Scotland (UWS) and holds a Ph.D. in Environmental Radioactivity from University of Glasgow and a B.Sc. degree in Geochemistry from University of Reading. He has been a 100 talent

high-end expert Fellow at Hunan University of Science & Technology, Xiangtan, PRC (2016-2021). He has editorial roles in several Earth and Environmental Science journals and has worked in academic and industrial research environments.

**Author: Guest contributor**

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