Ecosystem Approach; Ecosystems Services

Food
Timber
Fuel
Water

Economic Goods

Provisioning services

£4 bn

£5 bn

External costs

Recreation
Tourism
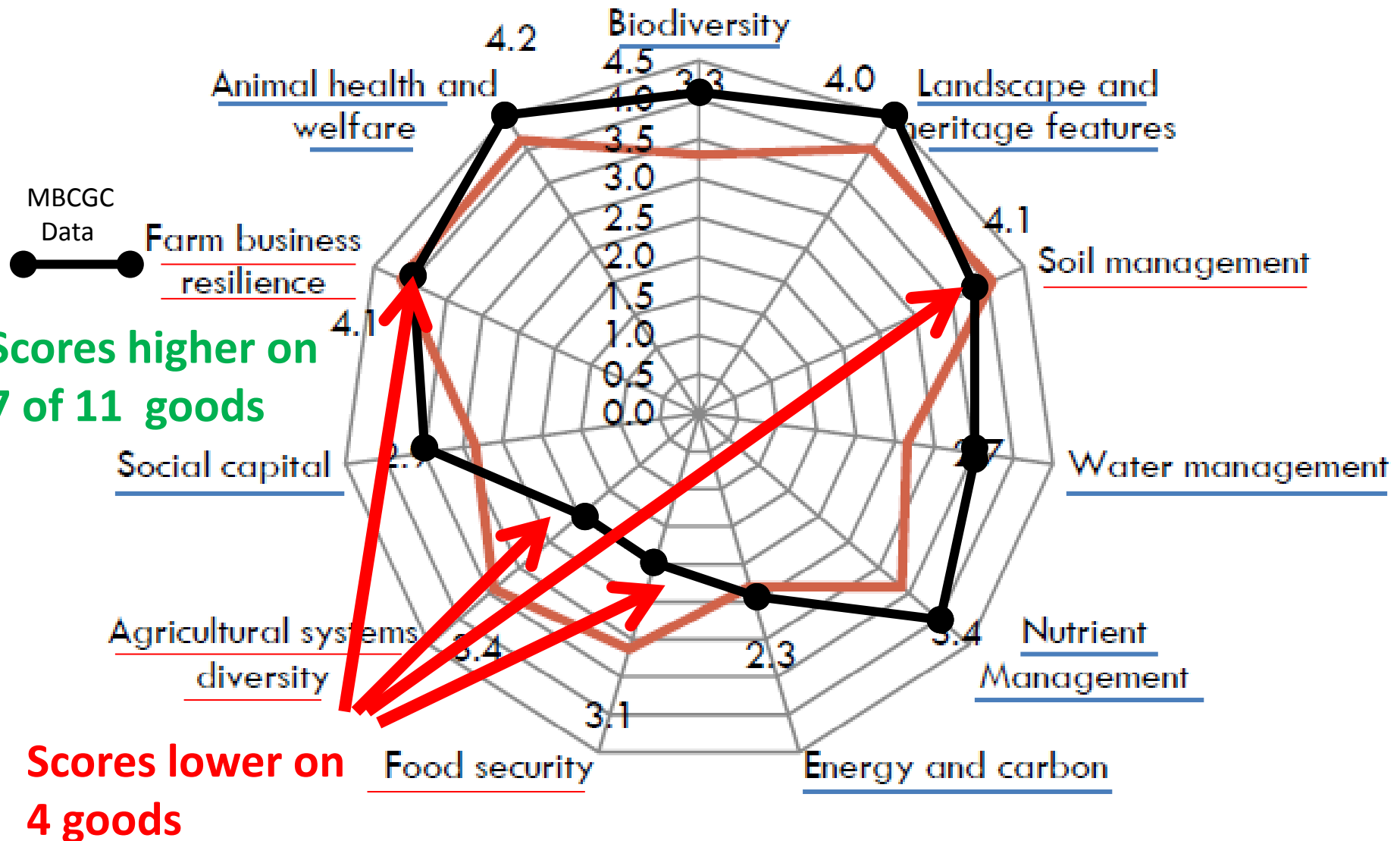Health and well-being
Amenity
Aesthetics

Social/Cultural Goods

Regulating services

Biodiversity;
Underpins ecosystem services

Environment;
provides base for supporting economic necessities and societal benefits

