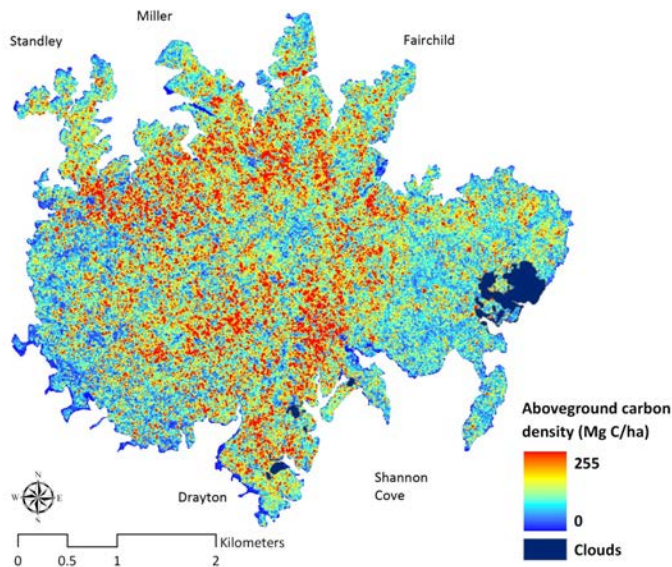


Networking of forest plots in Asian countries

2018.10.24

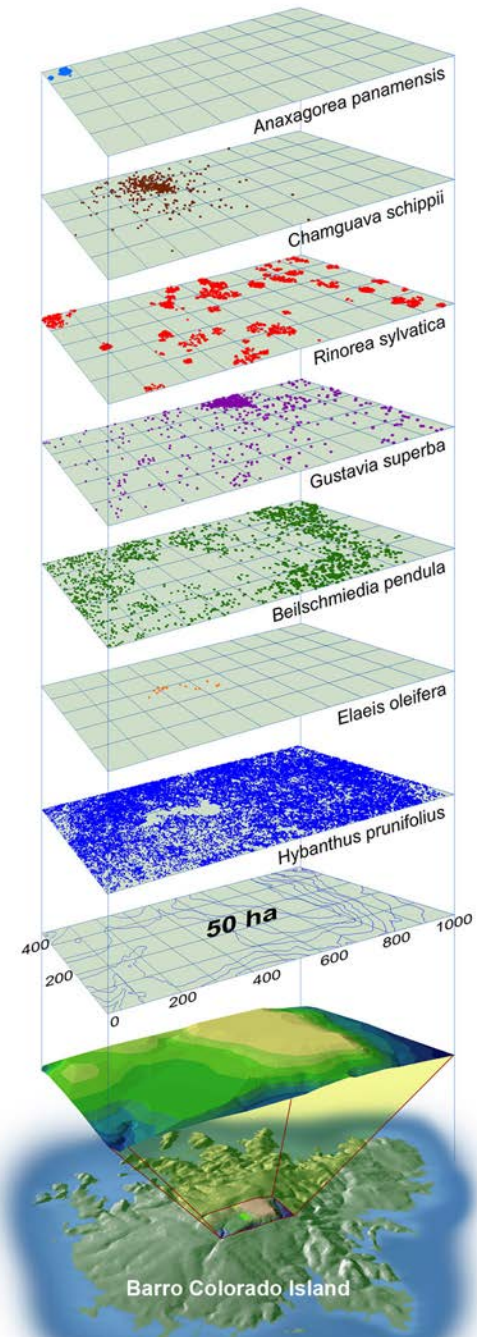
GEOSS AO AP BON session

Chair: Kaoru KITAJIMA (Kyoto U)



Mascaro et al., 2010

Image courtesy of Stuart Davies



ForestGEO plot network of CTFS

The Center for Tropical Forest Science (CTFS): Forest Global Earth Observatory (4-150 ha plots, in which all woody freestanding stems > 1 cm diameter at breast height is marked and followed for survival and growth)

