

BIODIVERSITY: INTEGRATING CONSERVATION AND PRODUCTION

CASE STUDIES FROM AUSTRALIAN FARMS, FORESTS AND FISHERIES

Editors: Ted Lefroy, Kay Bailey, Greg Unwin and Tony Norton



CSIRO
PUBLISHING

© CSIRO 2008

All rights reserved. Except under the conditions described in the *Australian Copyright Act 1968* and subsequent amendments, no part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, duplicating or otherwise, without the prior permission of the copyright owner. Contact **CSIRO PUBLISHING** for all permission requests.

National Library of Australia Cataloguing-in-Publication entry

Biodiversity : integrating conservation and production : case studies from Australian farms, forests and fisheries / editor, Ted Lefroy ... [et al.].

9780643094581 (pbk.)

Bibliography.

Biodiversity – Australia – Case studies

Biodiversity conservation – Australia – Case studies.

Vegetation management – Australia – Case studies.

Plant diversity conservation – Australia – Case studies.

Lefroy, Edward C. (Ted C.)

333.950994

Published by

CSIRO Publishing

150 Oxford St (PO Box 1139)

Collingwood VIC 3066

Australia

Telephone: +61 3 9662 7666

Local call: 1300 788 000 (Australia only)

Fax: +61 3 9662 7555

Email: publishing.sales@csiro.au

Website: www.publish.csiro.au



Front cover

Aerial photo of 'Elverton', Blessington, Tas, courtesy of Michael Castley from Private Forests Tasmania. Photo of people by Jennifer Hemer.

Edited by Adrienne de Kretser

Cover and text design by James Kelly

Original cover concept by Julia Dineen

Set in 10/12.5 Adobe Minion and ITC Stone Sans

Typeset by Desktop Concepts Pty Ltd, Melbourne

Printed in Australia by BPA Print Group

Supported by Australia and New Zealand Banking Group Limited



A 7002 1438242B

Contents

Preface	vii
Contributors	viii
Acknowledgements	x

Conservation and production

1	Science, ethics and emotion in the politics of biodiversity	3
	<i>Pete Hay</i>	
2	Finding opportunity in the challenge	13
	<i>Severn Cullis-Suzuki</i>	
3	Reflections on landscape integration: lessons from the past and principles for the future	21
	<i>David Lindenmayer</i>	
4	Consuming the Earth	31
	<i>Barney Foran</i>	

Personal case studies

5	Balancing the three-legged stool: a case study of forest conversion and conservation	45
	<i>Ian Dickenson, AO</i>	
6	Farming from first principles	55
	<i>David Marsh</i>	
7	Environmental restoration as a precursor to production gains	63
	<i>John and Robyn Ive</i>	
8	Regenerative agriculture: the case for dialogue with nature	75
	<i>Graham Strong</i>	
9	People and their sense of place	89
	<i>Cynthia and Tom Dunbabin</i>	

Groups, communities and catchments

10	Managing floodplains in northern Australia	101
	<i>Tony Searle</i>	
11	The value of biodiversity to integrated pest management	109
	<i>Cam Nicholson</i>	

12	Using production improvements to interest farmers in nature conservation	119
	<i>David Walker and Rob Frend</i>	
13	Testing market-based instruments for conservation in northern Victoria	133
	<i>Carla Miles</i>	
14	Working with farmers to improve habitat for ground-nesting birds	147
	<i>Alexandra Knight and Stuart Whitten</i>	
15	Achieving regional conservation targets through market-based instruments in southern Queensland	155
	<i>Kate Steel</i>	
16	The Australian rice industry's Environmental Champions program	167
	<i>Janelle McGufficke, Louise Adcock, Les Gordon and Leigh Vial</i>	
17	Profitable and biodiverse wool production: the Land, Water & Wool program	177
	<i>Jann Williams and Mary Goodacre</i>	

Research guiding conservation

18	How research influences management: a case study of barramundi in northern Australia	189
	<i>Janet Ley</i>	
19	Tailoring forest management to the habitat needs of the giant velvet worm	205
	<i>Simon Grove, Marie Yee and Laura Borrer Closs</i>	
20	New approaches to tackling fisheries bycatch in tropical prawn trawling	217
	<i>David Maynard</i>	
21	Measuring the biodiversity values of a small-scale farm forestry enterprise in northern Tasmania	225
	<i>Greg Unwin, John Lord and Arthur Lyons</i>	

Conclusions

22	The Tamar Principles	237
	<i>Bernard Lloyd, Ted Lefroy and Kay Bailey</i>	
23	Closing the adaptive management loop: why practical experience is necessary but not sufficient and science is essential but not always right	249
	<i>Ted Lefroy</i>	