



giving
nature
a home

RSPB CENTRE FOR CONSERVATION SCIENCE



Comparing land sparing and land sharing in the UK

Tom Finch



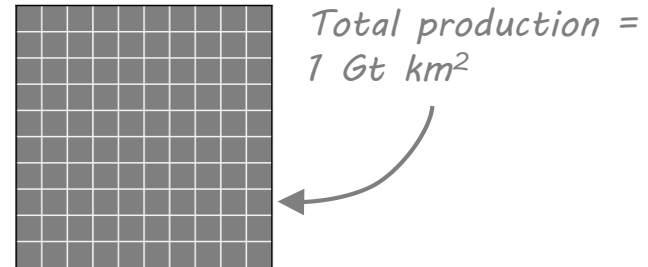


Approaches to food & nature

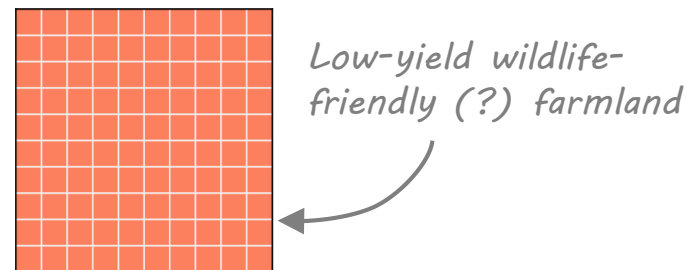
Some background

Approaches to food & nature

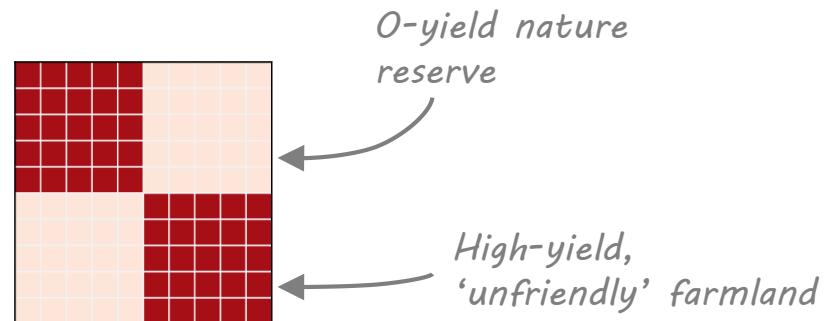
- Given...
 - Total area = 100 km²
 - 'Production target' = 1 Gt km⁻²



