

Incorporating climate adaptation incentives into bioenergy support policies

Dr Alex Baumber

Faculty of Transdisciplinary Innovation

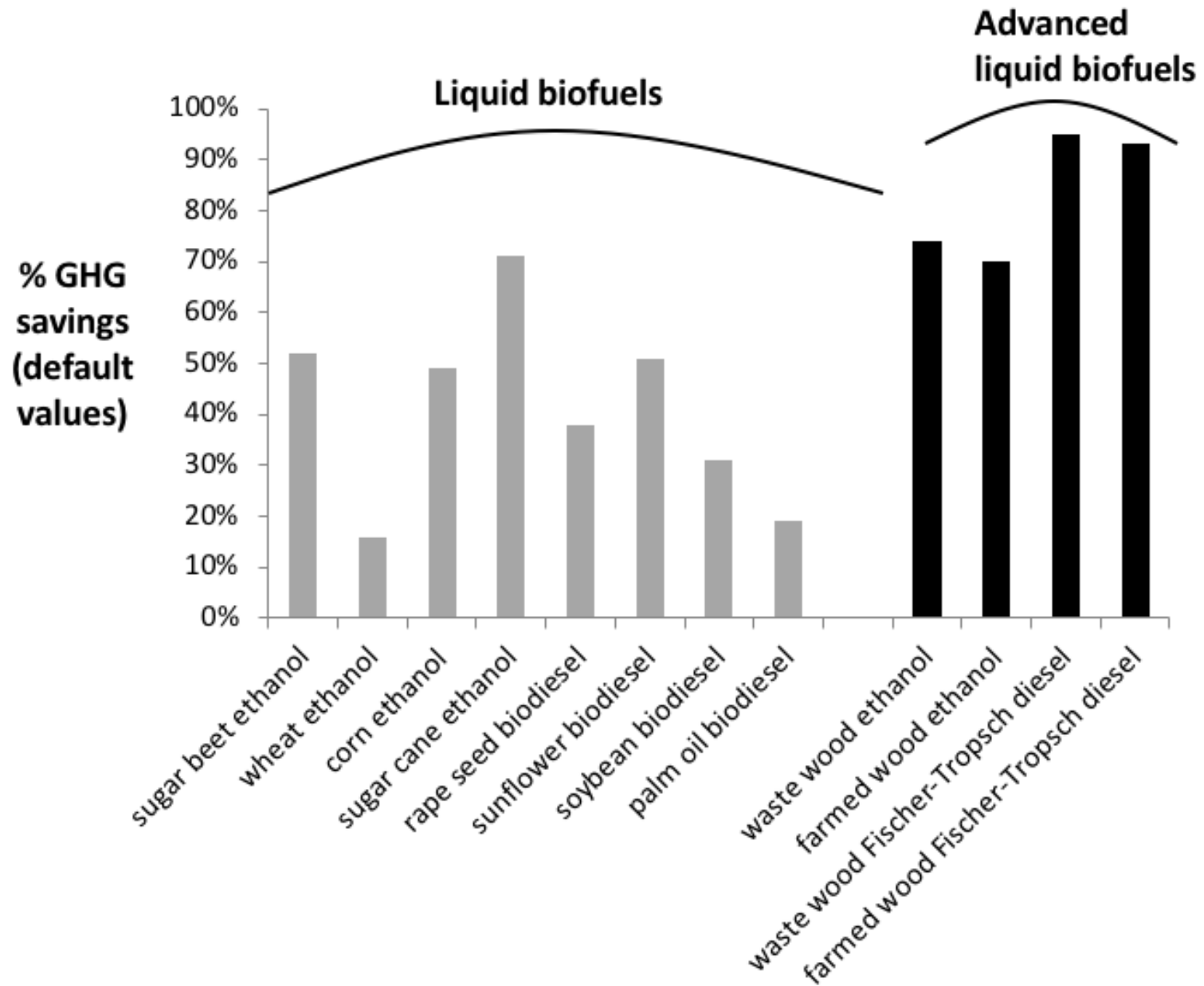
University of Technology Sydney



