



Government
Office for

Science

 **Foresight**

Strategic Land Use

Crossing the urban/rural & disciplinary divides

Presentation to RELU/EPSRC Workshop London October 2010

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Long term challenges

- **Population levels** - Total UK population could increase to 71.1 million by 2031. 25% of UK population live in London and the South East. *Where do we place/house people?*
- **Economic growth and affluence** – Economically active is set to fall to 61.7% by 2020; a shrinking work force; we demand greater growth and prosperity but global shocks can trigger rapid change. *Overheated regions?*
- **Changing environment conditions** – how individuals, businesses, civil society and policymakers adapt to climate change. UK imported 0.78m tonnes of fresh fruit and vegetables from Africa each year - 15% of its requirement. 95% of fruit and 50% of vegetables imported. *Flood risks? Future of air?*
- **Transport and infrastructure** – meeting the needs of a mobile society. 4m people use London Underground each day. *Can roads and rail and air travel cope with increased numbers?*
- **Energy** – shortage of gas oil and water in the years ahead. *Regional disparities?*

Big questions and tough decisions

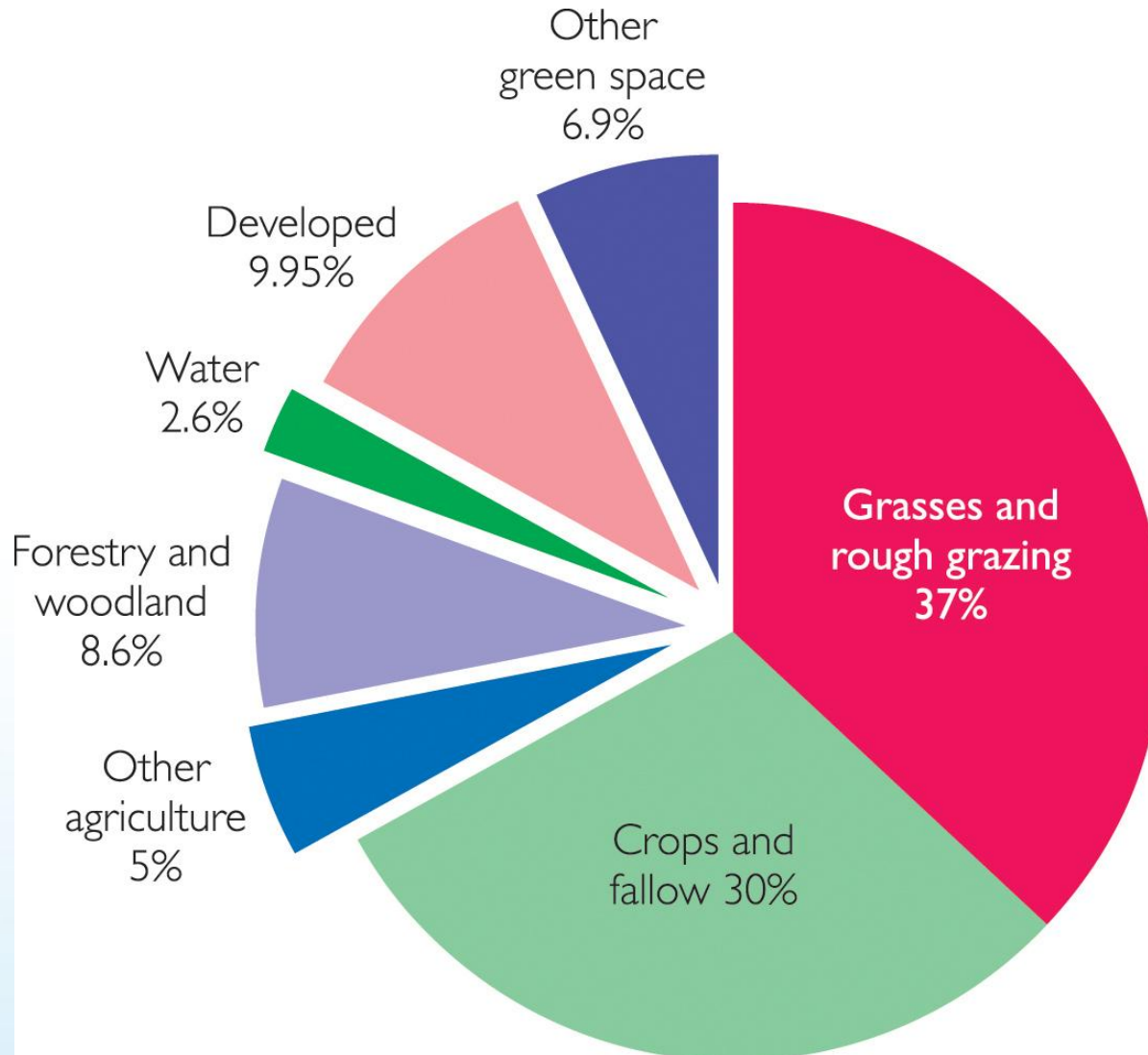
- New science
- Major infrastructure
- Agricultural reform
- Settlement patterns
- Species extinctions
- Diversity of natural and built assets
- Policy legacy of previous interventions



