



North Tyneside Council

Working in partnership with  
**CAPITA**



# Climate Change and the Potential Health Impacts for North Tyneside Council and it's Partners

Presentation to Environment Sub Committee 11<sup>th</sup> January 2017

# Climate Change – what does it mean for North Tyneside?

## •Trends in Weather

- Heat Waves
- Flooding
- Cold Snap
- Drought

## •Scenarios for the UK

- UK Climate Projections 09 (UKCP09)
  - 2° C
    - Temperature increase in UK greater than the global 2° C
    - 5-20% rise in river flows in wet periods.
  - 4° C
    - Impacts become increasingly severe

## •Adaption and Mitigation in North Tyneside



# Climate change and weather – impact on health

## Heatwave, drought and cold snaps (prolonged events)

- Excess deaths (very young and over 75 years)
- Demand on resources and infrastructure
- Access to health and social care
- Risk of fires

## Response to prolonged events (level 2-4 alerts)

- Heatwave plan
- Cold weather plan
- Emergency response

## Preparation prior to events (level 0-1)

- All year planning
- Seasonal planning (summer and winter)



## Air pollution and impact on health

The table below shows the types of health effects experienced by the most common pollutants at elevated levels:

Pollutant	Health effects at very high levels
Nitrogen Dioxide, Sulphur Dioxide, Ozone	These gases irritate the airways of the lungs, increasing the symptoms of those suffering from lung diseases
Particles	Fine particles can be carried deep into the lungs where they can cause inflammation and a worsening of heart and lung diseases
Carbon Monoxide	This gas prevents the uptake of oxygen by the blood. This can lead to a significant reduction in the supply of oxygen to the heart, particularly in people suffering from heart disease

**In 2010 there were an estimated 101 excess deaths in North Tyneside attributable to PM<sub>2.5</sub> air pollution (PHE 2014)**



## Weather conditions and air pollution

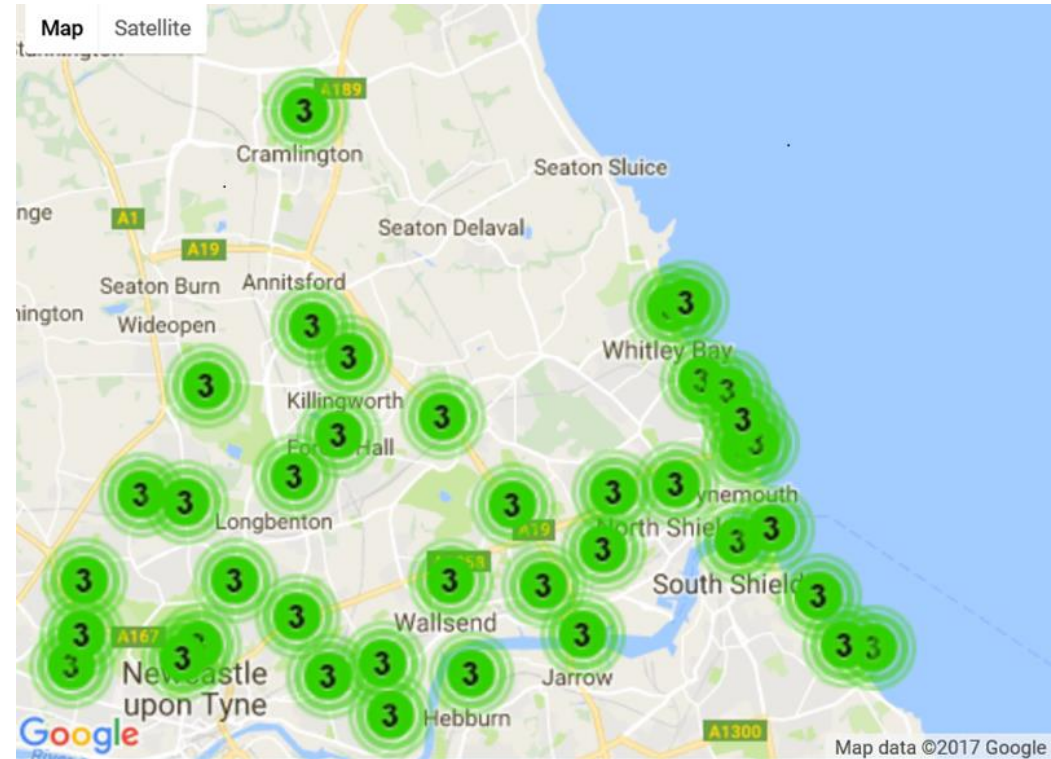
In winter, cold, still conditions can lead to an increased level of pollutants at ground level.

In summer, hot weather, without much wind can also lead to raised concentrations of pollutants.

