

ENVSCI203

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1.
Worm B, Hilborn R, Baum JK, Branch TA, Collie JS, Costello C, et al. Rebuilding Global Fisheries. *Science*. 2009 Jul 31;325(5940):578–85.
 2.
Pauly D, Christensen V, Gu  nette S, Pitcher TJ, Sumaila UR, Walters CJ, et al. Towards sustainability in world fisheries. *Nature*. 2002 Aug 8;418(6898):689–95.
 3.
Heino M, Enberg K. Sustainable Use of Populations and Overexploitation. In: *Encyclopedia of life sciences* [Internet]. New York: Facts On File; 2009. Available from: <http://doi.wiley.com/10.1002/9780470015902.a0020476>
 4.
Gillman M. Population Dynamics: Introduction. In: *Encyclopedia of life sciences* [Internet]. New York: Facts On File; 2009. Available from: <http://doi.wiley.com/10.1038/npg.els.0003164>
 5.
Donovan TM, Welden CW. Spreadsheet exercises in conservation biology and landscape ecology. Sunderland, Mass: Sinauer Associates; 2002.
 - 6.

Howard AD. Geomorphological systems; equilibrium and dynamics. *American Journal of Science*. 1965 Apr 1;263(4):302–12.

7.

Botsford LW. The Management of Fisheries and Marine Ecosystems. *Science*. 1997 Jul 25;277(5325):509–15.

8.

Bracken LJ, Wainwright J. Geomorphological equilibrium: myth and metaphor? *Transactions of the Institute of British Geographers*. 2006 Jun 1;31(2):167–78.

9.

Bock RK, Krischer W. The Data Analysis BriefBook [Internet]. Vol. Accelerator Physics. Berlin, Heidelberg: Springer Berlin Heidelberg; 1998. Available from: <http://dx.doi.org/10.1007/978-3-662-03725-6>

10.

Coe MJ, Cumming DH, Phillipson J. Biomass and production of large African herbivores in relation to rainfall and primary production. *Oecologia*. 1976;22(4):341–54.

11.

Easton VJ, McColl JH. Statistics Glossary [Internet]. 2000. Available from: <http://www.stats.gla.ac.uk/steps/glossary/index.html>

12.

Lane DM. HyperStat Online: An Introductory Statistics Textbook and Discussion of whether most published research is false [Internet]. 2003. Available from: <http://davidmlane.com/hyperstat/>

13.

Lowry R. Inferential Statistics [Internet]. 2003. Available from:

<http://vassarstats.net/textbook/>

14.

Quinn GP, Keough MJ. Experimental design and data analysis for biologists. Cambridge, UK: Cambridge University Press; 2002.

15.

Rowntree D. Statistics without tears: a primer for non-mathematicians. Classic ed. Vol. Allyn and Bacon classics. Boston: Allyn and Bacon; 2004.

16.

Sokal RR, Rohlf FJ. Biometry: the principles and practice of statistics in biological research. 3rd ed. New York: Freeman; 1995.

17.

StatSoft. Electronic Statistics Textbook [Internet]. 2013. Available from: <https://statisticasoftware.wordpress.com/2012/04/12/electronic-statistics-textbook/>

18.

Castree N, Rogers A, Sherman DJ, Ebooks Corporation. Models, modelling, and geography. In: Questioning geography: fundamental debates [Internet]. Malden, MA: Blackwell Pub; 2005. Available from: <http://auckland.ebib.com.ezproxy.auckland.ac.nz/patron/Read.aspx?p=243571&pg=220>

19.

Müller P. Constructing climate knowledge with computer models. Wiley Interdisciplinary Reviews: Climate Change. 2010;1(4):565–80.

20.

The Method of Multiple Working Hypotheses. Science [Internet]. 1890;15(366):92–6.

Available from: <http://www.jstor.org.ezproxy.auckland.ac.nz/stable/1764336>

21.

John R. Platt. Strong Inference. *Science* [Internet]. 1964;146(3642):347–53. Available from: <http://www.jstor.org.ezproxy.auckland.ac.nz/stable/1714268>

22.