67 Forest Plots 27 Countries 6 Million Trees 12,000 Species



Slik et al. (2015) PNAS

www.pnas.org/cgi/doi/10.1073/pnas.1423147112

An estimate of the number of tropical tree species

J. W. Ferry Slik^{a,1}, Víctor Arroyo-Rodríguez^b, Shin-Ichiro Aiba^c, Patricia Alvarez-Loayza^d, Luciana F. Alves^e, Peter Ashton^f, Patricia Balvanera^b, Meredith L. Bastian^g, Peter J. Bellingham^h, Eduardo van den Bergⁱ, Luis Bernacci^e, Polyanna da Conceição Bispo^j, Lilian Blanc^k, Katrin Böhning-Gaese^l, Pascal Boeckx^m, Frans Bongersⁿ, Brad Boyle^o, Matt Bradford^p, Francis Q. Brearley^q, Mireille Breuer-Ndoundou Hockemba^r, Sarayudh Bunyavejchewin^s, Darley Calderado Leal Matos^t, Miguel Castillo-Santiago^u, Eduardo L. M. Catharino^v, Shauna-Lee Chai^w, Yukai Chen^x, Robert K. Colwell^{y,z}, Chazdon L. Robin^y, Connie Clark^d, David B. Clark^{aa}, Deborah A. Clark^{aa}, Heike Culmsee^{bb}, Kipiro Damas^{cc}, Handanakere S. Dattaraja^{dd}, Gilles Dauby^{ee}, Priya Davidar^{ff}, Saara J. DeWalt^{gg}, Jean-Louis Doucet^{hh}, Alvaro Duqueⁱⁱ, Giselda Durigan^{jj}, Karl A. O. Eichhorn^{kk}, Pedro V. Eisenlohr^{ll}, Eduardo Eler^{mmm}, Corneille Ewango^r, Nina Farwigⁿⁿ, Kenneth J. Feeley^{oo}, Leandro Ferreira^t, Richard Field^{pp}, Ary T. de Oliveira Filho^{qq}, Christine Fletcher^{rr},

..... a pantropical tree inventory database from closed canopy forests, consisting of **657,630** trees belonging to **11,371** species,

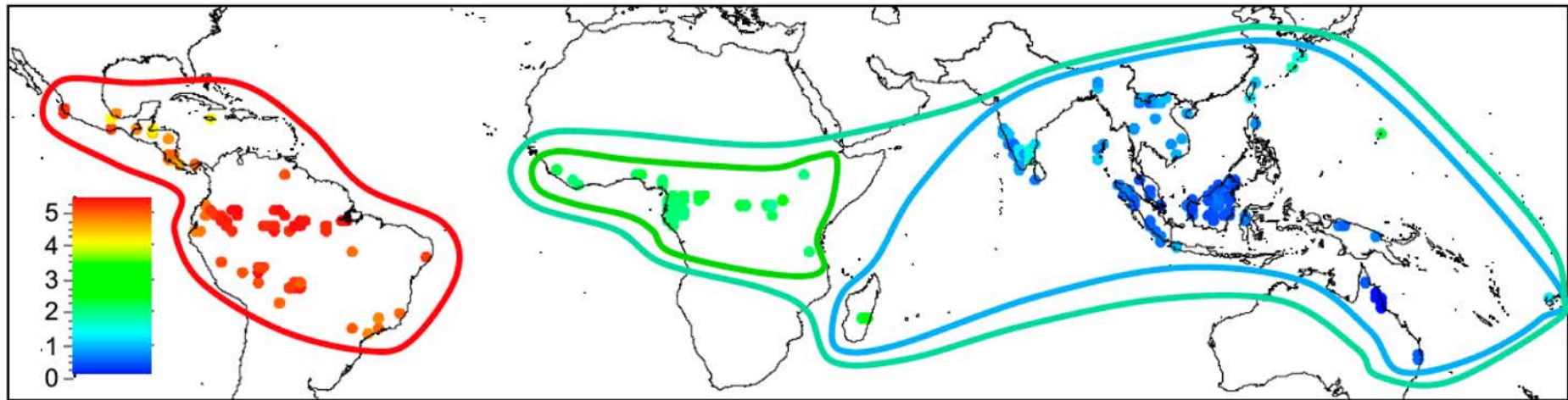


Fig. 1. Overview of sample locations and their floristic affinities (point colors correspond to scores on the first DCA axis with similar colors indicating similar generic composition, and the lines indicate the floristic affinities as determined by cluster analysis).

