***­­­environmental SCIENTIST*  journal: Learning Resource Notes**

The purpose of these educational resource notes is to provide a format for informal, seminar-style discussions of the topics explored in the latest edition of the journal of the Institution of Environmental Sciences.

Through discussion of the ideas and issues presented within the journal, they aim to supplement and enhance students’ knowledge and understanding of a broad range of environmental science issues and provide insights into the professional concerns of practising environmental scientists.

**Articles in focus**

The below articles have been selected as particularly relevant for in-depth discussion, allowing for wider debate of the key elements of the article topic. Some specific questions you may wish to consider when reading and discussing these articles are outlined.

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| Learning outcomes | * Understand the main concepts and challenges discussed in the edition * Describe the conclusions reached by authors, and identify their relevance to the environmental science sector * Critically reflect on the ideas presented |
| Format | * Articles of particular interest are to be selected and shared with the group to read ahead of the discussion. Suggestions of focus articles are described below. * Small group discussions of articles that closely relate to programme content to supplement learning. * Discussions can be led by participants or the tutor, using the ‘articles in focus’ resource to prompt debate and aid the conversation. * The suggested discussion points and questions provided in this pack for selected articles can be used as a starting point to guide the discussion. * Students can be encouraged to choose to discuss any of the other articles within the issue. |

e*nvironmental SCIENTIST* **Are we measuring what matters?**Vol 35, issue 2

https://www.the-ies.org/resources/are-we-measuring-what-matters

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| **Topic overview** | This issue explores how, and why, specific environmental indicators are chosen to communicate environmental tipping points, baselines and benchmarks – alongside examining the politics, philosophies, and science that underpin them.  Articles in ‘Are we measuring what matters?’ examine a wide range of contemporary indicators from different perspectives across the environmental sector. Case studies demonstrate how indicators can help bridge difficult communication challenges – such as engaging both policymakers and the public with environmental problems – and other articles consider the complexities inherent in attempting to quantify or measure more abstract concepts, such as the wellbeing and value derived from experiencing beauty in our environment.  This issue of environmental SCIENTIST takes an interdisciplinary approach, bringing together scientists, policymakers, and public servants to ask how we measure both environmental degradation and improvement, and whether these methods are doing the work that is necessary to help us reach global environmental targets in the future. |
| **Articles in focus** | |
| **‘Starting from scratch: developing new climate change metrics’**  **(Freya Roberts, Lucy Hubble-Rose and Kris de Meyer, p. 32)** | **Article overview:** This article is a case study examining the complexities of developing climate metrics and indicators that can communicate the state of climate change effectively and accurately. |
| * Explain the impetus behind the project that the CAU embarked upon: what did the funders want the project leaders to explore? * List 3 key features of effective metrics that the project team wanted to harness in their development of the new climate metrics. * Discuss the benefits of having a multi-disciplinary team working on the project. |
| **‘Cutting unsustainable consumption’**  **(Emily Carr, p. 24)** | **Article overview:** In this article, the author advocates for the setting of ambitious targets in relation to the UK’s consumption of resources and products. |
| * Describe one existing barrier to countries being able to meet their material footprint targets. * Explore the issues caused by high-income countries outsourcing their material consumption to lower-income countries. * Discuss the 5 key factors underpinning material footprint metrics. What do these concepts *not* take into account? |
| **‘Indicators for environmental monitoring and assessment: current state and future challenges’ (Cathy Maguire, p. 76)** | **Article overview:** This article gives an overview of how environmental indicators are used and deployed in policy-making contexts, and the barriers in using indicators as the sole evidence for developing policy. |
| * From the first two pages of this article, highlight 2 key benefits of using environmental indicators in policy contexts. * Summarise the OEP’s latest assessment findings: what environmental features are in decline, and which are improving? * What are the advantages of reusing existing environmental indicators over developing entirely new ones? |