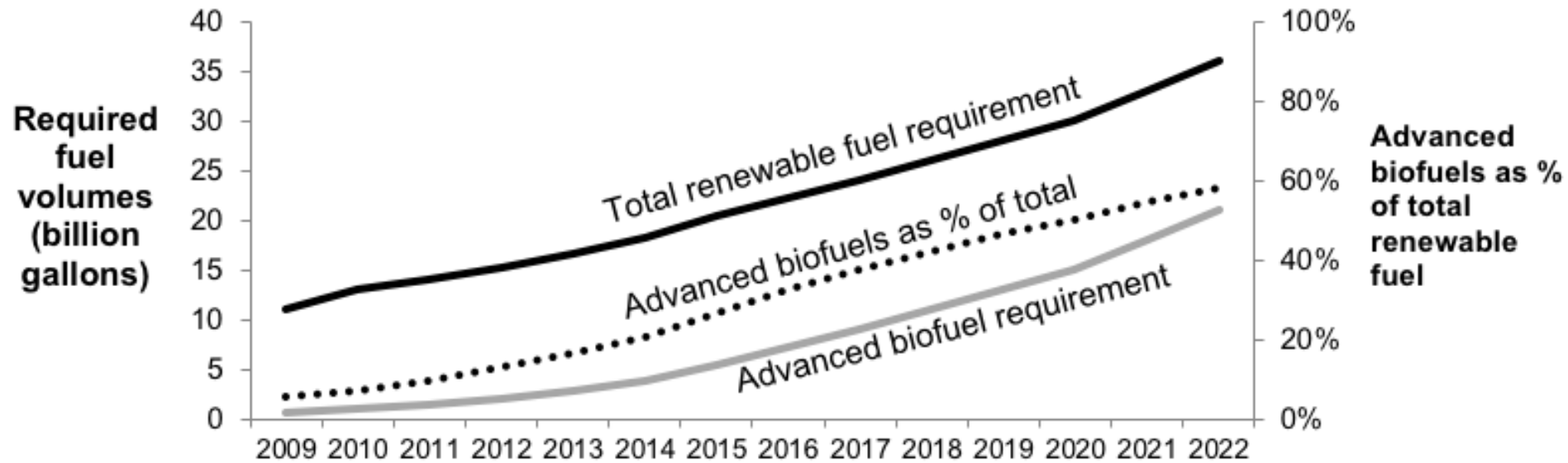


**Mattias Klum –
National Geographic**

% GHG savings from selected biofuels (EU data 2014)



US Renewable Fuel Standard biofuel mandates (as set in 2010)





