Key findings from *Waterbirds around the world*

This briefing takes the text of the Edinburgh Declaration and summarises the main findings of *Waterbirds around the world* against each of the main elements of the Declaration. It also cross-references to the relevant papers within the book.

Edinburgh Declaration	Key findings from *Waterbirds around the world*	Papers in *Waterbirds around the world* and web-links
Consider that although significant progress has been made to conserve waterbirds and their wetland habitats leading to some major successes, overall there remain important challenges, which, together with uncertainties about implications of future changes, requires further efforts and focused actions;	Although we have made a good start, there's still lots more to do!	Kuijken , E. (2006). A short history of waterbird conservation. Pp. 52-59. web: http://www.jncc.gov.uk/page-3893 (Section 2.1)
Reaffirm that, in the words of the Ramsar Convention, "*waterbirds, in their seasonal migrations may transcend frontiers and so should be regarded as an international resource*" and "*that the conservation of wetlands and their flora and fauna can be ensured by combining far-sighted national policies with co-ordinated international action*" and accordingly **urge that** efforts between countries to conserve waterbird populations and their wetland habitats are extended, not only for the values that waterbirds have in sustaining human populations, but also for their own sakes;	Much international activity in the decades after WWII developed structures of international environmental governance, with organisations such as Wetlands International created in the 1950s and the Ramsar Convention on wetlands signed in 1971. We now have these frameworks and tools and need to use them energetically to address current and emerging waterbird conservation issues (notably climate change).	Stroud, D.A., Boere, G.A., Galbraith, C.A. & Thompson, D.B.A.T (2006) Waterbird conservation in a new millennium — where from and where to? Pp. 29-39. web: http://www.jncc.gov.uk/page-3892 (Part 1) Kuijken , E. (2006). A short history of waterbird conservation. Pp. 52-59. web: http://www.jncc.gov.uk/page-3893 (Section 2.1)
Consider that flyway conservation should combine species- and ecosystem-based approaches, internationally co-ordinated throughout migratory ranges;	*Waterbirds around the world* reviews current knowledge of flyway systems as an aid to national and international conservation planning.	Boere, G.C. & Stroud, D.A. (2006). The flyway concept: what it is and what it isn't. Pp. 40-49. web: http://www.jncc.gov.uk/page-3892 (Part 1) Hagemeijer, W. (2006). Site networks for the conservation of waterbirds Pp. 697-699. web: http://www.jncc.gov.uk/page-3896 (Section 5.3.5)

Edinburgh Declaration	Key findings from *Waterbirds around the world*	Papers in *Waterbirds around the world* and web-links
		Delany, S.N. & Scott, D.A. (2006). Wetlands International's Flyway Atlas series: establishing the geographical limits of waterbird populations. Pp. 574-581. web: http://www.jncc.gov.uk/page-3895 (Section 4.5.2)
Acknowledge that the conservation and sustainable use of waterbirds and wetland resources require co-ordinated action by public and private sectors, dependent local communities and other stakeholders;	The task of making sustainable development and 'one-world living' a reality is enormous and poses challenges not just for governments but also for all parts of civil society.	Schmidt, P.R. (2006). North American flyway management: a century of experience in the United States. Pp. 60-62. web: http://www.jncc.gov.uk/page-3893 (Section 2.2)
Call in particular for urgent action to:		
• Halt and reverse wetland loss and degradation;	There are widespread waterbird declines in most regions caused principally by loss and degradation of wetland (and other) habitats. Conservation responses must urgently address causes of wetland loss and degradation, as well as enhancing monitoring and research so as better to inform appropriate conservation policies.	Stroud, D.A., *et al.* (on behalf of the International Wader Study Group) (2006). The conservation and population status of the world's shorebirds at the turn of the millennium. Pp. 643-648. web: http://www.jncc.gov.uk/page-3896 (Section 5.2.1) Syroechkovskiy, E.E. (2006). Long-term declines in Arctic goose populations in eastern Asia. Pp. 649-662. web: http://www.jncc.gov.uk/page-3896 (Section 5.2.2) Barter, M.A. (2006). The Yellow Sea – a vitally important staging region for migratory shorebirds. Pp. 663-667. web: http://www.jncc.gov.uk/page-3896 (Section 5.2.3)
• Complete national and international wetland inventories, and promote the conservation of wetlands of importance to waterbirds in the context of surrounding areas, especially through the participation of local communities;	Inventories of Important Bird Areas (IBAs) have now been published for most of the Old World and are under preparation for the New World. Establishment of effective national networks of protected areas (such as Ramsar sites) based on these IBAs is of critical importance.	Crosby, M.J. & Simba Chan, S. (2006). Threatened waterbird species in eastern and southern Asia and actions needed for their conservation. Pp. 332-338. web: http://www.jncc.gov.uk/page-3894 (Section 3.6.6) Vega, X., Gozalez, M.A. & del Vieja, A.M. (2006). Potential new Ramsar sites in northwest Mexico: strategic

