

Air Quality Overview

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Air and Environment Quality

Defra

Forecasting Seminar – 6th May 2004

Outline

- **International level**
 - CAFE
 - Current and future negotiations in EU
 - UNECE
- **National level**
 - Industrial policies
 - Transport policies
 - Air Quality Expert Group
 - AQ Headline Indicator
- **Local Air Quality Management**

International policies: Clean Air For Europe

- CAFE is part of the 6th Environment Action Programme. It is reviewing all air quality directives
- A policy statement (Thematic Strategy) is expected in July 2005 accompanied or followed by legislative proposals
- UK is very supportive of CAFE. We are trying to encourage the Commission to take an holistic approach

4th Daughter Directive

- PAHs, Cadmium, Arsenic, Nickel and Mercury
- Negotiation are underway
- Commission proposal requires monitoring of 4 heavy metals and set a target value for PAHs (1ng/m³)
- European Parliament likely to push at least for target values on all pollutants
- Political agreement expected for June 2004

Paint and Marine Fuel

- European Parliament has given second reading to the proposed directive on solvents in household paints (reducing ozone precursors)
- New standards for paint to come into force in 2007 and 2010
- Negotiations are underway on directive to limit high level of sulphur in marine fuel. Political agreement possible in June 2004

Possible new Euro Standards

- Discussion in Europe on possible new Euro standards (Euro V and Euro VI)
- Focus on NOx and, in particular, PM₁₀ reductions (diesels)
- Government currently considering cost and benefits...
- ... but recognises that further action on reducing vehicle emissions is needed

POP and Heavy Metal Protocols (UNECE)

- Persistent Organic Pollutants (POP) Protocols entered into force in October 2003. EU regulations on manufacture of POPs now in place. UK intends to ratify the Protocol as soon as possible
- Heavy Metal Protocol came into force at the end of 2003. UK probably already meets requirements but intends to ratify as soon as possible

National Policies update:

Implementation of LCPD:

- Estimated to cut 950kt of NO_x and 700 kt of SO₂ (National Plan)
- Different stakeholders favour different implementation (Emission LV vs National Plan)
- Government is continuing further assessment of two options for implementation

Solvent Emission Directive:

- now transposed with measures under the PPC regime; brings new processes under environmental controls (e.g., dry cleaners)

Transport policies I

Extension of **Traffic Regulation Conditions** applying to public services vehicles (e.g. buses) to allow Traffic Commissioners to rule on whether to grant powers to LAs to cover Euro Emission standards and loudspeaker noise

- DfT working on implementing Regulations by June 2004

Road charging for **lorry users** to reflect costs of climate change, air pollution, road maintenance, safety, traffic congestion and noise

- 3rd Progress report (March 2004) announced delay introduction of the scheme until 2007/8

Feasibility study for **all road users** charging to report in summer 2004

Transport policies II

- Evaluation of Roadside Emission Testing scheme to be published in summer 2004
- Aviation White paper published in December 2003. Supplementary information published in February 2004
- Review of 10 Year Transport Plan by summer 2004

Air Quality and social deprivation

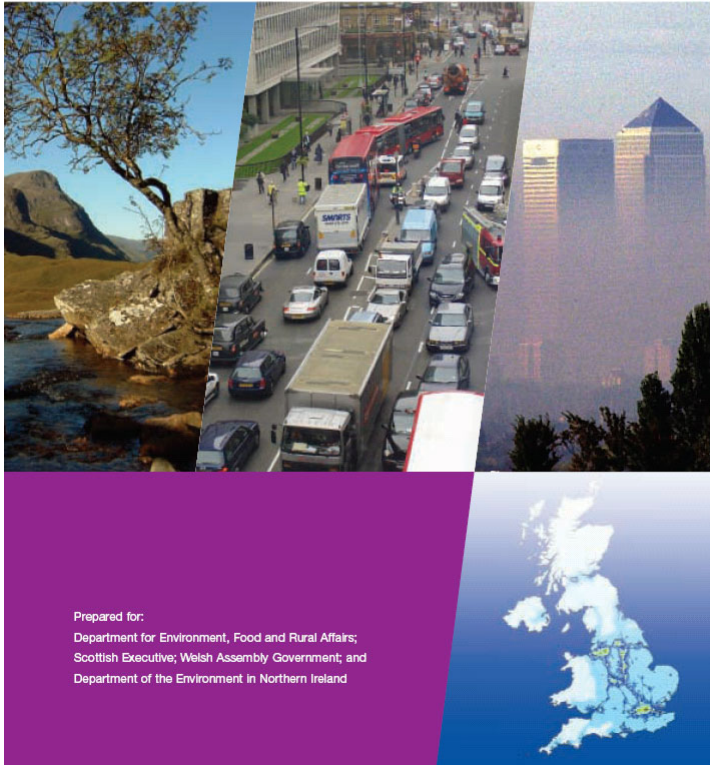
- New ONS/ODPM/Defra study on links between social deprivation and air quality
- Aims to help better target air quality policy by providing improved ward and district level information on air quality in deprived urban and rural areas
- Will provide local area information on air quality and analyse correlations nationally between air quality and social deprivation
- Includes ozone, PM₁₀ and NO_x
- Completes March 2006