Miscanthus

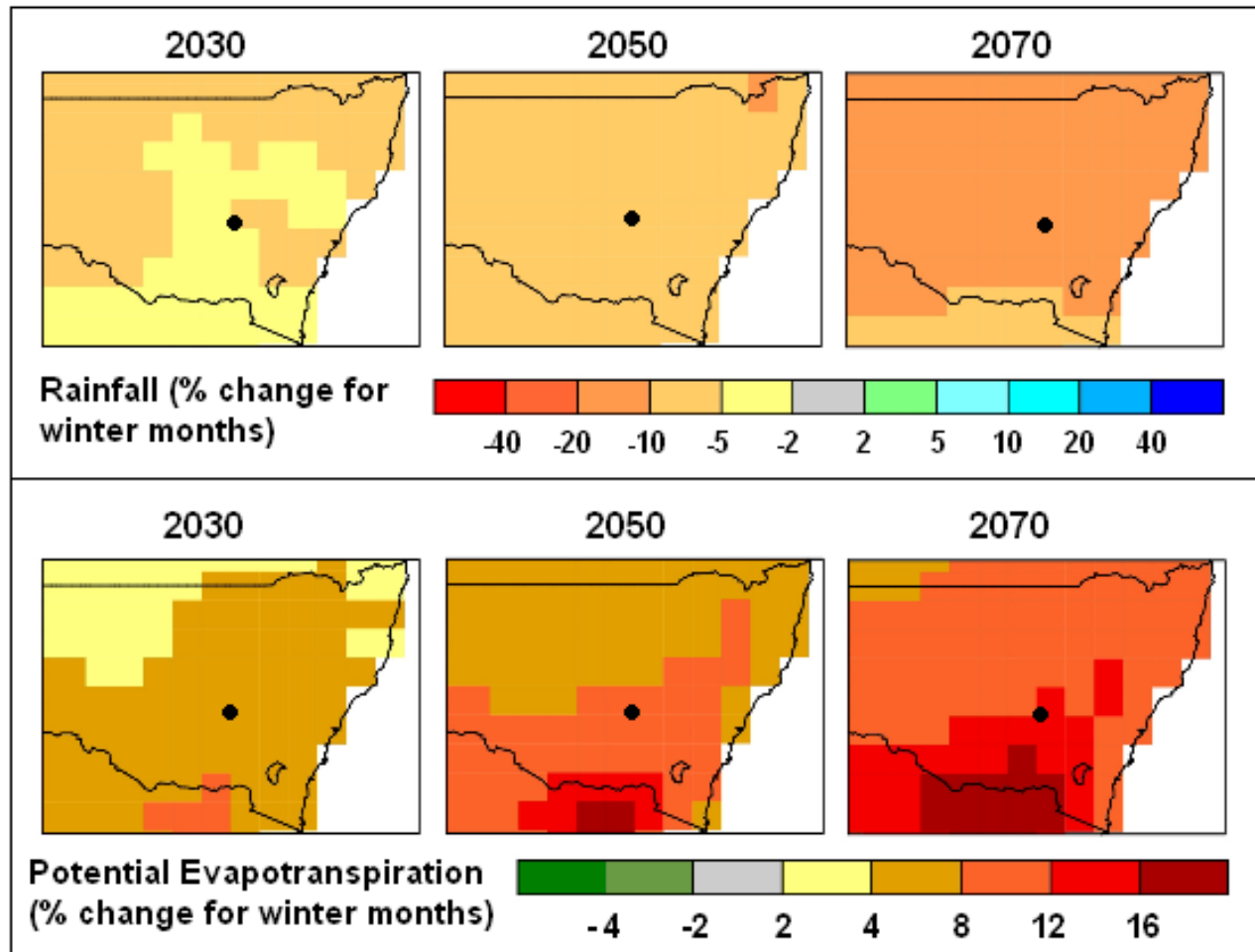


Willow



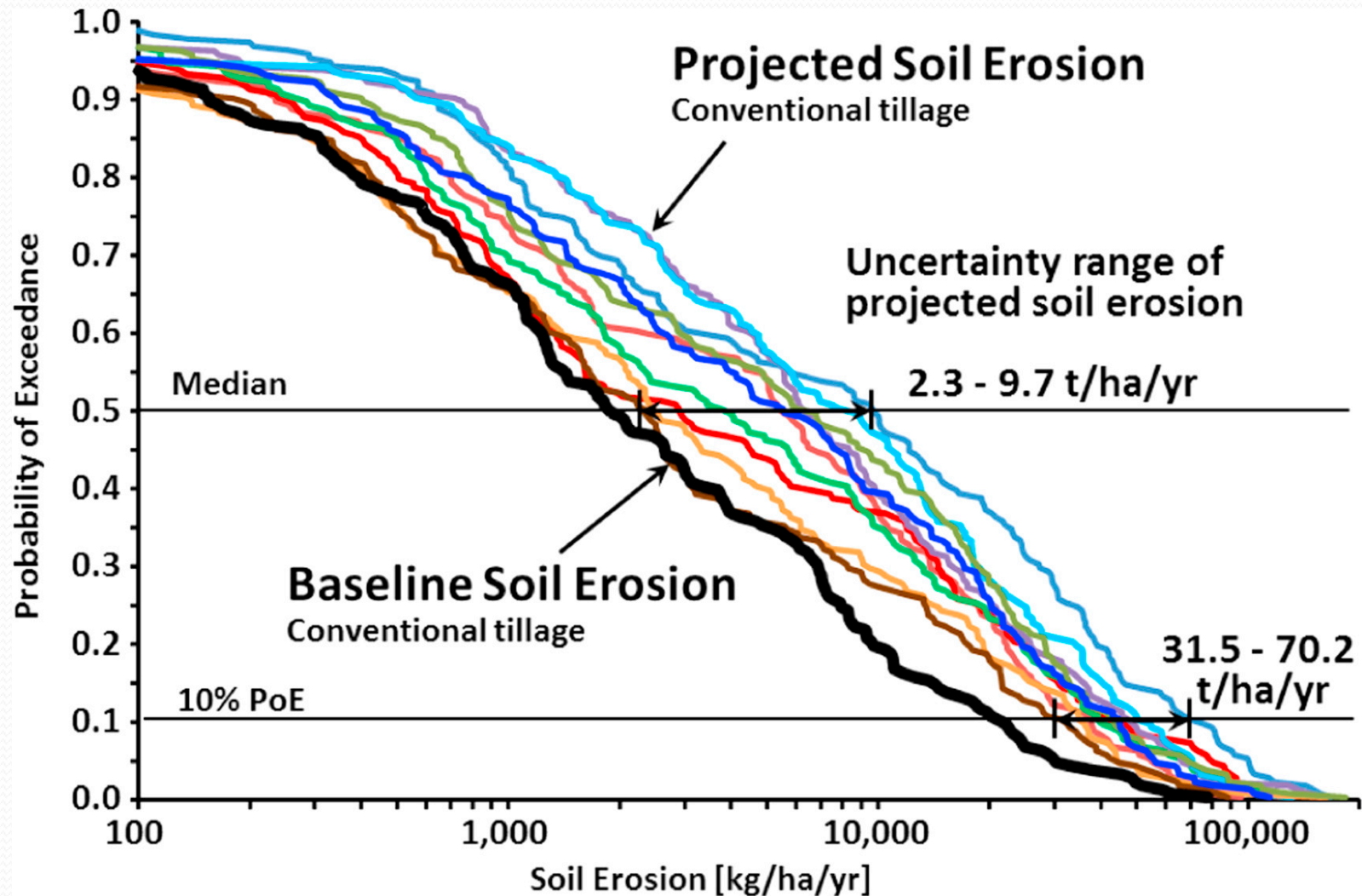
