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Review of Criteria for the Identification of Internationally Important Breeding Sites Critical for Species Listed in Annex 1 of The Agreement on the Conservation of Albatrosses and Petrels

REVIEW OF CRITERIA FOR THE IDENTIFICATION OF INTERNATIONALLY IMPORTANT BREEDING SITES CRITICAL FOR SPECIES LISTED IN ANNEX 1 OF THE AGREEMENT ON THE CONSERVATION OF ALBATROSSES AND PETRELS

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EXECUTIVE SUMMARY

In Resolution 1.5 adopted at the first session of the Meeting of the Parties to the Agreement on the Conservation of Albatrosses and Petrels (ACAP - held in Hobart on 10-12 November, 2004) it was agreed (as Task 7.1 of the Work Programme for the Advisory Committee for 2005-2007) that 'a discussion paper based on a review of existing criteria that may assist in the development of new criteria to identify internationally important breeding sites critical for Annex 1 species' be prepared. This paper addresses this task. It is divided into three main parts.

In the first part of the paper, two major approaches used to identify internationally important bird sites that have been developed over the past two decades under the auspices of the Ramsar Convention and by Birdlife International are outlined.

▪ Ramsar Convention site selection criteria include five that appear relevant to identify internationally important breeding sites (*Ramsar Criteria 2, 3, 4, 5 and 6*).

▪ The ornithological criteria of the Ramsar Convention bear a strong degree of similitude to criteria developed in Birdlife International's Important Bird Area (IBA) Programme - with IBAs conceptualised at the global level (A level criteria), regional or continental levels (B level criteria), sub-regional and/or national levels (C level criteria).

Global IBA categories and criteria of probable relevance to the identification of internationally important breeding sites critical for ACAP Annex 1 species are *IBA Criteria A1, A3, A4i, A4ii* and *A4iii*.

A recent development in the IBA approach that merits noting is the identification of 'outstanding IBAs' - with *IBA Criterion A1 (for Critical, Endangered and Vulnerable bird species)* being a necessary condition for identification.

The second part of the paper lists other internationally important bird breeding site criteria in use under the auspices of the various international agreements and partnership initiatives. This listing shows that Ramsar Convention criteria and Birdlife International's IBA criteria have in part (or in whole) gained widespread acceptance.

The third part of the paper summarises considerations that have recently been discussed in reports, working papers and at workshops concerning the extension of internationally important breeding seabird sites to incorporate both nesting sites and/or offshore and oceanic areas used by breeding birds for feeding.

▪ In respect of criteria developed for the delimitation of boundaries of breeding seabird IBAs at sea, the Royal Society for the Protection of Birds (RSPB) has developed the *radius-based approach* methodology. This approach is summarised and problems that have been raised in connection with it are briefly discussed.

▪ A discussion about extending internationally important seabird breeding sites offshore took place at the Global Procellariiform Tracking Workshop held in South Africa in 2003. It was noted at this Workshop that existing global IBA criteria could be adapted and applied in the marine environment to identify IBAs for albatrosses and giant-petrels with IBA criteria of probable relevance to the marine environment being *IBA Criteria A1, A3, A4i, A4ii* and *A4iii*. It was also concluded that, for albatrosses, IBAs are likely to be of three types: congregations of breeders around islands, congregations of breeders in oceanic areas and congregations of non-breeders.

▪ The first of these types, congregations of breeders around islands, is discussed in terms of the *radius-based approach* to seaward extensions of breeding colony IBAs. In regard to congregations of breeders in oceanic areas, the *Marine Classification Criterion (MCC) approach* used in several Birdlife International studies of waterbird concentrations in the North Sea and the Baltic Sea could be relevant. Birdlife International also notes that methodology to identify marine IBAs that provide rich feeding for pelagic species is currently under further development both within Europe (notably in Spain and the UK by the Sociedad Española de Ornitologia and RSPB, respectively) and beyond Europe by the Partnership of Birdlife International.

The conclusion of the review notes that Ramsar criteria and Birdlife International's IBA categories and criteria for the identification of internationally important bird sites have in whole or in part (with modification) gained widespread acceptance. This is demonstrated by their adoption in numerous international instruments and initiatives. Both sets of criteria display a high degree of similitude and *IBA Criteria A1, A3, A4i, A4ii* and *A4iii* are of probable relevance to the identification of internationally important breeding sites critical for ACAP Annex 1 species. The *radius-based approach* for defining boundaries of feeding areas around or adjacent to seabird colonies offers a potentially useful methodology for the seaward extension of breeding sites to incorporate offshore areas used in particular for feeding, resting and social interactions. In regard to congregations of breeding birds in oceanic areas particularly used for feeding, the *MCC approach* may be useful, although it has been noted that there are drawbacks with it in relation to its application for pelagically distributed seabirds (such as those species listed in Annex1).

In light of these conclusions, it is recommended that the Advisory Committee develop criteria and guidelines to identify internationally important breeding sites critical for Annex 1 species based on the IBA global level criteria (especially *A1, A3, A4i, A4ii* and *A4iii*) because of their applicability and widespread acceptance in other international instruments and initiatives – both markers of international legitimacy. Further work needs to be undertaken in regard to sites holding congregations of breeders in offshore and oceanic areas. Use of the 'outstanding internationally important site' appellation for the identification of globally threatened species' breeding sites, through the application of a criterion based on *IBA Criterion A1* as a necessary condition for site identification, merits consideration, too.

