

**Global biodiversity mechanisms:
a thematic review of recent developments and future evidence needs**

Strand Palace Hotel, London 20th May 2009

Thematic Briefing

Wildlife diseases and invasive alien species

May 2009

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Briefing note: wildlife diseases and invasive alien species

Summary

Invasive alien species (IAS) and wildlife disease can have significant impacts not only on biodiversity but also on human society and its economic interests. IAS have been identified as one of the major causes of global biodiversity loss, whilst the consequences of wildlife disease on wildlife populations (particularly when small or fragmented) and on domesticated animals or humans (if zoonotically infected) can be immense. Both issues have strong similarities, not least the extent to which similar responses (prevention through policy, surveillance and control) are demanded of both.

Both these issues – especially that of wildlife disease – have been gaining increased attention from MEAs, with the 2008 CoPs giving them particular focus.

UK expertise was significantly influential in the drafting of most of the text and guidance related to highly pathogenic avian influenza (HPAI), and other wildlife disease issues, adopted by three MEAs last year. We continue to have strong influence internationally in relation to this issue – especially informal co-ordination between multiple international organisations, MEAs and the EU. Several UK procedures and approaches concerning HPAI responses have now been adopted as recommended good practice by the international community.

The UK is well placed to respond to international recommendations related to IAS via the [GB Invasive Non-Native Species Framework Strategy](#), and in relation to wildlife disease issues via DEFRA's [Wildlife Health Strategy](#). However, neither of these important policy frameworks apply to the UK's Overseas Territories and Crown Dependencies which are already suffering major impacts from IAS and where the implications of wildlife disease remain largely unaddressed and unconsidered.

The need for OT and CD governments to develop relevant policy in these areas seems to be a high priority. It would be useful to explore how this might best be developed and supported with expertise from other parts of the UK. It would also be helpful to discuss how UK expertise might be used to help develop relevant policy and processes internationally.

Outputs from relevant MEA meetings

Issues of wildlife disease and alien invasive species have been discussed at the recent international meetings or otherwise agreed by international processes:

Invasive Alien Species

CBD COP 9 (May 2008)

Decision XI/4: [In-depth review of ongoing work on alien species that threaten ecosystems, habitats or species.](#)

AEWA MoP 4 (September 2008)

Resolution 4.5: [Introduced non-native waterbird species in the Agreement area.](#)

European Commission (December 2008)

Communication - [Towards an EU Strategy on Invasive Species](#)

Wildlife Diseases

AEWA MoP 4 (September 2008)

Resolution 4.15: [Responding to the spread of highly pathogenic avian influenza H5N1.](#)

Ramsar CoP 10 (October/November 2008)

Resolution X.21: [Guidance on responding to the continued spread of highly pathogenic avian influenza.](#)

CMS CoP 9 (December 2008)

Resolution 9.8: [Responding to the challenge of emerging and re-emerging diseases in migratory species, including HPAI H5N1.](#)

Wildlife diseases

All three Resolutions have a major focus on conservation responses to highly pathogenic avian influenza H5N1, in all cases responding to previous Resolutions at previous MoP/CoPs in autumn 2005 when the virus was spreading across Eurasia.

Each Resolution seeks to establish good national and international practice in contingency planning and responses to HPAI outbreaks. This good practice draws to a significant extent on UK experience, especially in respect to aspects such as the recommendation for countries to establish Ornithological Expert Panels (as pioneered by DEFRA) as a means of integrating specialist ornithological expertise within government response systems.

Notable elements of the three Resolutions include the following.

