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JOINT NATURE CONSERVATION COMMITTEE

**UPDATE ON WORK PROGRAMME AND ACTIVITIES OF THE AIR POLLUTION
LEAD CO-ORDINATION NETWORK**

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1. Background

- 1.1. In the context of this paper, it is worth briefly summarising the reasoning behind the establishment of an inter-agency Air Pollution Lead Co-ordination Network (APLCN).
- 1.2. Until 1996, English Nature provided technical advice on air pollution issues for the statutory conservation agencies in a Lead Agency capacity. However, the loss of a key member of staff compromised the agencies' abilities to carry out their statutory responsibilities at a strategic level (e.g. special function duties on behalf of the Joint Nature Conservation Committee (JNCC)), as well as at a local level (e.g. as statutory consultees to the Integrated Pollution Control (IPC) and Integrated Pollution Prevention Control (IPPC) processes).
- 1.3. In response to this gap in technical expertise, the APLCN was formally established in January 2000 for an initial period of three years. It is due to be reviewed in the next financial year (2002/03). The Network chair is provided by CCW, and JNCC and the agencies collectively fund a Network Officer post. Full details of the establishment of the Network, and its aims and functions, are contained in JNCC paper JNCC 99 P16 'Proposals for an inter-agency Air Pollution Co-ordination Network'.
- 1.4. The APLCN provides a strategic UK-wide approach to air pollution issues. On behalf of JNCC, it a) ensures that there is a rigorous and consistent approach to air pollution assessment across the UK, b) provides advice to UK Government and devolved administrations on air pollution policy, and c) identifies research priorities. It also provides support for the general functions of the country agencies.
- 1.5. Changes in UK legislation are placing considerably more responsibilities upon the country agencies in their consideration of air pollution impacts. For example, the Environment Act 1995, the implementation of the Habitats Regulations (in particular, the review of air pollution consents), and implementation of the IPPC Directive (over 7,000 processes to be covered between 2000 and 2007), require considerable country agency involvement. A key role of the Network is to ensure that the greatest possible nature conservation benefits accrue from implementing these measures.

- 1.6 This paper summarises material covered in a briefing provided to the Chief Scientists Group in Belfast on 2 November 2001, and updates the Joint Committee on the work of the APLCN since January 2000.

2. Development of an air pollution database

- 2.1 The development of an air pollution database was identified as the main target for the APLCN in the 2001/02 JNCC work programme. The database is planned as a replacement for the now out-dated 'Air Pollution Handbook'. It originally started as a Scotland and Northern Ireland initiative known as the 'Air Pollution Information System'. However, catalysed by the APLCN, database development is now being shared amongst all the UK air pollution regulators and conservation agencies in a collaborative effort.
- 2.2 The database will contain information on the impacts of different air pollutants on habitats and species of conservation interest across the UK. Supported by appropriate guidance and training, it will provide essential information to enable country agency staff to assess air pollution impacts upon nature conservation interests, and will underpin the agencies' work on IPPC authorisations and the review of consents on Natura 2000 sites.
- 2.3 The database is being developed as a web-based platform, and will be fully compatible with the National Biodiversity Network.

3. Advice to Government on air pollution issues

- 3.1 The APLCN has been heavily involved in advising UK Government and devolved administrations on the assessment of air pollution impacts on designated sites. This has been driven mainly by the requirements of the Habitats Directive. Close liaison has been maintained with staff in DEFRA's Air Quality Division who have been very supportive of the agencies' concerns. Substantial progress has been made in a number of important areas.

NEGTA P

- 3.2 The National Expert Group on Transboundary Air Pollution (NEGTA P) was convened three years ago at the request of the UK Environment Minister. The terms of reference for the work were to review the existing situation regarding the main air pollutants (sulphur dioxide, nitrogen oxides, ammonia and ground-level ozone) and to project the situation in 2010 (a date when all currently agreed air pollution reduction measures will be enacted). The report is due for publication in December 2001.
- 3.3 The chair of the APLCN represented JNCC as a member of the expert group. Considerable technical support was also provided by the APLCN Network Officer. The APLCN's main involvement focussed on a) assessing impacts upon nationally and internationally protected sites, and b) exploring the interactions of air pollution, climate change, site management and condition assessment.

