

Water Matters for Floodplain Meadows

Kevan Martin
Thames Valley Wildflower Meadow Restoration Project

MG4 Plant Community – only 1000ha remains in the UK

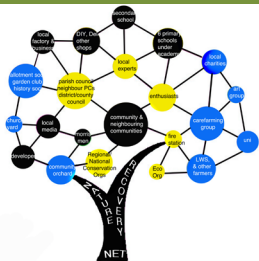


Thames upstream of Swinford Toll Bridge



Long Mead, November 2023





A Hedge in Time

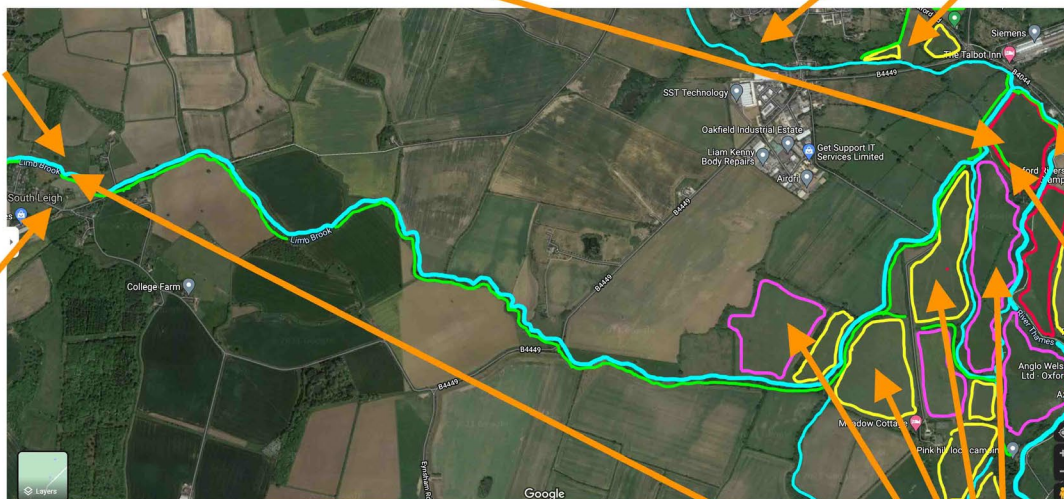
Eynsham to South Leigh along the Limb Brook

Long Mead's Thames Valley Wildflower Meadow Restoration Project

Nature Recovery Network

Landscape-scale hedgerow co-ordination by Church Farm, South Leigh

NRN community hedge planting in South Leigh



- MG4 - LWS
- MG4 under restoration - TVWMP
- MG4 under restoration - CS/HLS
- Limb Brook and tributaries/River Thames
- Hedgerow corridors

As part of NRN, Eynsham and South are testing water quality in the Limb Brook in South Leigh and 10 other sites in both Parish. Equipment funded by County Councillor Priority Fund

Landowners already engaged in Eynsham's NRN and Long Mead's TVWMP

Eynsham's NRN community hedge planting in Eynsham Primary School and Bartholomew Secondary School

Witney Rd Playground hedge, funded by Eynsham Rotary

Eynsham's NRN community hedge planting in Playing Fields Carnival Meadow (restoration funded by CPRE/Wild Oxfordshire)

Creates an ecotone for new meadow

Engaging resident traveller community in project - hedge-planting as part of Eynsham's NRN community hedge planting project

Local expert Anna Rowlands has been leading NRN water vole surveys: healthy population discovered in Limb Brook and Wharf Stream 2022/2023

