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Overview of IBAs in the Americas

A total of 2345 IBAs are documented in this directory, covering 57 countries or territories in the Americas with a total area of 3,284,602 km², including some 140,000 km² of marine extensions (Table 1, Figure 4, see map after page 457). IBAs in the Americas[1] represent 7.9% of the region's terrestrial area, which is similar to other regions where IBAs have been identified except for Europe which has a smaller percentage (see Table 3 in Methods). However, this percentage could increase to approximately 10% when global IBA identification is completed in the United States, Chile and Guyana. The fact that United States IBAs are incomplete and that Canadian IBAs are generally small[2] is reflected in an IBA coverage of just 2.5% of North America's terrestrial area. In contrast, IBA coverage of Central America, the Caribbean and South America is around 15% of each region (Table 1). IBA coverage of national land area varies from less than 1% on some Caribbean islands to 100% of the island of Navassa. Twelve countries have more than 30% of their area covered by the IBA network (Table 1).

Just over half the IBAs identified in the Americas are located in South America, reflecting the high number of IBA trigger species present in the region. In fact, 72% of the region's trigger species occur in South America, although their occurrence is not exclusive to this region (Figure 1). North America has the second highest number of IBAs in the region at 544. South America also has the largest total IBA area (63% of the hemispheric total) while the Caribbean only contributes

Table 1. Numbers of IBAs and trigger species per country and region in the Americas[3]

Region	Country/Territory	No. of IBAs	Country land area (km²)	Total IBA area (km²)	% country/territory land area covered by IBA network[4]	% marine area of IBAs	No. of A1 IBAs	No. of A1 species in IBAs[5]
North America	Canada	325	9,984,670	303,122.41	2.4	21.1	31 (10%)	6 (19%)
	St Pierre and Miquelon (to France)	2	242	40.50	no data	no data	-	-
	United States[7]	217	9,826,630	245,313.71	2.6	no data	150 (69%)	40 (41%)
	Total	**544 (23%)**	**19,811,542 (49%)**	**548,477 (17%)**	**2.5**	**21.1**	**181 (33%)**	**42 (55%)**
Central America	Belize	6	22,965	31,345.82	66.0	50.8	6 (100%)	11 (69%)
	Costa Rica	21	51,100	30,709.76	52.4	12.7	19 (90%)	18 (49%)
	El Salvador	20	21,040	3,164.67	15.2	1.0	2 (10%)	3 (21%)
	Guatemala	21	108,900	51,884.27	47.4	0.0	16 (76%)	12 (40%)
	Honduras[7]	23	112,088	21,602.33	17.9	6.2	22 (96%)	18 (82%)
	Mexico	145	1,972,550	242,234.87	11.7	4.2	123 (85%)	72 (83%)
	Nicaragua	33	130,373	27,107.38	18.9	17.9	21 (64%)	13 (65%)
	Panama	53	75,990	25,010.46	28.8	13.9	38 (72%)	34 (85%)
	Total	**322 (14%)**	**2,495,007 (6%)**	**433,060 (13%)**	**15.8**	**9.1**	**247 (77%)**	**112 (82%)**
Caribbean	Anguilla (to UK)	7	98	52.56	12.8	79.7	-	-
	Antigua and Barbuda	11	441	188.93	12.6	70.8	11 (100%)	4 (100%)
	Aruba (to Netherlands)	4	193	6.12	0.3	91.0	2 (50%)	1 (100%)
	Bahamas	31	13,940	4,571.90	21.3	37.4	20 (65%)	6 (100%)
	Barbados	6	431	0.49	0.2	0.3	-	-
	Bermuda (to UK)	1	53	7.60	1.5	86.4	1 (100%)	1 (100%)
	Bonaire (Netherlands Antilles)	6	288	238.30	52.6	36.9	4 (67%)	2 (100%)
	British Virgin Islands	3	153	53.19	11.1	64.5	-	-
	Cayman Islands (to UK)	10	262	67.10	21.9	0.0	10 (100%)	4 (100%)
	Cuba	28	109,886	23,165.78	14.9	28.4	28 (100%)	24 (92%)
	Curaçao (Netherlands Antilles)	5	444	162.80	24.8	33.3	2 (40%)	1 (100%)
	Dominica	4	754	106.70	13.2	6.5	2 (50%)	3 (100%)
	Dominican Republic	21	48,730	7,212.64	13.0	13.4	20 (95%)	20 (100%)
	Grenada	6	344	21.49	6.0	0.0	5 (83%)	1 (50%)
	Guadeloupe (to France)	6	1,713	499.07	26.4	12.9	2 (33%)	2 (100%)
	Haiti	10	27,750	232.40	0.9	0.0	10 (100%)	18 (100%)
	Jamaica	15	10,829	3,112.84	21.0	25.6	13 (87%)	14 (88%)
	Martinique (to France)	10	1,100	545.12	28.0	42.5	6 (60%)	2 (100%)
	Montserrat (to UK)	3	102	16.45	16.1	0.0	3 (100%)	2 (100%)
	Navassa (to US)	1	5	1,481.00	100.0	99.7	1 (100%)	1 (100%)
	Puerto Rico (to US)	20	8,870	1,971.76	16.2	26.4	14 (70%)	6 (67%)
	Saba (Netherlands Antilles)	1	13	20.00	38.8	74.0	-	-
	St Barthélemy (to France)	2	25	7.30	3.9	86.8	-	-
	St Eustatius (Netherlands Antilles)	2	21	14.86	35.9	43.3	-	-
	St Kitts and Nevis	2	261	62.60	22.3	4.7	-	-
	St Lucia	5	616	178.86	25.3	0.0	5 (100%)	6 (100%)
	St Maarten (Netherlands Antilles)	5	33	8.16	7.2	66.2	1 (20%)	1 (100%)
	St Martin (to France)	3	56	8.88	6.9	56.5	-	-
	St Vincent and the Grenadines	15	389	179.00	34.9	22.4	7 (47%)	2 (67%)
	Trinidad and Tobago	7	5,128	1,061.93	19.3	6.4	3 (43%)	2 (50%)
	Turks and Caicos Islands (to UK)	9	500	1,034.21	60.7	42.1	4 (44%)	1 (33%)
	US Virgin Islands	9	353	62.18	10.1	40.9	2 (22%)	2 (100%)
	Total	**268 (11%)**	**233,781 (1%)**	**46,352 (1%)**	**14.1**	**29.0**	**176 (66%)**	**73 (92%)**
South America	Argentina	266	2,800,000	318,187.41	10.4	0.7	262 (98%)	87 (74%)
	Bolivia	50	1,098,581	228,864.84	21.0	0.0	50 (100%)	64 (85%)
	Brazil	234	8,514,877	937,135.97	11.0	0.7	219 (94%)	196 (91%)
	Chile[7]	114	756,096	46,855.49	6.2	no data	73 (64%)	39 (64%)
	Colombia	116	1,141,748	76,993.02	7.1	47.3	104 (90%)	124 (85%)
	Ecuador	107	256,370	91,435.30	36.4	6.5	99 (93%)	115 (91%)
	Falkland Islands (Malvinas)	22	12,173	769.53	6.3	0.0	22 (100%)	10 (67%)
	French Guiana	12	84,000	26,753.01	31.6	1.2	4 (33%)	4 (67%)
	Guyana[7]	10	216,000	3,666.00	1.7	no data	4 (57%)	4 (33%)
	Paraguay	57	406,752	33,268.74	8.4	0.0	54 (95%)	45 (76%)
	Peru	116	1,285,216	200,220.70	15.3	1.1	108 (93%)	146 (86%)
	Suriname	13	163,270	50,622.70	31.8	8.9	4 (31%)	5 (71%)
	Uruguay	22	176,215	31,523.50	18.0	0.7	21 (95%)	17 (43%)
	Venezuela	72	916,445	210,417.63	24.5	2.0	57 (79%)	47 (84%)
	Total	**1,211 (52%)**	**17,827,743 (44%)**	**2,256,714 (69%)**	**12.6**	**4.4**	**1,081 (89%)**	**522 (94%)**
	Americas total	**2,345**	**40,368,072**	**3,284,602**	**7.9**	**7.1**	**1,685 (72%)[8]**	**701 (94%)**

