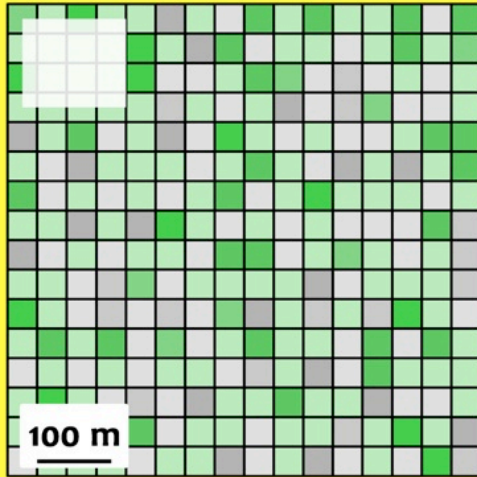
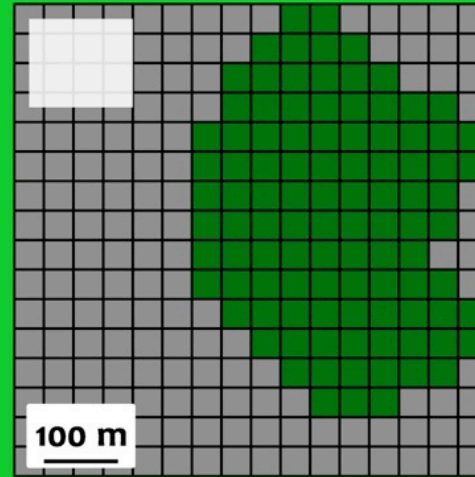


Land sharing vs Land sparing

Land sharing



Land sparing

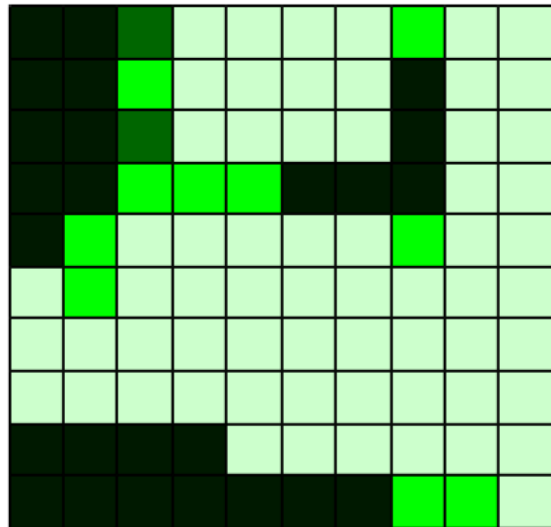


(a)

Landsparring
Avon, New York

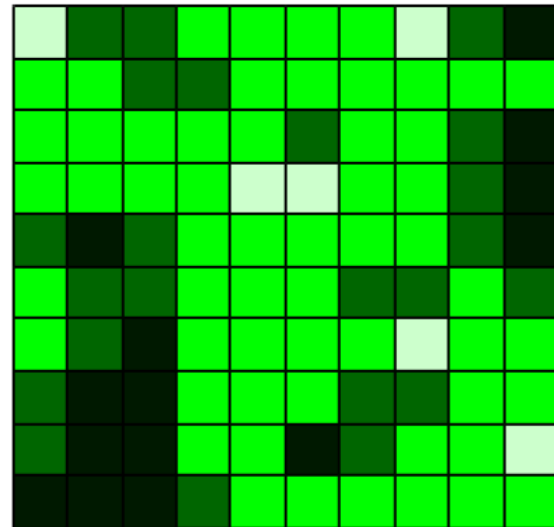


Agricultural endpoints



(b)

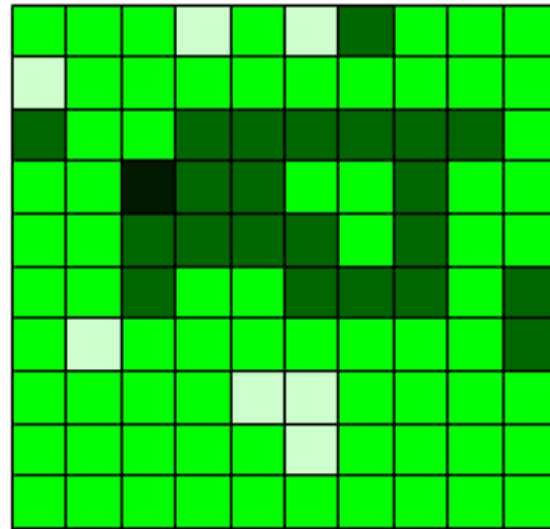
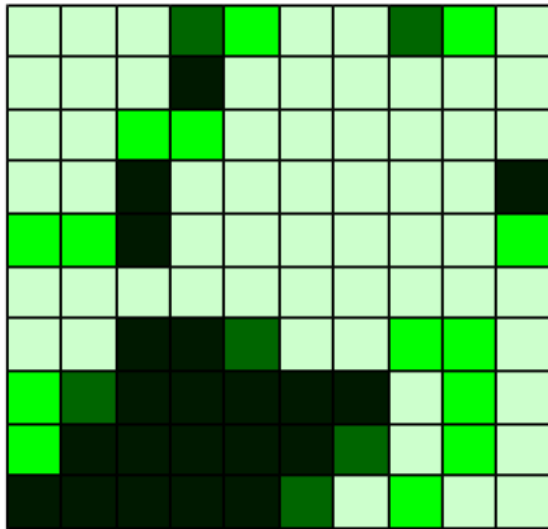
Landsharing
Marion, New York