NRN Hedge-laying workshop for community - delivered by Wychwood Forest Trust

Arable field near Eynsham, November 2023



Chill Brook, November 2023



Wharf stream – November 2023 confluence of Chil Brook and Limb Brook



Summer crop – Long Mead



Hay Baling Long Mead 2023



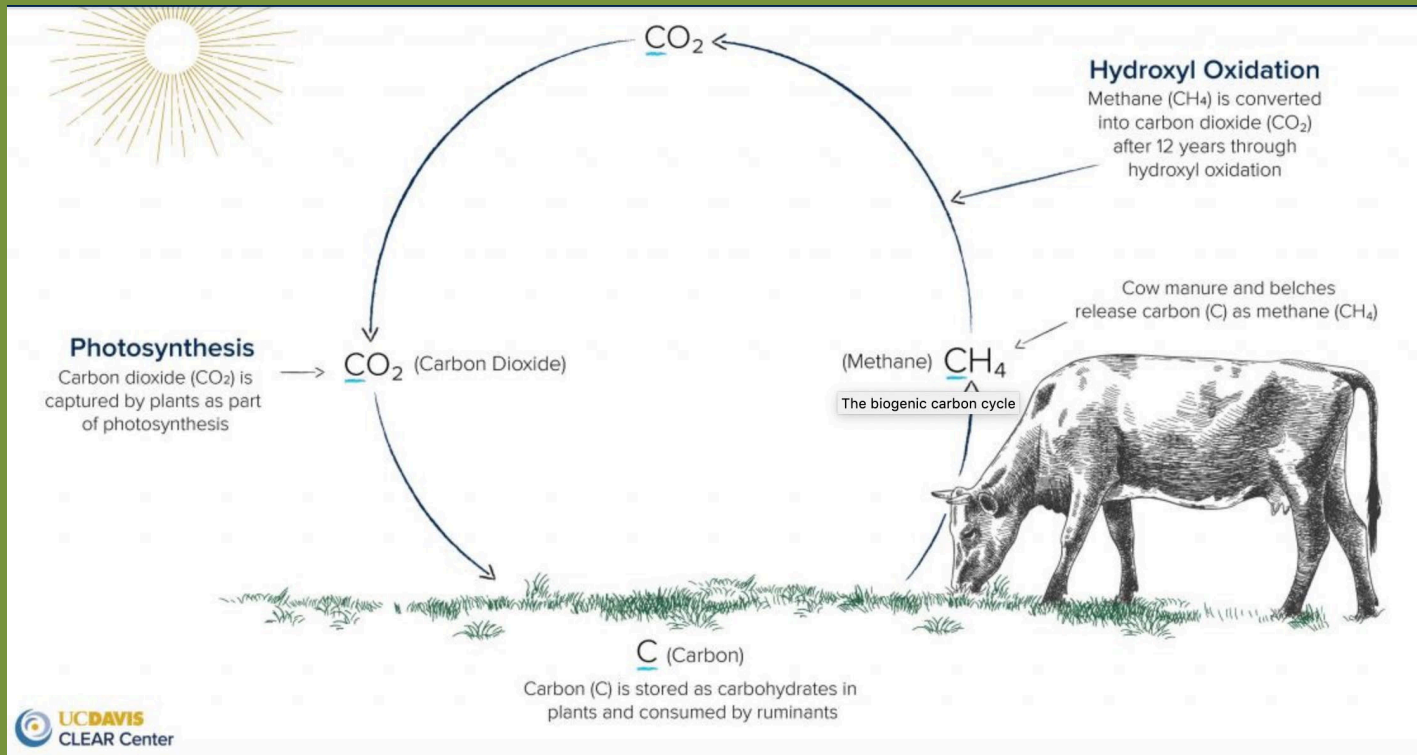
The Botany Class



Shepherdesses, Long Mead



Biogenic Carbon Cycle



Christ Church Meadow Restoration, 2020. An example of Resilience



Christ Church Meadow 2020



