

## Interim Report – Department of Environment, Food and Rural Affairs

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Project Title: UK National Ammonia Monitoring Network	
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Report approved for release by: Dr M. A. Sutton	
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Report Number: AS08 / 02	
Report date:	

### Objectives for this reporting period

This report presents the current status of the network operations, and the latest monitoring data on NH<sub>3</sub> and NH<sub>4</sub><sup>+</sup>.

### Operation of Network

- The NAMN continues to run smoothly in providing monthly measurement data in gaseous NH<sub>3</sub> and aerosol NH<sub>4</sub><sup>+</sup> concentrations. The network site map for 2007 are shown in Figure 1. The aim of these measurements is to explore temporal and spatial patterns, compare results with dispersion models and contribute to national N deposition estimates.
- The preliminary 2007 interpolated concentration maps for gaseous NH<sub>3</sub> and aerosol NH<sub>4</sub><sup>+</sup> from the UK NAMN are shown in Figure 2.
- S15 Llyncllys Common: the local site operator (Mr David Pedlow) has notified CEH of their intention to put their property up for sale in spring 2008. Mr Pedlow and his wife (Mrs Jackie Pedlow) have acted as local site operators for the site since the start of the project, and the DELTA and passive monitoring equipment are located in their garden. They have promised that they will make every effort to persuade the buyer / new owner to continue the ammonia monitoring work, and will keep CEH informed.
- Ammonia monitoring data for S29 Dyffryn Mymbyr and S100 Plas y Brenin was provided to Alex Turner (Environmental Change Network Project Officer, Countryside Council for Wales CCW) for inclusion in CCW's annual summary report for the Welsh Assembly.
- A report prepared for S52 Fenns Moss nature reserve in 2006 (Ammonia Monitoring at Fenn's Moss NNR) was requested and provided to a Tim Ashley of Ruralscapes Ltd, as they wanted to conduct an Environmental Impact Assessment of ammonia in the area.

- Work in the local scale variability study in a Southern Scottish Landscape is progressing well.
- The current UK NAMN contract will finish at the end of April 2008, and a variation was submitted in Feb08 to defra to extend the contract to the end of December 2008, to coincide with the end date of the UK Nitric Acid Monitoring network contract.

- **Other activities**

- CEH continues to contribute to UNECE working groups (Ulrike Dragosits, Mark Sutton).
- There were no CEN activities during the reporting period.
- NitroEurope IP: NEU Level Inferential N Flux Network, using the DELTA methodology from the UK ammonia and nitric acid monitoring networks (NEU: [www.nitroeuropa.eu](http://www.nitroeuropa.eu)).