(c) Manhattan, New York City

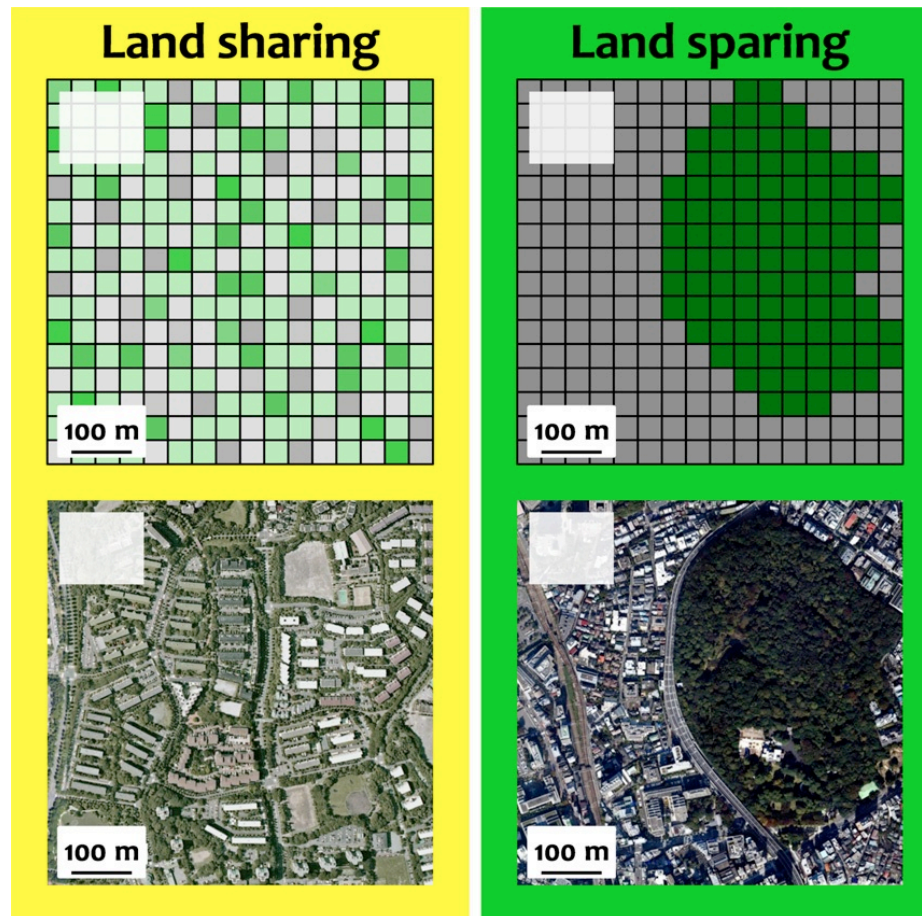
(d) Queens, New York City

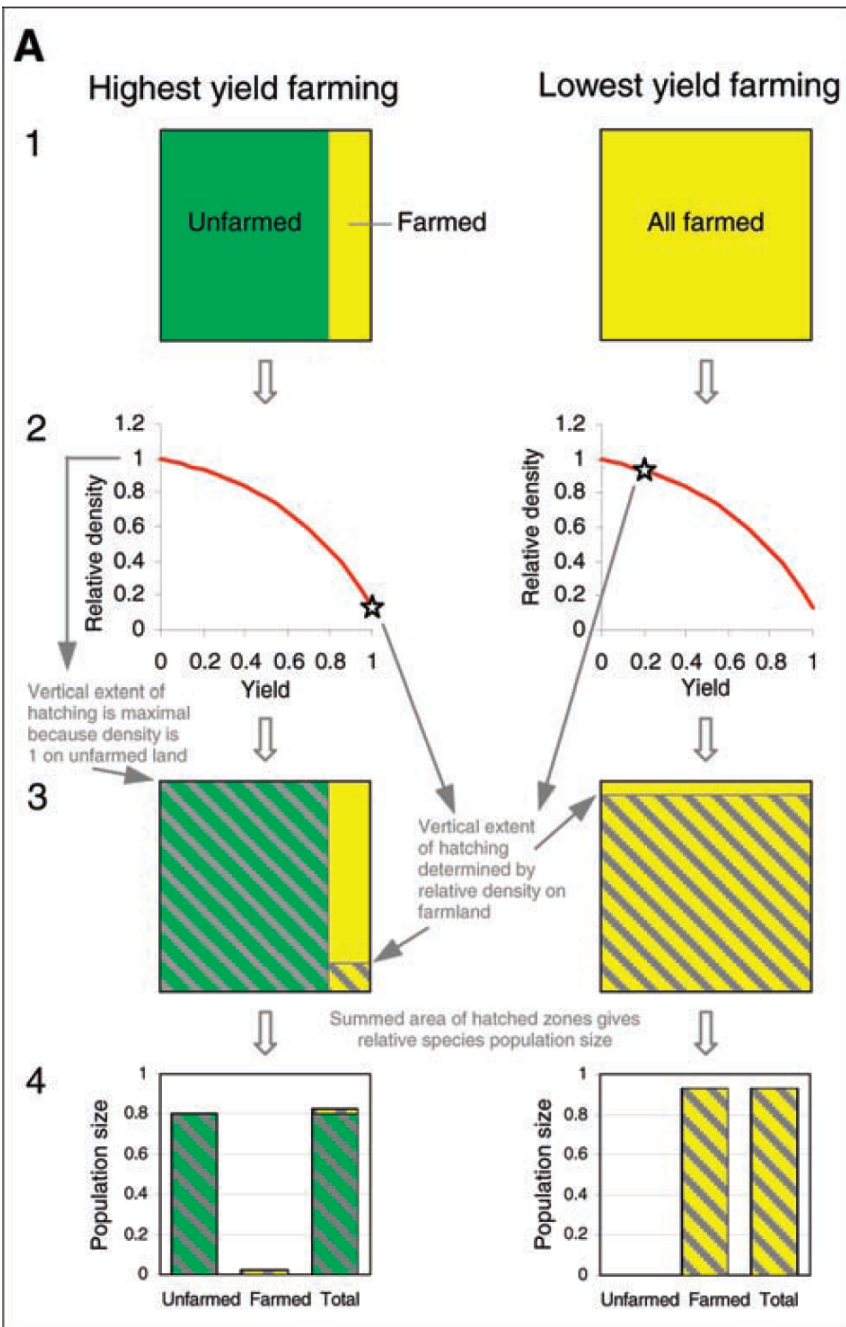
Urban endpoints

