

Landscape dynamics and conservation decisions

Applied conservation is about deciding what to do where and when. We have a suite of excellent tools and theories for deciding what to do where, traditional conservation planning, however we do not have easy to use tools for deciding when to take those actions. In this talk I define the dynamic prioritization problem and give examples of how we are tackling that problem. I use the talk to emphasise two important issues in conservation problem solving: 1) the difference between models, problems and algorithms in applied conservation, and 2) the difficulty in setting objectives. The talk will draw on papers such as:

- Bode M., Wilson K.A., Brooks T.M., Turner W.R., Mittermeier R.A., McBride M.F., Underwood E.C. & Possingham H.P. (2008). Cost-effective global conservation spending is robust to taxonomic group. *Proceedings of the National Academy of Sciences of the United States of America*, 105, 6498-6501.
- Drechsler, M., R. Lourival, and H. P. Possingham. 2009. Conservation planning for successional landscapes. *Ecological Modelling* 220:438-450.
- Meir, E., S. Andelman, and H. P. Possingham. 2004. Does conservation planning matter in a dynamic and uncertain world? *Ecology Letters* 7:615-622.
- McBride M.F., Wilson K.A., Bode M. & Possingham H.P. (2007). Incorporating the effects of socioeconomic uncertainty into priority setting for conservation investment. *Conserv. Biol.*, 21, 1463-1474.
- McCarthy M.A. & Possingham H.P. (2007). Active adaptive management for conservation. *Conserv. Biol.*, 21, 956-963
- McDonald-Madden E., Bode M., Game E.T., Grantham H. & Possingham H.P. (2008). The need for speed: informed land acquisitions for conservation in a dynamic property market. *Ecology Letters*, 11, 1169-1177
- Richards, S. A. Possingham, H. P. and Tizard, J. 1999. Optimal fire management for maintaining community diversity . *Ecological Applications* 8:156
- Wilson, K. A., M. McBride, M. Bode, and H. P. Possingham. 2006. Prioritising global conservation efforts. *Nature* 440:337-340