Christ Church Meadow, January 2021



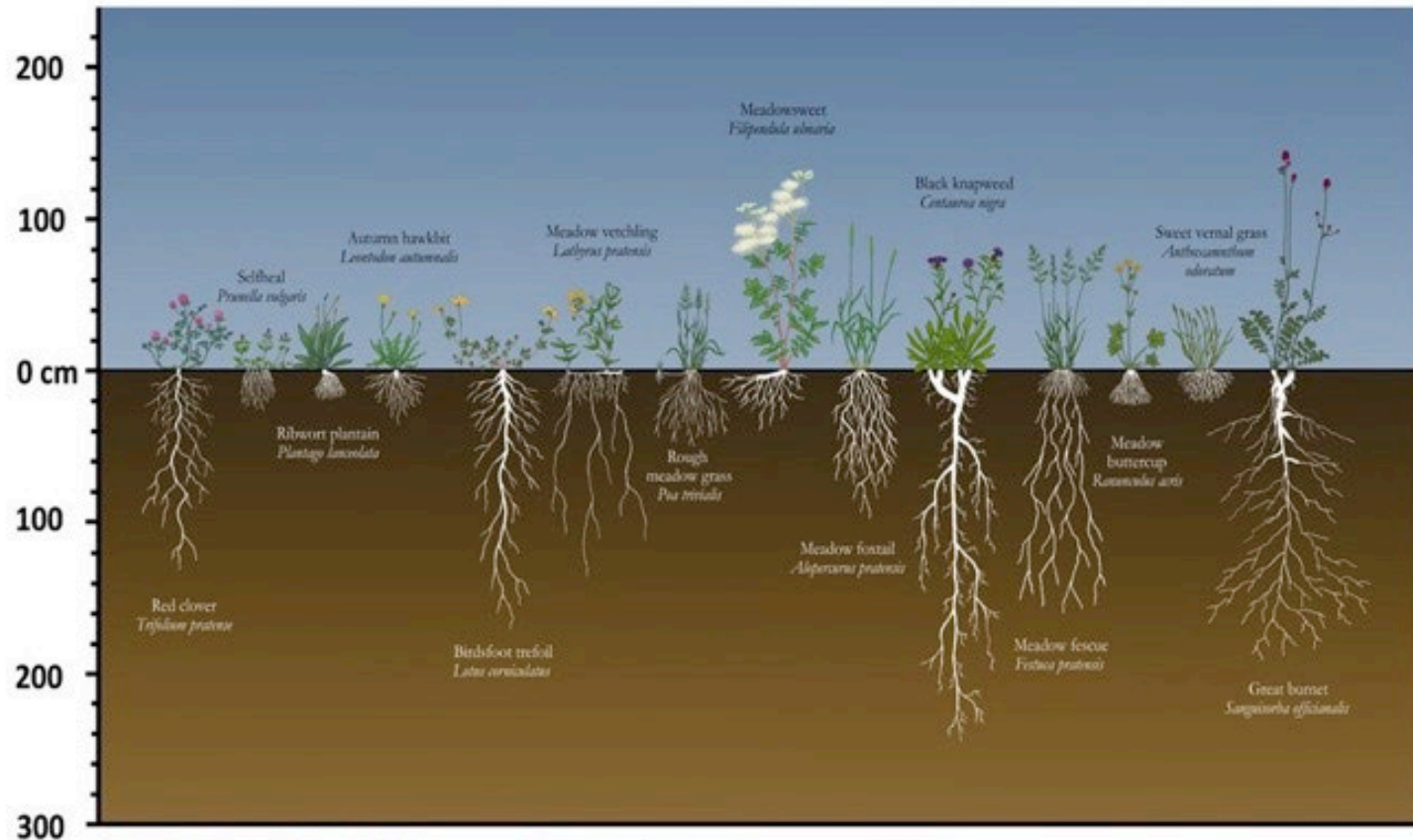
Christ Church Meadow

May 2021



Mitigation of climate change

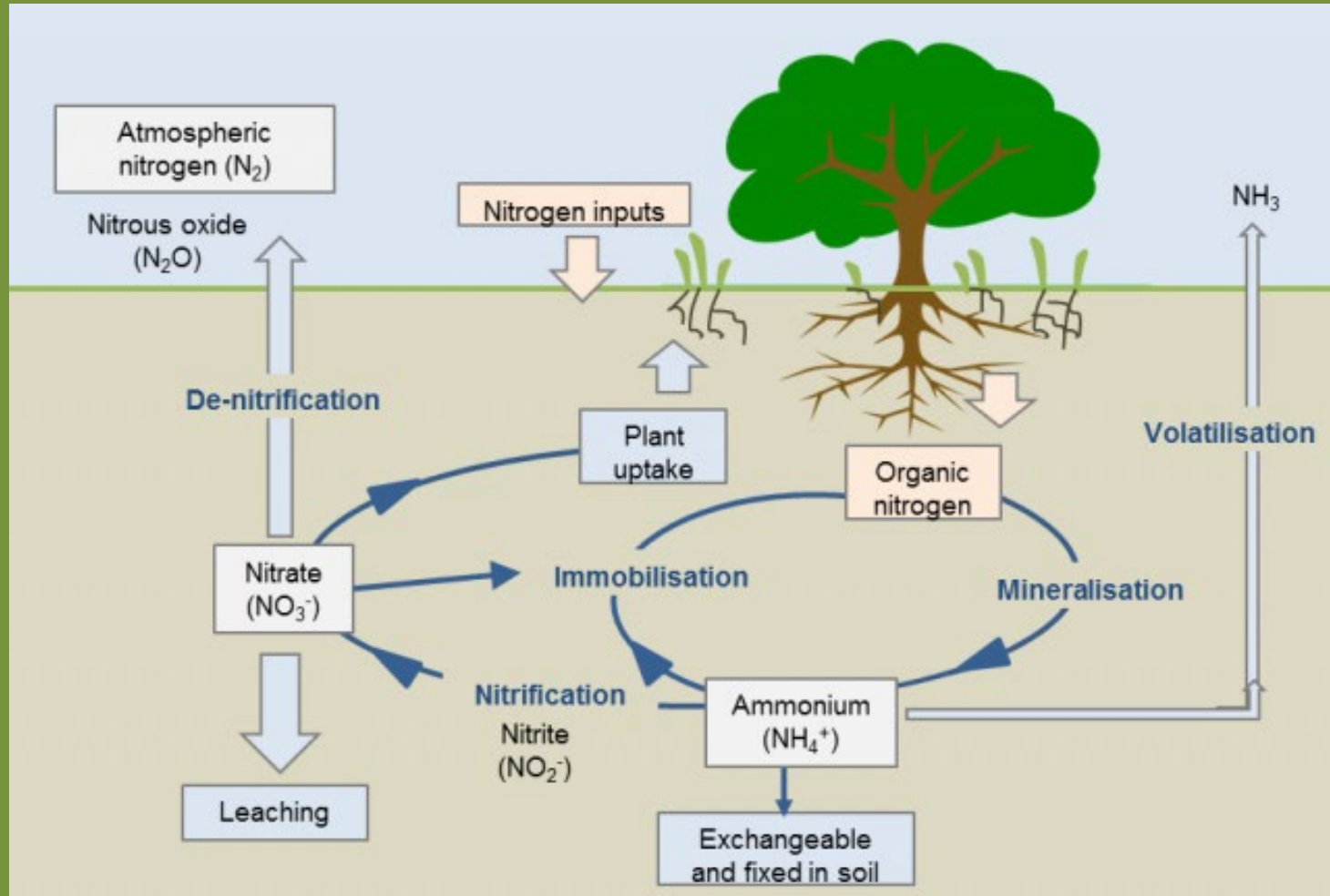
Rooting structures of floodplain meadow plants