## Air quality measurement and forecasts

### Air pollution is described as:

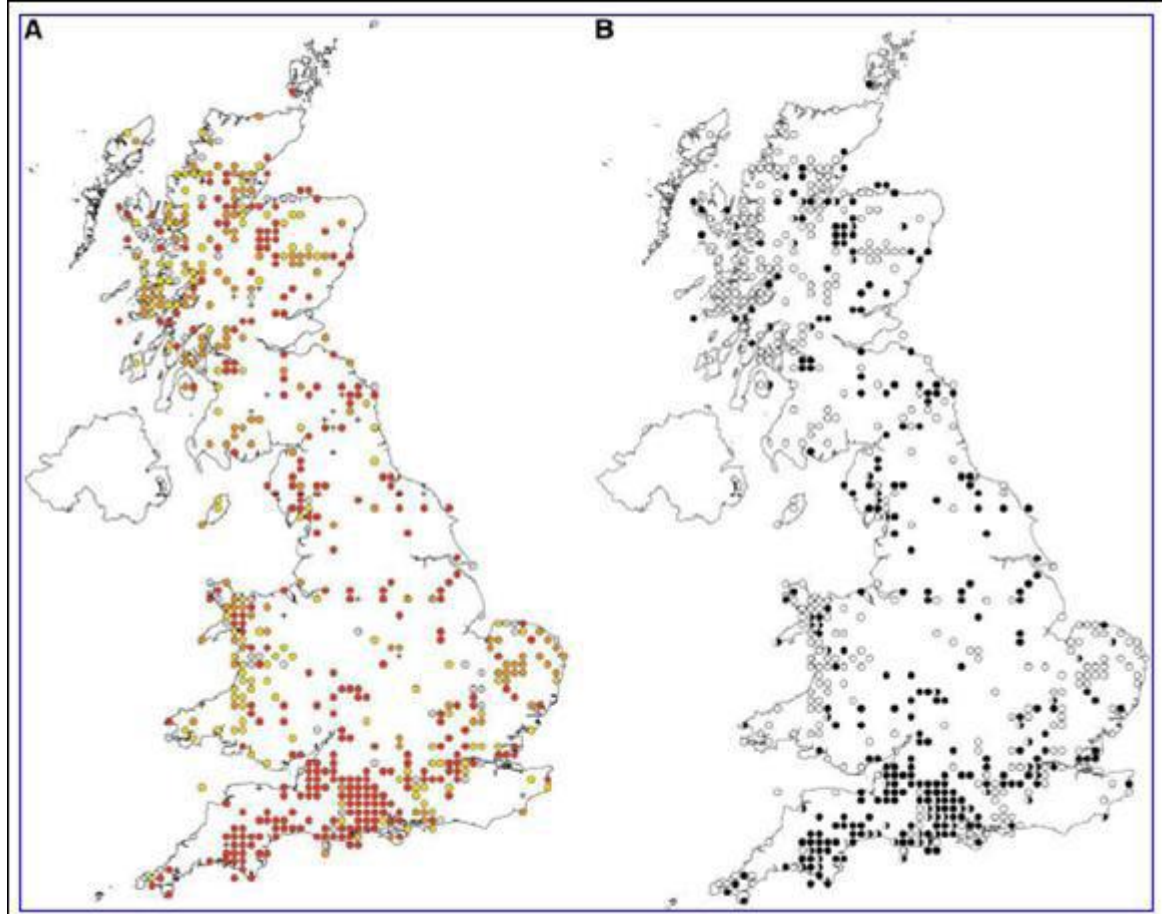
'Low (1-3)', 'Moderate (4-6)', 'High (7-9)' or 'Very High (10)' in relation to the presence of particulate matter, sulphur dioxide, nitrogen dioxide, carbon monoxide and ozone.



# Vector, food and water borne diseases

- Mosquitoes – number and species type is likely to increase (risk from malaria and other exotic diseases remains low)
- Higher spring and summer temperatures can directly affect the survival of ticks and influence their seasonal activity.

Map A and B shows the distribution of sheep/deer ticks 1970 – 2004 and 2005 – 2009. In both maps distribution in the NE is low.



# Flooding

## Health Impacts

- Direct water related impacts i.e. death / drowning
- Gastrointestinal
- Psychological distress

## During Events

- Emergency response team
- Flood Wardens

## Future Protection

- £2.5M scheme in Monkseaton, Murton, Shiremoor & Wellfield.
- Working with partners in EA and NWL
- Surface Water and Drainage Partnership – ‘Flood Safe, Flood Ready’
- Local Flood Risk Management Strategy
- NPPF & Local Plan policies



## Summary Climate Change and Impact on Health

- **Still a lot of uncertainty regarding the impact of climate change on vector and water borne diseases**
  - International and national surveillance e.g. Zika Virus and PHE Mosquito Surveillance
  - Local Environmental Health and Health Protection arrangements for outbreaks
- **Known health risks relating to extremes in temperature (cold and heat)**
  - North Tyneside Council has plans in place to protect residents
- **Known risks relating to air pollution**
  - North Tyneside Council has convened a work group to develop an action plan
- **Known risks regarding flooding**
  - North Tyneside Council has Flood Planning in place
- **Opportunities to use planning and policy development to mitigate the impact of climate change**
  - The Local Plan (housing quality and standards, transport planning etc...)
  - Fuel poverty strategy