Edinburgh Declaration	Key findings from *Waterbirds around the world*	Papers in *Waterbirds around the world* and web-links
		importance for migratory waterbirds. Pp. 158-160. web: http://www.jncc.gov.uk/page-3894 (Section 3.2.1) Mukherjee, A.& Wilske, B. (2006). Important Bird Areas in western India. Pp. 302. web: http://www.jncc.gov.uk/page-3894 (Section 3.5.14)
• Extend and strengthen international networks of key sites for waterbirds along all flyways;	Networks of sites established for flagship species also benefit many other globally threatened species and habitats.	Prentice, C., Mirande, C., Ilyashenko, E. & Harris, J. (2006). Flyway site network development in Asia: wetland conservation using the Siberian Crane *Grus leucogeranus* as a flagship species. Pp. 690-696. web: http://www.jncc.gov.uk/page-3896 (Section 5.3.8) Hagemeijer, W. (2006). Site networks for the conservation of waterbirds Pp. 697-699. web: http://www.jncc.gov.uk/page-3896 (Section 5.3.9)
• Establish and extend formal agreements and other co-operation arrangements between countries to conserve species, where possible within the frameworks provided by the Conventions on Migratory Species, Biological Diversity and Wetlands;	There has been good success in establishing a framework for formal co-operation in the North American and African-Eurasian regions, and more informally in the Asia-Pacific region. These approaches need urgently to be consolidated and extended to other regions. Notably the Central Asian and Neotropical/South America flyways.	Schmidt, P.R. (2006). North American flyway management: a century of experience in the United States. Pp. 60-62. web: http://www.jncc.gov.uk/page-3893 (Section 2.2) Mundkur, T. (2006). Successes and challenges of promoting conservation of migratory waterbirds and wetlands in the Asia-Pacific region: nine years of a regional strategy. Pp. 81-87. web: http://www.jncc.gov.uk/page-3893 (Section 2.5) Lenten, B. (2006). The Agreement on the Conservation of African-Eurasian migratory waterbirds. Pp. 350-353 web: http://www.jncc.gov.uk/page-3894 (Section 3.7.1)

