**Essay #3: Biodiversity**

Length: 4 pages, 1.5 spacing

As discussed in class, I will be focusing on whether the essay has a compelling thesis that goes beyond a simple list of key ideas, i.e. an over-arching argument that drives connections and transitions between your key ideas.

Below are example questions to get you started, though you’re not required to answer any one in whole or in part. You are welcome to alter the particular focus of the paper to better match your interests but for this final paper please clear any significant departures with me ahead of time using a brief description by email.

1. Are incentive payments to landowners to enhance biodiversity (e.g. eBird in the Central Valley) a good policy instrument? Will such a scheme lead to a net increase in biodiversity? Or are such programs bound to fail because (1) market instruments can crowd out or undermine our sense of shared responsibility (see Sandel 1997) and/or (2) measurement and verification problems undermine the validity of the policy?
	1. Economists and others argue that there is no policy panacea in general and for biodiversity and ecosystem services in particular (Stavins 2004; Ostrom et al. 2007). If there is a role to be played by payments for ecosystem services, what is that role?
	2. An OECD handbook argues that, “Market creation is effective because it is often the most direct approach to solving the problem of biodiversity decline.” By market creation they mean broadly “markets in land, markets in uses of land, markets in specific flows of biodiversity, markets in things associated with biodiversity” (OECD, 2004, p. 10). Is this good advice for OECD member countries?
2. To quote Bernd Blossey (2012): “Despite enormous energy and expenditure devoted to conservation, we will be unable to save all imperiled species and places. How can (or even should) we come up with a prioritization approach that helps us make decisions about what is worth saving?” Do economic approaches hold promise? Does a focus on valuation of species help or hinder the process? Do approaches that focus on alternative objectives like population viability (e.g. Newbold and Siikamäki, 2009) overcome concerns with valuation without generating new concerns?
3. In the conflict between development and conservation needs, do “flexible” market mechanisms like conservation banking (e.g. gopher tortoises) suggest a way forward?
4. Should we be stacking ecosystem service payments? Robertson et al. (*forthcoming*) argued that “stacking (of ecosystem service credits) may result in a greater loss of ecosystem services than would occur in single credit markets” (p. 9). As a counterpoint, Armsworth et al. (2012) argue that “ if policies are intended to deliver multiple conservation outcomes, it is still much more effective to include these in the scheme design explicitly rather than rely on an “umbrella” approach (p. 409).

Armsworth, P.R., Acs, S., Dallimer, M., Gaston, K.J., Hanley, N. & Wilson, P. (2012). [The cost of policy simplification in conservation incentive programs](http://onlinelibrary.wiley.com/doi/10.1111/j.1461-0248.2012.01747.x/full). Ecology Letters 15(5), 406-414.

Blossey, B. (2012). [The Value of Nature (guest editorial).](http://www.esajournals.org/doi/full/10.1890/154-9295-10.4.171)*Frontiers in Ecology and the Environment*, 10(4), 171*.*

Ostrom, E., M. Janssen and J. M. Anderies (2007). “[Going Beyond Panaceas](http://www.pnas.org/content/104/39/15176.full).” *Proceedings of the National Academy of Sciences*. 104(39) 15176-15178.

Morgan Robertson, Todd BenDor, Rebecca Lave, Adam Riggsbee, J.B. Ruhl, and Martin Doyle (*forthcoming*). “Stacking Ecosystem Services.” Frontiers in Ecology and the Environment.

Newbold, S. C. and J. Siikamäki (2009). “[Prioritizing conservation activities using reserve site selection methods and population viability analysis](http://www.esajournals.org/doi/abs/10.1890/08-0599.1).” *Ecological Applications* 19(7) 1774-1790.

OECD (2004). “[Handbook of Market Creation for Biodiversity: Issues in Implementation](http://www.peblds.org/files/Publications/OECD/OECD_Handbook%20of%20Market%20Creation_implementation.pdf).” Organisation for Economic Co-operation and Development, i-177.

Sandel, M.J. (1997). “[It’s Immoral to Buy the Right To Pollute](http://www.des.ucdavis.edu/faculty/Springborn/courses/Readings/Sandel%201997--%20It%EF%BF%BDs%20Immoral%20to%20Buy%20the%20Right%20to%20Pollute.pdf),” *New York Times*, Dec. 15, p. A29.

Stavins, R. (2004). “[The Myth Of Simple Market Solutions](http://www.env-econ.net/stavins/Column_2.pdf).” *The Environmental Forum*. The Environmental Law Institute, Washington, D.C.