

Book reviews

Decision support systems for the management of grazing lands: Emerging issues (Man and the Biosphere Series: Vol II).

Edited by J.W. STUTH and B.G. LYONS. Published by UNESCO and The Parthenon Publishing Group, New York, 1993. 301pp. Price A\$38.

"One of the greatest pains to human nature is the pain of a new idea." This book deals with the growing pains of a new concept — decision support systems (DSS) defined by Stuth and Stafford Smith on page 1 as "helping people make better decisions". Readers won't find reassuring stories of successful adoption or praise from thankful clients, but rather a state-of-the-art snapshot of a vital discipline of grazing-land science. For practitioners, funders, clients, educators and doubters, it makes important reading.

In April 1991, the International Conference on Decision Support Systems for Resource Management was held at Texas A&M University. The keynote speakers provided the basis for the content of this book. In 11 chapters and 33 half-page abstracts, this book covers the diverse range of subjects involved in the development of decision support systems for grazing lands. Topics include a general review of principles, underlying biophysical simulation models, economics, ecology, expert systems, soft systems methodology, spatial information systems, software engineering, training, and detailed case studies from Australia, USA and northern China. The abstracts also include applications from India, South Africa, Scotland, New Zealand, Canada and Russia.

Each chapter deals clearly with the jargon and numerous acronyms that are so much part of "soft and hard" systems and "information technology". The book will benefit those seeking a rapid update on recent developments in these diverse fields, especially practitioners who have become rusty or locked into old technology. In Australia, tertiary education has lagged behind developments in DSS, in part due to the lack of reference material. We found this book very useful in the preparation of lectures supporting demonstrations of current DSS activity.

The authors have been uncompromising and honest in dealing with the many problems that have limited the adoption of DSS. Such honesty and humility derive from the sole objective of

DSS, that is to be useful to the grazing community (i.e. individual graziers to policy makers). As a snapshot (albeit 1991) of the state of this emerging discipline, this book provides a much needed review to warn current practitioners and funders of likely pitfalls (e.g. Inadequate software engineering, chapter 7) and to point the likely pathways for success (e.g. Soft systems, chapter 4; User training, chapter 9).

The book deals with major problems confronting DSS: (1) effective training is dependent on "the participant's willingness to learn and attitude toward continued lifelong learning" (p. 205); (2) the lack of involvement of industry; (3) the lack of analysis of how graziers make decisions; and hence, the perceived (by DSS builders) behaviour of graziers as solely goal-seeking (R. Ison, chapter 4). The extent to which these problems can be overcome by an enthusiastic DSS push rather than by a sceptical client pull is only now being addressed in current activity.

The book is well presented and well edited. It is supported by a conference proceedings and a video. However, more detail could have been provided in each abstract as most occupy only half of the one page allotted.

Eight of the 11 chapters have a senior author from Texas A&M, appropriately identifying this institution as a world leader in the field. Thus, the book offers the experience and methods of an advanced technological society with the demonstrated capability to put a man on the moon. Australian readers will appreciate that we are presently unlikely to have the same human and technological resources to fully implement this received wisdom. Furthermore, our capacity for destructive infighting and "tall poppy syndrome" may prevent the necessary collaboration required to make DSS successful and, hence, lead to the rejection of DSS as a concept for improving our grazing industries. If the concept of "helping people make better decisions" is rejected, where does that leave the rest of rangeland research? This book at least provides a positive approach in detailing the methods that will make DSS happen!

*Greg McKeon and Ken Day
Queensland Department of
Primary Industries*