Air Quality Expert Group

AIR QUALITY EXPERT GROUP

Nitrogen Dioxide in the United Kingdom

Summary



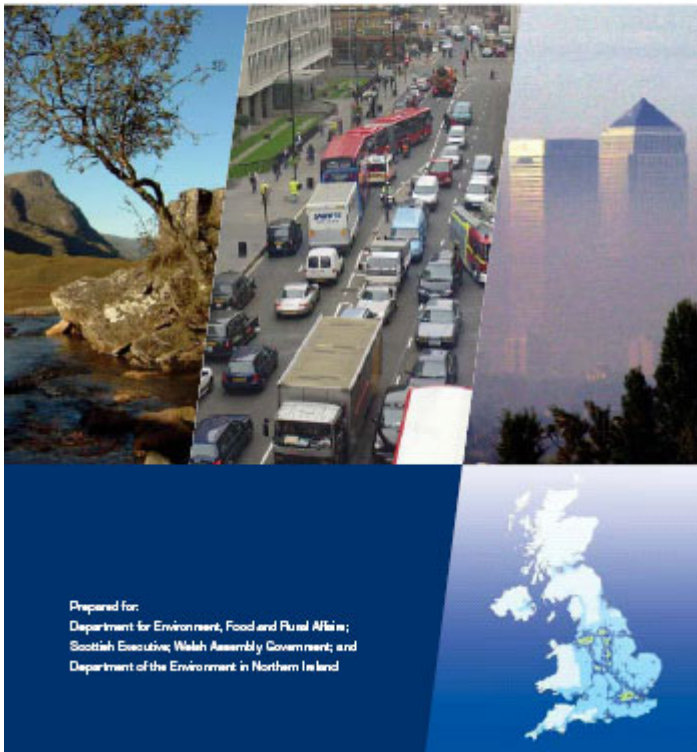
Prepared for:
Department for Environment, Food and Rural Affairs;
Scottish Executive; Welsh Assembly Government; and
Department of the Environment in Northern Ireland

- Nitrogen dioxide report launched 22nd April at the NSCA Spring Workshop by Prof Mike Pilling (Chair of AQEG)
- Full 338 page report and a summary aimed at the public
- Available as hardcopy from AEQ and on AQEG website (www.defra.gov.uk/environment/airquality/aeqg/)

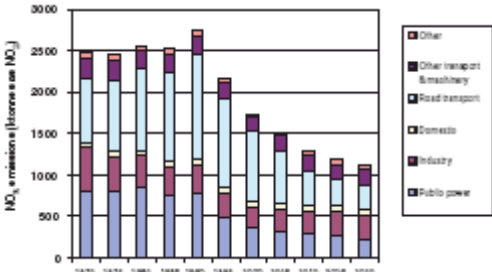
Report Chapters

AIR QUALITY EXPERT GROUP

Nitrogen Dioxide in the United Kingdom



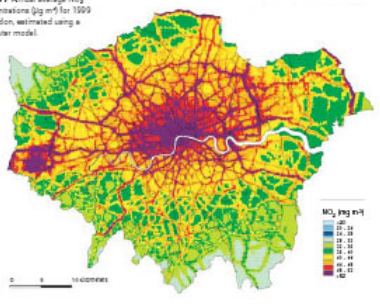
- Emissions and emissions inventories
- Meteorological and chemical processes
- Measurement methods and UK monitoring networks for NO₂
- Modelling
- NO₂ concentrations and recent trends
- Projected NO₂ concentrations in 2005 and 2010
- Conclusions
- Research Recommendations