Key questions

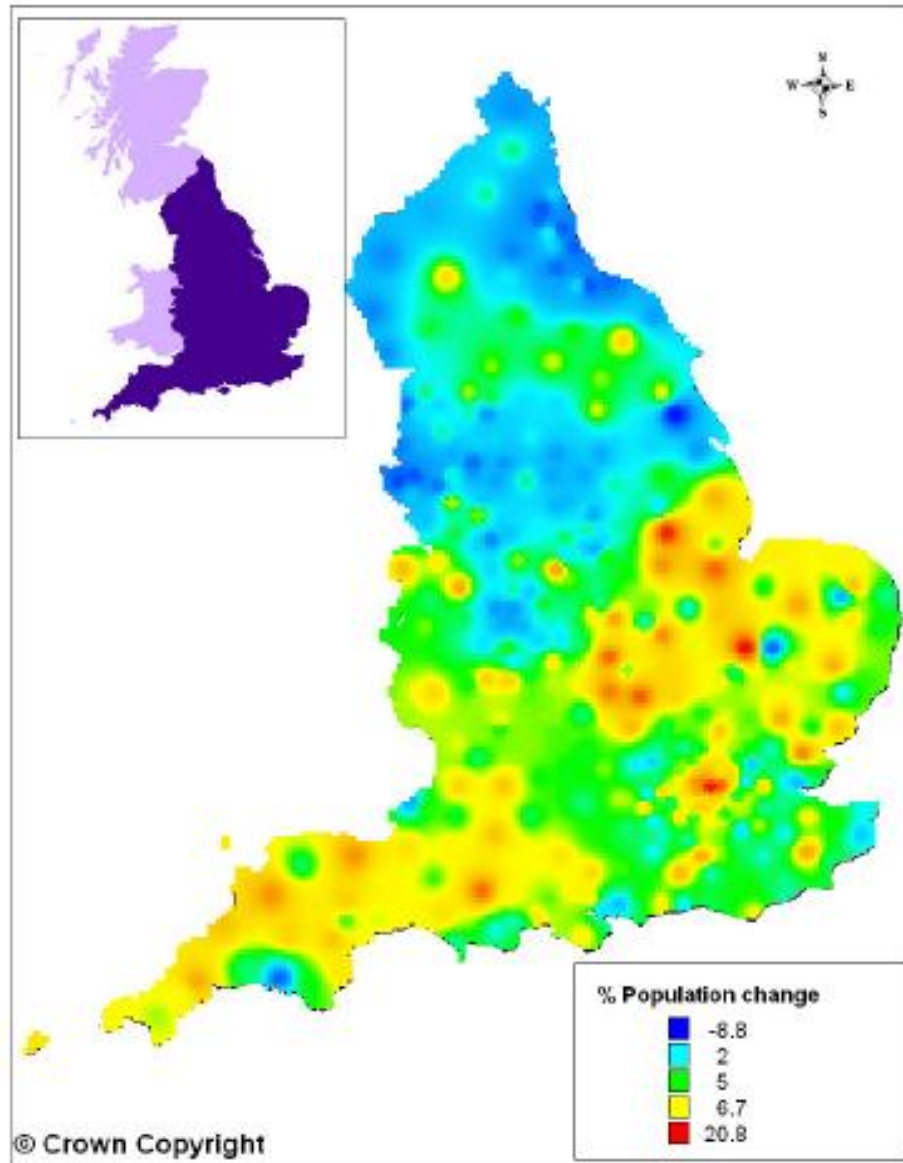
- What are the major global and national **drivers of change**?
- Is the "**land system**" sufficiently resilient and flexible?
- Are there **key decisions** about land use which should be taken in the short-term with the benefit of new insights?
- Could existing land use practices lead to **unintended consequences**?
- How could behaviours and **attitudes** towards land change?
- What developments in **science and technology** could affect land use?
- How do we **translate** scientific evidence into the decision making process AND act upon it?

Proportions of land use in England in 2005

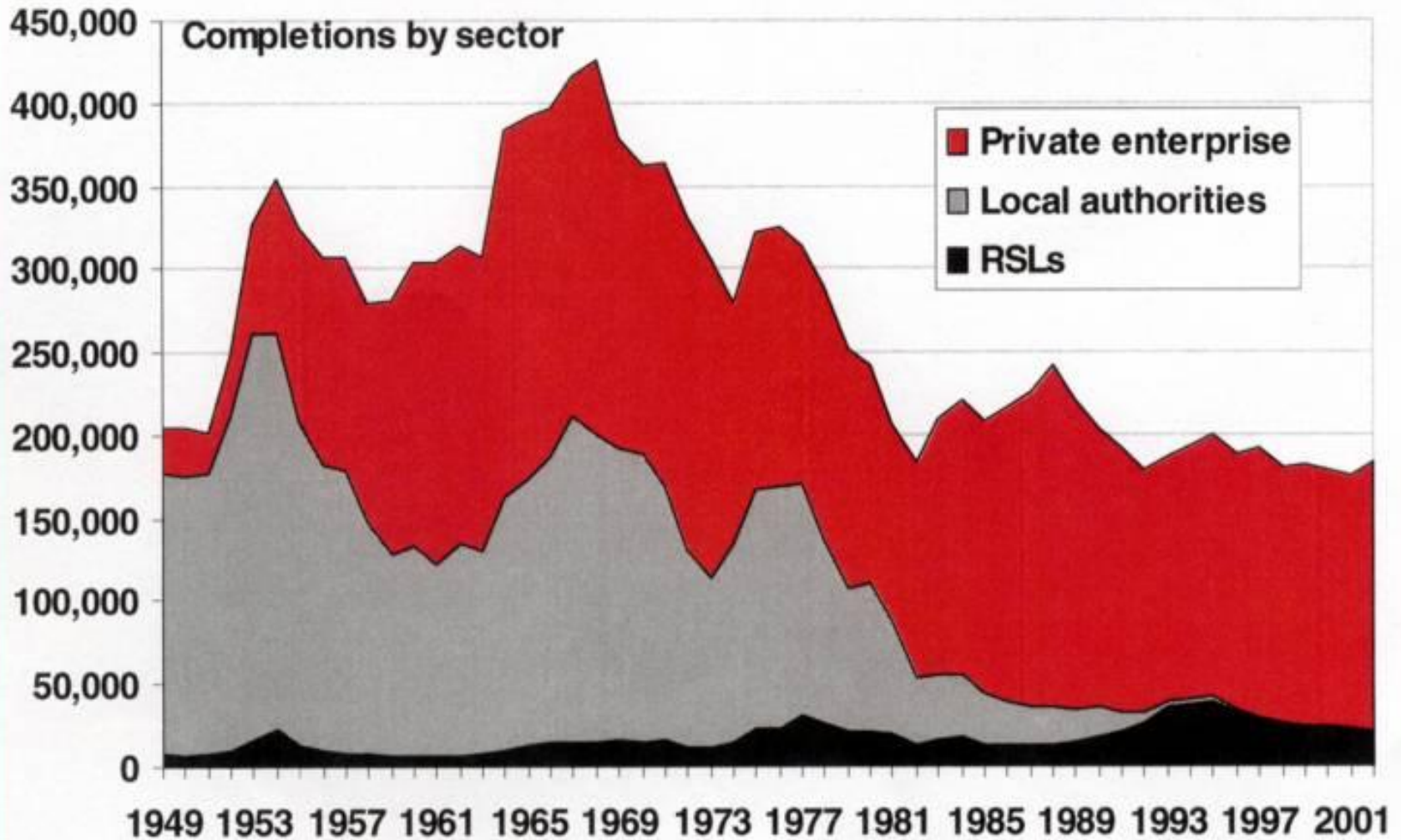


Source – combined, Defra, CLG, Forestry Commission and Environment Agency (2005)