[1] See Introduction for a definition of the Americas.
[2] IBAs have not been identified for the Boreal Forest, nor is it certain that this approach is suitable for this wilderness area - see p37, 39.
[3] Percentages in brackets in the first three columns refer to percentage of Americas total; in subsequent columns percentages are per country/region. IBAs often qualify under more than one criterion; n/a refers to countries where A2 or A3 criteria were not applied, a dash (-) implies an absence of trigger species.
[4] Country land areas and percentage of IBA coverage of country land area are calculated from GDAM (2009) and Vmap (2005) and may vary slightly with information provided in each country chapter.

1% of total IBA area. However, Caribbean countries also represent just 1% of the hemisphere's land area. In general, the number and area of IBAs increase with increasing country area.

The number of sites currently identified by territory varies from one on Bermuda, Navassa and Saba to 325 in Canada, while the total IBA area per country/territory ranges from 49 ha on Barbados to almost 94 million ha in Brazil (four times the total land area of the Caribbean). Individual IBAs range in size from less than 1 ha on Barbados to the largest IBA in the Americas (and globally) at 7,351,066 ha at Tabocais in the states of Acre and Amazonas, Brazil. However, most IBAs (almost 85%) are within the 1000 and 999,999 ha size class (Figure 2), with a median area of 17,647 ha. The mean or average IBA area is considerably larger at 140,347 ha, due to the contribution of some very large IBAs (68 IBAs are over 1 million ha in size). Only 3% of IBAs are smaller than 100 ha.

Although marine IBAs have yet to be systematically identified throughout the hemisphere, marine areas have been included for seabird colonies in the Caribbean and at several coastal or island IBAs in other regions. In Canada, for example, the marine area of IBAs makes up 21% of the total IBA area for sites primarily identified under A4 criteria. In the Caribbean, where 1 km marine extensions have been added to most IBAs with seabird breeding colonies (BirdLife International 2008a), marine areas account for almost a third of the total IBA area (Table 1).

