



## Resensies / Reviews

# Sustainability science: a new challenge to the Southern African scientific community – or is it?

**Burns, Michael & Weaver, Alex, eds. 2008. Exploring sustainability science: a Southern African perspective.**

Stellenbosch: African Sun. 625 p. Price: R350,00.

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Science is essentially about asking and answering questions. In short, these questions revolve around what is happening, why it is happening and how we should respond. We are living in a profoundly different era than any other in human history, which poses new questions and challenges to the research community. The level of complexity has increased dramatically to the extent that some questions are considered trans-scientific in that traditional science is unable to provide answers. Moreover, it is argued that science has become estranged, isolated and disconnected from decision and policy making. To deal with this ever-increasing complexity and to reconnect with decision makers, integrative understandings and solutions are sought to deal with questions around poverty alleviation, population growth, rapid urbanisation, loss of biodiversity, increasing energy demand, climate change, et cetera. This is especially true of, and applicable to those researchers exploring questions around sustainability or sustainable development. Sustainability science emerged internationally as a reaction to these challenges. In many ways the sustainability challenge is amplified, more complex and particularly acute within the Southern African region, mainly due to rapid population growth, wide spread poverty and poor governance.

This book presents the first attempt at defining and presenting the concept of sustainability science from a Southern African perspective. The work is the result of a research project/experiment which aimed to assemble a team of researchers from a variety of disciplines, persuade them to explore the concept of sustainability science and challenge them to put the knowledge gained to practical effect. The book pulls together views from a long list of well respected researchers (mainly from the Council for Scientific and Industrial Research) for whom the concept of sustainability science was novel before writing. Therefore, the content of the book is in many instances exploratory in nature, reflecting views of different authors on the how and why of multi-disciplinary thinking and research. As a point of departure the following definition for sustainability science is put forward, which classifies research based on the motivation that inspires it:

Sustainability Science is defined as use-inspired basic research that seeks to learn about the interactions among humans (including their cultural, political, economic and demographical characteristics), their technologies and the environment.

In line with this definition four main themes are covered, namely philosophical and conceptual foundations for sustainability science, transdisciplinarity and knowledge integration, resilience analysis of social ecological systems, and learning from adaptive self-organisation within social-ecological systems.

A particularly strong contribution of the book is that it provides a sound theoretical basis for thinking about sustainability science as well as general research dealing with sustainability issues. Furthermore, it succeeds in introducing diverse views and writing styles from various scientific traditions and disciplines. The individual chapters in many instances reflect a retrospective and introspective view on the current state of knowledge in terms of integrative thinking and multi-disciplinary research within disciplines. The book is therefore strongly recommended to researchers involved in multi-disciplinary as well as sustainability related research, especially within the region.

In conclusion it should be said that some readers might very well question the existence and the validity of sustainability science as a “new branch” of science. Especially the notion of it being use-inspired (as reflected in the definition stated earlier) in aiming to deal with sustainability. The argument could be given that due to the broad definition of sustainability, all research could essentially be

classified as being part of sustainability science. However, the debate around what is meant by sustainability science does not detract from the usefulness of the book, but rather highlights its potential contribution towards thinking about the role of science in providing solutions to the serious sustainability challenges we face globally and in the Southern African region.