Blue mallee

Projected winter rainfall decline in NSW Wheat Belt



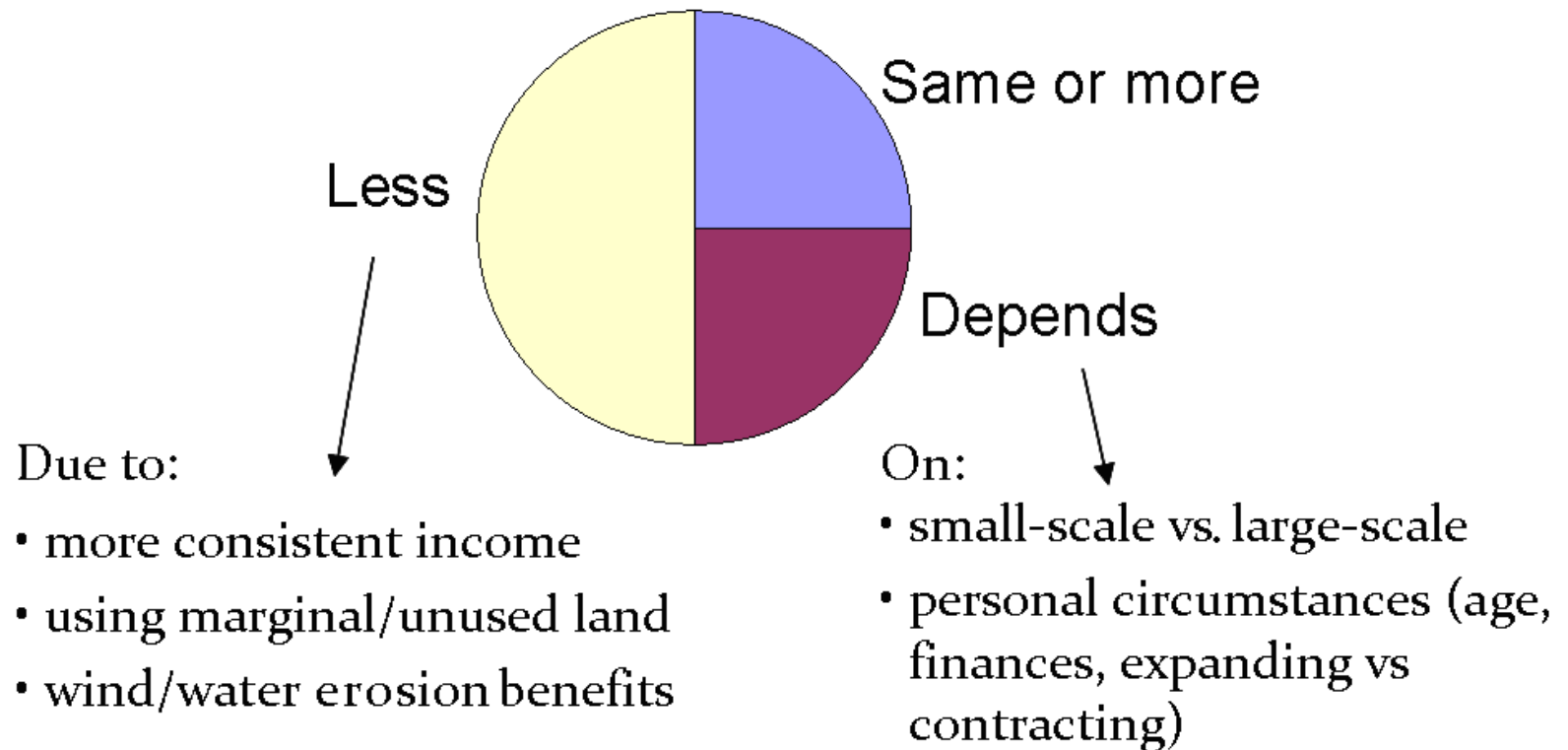
A1B 'best bet'
scenario
CSIRO/BOM
(2010)

