

How Resource Dependency Can Influence Social Resilience within a Primary Resource Industry*

N. A. Marshall, D. M. Fenton, P. A. Marshall, S. G. Sutton

First published: 22 October 2009

<https://doi.org/10.1526/003601107781799254>

* We wish to thank Neil Adger and Fikret Berkes for comments on an earlier version of the manuscript. We also thank Ameer Abdulla, Rohan Arthur, and James Innes for constructive discussions. We gratefully acknowledge funding from the School of Tropical Environment Studies and Geography, James Cook University, Townsville and the Cooperative Research Centre for Reef Research, Townsville, Australia. Please direct correspondence to: Nadine Marshall, (ph) 61 7 4753 8555, (fx) 61 7 4753 8600, nadine.marshall@csiro.au, CSIRO, Davies Laboratory, PMB Aitkenvale, Queensland, Australia 4814.



PDF

Abstract

ABSTRACT Maintaining a healthy balance between human prosperity and environmental integrity is at the core of the principles of Ecological Sustainable Development. Resource-protection policies are frequently implemented so as to regulate the balance between resource access and use, however, they can inadvertently compromise the ability of resource users to adapt and be resilient. Resource users who are especially dependent on a resource are more seriously compromised. But how do we define and measure resource dependency? And how do we assess its ability to influence social resilience? In this study, a conceptual model of resource dependency is developed in terms of: (i) occupational attachment, (ii) attachment to place, (iii) employability, (iv) family attitude to change, (v) business size, (vi) business approach, (vii) financial situation, (viii) level of specialisation, (ix) time spent harvesting, and (x) interest in and knowledge of the environment. The model of resource dependency and its effect on social resilience are (quantitatively and qualitatively) tested and explored using the commercial fishing industry in North Queensland, Australia. Results show that occupational attachment and employability were important influences as were business size and approach. Results can be used to identify vulnerability to institutional change and guide policy

This website utilizes technologies such as cookies to enable essential site functionality, as well as for analytics, personalization, and targeted advertising. You may change your settings at any time or accept the default settings. You may close this banner to continue with only essential cookies. [Privacy Policy](#)

Manage Preferences

Accept All

Reject Non-Essential

Adger, W. N. 2000. "Social and Ecological Resilience: Are They Related?." *Progress in Human Geography* 24: 347-64.

[Web of Science®](#) | [Google Scholar](#)

Adger, W. N., P. M. Kelly, A. Winkels, L. Q. Huy, and C. Locke. 2002. "Migration, Remittances, Livelihood Trajectories, and Social Resilience." *Ambio* 31: 358-66.

[PubMed](#) | [Web of Science®](#) | [Google Scholar](#)

Albrecht, S. L. and J. G. Thompson. 1988. "The Place of Attitudes and Perceptions in Social Impact Assessment." *Society and Natural Resources* 1: 69-80.

[Web of Science®](#) | [Google Scholar](#)

Allison, E. H. and R. J. Hobbs. 2004. "Resilience, Adaptive Capacity, and the "Lock-in Trap" of the Western Australian Agricultural Region." *Ecology and Society* 9. Retrieved May 23 2007 (<http://www.ecologyandsociety.org/vol9/iss1/art8>).

[Google Scholar](#)

Bailey, C. 1997. "Lessons From Indonesia's 1980 Trawler Ban." *Marine Policy* 21: 225-35.

[Web of Science®](#) | [Google Scholar](#)

Bailey, C. and C. Pomeroy. 1996. "Resource Dependency and Development Options in Coastal Southeast Asia." *Society and Natural Resources* 9: 191-99.

[Web of Science®](#) | [Google Scholar](#)

Barnes, T., J. R. Hayter, and E. Hay. 1999. "'Too Young to Retire, Too Bloody Old to Work': Forest Industry Restructuring and Community Response in Port Alberni, British Columbia." *The Forestry Chronicle* 75: 781-87.

[Web of Science®](#) | [Google Scholar](#)

This website utilizes technologies such as cookies to enable essential site functionality, as well as for analytics, personalization, and targeted advertising. You may change your settings at any time or accept the default settings. You may close this banner to continue with only essential cookies. [Privacy Policy](#)

Manage Preferences

Accept All

Reject Non-Essential

Bennett, K. 2001. "Voicing Power: Women, Family Farming and Patriarchal Webs." Working Paper 62. Centre for Rural Economy Working Paper Series. University of Newcastle upon Tyne.

