

TEACHING RESOURCES

Accounting for biodiversity (& reflecting on inter-disciplinarity)

This document is designed to provide a starting point to help colleagues who may wish to use this film as part of their teaching programmes. The film takes about 53 minutes to air and can be used as a basis for investigating a number of areas, namely:

1. How is biodiversity conceptualised, what critical risks exist in this area and what are the contemporary debates in biodiversity;
2. How have accountants considered the issues that arise for organisations as they seek to manage biodiversity and provide accounts about those activities; and
3. Consideration of wicked problems and post-normal science (which underlie trying to account for biodiversity and to manage biodiversity).

There are many possible ways in which the film could be used. Here are just three suggestions:

1. As a standalone film that would prompt a conversation about inter-disciplinarity, low carbon intellectual renewal and accounting for biodiversity (if this were the case we would suggest that the total time devoted to the topic would be two hours: one hour for the film and one for the discussion).
2. As a film to support a more extended consideration of accounting for biodiversity approaches (perhaps supplemented with an assessment that would require students to conduct a simple biodiversity survey – see the website for a link to the University of St Andrews’ biodiversity survey). In this case the various readings listed below could be helpful.
3. As a film to support a more inter-disciplinary engagement with the issue of biodiversity. If this were the case then the readings listed below are a skeletal list of suggestions of possibly relevant material. The mix of readings and activities under this option would clearly depend on what disciplines were engaged in the conversation. Country specific material on biodiversity management may also be useful in this context.

Possible readings:

Biodiversity more generally (this provides a very high level snapshot of this area)

Balmford, A., et al. (2002), “Economic Reasons for Conserving Wild Nature”, *Science* 297, 950-953.

Begon, M, Townsend, CR & Harper JL (2006), *Ecology from individuals to ecosystems* (4th Edn - Oxford: Blackwell Publishing.).

Costanza, R et al. (1997), "The value of the world's ecosystem services and natural capital", *Nature* 387:253-260.

Millennium Ecosystem Assessment (2005), *Ecosystems and Human Well-being: Synthesis* (Island Press: Washington). (see also <http://www.millenniumassessment.org/en/index.aspx>)

The Economics of Ecosystems and Biodiversity review - <http://www.teebweb.org/>

The Sustainable Development Commission's review of proposals for a Severn Barrage and the its implication for sustainable development - [http://www.sd-commission.org.uk/publications/downloads/Tidal Power in the UK Oct07.pdf](http://www.sd-commission.org.uk/publications/downloads/Tidal_Power_in_the_UK_Oct07.pdf)

Accounting for biodiversity

Herbohn, K., (2005), "A full cost environmental accounting experiment", *Accounting, Organizations and Society*, 30(6), pp. 519-536.

Jones, M. (1996), "Accounting for Biodiversity: A Pilot Study", *British Accounting Review*, 28 pp. 281-303.

Jones, M., (2003), "Accounting for biodiversity: operationalising environmental accounting", *Accounting, Auditing and Accountability Journal*, 16(5), pp. 762-789.

Jones, M., and Matthews, J., (2000), *Accounting for biodiversity: a natural inventory of the Elan Valley Nature Reserve*, (Association of Chartered Certified Accountants: London).

Lamberton G., (2000), "Accounting for Sustainable Development—A Case Study of City Farm", *Critical Perspectives on Accounting*, 11(5), pp. 583-605.

Accounting and sustainable development

The key text in this area is:

Unerman, J., Bebbington, J., and O'Dwyer, B., Eds., (2007), *Sustainability Accounting and Accountability*, (Routledge: London).

While there is no specific discussion of biodiversity in that book, the closing chapter discusses the mismatch between sustainable development and entity level evaluations.

Wicked problems and post-normal science

Bebbington, J., (2009), "Measuring sustainable development performance: possibilities

and issues", *Accounting Forum*, 33(3), pp. 189-193.

Frame, B and Brown, J., (2008), "Developing post-normal technologies for sustainability", *Ecological Economics*, 65(2), pp. 225-241.

Funtowicz, S., and Ravetz, J., (1993), "Science for the post-normal age", *Futures*, 25(7), pp. 739-755.

Ravetz, J., (2006), "Post-Normal Science and the complexity of transitions towards sustainability", *Ecological Complexity*, 3(4), pp. 275-284.

See also the following website on wicked problems - <http://cognexus.org/id42.htm>.