1992
Rio Summit ⟶ 2001
Millenium Assessment ⟶ 2020
Kyoto Protocol

Public Goods Tool – results for 40 organic farms

Radar chart with 11 spurs labelled: Biodiversity, Landscape and heritage features, Soil management, Water management, Nutrient Management, Energy and carbon, Food security, Agricultural systems diversity, Social capital, Farm business resilience, Animal health and welfare. Scale 0.0 to 5.0. Lines: overall mean, maximum, minimum.
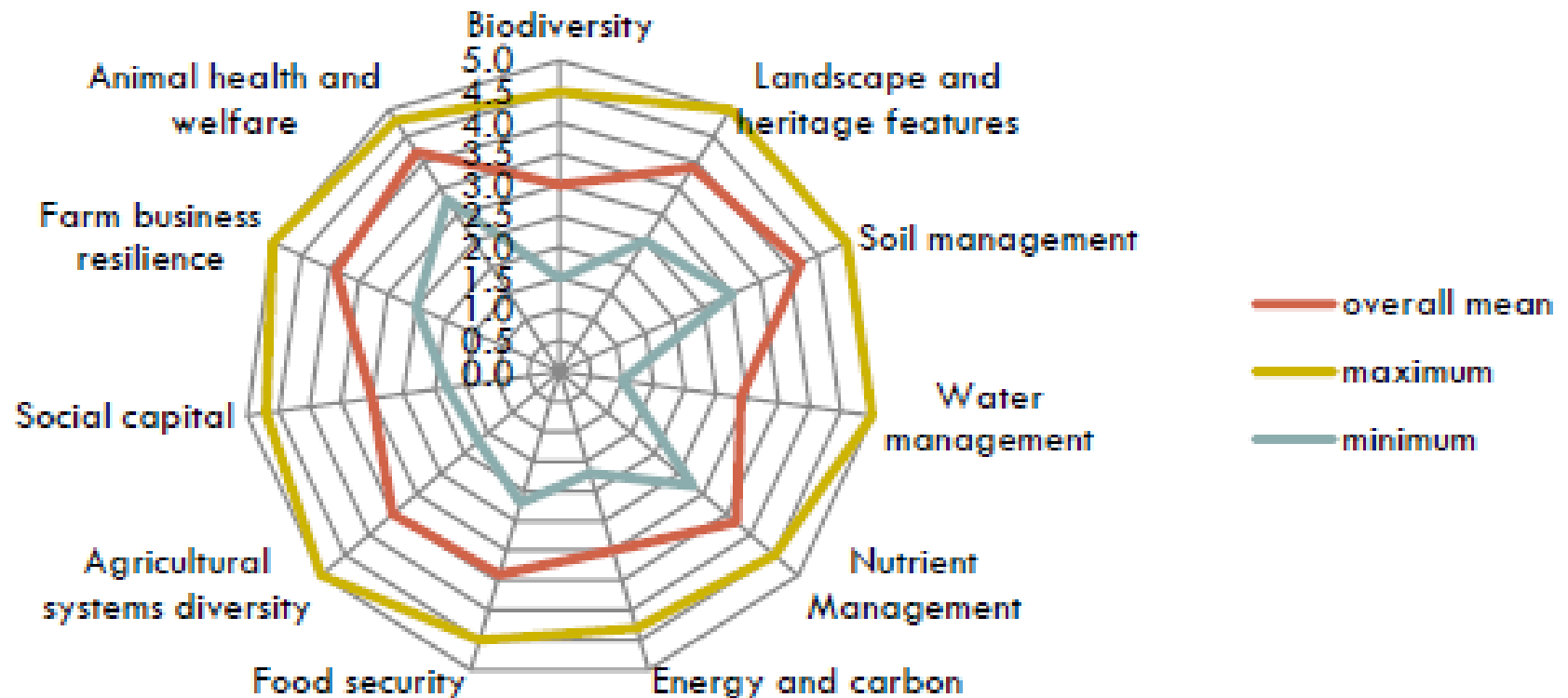
- **Results shown as interconnecting web**