[Google Scholar](#) 

Berkes, F. and C. Folke. 1998. "Linking Social and Ecological Systems for Resilience and Sustainability." Pp. 1-25 in *Linking Social and Ecological Systems: Management Practices and Social Mechanisms for Building Resilience*, edited by F. Berkes and C. Folke. Cambridge: Cambridge University Press.

[Web of Science®](#)  | [Google Scholar](#) 

Bliss, J. C., T. L. Walkingstick, and C. Bailey. 1998. "Development or Dependency?". *Journal of Forestry* 96: 24-30.

[Web of Science®](#)  | [Google Scholar](#) 

Bolton, R. 1992. "Place Prosperity via People Prosperity' Revisited: An Old Issue with a New Angle. *Urban Studies* 29: 185-203.

[Web of Science®](#)  | [Google Scholar](#) 

Boserup, E. 1981. *Population and Technological Change: A Study of Long-term Trends*. Chicago: University of Chicago Press.

[Google Scholar](#) 

Bradley, D. and A. Grainger. 2004. "Social Resilience as a Controlling Influence on Desertification in Senegal. *Land Degradation and Development* 15: 451-70.

[Web of Science®](#)  | [Google Scholar](#) 

Brunckhorst, D. J. 2002. "Institutions to Sustain Ecological and Social Systems. *Ecological Management and Restoration* 3: 108-16.

[Google Scholar](#) 

This website utilizes technologies such as cookies to enable essential site functionality, as well as for analytics, personalization, and targeted advertising. You may change your settings at any time or accept the default settings. You may close this banner to continue with only essential cookies. [Privacy Policy](#)

Manage Preferences

Accept All

Reject Non-Essential

[Google Scholar](#) 

Canan, P. and M. Hennessey. 1983. "Community Values as the Context for Interpreting Social Impacts." *Environmental Impact Assessment Review* 3/4: 351-65.

[Google Scholar](#) 

Carpenter, S. and W. A. Brock. 2004. "Spatial Complexity, Resilience and Policy Diversity: Fishing on Lake-Rich Landscapes." *Ecology and Society* 9. Retrieved May 23 2007 (<http://www.ecologyandsociety.org/vol9iss1art8>).

[Web of Science®](#)  | [Google Scholar](#) 

Carpenter, S. and L. Gunderson. 2001. "Coping with Collapse: Ecological and Social Dynamics in Ecosystem Management." *Bioscience* 51: 451-57.

[Web of Science®](#)  | [Google Scholar](#) 

Carroll, M. S. and R. G. Lee. 1990. "Occupational Community and Identity Among Pacific NorthWestern Loggers: Implications for Adapting to Economic Changes." Pp. 141-54 in *Community and Forestry: Continuities in the Sociology of Natural Resources*, edited by R. G. Lee, D. R. Field, and W. R. J. Burch. Colorado: Westview Press.


[Google Scholar](#) 

Chambers, R. 1989. "Editorial Introduction: Vulnerability, Coping and Policy." *Institute of Development Studies Bulletin* 20: 1-7.

[Web of Science®](#)  | [Google Scholar](#) 

Chen, P. Y. and P. M. Popovich. 2002. *Correlation: Parametric and Nonparametric Measures*. Newbury Park, CA: Sage.

[Google Scholar](#) 

This website utilizes technologies such as cookies to enable essential site functionality, as well as for analytics, personalization, and targeted advertising. You may change your settings at any time or accept the default settings. You may close this banner to continue with only essential cookies. [Privacy Policy](#) 

Manage Preferences

Accept All

Reject Non-Essential

Crean, K. 1999. "Centralised and Community-Based Fisheries Management Strategies: Case Studies from Two Fisheries Dependent Archipelagos. *Marine Policy* 23: 243-57.

[Web of Science®](#) | [Google Scholar](#)

Curtis, A., M. van Nouhuys, W. Robinson, and J. Mackay. 2000. "Exploring Landcare Effectiveness Using Organisational Theory. *Australian Geographer* 31: 349-66.