REVIEW OF CRITERIA FOR THE IDENTIFICATION OF INTERNATIONALLY IMPORTANT BREEDING SITES CRITICAL FOR SPECIES LISTED IN ANNEX 1 OF THE AGREEMENT ON THE CONSERVATION OF ALBATROSSES AND PETRELS

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INTRODUCTION

In Resolution 1.5 adopted at the first session of the Meeting of the Parties to the Agreement on the Conservation of Albatrosses and Petrels (ACAP - held in Hobart on 10-12 November, 2004) it was agreed (as Task 7.1 of the Work Programme for the Advisory Committee for 2005-2007) that 'a discussion paper based on a review of existing criteria that may assist in the development of new criteria to identify internationally important breeding sites critical for Annex 1 species' be prepared. This paper addresses this task. It is divided into three main parts. In the first, two major approaches to the identification of internationally important sites that have been developed over the past two decades – under the Ramsar Convention and in Birdlife International's Important Bird Area (IBA) Programme – are outlined. This lays the foundation for the second part of the paper that lists other internationally important bird site criteria relevant to the identification of breeding sites in use under the auspices of international agreements and partnership initiatives involving international organizations, governments and non-governmental organizations. The third part summarises considerations that have recently been discussed in reports, working papers and at workshops concerning the extension of internationally important breeding seabird sites to incorporate both nesting sites and/or offshore and oceanic areas used by breeding birds for feeding.

Before moving onto the first part of the paper, it is necessary to define, briefly, two of the terms used in the description of Task 7.1 of the Work Programme for the Advisory Committee for 2005-2007 - 'breeding sites' and 'Annex 1 species.' The first, 'breeding sites,' is generally taken to mean those areas where bird species' nests are located. Breeding albatross and petrel species that generally nest in island and coastal areas, also use offshore and oceanic areas to forage for food. Until recently, however, little attention has been paid to the identification of offshore areas important for marine bird species such as the foraging areas of breeding seabirds. Part of the reason for this lack of attention has been due to the longstanding belief that such areas (beyond the limits of the territorial sea more than 12 nautical miles from the coastline) could not be afforded legal protection (a desired outcome that could follow site identification). This situation has now changed with many governments addressing ideas of marine protected areas within, for example, their Exclusive Economic Zones (EEZs) and, as a consequence, this has led to the recognition that important breeding seabird sites need to be extended to incorporate offshore and oceanic areas where these birds forage for food.

The term 'Annex I species" refers to albatross and petrel species listed in Annex 1 of the Agreement. The purpose of Annex 1 is to indicate the particular species of albatrosses and petrels to which the Agreement applies.

MAJOR APPROACHES TO THE IDENTIFICATION OF INTERNATIONALLY IMPORTANT BIRD SITES
Two major approaches used to identify internationally important bird sites have been developed under the auspices of the Ramsar Convention and by Birdlife International.

The **Ramsar Convention** (formally the Convention on Wetlands of International Importance especially as Waterfowl Habitat) was opened for signature in 1971 and entered into force in 1975. Currently, the Ramsar Convention has 146 parties. Article 2.4 of this Convention provides for parties to designate at least one site as a wetland of international importance and, thereafter, as prescribed in Article 2.1, each party 'shall designate suitable wetlands within its territory for inclusion in the List of Wetlands of International Importance' (Ramsar Convention Secretariat 2005). Over the past two decades, specific criteria have been developed for site selection and, currently, 1458 sites have been included in this List.

In 1999, the most recent version of these criteria (set out in the *Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance of the Convention on Wetlands*) was adopted at the 7th Meeting of the Conference of the Contracting Parties (Ramsar Convention Secretariat 2005). Five of the criteria for identifying sites outlined in this document appear relevant to identify internationally important bird breeding sites – recognising, of course, that the Ramsar Convention applies especially to the wetland habitats of waterbirds:[1]

- *Ramsar Criterion 2* specifies that a wetland should be considered internationally important if it supports globally vulnerable, endangered, or critically endangered species (at any stage of their life cycle) or threatened ecological communities;
- *Ramsar Criterion 3* specifies that a wetland should be considered internationally important if it supports populations of plant and/or animal species important for maintaining the biological diversity of a particular region;
- *Ramsar Criterion 4* specifies that a wetland should be considered internationally important if it supports plant and/or animal species at a critical stage of their life cycles, or provides refuge during adverse conditions;

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[1] Under the Ramsar Convention 'wetlands' are defined as '. . . areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six metres' (Article 1.1); and which ". . . may incorporate riparian and coastal zones adjacent to the wetlands, and islands or bodies of marine water deeper than six metres at low tide lying within the wetlands' (Article 2.1). The *Strategic Framework and guidelines* document defines 'waterbirds' (a term it considers synonymously with 'waterfowl,' which was used in the Ramsar Convention) as 'birds ecologically dependent on wetlands' (Article 1.2). At the level of taxonomic order, it includes especially: penguins (*Sphenisciformes*), divers (*Gaviiformes*), grebes (*Podicipediformes*), wetland related pelicans, cormorants, darters and allies (*Pelecaniformes*), herons, bitterns, storks, ibises and spoonbills (*Ciconiiformes*), flamingos (*Pheonicipteriformes*), screamers, swans, geese and ducks (wildfowl) (*Anseriformes*), wetland related raptors (*Accipitriformes* and *Falconiformes*), wetland related cranes, rails and allies (*Gruiformes*), Hoatzin (*Opisthocomiformes*), wetland related jacanas, waders (or shorebirds), gulls, skimmers and terns (*Charadriiformes*), coucals (*Cuculiformes*) and wetland related owls (*Strigiformes*).