- Promotion of conclusions of the Aviemore workshop on ‘Lessons learnt from H5N1 outbreaks’ (June 2007), and including recommendations with respect to:
 - contingency planning, risk assessment and response strategies;
 - surveillance and early warning systems;
 - epidemiology and tracing sources of infection;
 - communication, education and public awareness; and
 - research and data needs [AEWA].
- A major ‘guide to guidance’ related to HPAI which outlines key sources of advice and guidance¹ that countries can use, organised by theme and risk state [Ramsar].
- New guidance for managers of wetland protected sites related to risk assessment and responses [Ramsar].
- An objective ‘scientific summary’ outlining current understanding of the genesis and factors behind the spread of HPAI H5N1, especially as a guide for those responsible for briefing media and others [AEWA, Ramsar & CMS].
- An outline of experience (drawn largely from UK and other EU experience) in establishing and running Ornithological Expert Panels so as to ensure appropriate ornithological expertise is available to decision makers within government regarding risk assessment, contingency planning and responses [AEWA & Ramsar];
- The need to further integrate responses to wildlife, livestock, human and ecosystem health issues.
- Recommendation on the important need to undertake and report epidemiological investigations following cases where HPAI H5N1 infection is found in wild birds – whether apparently associated with outbreaks in poultry or not – in order to learn from these and reduce future risks [AEWA & Ramsar].
- Technical guidance for non-specialists on recommended ornithological information to be collected during surveillance programmes or field assessment of wild bird mortality events, especially at wetlands (so as to improve quality of reported data reported internationally which has been generally poor) [Ramsar].
- Strong endorsement that each MEA should continue to support and participate in the work of the Scientific Task Force on Avian Influenza and Wild Birds (www.aiweb.info) as the international liaison group on this issue [AEWA, Ramsar & CMS].

¹ See also <http://www.aiweb.info/document.aspx?DocID=285>

- Promotion of the convening (by CMS and FAO) of a separate Scientific Task Force on Wildlife Disease to provide a means for liaison on conservation responses on wide issues regarding wildlife disease [CMS].
- Development of appropriate guidance on appropriate responses to wildlife diseases of importance to people, domestic animals and wildlife which are dependent on wetlands [Ramsar & CMS].

Invasive alien species (IAS)

CBD CoP 9

Fifteen guiding principles for the prevention, introduction and mitigation of IAS impacts were agreed at CoP 6 in 2002. At COP 9 decisions were taken on recommendations from a review undertaken by an *Ad Hoc* Technical Expert Group ([UNEP/CBD/SBSTTA/11/INF/4](#)).

The review identified the lack of capacity as a major constraint to the prevention, eradication and control of IAS. The inadequacies included phytosanitary and quarantine control, early detection and rapid response systems, adequate field equipment; inter-sectoral planning, economic valuation, and integrated policy and legal frameworks.

Gaps and inconsistencies

CoP 9 recognised the need to address the gaps and inconsistencies and agreed follow-up activities as follows:

- Parties were encouraged to use existing risk assessment guidance and apply the International Plant Protection Convention quarantine procedures and standards to all IAS that have adverse impacts on plant biodiversity.
- The International Plant Protection Convention was invited to continue its efforts to expand its coverage of IAS.
- Organisations including OIE – the World Organization for Animal Health, WTO’s Committee on Sanitary and Phytosanitary Measures and FAO’s Committee on Fisheries were invited to note the lack of international standards covering IAS and to consider whether and how to address this, including broadening their mandates and providing practical guidance.
- Examples of best practices were requested for addressing risks associated with the IAS via trade in pets, aquarium and terrarium species, and as live bait and live food. SBSTTA is to consider the establishment of an *Ad Hoc* Technical Expert Group to address the risks associated with the introduction of IAS.

Follow-up of in-depth review of work programme

Decisions to date including the “Guiding Principles” adopted in [Decision VI/23](#) which continues to provide a relevant guidance framework. However, IAS threats continue to grow and additional actions were identified in four main areas outlined below. The main points included the need for the following.

1. National, regional and sub-regional activities and capacity-building

- **Development of national and regional policies, strategies and/or programmes and initiatives**, which to address IAS threats. The EU IAS strategy is a good example. Workshops were seen as very useful for building and strengthening regional initiatives.