[Web of Science®](#) | [Google Scholar](#)

Daniel, T. C. 1988. "Human Values and Natural Systems: A Psychologist's Response. *Society and Natural Resources* 1: 285-90.

[Web of Science®](#) | [Google Scholar](#)

Farmer, F. L. and S. L. Albrecht. 1998. "The Biophysical Environment and Human Health: Toward Understanding the Reciprocal Effects. *Society and Natural Resources* 11: 707-17.

[Web of Science®](#) | [Google Scholar](#)

Fenton, D. M. and N. A. Marshall. 2001. *A Guide to the Fishers of Queensland. Part A. TRC-Analysis and Social Profiles of Queensland's Commercial Fishing Industry*. CRC Reef Research Centre: Townsville, Australia.

[Google Scholar](#)

Fenton, D. M. and G. Carr. 2001. "Social Change and Agricultural Extension: A Conceptual Framework and Research Methodology." Report prepared for The Department of Natural Resources and Environment, Victoria, Australia.

[Google Scholar](#)

Field, D. R. and W. R. J. Burch. 1988. *Rural Sociology and the Environment*. Connecticut: Greenwood Press.

[Google Scholar](#)

This website utilizes technologies such as cookies to enable essential site functionality, as well as for analytics, personalization, and targeted advertising. You may change your settings at any time or accept the default settings. You may close this banner to continue with only essential cookies. [Privacy Policy](#)

Manage Preferences

Accept All

Reject Non-Essential

Folke, C. 2001. "Social-Ecological Resilience and Behavioural Responses." Discussion Paper. Retrieved May 23 2007 (<http://www.beijer.kva.sepublicationspdf-archiveDisc155.pdf>).

Folke, C., S. Carpenter, T. Elmqvist, L. Gunderson, C. S. Holling, B. Walker, D. N. Bengtson, F. Berkes, J. Colding, K. Danell, M. Falkenmark, L. Gordon, R. E. Kasperson, N. Kautsky, A. Kinzig, S. Levin, K. Maler, F. Moberg, L. Ohlsson, E. Ohlsson, W. V. Reid, J. Rockstrom, H. Savenije, and U. Svedin. 2002. "Resilience and Sustainable Development: Building Adaptive Capacity in a World of Transformations." Scientific Background Paper on Resilience for the process of The World Summit on Sustainable Development on behalf of The Environmental Advisory Council to the Swedish Government. Retrieved May 23 2007 (<http://www.unisdr.orgengrisk-reduction/wssdresilience-sd.pdf>).

Folke, C. and L. Gunderson. 2002. "A Kaleidoscope of Change." *Conservation Ecology* 6. Retrieved May 23 2007 (<http://www.consecol.orgvol6iss2art19>).

Force, J. E., G. E. Machlis, C. Zhang, and A. Kearney. 1993. "The Relationship Between Timber Production, Local Historical Events, and Community Social Change: A Quantitative Case Study." *Forest Science* 39: 722-42.

Freudenburg, W. R. 1992. "Addictive Economies: Extractive Industries and Vulnerable Localities in a Changing World Economy." *Rural Sociology* 57: 305-32.

Freudenburg, W. R. and S. Frickel. 1994. "Digging Deeper: Mining-Dependent Regions in Historical Perspective." *Rural Sociology* 59: 266-88.

This website utilizes technologies such as cookies to enable essential site functionality, as well as for analytics, personalization, and targeted advertising. You may change your settings at any time or accept the default settings. You may close this banner to continue with only essential cookies. [Privacy Policy](#)

Manage Preferences

Accept All

Reject Non-Essential

[Web of Science®](#) | [Google Scholar](#)

Gramling, R. and W. R. Freudenburg. 1992. "Opportunity-Threat, Development, and Adaptation: Toward a Comprehensive Framework for Social Impact Assessment. *Rural Sociology* 57: 216-34.

[Web of Science®](#) | [Google Scholar](#)

Green, R. 1999. "Meaning and Form in Community Perception of Town Character. *Journal of Environmental Psychology* 19: 311-29.

[Web of Science®](#) | [Google Scholar](#)

Gunderson, L. 1999. "Resilience, Flexibility and Adaptive Management - Antidotes for Spurious Certitude? *Conservation Ecology* 3. Retrieved May 23 2007 (<http://www.consecol.orgvol13iss1art7>).