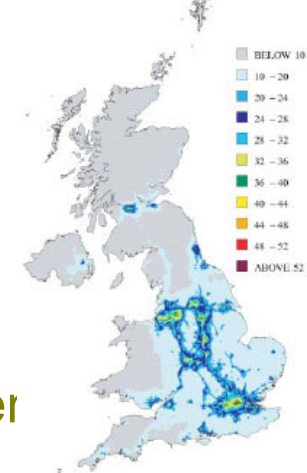
Main Findings 1



- 37% reduction in NOx emissions since 1990 - mainly reductions from road transport and public power genⁿ
- Increase in fraction of NOx emitted as NO₂
- Analysis of data from 212 automatic monitoring sites
- Reductions in NO₂ significantly less than those in NOx at urban background, urban centre sites
- Ascribe this to higher primary NO₂ – role of diesels
- Substantial exceedences of annual mean of 40 µgm⁻³ in London especially
- Proximity to traffic is key determinant
- Urban background sites in Europe – broadly similar to UK



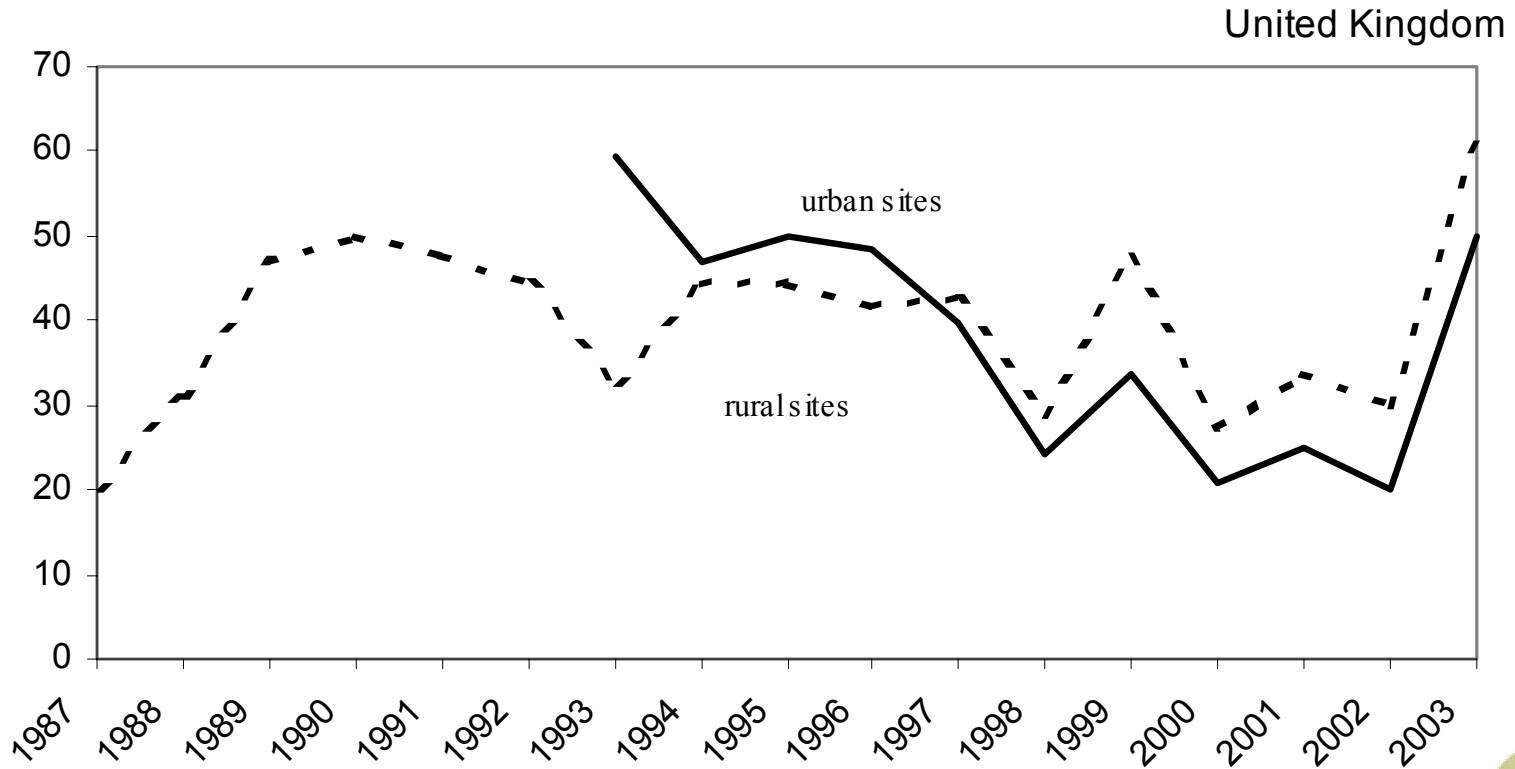