Mulligan M, Wainwright J. Modelling and model building. In: Wainwright J, Mulligan M, editors. *Environmental Modelling* [Internet]. New York: John Wiley & Sons, Ltd.; 2005. p. 7–68. Available from: <http://site.ebrary.com.ezproxy.auckland.ac.nz/lib/auckland/reader.action?ppg=27&docID=10650971&tm=1453163605208>

23.

Agar M. My Kingdom for a Function: Modeling Misadventures of the Innumerate. *Journal of Artificial Societies and Social Simulation* [Internet]. 2003;6(3). Available from: <http://jasss.soc.surrey.ac.uk/6/3/8.html>

24.

Gotelli NJ, Ellison AM. A primer of ecological statistics. In: *A primer of ecological statistics*. Sunderland, Mass: Sinauer Associates Publishers; 2004.

25.

Murray AB. Contrasting the goals, strategies, and predictions associated with simplified numerical models and detailed simulations. In: Wilcock PR, Iverson RM, editors. *Prediction in geomorphology* [Internet]. Washington, D.C.: American Geophysical Union; 2003. p. 151–65. Available from: <http://onlinelibrary.wiley.com.ezproxy.auckland.ac.nz/doi/10.1029/135GM11/summary>

26.

Oreskes N. The role of quantitative models in science. In: Canham CDW, Cole J, Lauenroth WK, editors. *Models in ecosystem science*. Princeton, N.J.: Princeton University Press; 2003. p. 14–31.

27.

Hatamian TS. Mathematical fortune-telling. *Complexity*. 2001;6(5):27-40.

28.

Epstein JM. Why Model? *Journal of Artificial Societies and Social Simulation* [Internet]. 2008;11(4). Available from: <http://jasss.soc.surrey.ac.uk/11/4/12.html>

29.

Thompson NS, Derr P. Contra Epstein, Good Explanations Predict. *Journal of Artificial Societies and Social Simulation* [Internet]. 2009;12(9). Available from: <http://jasss.soc.surrey.ac.uk/12/1/9.html>

30.

Lazar N. Ockham's Razor. *Wiley Interdisciplinary Reviews: Computational Statistics*. 2010;2(2):243-6.

31.

George L. W. Perry. Modelling and Simulation. In: *A companion to environmental geography* [Internet]. Chichester, U.K.: Wiley-Blackwell; 2009. Available from: <https://onlinelibrary.wiley.com/doi/10.1002/9781444305722.ch20>

32.

Winsberg E. Computer Simulation and the Philosophy of Science. *Philosophy Compass*. 2009;4(5):835-45.

33.

Pidgeon N, Fischhoff B. The role of social and decision sciences in communicating uncertain climate risks. *Nature Climate Change*. 2011;1(1):35-41.

34.

Smith E. Uncertainty analysis. In: Encyclopedia of environmetrics. Chichester: Wiley; 2002.

35.

Walker WE, Harremoes P, Rotmans J, Van Der Sluijs JP, Van Asselt MBA, Janssen P, et al. Defining uncertainty: a conceptual basis for uncertainty management in model-based decision support. Integrated Assessment [Internet]. 2003;4(1):5–17. Available from: http://journals.sfu.ca.ezproxy.auckland.ac.nz/int_assess/index.php/iaj/article/view/122/79

36.

Mayer DG, Butler DG. Statistical validation. Ecological Modelling [Internet]. 1993;68(1–2):21–32. Available from: <https://www.sciencedirect.com/science/article/pii/0304380093901052?via%3Dihub>

37.

Spiegelhalter D, Pearson M, Short I. Visualizing Uncertainty About the Future. Science. 2011;333(6048):1393–400.

38.

Volker Grimm, Eloy Revilla, Uta Berger, Florian Jeltsch, Wolf M. Mooij, Steven F. Railsback, Hans-Hermann Thulke, Jacob Weiner, Thorsten Wiegand and Donald L. DeAngelis. Pattern-Oriented Modeling of Agent-Based Complex Systems: Lessons from Ecology. Science [Internet]. 2005;310(5750):987–91. Available from: <http://www.jstor.org.ezproxy.auckland.ac.nz/stable/3842807>

39.

Naomi Oreskes, Kristin Shrader-Frechette and Kenneth Belitz. Verification, Validation, and Confirmation of Numerical Models in the Earth Sciences. Science [Internet]. 1994;263(5147):641–6. Available from: <http://www.jstor.org.ezproxy.auckland.ac.nz/stable/2883078>

40.