Photo: Murray Cooper

No. of A2 IBAs	No. of A2 species in IBAs	No. of A3 IBAs	No. of A3 species in IBAs	No. of A4 IBAs	No. of A4 species in IBAs
-	-	n/a	n/a	315 (97%)	92
n/a	-	n/a	n/a	2 (100%)	2
n/a	n/a	n/a	n/a	105 (48%)	94
-	**-**	**n/a**	**n/a**	**422 (78%)**	**136 (51%)**
6 (100%)	2 (100%)	5 (83%)	33 (92%)	3 (50%)	4
14 (67%)	82 (95%)	13 (62%)	101 (91%)	9 (43%)	26
7 (35%)	18 (86%)	19 (95%)	49 (94%)	-	0
9 (43%)	24 (96%)	18 (86%)	87 (93%)	2 (10%)	4
20 (87%)	23 (100%)	20 (87%)	75 (95%)	5 (22%)	11
72 (50%)	76 (87%)	28 (19%)	71 (36%)	46 (32%)	77
18 (55%)	16 (89%)	18 (55%)	49 (83%)	4 (12%)	3
25 (47%)	104 (100%)	17 (32%)	106 (98%)	19 (36%)	14
171 (53%)	**198 (96%)**	**138 (43%)**	**236 (74%)**	**88 (27%)**	**88 (37%)**
4 (57%)	4 (100%)	n/a	n/a	4 (57%)	5
7 (64%)	11 (100%)	n/a	n/a	8 (73%)	4
-	-	2 (50%)	1 (100%)	2 (50%)	4
14 (45%)	7 (100%)	n/a	n/a	20 (65%)	11
6 (100%)	4 (100%)	n/a	n/a	5 (83%)	5
-	-	n/a	n/a	1 (100%)	2
5 (83%)	3 (100%)	5 (83%)	2 (100%)	2 (33%)	2
3 (100%)	8 (100%)	n/a	n/a	3 (100%)	2
8 (80%)	4 (100%)	n/a	n/a	3 (30%)	2
17 (61%)	11 (100%)	24 (86%)	48 (100%)	13 (46%)	17
2 (40%)	1 (100%)	3 (60%)	1 (100%)	4 (80%)	3
3 (75%)	19 (100%)	n/a	n/a	2 (50%)	2
17 (81%)	34 (100%)	n/a	n/a	5 (24%)	6
6 (100%)	7 (100%)	n/a	n/a	-	0
4 (67%)	17 (100%)	n/a	n/a	3 (50%)	1
9 (90%)	30 (83%)	n/a	n/a	-	0
13 (87%)	36 (100%)	n/a	n/a	6 (40%)	9
6 (60%)	19 (100%)	n/a	n/a	4 (40%)	2
3 (100%)	12 (100%)	n/a	n/a	-	0
-	-	n/a	n/a	1 (100%)	1
18 (90%)	24 (96%)	n/a	n/a	5 (25%)	5
1 (100%)	7 (88%)	n/a	n/a	1 (100%)	1
-	-	n/a	n/a	2 (100%)	2
2 (100%)	8 (100%)	n/a	n/a	1 (50%)	1
1 (50%)	10 (100%)	n/a	n/a	1 (50%)	1
4 (80%)	23 (100%)	n/a	n/a	1 (20%)	2
3 (60%)	5 (100%)	n/a	n/a	2 (40%)	1
3 (100%)	8 (100%)	n/a	n/a	1 (33%)	1
12 (80%)	14 (100%)	n/a	n/a	3 (20%)	3
3 (43%)	2 (100%)	4 (57%)	5 (100%)	4 (57%)	6
6 (67%)	4 (100%)	n/a	n/a	6 (67%)	14
7 (78%)	7 (100%)	n/a	n/a	2 (22%)	5
187 (70%)	**135 (100%)**	**38 (14%)**	**55 (100%)[6]**	**115 (43%)**	**46 (31%)**
92 (35%)	52 (91%)	57 (21%)	151 (70%)	57 (21%)	50
31 (62%)	66 (89%)	26 (52%)	206 (90%)	4 (8%)	5
124 (53%)	163 (93%)	78 (33%)	440 (94%)	17 (7%)	24
32 (28%)	32 (100%)	7 (6%)	39 (56%)	59 (52%)	37
83 (72%)	179 (79%)	40 (34%)	251 (90%)	9 (8%)	9
74 (69%)	168 (100%)	45 (42%)	187 (82%)	23 (21%)	33
19 (86%)	6 (100%)	n/a	n/a	17 (77%)	10
4 (33%)	1 (100%)	6 (50%)	39 (89%)	4 (33%)	23
n/a	n/a	n/a	n/a	3 (43%)	(only A4iii)
10 (18%)	9 (100%)	31 (54%)	101 (97%)	16 (28%)	12
94 (81%)	199 (94%)	53 (46%)	304 (86%)	17 (15%)	18
6 (46%)	6 (100%)	9 (69%)	46 (100%)	5 (38%)	6
14 (64%)	4 (100%)	3 (14%)	6 (86%)	5 (23%)	5
44 (61%)	104 (98%)	47 (65%)	193 (94%)	19 (26%)	15
627 (52%)	**657 (96%)**	**402 (33%)**	**1,069 (92%)**	**255 (21%)**	**141 (44%)**
985 (42%)	**971 (99%)**	**578 (25%)**	**1,350 (90%)**	**880 (38%)**	**276 (63%)**

IBA coverage by criteria and species

IBAs in the Americas have been identified on the basis of 1981 trigger species, that is, species meeting one or more of the IBA criteria (see Methods), of these, 700 are threatened or Near Threatened (Appendix 1). There at least 2200 trigger species in the Americas, taking into account an estimate of potential congregatory species triggering IBAs under the A4 criterion. Of these more than 90% are represented at one or more IBAs. South America has by the far the largest number of trigger species at over 1500, whereas the Caribbean and North America have approximately 350 each and Central America has over 600 (Figure 1).

Figure 1. Estimated number of trigger species (left bars) and number of trigger species confirmed in IBAs (right bars) with percentage of regional total.

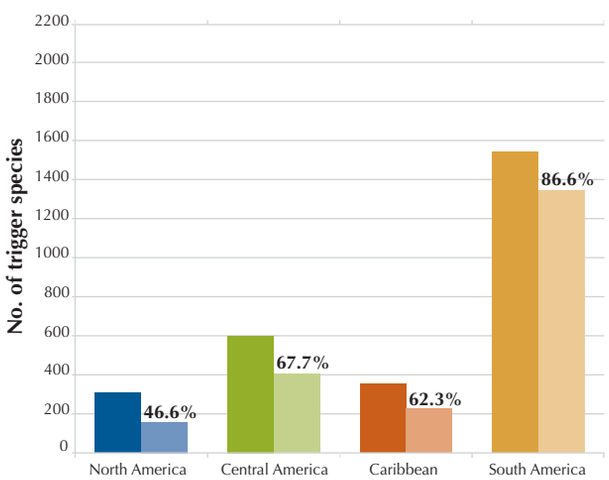
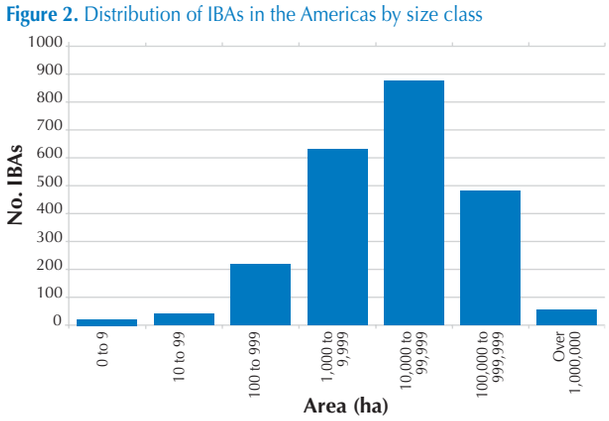


Figure 2. Distribution of IBAs in the Americas by size class



[5] Numbers of A1 species exclude vagrants

[6] The A3 criterion was only applied on Aruba, Bonaire, Curaçao (NSA), Trinidad and Tobago (NSA, NAN) and Cuba (GAN). See Methods, Appendices 1 and 1g.