[Google Scholar](#)

Gunderson, L., C. Folke, M. Lee, and C. S. Holling. 2002. "In Memory of Mavericks. *Conservation Ecology* 6. Retrieved May 23 2007 (<http://www.consecol.orgvol6iss2art19>).

[Google Scholar](#)

Gustafson, P. 2001. "Meanings of Place: Everyday Experience and Theoretical Conceptualisations. *Journal of Environmental Psychology* 21: 5-16.

[Web of Science®](#) | [Google Scholar](#)

Hampshire, K., S. Bell, and G. Wallace. 2004. "Real Poachers and Predators: Shades of Meaning in Local Understanding of Threats to Fisheries. *Society and Natural Resources* 17: 305-18.

[Web of Science®](#) | [Google Scholar](#)

Hanna, S. 1996. "Creating User-Group Vested Interest in Fishery Management Outcomes: A Case Study. Fisheries Resource Utilization and Policy. *Proceedings of the World Fisheries Congress. Theme 2*, edited by R. M. Meyer, C. Zhang, and M. L. Windsor. Lebanon, NH, USA: Science Publishers.

This website utilizes technologies such as cookies to enable essential site functionality, as well as for analytics, personalization, and targeted advertising. You may change your settings at any time or accept the default settings. You may close this banner to continue with only essential cookies. [Privacy Policy](#)

Manage Preferences

Accept All

Reject Non-Essential

Henderson, H. 1994. "Paths to Sustainable Development. *Futures* 26: 125–37.

[Web of Science®](#) | [Google Scholar](#)

Hidalgo, M. C. and B. Hernandez. 2001. "Place Attachment: Conceptual and Empirical Questions. *Journal of Environmental Psychology* 21: 273–81.

[Web of Science®](#) | [Google Scholar](#)

Hiedanpaa, J. 2005. "The Edges of Conflict and Consensus: A Case for Creativity in Regional Forest Policy in Southwest Finland. *Ecological Economics* 55: 485–98.

[Web of Science®](#) | [Google Scholar](#)

Holling, C. S. 1973. "Resilience and Stability of Ecological Systems. *Annual Review in Ecology and Systematics* 4: 1–23.

[Google Scholar](#)

Holling, C. S. 2004. "From Complex Regions to Complex Worlds. *Ecology and Society* 9. Retrieved May 23 2007 (<http://www.ecologyandsociety.org/vol9iss1art11>).

[Google Scholar](#)

Holling, C., S. F. Berkes, and C. Folke. 1998. " Science, Sustainability and Resource Management." Pp. 342–62 in *Linking Social and Ecological Systems. Management Practices and Social Mechanisms for Building Resilience*, edited by F. Berkes and C. Folke. Cambridge: Cambridge University Press.

[Google Scholar](#)

Holling, C. S. and G. K. Meffe. 1996. "Command and Control and the Pathology of Natural Resource Management. *Conservation Biology* 10: 328–37.

[Web of Science®](#) | [Google Scholar](#)

This website utilizes technologies such as cookies to enable essential site functionality, as well as for analytics, personalization, and targeted advertising. You may change your settings at any time or accept the default settings. You may close this banner to continue with only essential cookies. [Privacy Policy](#)

Manage Preferences

Accept All

Reject Non-Essential

Hughes, T. P., D. R. Bellwood, C. Folke, R. S. Steneck, and J. Wilson. 2005. "New Paradigms for Supporting the Resilience of Marine Ecosystems. *Trends in Ecology and Evolution* 20. Retrieved May 23 2007 (http://doc.nprb.org/webBSIERPHughes20et20al202005_ecosystem202020resilience.pdf).

[Web of Science®](#) | [Google Scholar](#)

Hughey, K. F. D. 2000. "User Led Initiatives in Promoting Sustainable Commercial Fisheries Management - Comparing the Divergent Approaches of Australia and New Zealand." Pp. 139-46 in *Management for Sustainable Ecosystems*, edited by P. Hale, A. Petrie, D. Moloney, and P. Sattler. Brisbane: Centre for Conservation Biology, The University of Queensland.

[Google Scholar](#)

Humphrey, C. R. 1994. "Introduction: Natural Resource-Dependent Communities and Persistent Rural Poverty in the U. S. - Part II. *Society and Natural Resources* 7: 201-3.

