

**Material for Breakout Session A:
Economic Analysis and Ecological Production Functions
SAB Workshop, December 13-14, 2005
Science for Valuation of EPA's Ecological Protection Decisions and Programs
Ronald Reagan Building, Washington, DC**

Session Leaders:

Dr. Joan Roughgarden, Professor, Biological Sciences and Evolutionary Biology, Stanford University, Herrin Laboratory, Stanford, CA

Dr. Stephen Polasky, Fesler-Lampert Professor of Ecological Economics, Department of Applied Economics, University of Minnesota

Contents:

- Bibliography in Ecological Economics developed by Joan Roughgarden
- Diagram (see diagram below depicting ecological models, outputs, services, valuation tools and decision approaches)
- Citations related to breakout topic (copies available at breakout session)
 - 1998, Roughgarden, J., Production functions from ecological populations: a survey with emphasis on spatially explicit models. In: Tilman, D. and P. Kareiva, (Eds.) *Spatial Ecology: The Role of Space in Population Dynamics and Interspecific Interactions*, Princeton University Press, pp. 296--317.
 - 2003, Armsworth, P. and J. Roughgarden. The economic value of ecological stability. *Proc. Nat. Acad. (USA)* 100:7147--7151.
 - Ricketts, Taylor H., Gretchen C. Daily, Paul R. Ehrlich, and Charles D. Michener. 2004. Economic value of tropical forest to coffee production. *PNAS* (34):12579--12582.
 - Polasky, Stephen, Erik Nelson, Eric Lonsdorf, Paul Fackler, and Anthony Starfield. 2005. Conserving species in a working landscape: land use with biological and economic objectives. *Ecological Applications* 15:1387--1401.

Bibliography in Ecological Economics developed by Joan Roughgarden

2003, Armsworth, P. and J. Roughgarden. The economic value of ecological stability. *Proc. Nat. Acad. (USA)* 100:7147--7151.

2001, Roughgarden, J. and P. Armsworth. Managing ecosystem services. In: Press, M., N. Huntly, and S. Levin, eds. *Ecology: Achievement and Challenge*, Blackwell Science, pp. 337--356.

2001, P. Armsworth and J. Roughgarden. An invitation to ecological economics, *Trends in Ecology and Evolution* 16:229--234.

- 2001, Roughgarden, J. Guide to diplomatic relations with economists. *Bull. Ecol. Soc. America* 82:85--88.
- 1998, Roughgarden, J., Production functions from ecological populations: a survey with emphasis on spatially explicit models. In: Tilman, D. and P. Kareiva, (Eds.) *Spatial Ecology: The Role of Space in Population Dynamics and Interspecific Interactions*, Princeton University Press, pp. 296--317.
- 1998, Roughgarden, J., How to manage fisheries. *Ecological Applications*, 8(1):S160--S164.
- 1997, Brown, G. and J. Roughgarden, A metapopulation model with private property and a common pool. *Ecological Economics*, 22:65--71.
- 1996, Roughgarden, J. and F. Smith, Why fisheries collapse and what to do about it. *Proc. Nat. Acad. Sci., (USA)*, 93:5078--5083
- 1995, Roughgarden, J., Can economics protect biodiversity? In: T. Swanson, (Ed.), *The Economics and Ecology of Biodiversity Decline*. Cambridge University Press, pp. 149--156.
- 1995, Brown, G. and J. Roughgarden, An ecological economy: notes on harvest and growth. In: Perrings, C., K.G. Maler, C. Folke, C.S. Holling and B.O. Jansson (Eds.), *Biodiversity Loss: Ecological and Economic Issues*, Cambridge, Cambridge University Press, pp. 150-189.