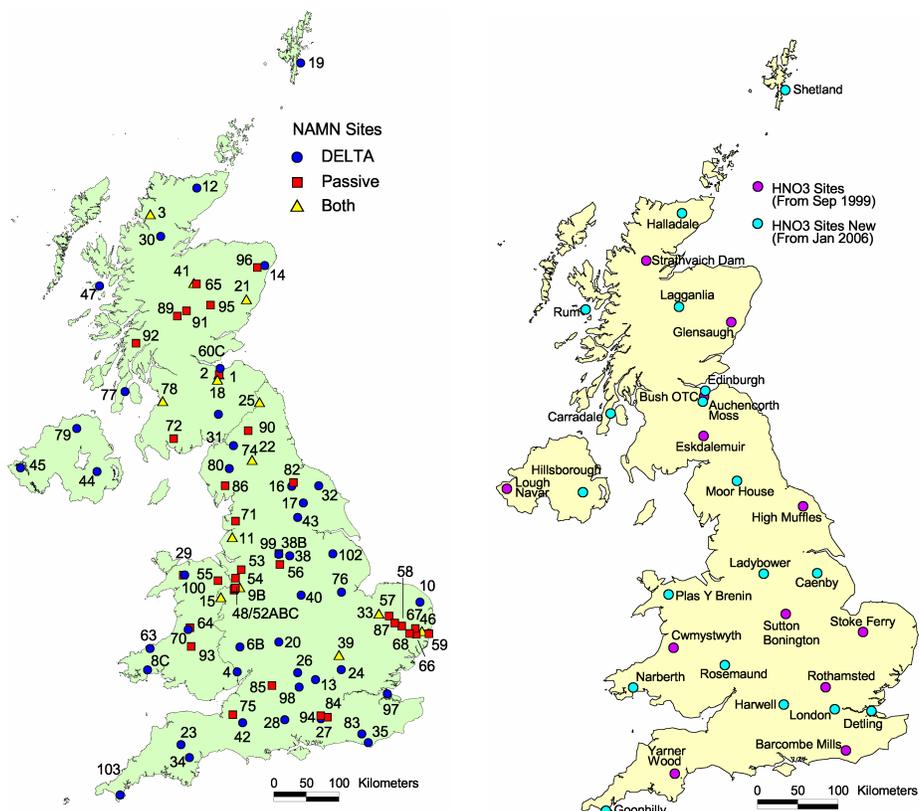


Figure 1: (A) UK NAMN Site Map (2007) and (B) 30 site HNO<sub>3</sub> Monitoring Network (also operated by CEH) is an integral part of the UK NAMN. This uses an extension of the DELTA methodology at 30 UK NAMN sites to additionally sample HNO<sub>3</sub> and related species.

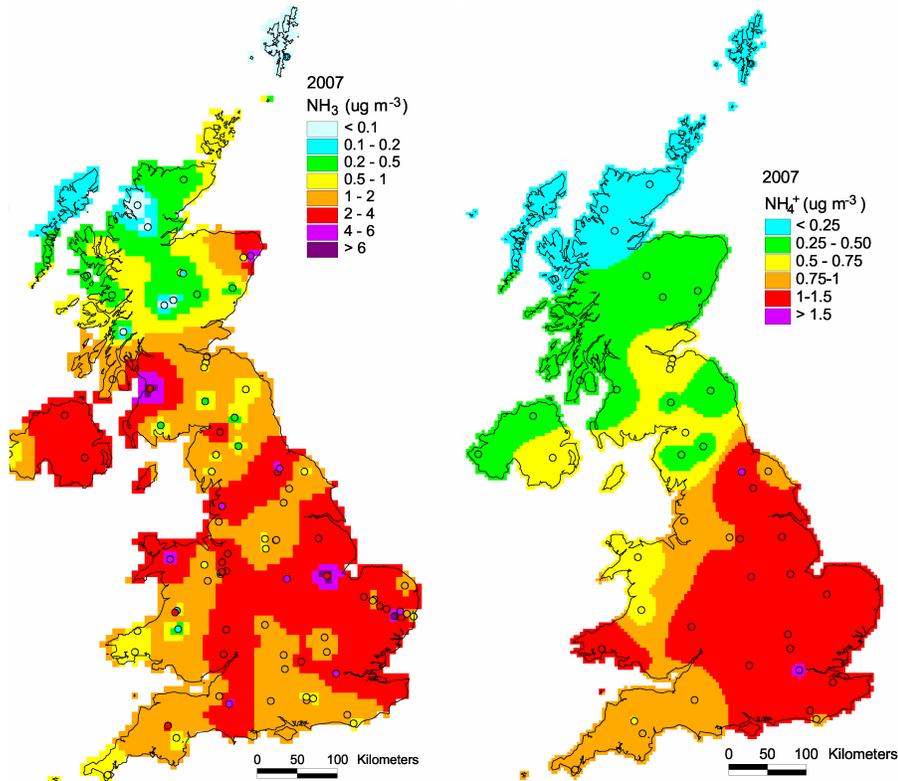


Figure 2: 2007 UK interpolated concentration maps (10 km x 10 km grid resolution) for gaseous  $\text{NH}_3$  (from 94 sites) and for aerosol  $\text{NH}_4^+$  (from 45 sites).

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## Publications

Book chapter on “Nitrogen in the Environment: Sources, Problems, and Management” in the second Edition of Nitrogen in the Environment (Elsevier). Draft

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