

Local Strategic Partnership: Think Tank on Global Changes

Inquiry 1: General Framework for Addressing the Impacts of Climate Change and Peak Oil

BACKGROUND

1. In October 2007 the Local Strategic Partnership¹ (LSP) established a Global Changes Think Tank to consider the twin impacts of climate change and Peak Oil. The membership of the Think Tank is drawn from LSP Members, the Transition Town movement and Council Officers. Others are invited to Think Tank meetings and provide evidence.

WORK PROGRAMME

2. The topic area is huge and with the agreement of the LSP the Think Tank has separated the main issues out and is tackling each over a period of time. The subject areas agreed for early consideration were:

- General framework for addressing the impacts of climate change and Peak Oil
- Role of Landuse Planning
- Housing
- Transport; and,
- Food

INTRODUCTION

3. This report concerns the LSPs general framework for addressing the impacts of climate change and Peak Oil.

IMPACTS AND ASSETS

4. The LSP has agreed a framework for addressing climate change and Peak Oil based on a consideration of the nature of the impacts and the key quality of life assets that will be affected within the District. This should provide a sound basis for action planning and each of these elements is considered below.

The Nature of the Impact

5. In terms of climate change the LSP has accepted that the current UK Climate Impacts Programme (UKCIP) climate scenarios for the South West, although based on 2002 data and therefore limited (a new model will be available in 2009), provide a reasonable description of the future. As such the nature of the change that the LSP will have to help local communities respond and adapt to can be summarised as follows:

- Overall the region is becoming warmer and by the 2050s average temperatures may be as much as 3.5C warmer in summer;
- High summer temperatures are becoming more frequent, and very cold winters are becoming increasingly rare;
- Winters are becoming wetter (a 5 – 20% increase is expected by the 2050's), whilst summers are becoming drier (10-40% decrease by the 2050s);
- Heavy winter rain could be twice as frequent by the 2080s;
- The temperature of coastal waters is increasing, whilst relative sea levels continue to rise and could be as much as 80cm higher by the 2080s;
- By the 2080s extreme sea levels could occur up to 20 times more frequently than they do now.

¹ Further information about the Stroud District LSP can be found at

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6. However, the LSP is aware that the weight of research evidence is suggesting that the impacts of climate change may be considerably more severe and happen sooner than had been originally forecasted above. The LSP is content that its Think Tank process and the importance placed on climate change and Peak Oil within its new Sustainable Community Strategy will allow it to stay abreast of developments and respond accordingly.

7. In terms of Peak Oil the LSP was concerned about the future security of energy supply and that this needs to be a major driver for diversifying and de-carbonising supply whilst reducing demand. The Country is confronted by a number of energy challenges:

- ❑ Much of the UK's energy infrastructure will need renewing over the next decade if national supplies are to be maintained;
- ❑ The supply of fossil fuels is limited and worldwide energy demand continues to increase, with demand in 2030 expected to be 50% higher;
- ❑ It is likely that global oil production has already or is about to peak and production will start to fall from now on;
- ❑ North Sea production of oil and gas has already peaked and the UK has become a net importer for the first time in many years;
- ❑ Nuclear power accounts for 18% of our electricity generation and 7.5% of total UK energy supplies. However, most of the existing stations are due to close within the next 15 years or so.

8. At a local level people will be confronted with an ever more unpredictably in the supply and cost of energy and energy intensive goods, including food. Those living in rural areas and / or on low incomes are likely to be most severely affected. Nationally, there is a growing gap between 'rich and poor' and it will be important to ensure at a local level that access to key quality of life resources does not worsen the position.

The Key Assets

9. The LSP felt that there were a number of key assets that will continue to determine quality of life in the future and that these will need to be made more resilient over time if local communities are to adapt effectively. Initially the key assets are considered to be:

- ❑ Social capital – people as individuals (family and friends) and part of community networks and organisations
- ❑ Human capital – developing the appropriate knowledge and skills necessary for people, businesses and service providers to adapt to and with climate change and Peak Oil
- ❑ Rail network
- ❑ Infrastructure associated with public and community transport, cycling and pedestrian access
- ❑ Trunk Roads – M5 / A419 / A46
- ❑ Housing infrastructure – 48,000 existing properties
- ❑ Business infrastructure, including work places and spaces.
- ❑ Biodiversity – particularly the Severn Estuary as a major south – north migration corridor

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- ❑ Local food production capacity - agricultural land and infrastructure (including food processing) as well as domestic and community (e.g. allotments) growing space
- ❑ Electricity – distribution network (and a local renewable energy infrastructure as it is developed in the coming years)
- ❑ Gas – distribution network
- ❑ Water – distribution and treatment network

CONCLUSION

9. Over time the LSP wishes to build up a picture of how the main impacts (wetter winters, warmer winters, drier summers, hotter summers, extreme weather, sea level change and over dependence on ever scarcer carbon based energy) will affect each asset and what action will need to be taken by individuals, communities and organisations to increase resilience. The local community will also have to become more tuned into how key assets outside of the District will be affected by the poor resilience planning of others.

10. The Framework above provides an opportunity for structuring the thinking and action of the LSP and others. Overall progress will be monitored through the Sustainable Community Strategy.

LSP ACTION

11. A number of actions have arisen out this report but the main one for the LSP is that:

- ❑ **Addressing the twin impacts of climate change and Peak Oil are at the heart of the Sustainable Community Strategy.**