Edinburgh Declaration	Key findings from *Waterbirds around the world*	Papers in *Waterbirds around the world* and web-links
• Fund and implement recovery plans for all globally threatened waterbird species;	Little conservation action is being undertaken for many globally threatened species. The number of globally threatened waterbirds continues to increase. There are few international mechanisms to fund or co-ordinate conservation actions for globally threatened species that are not migratory, especially those occurring on islands European experience shows that, when effectively implemented, international action plans can positively influence the conservation status of globally threatened birds	Davidson, N.C. & Stroud, D.A. (2006). African-Western Eurasian Flyways: current knowledge, population status and future challenges. Pp. 63-73. web: http://www.jncc.gov.uk/page-3893 (Section 2.3) Stroud, D.A., *et al.* (on behalf of the International Wader Study Group) (2006). The conservation and population status of the world's shorebirds at the turn of the millennium. Pp. 643-648. web: http://www.jncc.gov.uk/page-3896 (Section 5.2.1) Nagy, S. & Burfield, I. (2006). Saving Europe's most endangered birds: lessons to be learnt from implementing European Species Action Plans. Pp. 602-607. web: http://www.jncc.gov.uk/page-3896 (Section 5.1.1)
• Halt and reverse recently revealed declines of long-distance migrant shorebirds through sustainable management by governments and others of human activities at sites of unique importance to them;	Many sites of critical importance for long-distant migrants have been and in many cases, still are, being degraded through habitat loss and degradation.	Ens, B.J. (2006). The conflict between shellfisheries and migratory waterbirds in the Dutch Wadden Sea. Pp. 806-811. web: http://www.jncc.gov.uk/page-3897 (Section 6.1.6)
• Restore albatross and petrel populations to favourable conservation status through urgent and internationally co-ordinated conservation actions, especially through the framework provided by the Agreement on the Conservation of Albatrosses and Petrels;	There is a critical and urgent need to fully implement the Agreement on the Conservation of Albatrosses and Petrels in order to halt and reverse current declines.	Cooper, C. (2006). Conservation of albatrosses and petrels of the Southern Ocean. Pp. 113-119. web: http://www.jncc.gov.uk/page-3893 (Section 2.9)
• Substantially reduce pollution in the marine environment and establish sustainable harvesting of marine resources;		

Edinburgh Declaration	Key findings from *Waterbirds around the world*	Papers in *Waterbirds around the world* and web-links
• Underpin future conservation decisions with high-quality scientific advice drawn from co-ordinated, and adequately funded, research and monitoring programmes notably the International Waterbird Census, and to this end, urge governments and other partners to work together collaboratively and supportively;	An international partnership to support the International Waterbird Census has been developed by Wetlands International following the request of AEWA's third Meeting of Parties[1]	
• Develop policy-relevant indicators of the status of the world's wetlands, especially in the context of the 2010 target, using waterbird and other data generated from robust and sustainable monitoring schemes;	One of the indicators of the effectiveness of the Ramsar Convention currently under development relates to waterbird trends	Davidson, N.C. & Stroud, D.A. (2006). African-Western Eurasian Flyways: current knowledge, population status and future challenges. Pp. 63-73. web: http://www.jncc.gov.uk/page-3893 (Section 2.3)
• Invest in communication, education and public awareness activities as a key element of waterbird and wetlands conservation;	Many examples from around the world show that communication, education and public awareness is central to effective waterbird conservation. Wetland education centres have a valuable role in development educational programmes, and especially engaging with children.	Diop, M.D. & Beye, C. (2006) Wetlands International's Communication, Education and Public Awareness Programme on wetlands for west Africa. Pp. 836-837. web: http://www.jncc.gov.uk/page-3897 (Section 6.2.3) Chapman, H., Andres, B.A. & Fellows, S. (2006). Shorebird Sister Schools Program: shorebird education in North America and beyond. Pp. 832. web: http://www.jncc.gov.uk/page-3897 (Section 6.2.1) Whitehead, M. (2006). Wetland Link International (WLI): a global network for wetland centres. 838-840. web: http://www.jncc.gov.uk/page-3897 (Section 6.2.4)
• Assess disease risk, and establish monitoring programmes in relation to migratory waterbird movements, the trade of wild birds, and	The frequency and magnitude of disease amongst waterbirds has increased and affect not only waterbirds, but also impacts on human economic,	Friend, M. (2006). Evolving changes in diseases of waterbirds. Pp. 412-417. web: http://www.jncc.gov.uk/page-3895 (Section 4.2.1)

[1] http://www.unep-aewa.org/meetings/en/mop/mop3_docs/final_resolutions_word/res3_6_partnership_wpa.doc