Figure ES8: Population Change in England 1992-2002

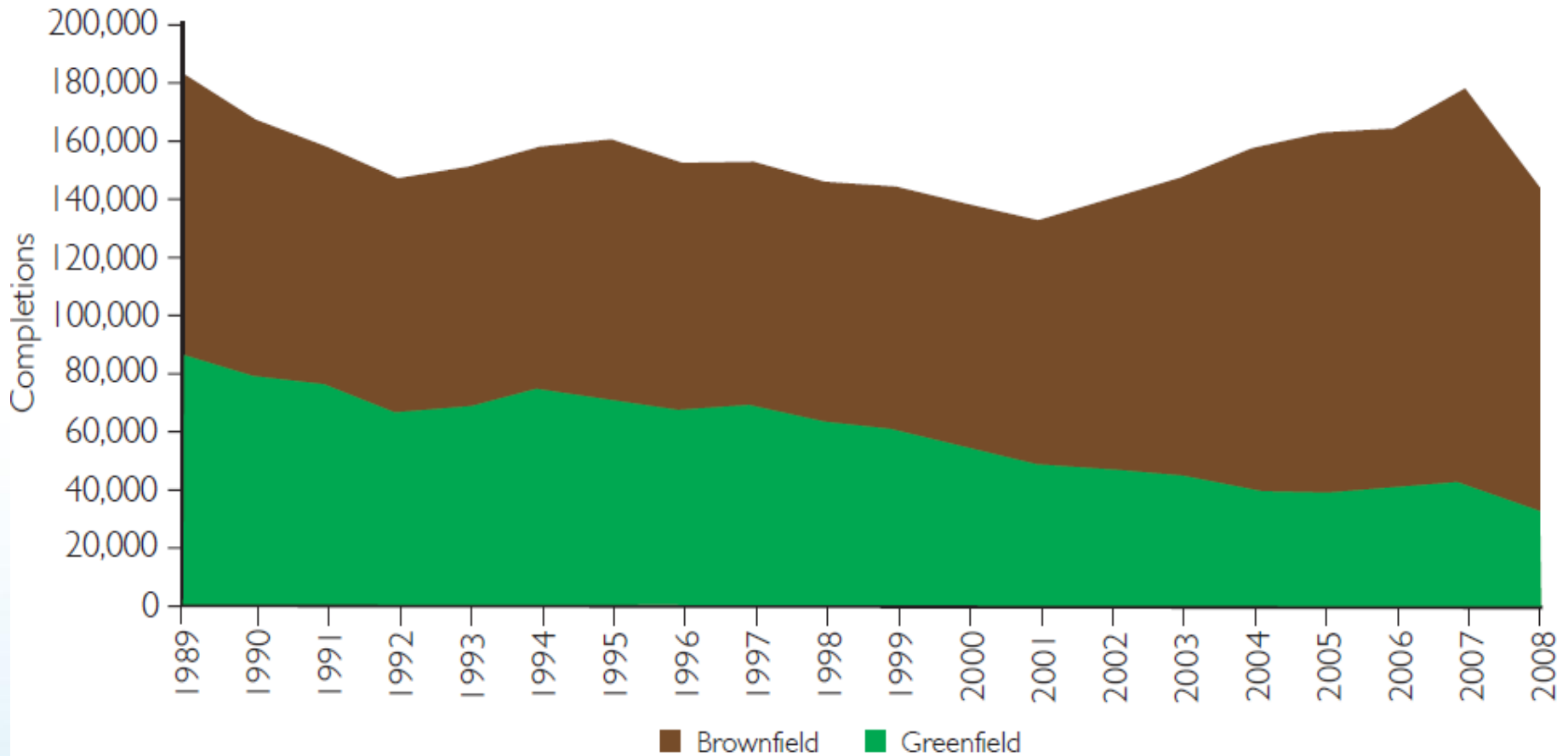


Housing completions, UK 1949-2001



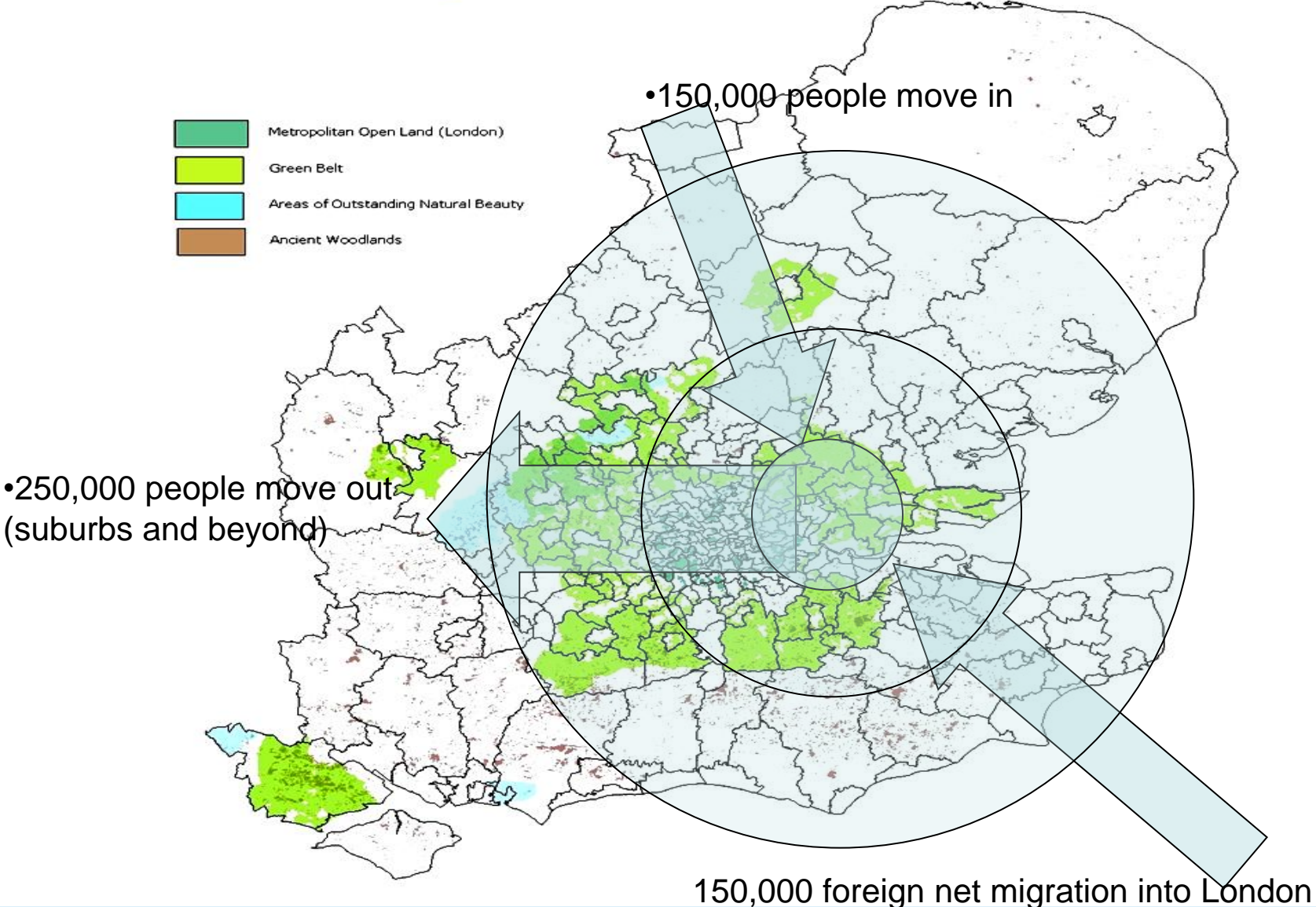