- **Land sharing**
 - 100 km² farmed at 1 Gt km⁻²
 - 0 km² spared for nature

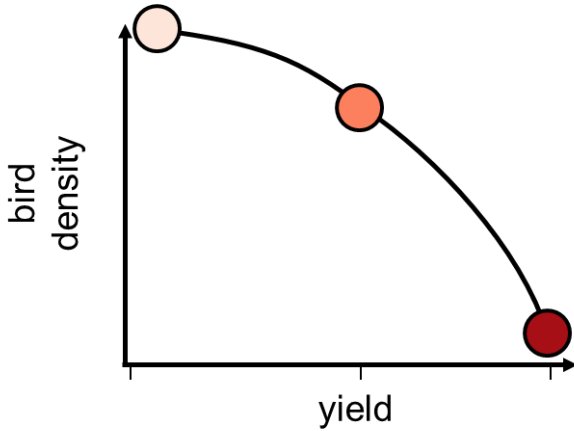


- **Land sparing**
 - 50km² farmed at 2 Gt km⁻²
 - 50km² spared for nature

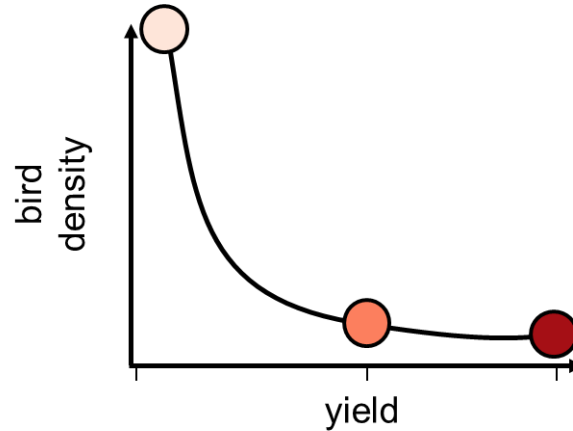


Low yield → High yield

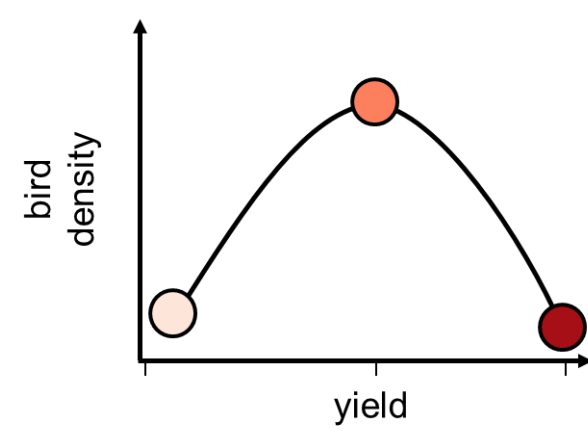
Density-yield curves



Low yield → High yield



Low yield → High yield



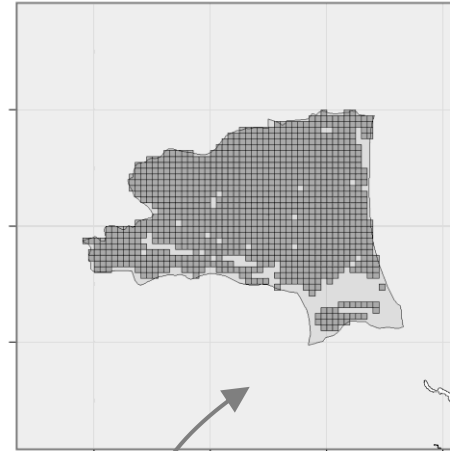
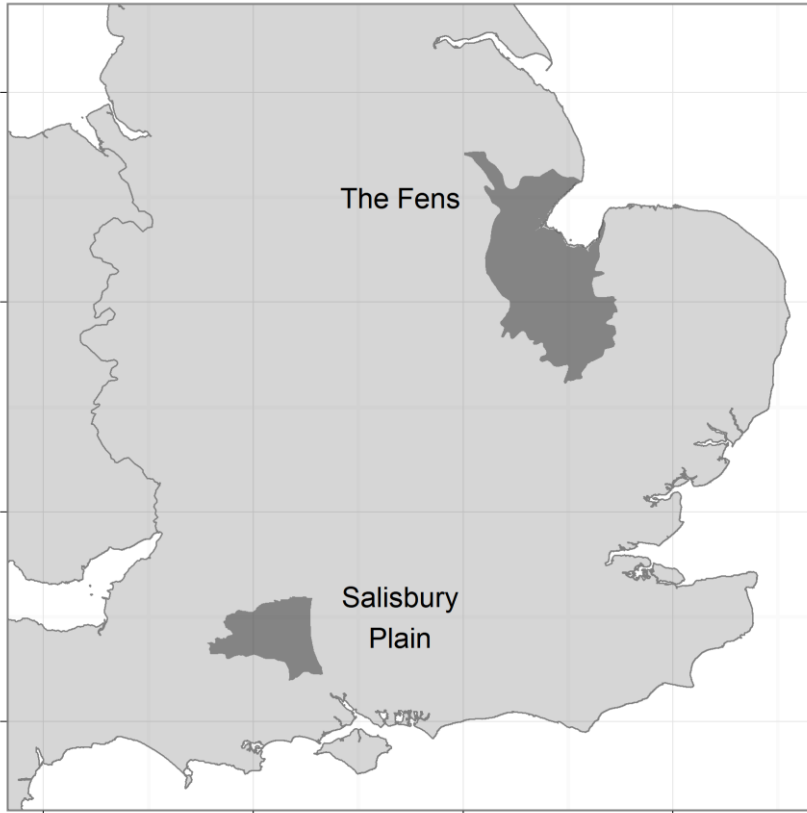
Low yield → High yield