- 3.4 A key finding of NEG-TAP is that, by focusing effort on the improvement of ambient air quality (i.e. critical *levels* of pollutants), issues relating to the transport and deposition of pollutants to sensitive remote sites (i.e. critical *loads* of pollutants) remain of great concern. In other words, even when air quality in the UK meets prescribed standards, ecological concerns about pollution deposition will still exist. By addressing these nature conservation issues within the NEG-TAP report, the Network will ensure that they remain a prime focus for further assessment and mitigation.

Valuation of air pollution effects on ecosystems – a scoping study

- 3.5 Government must often make difficult spending decisions that involve tradeoffs in allocating resources. Monetary valuation can provide important guidance to decision making in the context of air pollution abatement. Valuing the benefits of ecosystem recovery in monetary terms is not straightforward, firstly because many ecosystem services, such as biodiversity, are not traded in markets, and secondly because the science to underpin a valuation is insufficiently robust to predict recovery from air pollution.
- 3.6 This ongoing DEFRA-led project aims to review ecosystem valuation and to assess the extent to which advances in both economic valuation and scientific understanding could potentially allow a cost-benefit valuation exercise to be undertaken for ecosystem recovery from air pollution in the UK.
- 3.7 The APLCN has provided scientific input to the project. However, further work will be required to produce validated indicators for ecosystem valuation. The APLCN will continue to work with DEFRA to develop suitable indicators.

Protection of statutory conservation sites under the Air Quality Strategy

- 3.8 The focus of the 1997 Air Quality Strategy is on human health. The recent revision of the Strategy incorporated vegetation protection standards (critical levels for sulphur dioxide and nitrogen dioxide). However, the Strategy provided for areas where the vegetation standards would not apply ('exclusion zones'); these include areas around urban conurbations, industrial processes and roads. The Strategy also allowed an exclusion zone to be implemented around a new industrial process.
- 3.9 The APLCN advised DEFRA that the exclusion zone approach would deny some of the UK's most valued wildlife sites the air quality that would be required to keep their habitats and species in favourable condition. The Network also questioned whether this approach to air quality would leave the UK open to challenge under Article 6.2 of the Habitats Directive, which requires Member States to '... avoid, in the special areas of conservation, the deterioration of natural habitats and the habitats of species ... for which the areas have been designated ...'.
- 3.10 As a result of these concerns, DEFRA immediately commissioned work to

assess the consequences of this approach; the APLCN is part of the project management team. Case-studies for specific SSSIs that are expected to exceed the critical level for the protection of ecosystems in 2010 will be used to refine and develop air pollution abatement policy options.

The Air Quality Forum

- 3.11 The APLCN has been invited to sit on DEFRA's Air Quality Forum. The Forum is the technical advisory body responsible for producing the UK Air Quality Strategy. As a member of the forum, the APLCN will have an opportunity to promote the adoption of standards to protect sensitive nature conservation interests.

4. The Habitats Directive and IPPC

- 4.1 Working closely with the regulators (Environment Agency (EA), Scottish Environment Protection Agency (SEPA), and Environment and Heritage Service (EHS)), the Network provides an appropriate framework to ensure consenting procedures used by the relevant competent authorities reflect the requirements of the Habitats Regulations.
- 4.2 In England and Wales, EA is undertaking a major exercise to review consents and permissions affecting Natura 2000 sites. The APLCN has worked closely with EA to ensure that nature conservation issues are adequately taken into account.
- 4.3 The APLCN believes that in order to comply with the Habitats Regulations, EA must fundamentally reassess the way they regulate pollution. The APLCN has formed a Technical Advisory Group with EA to address issues of concern, e.g. to ensure that the combined effects of plans and projects are assessed appropriately, and that implementation of the IPPC Directive takes into account the requirements of the Habitats Regulations.
- 4.4 At present, the review of consents exercise is active only in England and Wales. However, the Network has established contact with the relevant bodies in Scotland and Northern Ireland to ensure that, when the process becomes active there, they can adopt the approach that is being developed jointly with EA.
- 4.5 The country agencies are statutory consultees in the assessment of IPPC applications. The APLCN is producing guidance and support to help agency local teams engage meaningfully in the assessment process. IPPC will involve approximately 7,000 authorisations in the UK. The APLCN will work with the regulators to ensure agency input to the process is appropriately co-ordinated.