Source: ODPM

Rising pressures and tensions: Example - Brownfield vs. Greenfield development



Sources: CLG Land-use Change Statistics; CLG house building statistics

Migration: London 2001



New patterns of commuting

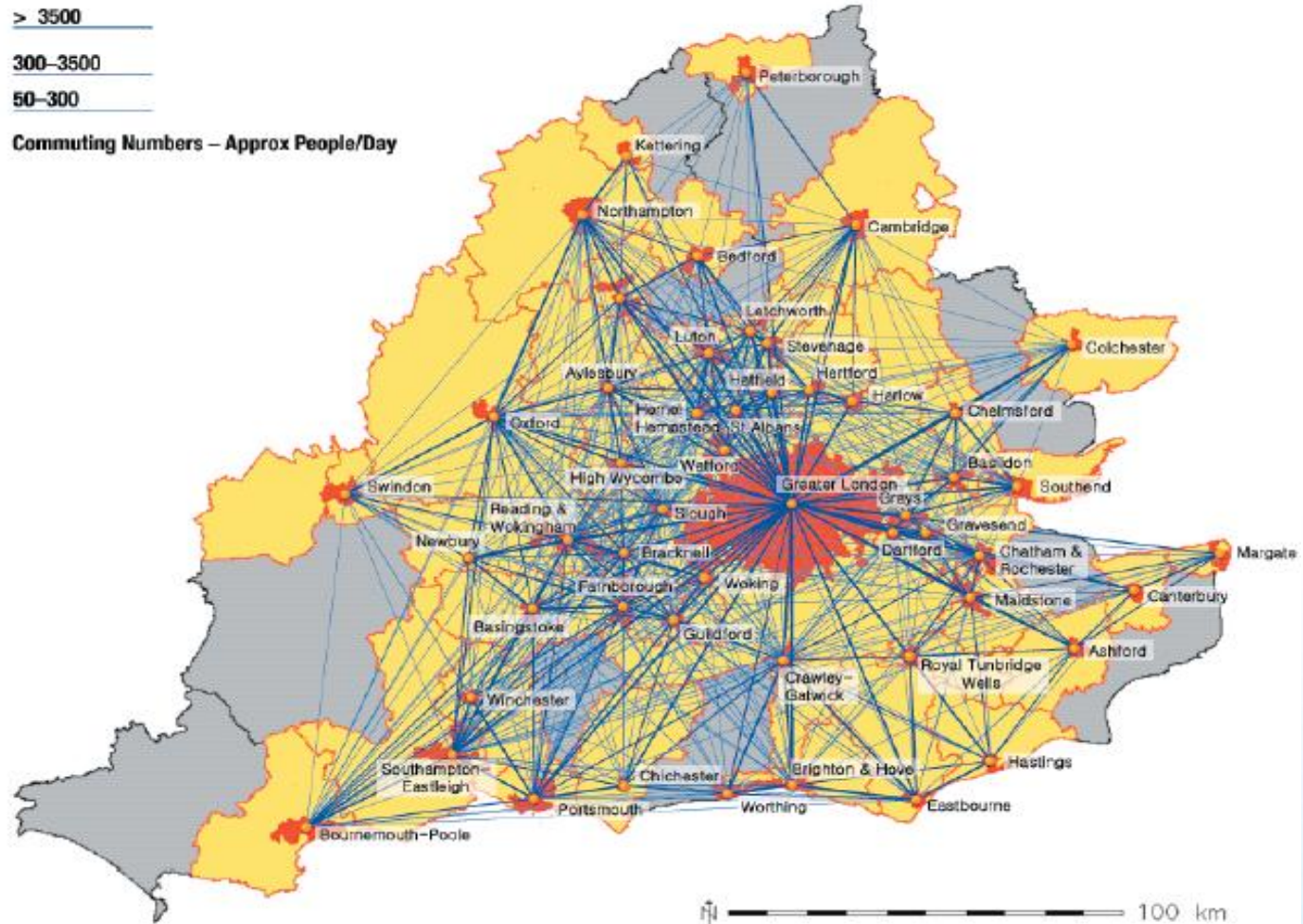
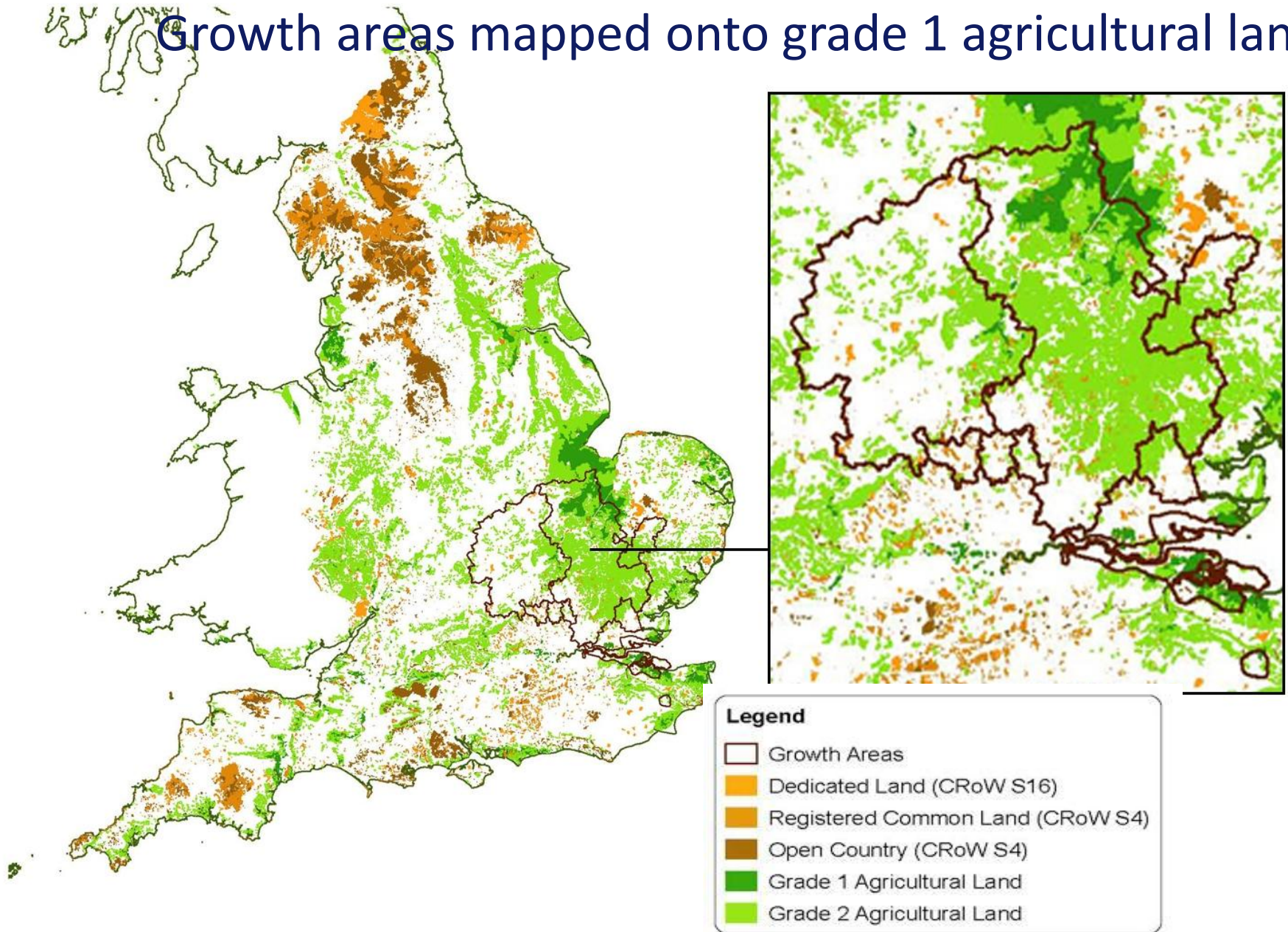
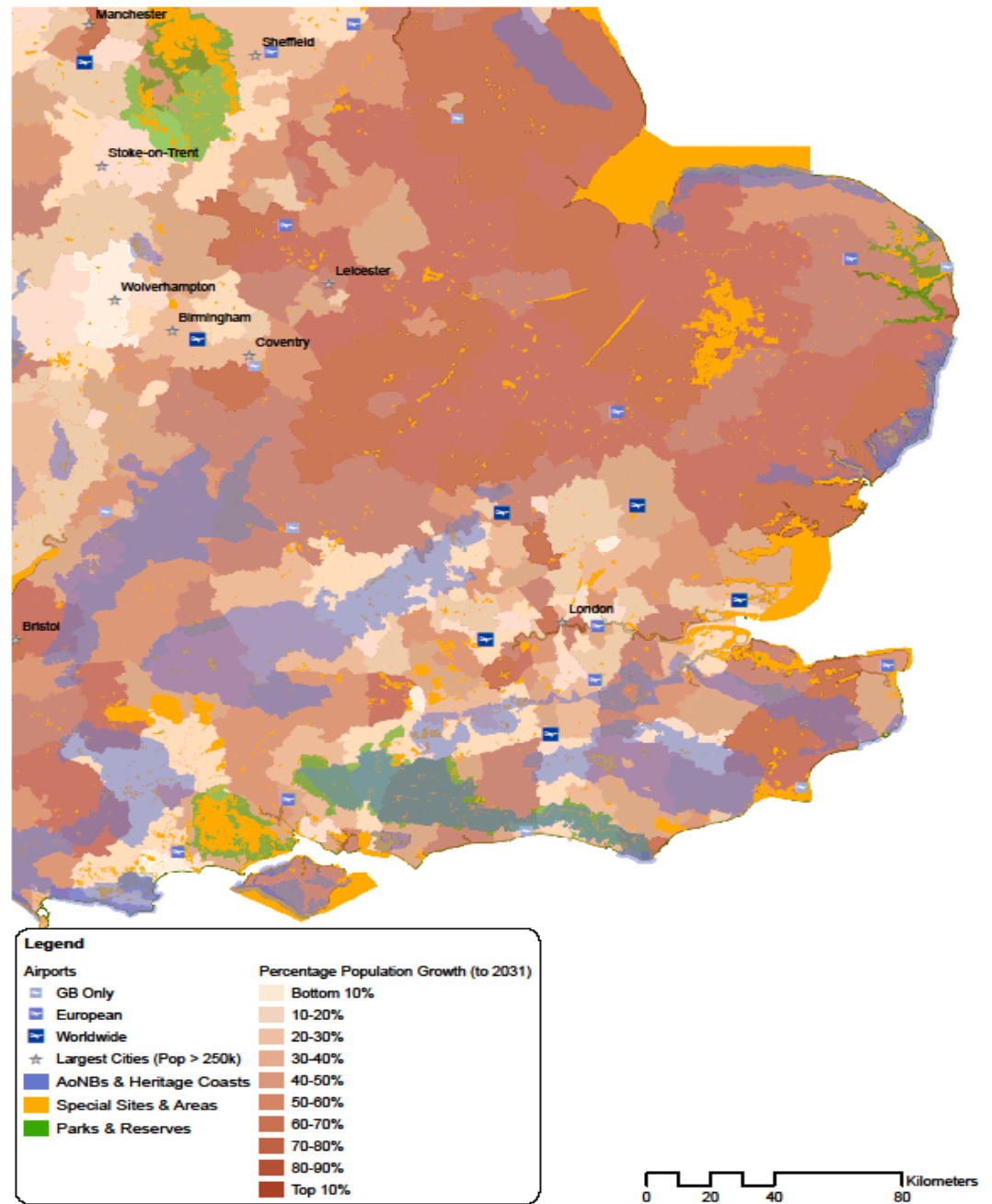