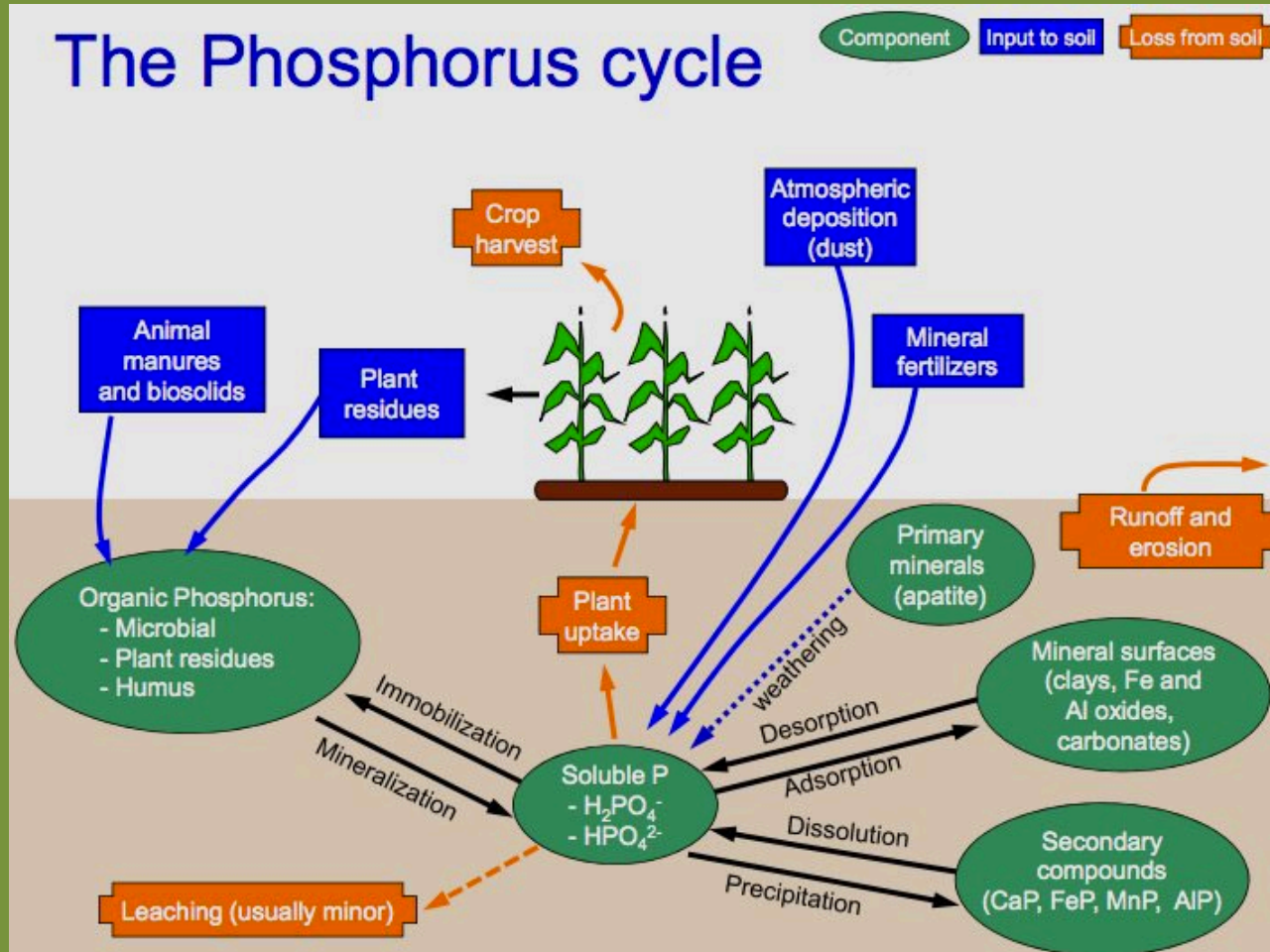
www.floodplainmeadows.org.uk
www.open.ac.uk/ees
 Artwork by www.vickybowskill.com with
 botanical expertise from Irina Tatarenko.

References:
 Diagnoses and keys for the age states of meadow plants. Parts 2 & 3 (1983),
 Moscow State Pedagogical Institute, Moscow
 Diagnoses and keys for the age states of grasses (1997), Moscow
 Biological Flora of Moscow Oblast (1974-2002)