[7] IBA inventories for these countries are at different stages of completion.

[8] Total of A1 species includes three species entering A1 after 2007 (*Pelecanus thagus*, *Aratinga solstitialis* and *Myiarchus semirufus*)

All four criteria have been used to identify IBAs in the Americas, with the highest number identified under the A1 criterion (89% of all IBAs), followed by A2 with 627 IBAs (52%; Table 1). The number of IBAs per criteria differs among regions reflecting differences in trigger species composition. For example, in North America, only 33% of IBAs are confirmed under A1, but 78% are triggered by A4 species. The Caribbean has the highest percentage of IBAs confirmed under the A2 criterion (70%) which is to be expected given that practically the entire Caribbean region is covered by one of several Endemic Bird Areas or Secondary Areas. Sixty-one IBAs from the Caribbean, Central America and South America meet all four criteria.

The 1685 IBAs confirmed under the A1 criterion cover 94% of the hemisphere's 746 threatened or Near Threatened species. Of these, 96 species are represented at only one IBA each (of which 20% are entirely unprotected) and almost half are confirmed at just five or less sites. In some cases, sites may represent the only known site where the species exists (see Focus on IBAs and threatened birds), but for other species, sites have yet to be identified in order to ensure adequate geographic coverage of A1 species' ranges. Of the 96 species triggering IBA criteria at just one site, 26 are Critically Endangered. Twenty-seven IBAs have 20 or more species triggering A1 criteria at the site, with a maximum of 39 A1 trigger species identified at Maciço Florestal de Paranapiacaba (BR181) in Brazil's Atlantic Forest. Of the 45 A1 species not covered by the IBA network, 27 are pelagic marine species, some of which only reach territorial waters off the west coast of the Americas. This reflects the need to complete the identification of marine IBAs, especially for areas remote from land where pelagic seabirds gather to feed (see Box 4 in Methods). Taxonomic changes also mean that two other species are no longer recognized in the IUCN 2008 Red List.

Almost all restricted-range species in the Americas are covered by at least one IBA (Table 1). One Endemic Bird Area (EBA) in Mexico and four Secondary Areas[9] in the United States are not yet represented within the IBA network. The EBA, Guadaloupe Island (EBA 003) needs to be reevaluated given that its one remaining extant taxon used originally to define the EBA is no longer recognized as a species (see Appendix 1b). The number of IBAs identified for each of the remaining EBAs and Secondary Areas ranges from 1 to 65, with 11 EBAs having more than 30 IBAs. The handful of species not covered by the IBA network correspond to recent changes in taxonomy that have yet to be reflected in IBA databases (e.g. *Scytalopus* spp in Colombia), species with no recent records (e.g. Spix's Macaw; *Cyanopsitta spixii*) or little known species, among others. A further seven species (not shown in Table 1) are considered as A2 trigger species exclusively in the United States where the A2 criterion has yet to be applied.

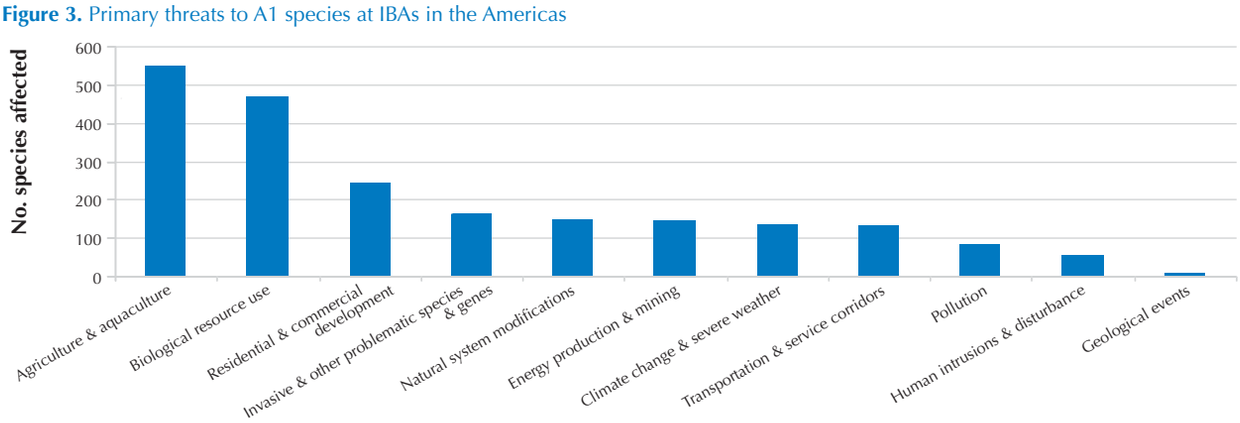
Over 90% of biome-restricted species taken into account in IBA identification in the Americas are covered by the IBA network, although biome areas covered by IBAs varies considerably. Biomes with the highest percentages of species not covered are Chaco (CHA), Equatorial Pacific Coast (EPC), Madrean Highlands (MAH) and Subtropical Pacific (STP). In the case of EPC, most of the species missing are from the Galapagos Islands where the A3 criterion was not applied. Analysis is pending for many of the MAH biome-restricted species in Mexico and currently these have not been confirmed for many IBAs in the country. Similarly in Chile, where IBA identification is still in progress, many STP restricted species are yet to be incorporated into IBA identification. The average area of IBAs identified under the A3 criterion (2515 km^2) is significantly larger than that of all IBAs, reflecting the fact that these IBAs should be representative of large areas of each biome; however, there is still considerable variation in size within A3 IBAs (from 2 ha in the Caribbean to 7,351,066 ha in Brazil). Four biomes have more than 10% of their area included within IBAs. Over 70% of the Chiriquí-Darién Highlands are covered by IBAs, but only 12% of the Northern Andes, probably reflecting the amount of natural habitat remaining in these biomes.