A misty landscape with a large, leafless tree in the foreground and a body of water in the background. The scene is captured in a soft, golden light, likely during sunrise or sunset, creating a serene and atmospheric mood. The tree's intricate branches are silhouetted against the hazy sky, while the water in the distance is shrouded in a thick mist.

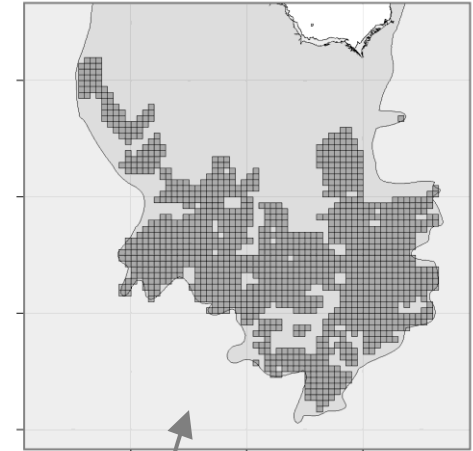
The Fens & Salisbury Plain

Case study landscapes

The Fens & Salisbury Plain



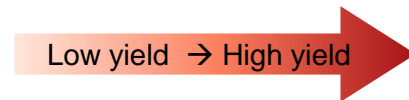
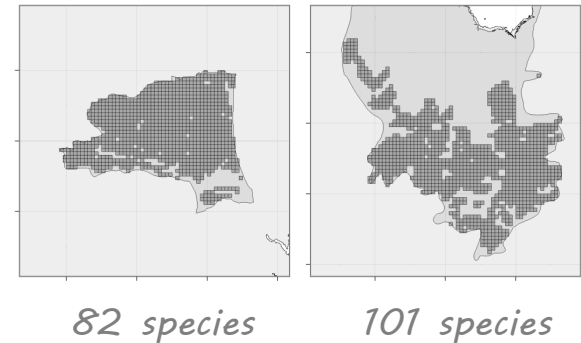
*1026km²
chalky soil*