- *Ramsar Criterion 5* specifies that a wetland should be considered internationally important if it regularly supports 20,000 or more waterbirds; and
- *Ramsar Criterion 6* specifies that a wetland should be considered internationally important if it regularly supports 1% of the individuals in a population of one species or subspecies of waterbird (Ramsar Convention website).[2]

It is important to note that the *Strategic Framework and guidelines* document urges Ramsar Convention parties to consider all of the Criteria fully and systematically in the identification of their priority candidate sites that qualify for designation. The document also cautions that parties should be aware that Ramsar site designation does not, in itself, confer legal protected area status on a site. What a Ramsar designation can do, however, is to confer a special type of recognition on a site – as a site recognised as internationally important that could be a starting point for a process of recovery, rehabilitation or national legal protection. Of course, if a site already has national protected status, Ramsar designation supplements and strengthens such status (Ramsar Convention Secretariat 2005).

The ornithological criteria of the Ramsar Convention listed above bear a strong degree of similitude to criteria developed in **Birdlife International's Important Bird Area (IBA) Programme.** Originally developed and applied in Europe during the 1980s in response to the need to identify sites eligible for designation under the requirements of the European Economic Community's Directive on the conservation of wild birds (1979 – also known as the Birds Directive), the IBA Programme was extended first to the Middle East (Evans 1994) and, then, further developed for application world wide (Fishpool *et al.* 1998, Heath and Evans 2000, Bennun and Fishpool 2000, Fishpool and Evans 2001).

Derived from internationally recognized sources of bird population data, IBAs have been conceptualised at various levels – global (A level criteria), regional or continental (B level criteria), sub-regional and /or national (C level criteria) – using appropriately standardised categories and selection criteria. This allows the "nesting" of lower level categories and criteria within higher ones that, in turn, allows meaningful comparisons to me made between sites across regions of the world (Fishpool and Evans 2001).

In the recently published *Important Bird Areas in Africa and associated islands: priorities for conservation* (Fishpool and Evans 2001), internationally Important Bird Areas of global significance (level A) are identified, based on the presence of at least one of the following:

A1. bird species of global concern;
A2. assemblages of restricted-range bird species;
A3. assemblages of biome-restricted bird species; and
A4. congregations of numbers of congregatory bird species

Site selection criteria derived from these categories are defined in the following ways:

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[2] See Appendix 1 of this discussion paper for definitions of selected key terms used in these Ramsar criteria, Birdlife International criteria for the identification of African IBAs and other existing criteria.

- A1 sites are defined as holding significant numbers of globally threatened species, or other species of global conservation concern (*IBA Criterion A1*);
- A2 sites are known or thought to hold a significant component of a restricted-range species (*IBA Criterion A2*);
- A3 sites are known or thought to hold a significant component of the group of species whose distributions are largely or wholly confined to one biome (*IBA Criterion A3*);
- A4i sites are known or thought to hold, on a regular basis, 1% or more of a biogeographic population of a congregatory waterbird species (*IBA Criterion A4i*);
- A4ii sites are known or thought to hold on a regular basis, 1% or more of the global population of a congregatory seabird or terrestrial species (*IBA Criterion A4ii*);
- A4iii sites are known or thought to hold, on a regular basis, at least 20,000 waterbirds, or at least 10,000 pairs of seabirds, of one or more species (*IBA Criterion A4iii*);
- A4iv sites are known or thought to be a bottleneck site where migratory species pass regularly during migration in numbers exceeding set thresholds (*IBA Criterion A4iv*).

In the construction of the African inventory of IBAs, terms such as 'hold on a regular basis', 'globally threatened species,' 'significant numbers,' 'waterbird' and 'seabird' are defined in detail. For example, 'hold on a regular basis' includes seasonal presence (such as breeding season); 'globally threatened' includes species classified as Critical, Endangered and Vulnerable, according to internationally recognized IUCN criteria (Fishpool and Evans 2001 – see Appendix 1 of this discussion paper for further detailed definitions of such terms used as guidelines for the identification of African IBAs).

It is important to note that, like the Ramsar Convention approach, the IBA approach does not involve, directly, any notion of area protection. It does, however, provide a means by which to identify and prioritise site networks based upon their bird values (Harris and Woehler 2004). Moreover, like Ramsar site designation, IBA identification potentially supplements and strengthens existing protected areas or provides a starting point for the designation of international and national protected area status.

From this summary of the IBA approach, it can be concluded that global IBA categories and criteria of probable relevance to the identification of internationally important breeding sites critical for ACAP Annex 1 species are *IBA Criteria A1, A3, A4i (if Annex 1 species of albatrosses and petrels are defined as waterbirds), A4ii* and *A4iii*. It can also be concluded that *IBA Criterion A4iii* is essentially the same as *Ramsar Criterion 5* and that *IBA Criteria A4i* and *A1* are closely related to *Ramsar Criteria 6* and *2,* respectively.

