Green Data

9th October 2019

IET London: Savoy Place

#GreenData19

How digitalisation is transforming environmental policy and practice

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Agenda

09.15 - 09.45
Registration and Refreshments

09.45 - 10.00
Chair's Welcome
Chris Fry, Managing Director, Accelar Limited

10.00 - 11.25
Delivering the 25 Year Environmental Plan: Role of "Green Data"
The 25 Year Plan sets an ambitious blueprint for environmental progress over a generation and will be turned into law through the Environment Bill. How will 'green data' underpin the way targets are set and progress monitored under the Plan? Will digital applications help the plan be achieved?

Panellists:
- Matthew Farrow, Executive Director, Environmental Industries Commission (EIC)
  Innovation, data and the 25YEP (results of EIC research project)
- Dr Simon Gardner, Head of Digital Environment, NERC/UKRI
  NERCs strategy to unlock the potential of environmental data
- Dr Robert Bradburne, Deputy Director, Defra
  The role of digital and data in the 25YEP

11.25 - 11.50
Coffee Break

11.50 – 13.15
Digital Trends for the Environment
What are the latest global trends in digital and data-led applications in the environmental field?

Panellists:
- Jon Blower, Chief Technical Officer, Institute for Environmental Analytics (IEA)
- Janet Ranganathan, Vice President, Science and Research, World Resources Institute (WRI)

More panellists to be announced

13.15 – 14.15
Lunch

14.15 - 15.15
Breakout Sessions
Using green data to drive new business models and better environmental outcomes
Hear and discuss case studies in specific areas with experts

Digitising Environmental Assessment: Case Studies in Natural Capital Accounting and Digital Reporting
- Erin Gianferrara, Principal Environmental Economist, AECOM
- Ross Stewart, Digital Environmental Assessment Lead, AECOM

Flood and Water Management
- Rob Lamb, Managing Director, JBA Trust

Smart Cities
- Dr Parag Rastogi, Building Physicist and Lead Product Manager for Health and Wellbeing, arbnco

15.15 - 15.35
Coffee Break

15.35 – 16.30
Helping Citizens Use, Generate and Make Sense of Green Data
Smart phones, open data and portable sensors are transforming the way citizens relate to environmental issues and the role they play in creating and combining new data sets. How will this change the way companies, regulators and institutions work together to manage the environment and our common future?

Panellists:
- Dr Erinma Ochu MBE, Lecturer in Science Communication and Future Media, University of Salford
- Dr Advaith Siddharthan, Reader, Knowledge Media Institute, The Open University

More panellists to be announced

16.30 – 17.00
The "Digital Twin" Concept

Keynote Speaker:
- Mark Enzer, Chief Technology Officer, Mott MacDonald
  Chair of Digital Framework Task Group at Centre for Digital Built Britain

17.00 – 17.10
Closing Remarks from the Chair
Chris Fry, Managing Director, Accelar Limited

17.10 – 19.00
Drinks and Networking Reception

Speaker Biographies

Jon Blower, Chief Technology Officer, Institute for Environmental Analytics (IEA)

Jon is the Chief Technology Officer at the Institute for Environmental Analytics (IEA), a partnership of academic and commercial organisations, based at the University of Reading. He has a background in geoscience with a degree in Natural Sciences from Cambridge and a PhD from Bristol. After working as a software engineer he joined the University of Reading in 2003, and the IEA in 2015. He leads a number of collaborative projects in the area of environmental informatics and visualisation, applying advanced techniques in information technology to make environmental information more accessible and useful for researchers and decision-makers.

Dr Robert Bradburne, Deputy Director, Defra

Robert is the Deputy Director for the Environment Analysis Unit in the UK's Department for Environment, Food and Rural Affairs (Defra). He leads an interdisciplinary team of around 20 specialists in environmental science, economics, and statistics. The Unit provides joined-up analytical advice on environmental issues across Defra's remit and generates the tools, data, and evidence needed to enable people to take account of the value of nature in decisions, plans and strategies that they make. Robert holds a degree in plant sciences from Cambridge University and a PhD in crop genetics from the John Innes Centre. Robert's first job was doing post-doctoral research into the genetics of wheat quality. He then moved into the UK Civil Service, joining the Horticultural Crop Sciences Unit in the Department for Environment, Food and Rural Affairs. From there he moved onto positions in waste policy, departmental strategy and business planning. He managed the ground-breaking National Ecosystem Assessment in 2011, and after short period leading the Sustainable Agriculture policy team, he returned to science as Head of Science for the Sustainable Land Management and Livestock Farming Directorate. Now as the head of the Environment Analysis Unit, Robert leads the development a number of cross cutting environmental analysis themes, including the development of metrics, tools and valuation/ accountancy techniques concerned with the concept of Natural Capital.