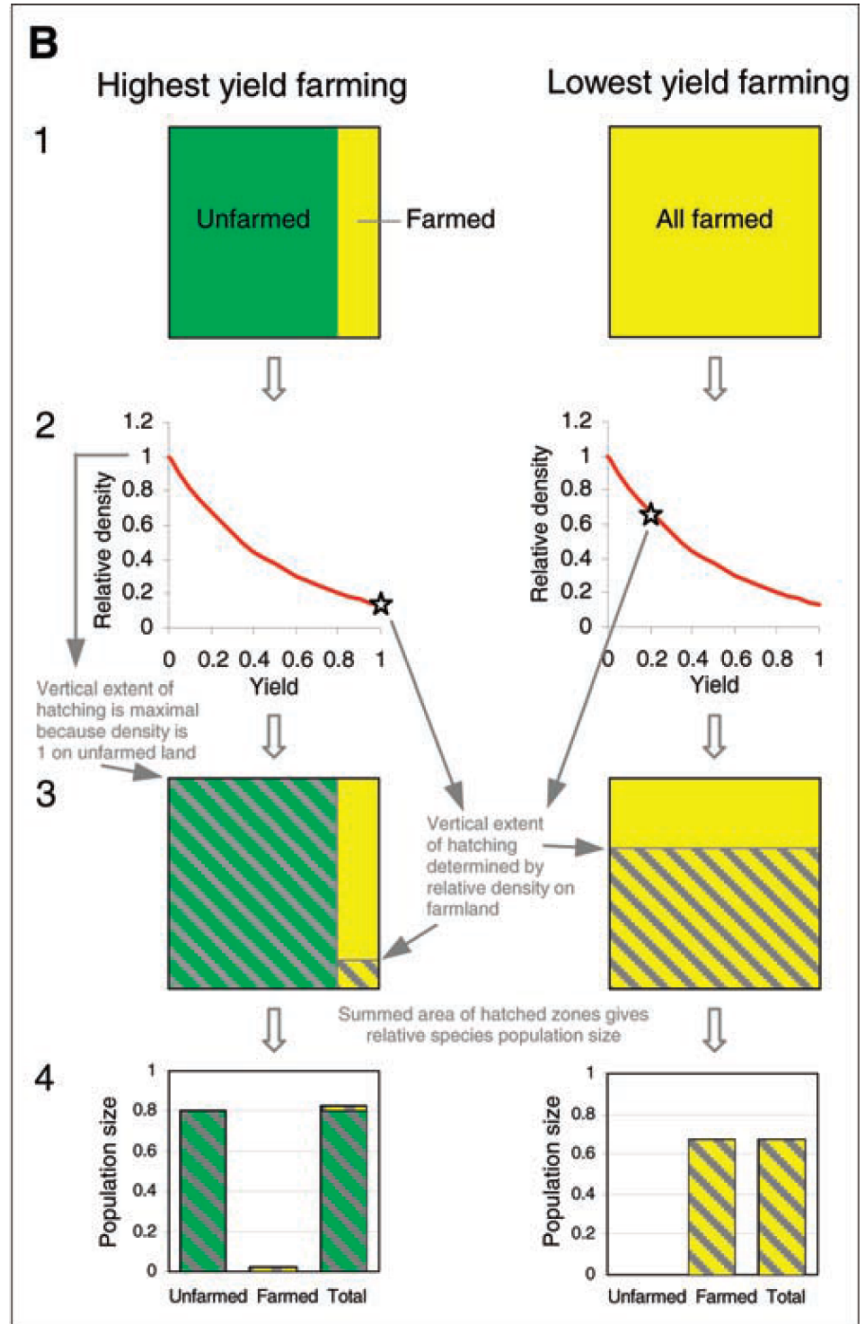
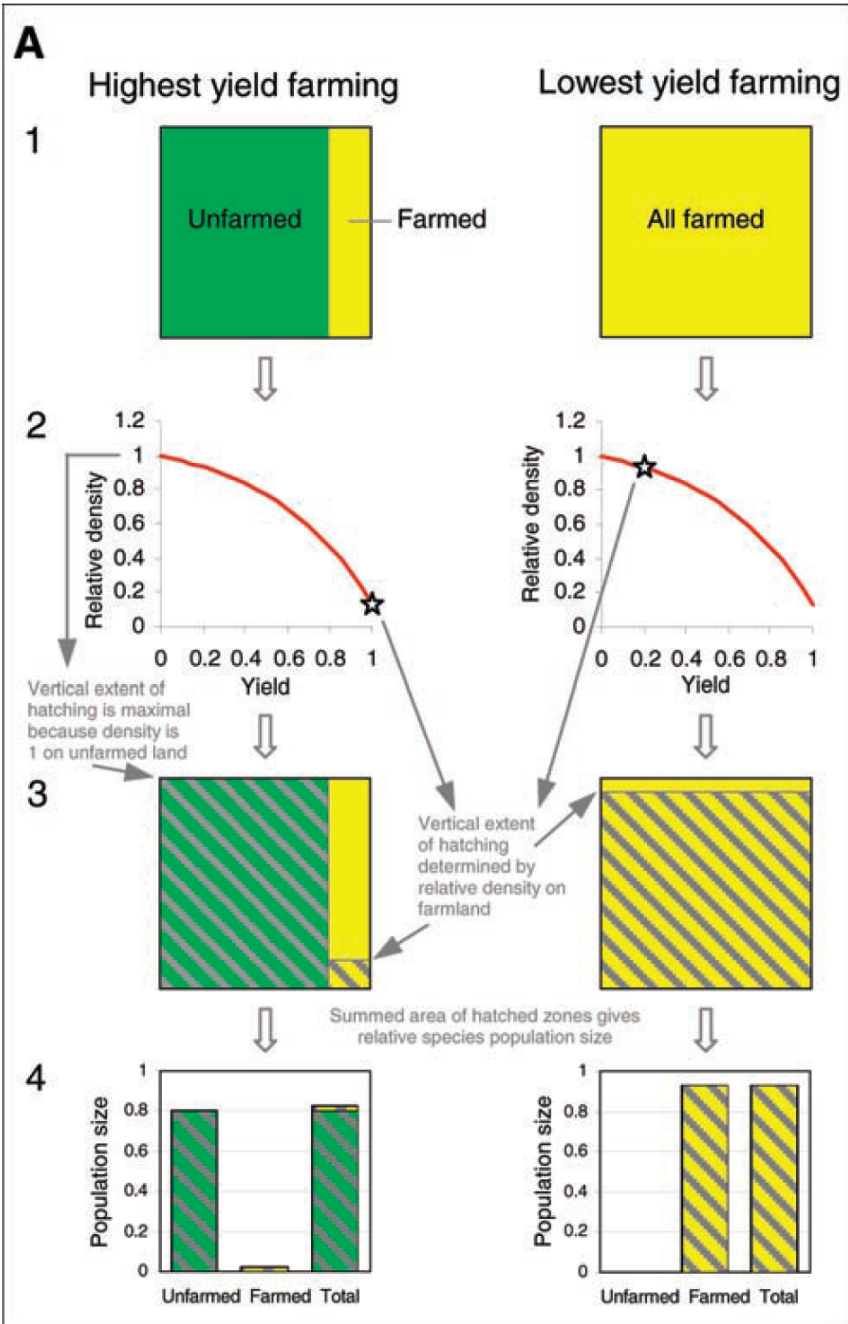


Sharing or sparing? How should we grow the world's cities?