A recent development in the IBA approach that merits noting is the identification of 'outstanding IBAs'. In 2003, Birdlife International published *Saving Asia's threatened birds: A guide for government and civil society* (Birdlife International 2003a). Using globally significant IBA criteria, this initiative identified outstanding sites for threatened birds with *IBA Criterion A1 (for Critical, Endangered and Vulnerable bird species)* being a necessary condition for identification. As explained in this guide, preliminary lists of IBAs for each Asian country were used to help identify the most outstanding

sites for threatened birds in each forest, grassland and wetland region, and for seabirds. A total of 311 IBAs were selected, through consultation with regional experts, to ensure that every threatened species is covered by a least one IBA, although it was not possible to select sites for some poorly known birds. In general, the IBAs with the most extensive and highest quality natural habitat were chosen, but in some areas where natural habitats are fragmented it was necessary at times to select several smaller IBAs to provide a minimum level of coverage to the threatened species. In wetland regions, IBAs were chosen which regularly support globally outstanding (breeding, passage or wintering) congregations of threatened waterbirds. This particular appellation of 'outstanding IBA' may have relevance for the identification of internationally importance breeding sites holding such globally threatened albatross and petrel species.

SITE SELECTION CRITERIA ADOPTED IN OTHER INTERNATIONAL INSTRUMENTS AND INITIATIVES

Apart from the Ramsar criteria and Birdlife International's IBA criteria (as used in the African IBA Programme), the question arises: what criteria have been adopted to identify internationally important breeding sites under the auspices of other international agreements and partnership initiatives? The following list canvasses the sorts of criteria currently in use.

The **Agreement on the Conservation of African-Eurasian Waterbirds (AEWA)** was concluded in 1995 and entered into force on November 1, 1999. The AEWA covers 235 species of birds ecologically dependent on wetlands for at least part of their annual cycle. The Agreement covers 117 countries from Europe, parts of Asia, Canada, the Middle East and Africa and currently has 49 parties (African-Eurasian Waterbird Agreement 2005a).

Article III2(c) of AEWA provides for parties to identify sites and habitats for migratory waterbirds occurring within their territory and encourages the protection, management, rehabilitation and restoration of these sites, in liaison with bodies listed in Article IX concerned with habitat conservation (such as the secretariat of the Ramsar Convention). In *AEWA Annex 3 - Action Plan (2003-2005),* adopted at the Second session of the Meeting of the Parties in 2002, it was agreed that parties 'shall endeavour, as a matter of priority to identify all sites of international and national importance for populations [of waterbirds] listed in Table 1' (African-Eurasian Waterbird Agreement 2005b). Also at this Meeting, *AEWA Conservation Guidelines* were adopted with Guideline No. 3 on the preparation of site inventories for migratory waterbirds stating that, in the context of AEWA, a site should be considered to be a key site for migratory waterbirds if:
- it harbours one or more of the globally threatened species listed in Annex 2 of the Agreement; and
- it meets the numerical Ramsar criteria, in particular the 1% threshold (*Ramsar Criterion 6),* for one or more of the species listed in Annex 2 to the Agreement.

In addition, it is stated in these guidelines that *Ramsar Criteria 2, 3, 4* and *5* apply to wetland biodiversity and are applicable to waterbirds in certain circumstances (African-Eurasian Migratory Waterbirds 2005b).

The **North American Waterbird Conservation Plan: Version 1** advocates the designation of global, continental, national and state/provincial IBAs using globally significant criteria developed by Birdlife International (*A1, A2, A3, A4i, A4ii* and *A4iii*)

– with sub-global criteria to be structured by partner organizations in ways appropriate for the particular planning region (Kushlan, J.A. *et al.* 2002).

The **Audubon Society** in the United States has an IBA programme advocating categories the same as Birdlife International's approach with different thresholds in regard to the global level criteria:
- *IBA Criterion A4i* - more than 1% biogeographic population of a waterbird simultaneously and more than 5% over a season; and
- *IBA Criterion A4ii* - more than 1% global population of a seabird or terrestrial species simultaneously and more than 5% over a season.

In addition, in regard to continental level criteria:
- *IBA Criterion B4i* - more than 1% of a flyway/subspecies population of a waterbird simultaneously and more than 5% over a season; and
- *IBA Criterion B4ii* - more than 1% biogeographic (N.Am) population of a seabird or terrestrial species simultaneously and more than 5% over a season (Audubon 2005).

The **Antarctic IBA Inventory** is a joint initiative of Birdlife International and the Scientific Committee on Antarctic Research (SCAR) Group of Experts on Birds (GEB: formerly the SCAR Bird Biology Subcommittee SCAR-BBS). Established in 2002, this group used Birdlife International's globally significant IBA approach and, through the application of *IBA Criteria A1, A4i, A4ii* and *A4iii*, identified 119 candidate IBAs – 97 of which are not currently protected as Antarctic Specially Protected Areas (ASPAs) under the Terms of the Protocol on Environmental Protection to the Antarctic Treaty (Harris and Woehler 2004).