Edinburgh Declaration	Key findings from *Waterbirds around the world*	Papers in *Waterbirds around the world* and web-links
implications for human health.	health and cultural values. Solutions require integration of numerous scientific disciplines in an ecological approach. There is an urgent need for more systematic disease surveillance diseases at national and international scales. Current concerns regarding avian influenza have focussed attention on how best to make this happen.	Kuiken , T. *et al.* (2006). Emerging viral diseases in waterbirds. Pp. 418-421. web: http://www.jncc.gov.uk/page-3895 (Section 4.2.2) Rocke, T.E. (2006). The global importance of avian botulism. Pp. 422-426. web: http://www.jncc.gov.uk/page-3895 (Section 4.2.3) Melville, D. & Shortridge, K.F. (2006). Migratory waterbirds and avian influenza in the East Asian-Australasian Flyway with particular reference to the 2003-2004 H5N1 outbreak. Pp. 432-438. web: http://www.jncc.gov.uk/page-3895 (Section 4.2.5)
Urge that particular priority be given to capacity building for flyway conservation in countries and territories with limited institutions and resources, given that the wise-use of waterbirds and wetlands is important for sustainable development and poverty alleviation;	Capacity building is central to the development of sustainable programmes of waterbird and wetland conservation and management. There are good examples from Africa and elsewhere of effective capacity building.	Ndiaye, A., Dodman, T. & Diagana, C.H. (2006). Building capacity ion Africa through a regional training programme. Pp. 884. web: http://www.jncc.gov.uk/page-3897 (Section 6.5.1) Solokha, A., Hagemeijer, W. & Mundkur, T. (2006). Building capacity in Central Asia and the Caucasus to promote waterbird research. Pp. 885-888. web: http://www.jncc.gov.uk/page-3897 (Section 6.5.2) Nasiwra, O. *et al.* (2006). Building capacity in waterbird and wetland monitoring in eastern Africa. Pp. 889-891 web: http://www.jncc.gov.uk/page-3897 (Section 6.5.3)
Strongly encourage countries to ratify and implement relevant conventions, agreements and treaties so as to encourage further international co-operation, and to make use of available resources including the Global Environment Facility in order to finance action required under this	A multitude of studies highlight the value of the Ramsar Convention and other MEAs, such as the Agreement on the conservation of African-Eurasian Migratory Waterbirds, in addressing the protection	Davidson, N.C. & Stroud, D.A. (2006). African-Western Eurasian Flyways: current knowledge, population status and future challenges. Pp. 63-73. web: http://www.jncc.gov.uk/page-3893 (Section 2.3)

Edinburgh Declaration	Key findings from *Waterbirds around the world*	Papers in *Waterbirds around the world* and web-links
Declaration;	of internationally important wetlands. MEAs provide a range of tools and policies: they need to be used by their Contracting Parties and other countries encouraged to accede to these treaties. There is a long-history of effective multilateral international co-operation related to the conservation of migratory waterbirds in North America.	Lenten, B. (2006). The Agreement on the Conservation of African-Eurasian Migratory Waterbirds. Pp. 350-353. web: http://www.jncc.gov.uk/page-3894 (Section 3.7.1) Schmidt, P.R. (2006). North American flyway management: a century of experience in the United States. Pp. 60-62. web: http://www.jncc.gov.uk/page-3893 (Section 2.2)
Consider that, with the long history of co-operative international assessments, waterbirds provide excellent indicators by which to evaluate progress towards achievement of the 2010 target established by world leaders in 2002, and to this end **Call on** the Conventions on Migratory Species, Biological Diversity and Wetlands, and other international agreements to work together and with other partners on such assessments, and in particular with Wetlands International to further develop the analytical content, of the triennial publication *Waterbird Population Estimates* and its use;		
Stress the need for wide international dissemination of this Declaration and the technical outcomes of this Conference; and	Waterbirds around the world: • contains contributions from 453 authors from 59 countries; • has 264 papers and reviews relating to 614 waterbird species from 162 countries; and • presents new data on 170 Globally and Near Threatened species. It is a unique overview of the status of the worlds waterbirds at the start of a new millennium.	

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Agree to meet again as a conference in ten years time to review progress.		