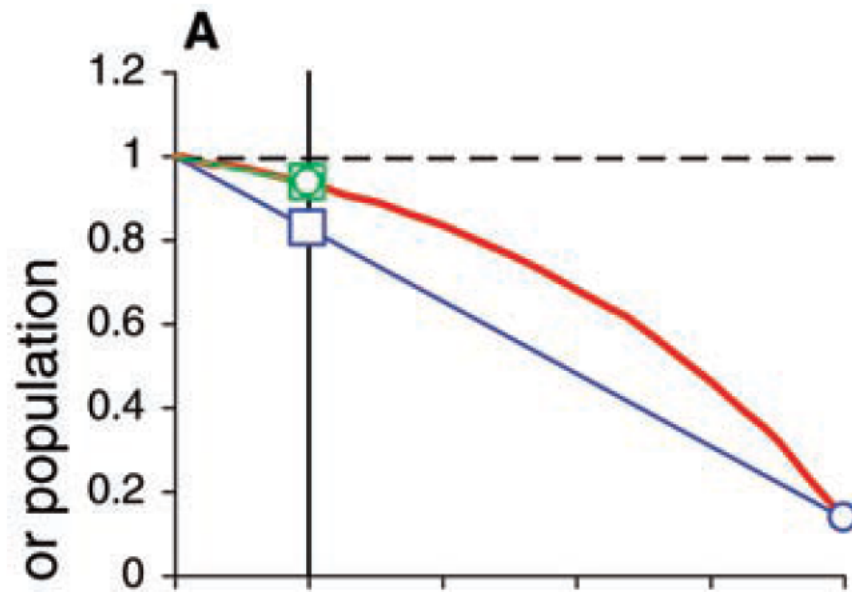
Brenda B. Lin^{1*} and Richard A. Fuller^{2,3}



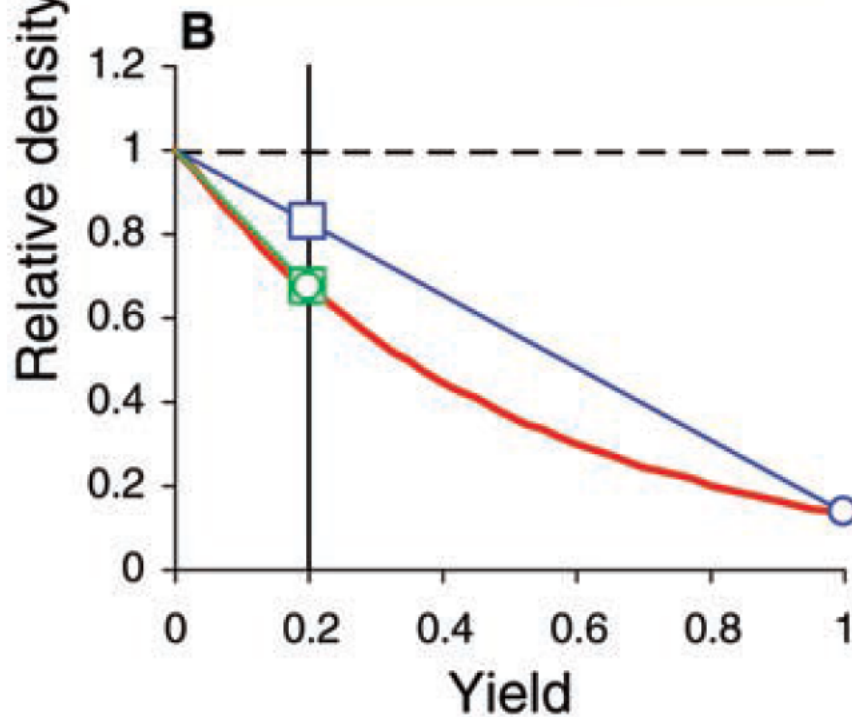




(Green et al. 2005, Science)