Lenton TM, Williams HTP. On the origin of planetary-scale tipping points. *Trends in Ecology & Evolution*. 2013;28(7):380–2.

41.

Sterman JD. Learning In and About Complex Systems. *Reflections* [Internet]. 2000;1(3):24–51. Available from: <https://onlinelibrary.wiley.com/doi/abs/10.1002/sdr.4260100214>

42.

DeAngelis DL, Mooji WM. In praise of mechanistically rich models. In: Canham CDW, Cole J, Lauenroth WK, editors. *Models in ecosystem science*. Princeton, N.J.: Princeton University Press; 2003. p. 63–83.

43.

Murphy BP, Bowman DMJS. What controls the distribution of tropical forest and savanna? *Ecology Letters*. 2012;15(7):748–58.

44.

H. Charles Romesburg. *Wildlife Science: Gaining Reliable Knowledge*. *The Journal of Wildlife Management* [Internet]. 1981;45(2):293–313. Available from: <http://www.jstor.org.ezproxy.auckland.ac.nz/stable/3807913>

45.

McNamara DE, Werner BT. Coupled barrier island–resort model: 1. Emergent instabilities induced by strong human-landscape interactions. *Journal of Geophysical Research*. 2008;113(F1).

46.

Breckling B, Jopp F, Reuter H. System Analysis and Context Assessment. In: *Modelling complex ecological dynamics* [Internet]. Berlin: Springer; 2010. p. 43–54. Available from: http://link.springer.com/10.1007/978-3-642-05029-9_4

47.

Chorley RJ, Kennedy BA. Physical geography: a systems approach. London: Prentice-Hall; 1971.

48.

Laurance WF, Williamson GB. Positive Feedbacks among Forest Fragmentation, Drought, and Climate Change in the Amazon. *Conservation Biology*. 2001;15(6):1529–35.

49.

Marten G. Environmental Tipping Points: A New Paradigm for Restoring Ecological Security. *Journal of Policy Studies (Japan)* [Internet]. 2005;20:75–87. Available from: <http://www.ecotippingpoints.org/resources/publication-journal-of-policy-studies.html>

50.

Castree N, Rogers A, Sherman DJ. Questioning geography: fundamental debates [Internet]. Malden, MA: Blackwell Pub; 2005. Available from: <https://ebookcentral.proquest.com/lib/auckland/detail.action?docID=243571>

51.

Hilborn R, Mangel M. The ecological detective: confronting models with data [Internet]. Vol. Monographs in population biology. Princeton, N.J.: Princeton University Press; 1997. Available from: <https://ebookcentral.proquest.com/lib/auckland/detail.action?docID=1113396>

52.

O'Sullivan D, Perry GLW. Spatial simulation: exploring pattern and process [Internet]. Chichester, West Sussex, U.K.: Wiley-Blackwell; 2013. Available from: <http://dx.doi.org/10.1002/9781118527085>

53.

Stefanon L, Carniello L, D'Alpaos A, Rinaldo A. Signatures of sea level changes on tidal geomorphology: Experiments on network incision and retreat. *Geophysical Research Letters* [Internet]. 2012;39(12). Available from:

<https://agupubs.onlinelibrary.wiley.com/doi/10.1029/2012GL051953>

54.

van Maanen B, Coco G, Bryan KR, Friedrichs CT. Modeling the morphodynamic response of tidal embayments to sea-level rise. *Ocean Dynamics* [Internet]. 2013;63(11-12):1249-62. Available from: <https://link.springer.com/article/10.1007%2Fs10236-013-0649-6>

55.

Zhou Z, Olabarrieta M, Stefanon L, D'Alpaos A, Carniello L, Coco G. A comparative study of physical and numerical modeling of tidal network ontogeny. *Journal of Geophysical Research: Earth Surface*. 2014;119(4):892-912.

56.

B. T. Werner. Eolian dunes: Computer simulations and attractor interpretation. *Geology* [Internet]. 1995;23(12):1107-10. Available from: <http://geology.geoscienceworld.org.ezproxy.auckland.ac.nz/content/23/12/1107.full.pdf+html>

57.

