

# Contents

<i>Notes on contributors</i>	vii
Foreword: learning and adapting – central features of resilience <i>Carl Folke</i>	xi
Foreword: on learning, resilience and research in environmental education <i>Justin Dillon</i>	xiii
<b>Introduction</b> <i>Marianne E. Krasny, Cecilia Lundholm and Ryan Plummer</i>	1
<b>1. Resilience and learning: a conspectus for environmental education</b> <i>Cecilia Lundholm and Ryan Plummer</i>	13
<b>2. Social–ecological resilience and environmental education: synopsis, application, implications</b> <i>Ryan Plummer</i>	29
<b>3. Learning for resilience, or the resilient learner? Towards a necessary reconciliation in a paradigm of sustainable education</b> <i>Stephen Sterling</i>	45
<b>4. Exploring adaptability through learning layers and learning loops</b> <i>Annette Löf</i>	63
<b>5. Environmental education for social–ecological system resilience: a perspective from activity theory</b> <i>Marianne E. Krasny and Wolff-Michael Roth</i>	78
<b>6. Resilience in learning systems: case studies in university education</b> <i>Nadarajah Sriskandarajah, Richard Bawden, Chris Blackmore, Keith G. Tidball and Arjen E.J. Wals</i>	91
<b>7. Agricultural knowledge in urban and resettled communities: applications to social–ecological resilience and environmental education</b> <i>Soul Shava, Marianne E. Krasny, Keith G. Tidball and Cryton Zazu</i>	105

<b>8. Stewardship, learning, and memory in disaster resilience</b> <i>Keith G. Tidball, Marianne E. Krasny, Erika Svendsen, Lindsay Campbell and Kenneth Helphand</i>	120
<b>9. Participatory action research and environmental learning: implications for resilient forests and communities</b> <i>Heidi L. Ballard and Jill M. Belsky</i>	138
<b>10. Responses to climate change: exploring organisational learning across internationally networked organisations for development</b> <i>Emily Boyd and Henny Osbahr</i>	155
<b>11. Learning for resilience? Exploring learning opportunities in biosphere reserves</b> <i>Lisen Schultz and Cecilia Lundholm</i>	169
<b>12. Environmental education, resilience, and learning: reflection and moving forward</b> <i>Marianne E. Krasny, Cecilia Lundholm and Ryan Plummer</i>	188
<i>Index</i>	195