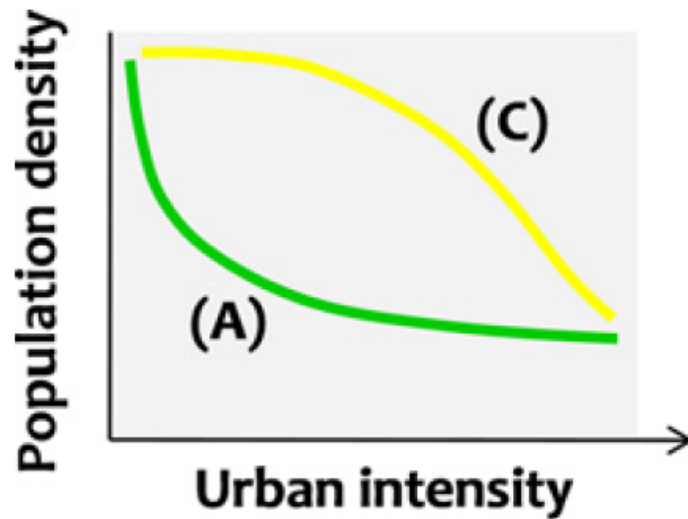


Land sharing best



Land sparing best

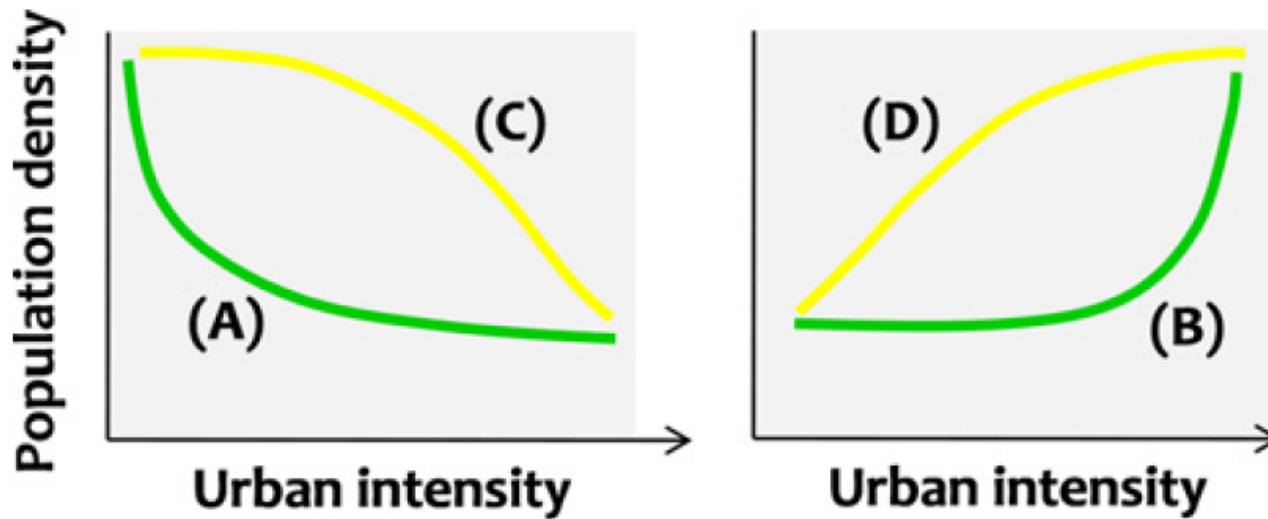
Losers



- Land sparing better
- Land sharing better

Losers

Winers



- Land sparing better
- Land sharing better

Land-sharing VS Land-sparing

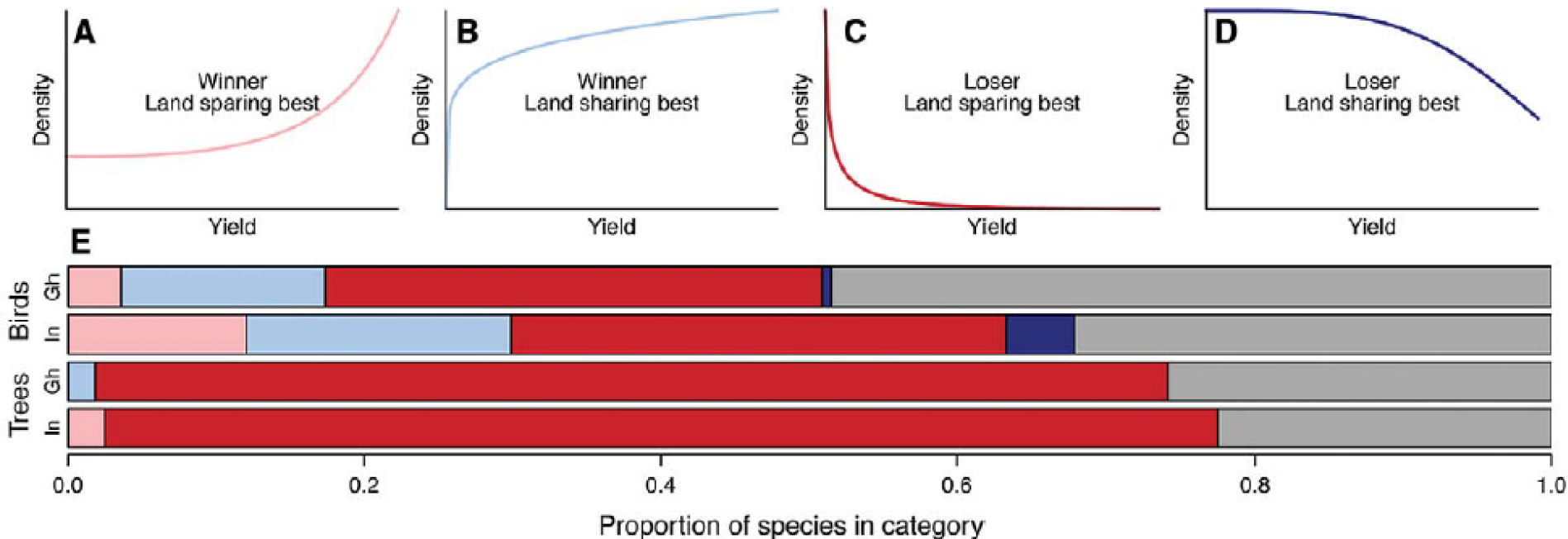
Reconciling Food Production and Biodiversity Conservation: Land Sharing and Land Sparing Compared