The Circumpolar Protection Area Network (CPAN) was established in 1996 under the **Conservation of Arctic Flora and Fauna (CAFF) Program** involving eight Arctic countries. Criteria used for selecting and designating Arctic sites for bird conservation are:
- Sites important as congregating, breeding and feeding grounds, paying particular attention to those species used by local indigenous populations for subsistence;
- Sites important internationally for Arctic fauna with emphasis, at the outset, on sites important for shared populations;
- Sites significant as breeding, staging, moulting, and/or feeding grounds for waterfowl based on the *Ramsar Criteria* and the Birdlife International *IBA Criteria*;
- Sites important as seabird colonies and feeding grounds with emphasis on sites of circumpolar significance;
- Sites important for rare, vulnerable or endangered fauna or Species of Common Conservation Concern listed by CAFF (Conservation of Arctic Flora and Fauna Program 2005).

Three Action Plans have recently been developed under the **Asia Pacific Waterbird Conservation Strategy**: for Anatidae in the East Asian Flyway; for cranes in the North East Asian Flyway; and for shorebirds in the East Asia-Australasian Flyway. A key element of these Plans has been the establishment of networks of sites that are designated as internationally important for migratory waterbirds. This network concept is based on the Western Hemisphere Shorebird Reserve Network that operates in the Americas. To date, 84 sites have been designated in the three networks (37 for

shorebirds, 20 for cranes, and 27 for Anatidae). 48 of these sites (i.e. 56%) are also listed as Ramsar sites and 13 countries are directly involved in the networks (Wetlands International 2005).

The **East Asian Flyway Anatidae Site Network** (coordinated by Wetlands International - Japan) and the **East Asia-Australasian Shorebird Site Network** (coordinated by Wetlands International – Oceania) apply *Ramsar Criteria 2, 5* and *6* for selection of sites of international importance (Japanese Association for Wild Geese Protection 2005, Wetlands International – Oceania 2003).

The **North East Asian Crane Site Network** (coordinated by Wetlands International – Japan) applies *Ramsar Criterion 6* (the 1% criterion closely related to global *IBA Criterion A4i*). It is acknowledged, however, that the application of the 1% criterion is easier to apply to wintering grounds, but difficult to apply to breeding populations of non-colonial cranes. Accordingly, key sites known to be important for breeding are identified even if the number of nesting birds does not meet the 1% threshold. It is also acknowledged that data deficiencies may mean that a 5-year mean of individuals at a site that is used to define whether a site 'regularly holds' 1% of the relevant population has to be relaxed to cover 'occasionally supports 1% of the population' at least once in the preceding ten years (Wetlands International – Japan 1999).

In Europe, perhaps the most significant development in bird conservation over the past 25 years has been the European Economic Community's **Birds Directive**. This came into force in April, 1979. Protected sites classified in accordance with Article 4 of the Birds Directive are designated Special Protection Areas (SPAs). The Birds Directive does not, however, provide formal criteria for selecting SPAs. In the UK, the **Joint Nature Conservation Committee (JNCC)** developed SPA Selection Guidelines in two stages for use in that country (Joint Nature Conservation Committee 2005a):

Stage 1 (to identify areas which are likely to qualify for SPA status) has four site criteria:
1. An area is used regularly by 1% or more of the Great Britain (or in Northern Ireland, the all-Ireland) population of a species listed in Annex 1 of the Birds Directive in any season.
2. An area is used regularly by 1% or more of the biogeographical population of a regularly occurring migratory species (other than those listed in Annex 1) in any season.
3. An area is used regularly by over 20,000 waterfowl (as defined by the Ramsar Convention) or 20,000 seabirds in any season.
4. An area which meets the requirements of one or more of the Stage 2 guidelines in any season, where the application of Stage 1 guidelines 1, 2, or 3 for a species does not identify an adequate suite of most suitable sites for the conservation of that species (Joint Nature Conservation Committee 2005b).

Stage 2 (to select the most suitable areas in number and size for SPA classification) has seven site criteria:
1. Population size and density – areas holding or supporting more birds than others and/or holding or supporting birds at higher concentration are favoured for selection.

2. Species range – areas selected for a given species provide as wide a geographic coverage across the species' range as possible.
3. Breeding success – areas of higher breeding success than others are favoured for selection.
4. History of occupancy – areas known to have a longer history of occupancy or use by the relevant species are favoured for selection.
5. Multi-species areas – areas holding or supporting the larger number of qualifying species under Article 4 of the Directive are favoured for selection;
6. Naturalness – areas comprising natural or semi-natural habitats are favoured for selection over those which do not.
7. Severe weather refuges – areas used at least once a decade by significant proportions of the biogeographical population of a species in periods of severe weather in any season, and which are vital for the survival of a viable population, are favoured for selection (Joint Nature Conservation Committee 2005c).

In regard to internationally important assemblages of breeding seabirds in the UK, 41 SPAs have been selected under Stage 1.3. Each of these sites holds more than 10,000 pairs of seabirds (i.e. more than 20,000 individuals) and in order to identify the important components of these assemblages, all species occurring at levels more than 1% of national populations (or where there are more than 2,000 individuals present) have also been identified (Joint Nature Conservation Committee 2005d). It can also be noted that UK's SPA criteria are closely related to *IBA Criteria C4i, C4ii and C4iii* (with the "C" designation referring to national level sites).

