



Environment and the Shrinking City

Coping with City Shrinkage and Demographic Change: Lessons from around the Globe

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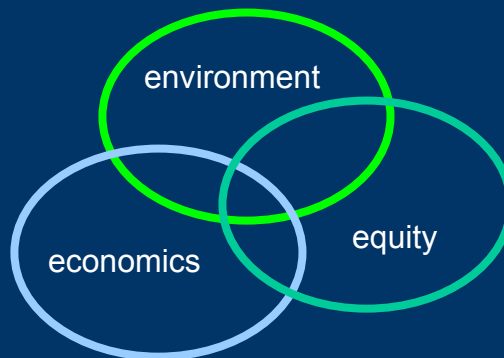


Overview

- indicators of sustainability
- energy use and global environment
- three policy options in conditions of retrenchment
- examples in UK, Germany and US
- conclusions

Indicators of sustainability

Sustainability: the triple bottom line



Environmental sustainability: some indicators



Level of pollutants

Greenhouse gas
emissions

Development of
greenfield sites

Water use



Biodiversity

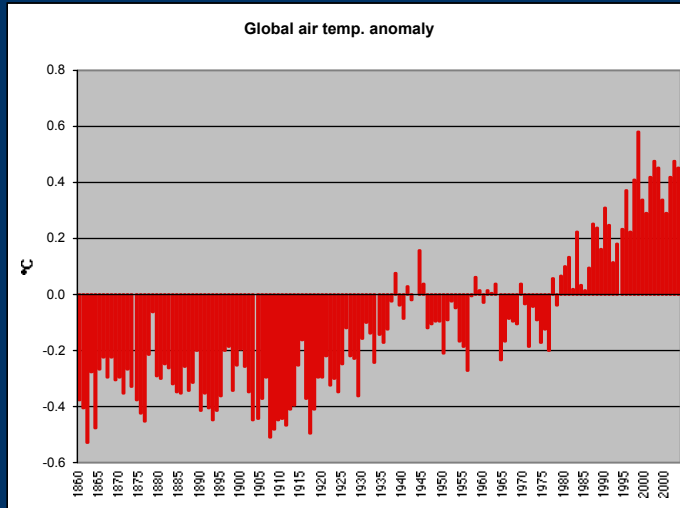
Recycling

Use of renewable
energy

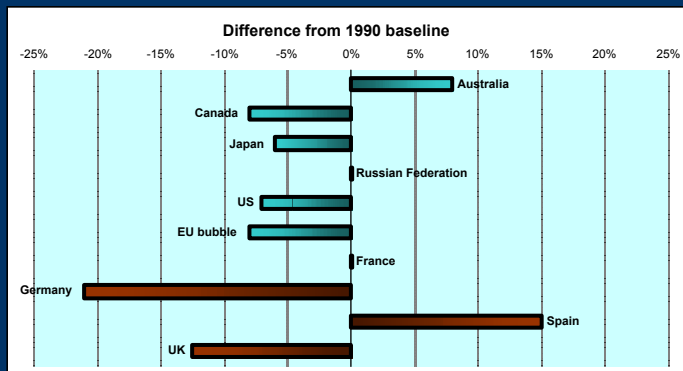
Development of
brownfield sites


Energy use and the global environment

The green house effect



Kyoto Protocol: GHG reduction targets/commitments





Three policy options in
conditions of retrenchment

to increase.....

€
tonnes CO₂

to increase.....

€
tonnes CO₂

increase



decrease

to increase.....

€
tonnes CO₂

increase more



increase

to increase.....

€
tonnes CO₂

decrease



decrease more

Examples from the UK,
Germany and US

Newark & Sherwood

East Midlands, UK



East Nottinghamshire

Ex-coal mining district

Population now stabilized
at 105,000

Policy of investment in
environment:

- low-energy projects
- reforestation

Southwell minster

Projects in Southwell: low energy



Vale House

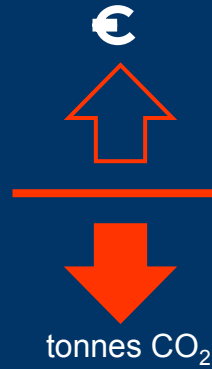


Hockerton earth-sheltered development

Strategy: decrease resource use



Southwell Leisure Center



Gelsenkirchen

North Rhine-Westphalia, Germany

Declining industrial
base in iron and coal

Population loss of 25%
to 300,000

Policy of investment in
environment:

- low-energy projects
- new industries



Solar suburb Gelsenkirchen-Bismarck

Strategy: develop resource-efficient industries

“from the city of 1000 fires
to the city of 1000 suns”



Solar Information Center, Rotthausen

€



tonnes CO₂

Pittsburgh Pennsylvania, USA



Policy: environmental clean up to attract new investment

Example: Nine Mile Run

Site of smelting plant for non-ferrous metals

Redeveloped for high-income housing:

- pollution contained
- parkland restored
- buildings energy efficient

€



tonnes CO₂

The third option.....



€



tonnes CO₂



Conclusions

- A number of policy options for improving environmental sustainability within shrinking cities - contexts differ
- Need for framework to encompass a basket of different environmental indicators
- Environmental issues as an important catalyst for change