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Book Review

Sustainability Assessment — Criteria and Processes

*Robert B. Gibson (Principle Author), Selma Hassan, Susan Holtz,
James Tansey and Graham Whitelaw*

Earthscan, UK 2005, 240 pages, £80.00, ISBN 1844070506 (Hardback)

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This is a beautifully composed and written book. Bob Gibson and friends write intelligently and in a refreshingly frank and eloquent manner. The Preface sets the scene — reconciling impact assessment with sustainability — using the analogy of matchmaking for marriage, and the book unfolds from there.

Not only is it a pleasure to read this book, it is also a must to read! Apart from being the first major book published on the topic of sustainability assessment, it outlines the issues and challenges and firmly steers us in the way forward. Prior to publication, this book was already being cited in journal and conference papers as preliminary drafts, and an earlier iteration of parts of the book, in a report available on the Internet, were in circulation. The thoughtful and measured pace for writing this book in this manner has paid off — it makes a significant, original and powerful contribution to the field.

Following the Preface, the book contains nine chapters and six appendices. The first four chapters set the scene for understanding environmental assessment and the sustainability concept. Chapter 1 presents a case study of the world's first attempt at an explicit sustainability assessment: the Voisey's Bay mining operation (for nickel, copper and cobalt) in Labrador in Canada's rugged north. The story of this assessment process and the issues it raises (e.g. how to move from traditional environmental assessment aimed at minimising negative impacts of a project on the biophysical environment, to one which makes a positive overall contribution to ecological and community sustainability at local and regional levels) highlights most of the challenges practitioners face in conducting true sustainability assessments. The chapter ends with an identification of the key agenda of the book overall: "to consider what we have learned from environmental assessment experience and from sustainability thought and practice so far, to identify the key requirements for sustainability and sustainability-oriented assessments and to outline the essential steps for implementation".

Chapter 2 plots the emergence of environmental assessment world wide and its subsequent evolution towards sustainability consideration. Chapter 3 describes the theory behind the sustainability concept; importantly establishing its evolution and meaning in a contemporary context and Chapter 4 presents five international sustainability-in-practice stories. While these three chapters provide a concise and valuable overview of this plighted pair, the remaining chapters become compelling reading for understanding their union.

Chapter 5 discusses the criteria necessary to enable sustainability decision-making. An important point is the need to move beyond the three pillars or triple bottom line approach of considering social, economic and environmental parameters separately, to embrace a truly integrated approach to sustainability assessment. A list of eight “decision criteria” for sustainability requirements are developed including, for example, the notions of socio-ecological system integrity and livelihood sufficiently and opportunity, in addition to more familiar concepts such as intra- and intergenerational equity. For each (and there are four others too), the authors outline the requirement and some illustrative implications. Whilst some of these criteria are already evident in (advanced) environmental assessment procedures, the demands for sustainability assessment take them into new areas and applications.

From this point, Chapter 6 further deepens the challenges of sustainability decision-making by examining the issue of trade-offs. I have already found the substance of this chapter to be incredibly useful when writing and training about sustainability assessment, having drawn on the content in several fora prior to the book’s publication. Recognising the inevitability that trade-offs will be involved in most if not all sustainability assessment decisions, the authors provide guidance in the form of six trade-off rules. These are not intended to (and indeed cannot) make an actual decision, but should be established at the outset to guide a given decision-making process so as to maximise the sustainability outcomes. The trade-off rules are a profound and vital contribution to the field.

Chapter 7 outlines how the sustainability considerations discussed to date can be incorporated into the design of an assessment process in terms of its generic statutory foundation. As would be expected, the legal, institutional and procedural framework is necessarily significantly different to traditional environmental assessment approaches, although largely consistent with the manner in which advanced systems (e.g. incorporating state-of-the-art strategic environmental assessment) have been evolving.

Chapter 8 returns to the issue of decisions and in particular examines the determination of significance in relation to predicted effects, selection among alternatives and decisions about trade-offs. As with the rest of the book, the authors' approach includes derivation of criteria that practitioners can use to apply the principles.

The final chapter looks at the way forward for advancing sustainability assessment practice. The authors note the growing international trend for innovation in this rapidly emerging field. Most of the chapter is a summary of key points and principles established in earlier chapters — for people pressed for time, this chapter could serve as a kind of “executive summary” of the book. The final pages expound the idea of incremental change through learning by doing. The authors are aware that radical change to approval processes overnight to permit the idealised model of best practice sustainability assessment is unlikely to occur. As they say in the book's closing sentence, sustainability assessment “is about making the world better, one

undertaking at a time”.

The authors cite minimal references along the way, preferring to adopt more of a story-telling approach. Whilst this makes for refreshing reading, the scholar in me was sometimes frustrated with this. But if this approach means that a wider audience (i.e. than the academic community) accesses this book, then it is clearly a strength of the book. I found the use of text boxes that provide summaries of issues, outline sustainability assessment principles and criteria for application of the principles to be very useful. In all cases, they reiterate key points that are explained fully in the supporting text. Similarly, the six appendices expand on the key principles and criteria presented in the book. The first two appendices in particular make linkages with the international literature with references linked to dot-point summaries of the work cited. The appendices provide an excellent guide for practitioners wishing to apply the concepts expounded in the book in practice.

Overall, I am extremely impressed with this book and unconditionally recommend it to all environmental assessment practitioners as an essential reading. It provides the foundation for building truly sustainable assessment processes. Hopefully practitioners will apply and experiment with application of the book’s core principles and criteria within their jurisdictions, and that as the practice of sustainability assessment grows, future publications will share the stories of implementation and learning from experience.