From this brief, but by no means exhaustive, list of criteria used or advocated in various international instruments and initiatives, it is clear that Ramsar criteria and Birdlife International's IBA categories and criteria have in part (or in whole) gained widespread acceptance. But what of other recent developments? Of note in regard to this question are a number of reports, working papers and workshops concerned with the extension of sites (both SPAs, identified under the terms of the Birds Directive, and IBAs) to incorporate the marine environment covering, especially, breeding seabird feeding areas. It is to this development that attention is now turned.

DEFINING INTERNATIONALLY IMPORTANT SITES IN OFFSHORE AND OCEANIC AREAS USED BY BREEDING SEABIRDS FOR FEEDING
In 1999, the UK High Court judged that the European Economic Community's Council Directive 92/43/EEC on the conservation of natural habitats of wild fauna and flora (1994 – known as the Habitats Directive) applied in UK waters beyond the 12 nautical mile limit of territorial waters up to the 200 mile limit of its EEZ. This decision supported the European Commission's earlier view that the Habitats Directive, as well as the Birds Directive, applies to member states' EEZs (Communication from the Commission to the Council and the European Parliament 1999). As a consequence of these developments, the UK government indicated it would amend existing regulations concerning the Habitats Directive and the Birds Directive and introduce new regulations to extend both directives into UK law in relevant offshore waters. To accomplish this task, it has become necessary, therefore, to redefine SPA selection criteria and guidelines to extend into the marine, offshore area beyond the territorial sea over waters the UK exercises sovereign rights of exploration and exploitation, conservation and

management of natural resources. (Huggett 2001, Johnston *et al.* 2002, Birdlife International 2003b)

Reports and position papers have been penned and workshops convened to address this task – instigated and/or supported by the European Union (EU), the UK and other EU member governments, Birdlife's European Partnership and others. For example, in respect of criteria developed for the delimitation of boundaries of breeding seabird SPAs or IBAs at sea, the **Royal Society for the Protection of Birds (RSPB)** has developed the *radius-based approach* methodology for defining boundaries of feeding areas around seabird colonies (RSPB 2000, see also Huggett 2001, Johnston *et al.* 2002, Birdlife International 2003b):

- The boundary at sea should be drawn as a radius from points at the margins of the colonies and parallel to the shoreline where the colony extends along a stretch of coast;
- The distance to the seaward boundary should be determined on the basis of information on foraging range, feeding and surface use of breeding seabirds;
- The distance to the seaward boundary should be species-specific and refer to those breeding species at the site which fulfil IBA criteria;
- When there is more than one breeding IBA species using the site, the highest recommended figure should be used to set the distance to the seaward boundary;
- Known and regularly used feeding areas adjacent to a recommended boundary should be incorporated within the site
- Where known and regularly used feeding areas do not lie adjacent to recommended boundaries, these locations should be considered as sites in their own right;
- Where the recommended seaward boundaries of sites overlap they should be merged to form a single site for management purposes.

A problem with this approach that has been raised in the UK is that data to determine reliable foraging radii is limited. To overcome this situation, Huggett (2001) suggests that an alternative approach is to define generic, precautionary radii for each species based on their known foraging ranges and then apply these to each of their colony IBAs. He maintains that the advantages of this generic-radii approach are that it does not require a detailed assessment of sea use or colony-specific foraging ranges and that it is relatively robust to variations in marine distribution among colonies and across years.

Huggett (2001) also acknowledges that the drawback of the *radius-based approach* is that it will often incorporate sea areas that seabirds seldom use and, if subsequently protected as SPAs, can impose unnecessary constraints on human use within such areas. A Scottish Natural Heritage Report also criticises the generic foraging radius-based approach noting that feeding locations for birds from a particular breeding colony appear to be specific to that colony, rather than determined by a generic foraging distance for each species (Harding and Riley 2000).

Another discussion about extending internationally important seabird breeding sites offshore took place at the **Global Procellariiform Tracking Workshop** held in South Africa in 2003. The rapporteur for this part of the Workshop's proceedings (Dr Lincoln Fishpool) notes that existing global IBA criteria could be adapted and applied in the marine environment to identify IBAs for albatrosses and giant-petrels with IBA criteria

of probable relevance to the marine environment being *IBA Criteria A1, A3, A4i, A4ii* and *A4iii* (Birdlife International 2004).

Discussion at the workshop about seaward extension to breeding colonies suggested that extensions of 200 nautical miles (the limit of EEZs) would cover the breeding populations of a significant number (perhaps two-thirds) of albatross species. It was noted, however, that this approach is unlikely to be adequate for breeding species with long incubation stints and which forage beyond continental shelves and shelf breaks. Moreover, it was asserted that inclusion of the whole EEZ of some countries, particularly geographically large ones, as marine IBAs is unrealistic and a narrower focus is likely to be more appropriate. In addition, it was agreed that future work is needed to assess for each species what proportion of time they spend within EEZs and to undertake sensitivity analyses to explore the consequences of using different radii around colonies. These analyses should also take into account the conservation status of the species concerned.

Finally, it was concluded at the Workshop that, for albatrosses, IBAs are likely to be of three types: congregations of breeders around islands, congregations of breeders in oceanic areas and congregations of non-breeders and that if marine IBAs could be identified for albatrosses, it ought to be possible to identify sites for other birds (Birdlife International 2004).