[Web of Science®](#) | [Google Scholar](#)

Hundloe, T. D. and P. McPhee. 2002. *The Economic Impacts of the GBRMPA RAP on the Commercial Seafood Industry*. Brisbane: The University of Queensland.

[Google Scholar](#)

Illo, J. F. I. and J. B. Polo. 1990. *Fishers, Traders, Farmers, Wives. The Life Stories of Ten Women in a Fishing Village*. Manila: Institute of Philippine Culture.

[Web of Science®](#) | [Google Scholar](#)

Jabareen, Y. 2004. "A Knowledge Map for Describing Variegated and Conflict Domains of Sustainable Development. *Journal of Environmental Planning and Management* 47: 623-42.

[Google Scholar](#)

Johnson, T. G. and J. I. Stallman. 1994. "Human Capital Investment in Resource-Dominated Economies. *Society*

This website utilizes technologies such as cookies to enable essential site functionality, as well as for analytics, personalization, and targeted advertising. You may change your settings at any time or accept the default settings. You may close this banner to continue with only essential cookies. [Privacy Policy](#)

Manage Preferences

Accept All

Reject Non-Essential

King, L. A. and V. L. Hood. 1999. "Ecosystem Health and Sustainable Communities. *Ecosystem Health* 5: 49-57.

[Web of Science®](#) | [Google Scholar](#)

King, T. F. 1998. "How the Archaeologists Stole Culture: A Gap in American Environmental Impact Assessment Practice and How to Fill It. *Environmental Impact Assessment Review* 18: 117-33.

[Google Scholar](#)

Krannich, R. S. and B. Zollinger. 1997. "Pursuing Rural Community Development in Resource-Dependent Areas: Obstacles and Opportunities. *Research in Community Sociology* 7: 201-22.

[Google Scholar](#)

Levin, S., S. Barrett, S. Aniyar, W. Baumol, C. Bliss, B. Bolin, P. Dasgupta, P. R. Ehrlich, C. Folke, I. Gren, C. S. Holling, A. Jansson, B. Jansson, K. Maler, D. Martin, C. Perrings, and E. Sheshinski. 1998. "Resilience in Natural and Socioeconomic Systems. *Environment and Development Economics* 3: 222-35.

[Google Scholar](#)

Locke, C., W. N. Adger, and M. Kelly. 2000. "Changing Places Environmental Impact of Migration. *Environment* 42: 24-39.

[Web of Science®](#) | [Google Scholar](#)

Ludwig, D., B. Walker, and C. S. Holling. 1997. "Sustainability, Stability and Resilience. *Conservation Ecology* 1. Retrieved May 23 2007 (<http://www.consecol.org/vol1iss1art7>).

[Web of Science®](#) | [Google Scholar](#)

Machlis, G. E. and J. E. Force. 1988. "Community Stability and Timber-Dependent Communities. *Rural Sociology* 53: 220-34.

[Web of Science®](#) | [Google Scholar](#)

This website utilizes technologies such as cookies to enable essential site functionality, as well as for analytics, personalization, and targeted advertising. You may change your settings at any time or accept the default settings. You may close this banner to continue with only essential cookies. [Privacy Policy](#)

Manage Preferences

Accept All

Reject Non-Essential

Manfredo, M. J. and A. A. Dayer. 2004. "Concepts for Exploring the Social Aspects of Human-Wildlife Conflict in a Global Context. *Human Dimensions of Wildlife* 9: 317-28.

[Google Scholar](#)

Marsh, A. and J. Williamson. 2001. "Early School Leavers in Rural Australia: Are They All 'At Risk'?. *Rural Society* 9: 443-54.

[Google Scholar](#)

Marshall, N. A. 2006. A Conceptual and Operational Understanding of Social Resilience in a Primary Resource Industry. PhD Dissertation. School of Tropical Studies and Geography, James Cook University, Townsville, Australia.

[Google Scholar](#)

Marshall, N. A. 2007. "Can Policy Perception Influence Social Resilience to Policy Change? *Fisheries Science* Forthcoming.

[Google Scholar](#)

Marshall, N. A. and P. A. Marshall. 2007. "Conceptualising and Operationalising Social Resilience within Commercial Fisheries in Northern Australia. *Ecology and Society* 12. Retrieved May 23 2007: (<http://www.ecologyandsociety.org/vol12iss1/art1>).