In support of the recommendations above, the Conference concluded the following:		
• For the Flyways of the Americas, collaboration between North, Central and South America and Caribbean nations is developing, based on conclusions of the conference of nations to consider the status of migratory birds held during the VIIIth Neotropical Congress in Chile, and in the recent completion of a Waterbird Conservation Plan for the Americas. Despite more than a century of conservation efforts in North America and emergence of a shared vision for biologically-based, landscape orientated partnerships, it is clear that international co-operation amongst Pan-American countries sharing migratory birds should increase.	Most reported waterbird conservation and research in the Neotropics relates to activities restricted to individual countries. There is a pressing need to develop structures that will facilitate internationally co-operative work. There are, however, some examples of wider-scale assessments and these need to be strongly encouraged.	Schmidt, P.R. (2006). North American flyway management: a century of experience in the United States. Pp. 60-62. web:: http://www.jncc.gov.uk/page-3893 (Section 2.2) Blanco, D.E. (2006). The Ruddy-headed Goose *Chloephaga rubidiceps* mainland population: a flyway perspective. Pp. 195-196. web: http://www.jncc.gov.uk/page-3894 (Section 3.2.12)
• In African-Eurasian Flyways, the generally good knowledge of waterbirds is not being effectively transferred into necessary national and local actions. Nor have conservation efforts led to maintaining or restoring the health of many waterbird populations, including globally threatened species. There are urgent needs to integrate waterbird conservation as part of sustainable development, to the greater benefit of local communities and other stakeholders dependent on wetlands as well as benefiting biodiversity. The African-Eurasian Waterbird Agreement (UNEP/AEWA) provides a good basis to achieve this.	There is an urgent need to integrate waterbird conservation as part of sustainable development, to the greater benefit of local communities and other stakeholders dependent on wetlands as well as benefiting biodiversity.	Davidson, N.C. & Stroud, D.A. (2006). African-Western Eurasian Flyways: current knowledge, population status and future challenges. Pp. 63-73. web: http://www.jncc.gov.uk/page-3893 (Section 2.3) Lenten, B. (2006). The Agreement on the Conservation of African-Eurasian migratory waterbirds. Pp. 350-353. web: http://www.jncc.gov.uk/page-3894 (Section 3.7.1)
• Intra-African Flyways are extremely poorly known and would benefit from greater attention.	Many globally threatened waterbirds occur in Africa but the knowledge to effectively conserve them remains limited.	Section 3.4. Intra-African migration. Pp. 217-262. web: http://www.jncc.gov.uk/page-3894 (Section 3.4) Dodman, T. & Diagana, C.H. (2006). Conservation dilemmas for intra-African migratory waterbirds. Pp.

		218-223. web: http://www.jncc.gov.uk/page-3894 (Section 3.4.1) Childress, B. et al. (2006). Satellite-tracking documents the East African flyway and key site network of the Lesser Flamingo *Phoenicopterus minor*. Pp. 218-223. web: http://www.jncc.gov.uk/page-3894 (Section 3.4.1) Baker, N.E. & Baker, E.M. (2006). Waterbirds in Tanzania: what we know and what we do not; where are the knowledge gaps? Pp. 245-249. web: http://www.jncc.gov.uk/page-3894 (Section 3.4.8)
• Many of the waterbirds of the Central Asian Flyway appear to be declining, although information on status and trends is generally poor. In most countries there has been little previous investment in conservation and low involvement of local stakeholders in the sustainable management of wetlands. An international framework for the development of conservation initiatives for migratory waterbirds in Central Asia is urgently required to promote co-operative action. Better information is needed to identify priority conservation issues and responses.	Information on waterbirds of the Central Asian Flyway is very limited and is better in the south (India and Pakistan) than further north – central Asian Republics. It is the flyway that is most poorly known with a high proportion of its wader populations being unknown in either size or population trend (80% of populations). Furthermore, nearly all existing estimates are over ten years old, meaning that contemporary knowledge of the waders in this part of the world is almost unknown. Nonetheless, best available information indicates that about twice as many wader populations are declining as are increasing. There is an urgent need both to assess recent data for this flyway as well as to improve processes of basic data gathering and analysis.	Section 3.5. Flyway conservation in the Central Asian Flyway. Pp. 263-314. web: http://www.jncc.gov.uk/page-3894 (Section 3.5) Stroud, D.A., *et al.* (on behalf of the International Wader Study Group) (2006). The conservation and population status of the world's shorebirds at the turn of the millennium. Pp. 643-648. web: http://www.jncc.gov.uk/page-3896 (Section 5.2.1)
• The waterbirds of Asian-Australasian Flyways are the most poorly known, and the greatest number of globally threatened waterbirds occur here. This flyway extends across the most densely populated	Many critically threatened waterbirds occur in this region. The rapidity and extent of economic growth and the size of human populations pose extreme	Section 3.6. East-Asia-Pacific Flyway. Pp. 315-348. web: http://www.jncc.gov.uk/page-3894 (Section 3.6)