Ben Phalan,¹ Malvika Onial,¹ Andrew Balmford,¹ Rhys E. Green^{1,2}

Ben Phalan *et al.*
Science **333**, 1289 (2011);
DOI: 10.1126/science.1208742

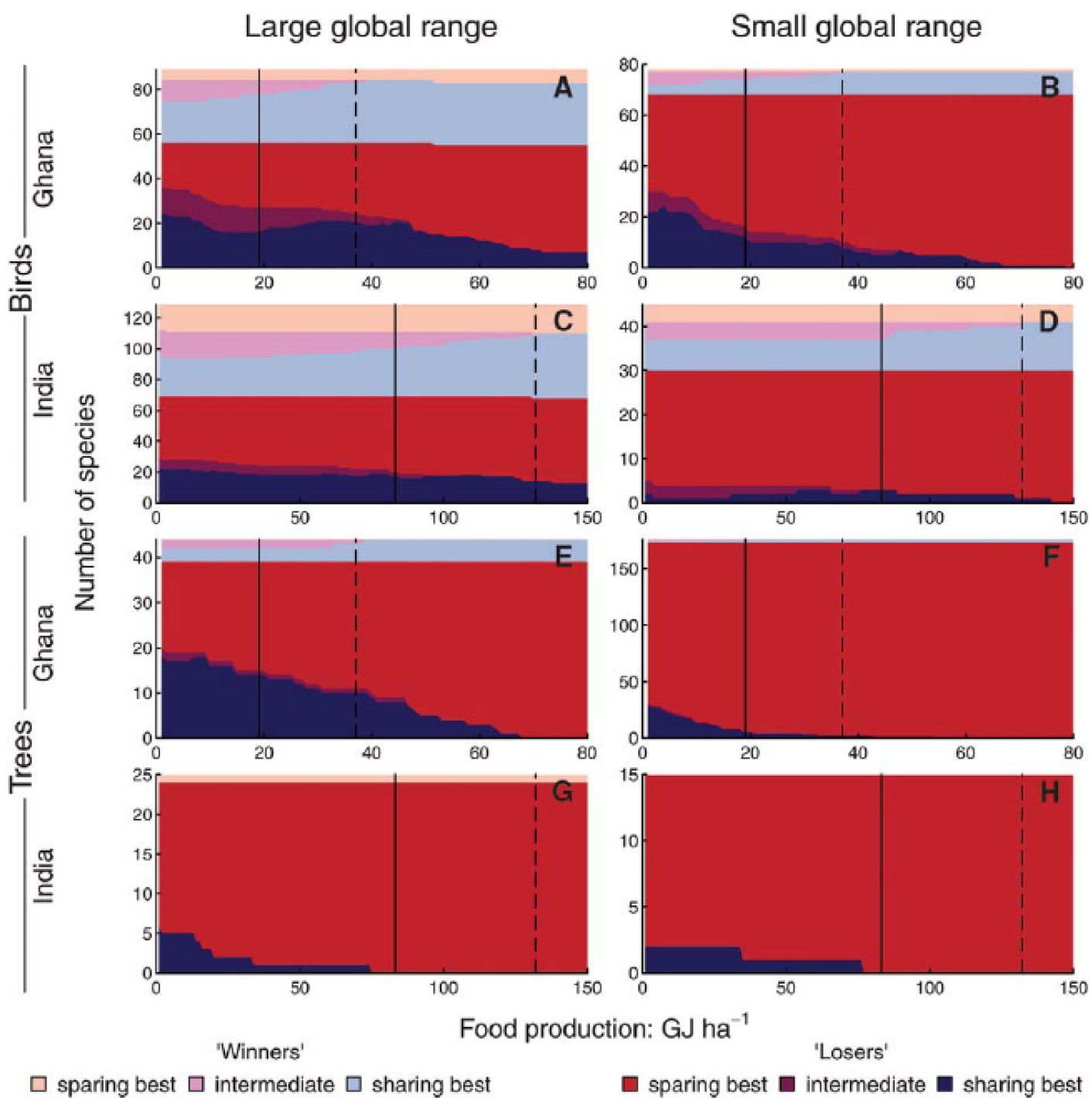


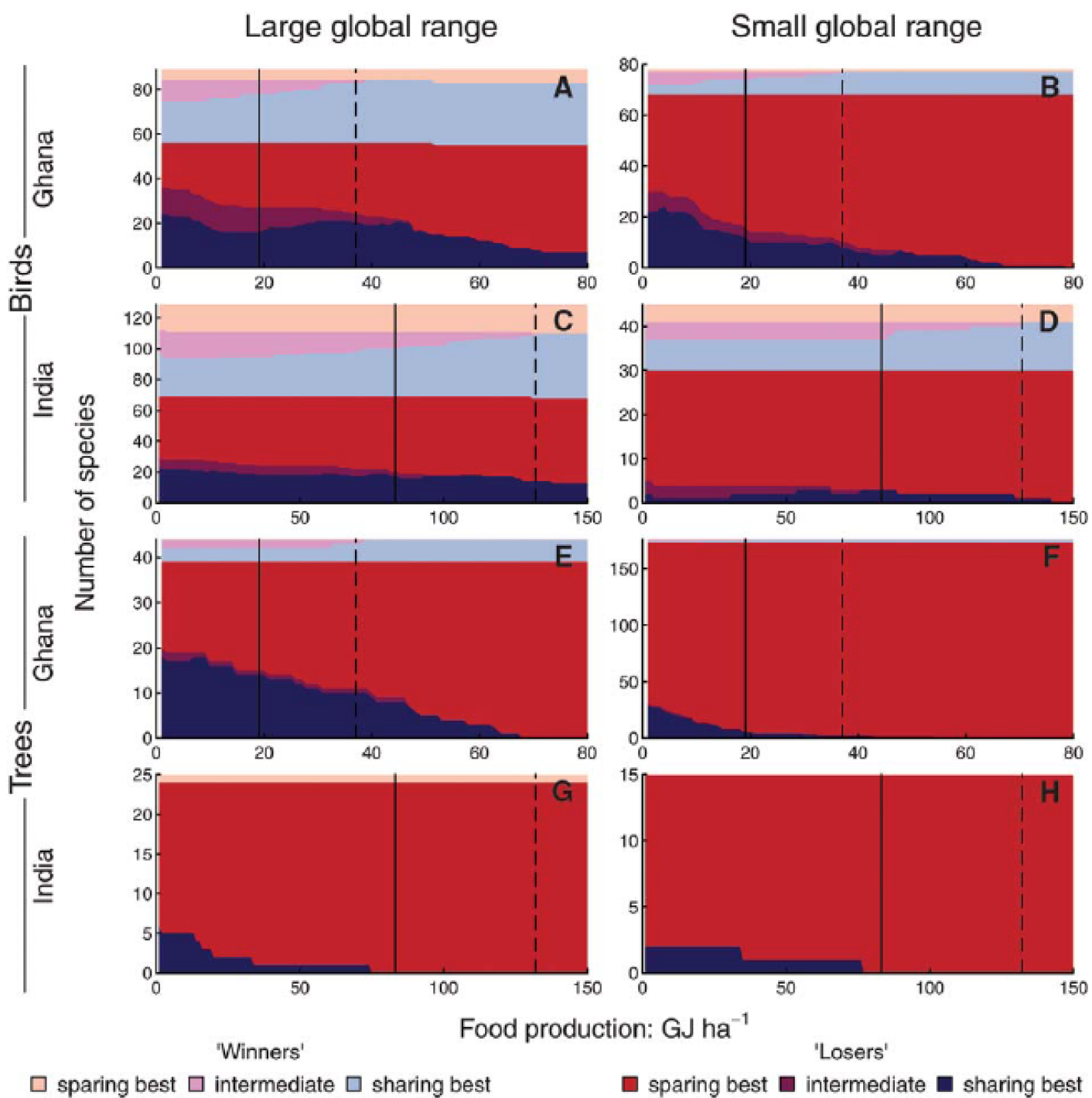
Land-sharing VS Land-sparing

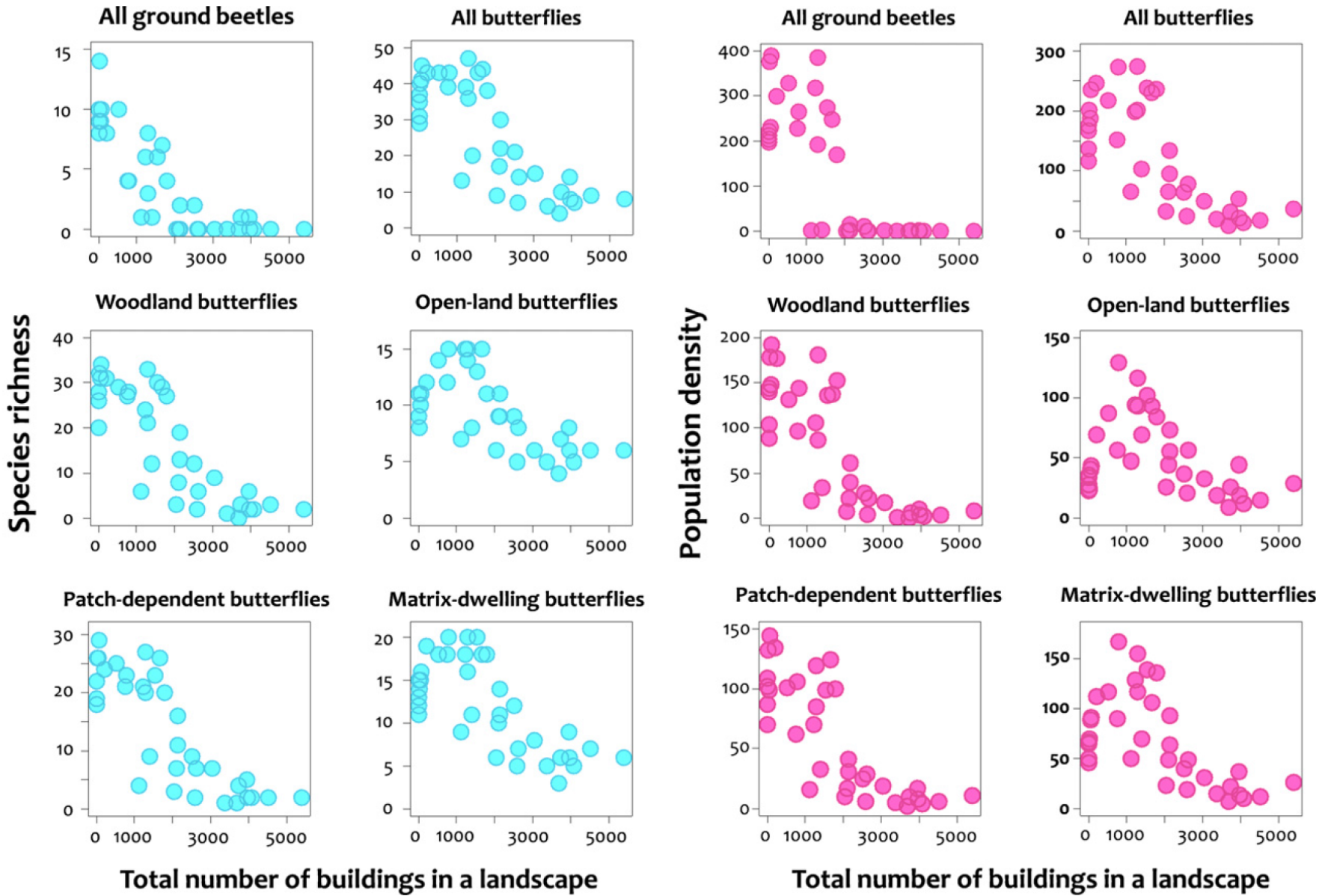