Schwämmle V, Herrmann HJ. Geomorphology: Solitary wave behaviour of sand dunes. *Nature* [Internet]. 2003;426(6967):619-20. Available from: <https://www.nature.com/articles/426619a>

58.

Beck MB. Water quality modeling: A review of the analysis of uncertainty. *Water Resources Research* [Internet]. 1987;23(8):1393-442. Available from: <https://agupubs.onlinelibrary.wiley.com/doi/10.1029/WR023i008p01393>

59.

SCHNEIDER DC. The Rise of the Concept of Scale in Ecology. *BioScience* [Internet]. 2001;51(7). Available from: [https://www.jstor.org/stable/10.1641/0006-3568\(2001\)051\[0545:trotco\]2.0.co;2](https://www.jstor.org/stable/10.1641/0006-3568(2001)051[0545:trotco]2.0.co;2)

60.

Turner MG, Gardner RH, O'Neill RV. Landscape ecology in theory and practice: pattern and process [Internet]. New York: Springer; 2001. Available from: <https://link.springer.com/book/10.1007%2Fb97434>

61.

Zuur AF, Ieno EN, Elphick CS. A protocol for data exploration to avoid common statistical problems. *Methods in Ecology and Evolution*. 2010;1(1):3–14.

62.

Gotelli NJ. A primer of ecology. 4th ed. Sunderland, MA: Sinauer Associates; 2008.

63.

Hardisty J, Taylor DM, Metcalfe SE. Computerised environmental modelling: a practical introduction using Excel. Chichester, West Sussex, England: J. Wiley & Sons; 1993.

64.

Quarteroni A. Mathematical models in science and engineering. *Notices of the AMS* [Internet]. 2009;56(1):10–9. Available from: <https://www.ams.org/notices/200901/tx090100010p.pdf>

65.

R. F. Costantino, R. A. Desharnais, J. M. Cushing and Brian Dennis. Chaotic Dynamics in an Insect Population. *Science* [Internet]. 1997;275(5298):389–91. Available from: <http://www.jstor.org.ezproxy.auckland.ac.nz/stable/2891006>

66.

Edward N. Lorenz. Deterministic Nonperiodic Flow. *Journal of Atmospheric Science* [Internet]. 1963;20:130–41. Available from: <http://journals.ametsoc.org/doi/abs/10.1175/1520-0469%281963%29020%3C0130%3ADNF%3E2.0.CO%3B2>

67.

Ahmed M, Ogden J. Population dynamics of the emergent conifer(D. Don) Lindl. (Kauri) in New Zealand I. Population structures and tree growth rates in mature stands. New Zealand Journal of Botany [Internet]. 1987;25(2):217–29. Available from: <https://www.tandfonline.com/doi/abs/10.1080/0028825X.1987.10410068>

68.

Stockdon HF, Holman RA, Howd PA, Sallenger AH. Empirical parameterization of setup, swash, and runup. Coastal Engineering. 2006;53(7):573–88.

69.

Zuur AF, Ieno EN, Smith GM. Analysing ecological data [Internet]. Vol. Statistics for biology and health. New York: Springer; 2007. Available from: <https://link.springer.com/book/10.1007%2F978-0-387-45972-1>

70.

Robert L. Axtell, Joshua M. Epstein, Jeffrey S. Dean, George J. Gumerman, Alan C. Swedlund, Jason Harburger, Shubha Chakravarty, Ross Hammond, Jon Parker and Miles Parker. Population Growth and Collapse in a Multiagent Model of the Kayenta Anasazi in Long House Valley. Proceedings of the National Academy of Sciences of the United States of America [Internet]. 2002;99(10):7275–9. Available from: <http://www.jstor.org.ezproxy.auckland.ac.nz/stable/3057853>

71.

Jeffrey S. Dean, Robert C. Euler, George J. Gumerman, Fred Plog, Richard H. Hevly and Thor N. V. Karlstrom. Human Behavior, Demography, and Paleoenvironment on the Colorado Plateaus. American Antiquity [Internet]. 1985;50(3):537–54. Available from: http://www.jstor.org.ezproxy.auckland.ac.nz/stable/280320?sid=primo&origin=crossref&seq=1#page_scan_tab_contents

72.

Diamond JM. Archaeology: Life with the artificial Anasazi. Nature. 2002;419(6907):567–9.