- **11 'spurs', corresponding to different agri-system features**

- **web metaphor emphasises need to recognize inter-connectedness**

- **the linkages make the whole thing work**
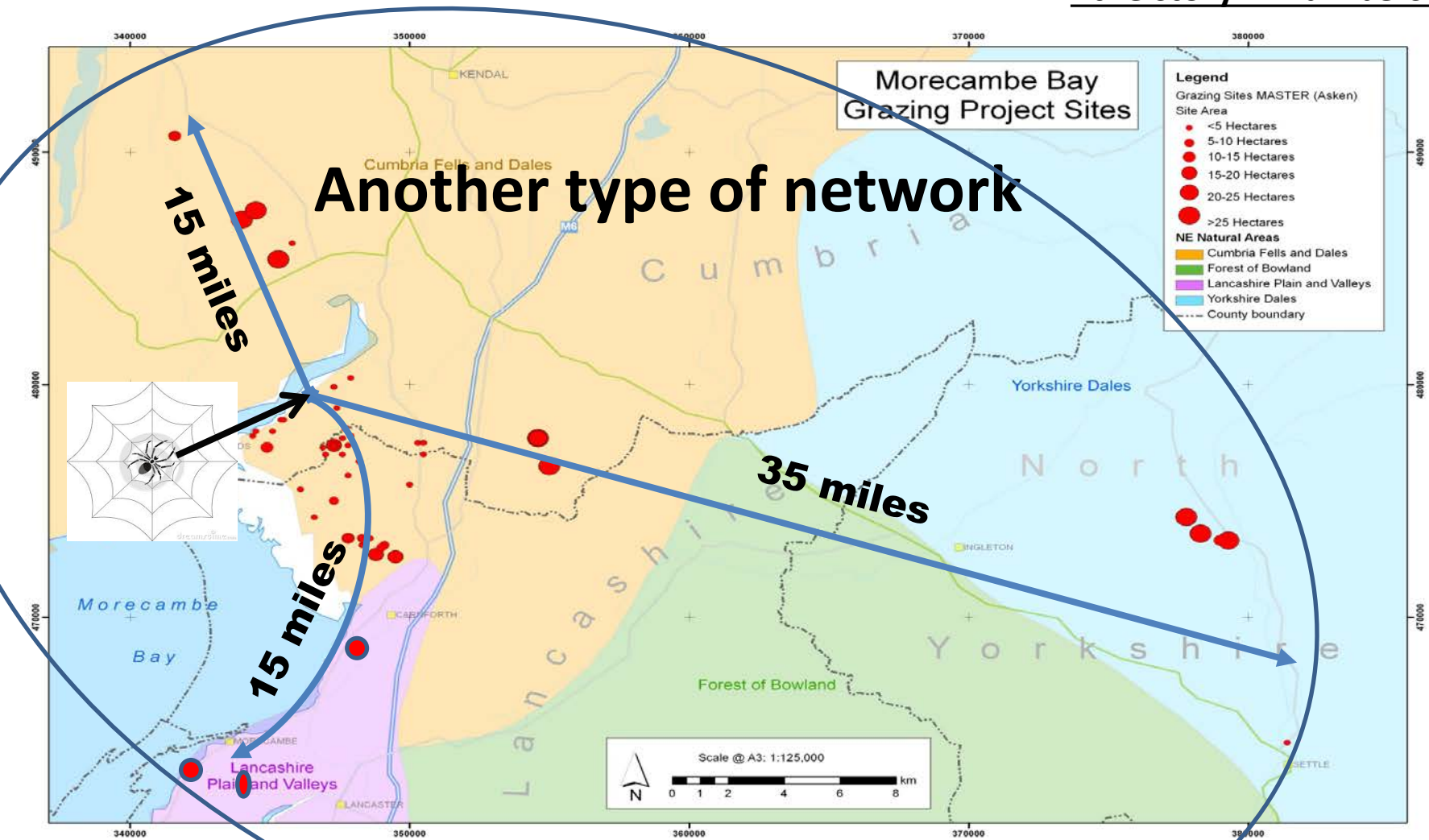
- **But .... 'where's the spider?'**

Beef and Sheep
How did we do?

Morecambe Bay Conservation Grazing Co.