part of the world, where there are extreme pressures not only on unprotected wetlands but also on protected sites. Effective protection of wetlands of major importance is a critical need, as in other regions of the world. There are huge, and crucial, challenges in ensuring effective wise-use of key sites, as well as ensuring that consumptive uses of waterbirds are sustainable.	challenges for waterbirds and wetland conservation. Over 80% of wetlands in east and south-east Asia are classified as threatened, with over half under serious threat. Of inter-tidal wetlands in South Korea, 43% have been destroyed by land-claim (with more underway), as also have 37% of inter-tidal wetlands on China's coastline. The development of non-binding international mechanisms (Asia-Pacific Migratory Waterbird Conservation Strategy 2001) for conservation and monitoring is a welcome step forward, although there are huge challenges to secure the conservation of wetlands of global significance to waders so as to reverse current negative trends. This is especially so given the intense socio-economic pressures within the region.	Mundkur, T. (2006). Successes and challenges of promoting conservation of migratory waterbirds and wetlands in the Asia-Pacific region: nine years of a regional strategy. Pp. 81-87. web: http://www.jncc.gov.uk/page-3893 (Section 2.5) Barter, M.A. (2006). The Yellow Sea – a vitally important staging region for migratory shorebirds. Pp. 663-667. web: http://www.jncc.gov.uk/page-3896 (Section 5.2.3) Stroud, D.A., *et al.* (on behalf of the International Wader Study Group) (2006). The conservation and population status of the world's shorebirds at the turn of the millennium. Pp. 643-648. web: http://www.jncc.gov.uk/page-3896 (Section 5.2.1)
• Conservation of pelagic waterbirds in the open oceans gives a range of unique challenges. The entry into force of the Agreement on the Conservation of Albatrosses and Petrels is a most welcome development, and its full implementation is an urgent need. Addressing issues of seabird by-catch, especially by illegal and unregulated fisheries remains a critical need to reverse the poor conservation status of many species, as is the general need to achieve sustainable marine fisheries.	Amongst the biggest challenges for marine conservation are: a) implementation of precautionary ecosystem-based approaches to sustainable use of resources; and b) minimization of the environmental consequences of human activities. Progress on both topics requires the identification of species, sites and areas needing particularly sensitive management, including within the context and scope of Marine Protected Areas.	Section 5.5. The marine environment: challenges for conservation implementation. Pp. 737-781. web: http://www.jncc.gov.uk/page-3896 (Section 5.5) Cooper, C. (2006). Conservation of albatrosses and petrels of the Southern Ocean. Pp. 113-119. web: http://www.jncc.gov.uk/page-3893 (Section 2.9)
• Most of the world's known flyways originate in the Arctic. The recent development of international co-operation between arctic countries is welcome, as is the recognition of the crucial need to involve	Recent years have seen the active development of much organisational and institutional activity in the arctic, together with the progressive development of a range of multinational agreements and other	Section 3.1. The Arctic: source of flyways. Pp. 126-156. web: http://www.jncc.gov.uk/page-3894 (Section 3.1)