[Google Scholar](#)

McCay, B. J. 1996. "Participation of Fishers in Fisheries Management. Fisheries Resource Utilization and Policy." Pp. 60-75 in *Proceedings of the World Fisheries Congress, Theme 2*, edited by R. M. Meyer, C. Zhang, and M. L. Windsor. Lebanon, NH, USA, Science Publishers, Inc.:60-75.

[Google Scholar](#)

McPhee, D. P. and T. D. Loveday. 2000. "The Queensland Fishing Industry and Ecologically Sustainable

This website utilizes technologies such as cookies to enable essential site functionality, as well as for analytics, personalization, and targeted advertising. You may change your settings at any time or accept the default settings. You may close this banner to continue with only essential cookies. [Privacy Policy](#)

Manage Preferences

Accept All

Reject Non-Essential

Mitchell, J. C. 1974. "Social Networks." Pp. 279-97 in *Social Networks in Urban Settings*, edited by J. C. Mitchell. Manchester: University of Manchester.

[Google Scholar](#) 

Nord, M. 1994. "Natural Resources and Persistent Poverty: In Search of the Nexus. *Society and Natural Resources* 7: 205-20.

[Web of Science®](#)  | [Google Scholar](#) 

North, D. 1990. "*Institutions, Institutional Change and Economic Performance.*" Cambridge: Cambridge University Press.

[Google Scholar](#) 

Nunnally, J. C. 1978. *Psychometric Theory* (2d. ed.). New York: McGraw-Hill.

[Google Scholar](#) 

Ogburn, W. F. 1972. "Fixity and Persistence in Society." Pp. 46-72 in *Social Change*, edited by R. Nisbet. Oxford: Basil Blackwell Publishers.

[Google Scholar](#) 

Olsson, P., C. Folke, and T. Hahn. 2004. "Social-Ecological Transformation for Ecosystem Management: the Development of Adaptive Co-management of a Wetland in Southern Sweden. *Ecology and Society* 9. Retrieved May 23 2007 (<http://www.ecologyandsociety.org/vol9iss4art2>).

[Web of Science®](#)  | [Google Scholar](#) 

Overdevest, C. and G. P. Green. 1995. "Forest Dependence and Community Well-Being: A Segmented Market Approach. *Society and Natural Resources* 8: 111-31.

[Web of Science®](#)  | [Google Scholar](#) 

This website utilizes technologies such as cookies to enable essential site functionality, as well as for analytics, personalization, and targeted advertising. You may change your settings at any time or accept the default settings. You may close this banner to continue with only essential cookies. [Privacy Policy](#)

Manage Preferences

Accept All

Reject Non-Essential

Poggie, J. J. and C. Gersuny. 1974. "Fishermen of Galilee. The Human Ecology of a New England Coastal Community." *Marine Bulletin Series* No. 17 National Oceanic and Atmospheric Administration, Rhode Island University, Kingston.

[Google Scholar](#)

Reed, M. G. 1999. "'Jobs Talk': Retreating from the Social Sustainability of Forestry Communities. *The Forestry Chronicle* 75: 755-63.

[Web of Science®](#) | [Google Scholar](#)

Rickson, R., J. Western, and R. Burdge. 1988. "Theoretical Bases of Social Impact Assessment." Pp. 1-14 in *Papers on Assessing the Social Impact of Development*, edited by R. A. Hindmarsh, T. Hundloe, G. T. McDonald, and R. E. Rickson. Brisbane: Institute of Applied Environmental Research, Griffith University.

[Google Scholar](#)

Rickson, R. E., J. S. Western, and R. J. Burdge. 1990. "Social Impact Assessment: Knowledge and Development. *Environmental Impact Assessment Review* 10: 1-10.

[Google Scholar](#)

Salaman, G. 1974. *Community and Occupation*. Cambridge: Cambridge University Press.

[Google Scholar](#)

Smith, S. 1995. "Social Implications of Changes in Fisheries Regulations for Commercial Fishing Families. *Fisheries* 20: 24-26.

[Web of Science®](#) | [Google Scholar](#)

Smith, S., S. J. Jacob, M. Jepson, and G. Israel. 2003. "After the Florida Net Ban: The Impacts on Commercial Fishing Families. *Society and Natural Resources* 16: 39-59.

