



**Analysis and simulation of the
Long-Term / Large-Scale interactions
of C, N and P
in UK land, freshwater and atmosphere**

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RC Helliwell *JHI**

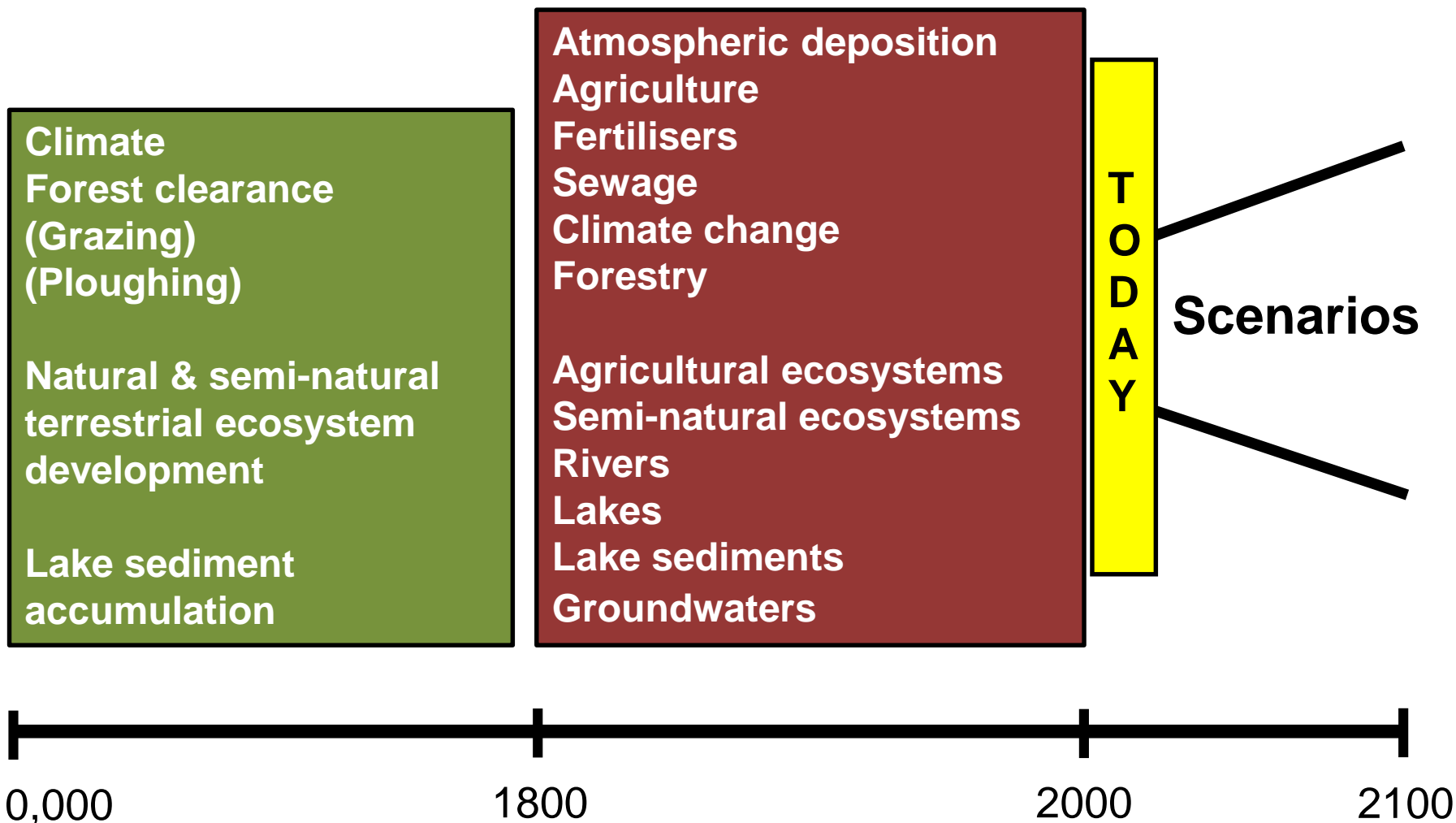
NL Rose *UCL*

S Ullah *U Keele*

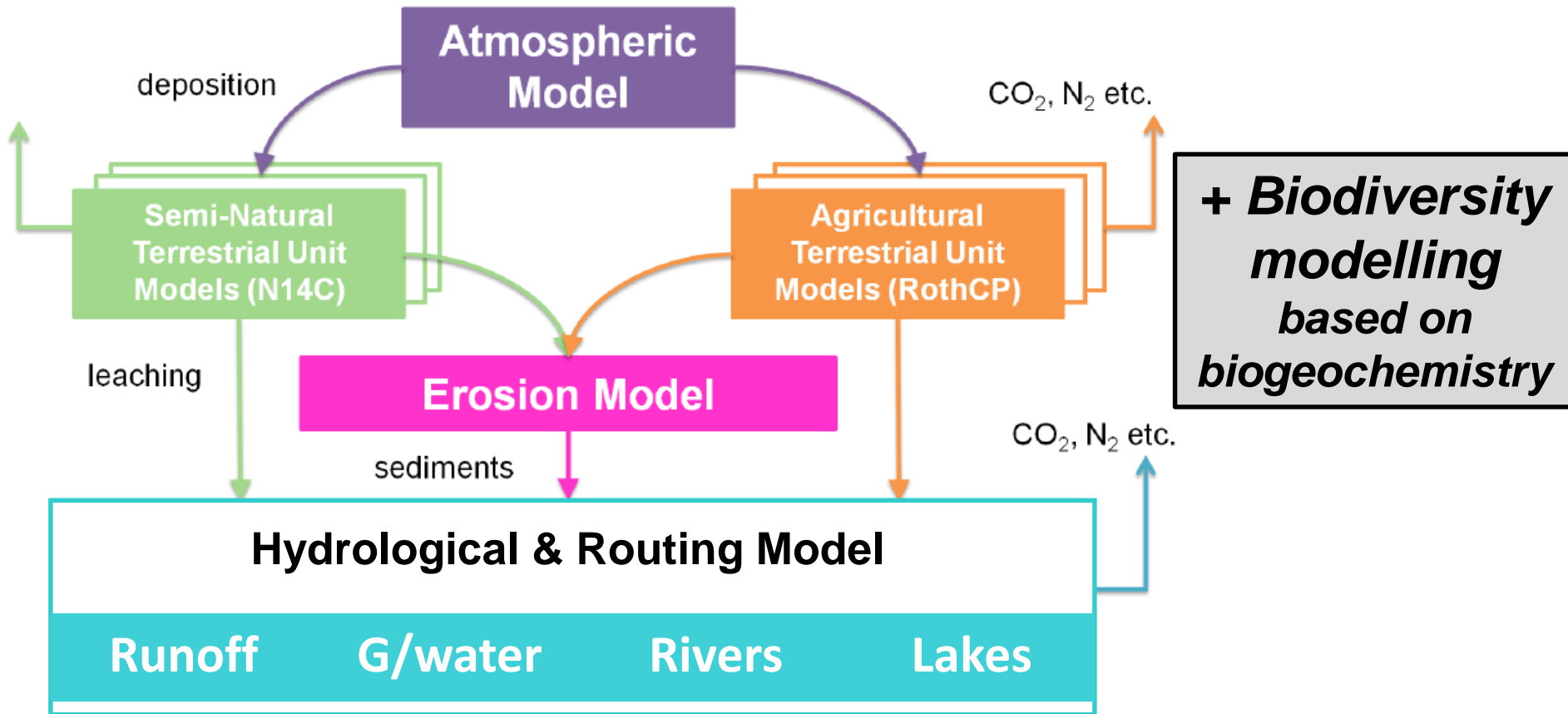
CL Bryant *NERC RCF*

New end date: 31 December 2015

Temporal evolution of UK ecosystems



LTLS research activities



+ Measurements

soil denitrification
river transport (¹⁴C)
fuel experiments
NPP

soil survey (¹⁴C)
lakes
bracken survey
peat survey

Stakeholder activities

- **Meeting #1** **April 2014**
- **Scenarios** **Selected and (nearly) ready for use**
- **Website** **Recently updated**
- **Meeting #2** **Feb 2016**
- **PPN** **In development (with Anne Liddon)**

State of the LTLS project

Completed

Biogeochemical models

New data collection

Some papers

To be completed

Biodiversity models

Complete IM runs 1800-2000

Run scenarios 2000-2100

Stakeholders' meeting

Analyse outputs

Write more papers

Presentations: posters

- Jess Adams PO¹⁴C in rivers
- Rachel Helliwell Scenarios
- Susan Jarvis NPP & biodiversity (1)
- Ed Rowe Bracken study
- Dan Schillereff Macronutrients in peat
- Simon Smart NPP & biodiversity (2)
- Sam Tomlinson Atmospheric modelling
- Sami Ullah Denitrification

Presentations: talks

TODAY

- Ulli Dragosits
- Shibu Muhammed
- Ed Tipping / Jess Davies
- Fotis Sgouridis
- Vicky Bell

Atmospheric modelling
Agricultural modelling
Semi-natural modelling
Soil denitrification
Integrated modelling

TOMORROW

- John Boyle
- Simon Turner

Lake sediment records
Lake sediment isotopes