A total of 880 IBAs (Table 1) have been triggered by the A4 criterion, including at least 20% of all IBAs in each subregion, 97% of Canada's IBAs, and all IBAs on several small Caribbean islands. An estimated 439 species potentially trigger this criterion in the Americas based on an assessment of whether they are congregatory[10] in at least part of their range or during part of the year (Table 1, Appendix 1). Of these, more than half (63%) meet A4 thresholds in at least one site in the Americas, but undoubtedly more species will be confirmed as better population data become available in the region. Of particular note are four IBAs holding estimates of more than 10,000,000 individual seabirds and/or waterbirds; these are Baccalieu Island (CA194) and Lancaster Sound Polynya (CA302) in Canada, New Island Group (FK011) in Falkland Islands (Malvinas) and Costa sur de Arica (IBA No. 5) in Chile. IBAs holding high percentages of global populations of congregatory species include over 30% of the global population of Western Sandpiper (*Calidris mauri*) wintering in Panama Bay (PA041), an estimated 70% of the global population of Semipalmated Sandpiper (*Calidris pusilla*) passing through the Bay of Fundy (five IBAs) in Canada and 50% of the same species overwintering in Littoral IBA (GF002) in French Guiana. More than 5,000,000 migrating raptors pass through one or more of seven IBAs in Central America meeting the A4iv criterion for migratory bottlenecks.

Threats at IBAs

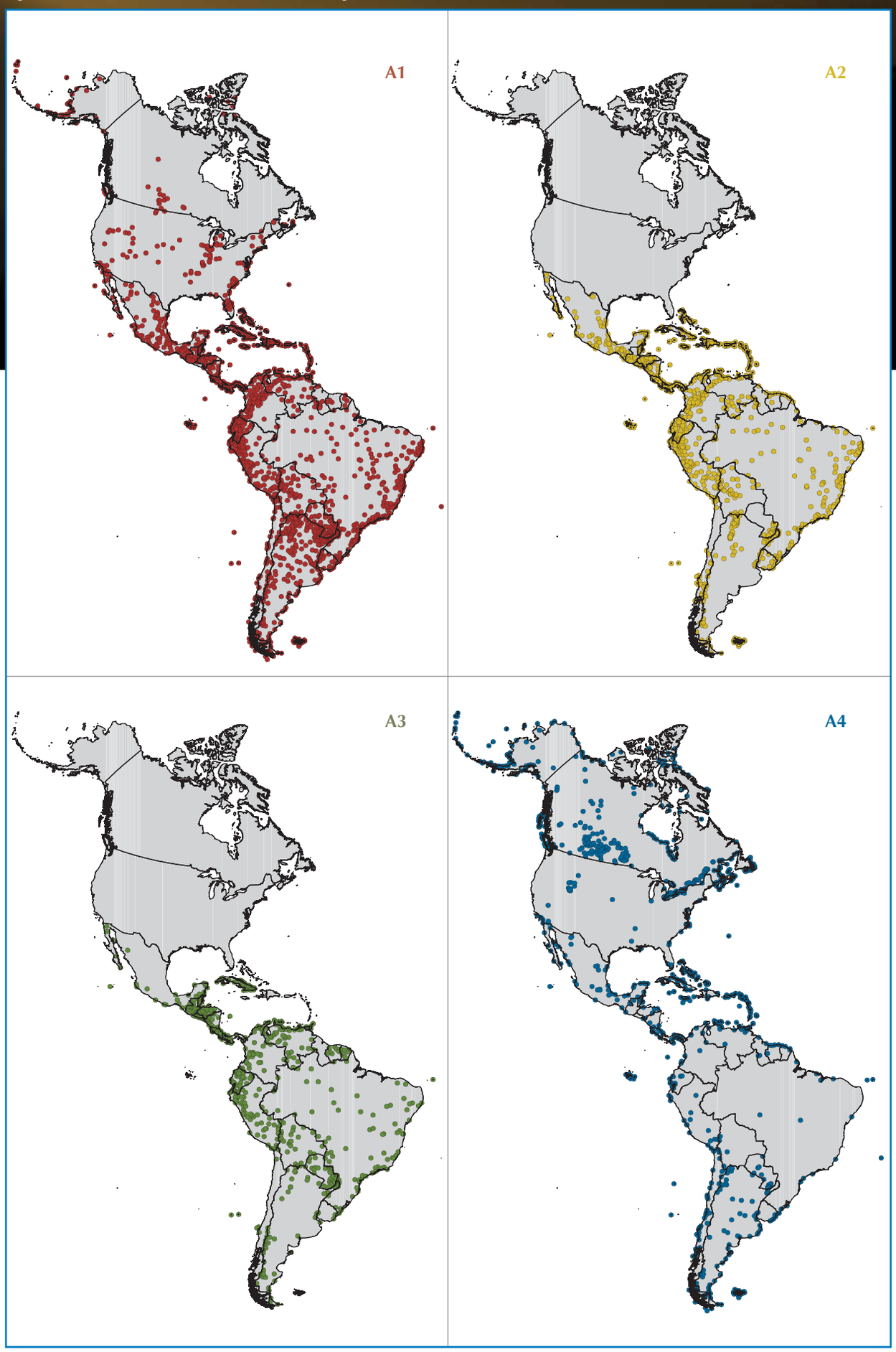
Information on threats is not available at all IBAs in the Americas. This information will be collected as the IBA monitoring protocol is implemented at sites throughout the hemisphere (see Future steps). However, detailed information on threats to red listed birds has been collected for a number of years. Eleven primary and 111 secondary threats (see Salazar *et al*. 2008) were recorded for the 701 species meeting A1 criteria at 1685 IBAs (72% of the total number of IBAs) as part of the 2009 Red List. Of the primary threats, agriculture and aquaculture, biological resource use, and residential and commercial development are the three most frequent threats to A1 species in IBAs in the Americas (Figure 3). Threats to sites in the Tropical Andes were documented in 2005, of these, agricultural expansion, burning of vegetation and selective logging were the most prevalent in this region (BirdLife International & Conservation International 2005).