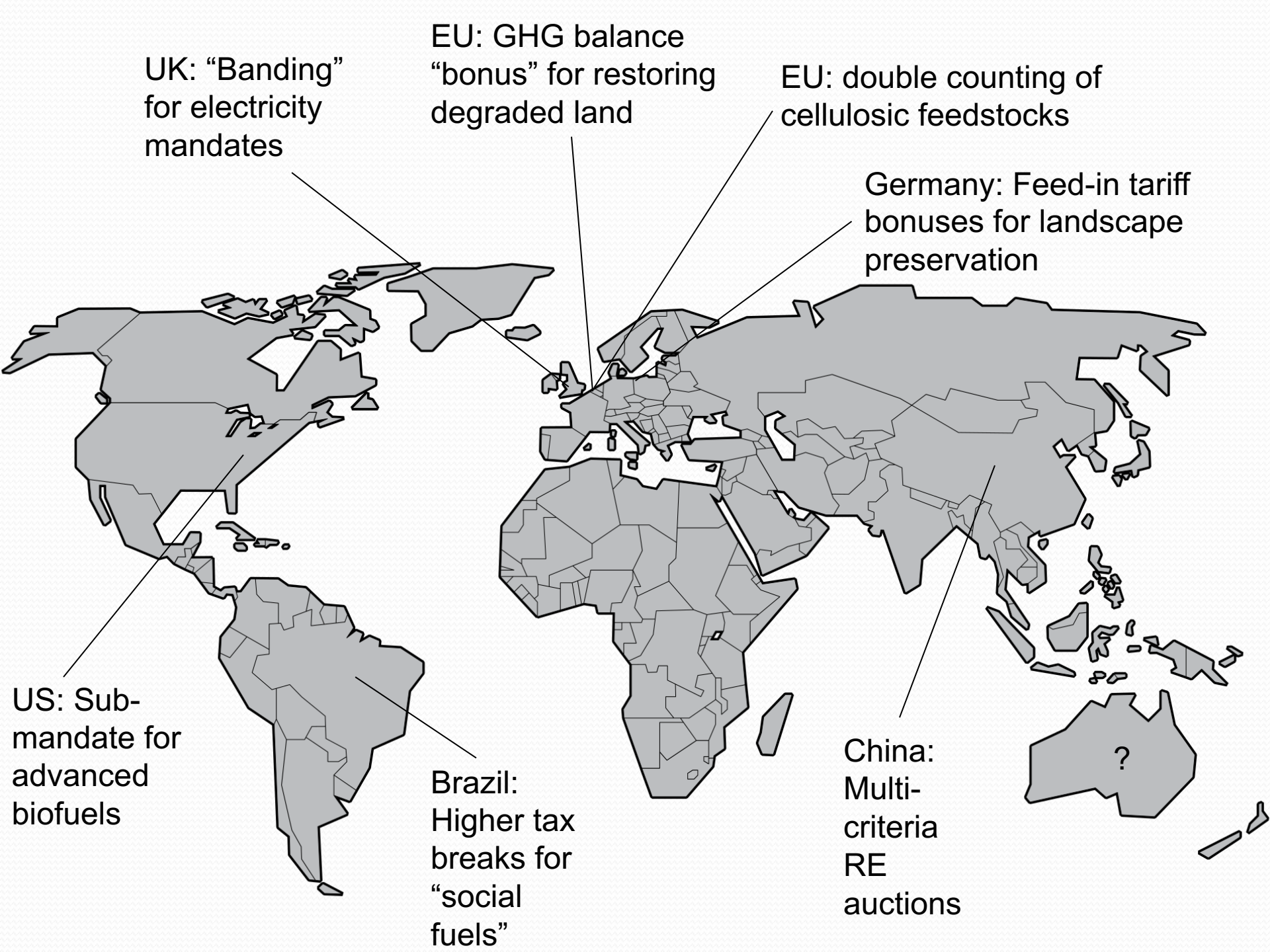
Soil erosion under 10 climate projections, US Great Plains



Garbrecht, J.D., Nearing, M.A., Steiner, J.L., Zhang, X.J., Nichols, M.H., 2015. Can conservation trump impacts of climate change on soil erosion? An assessment from winter wheat cropland in the Southern Great Plains of the United States. *Weather Clim. Extremes* 10(A), 32–39.

Would you require the same net annual average return per hectare as current land uses? (n=16)





UK: "Banding"
for electricity
mandates

EU: GHG balance
"bonus" for restoring
degraded land

EU: double counting of
cellulosic feedstocks

Germany: Feed-in tariff
bonuses for landscape
preservation

US: Sub-
mandate for
advanced
biofuels

Brazil:
Higher tax
breaks for
"social
fuels"

China:
Multi-
criteria
RE
auctions

?

Thank you!

alex.baumber@uts.edu.au

Baumber, A. 2017. Enhancing ecosystem services through targeted bioenergy support policies. *Ecosystem Services*, 26: 98-110.



BIOENERGY CROPS FOR ECOSYSTEM HEALTH AND SUSTAINABILITY

ALEX BAUMBER