- **Support for capacity development** in developing countries, in particular the least developed countries and small island developing states, to implement national strategies and programmes on IAS, noting also countries that are centres of origin.
- **Identify existing information management networks**, expertise and opportunities to further enhance national work of regional organisations and share lessons learned about regional approaches.
- **Collaborate on the development and use of early warning systems** and on the development and use of rapid response mechanisms.
- Further **enhance and strengthen the involvement and participation of local communities** in the management of IAS, and to include in national IAS strategies and action plan implementation.
- **Develop capacity** to address how climate change affects the risks associated with the introduction, establishment, spread and impacts of IAS;

2. Information exchange on best practices, lessons learned and development of tools

- **Submit case-studies, lessons learned and best practices** to implement the Guiding Principles and other relevant measures.
- **Develop practical tools based on case studies** and best practice to help implement CoP 9 decisions on IAS with Global Invasive Species Programme (GISP) and others, and develop and implement national IAS strategies.
- **Establish mechanisms to manage pathways for potential IAS**, especially in inland water, marine and coastal ecosystems, including shipping, trade and aquaculture and mariculture.
- Parties and other States that have not done so, to **ratify the International Convention for the Control and Management of Ships' Ballast Water and Sediment**.
- Note the need for **guidance and criteria to evaluate the risks from other pathways of IAS** such as aviation, tourism, hull-fouling, and development aid projects.
- Support **development and implementation of voluntary schemes**, certification systems and codes of conduct for relevant industries and stakeholders including guidelines to prevent introduction of, and manage potentially invasive commercially important species (including plants, pets, invertebrates, fish, and aquarium / terrarium species).
- Study the **impact of other drivers**, in particular, land use change and climate change adaptation and mitigation activities on the introduction, establishment and spread of IAS.

3. Communication, education and public awareness

- **Strengthen national level communication across sectors**, ensure greater co-operation and co-ordination between relevant agencies and authorities at national and regional levels, and consider the advisability of establishing or designating national co-ordination centres.
- **Develop and support awareness raising programmes at all levels** for decision-makers and practitioners, in particular in agriculture, aquaculture and forestry, and in the horticulture trade and pet trade, and more generally, in the transportation, trading, travel and tourism sectors that are potential pathways of biological invasions.
- **Promote access to and availability of information on IAS**.

4. Provision of resources

- CBD reiterated its invitation to the GEF, Parties, other Governments and funding organizations to **provide adequate and timely financial support to GISP** to enable it to fulfil the tasks outlined in many of its decisions.

AEWA MoP 4 considered a [major review](#) (undertaken by the BTO) related to the status and trends on non-native waterbird species in the Agreement area. Resolution 4.5 reflected on the implications for Contracting Parties. In particular, it (*inter alia*) recommended:

- that Contracting Parties and other Range States strengthen their precautionary measures in order to prevent introductions, escapes and deliberate release of non-native waterbirds species and, as appropriate, enforce and improve national legislation to this effect;
- that ornithological organisations to encourage counters to include non-native and hybrid waterbirds in their existing waterbird censuses and monitoring schemes, and regularly report such information;
- the UK to continue its Ruddy Duck eradication programme towards a complete extermination of the UK population, and strongly urged all other Contracting Parties and other Range States with Ruddy Duck populations, notably The Netherlands and France, to establish or step up complementary eradication measures in order to prevent the spread of the species in Europe and towards its complete eradication within Eurasia;
- the implementation of better regulation of the introduction of non-native populations of native waterbird species so as to prevent the introduction of inappropriate genetic material; and
- that Contracting Parties consider the better recording and monitoring of avicultural collections of non-native waterbirds.

Ramsar CoP 10 did not specifically consider non-native species at CoP 10, although its Scientific and Technical Review Panel (STRP) has been requested to “Prepare comprehensive and up-to-date global guidance on invasive species in relation to wetlands and their management, in cooperation with the Global Invasive Species Programme (GISP) and other relevant organizations” for CoP 11.