Mark Enzer, Chief Technical Officer, Mott MacDonald and Chair of Digital Framework Task Group at Centre for Digital Built Britain

Mark is the Chief Technical Officer at Mott MacDonald. In this role, he is accountable to the Group Board for technical excellence globally, which he drives chiefly via Mott MacDonald's internal professional networks. Mark is a keen champion of innovation in the context of collaborative delivery models and he is particularly interested in transformational change in infrastructure engineering, including the application of digital transformation, Smart Infrastructure, low-carbon sustainable solutions, platform-based delivery and design for manufacture and assembly (DfMA). Mark is currently the chair of the Digital Framework Task Group, which is part of the Centre for Digital Built Britain. Mark was the leader of the Digital Transformation workstream as part of "Project 13" for the Infrastructure Client Group, which represents the UK's major infrastructure client organisations and he was the Lead Author of the Infrastructure Carbon Review, published by HM Treasury.

Matthew Farrow, Executive Director, Environmental Industries Commission (EIC)

Matthew has been EIC Executive Director for 5 years. He was previously Head of Policy at the Environmental Services Association (ESA) and before that spent 20 years working at the Confederation of British Industry (CBI), including heading up their Energy & Environment team.

Chris Fry, Managing Director, Accelar Limited

Chris is an established consultancy business leader with wide ranging experience spanning transport (rail/high speed rail, highways), renewable energy, flood defence, urban regeneration, smart cities, construction and government policy. With extensive involvement in strategic environmental/ sustainability appraisal and the development of indicators and performance measures, he has long advocated the integration of green data to strengthen decisions and designs. He has a strong interest in eco-innovation, for example as a member of the EIC's Sustainable Smart Cities Taskforce and chair of the industrial advisory board for the Practitioner Doctorate in Sustainability programme at the University of Surrey. Working with co-founder, Charlene Baker, Chris has recently launched Accelar. Their focus is on helping organisations to play their part in significantly accelerating decarbonisation and environmental recovery, using data-driven insights and metrics to retune strategies and pinpoint market opportunities.

Dr Simon Gardner, Head of Digital Environment, NERC/UKRI

Simon is Head of Digital Environment at the Natural Environment Research Council (now part of UK Research and Innovation). He is leading the delivery of the, 'Constructing a Digital Environment', programme, which is seeking to integrate emerging technologies in order to monitor and predict the natural environment at higher spatial and temporal resolutions, develop approaches toward digital twinning of the environment and create 'nowcasting' capability to enable decision-making based on real-time feedback from the environment. He was previously the Head of Innovation with responsibility for directed industry-facing programmes, knowledge-exchange, research commercialisation, and the delivery of the 'Regional Impact from Science of the Environment' (RISE) programme. He formerly worked for twenty years at the Environment Agency where he held a variety of different roles, including manager of the organisation's National Evidence Hub, the management of Research Partnerships and Engagement, and management of EU & International Science activities.

Erin Gianferrara BSc, Principal Environmental Economist, AECOM

Erin is a Principal Environmental Economist in AECOM's Policy and Appraisal team, with seven years' experience spanning over 60 projects. Her work focusses on developing evidence for natural and social capital accounting, socio-economic analysis, cost-benefit analysis, and impact assessments to inform environmental policy, planning, and funding decisions. Her previous work includes developing natural capital approaches at the national level for Defra and ONS, at the Local Authority level for London Borough of Barnet, and at the site level for Eastbourne Council's Downland Estate. Erin is also currently the Technical Lead for AECOM's Natural Capital Laboratory.