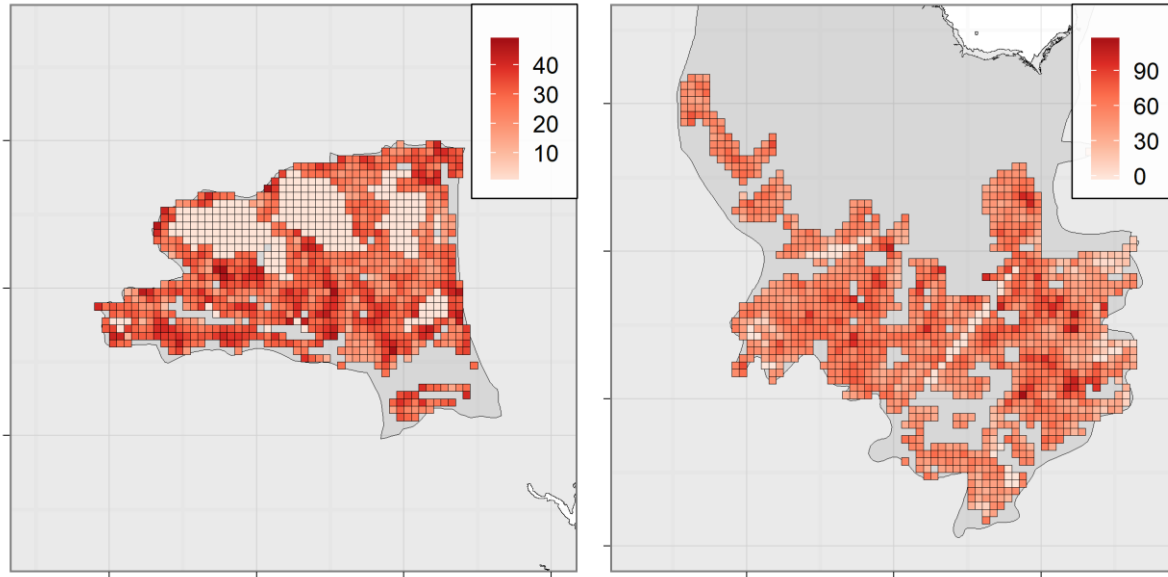
*1228km²
peaty soil*

Density–Yield

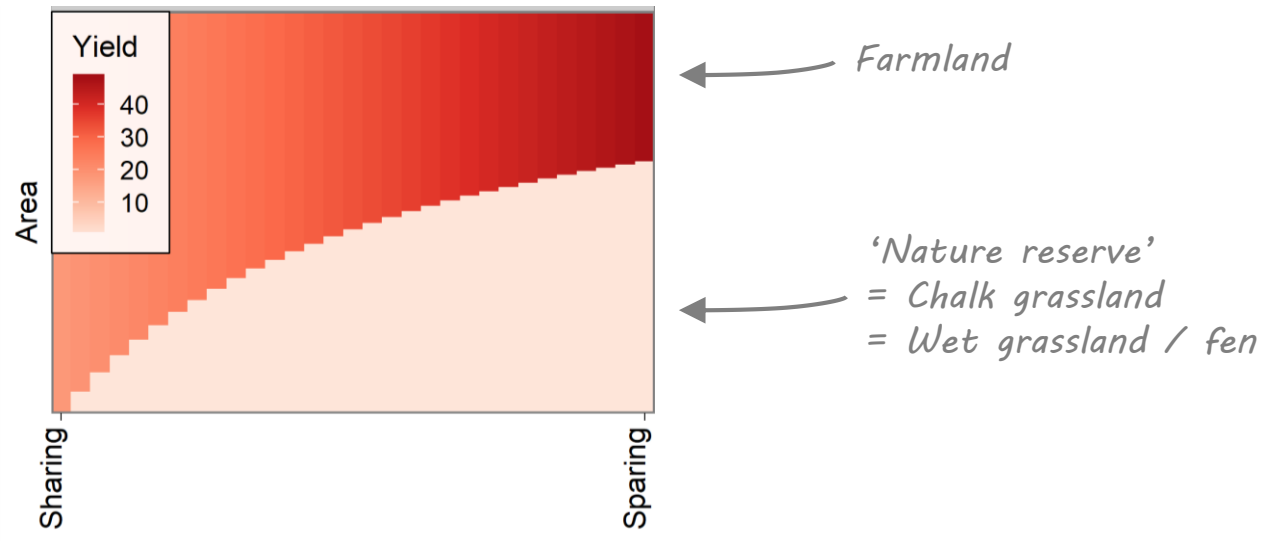
- BBS survey data
 - 108 squares in Salisbury Plain
 - 34 squares in The Fens
- Additional estimates for:
 - Wet grassland (Fens)
 - Bittern, Crane, Stone Curlew
 - Rare undetected ‘super-sensitive’ species