Fig. 13a: South East England MCR: Commuting 2001

Growth areas mapped onto grade 1 agricultural land



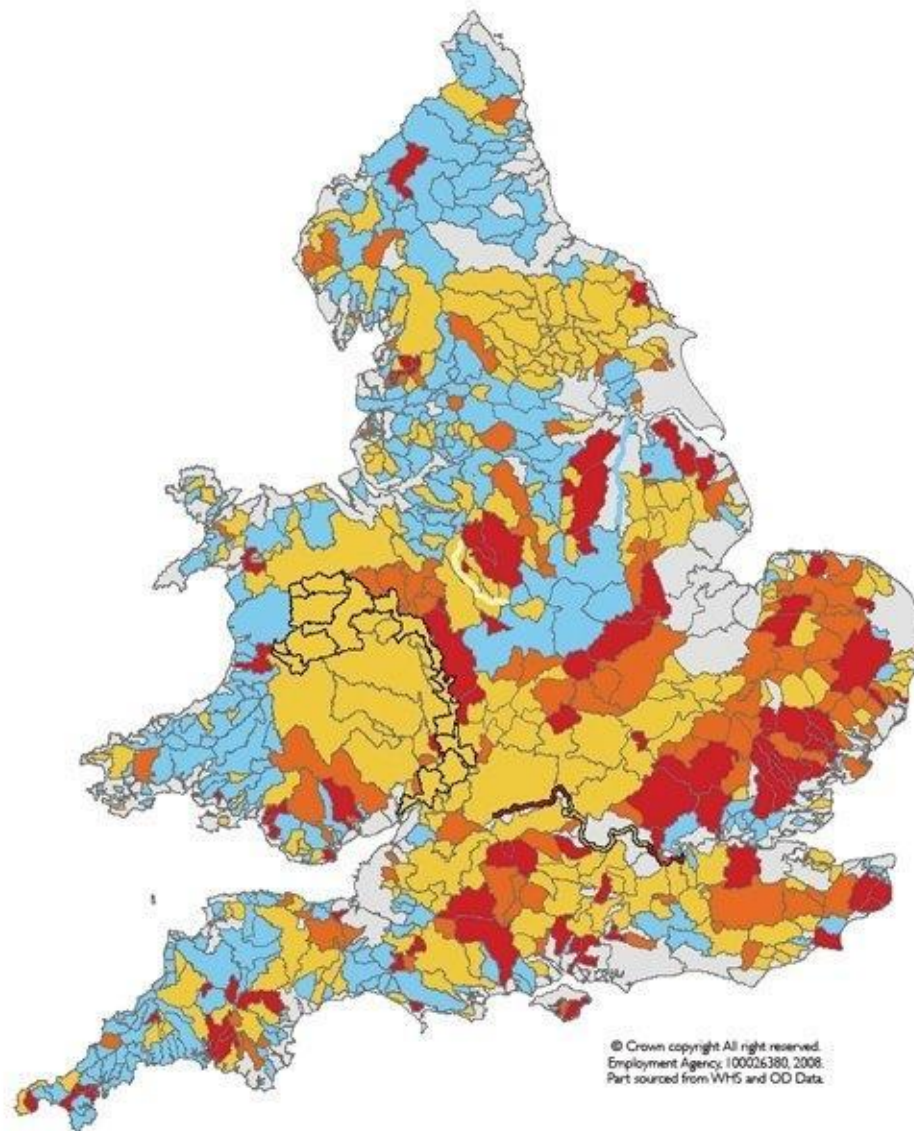
Population growth mapped onto landscape areas mapped onto airports



Tackling climate change



Land and resources – water already “over-abstracted” in the South East of England



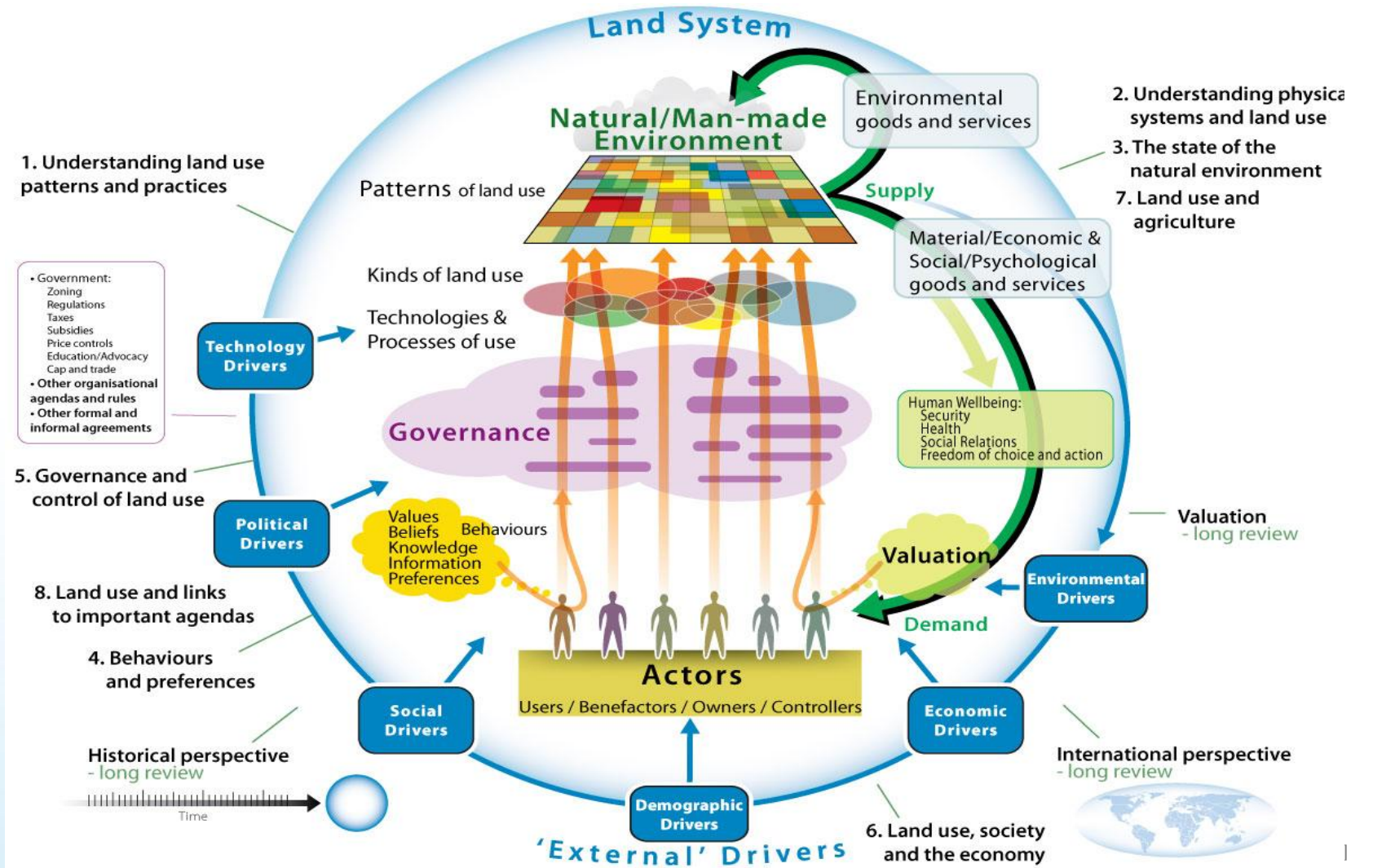
© Crown copyright All right reserved.
Employment Agency, 100026380, 2008.
Part sourced from WH5 and OD Data.