Figure 3. Primary threats to A1 species at IBAs in the Americas



[9] Eastern Bering Sea islands (SA 001), Seward Peninsula and Yukon delta (SA 002), Michigan jack pine savanna (SA 003) and Edwards plateau (SA 004).
[10] Defining which species are congregatory is an ongoing process. Numbers in Table 1 and Figure 1 are only estimates, lack of knowledge and the fact that some species are only congregatory in parts of their range are among the reasons for this incomplete data set.

Figure 4. Location of IBAs in the Americas according to criteria[11]



[11] Most IBAs are confirmed for multiple criteria.

Focus on IBAs and the marine environment

The marine environment plays an enormously important role in the Americas, both economically and biologically. The Humboldt current is a major reason behind the western coasts of South America (from Peru to Argentina) being among the most productive marine areas in the world. In economic terms, this translates to more than half the world's fish meal being produced in the Americas, with Peru the world's leading producer. Additionally, the United States is the world's principal producer of fish oil (IFFO 2009). Historically, seabird nesting colonies have also played an important economic role in guano extraction and export, especially in Chile and Peru (Box 1).

Of the 346 marine species in the world (BirdLife International, unpublished data), approximately 70% occur in the Americas. However, conflicts between industry and seabirds are largely responsible for precipitous declines in seabird populations and increases in threat status since the 1980s. Other threats to seabirds include invasive alien species at breeding sites, especially on islands. In the Americas, 56 marine species are threatened, seven of which are Critically Endangered, and a further 16 are Near Threatened (Table 1). Almost half the species restricted to the Americas are globally threatened. Therefore, there is an urgent need for international cooperation to ensure the sustainable use of marine resources, both in coastal areas and in international waters. Marine IBAs seek to protect those areas which are of vital importance to all aspects of seabird life cycles (Box 4, Methods). Furthermore, marine IBAs will

Table 1. Numbers of marine species and marine IBAs in the Americas.

	Marine species in the Americas						Marine IBAs			
Region	Marine species	Endemic to the Americas	CR	EN	VU	NT	Marine species triggering IBA criteria	A1 species in IBAs	Marine IBAs (including candidate sites)	Area[1] (ha)
North America	144	13	1	7	12	5	66	10	172 (326)	9,699,251
Central America	137	7	3	3	10	5	20	6	35 (41)	4,871,830
Caribbean	80	14	1	2	0	1	24	3	85 (138)	1,915,412
South America	160	32	5	11	24	15	68	33	152 (179)	6,067,480
Total	**240**	**66**	**7**	**16**	**33**	**16**	**136**	**45**	**444 (685)**	**22,553,973**

Table 2. Marine IBAs in the Americas[2]

Country	Marine IBAs (including candidate sites)	1. Seaward extensions of breeding colonies	2. Non-breeding (coastal) concentrations	3. Migratory bottlenecks	4. Areas for pelagic species	Country	Marine IBAs (including candidate sites)	1. Seaward extensions of breeding colonies	2. Non-breeding (coastal) concentrations	3. Migratory bottlenecks	4. Areas for pelagic species
Anguilla (to UK)	4 (7)	7	2	0	0	Canada	116 (151)	110	51	2	3
Antigua and Barbuda[3]	7 (9)	9	0	0	0	St Pierre et Miquelon (to France)	2 (2)	1	1	0	0
Aruba (to Netherlands)	2 (2)	2	0	0	0						
Bahamas	14 (27)	27	3	0	0	USA*	54 (173)	-	-	-	-
Barbados	0 (1)	1	0	0	0	**Total**	**172 (326)**	**111**	**52**	**2**	**3**
Bermuda (to UK)	1 (1)	1	0	0	0						
British Virgin Islands	3 (3)	3	0	0	0	Belize	1 (1)	1	0	0	0
Cayman Islands (to UK)	1 (3)	3	0	0	0	Costa Rica	2 (3)	2	1	0	0
Cuba	6 (9)	9	0	0	0	El Salvador	0 (1)	0	1	0	0
Dominica	2 (2)	2	0	0	0	Guatemala	0 (0)	0	0	0	0
Dominican Republic[3]	3 (4)	4	0	0	0	Honduras	1 (1)	0	0	0	0
Grenada	0 (0)	0	0	0	0	Mexico	25 (27)	16	18	0	0
Guadeloupe (to France)	3 (6)	6	0	0	0	Nicaragua	2 (3)	2	0	0	0
Haiti[3]	1 (1)	1	0	0	0	Panama	4 (6)	4	2	0	0
Jamaica	4 (6)	6	0	0	0	**Total**	**35 (41)**	**25**	**22**	**0**	**0**
Martinique (to France)	3 (4)	4	0	0	0						
Montserrat (to UK)	0 (0)	0	0	0	0	Argentina	26 (26)	20	15	0	0
Navassa (to US)	1 (1)	1	0	0	0	Brazil	10 (12)	6	5	0	0
Netherlands Antilles	9 (13)	13	0	0	0	Chile*	53 (60)	18	10	0	0
Puerto Rico (to US)	4 (8)	8	0	0	0	Colombia	4 (7)	6	6	0	0
St Barthélemy (to France)	2 (3)	3	0	0	0	Ecuador	14 (17)	14	2	0	0
St Kitts and Nevis	1 (2)	2	0	0	0	Falkland Islands (Malvinas)	22 (22)	22	0	0	0
St Lucia	1 (4)	4	0	0	0	French Guiana	4 (4)	1	4	0	0
St Martin (to France)	1 (2)	2	0	0	0	Guyana*	0 (3)	0	0	0	0
St Vincent and the Grenadines	3 (4)	4	0	0	0	Peru	11 (20)	18	1	0	0
Trinidad and Tobago	2 (4)	4	0	0	0	Suriname	0 (0)	0	0	0	0
Turks and Caicos Islands (to UK)	5 (7)	7	2	0	0	Uruguay	3 (3)	0	3	0	1
US Virgin Islands	2 (5)	5	1	0	0	Venezuela	5 (5)	5	4	0	0
Total	**85 (138)**	**138**	**8**	**0**	**0**	**Total**	**152 (179)**	**110**	**50**	**0**	**1**
						Total Americas	**444 (685)**	**384**	**132**	**2**	**4**