Density–Yield



Scenarios

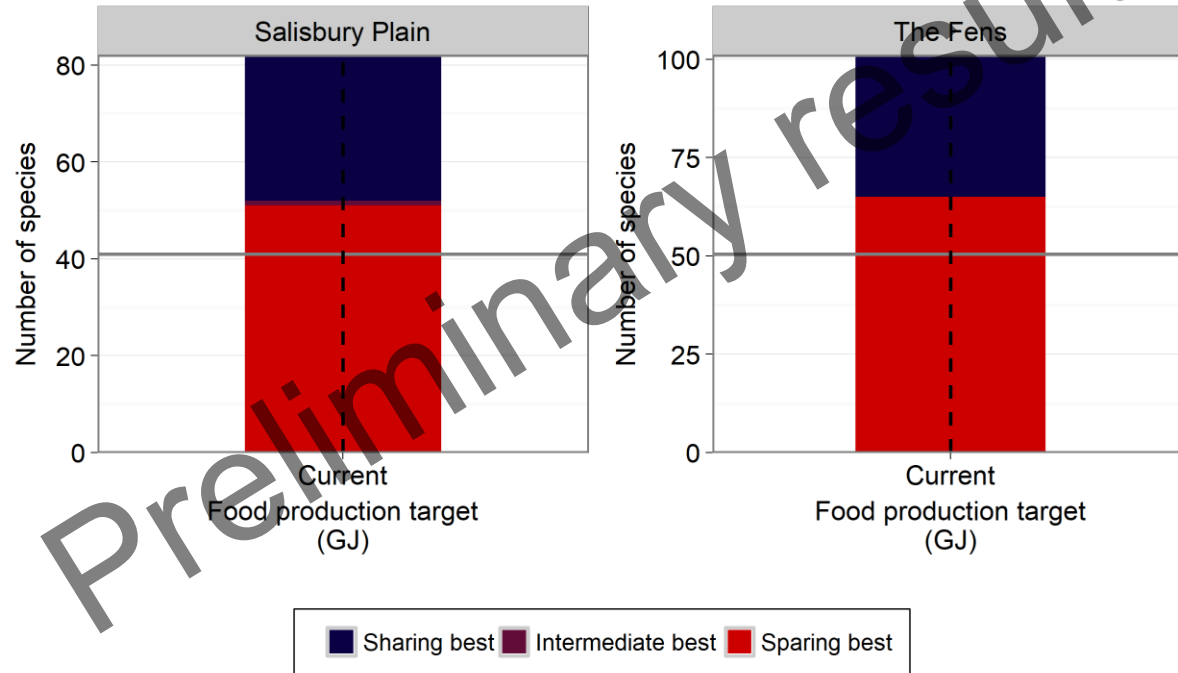


A landscape photograph showing a field of hay bales in the foreground, with a misty valley and hills in the background under a colorful sky. The sky transitions from a pale blue at the top to a warm orange and yellow near the horizon, with wispy clouds. The mist in the valley is illuminated by the low sun, creating a soft, ethereal glow. The hay bales are dark and scattered across the field.