Field types were: oil palm, cocoa, orange, mixed food crops, other crops (including coconut, rubber, sugarcane), cleared (land recently slashed or burnt for agriculture, but not yet planted), uncultivated (e.g., fallow, secondary forest, Raphia swamps) and uncultivable (e.g., roads, buildings, waterbodies).

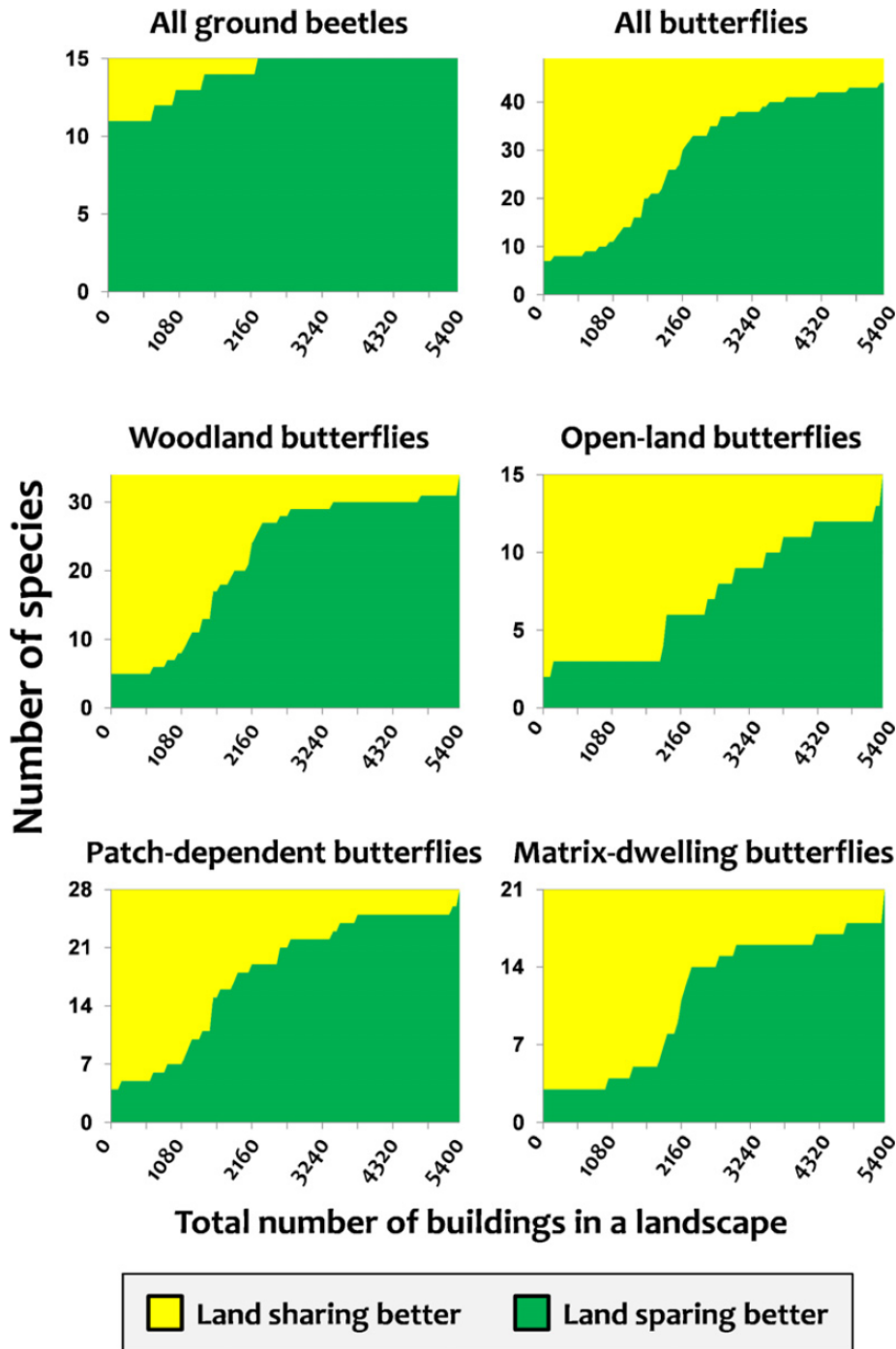
(Phalan et al. 2011, Science)