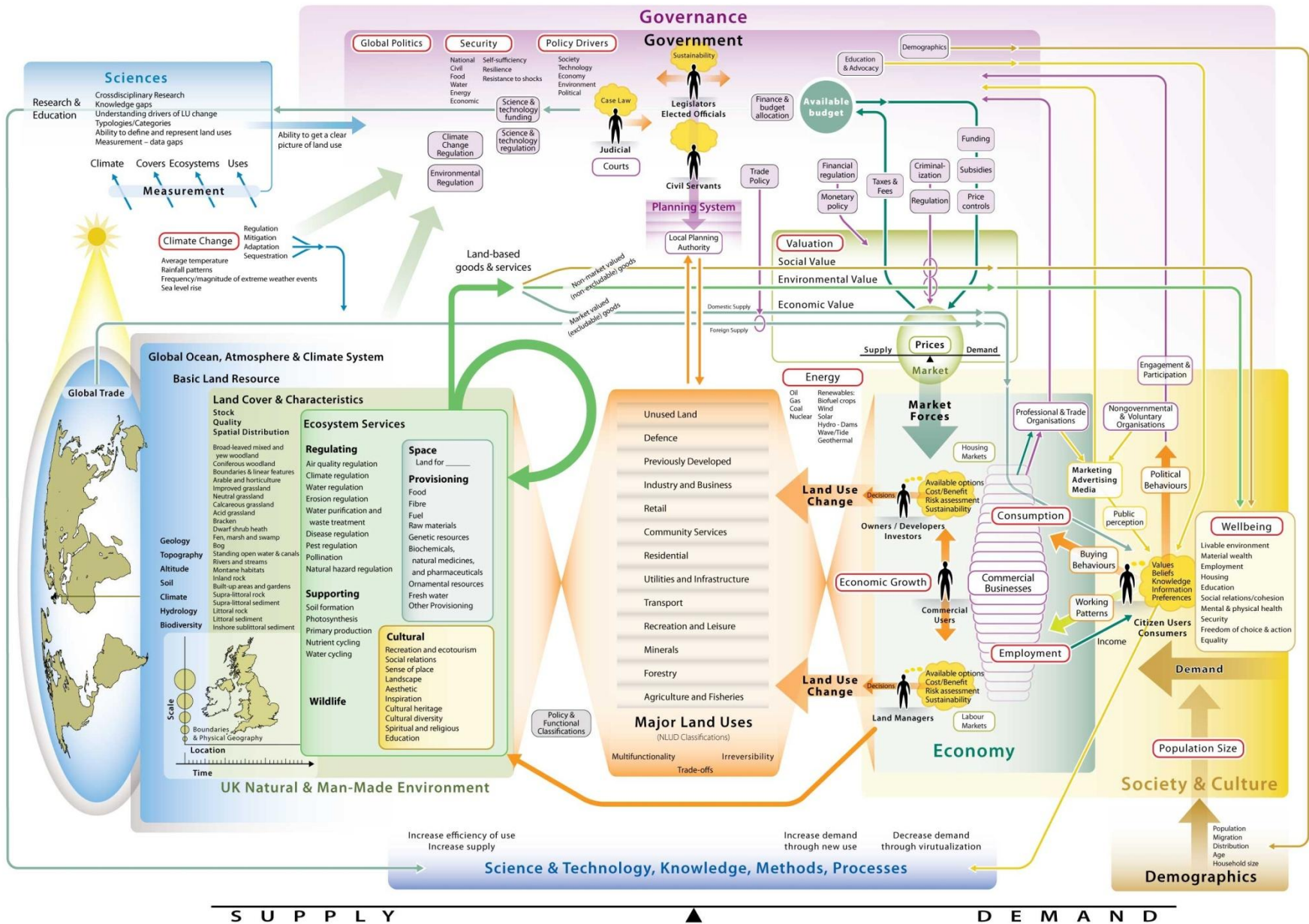
Legend

Resource availability status

- Water available
- No water available
- Over licenced
- Over abstracted
- GW only not assessed/no status available

Building **capacity** to tackle land use issues **systemically** and in an **integrated** way