Rob Lamb, Managing Director, JBA Trust

Rob has been working in academic and commercial research and development for 25 years, first at the Centre for Ecology and Hydrology in Wallingford, and since 2002 at JBA, where he is now Managing Director of the JBA Trust. A hydrologist and numerical modeller by training, he specialises in flood risk science. Rob has published work in numerous journals and is co-author of two text books. He directs the JBA Trust's programme of research on risk analysis, climate change and links between engineering and environmental science. Rob is a Professor in Practice at Lancaster University's Lancaster Environment Centre. In 2016 he was a member of the government's scientific advisory group on flooding.

Dr Erinma Ochu MBE, Lecturer in Science Communication & Future Media, University of Salford

Erinma is a practice based researcher focused on the ethical concerns of science in society, particularly the emerging concerns of digital technologies, data and spatial computing and the different ways we can ensure that environmental data is open, inclusive and can be accessed by the public in ways that make sense to them. This includes the NERC Community for Engaging Environments 3 year initiative which aims to involve marginalised communities in environmental science through community development, storytelling and citizen science, to enable diverse communities to have a meaningful stake in issues such as climate change and pollution. Trained originally in neuroscience and film, Erinma went on to become a lecturer in science communication and future media at the University of Salford. She has held fellowships from Wellcome, NESTA and Jerwood/Manchester International Festival and her work explores creative and collaborative ways to bridge the gap between policy and practice. She is trustee of Invisible Dust, Critical Friend to Creative Scene, Guest Curator at Sheffield International Festival and a Figshare open research Ambassador.

Janet Ranganathan, Vice President, Science and Research, World Resources Institute (WRI)

Janet is the Vice President for Science and Research at the World Resources Institute (WRI), a global research organization that works at the intersection of environment and development in 50+ countries. Janet has worked extensively on a broad range of sustainable development topics, including food sustainability, business and markets, climate change, greenhouse gas measurement, forests, and more. She ensures WRI's research is robust and its influence strategies evidence-based. She leads WRI's "Data into Action" strategy, which combines open data platforms, information and communication technologies, artificial intelligence, and human networks to drive more transparent and accountable management of the planet's resources.

Dr Parag Rastogi, Building Physicist and Lead Product Manager for Heath & Wellbeing, arbnco

Parag is a building scientist with a background in civil engineering. He comes to arbnco after a stint at the Ecole Polytechnique Federale de Lausanne (Switzerland) as a doctoral researcher, and a research fellow University of Strathclyde, Glasgow and RIKEN Center for Advanced Intelligence Project, Japan. At arbnco he leads research and development efforts to incorporate the latest scientific developments into the health, wellbeing, and climate offerings. His work touches upon health and wellbeing in buildings, integrating climate risk analysis into building performance evaluation and planning, and the use of machine learning and data science in software and hardware for buildings. Parag is also a visiting instructor at CEPT University, Ahmedabad, and speaks regularly at technical conferences and events.

Ross Stewart, Digital Environmental Assessment Lead, AECOM

Ross is a Chartered Environmentalist and Principal Impact Assessment Consultant in the Environment and Planning team at AECOM, London. Ross provides pre-consent environmental management support to nationally significant infrastructure projects, with a focus on transport infrastructure. Ross recently completed an 18-month secondment on the A303 Stonehenge highway improvement scheme. In addition to his environmental management role, Ross is leading the digital transformation of AECOM's UK&I environmental assessment service. Ross is coordinating an eclectic network of colleagues to identify, implement, and integrate digital improvement projects at each stage of the environmental impact assessment workflow.

Recently, Ross led the development of a digital reporting platform, which was first applied to the A303 Stonehenge project as a digital environmental statement, the first of its kind in the UK.

Dr Advaith Siddharthan, Reader, Knowledge Media Institute, The Open University

Advaith is a Reader at the Knowledge Media Institute (KMi), The Open University. He gained his PhD in Computer Science at the University of Cambridge and worked in New York, Cambridge and Aberdeen before taking up his current position. His research focuses on developing Artificial Intelligence technologies that engage the public with nature conservation through data. His work has been funded by EPSRC, ESRC, NERC and Horizon 2020, has featured in RCUK's Digital Economy impact summary report, and has won an EPSRC 'Telling Tales of Engagement' prize. He co-founded the citizen science project BeeWatch (beewatch.abdn.ac.uk) and is the academic lead for iSpot (ispotnature.org).

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