Nitrogen Cycle in Soil



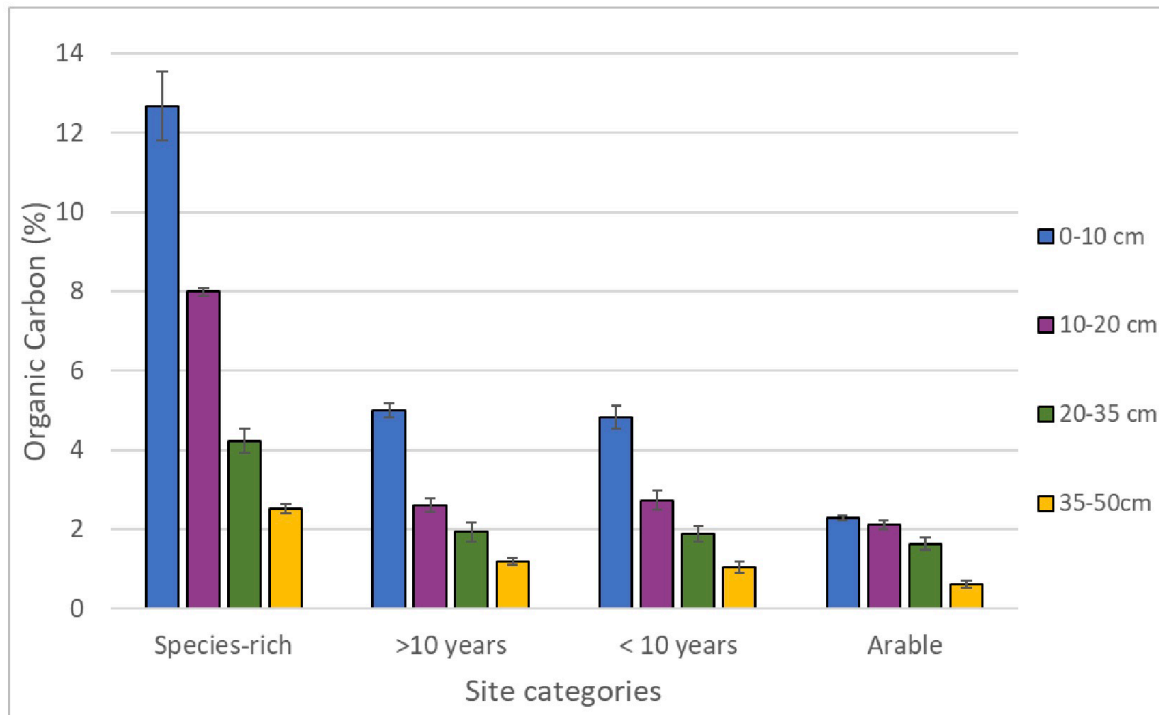
The Phosphorus cycle



Prof. David Gowing and trainee sampling Long Mead soil for Carbon content

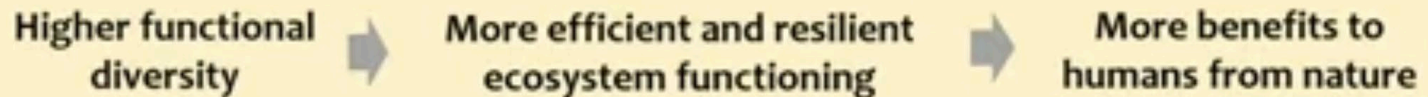


Preliminary results – Organic carbon (% w/w)

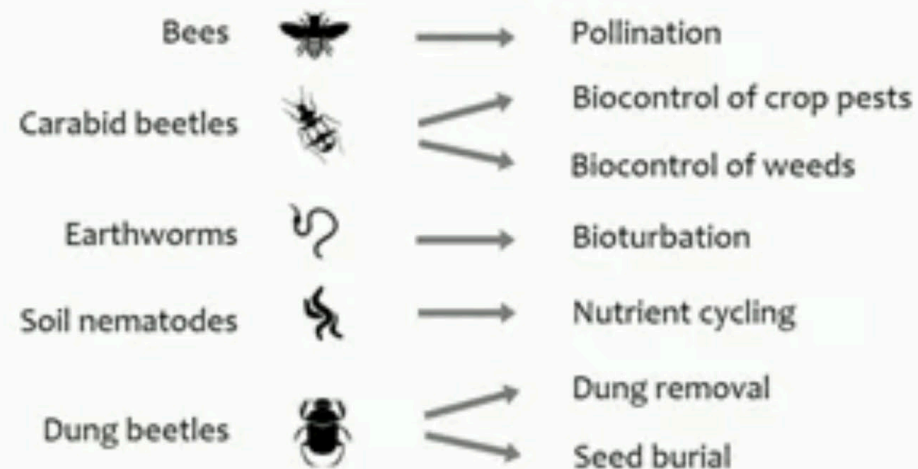


Clare Lawson
Floodplain Meadows Partnership
Open University

Biodiversity–ecosystem functioning research



Functional diversity predicts ecosystem functioning better than species-based indices:



Gagic et al. (2015) *Proc. Royal Soc. B*

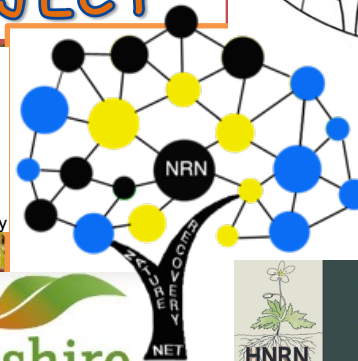
Towards a nature recovery network for Oxfordshire