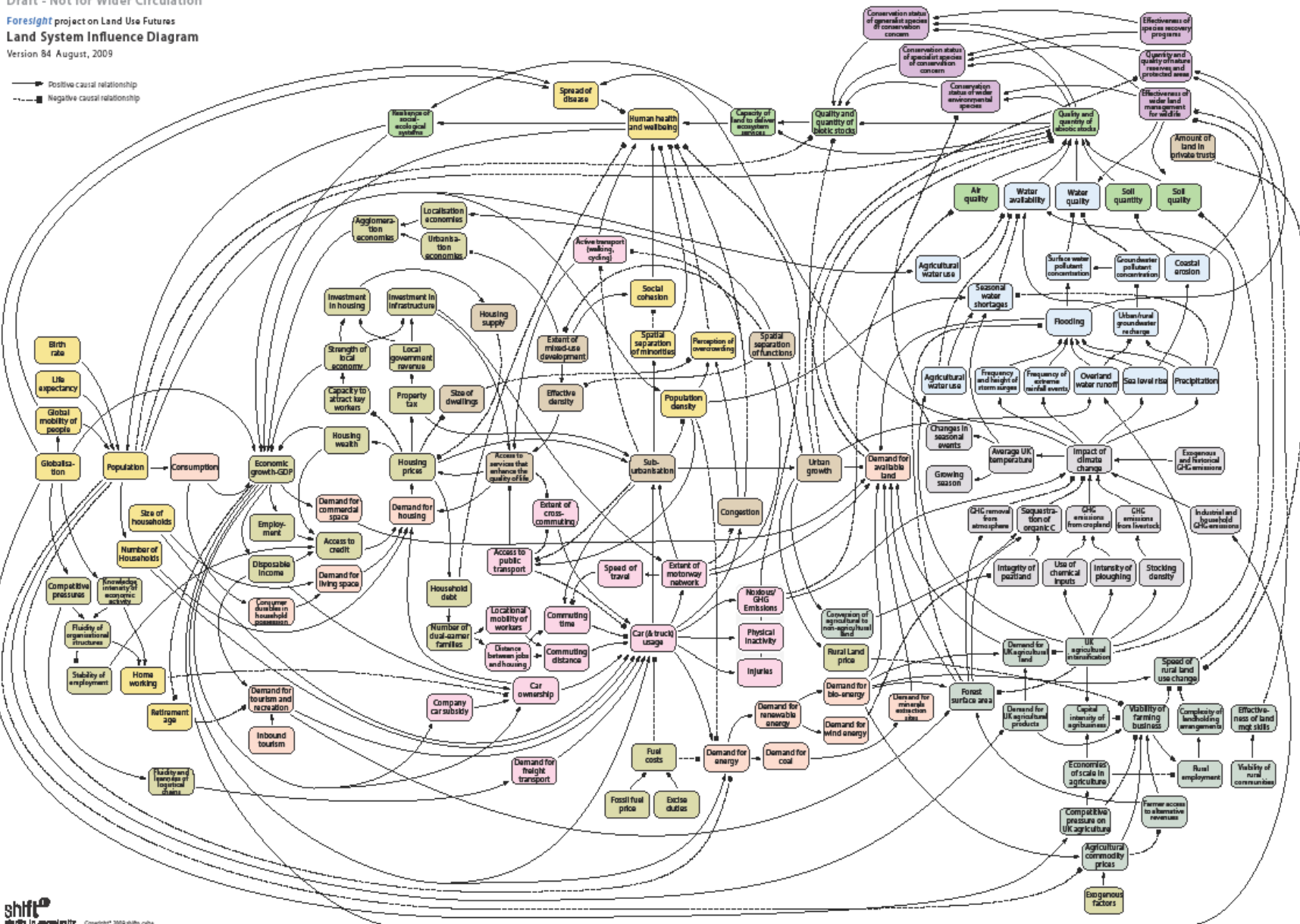


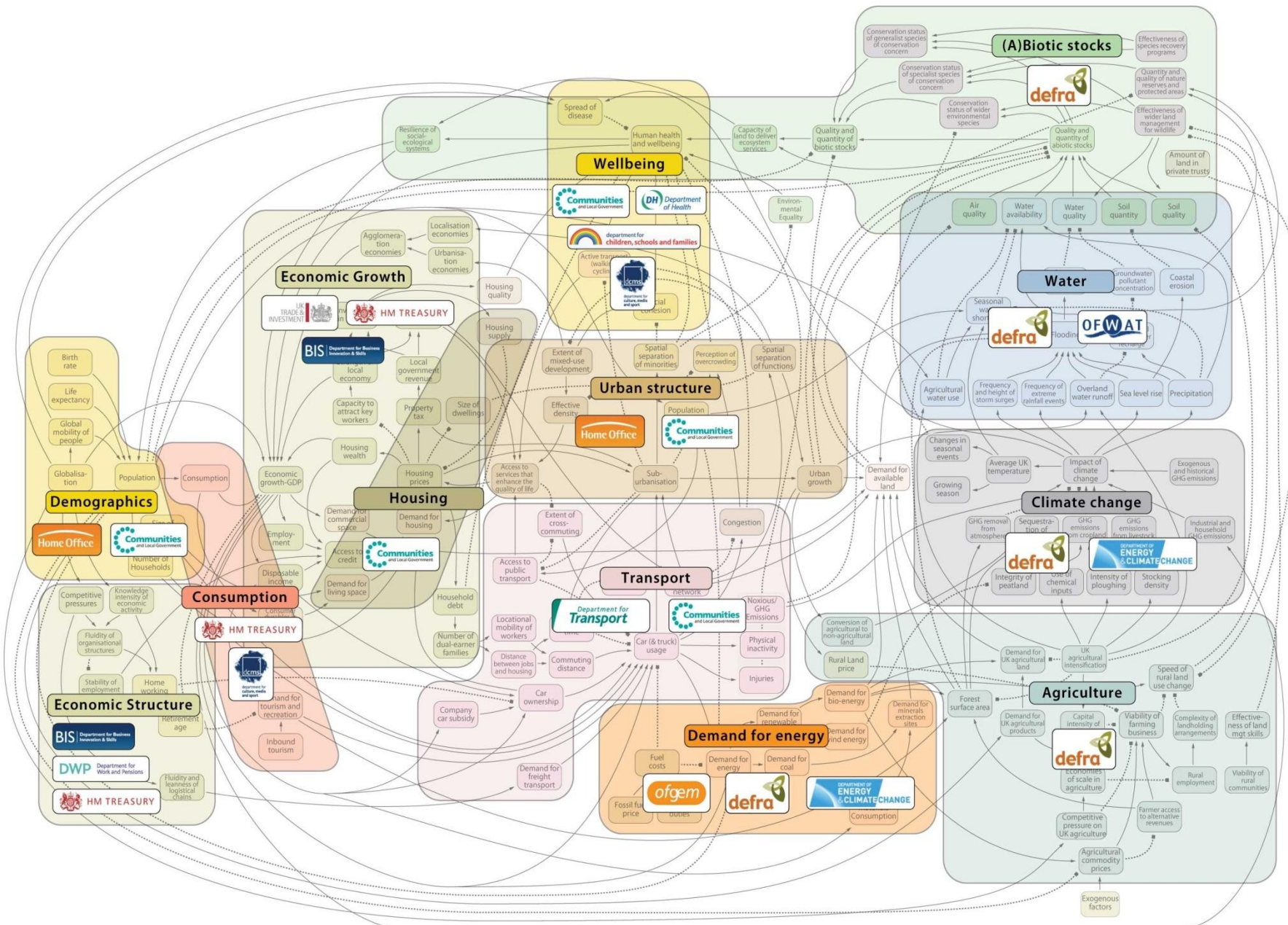


S U P P L Y

D E M A N D

→ Positive causal relationship
- - - Negative causal relationship





Having a “plan”

- **Political decisions will be needed to choose**

- the balance between national, regional and local powers
- the relative roles of regulation, incentives and markets
- overcoming policy and disciplinary silos

- **More nation-wide solutions**

- Greater assistance provided nationally on evidence base and intelligence; new forms of advocacy emerging?

- **Decentralised solutions:**

- national framework or evidence base – intelligence - sets out key scientific and factual evidence and trends, together with decision criteria, valuation methods; decisions taken at lowest suitable level

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The way forward

- The adoption of **clear national objectives** for land use
- Greater understanding and recognition of the **diversity of places**
- The promotion of **place-based governance**, based on realisation of opportunities and assets
- A greater emphasis on **local** decision making
- Protection of green areas important to local communities
- Promoting **ecosystem services** and **multifunctional land use**
- **Aligning incentives** with regulations and markets
- Ensuring a **credible evidence base to inform** local options
- Overcoming silo thinking and disciplinary divides – linking science with decision making
- A **big conversation** about land use and our land values