It is probable that this will be in the form of a ‘guide to guidance’ as successfully prepared for HPAI H5N1 (see above).

Other international work in progress...

European Union

Annual costs in the EU related to IAS issues are estimated to be at least €12.7 bn, and increasing rapidly due to the expansion of trade. The European Commission adopted in December 2008 a [‘Communication presenting policy options for an EU Strategy on Invasive Species’](#).

In the Communication, the Commission:

- examines the evidence regarding ecological, economical and social impact of IAS in Europe;
- analyses the effectiveness of the current legal situation for tackling this problem; and
- describes four possible options for a future EU strategy.

In addition the Commission highlights measures that can be put in place immediately, including a Europe-wide early warning system to report on new and emerging species.

A consultation was carried out on the options proposed in the Communication and the Commission is now in the process of developing the EU Strategy on Invasive Species, planned for 2010.

International Convention for the control and Management of Ships, Ballast Water and Sediments, 2004 (the BWM Convention)

The Ballast Water Convention has been developed to address the major issue of the spread of marine IAS via sea water carried as ballast in empty tankers. This is known to have resulted in the spread of many marine IAS which in turn have both conservation and sometimes massive economic impacts. For example the introduction of the shipworm *Teredo navalis* into the Baltic has severely damaged wooden coastal defence structures and caused damage estimated at €50 million since 1993. Similarly, the Chinese mitten crab has caused damage of an estimated €73.5 - 85 million in German waters alone.

From 2009, but not later than 2016, the Convention requires the establishment of a ballast water management system on board ships which will replace the uncontrolled ballast water uptake and discharge operations common until then. In future, ballast water will be treated on board before being discharged into the marine environment, in compliance with the ballast water performance standard in Regulation D-2 of the Ballast Water Convention.

The BWM Convention will enter into force 12 months ratification by not less than 30 States with combined merchant fleets constituting >35% of the gross tonnage of the world's merchant shipping. As of April 2008 it has been ratified by 18 Contracting Parties with 15.4% of the world's fleet tonnage.

The UK is in the process of ratifying the Convention but this could take about two years.

Issues for possible discussion

GENERAL ISSUES

- What priority is currently being given to IAS and wildlife disease as an issue for biodiversity conservation in the UK? Is this adequate and does it reflect the impacts of these both on biodiversity, and on (socio-)economic interests?
 - How might the profile of these issues be further raised within and outside government?
- IAS issues have been identified as of high priority by the governments of the UK OTs and CDs. This is especially because of their status as islands, sometimes in tropical or sub-tropical areas, and with often limited governmental and other capacities. Yet although part of the UK, the OTs are included neither within the GB Framework Strategy (below) nor within the scope of the EU's Communication.
 - How can capacity for IAS (and wildlife disease) issues best be developed within the UK OT/CDs?
 - How can the risk assessment developed for GB best be applied in the OT/CDs?
- How can we better join-up currently separate thinking about IAS in marine and terrestrial environments?

SPECIFIC ISSUES

The [GB Invasive Non-Native Species Framework Strategy](#) gives four main themes under which discussion might be considered:

1. PREVENTION

2. EARLY DETECTION, SURVEILLANCE, MONITORING

- Are the UK's surveillance programmes adequate for the purposes of early detection of IAS and wildlife disease?
 - What about the OTs and CDs?
- Can we further fine-tune UK responses in the event of further outbreaks of HPAI H5N1, especially the undertaking of recommended surveillance when infection is detected in wild birds but not in poultry?
- Can we adapt the Ornithological Expert Panel concept for application in the context of other advice to government on wildlife disease responses?

3. RAPID RESPONSE

4. MITIGATION, CONTROL AND ERADICATION

- In terms of Ramsar STRP's task to prepare further guidance related to wetland invasive species, what form might this take that avoids duplication and adds value to existing material? What information or guidance would be useful either at a policy level or to wetland managers that doesn't readily exist?