This website utilizes technologies such as cookies to enable essential site functionality, as well as for analytics, personalization, and targeted advertising. You may change your settings at any time or accept the default settings. You may close this banner to continue with only essential cookies. [Privacy Policy](#)

Manage Preferences

Accept All

Reject Non-Essential

Sonn, C. C. and A. T. Fisher. 1998. "Sense of Community: Community Resilient Responses to Oppression and Change." *Journal of Community Psychology* 26: 457-72.

[Web of Science®](#) | [Google Scholar](#)

Sorenson, R. L. and K. Kaye. 1999. "Conflict Management Strategies Used in Successful Family Businesses." *Family Business Review* 12: 133-46.

[Google Scholar](#)

Spector, P. E. 1992. *Summated Rating Scale Construction. An Introduction*. Newbury Park, CA: Sage.

[Google Scholar](#)

Stedman, R. C. 1999. "Sense of Place as an Indicator of Community Sustainability." *The Forestry Chronicle* 75: 765-70.

[Web of Science®](#) | [Google Scholar](#)

Stemler, S. 2001. "An Overview of Content Analysis." *Practical Assessment, Research & Evaluation* 7. Retrieved May 23 2007 (<http://pareonline.net/getvn.asp?v=7&n=17>).

[Google Scholar](#)

Tabachnick, B. G. and L. S. Fidell. 1996. *Using Multivariate Statistics, 3rd Edition*. New York: Harper Collins College Publishers.

[Google Scholar](#)

Trosper, R. L. 2004. "Policy Transformations in the US Forest Sector, 1970-2000: Implications for Sustainable Use and Resilience." Pp. 328-51 in *Navigating Social-Ecological Systems. Building Resilience for Complexity and Change*, edited by F. Berkes, J. Colding, and C. Folke. Cambridge: Cambridge University Press.

[Google Scholar](#)

This website utilizes technologies such as cookies to enable essential site functionality, as well as for analytics, personalization, and targeted advertising. You may change your settings at any time or accept the default settings. You may close this banner to continue with only essential cookies. [Privacy Policy](#)

Manage Preferences

Accept All

Reject Non-Essential

Underwood, A. J. 1997. *Experiments in Ecology. Their Logical Design and Interpretation Using Analysis of Variance*. Cambridge: Cambridge University Press.

[Google Scholar](#) 

Weber, R. P. 1985. *Basic Content Analysis*. Beverly Hills, CA: Sage.

[Google Scholar](#) 

L. E. Williams, ed. 2002. *Queensland's Fisheries Resources. Current Condition and Current Trends 1988-2000*. Brisbane, Queensland: Department of Primary Industries.

[Google Scholar](#) 

Wingard, J. D. 2000. "Community Transferable Quotas: Internalizing Externalities and Minimizing Social Impacts of Fisheries Management. *Human Organization* 59: 48-57.

[Web of Science®](#)  | [Google Scholar](#) 


Zeller, D. and E. G. Carmines. 1980. *Measurement in the Social Sciences*. Cambridge: Cambridge University Press.

[Google Scholar](#) 

Citing Literature

[Download PDF](#)

ABOUT WILEY ONLINE LIBRARY

This website utilizes technologies such as cookies to enable essential site functionality, as well as for analytics, personalization, and targeted advertising. You may change your settings at any time or accept the default settings. You may close this banner to continue with only essential cookies. [Privacy Policy](#) 

[Manage Preferences](#)

[Accept All](#)

[Reject Non-Essential](#)

Contact Us
Training and Support
DMCA & Reporting Piracy
Sitemap

OPPORTUNITIES

Subscription Agents
Advertisers & Corporate Partners

CONNECT WITH WILEY

The Wiley Network
Wiley Press Room

Copyright © 1999-2026 John Wiley & Sons, Inc or related companies. All rights reserved, including rights for text and data mining and training of artificial intelligence technologies or similar technologies.

WILEY

This website utilizes technologies such as cookies to enable essential site functionality, as well as for analytics, personalization, and targeted advertising. You may change your settings at any time or accept the default settings. You may close this banner to continue with only essential cookies. [Privacy Policy](#)



Manage Preferences

Accept All

Reject Non-Essential