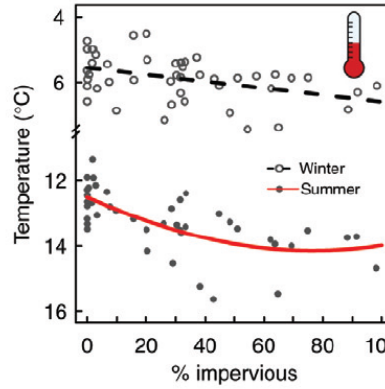
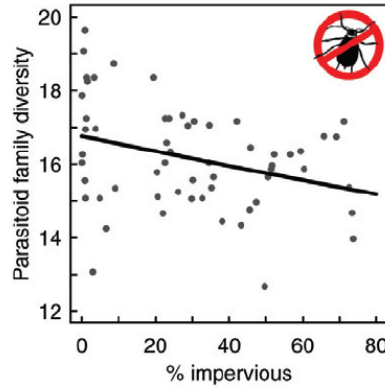
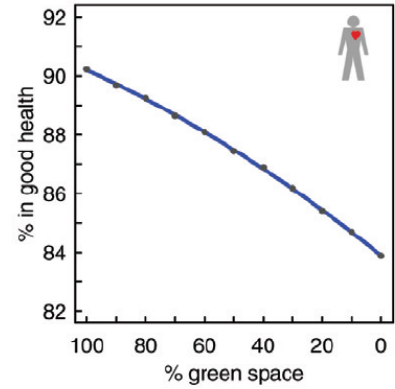
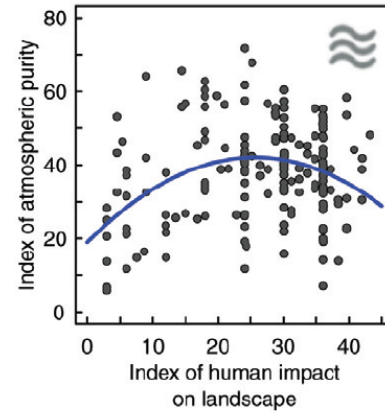
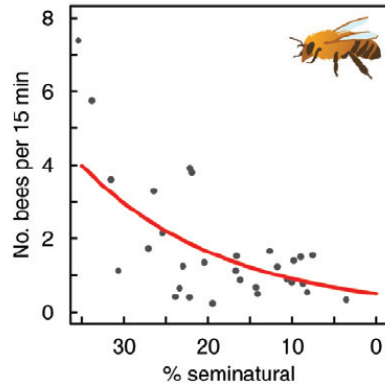
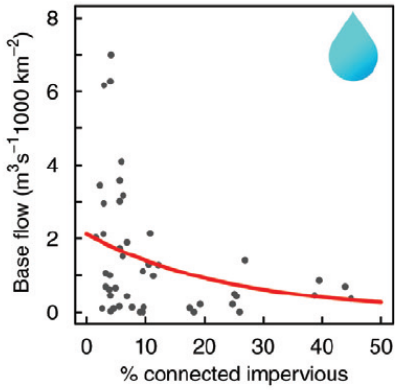
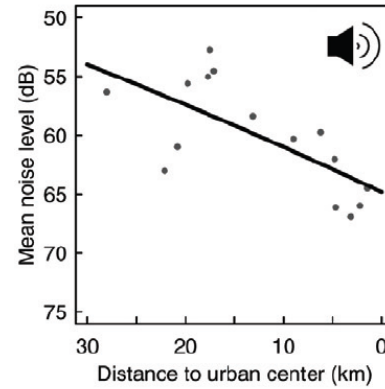
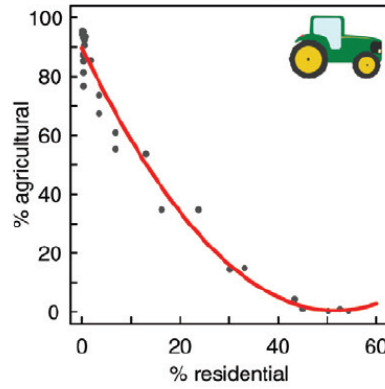
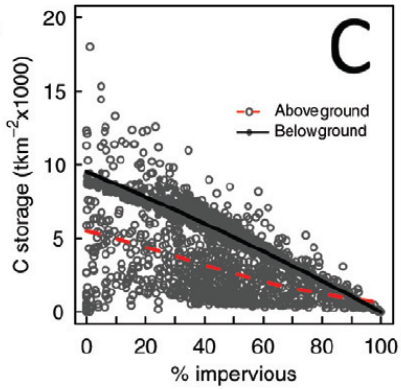
Tokyo, Japão (Soga et al. 2014, J App Ecol)



Tokyo, Japão

(Soga et al. 2014, J App Ecol)

Increasing service provision / decreasing disservice provision

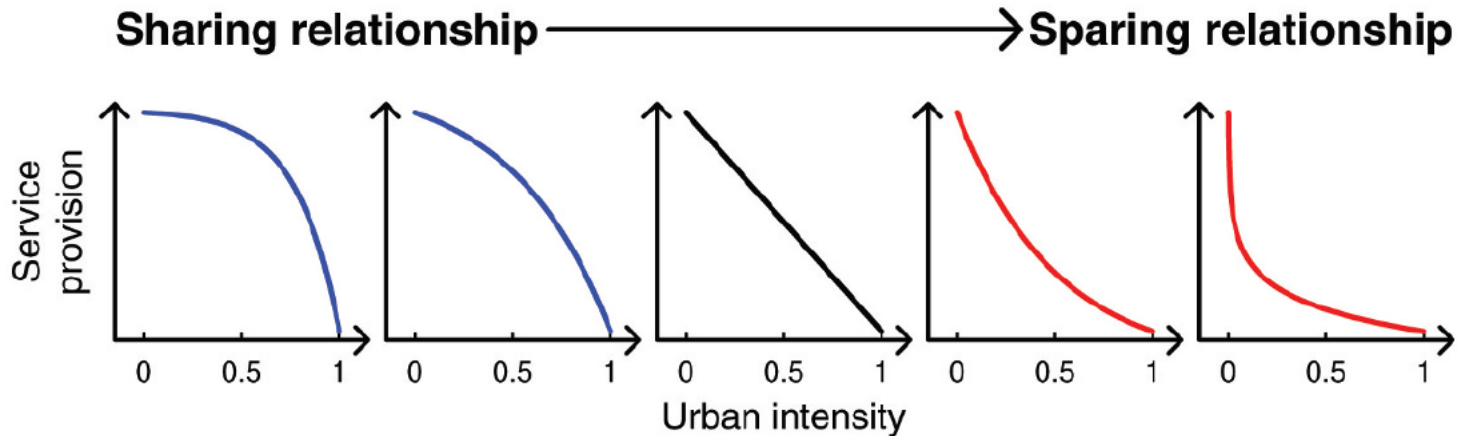


Increasing urban intensity

(Scot et al. 2005, FEE)

Land sparing is crucial for urban ecosystem services

Iain Stott¹, Masashi Soga², Richard Inger¹, and Kevin J Gaston^{1*}



Land-sharing VS Land-sparing

The agroecological matrix as alternative to the land-sparing/agriculture intensification model

Ivette Perfecto^{a,1} and John Vandermeer^{a,b}

Global food security, biodiversity conservation and the future of agricultural intensification

Teja Tscharntke^{a,*}, Yann Clough^a, Thomas C. Wanger^{b,c}, Louise Jackson^d, Iris Motzke^{a,c}, Ivette Perfecto^e, John Vandermeer^f, Anthony Whitbread^g

Realigning the land-sharing/land-sparing debate to match conservation needs: considering diversity scales and land-use history

Henrik von Wehrden · David J. Abson · Michael Beckmann · Anna F. Cord · Stefan Klotz · Ralf Seppelt

MINI REVIEW

Land Sparing Versus Land Sharing: Moving Forward

Joern Fischer¹, David J. Abson², Van Butsic^{3,4}, M. Jahi Chappell^{5,6}, Johan Ekroos⁷, Jan Hanspach¹, Tobias Kuemmerle⁸, Henrik G. Smith^{7,9}, & Henrik von Wehrden^{1,2,10,11}