

Demographic Change and the Environment

Professor Judith Petts

14 October 2010

EEAC Annual Conference



The Royal Commission
on Environmental Pollution



The Royal Commission
on Environmental Pollution

About the Royal Commission

- The Commission was established by Royal Warrant in 1970
- It is independent of Government
- 12 Members, supported by a full-time secretariat

Our Terms of Reference:

“To advise Government and Parliament on matters, both national and international, concerning pollution of the environment, the adequacy of research in this field, and future possibilities of danger to the environment.”



The Royal Commission
on Environmental Pollution

About the work of the Royal Commission

- Published 28 reports and 4 special reports to date
- 'Committee of experts' rather than an 'expert committee'
- Members have backgrounds in the natural sciences, law, social sciences, industry & business, medicine and economics





The Royal Commission
on Environmental Pollution

Current Study: Demographic Change and the Environment

- Announced study subject in March 2009
- Choose topic because we think that demographic change will have important environmental consequences - and so far little attention has been paid to this impact of demographic change
- 40-years on from 1971 Report of Government Panel of Experts
- Just UK – not global demographic change
- Considering a timeframe up to 2050.



Study method

- Scoping phase – overview and background information
- Evidence gathering – 2 stages
- Visits
- Workshops
- Commissioned papers



First stage evidence – Key findings (1)

- UK population projected to rise from 61.4 million in 2008 to 71.6 million in 2033
- Change in the age structure of the population with increasing lifespans
- Increase in the number of households, particularly single-person
- Complex and varied distribution of the population around the country



First stage evidence – Key findings (2)

- Complex and inter-related issues
- Consumption and population numbers – **$I = P \times A \times T$** ?
- Lack of research into the environmental impacts of demographic change
 - Water quality and availability
 - Energy consumption and greenhouse gases
 - Waste generation

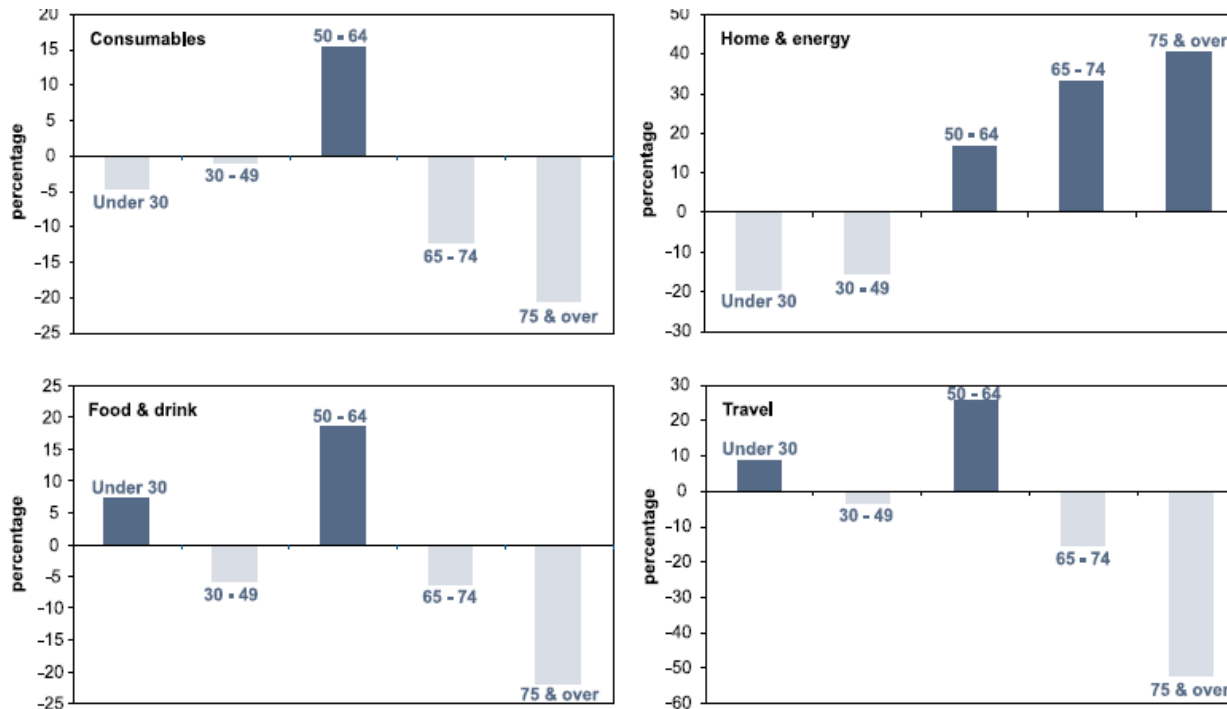


Example relationship between household size and resource use

Number of people in household	Comparative resource use and waste generation per household where 1.0 represents consumption/generation per capita of a single person household.			
	Water use	Waste generation	Electricity use	Gas use
1	1.0	1.0	1.0	1.0
2	1.6	1.9	1.4	1.3
3	2.1	2.4	1.6	1.4
4	2.6	2.5	1.8	1.6
5	3.1	2.7	1.9	1.7
6	3.7	2.8	-	-



Example relationship between carbon emissions and age





Spatial Distribution(1)

Inverness and Perth, Scotland

- An area of high intra regional variations in population change
- Areas of population decline alongside others which are rapidly expanding – Inverness Europe's fastest growing city 01-07
- Encouragement to population growth and inward migration





Spatial Distribution(2)

South East of England workshop

- South east - a densely populated area under pressure to provide more homes
- Likely to be increasing tensions between growth, infrastructure and environment
- Water quality, 'seriously water stressed'
- Air quality – potential constraint on urban area development





Commissioned papers

Pharmaceuticals in the environment

- An older population will use more medicinal products.
- Impacts of pharmaceutical products not fully understood.
- Concentrations are low but volumes of medicines used could double by 2052

Regional policy and migration in the UK

- It is feasible to alter regional distribution of the population through policy intervention...
- ...at a cost!



The Issues

- Where people are and how they live have potentially major environmental impacts and are more likely to be respond to policy intervention than attempts to constrain growth?
- Environmental constraints are real and are not simple or absolute
- How we live, the acceptability of physical and social quality and the costs we are willing to bear are significant issues



The Royal Commission
on Environmental Pollution

Spatial Impacts and Spatial Planning

- Changing regional planning
- Broad agenda of localism
- How to ensure decisions give sufficient attention to issues beyond the local?
- How to effectively use SEA & EIA to inform decisions?



The Royal Commission
on Environmental Pollution

Report timing

- Currently finalising drafting following peer review comments
- Publish in February 2011



The Royal Commission
on Environmental Pollution

Contact details

- Website: www.rcep.org.uk
- Joanna Foreman, Dissemination Manager
 - Tel: 0300 068 6471
 - Email: joanna.foreman@rcep.org.uk