Caribbean N. America C. America S. America

[1] Confirmed sites only.
[2] The total numbers of marine IBAs for all countries are subject to revision once lists of potential sites have been verified by partners or collaborating organizations. IBA inventories for countries marked with an asterisk are at different stages of completion.
[3] Some sites in Antigua & Barbuda, Dominican Republic and Haiti include non-coastal breeding colonies of seabirds whose delimitation may eventually include marine foraging areas.

play an important role in meeting CBD obligations to establish marine protected areas by 2012 (IBAs and CBD commitments, p43).

Overview of marine IBAs in the Americas

A total of 444 sites have been identified as global marine IBAs and a further 241 are proposed as candidate sites on the basis of seabird breeding colonies or significant areas of marine habitat within sites (Table 2). Validation of the data for the proposed sites is still required to ensure that relevant seabird population thresholds have been met. Sites are triggered by either A1 (35% of sites) or A4 (85%) criteria for marine species. The 444 marine IBAs in the Americas (19% of the total) cover an area of 225,540 km^2 (including terrestrial portions), of which 43% lies within North America. Of the 72 A1 marine species in the Americas, 45 meet IBA thresholds, with 33 triggering IBAs in South America alone (Table 1). Species not presently covered by the IBA network are mainly pelagic, belonging to the families Diomedeidae, Hydrobatidae and Procellariidae, reflecting a need to identify pelagic IBAs (currently in progress). Of the marine species restricted to the Americas, 15 do not trigger IBA criteria at present, mainly due to lack of information. However, IBAs have been proposed for six of these and are yet to be confirmed. The highest numbers of marine species triggering IBA criteria are found at both northern and southern extremes of the hemisphere, including the United States (42 species), Canada (41) and Chile (26).

Seabird foraging ranges can help determine IBA boundaries

Box 1

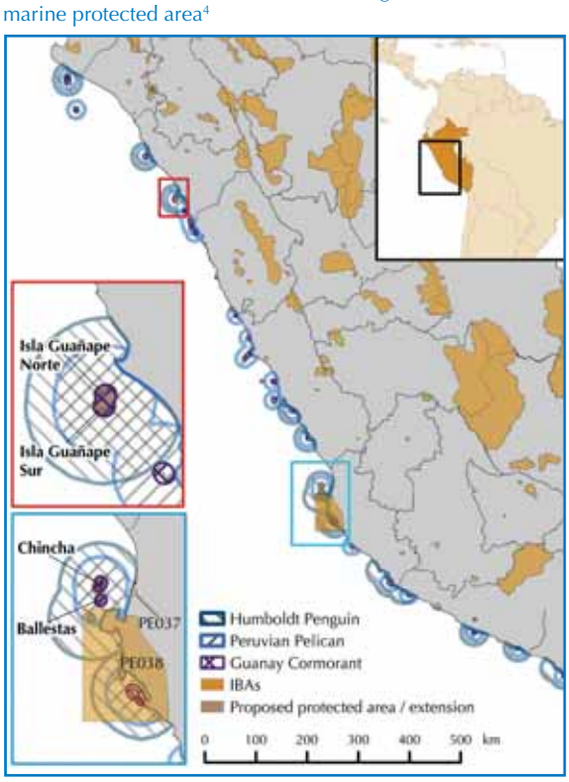
The Peruvian guano islands historically hold some of the largest seabird colonies in the world, with millions of breeding birds. In the early 20th century, with guano deposits exhausted and bird populations almost exterminated by the harvesters, the Peruvian government nationalized the islands and began to manage them as a sustainable resource, protecting the birds, improving their nesting sites, and taking only the annual accumulation of guano. However, over-fishing of anchoveta in the 1960s led to a decrease in bird numbers and continued over fishing and bycatch in some areas coupled with the effects of El Niño events has meant that many colonies have failed to recover to former levels.

In 2006, a law was approved to create a national reserve around 27 guano producing island groups (e.g. Islas Guañape, Figure 1) along the length of the Peruvian coast, as well as extending the current limits of Paracas National Park (PE036) to include the Chincha and Ballestas islands. The delimitation proposal establishes a two-nautical-mile buffer zone around each island, however, a mismatch exists between these proposed limits and the feeding areas of the species breeding at these colonies (Figure 1). These species include the three principal guano-producing species, Guanay Cormorant (*Phalacrocorax bougainvillii*), Peruvian Booby (*Sula variegata*) and Peruvian Pelican (*Pelecanus thagus*), as well as threatened breeding seabird species triggering IBA criteria at Paracas: Peruvian Tern (*Sterna lorata*), Humboldt Penguin (*Spheniscus humboldti*) and the Peruvian Diving-petrel (*Pelecanoides garnotii*).