- the story in numbers:

Another type of network

Morecambe Bay Grazing Project Sites

Legend
Grazing Sites MASTER (Asken)
Site Area
- <5 Hectares
- 5-10 Hectares
- 10-15 Hectares
- 15-20 Hectares
- 20-25 Hectares
- >25 Hectares

NE Natural Areas
- Cumbria Fells and Dales
- Forest of Bowland
- Lancashire Plain and Valleys
- Yorkshire Dales
- County boundary

15 miles

35 miles

15 miles

Scale @ A3: 1:125,000

c 1000 ha total area

530 ha National Nature Reserve — 15 landlords

850 ha SAC/SSSI

- 2 government agencies
- 5 N.G.O.s
- 2 local authorities
- 6 private landowners

1 spider

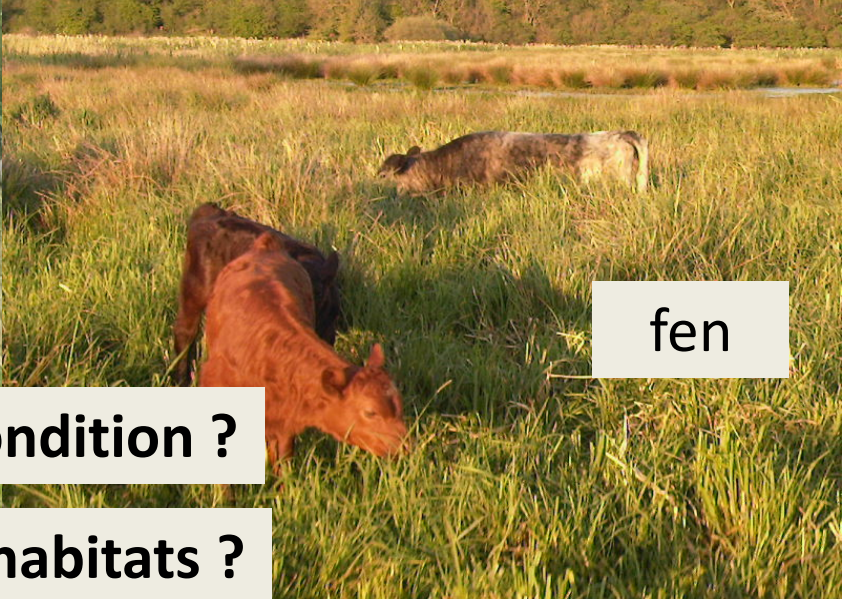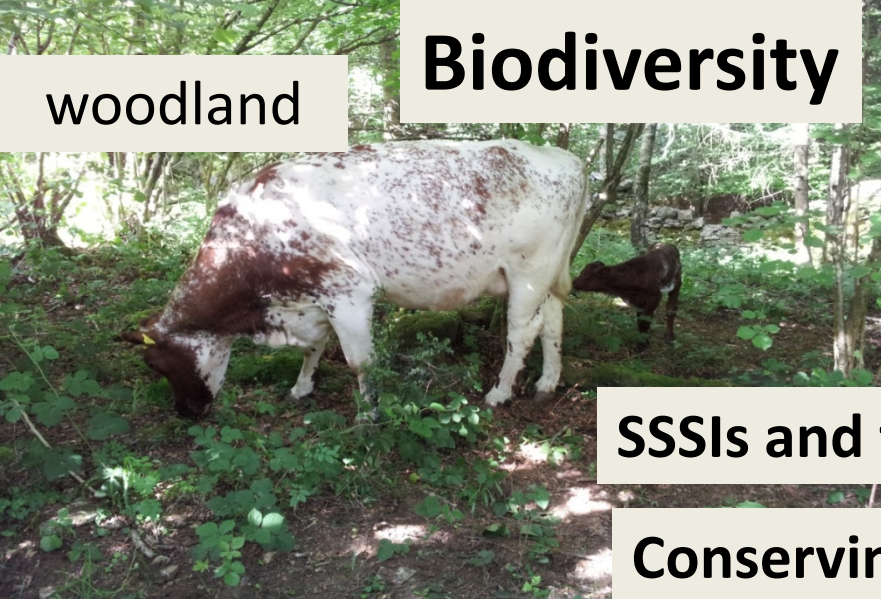The Product = 5 year old steer 300+kg DW

Reared and finished solely on 'unimproved' grazing

Scores low on 'food security'

Scores well on 'business resilience'

Biodiversity

woodland

fen

SSSIs and their condition ?

Conserving BAP habitats ?

Range and suitability of their management ?

Conservation Plan?

Limestone grassland

Herb-rich haymeadow

Biodiversity

Agri-environment scheme?

BAP species/ other rare spp?

(functional species)

Awards received for conservation works?

Agricultural systems diversity

Crop/forage diversity?

Rotation and range of varieties?

Fuel-wood sales

c. 30% tree/shrub cover - all of it grazed

Agroforestry!

Livestock diversity

Different species?

Different livestock breeds?

Pasture-fed

Different marketing outlets?

On-farm processing?

= yellow fat