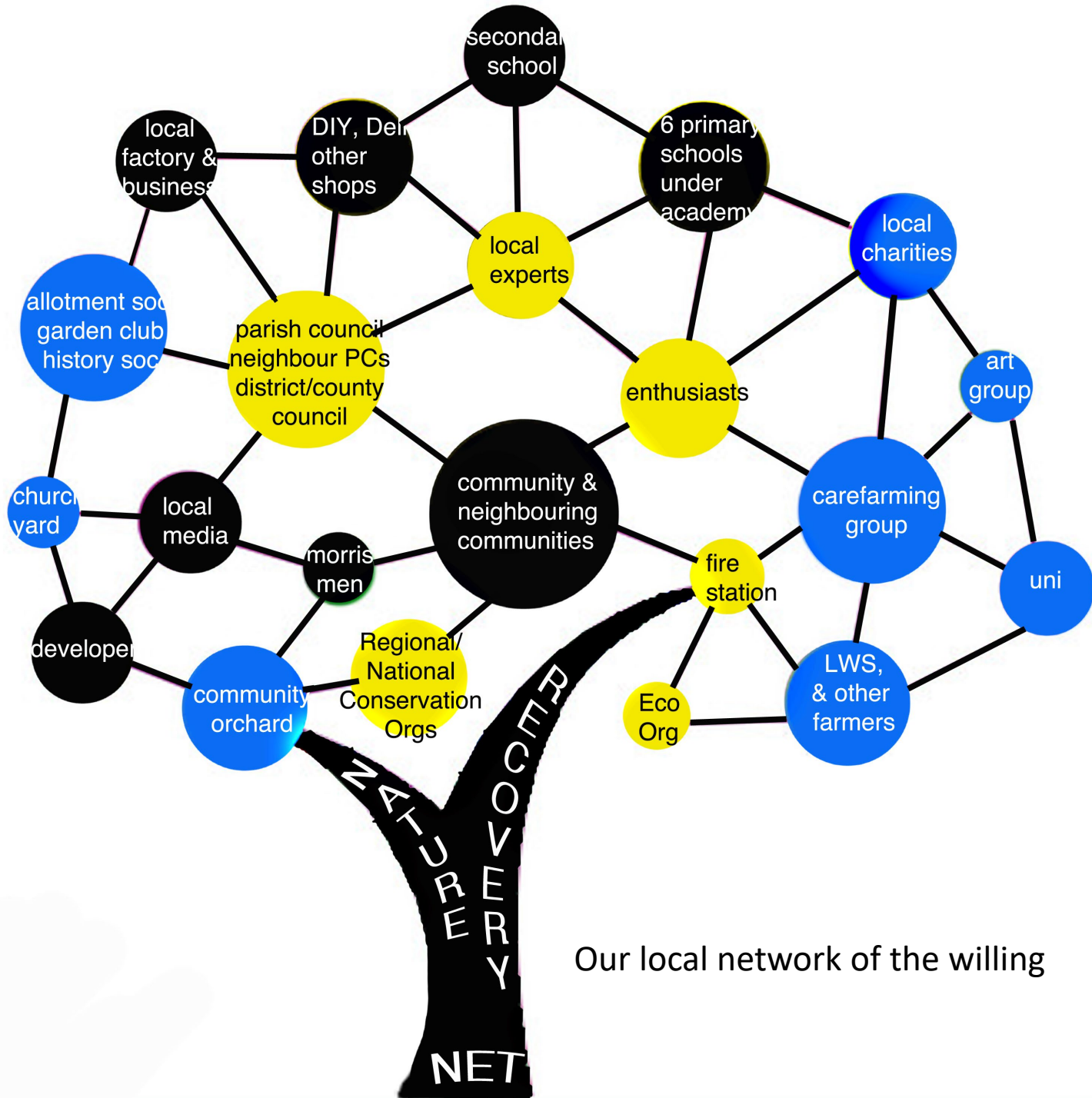


- Habitat mapping, design  Catriona Bass

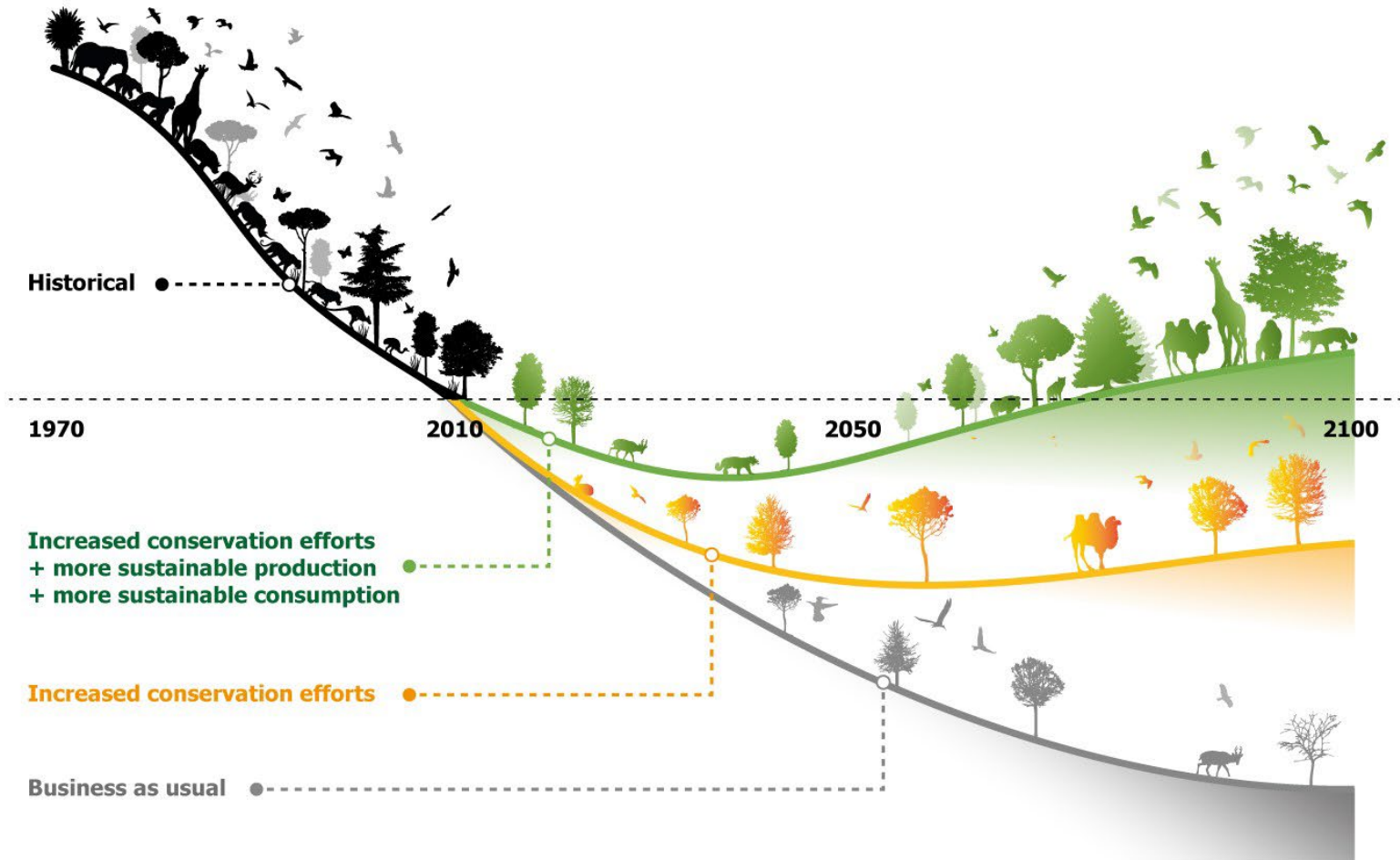


THAMES VALLEY WILDFLOWER MEADOW RESTORATION PROJECT





Our local network of the willing



This artwork illustrates the main findings of the article, but does not intend to accurately represent its results (<https://doi.org/10.1038/s41586-020-2705-y>)