
HIYE (Health in Your Environment Voluntary Sector Forum) brings together voluntary organisations involved in health, social and economic regeneration and environmental issues in Greater Nottingham. It aims to increase integration of policies and practices across these issues to improve the health and environment of local people. To this end it responds to proposals and initiatives; sends representatives to decision-making bodies; holds events to develop thinking on the issues; and facilitates the exchange of information and good practice.

Introduction

The seminar was introduced by Rob Crowder from Nottinghamshire County Council. He outlined what we know about climate change, which had been considered at a County conference in 2004.¹ He suggested that impacts which could be expected in Nottinghamshire include:

- Damage to environment and local economy
- Disruptions to business and transport
- Changes to lifestyle
- Problems with water supply
- Increased flood risk
- Heat damage, storm damage, subsidence
- Less electricity demand in winter but more in summer
- New pests and diseases
- Loss of wildlife and habitats

Key findings

Health impacts which might occur in Britain by 2050 due to climate change include:

- warmer winters could mean 20,000 less cold-related deaths per year;
- hotter summers could mean 2,000 more heat-related deaths per year;
- we can expect more food poisoning, more cataracts, more skin cancers;
- other parts of the world will suffer much greater impacts than in Britain, and problems such as water shortages could cause more conflicts and international migration.

Health impacts

Jonathan Harris, Assistant Director of Public Health in the East Midlands, summarised a Department of Health study looking at the possible health impacts of climate change.² This was based on work by the UK Climate Impacts Programme which suggests that it is likely there will be

- more frequent and more intense summer heat waves;
- less severely cold winters;
- increased risks of winter floods.

By 2050 this could have the following effects:³

Direct effects of heat and cold

- possible reduction in excess winter

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deaths from 60,000 per year to 40,000;

- possible increase in summer heat-related deaths from 800 to 2,800 per year.

(mortality is at a minimum with temperatures between 15.6°C and 18.6°C but increases below or above that range)

Infectious diseases

- food poisoning - a possible 10% increase (correlates with temperature, but with a time lag);
- malaria and tick borne disease – unlikely to become a problem, except possibly near salt marshes;
- waterborne infections – limited effect, but algal blooms could become more dangerous.

Other diseases

- cataracts (caused by ultra violet light) – estimated 2,000 extra cases per year;
- skin cancers – estimated 5,000 – 30,000 extra malignant melanoma cases per year;
- respiratory diseases – difficult to assess the overall impact (ozone is likely to increase, but much air pollution from smoke has been decreased).

Impacts on society which could affect health

- flooding (coastal and river);
- storms and gales;
- droughts;
- international unrest.

Some actions which can be taken to adapt to the climate change which is inevitable

- Ensure that all organisations and individuals working with vulnerable people are aware of advice in the Department of Health's Heatwave Plan.
- Ensure that all buildings are designed and managed to protect against heat as well as cold, and to withstand floods, droughts and storms.
- Improve public awareness of
 - food hygiene problems in hot weather;
 - health risks of over-exposure to the sun.

Workshops

The group then moved into three workshops to discuss actions which could be taken by individuals, voluntary organisations, local authorities, the health service, business and government to:

- (a) adapt to the possible effects of climate change (Adaptation);
- (b) reduce the causes of climate change (Mitigation).

The main ideas from the workshops are summarised in a table at the end of this report.

One of the main issues is protecting vulnerable people during heatwaves. The Department of Health has published a Heatwave Plan giving advice on this.⁴

Many of the issues relating to both adaptation and mitigation concern building design and management. The County Council, together with the District Councils has produced a Sustainable Developer Guide which covers many relevant points.⁵

For adaptation, some of the main points are:

- Buildings can be cooled by 'natural' ventilation, using the power of the sun rather than fossil fuel energy.
- Insulation protects against heat as well as cold.
- Blinds or shutters should be available to keep the sun out at its hottest (while allowing in heat from the sun in cold weather).
- Trees provide valuable shade, as well as protection from storms (and also absorb carbon dioxide while growing).
- For workplaces, it should be considered whether upper temperature limits are appropriate, and whether work patterns in hot weather should be changed (i.e. siestas) through flexible working hours.
- Buildings should be planned to cope with more extremes of weather in the future – heat, drought, storms, flooding. This should include sustainable drainage systems, planting shrubs and trees, water collection from roofs and 'grey water' systems.

As well as acting to avoid adverse health impacts of the climate change which is inevitable, we should all be taking action to reduce the greenhouse gases which cause climate change. For mitigation, the main issues are reducing energy use and reducing waste.⁶ Reducing the impact of road transport is a major way of achieving this. Possible actions include:

- sourcing food and other supplies locally;
- walking and cycling rather than using a car – which also helps to keep people healthy;
- don't buy goods you don't need, and buy goods that will last;

- separate waste for recycling or composting;
- use energy-efficient equipment;
- invest in renewable energy, such as solar water heating, and in insulation;
- switch off lights, and turn down thermostats.