Main Findings 2



- Modelling used to predict concentrations in 2005, 2010
- Exceedences are reduced, but significant areas of exceeder of $40 \mu\text{g m}^{-3}$ for annual mean will remain in London in 2005, 2010
- Predictions made difficult by:
 - Difficulty of assessing changes in primary NO_2
 - Increase in Northern Hemisphere mean baseline ozone ($1 \mu\text{g m}^{-3}$ per year, 1987 – 2001 (Mace Head))
- Need for a more holistic approach in development of air pollution controls and abatement strategies

AQ Headline Indicator

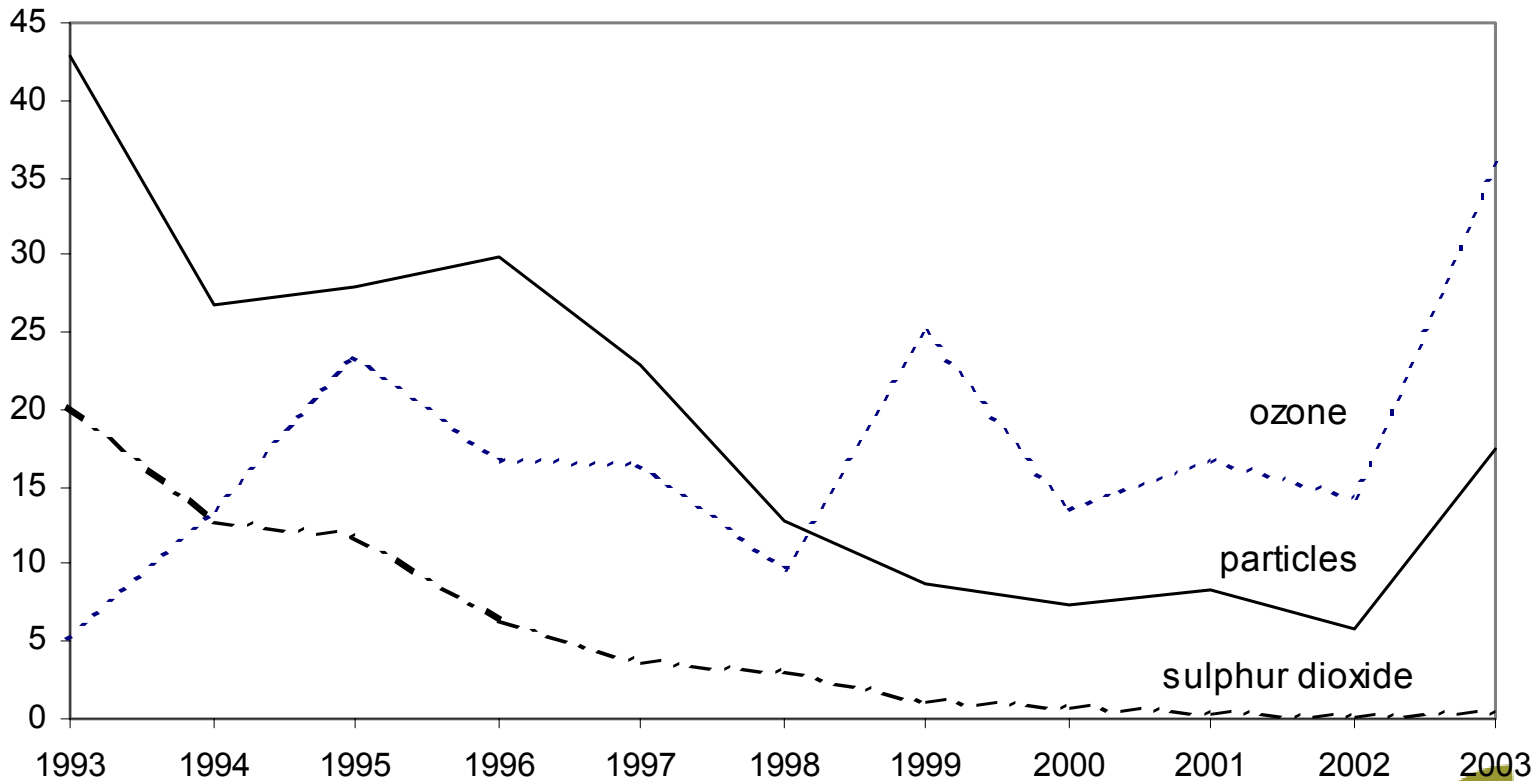
Days when air pollution is moderate or higher: 1987-2003