local communities and their traditional local knowledge in waterbird management. Austro-tropical Flyways also require research.	international treaties (for example the Conservation of Arctic Flora & Fauna – CAFF – a working group of the Arctic Council). These all indicate greatly increased interest in the region. With climate change predicted to impact more rapidly on the arctic more than on other regions, the need for increased research and conservation effort is urgently needed.	Wohl, K.D. (2006). The Arctic – origin of flyways. Pp. 120-123. web: http://www.jncc.gov.uk/page-3893 (Section 2.10)
• Climate changes are already affecting waterbirds. The consequences of climate change for waterbirds will be multiple, and will greatly exacerbate current negative impacts such as habitat loss and degradation. There is a need for wide-scale planning, at landscape and flyway scales, to reduce or mitigate the impacts on waterbird populations and their habitats. Research that explores a range of potential future scenarios will be required to underpin this planning and will need data from long-term monitoring and surveillance.	Climate changes are already affecting the distribution of waterbirds and probably also the abundance of some species too. There is an urgent need to develop adaptation policies.	Section 4.1. The implications of climate change for waterbirds. Pp. 384-409. web: http://www.jncc.gov.uk/page-3895 (Section 4.1) O'Connell, M.J. et al. (2006). Developing an integrated approach to understanding the effects of climate change and other environmental alterations at a flyway level. Pp. 385-397. web: http://www.jncc.gov.uk/page-3895 (Section 4.1.1) Rehfisch, M.J. & Austin, G.E. (2006). Climate change and coastal waterbirds: the United Kingdom experience reviewed. Pp. 398-404. web: http://www.jncc.gov.uk/page-3895 (Section 4.1.2)
• The conservation status of non-migrant waterbird populations around the world in many cases is poorer than that of migrants, and these waterbirds generally have less focused international attention than migrants. Addressing conservation requirements of non-migrant waterbirds should also be given national and international priority.	About two-thirds (60%) of globally or near threatened wader species are sedentary. Some of these species are much more poorly known and have a significantly worse conservation status than migrants. Evaluation of their current status suggests these species should receive urgent priority conservation attention, especially in light of the absence of international structures to promote their conservation.	Stroud, D.A., et al. (on behalf of the International Wader Study Group) (2006). The conservation and population status of the world's shorebirds at the turn of the millennium. Pp. 643-648. web: http://www.jncc.gov.uk/page-3896 (Section 5.2.1)

• On a densely populated planet it is crucial that waterbird conservationists focus on their relationships with communities and governments as the means both of reversing the causes of poor conservation status, and of resolving conflicts with protected species. Adequately funded programmes of communication, education and public awareness need to be the core of all waterbird conservation initiatives.	Waterbirds, through their often charismatic behaviour, their international migrations, and association with 'untamed nature' have great potential to increase support for biodiversity conservation at all levels. The processes of communication, education and public awareness (CEPA) are all invaluable complements to waterbird conservation but must be valued and funded accordingly. Conservation efforts may not realise their intended aims without CEPA.	Section 6.2. Let the waterbirds do the talking. Pp. 831-847. web: http://www.jncc.gov.uk/page-3897 (Section 6.2) Section 6.5. Building and sustaining capacity for waterbird conservation and research. Pp. 883-892 web: http://www.jncc.gov.uk/page-3897 (Section 6.5)
• Science has identified the critical importance of a small number of key sites to long-distance migrant shorebirds and that human activities at some of these are responsible for recent dramatic declines in certain shorebird populations.	Shorebirds that embrace the entire globe within their migration routes provide us with information about local environmental changes. At the same time, they integrate phenomena at larger spatial scales. Variations in the number, phenotype and behaviour of particular shorebirds could help provide us with biological "integrators" of global environmental information in ways that no network of observers could realistically ever give us. Weather stations and GIS analyses of land use can tell us about ongoing changes, but bird populations integrate this information in potentially insightful and surprising ways.	Section 4.4. Migration ecology. Pp. 505-567. web: http://www.jncc.gov.uk/page-3895 (Section 4.4) Piersma, T. (2006). Migration in the balance: tight ecological margins and the changing fortunes of shorebird populations. Pp. 74-80. web: http://www.jncc.gov.uk/page-3893 (Section 2.4) Gill, R.E. *et al.* (2006). Crossing the ultimate ecological barrier: evidence for an 11 000 km long non-stop flight from Alaska to New Zealand and eastern Australia by Bar-tailed Godwits *Limosa lapponica*. Pp. 524-534. web: http://www.jncc.gov.uk/page-3895 (Section 4.4.9)
• Recent research has highlighted the genetic and demographic risks incurred by species that have small populations. These have implications for the design of species recovery programmes.	World-wide population declines in waders are of great concern because many species have not yet recovered from loss of genetic variation caused by ice-age population bottlenecks. Therefore genetically effective population sizes are much smaller than census population sizes. Critical effective size could be as small as a few hundred	Baker, A. (2006). Population declines and the risk of extinction in waders: genetic and ecological consequences of small population size. Pp. 668-671. web: http://www.jncc.gov.uk/page-3896 (Section 5.2.4)