29 CTFS large plots in Asia: 14 plots in China, 4 plots in Taiwan, 4 in Thailand, 3 in Malaysia (Pasoh 1986~, Lambir 1991~), 1 in India (1987~), 1 in Phillipnes, 1 in Sri Lanka, 1 in Vietnam, Zero in Japan, Cambodia, Myanmar

Gaps ... but other forest plots

Partner Institutions:

China - Chinese Academy of Sciences

India - Indian Institute of Sciences

Malaysia - Forest Research Institute of Malaysia, Sarawak Forest Department, Osaka City University, Kyoto University, National Institute of Environmental Studies (Japan),

Philippines – University of the Philippines, Diliman, Conservation International-Philippines

Singapore - Nanyang Technological University, Singapore National Parks Board

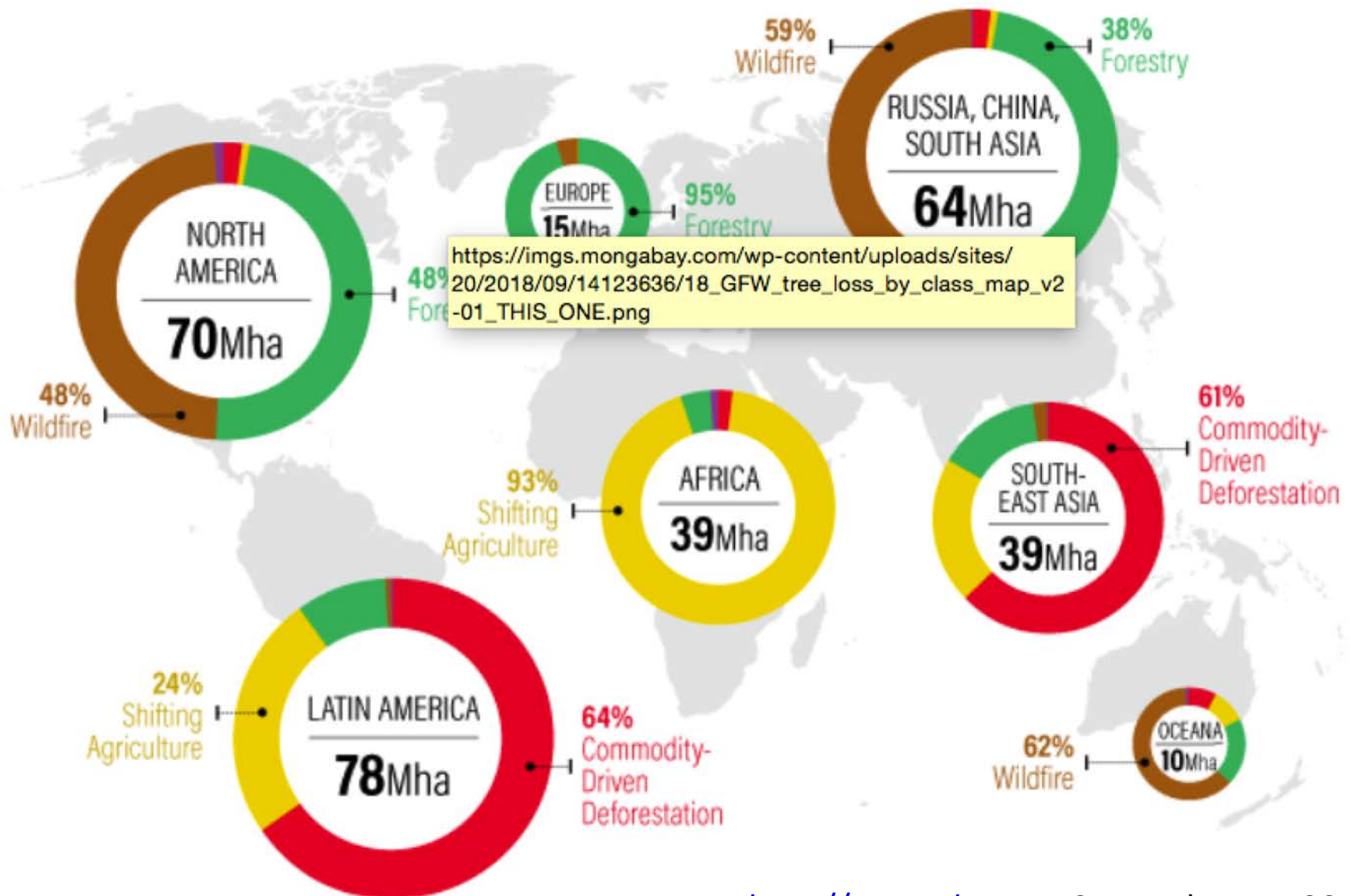
Sri Lanka - University of Peradeniya, Sri Lanka Forest Department, University of Sri Jayawardenepura