5. Other significant areas of APLCN work

- 5.1 The chair of the APLCN has been invited by NERC to sit on the Committee for Air Pollution Effects Research (CAPER). CAPER is mostly comprised of academics, and it allows the network to keep up-to-date with the latest

research into air pollution. It also provides an opportunity to inform the research community of the agencies' concerns and interests, in order to progress areas of mutual benefit (e.g. involvement with the NERC Global Nitrogen Enrichment (GANE) programme).

- 5.2 Countryside Survey 2000 provided evidence of widespread eutrophication of vegetation in the UK. The Network has been asked by CEH to help scope follow-up work to gain further insights into the causes of these changes. Linked to this work, the Network is assessing whether assays of the nitrogen content of plant tissues offers a relatively simple and inexpensive method of estimating nitrogen deposition levels, and may have potential as a biomonitoring tool.
- 5.3 The APLCN is considering applying for membership of the Chartered Institute of Water and Environment Management (CIWEM) 'Air Panel'. This would offer an opportunity to influence many of the practitioners in the field of pollution management.
- 5.4 The APLCN has presented briefings to EA, SEPA, DEFRA, the Department of Trade and Industry, and the National Assembly for Wales; a presentation to the Scottish Executive is scheduled for December 2001. We have also made presentations at conferences and workshops throughout the UK, as well as in the USA and Europe.
- 5.5 Two unplanned areas of work have required a significant amount of Network time. These have involved the assessment of smoke impacts from foot and mouth funeral pyres, and consideration of the local impacts of waste plants (incinerators).

6. Future directions

- 6.1 The APLCN has been greatly encouraged by the positive support it has received from DEFRA over the last two years. The concerns of the country agencies are helping to place nature conservation interests at the heart of UK air pollution policy.
- 6.2 In order to build upon progress made to date, the APLCN intend to produce a 15-year 'Air Pollution and the Natural Environment Outlook'. This will contain a 5-year research strategy. The document will be peer reviewed by academics, government officials and practitioners in the air pollution field, and it is hoped that this 'directional work plan' will be adopted by DEFRA. The draft text will be produced and reviewed in 2002/03 and published the following year.
- 6.3 Through its membership of the Air Quality Forum, the APLCN will continue to push for the Air Quality Strategy to adopt appropriate standards to protect wildlife. The Network's first target is to have 'exclusion zones' abolished. Longer-term targets include incorporating ammonia and ground-level ozone into the Strategy. The Network is also calling for the adoption within the Strategy of 'critical loads', in addition to the present focus on 'critical levels'.

This will help to ensure adequate protection of our most vulnerable sites through consideration of long-term deposition of pollutants to ecosystems.

- 6.4 The APLCN plans to undertake three additional major programmes of work next year.
- i. 'Rolling out' the air pollution database and supporting this with appropriate guidance and regional 'road shows'.
 - ii. Assessment of a tissue nitrogen assay as a potential biomonitoring tool for the country agencies (see 5.2 above).
 - iii. Prepare specific case studies at pilot sites to develop a generic methodology for completing 'appropriate assessment' of plans and projects as required under the Habitats Regulations.
- 6.5 The Network will also be actively engaging the habitat Lead Co-ordination Networks to involve them in air pollution impact assessment and to explore areas of mutual concern and interest.