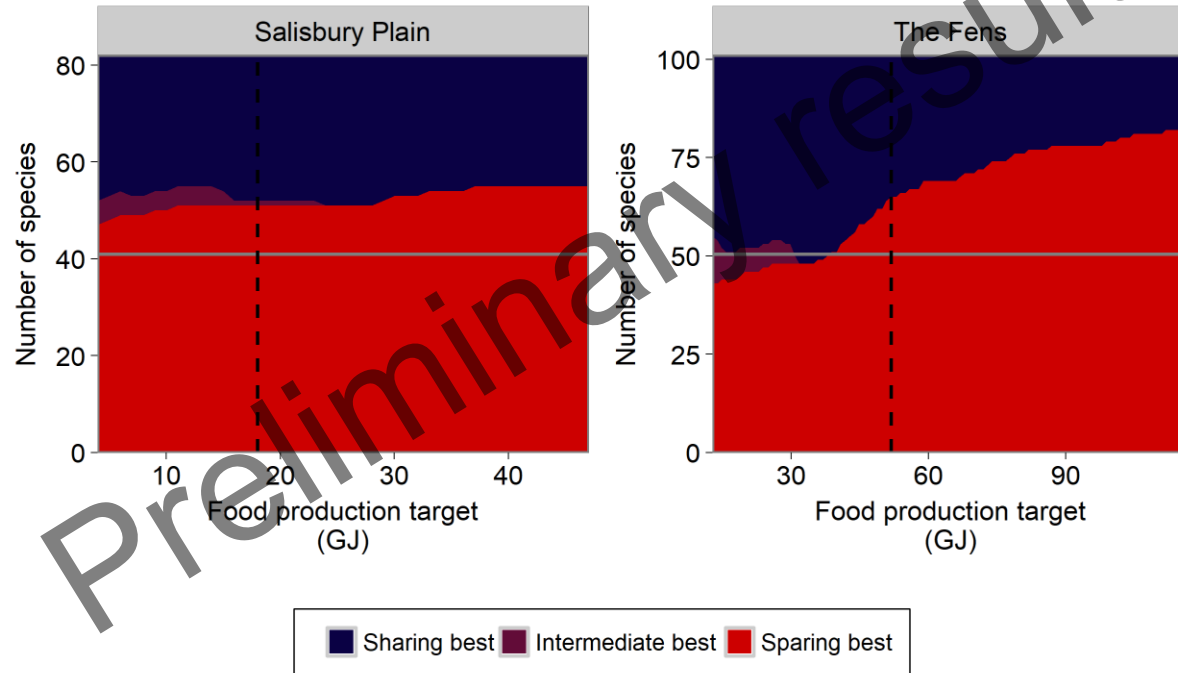
Results

(So far)

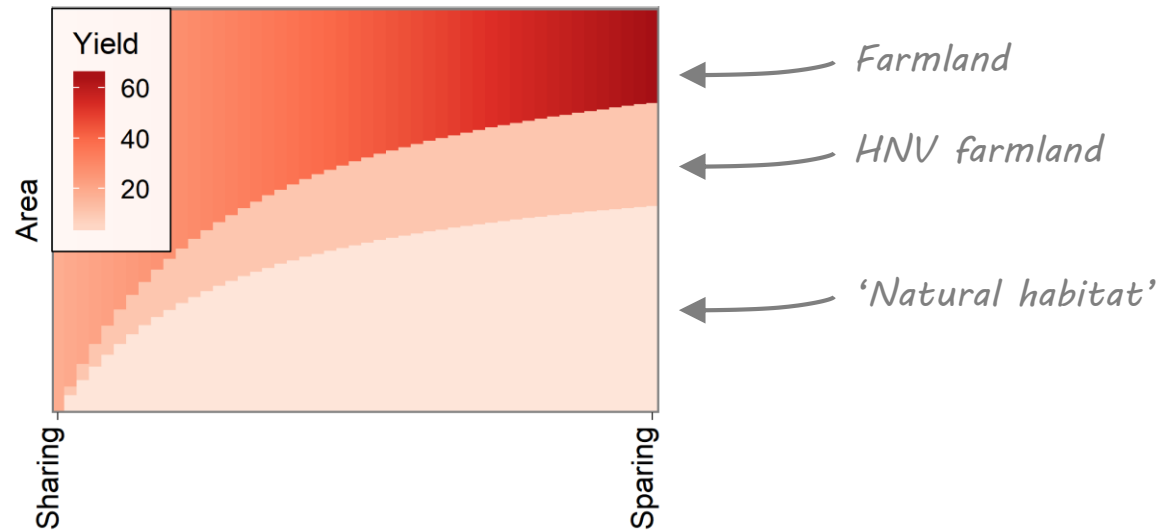
Counting the votes



Counting the votes



Mixed scenarios



Summary

- Sparing **and** sharing?
 - ‘Mixed’ strategy delivers multiple objectives
 - Recognise importance of high-yield food production
- Challenges:
 - **Landscape-scale** decision making
 - **Sustainable** high yields
 - **Off-site effects** of high yield farming?
 - **Demand reduction** measures

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