The first of these types, congregations of breeders around islands, has been discussed in terms of the *radius-based approach* to seaward extensions of breeding colony IBAs (see discussion above). In regard to congregations of breeders in oceanic areas, the *Marine Classification Criterion (MCC) approach* used in several **Birdlife International** studies of waterbird concentrations in the North Sea and the Baltic Sea could be relevant (Birdlife International 2003b). This approach is dependent on having sufficiently large amounts of quantitative data available on bird distribution in marine areas and uses the 1% threshold of *Ramsar Criterion 6* (which is closely related to *IBA Criteria A4i and A4ii*). It requires the quantification of three parameters (Skov *et al.* 2000):
- Parameter A - the size of the area based on the borders of a high-density aggregation of a waterbird or seabird species;
- Parameter B – the proportion of the total biogeographical or flyway population estimated to occur within the borders of the aggregation; and
- Parameter C – the degree of concentration displayed by the aggregation.

Important aggregations contain over 1% of the total biogeographical or flyway population of the species in question and the degree of concentration is regarded as important where 1% or more of a population is concentrated in an area of no more than 3000 km^2. In addition, the application of the *MCC approach* requires the precise delineation of the borders of the aggregations by the use of standard Geographical Information System (GIS) techniques (Birdlife International 2003b). This is, however, recognised as a potential problem with the *MCC approach* if applied to oceanic areas (Johnston *et al.* 2002, Birdlife International 2003b) as, too, is the requirement to meet the 1% threshold if applied to many thinly dispersed and wide ranging species such as albatrosses and petrels (Stroud *et al.* 2001, Johnston et al). Birdlife International acknowledge these and other drawbacks with the *MCC approach* related to its application for pelagically distributed seabirds (i.e. those species that only approach land in order to breed) including, for example, its "data hungry", complex nature, the

implementation of which requires the interpolation of census data and the necessity of GIS software (Birdlife International 2003b).

Notwithstanding these points, Johnston et al. (2002) report that the *MCC approach* is being used as part of a JNCC Marine SPA Project to investigate small-scale (i.e. hundreds of metres) aggregations of active breeding birds around colonies; moreover Birdlife International (2003b) note that methodology to identify marine IBAs that provide rich feeding for pelagic species is currently under further development both within Europe (notably in Spain and the UK by the Sociedad Española de Ornitologia and RSPB, respectively) and beyond Europe by the Partnership of Birdlife International (Birdlife International 2003b).

CONCLUSION

The conclusion of this review can be brief. To reiterate a point made earlier, Ramsar criteria and Birdlife International's IBA categories and criteria for the identification of internationally important bird sites have in whole or in part (with modification) gained widespread acceptance. This is demonstrated by their adoption in numerous international instruments and initiatives. Both sets of criteria display a high degree of similitude and *IBA Criteria A1, A3, A4i, A4ii* and *A4iii* are of probable relevance to the identification of internationally important breeding sites critical for ACAP Annex 1 species. The *radius-based approach* for defining boundaries of feeding areas around or adjacent to seabird colonies offers a potentially useful methodology for the seaward extension of breeding sites to incorporate offshore areas used in particular for feeding, resting and social interactions. In regard to congregations of breeding birds in oceanic areas particularly used for feeding, the *MCC approach* may be useful although it must be recognized that Birdlife International and others list numerous drawbacks with it in relation to its application for pelagically distributed seabirds (such as those species listed in Annex1).

In light of these conclusions, it is recommended that the Advisory Committee develop criteria and guidelines to identify internationally important breeding sites critical for Annex 1 species based on the IBA global level categories and criteria (especially *A1, A3, A4i, A4ii* and *A4iii*) because of their applicability and widespread acceptance in other international instruments and initiatives – both markers of international legitimacy. Further work needs to be undertaken in regard to sites holding congregations of breeders in offshore and oceanic areas. Use of the 'outstanding internationally important site' appellation for the identification of globally threatened species' breeding sites, through the application of a criterion based on *IBA Criterion A1* as a necessary condition for site identification, merits consideration, too.

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APPENDIX 1

DEFINITIONS OF KEY TERMS USED IN EXISTING CRITERIA

As stated in the introduction of this discussion paper, in Resolution 1.5 adopted at the first session of the Meeting of the Parties to ACAP it was agreed (as Task 7.1 of the Work Programme for the Advisory Committee for 2005-2007) that a discussion paper be prepared reviewing existing criteria that may assist in the development of new criteria to identify internationally important breeding sites critical for Annex 1 species.

There are numerous terms with various meanings used in the documentation on criteria used for the identification of internationally important breeding sites. In this appendix the definitions and meanings of selected key terms are discussed.

INTERNATIONALLY IMPORTANT
A key term in Task 7.1 is 'internationally important' – the meaning of which is not made altogether clear in the existing documentation on criteria used for the identification of such breeding sites.

The **Ramsar Convention's** *Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance of the Convention on Wetlands* provides a definition of 'importance' but not one of the term 'internationally important.' 'Importance' is defined in this document (relating to the long-term target of *Ramsar Criterion 2*) as 'sites, the protection of which will enhance the local and thus global long-term viability of species or ecological communities.' (Ramsar Convention Secretariat 2005).