	individuals, above which a population will persist without extinction due to genetic load. However, this requires an approximately 10-fold higher census population size. In populations such as the Red Knot *Calidris canutus rufa* which is currently undergoing a drastic decline in numbers due to bad ecological conditions, the risk of extinction is exacerbated.	
• The frequency and magnitude of disease losses among waterbirds (from emerging or re-emerging disease agents) have increased to the extent that they demand attention. These diseases not only affect waterbirds but have impacts on humans. Solutions require a multi-disciplinary approach.	The increasing frequency of several waterbird diseases, many of which are zoonotic, has highlighted the important need for more systematic disease surveillance at national and international scales. Current concerns regarding avian influenza have focussed attention on how best to make this happen.	Section 4.2. Disease emergence and impacts in migratory waterbirds. Pp. 410-446. web: http://www.jncc.gov.uk/page-3895 (Section 4.2)
• An integrated approach to the monitoring of waterbirds gives cost-effective identification of the reasons for waterbird population changes. There are good examples of the collection of demographic information and its integration with census data. Further such national and especially international schemes should be strongly encouraged and funded.	There is huge value in long-term integrated monitoring in identifying population trends (declines) and understanding their root courses. The linkage of population counts with other assessments to understand waterbird population dynamics is especially important. This information allows understand the nature of the factors controlling population sizes, and thus allows conservation agencies to cost-effectively target conservation responses. If we wish to understand how populations change it is essential to have long term datasets that sample different populations of each species (comparative approaches allow possible detection of reasons for changes observed between different geographical areas).	Section 4.3. Flyway monitoring – rising to the challenge. Pp. 447-504. web: http://www.jncc.gov.uk/page-3895 (Section 4.3) Lank, D.B. & Nebel, S. (2006). Cross-cutting research on a flyway scale – beyond monitoring. Pp. 107-112. web: http://www.jncc.gov.uk/page-3893 (Section 2.8)

• Systematic analyses for atlases confirm the value of ringing studies in assessing the conservation status of breeding, wintering and stop-over sites within flyways. To this end, there should be integration of data from conventional ringing and colour-marking, telemetry, stable isotope analyses and genetic markers.	Systematic analyses for atlases confirm the value of ringing studies in assessing the conservation status of breeding, wintering and stop-over sites within the context of whole flyways. Most analyses for the atlases published so far are based on recoveries of metal rings. We need better integration with such data, of other data from colour-ringing and similar individual marking, telemetry, stable isotope analyses and genetic markers. Whilst a number of migration atlases have been published, most only cover a subset of bird species, and almost all produced to date are based on ringing and recovery data from single countries. There is a strong need for atlases using data from all countries, within a continent or sub-continent, in a flyway, or best of all, based on the biology of the birds.	Section 4.5. Migration and flyway atlases. Pp. 568-599. web: http://www.jncc.gov.uk/page-3895 (Section 4.5)

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