Actions which everyone can take to reduce greenhouse gas emissions

- Don't use the car – walk or cycle.
- Invest in energy efficiency – insulating buildings protects against heat as well as cold.
- Reduce waste – don't buy things to throw away.

Notes

- ¹ A four page leaflet summarising action on climate change which could be taken in Nottinghamshire, and a consultation document, can be downloaded from <http://www.nottsagenda21.org.uk/> or telephone 0115 977 4351.
- ² Health Effects of Climate Change in the UK, Department of Health 2001. http://www.dh.gov.uk/PublicationsAndStatistics/Publications/PublicationsPolicyAndGuidance/PublicationsPolicyAndGuidanceArticle/fs/en?CONTENT_ID=4007935&chk=aPZEuj
- ³ Jonathan Harris's presentation is available as a PowerPoint file (700kB) from info@healthinyourenvironment.org.uk
- ⁴ See Department of Health press release, 11 May 2005: http://www.dh.gov.uk/PublicationsAndStatistics/PressReleases/PressReleasesNotices/fs/en?CONTENT_ID=4110200&chk=Z12o9/
- ⁵ The Sustainable Developer Guide can be viewed at www.sdg-nottinghamshire.org.uk
- ⁶ For information on Eco Teams which work with people to reduce energy and waste, phone 0115 917 8080.

Ideas from the workshops on health impacts of climate change

	Adaptation	Mitigation
Individuals	<ul style="list-style-type: none"> • in hot weather, stay in shade, drink plenty of fluids • sunshine makes people feel better • change work patterns (siestas?) • collect water off roofs 	<ul style="list-style-type: none"> • live nearer work and services • use car less; walk and cycle more • buy local food • consume less, waste less • use energy-efficient devices, insulation, etc
Local authorities	<ul style="list-style-type: none"> • promote tree planting for shade • design buildings, roads, etc to survive hot weather, storms, drought, and provide protection from overheating • plant species to resist soil erosion and land degradation, drought and flooding • environmental audits • promote good food hygiene 	<ul style="list-style-type: none"> • promote tree planting to absorb CO2 • design buildings to reduce energy use (insulation can protect against both heat and cold) • promote walking and cycling • better public transport • planning to reduce car travel • promote renewable energy – e.g. wind turbines in parks and playing fields
NHS	<ul style="list-style-type: none"> • inform people about the Heatwave Plan • heat resistance kit for elderly people • research how France, for example, has coped with heatwaves • skin cancer campaign – i.e. protect from the sun • inform about the effects of heat on health, crime and human behaviour generally • promote tree planting for shade from the sun particularly for children and to absorb CO2 	<ul style="list-style-type: none"> • design hospitals, health centres, etc to be energy efficient and protect from heat • good corporate citizenship, including local sourcing of supplies, reduction in waste, energy efficiency • promote walking and cycling for sustainable health • promote better public transport to reduce air quality problems
Business	<ul style="list-style-type: none"> • upper temperature limits for workplaces? • redesign air conditioning to keep buildings cool without using energy • blinds or shutters to keep the sun out • research work patterns in hot countries • business opportunities – e.g. home tourism, ‘sustainable buildings’ design, restore local production (less imports) • local farming – change crops to adapt to different climate • audit impact of climate change 	<ul style="list-style-type: none"> • design buildings to reduce energy use – renewables, energy efficiency • efficient use of resources to reduce waste • innovative designs to reduce emissions • bring work closer to where people live
Voluntary sector	<ul style="list-style-type: none"> • the voluntary sector is often working with those who will be most affected by climate change, and least able to adapt • work with NHS and local authorities to help protect vulnerable people from extremes of heat and cold • example – Groundwork’s sunscreen project 	<ul style="list-style-type: none"> • promote community-based renewable energy • the voluntary sector can support the sort of initiatives listed above for the other sectors, as appropriate for individual organisations
Government	<ul style="list-style-type: none"> • revise building regulations to ensure buildings will cope with extremes of weather in the future, including sustainable drainage and ‘grey water’ systems • flexible planning will be needed due to uncertainties over climate change • prepare for increased flow of environmental refugees, for example due to desertification 	<ul style="list-style-type: none"> • revise building regulations to promote best standards in energy efficiency and sustainable construction • introduce carbon rationing • follow best business practice in resource efficiency and energy efficiency • free insulation to reduce energy consumption
Media campaign	<ul style="list-style-type: none"> • confidence and positive outlook are needed (the issues are depressing) 	<ul style="list-style-type: none"> • ‘Climate change is not cool’ • we all need to make major lifestyle changes – but difficult to make individuals act against self-interest • consumerism and waste should be seen as anti-social

(Each sector should also follow up relevant ideas listed for other sectors above.)