73.

F. Jeltsch, M. S. Muller, V. Grimm, C. Wissel and R. Brandl. Pattern Formation Triggered by Rare Events: Lessons from the Spread of Rabies. *Proceedings: Biological Sciences* [Internet]. 1997;264(1381):495–503. Available from: <http://www.jstor.org.ezproxy.auckland.ac.nz/stable/50537>

74.

Levin SA. Mathematical and Computational Challenges in Population Biology and Ecosystems Science. *Science*. 1997;275(5298):334–43.

75.

Drechsler M. Sensitivity analysis of complex models. *Biological Conservation*. 1998;86(3):401–12.

76.

Haefner JW, SpringerLink (Online service). *Modeling biological systems: principles and applications* [Internet]. 2nd ed. New York: Springer; 2005. Available from: <http://dx.doi.org/10.1007/b106568>

77.

Ruckelshaus M, Hartway C, Kareiva P. Assessing the Data Requirements of Spatially Explicit Dispersal Models. *Conservation Biology* [Internet]. 1997;11(6):1298–306. Available from: <https://conbio.onlinelibrary.wiley.com/doi/full/10.1046/j.1523-1739.1997.96151.x>

78.

John W. Fitzpatrick, Martjan Lammertink, M. David Luneau Jr., Tim W. Gallagher, Bobby R. Harrison, Gene M. Sparling, Kenneth V. Rosenberg, Ronald W. Rohrbaugh, Elliott C. H. Swarthout, Peter H. Wrege, Sara Barker Swarthout, Marc S. Dantzker, Russell A. Charif, Timothy R. Barksdale, J. V. Remsen Jr., Scott D. Simon and Douglas Zollner. Ivory-Billed Woodpecker (*Campephilus principalis*) Persists in Continental North America. *Science* [Internet]. 2005;308(5727):1460–2. Available from: <https://www.science.org/doi/10.1126/science.1114103>

79.

Joel P. W. Pitt, Sue P. Worner and Andrew V. Suarez. Predicting Argentine Ant Spread over the Heterogeneous Landscape Using a Spatially Explicit Stochastic Model. *Ecological Applications* [Internet]. 2009;19(5):1176–86. Available from: <https://www.jstor.org/stable/40347260>

80.

Helen M. Regan, Mark Colyvan and Mark A. Burgman. A Taxonomy and Treatment of Uncertainty for Ecology and Conservation Biology. *Ecological Applications* [Internet]. 2002;12(2):618–28. Available from: <http://www.jstor.org.ezproxy.auckland.ac.nz/stable/3060967>

81.

Sibley DA. Comment on 'Ivory-billed Woodpecker (*Campephilus principalis*) Persists in Continental North America'. *Science* [Internet]. 2006;311(5767):1555a–1555a. Available from: <https://www.science.org/doi/10.1126/science.1122778>

82.

Venette, Robert. C., Kriticos, Darren J. Magarey, Roger D. Koch, Frank H. Baker, Richard H. A. Pest Risk Maps for Invasive Alien Species: A Roadmap for Improvement. *Bioscience* [Internet]. (5):349–62. Available from: <https://link.gale.com/apps/doc/A226474370/BIC?u=learn&sid=summon&xid=e2365909>

83.

Walker WE, Harremoes P, Rotmans J, Van Der Sluijs JP, Van Asselt MBA, Janssen P, et al. Defining uncertainty: a conceptual basis for uncertainty management in model-based decision support. *Integrated Assessment* [Internet]. 2003;4(1):5–17. Available from: http://journals.sfu.ca.ezproxy.auckland.ac.nz/int_assess/index.php/iaj/article/view/122/79

84.

Ran Nathan, Uriel N. Safriel and Imanuel Noy-Meir. Field Validation and Sensitivity Analysis of a Mechanistic Model for Tree Seed Dispersal by Wind. *Ecology* [Internet]. 2001;82(2):374–88. Available from: <https://www.jstor.org/stable/2679866>

85.

Svoray T, Nathan R. Spatially and temporally realistic and dynamic modelling for effects of water, temperature and light on tree population spread [Internet]. Proceedings of the 7th International Conference on GeoComputation. Southampton U.K.: GeoComputation; 2003. Available from: https://web.archive.org/web/20220120044142/http://www.geocomputation.org/2003/Papers/Svoray_Paper.pdf

86.