Source: netcen, Defra

Number of days of moderate or higher air pollution at urban sites caused by ozone, particles or sulphur dioxide: 1993 - 2003

United Kingdom



Note: For the purposes of this chart, where a day is caused by more than one pollutant it is counted for each pollutant, i.e. there is double counting

Source: netcen, Defra

LAQM – 1st Round

LAs with AQMAs:		LAs carried out Stage 4:		LAs submitted draft Action Plans:	
England	85	England	76	• England	46
London	31	London	29	• London	27
Scotland	3	Scotland	3	• Scotland	1
Wales	4	Wales	4	• Wales	2
Total	123	Total	112	• Total	76

LAQM – 2nd Round

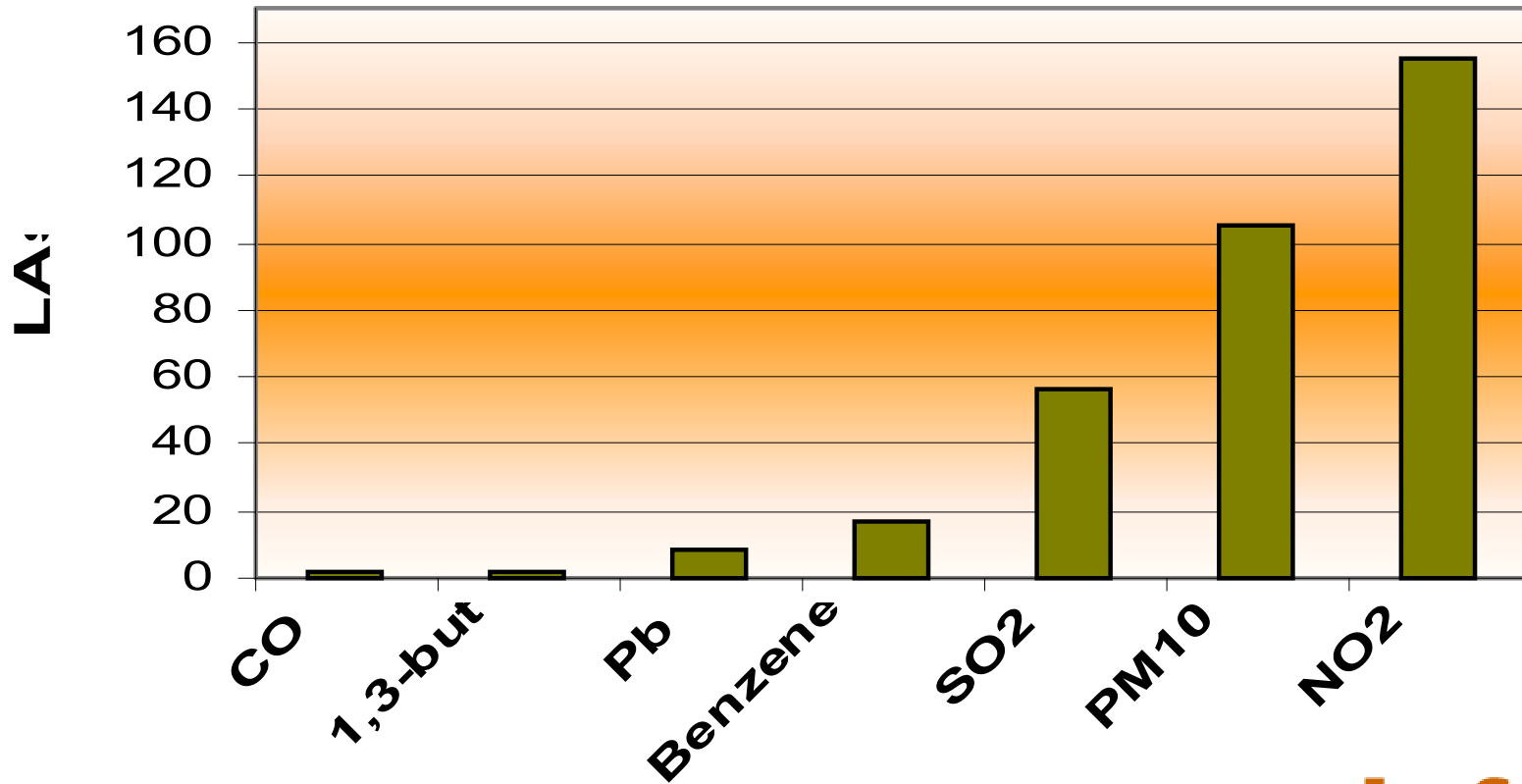
USA submitted:

- England 310 or 97%
- London 15 or 45%
- Scotland 32 or 100%
- Wales 18 or 82%
- Total 375 or 92%**

LAs going on to Detailed Assessment:

- England 167 or 52%
- London 1 or 3%
- Scotland 19 or 60%
- Wales 7 or 31%
- Total 194 or 48%**

Detailed Assessments by pollutants



30 April 04: Detailed Assessment

- Only when an Updating and Screening assessment has identified the risk of an exceedence of Air Quality Objectives
- Accurate assessment of the likelihood of an air quality objective being exceeded
- Assessment should be sufficiently detailed to determine magnitude and geographical extent of exceedence

30 April 04: Annual Progress Report

- Final guidance was published before Christmas
- Minimum requirements:
 - Available monitoring data
 - Log new large developments
- Checklists has been provided

LAQM – 2nd Round

- Defra has written to LAs carrying out Detailed Assessment to remind them of April 04 deadline
- We have invited explanation and expected date of compliance if LAs feel they are unlikely to meet the deadline
- We expected Annual Progress Reports to be delivered by April 04 deadline
- Look at example of good practice on our websites
- Look at FAQs for new guidance as these are updated often

Renewal of appraisal contracts

- Review and Assessment and Action Plan appraisal contracts are due for renewal
- New contracts begin 1 June 2004 – contracts yet to be awarded
- As part of the end of current contract assessment we have asked current contract holders to carry out two assessments which we intend to publish in summer '04

Assessments

Evaluation of Action Planning

- focus on on Action Planning, and in particular:
 - Effectiveness; Liaisons and interactions;

Evaluation of R&A Appraisal

- focus on effectiveness of appraisal process and provision of helpdesk
- Views from LAs have been received for both assessments

Supported Capital Expenditure (SCE)

- From April 04, the Local Government Act 2003 gives “good” and “excellent” LAs freedom to borrow for capital investment up to their “prudential limits”
- Defra continues to provide assistance to support LAs capital expenditure on air quality
- In 2003/4 we granted £4.6m (SCA), significantly above our original allocation of £2.5m
- In process of assessing bids for 2004/5 which are significantly higher than our allocation of £2.5m. Aimed to inform successful LAs by end of last week
- Our invitation made clear that SCE can be granted also if LA does not borrow but uses its own capital to carry out project

ODPM “Freedom & Flexibility”

- Consultation paper in November 03 suggested:
 - “Excellent” LAs will not need to produce Air Quality Action Plans (AQAP) or Local Transport Plans (LTP)
 - For “Non Excellent” LAs, AQAP can be integrated into LTP, if relevant, but requirement for AQAP remains
- New LTP Guidance (integrating air quality) will be issued for consultation in the next few weeks

Summary

- **International level**
- **National level**
- **Local Air Quality Management**