Outlining **Birdlife International's IBA approach**, Fishpool and Evans (2001) state that the selection of IBAs is achieved though the application of ornithological criteria that is grounded as far as possible in accurate, up-to-date knowledge of species' distributions and the sizes and trends of bird populations. They go on to say that '[t]he criteria by which sites are selected as IBAs ensure that the sites are of true significance for the international conservation of bird populations, and provide a common currency to which all IBAs adhere, thus creating consistency among, and enabling comparability between, sites at national, continental and global levels.' A site's international significance is determined 'in terms of the presence and abundance of species that occur at it in different seasons.' In addition, other aspects of these species also need to be taken into account including their threat and breeding status, range size, the composition of the species assemblages, vulnerability through congregation and the proportion of the total population of each species that occurs at a site. They conclude that all of these are important factors in determining a site's importance.

Both the Ramsar Convention approach and the IBA approach appear to be centred on the global/international significance/importance of the species that inhabit the sites. But it is not made clear what makes a species and a site '*internationally* important.' There are, however, a number of possible answers to this question. For example, the term could be used to label sites that have been so identified by meeting specified criteria

constructed and/or adopted by two of more states. Such sites are 'internationally important' because the states specify the selection criteria (and, perhaps, subsequently designate the sites as internationally important after they have been nominated) in a *decision-making process* that is international in nature (typically in formal meetings of parties to an international agreement). This meaning adopts the state-centric approach that uses the term 'international' to refer only to relations between the governments of nation-states (i.e. states) – conceived as the dominant actors in international affairs. The Ramsar Convention's appellation of the wetland sites identified and designated as internationally important appears to fit this meaning.

The term could also be used to label such sites *on the basis of criteria that are constructed and/or widely used and accepted by recognised international expert bodies (such as Birdlife International or IUCN) and individuals from various countries.* This meaning eschews the state-centric approach in favour of a wider conception that uses the term 'international' to refer to relations between actors (both state and/or non-state) located in various countries.

The point that can be drawn from this brief discussion is that when developing criteria for the identification of internationally important sites, consideration needs to be taken concerning, and explicitly expressing, what makes the sites 'internationally important.'

REGULARLY HOLDS/SUPPORTS
In the **Ramsar Convention's** *Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance of the Convention on Wetlands*, the term 'regularly supports' (used in *Ramsar Criteria 5* and *6*) is defined to mean a population of a given size if:

> (i)   the requisite number of birds is known to have occurred in two thirds of the seasons for which adequate data are available, the total number of seasons being not less than three; or
>
> (ii)   the mean of the maxima of those seasons in which the site is internationally important, taken over at least five years, amounts to the required level (means based on three or four years may be quoted in provisional assessments only) (Ramsar Convention Secretariat 2005).

It is also stated that '[i]n establishing long-term 'use' of a site by birds, natural variability in population levels should be considered especially in relation to the ecological needs of the populations present. Thus in some situations . . . the simple arithmetical average number of birds using a site over several years may not adequately reflect the true ecological importance of the site. In these instances, a site may be of crucial importance at certain times ('ecological bottlenecks'), but hold lesser numbers at other times. In such situations, there is a need for interpretation of data from an appropriate time period in order to ensure that the importance of sites is accurately assessed.' The document then goes on to state that '[i]n some instances, however, for species occurring in very remote areas or which are particularly rare, or where there are particular constraints on national capacity to undertake surveys, areas may be considered suitable on the basis of fewer counts. For some countries or sites where there is very little information, single counts can help establish the relative importance of the site for a species' (Ramsar Convention Secretariat 2005).

The term 'regularly' is also specified in **Stage 1 of the Special Protection Area (SPA) Selection Guidelines** developed by the Joint Nature Conservation Committee in the UK and the Ramsar Convention definition outlined above applies when these particular Stage 1 criteria are used (Joint Nature Conservation Committee 2005c).

In **Birdlife International's African project**, 'regularly holds' in regard to Critical or Endangered species, means regular presence, irrespective of its abundance at the site. This is considered sufficient to propose the site as an IBA under IBA Criterion A1 (Fishpool and Evans 2001). These authors go on to state that species in other threat categories have to be known, or thought, to be present in 'significant' numbers for the site to qualify under this criterion (with numerical thresholds specified for particular species). In general, it is also noted that the terms 'regular' and 'significant' in *IBA Criterion A1* exclude instances of vagrancy, marginal occurrence and ancient or historical records. Furthermore, 'regular' includes seasonal presence and presence at longer intervals (Fishpool and Evans 2001).

SUPPORTS
The term 'supports' (used in *Ramsar Criteria 4, 5* and *6*) means
    (i)   that the site provides habitat for . . .

It is also stated that areas that can be shown to be important to a species or an assemblage of species for any period of time are said to support that species. Occupation of an area need not be continuous, but may be dependent on natural phenomena such as flooding or (local) drought conditions (Ramsar Convention Secretariat 2005).

SIGNIFICANT COMPONENT
In **Birdlife International's African project**, the term 'significant component of a group of species' in *IBA Criterion 3* is concerned with ensuring that adequate representation of all constituent species in the network of sites is chosen. The term is '. . . intended to avoid selecting sites solely on the presence of one or a few biome-restricted species that are common, widespread and adaptable within the biome and, therefore, occur at other chosen sites' (Fishpool and Evans 2001). It is noted by the authors that additional sites may be chosen for the presence of one or a few species that would (for reasons, for example, of particular habitat requirements) be otherwise under-represented. It is for this reason, they explain, that the term is not more precisely defined (Fishpool and Evans 2001).