Thailand - Royal Forest Department, National Institute of Environmental Studies (Japan)

Taiwan – Taiwan Forest Research Institute, Tunghai University, U. Georgia,



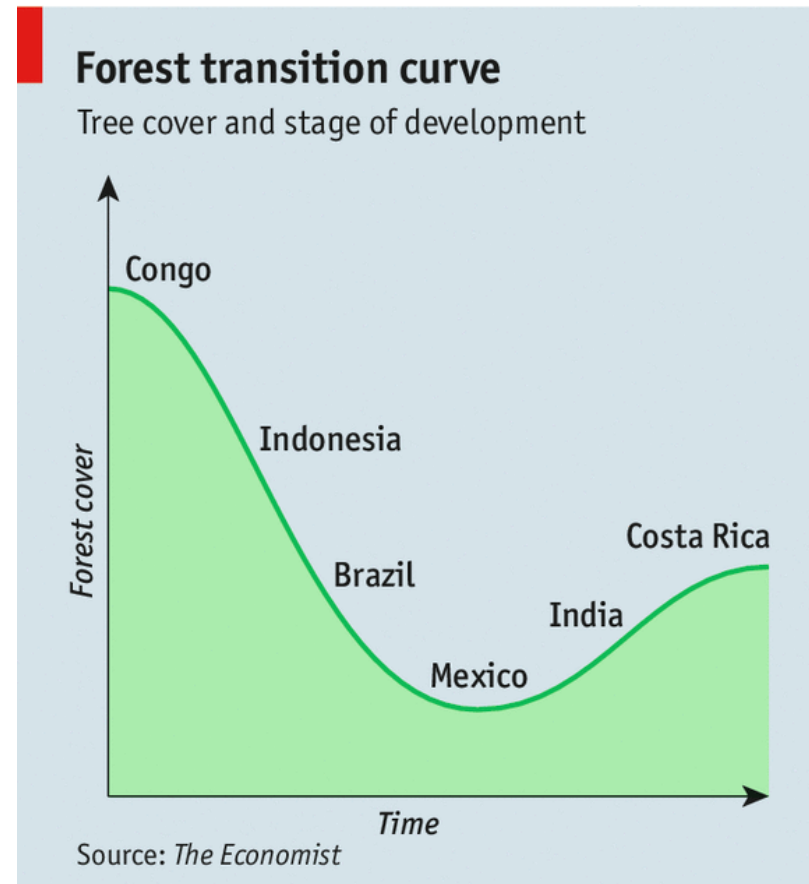
Regional Tree Cover Loss by Driver for the Period 2001–2015



Benefits of KEEP monitoring forest plots and networking them??

- Science:
 - Biodiversity
 - Ecosystem functions
 - Climate change responses
- Conservation:
 - Refugia of biodiversity in Anthropocene
 - Outreach

MORE ?



Discussion topics

- What are key challenges?
- How to sell to funders (policy-makers and tax payers)?
- Policy relevant research topics?
 - Potential topics and their priorities
- Sustainability of individual plots and plot networks