Botkin DB. Forest dynamics: an ecological model [Internet]. Oxford: Oxford University Press; 1993. Available from: <https://ebookcentral.proquest.com/lib/auckland/detail.action?docID=3051918>

87.

Castella JC, Trung TN, Boissau S. Ecology and Society: Participatory Simulation of Land-Use Changes in the Northern Mountains of Vietnam: the Combined Use of an Agent-Based Model, a Role-Playing Game, and a Geographic Information System. Ecology and Society [Internet]. 2005;10(1). Available from: <http://www.ecologyandsociety.org/vol10/iss1/art27/>

88.

Volker Grimm, Eloy Revilla, Uta Berger, Florian Jeltsch, Wolf M. Mooij, Steven F. Railsback, Hans-Hermann Thulke, Jacob Weiner, Thorsten Wiegand and Donald L. DeAngelis. Pattern-Oriented Modeling of Agent-Based Complex Systems: Lessons from Ecology. Science [Internet]. 2005;310(5750):987–91. Available from: <http://www.jstor.org.ezproxy.auckland.ac.nz/stable/3842807>

89.

Millington J, Romero-Calcerrada R, Wrainwright J, Perry G. An Agent-Based Model of Mediterranean Agricultural Land-Use/Cover Change for Examining Wildfire Risk. Journal of Artificial Societies and Social Simulation [Internet]. 2008;11(4). Available from: <http://jasss.soc.surrey.ac.uk/11/4/4.html>

90.

Richardson KA. On the limits of bottom-up computer simulation: towards a nonlinear modeling culture. In: 36th Annual Hawaii International Conference on System Sciences,

2003 Proceedings of the [Internet]. IEEE; 2003. Available from:
<https://ieeexplore.ieee.org/document/1174227?arnumber=1174227&tag=1>

91.

Thorsten Wiegand, Florian Jeltsch, Ilkka Hanski and Volker Grimm. Using Pattern-Oriented Modeling for Revealing Hidden Information: A Key for Reconciling Ecological Theory and Application. *Oikos* [Internet]. 2003;100(2):209–22. Available from:
<http://www.jstor.org.ezproxy.auckland.ac.nz/stable/3548178>

92.

Dawson RJ, Dickson ME, Nicholls RJ, Hall JW, Walkden MJA, Stansby PK, et al. Integrated analysis of risks of coastal flooding and cliff erosion under scenarios of long term change. *Climatic Change*. 2009;95(1–2):249–88.

93.

Dickson ME, Walkden MJA, Hall JW. Systemic impacts of climate change on an eroding coastal region over the twenty-first century. *Climatic Change*. 2007;84(2):141–66.

94.

Ashton A, Murray AB, Arnault O. Formation of coastline features by large-scale instabilities induced by high-angle waves. *Nature*. 2001;414(6861):296–300.

95.

Ashton AD, Murray AB. High-angle wave instability and emergent shoreline shapes: 1. Modeling of sand waves, flying spits, and capes. *Journal of Geophysical Research*. 2006;111(F4).

96.

van Maanen B, Coco G, Bryan KR. On the ecogeomorphological feedbacks that control tidal channel network evolution in a sandy mangrove setting. In: *Proceedings of the Royal Society A* [Internet]. 2015. Available from:
<https://royalsocietypublishing.org/doi/pdf/10.1098/rspa.2015.0115>

97.

Murray AB, Coco G, Goldstein EB. Cause and effect in geomorphic systems: Complex systems perspectives. *Geomorphology* [Internet]. 2014;214:1–9. Available from: <https://www.sciencedirect.com/science/article/pii/S0169555X14001135?via%3Dihub>

98.

Coco G, Murray AB. Patterns in the sand: From forcing templates to self-organization. *Geomorphology* [Internet]. 2007;91(3–4):271–90. Available from: <https://www.sciencedirect.com/science/article/pii/S0169555X07003819?via%3Dihub>

99.

Banded vegetation: development under uniform rainfall from a simple cellular automaton model. Available from: <http://link.springer.com.ezproxy.auckland.ac.nz/article/10.1023/A:1009725732740>