These at-sea areas, presently outside the proposed reserve limits, will require careful management so that bycatch from both long-lining and gill-netting is reduced, and food sources are not over exploited, enabling seabird populations to recover and the guano islands to become a sustainable resource for the extraction and tourism industries.

Near Threatened Peruvian Pelican (*Pelecanus thagus*) Photo: James C Lowen; www. pbase.com/james_lowen

Figure 1. Average foraging radii of six species of Peruvian seabirds around the Chincha Islands are larger than the current marine protected area[4]



Map: Centro para la Sostenibilidad Ambiental/BirdLife International

Challenges and opportunities for marine IBA conservation

With an increasing number of activities occurring in the marine environment (e.g. shipping, windfarms, ocean resource exploration, fishing activities) pressure on marine resources is being felt the world over. As a result, an expanding number of BirdLife Partners are working on identifying marine IBAs to feed into maritime planning and management initiatives with the goal of protecting key sites for seabirds. The identification and subsequent protection of marine IBAs will make a vital contribution to global initiatives to gain greater protection and sustainable management of the oceans, including working towards the identification of Marine Protected Areas (MPAs).

Among the future steps for the Americas IBA program are:

- Obtain data on foraging and maintenance ranges for seabirds in the Americas
- Re-establish boundaries of candidate marine IBAs taking into account marine areas
- Finalize inventory of marine IBAs in the Americas and marine hotpots[5]
- Integrate marine IBAs into national and international protection legislation

[4] Foraging radii were mapped by the Centre for Environmental Sustainability at Cayetano Heredia University with information taken from the BirdLife Seabird Foraging Radii Database and foraging studies carried out in Peru.
[5] Marine hotspots can be defined as those sites of most regular use to seabirds where "regular use" has been defined as "areas visited by birds from more than one site or during different season or years".

Focus on protection of the IBA network

IBAs, by definition, are the priority sites for bird conservation in the hemisphere. Therefore, it is vital to ensure their effective protection after identification. Protection, seen as a management mechanism, can take several forms, for example, legally protected areas (both private and public), conservation easements, purchase of exploitation rights and payment for ecological products and services, among others.

From a preliminary analysis on the protection status of IBAs throughout the hemisphere, 31% of IBAs are fully protected, that is, they lie completely within a designated protected area, 22% are partially protected, 37% are not protected and data is missing for the remaining 10% (Figure 1). Continental countries with the highest protection rates are Honduras and Venezuela with over 75% of IBAs totally protected in both countries. Islands with high rates of protection include Dominican Republic (71%) and Cuba (64%). Using information from coverage of protected areas (WDPA 2009), almost half the area of IBAs (49%) in the Americas lies within a protected area (Table 1)[1].

Nonetheless, having IBAs as part of protected area systems can facilitate planning and management. Many IBAs do fall within different types of systems, both public and private, national and local. In some countries, such as Cuba and Jamaica, all IBAs are systematically being included as part of the national protected area system.

However, strict legal protection may not always be the best answer for a site's conservation, especially when local communities depend directly on the area's natural resources. Indeed, in some circumstances, formal protected area designation could be counter-productive to conservation objectives, particularly where protected area regulations restrict traditional practices of land use and natural resource exploitation that

Box 1

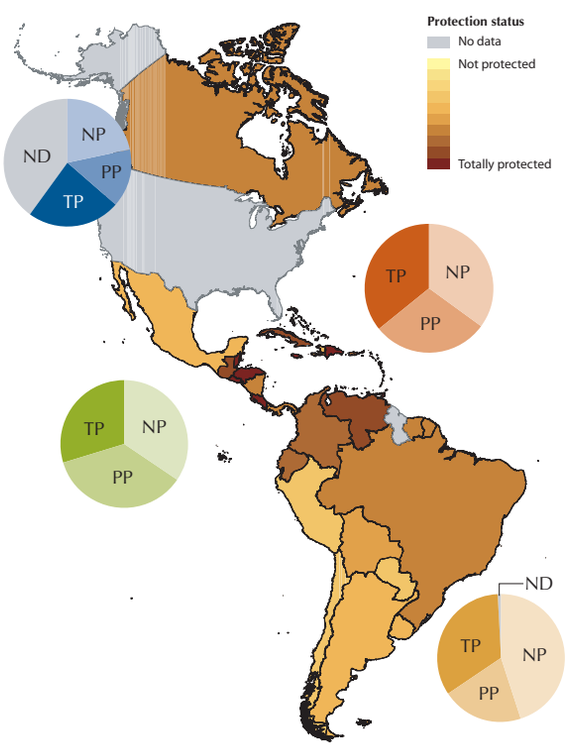
Official recognition of IBAs in Ecuador

A 2005 Ministry of the Environment agreement grants official recognition to IBAs in Ecuador. The text, published in the *Registro Oficial*, the official government gazette, recognizes that the IBA network is of public interest for bird conservation. The agreement cites and officializes the IBA selection criteria as the justification for IBA identification. In another important step, the agreement recognizes the Ecuadorian chapter in the Tropical Andes regional IBA directory as an official document listing threatened bird species protected by the Ecuadorian State.

Of key importance to obtaining this recognition was the participation of the Ministry of the Environment in the National IBA committee. CECIA (now Aves & Conservación, the BirdLife partner in Ecuador) had also involved the relevant government entities from the early stages of the IBA program, before a specific Ministry for the Environment existed.

Photo: Murray Cooper

Figure 1. Protection status by country[2] and region



Legal protection obtained for specific IBAs in the Americas

Several sites in the Americas have become legally protected since their designation as IBAs. In many cases, IBA nomination has boosted protected area designation proposals or provided more information to support them. Examples come from several countries, including:

Argentina - IBAs are being employed to guide decisions on new protected areas in the provinces of Buenos Aires and Entre Ríos. They have also been used as the basis in conservation corridor design in the Gran Chaco region of the country.

Colombia - At least six sites have gained legal protection where the IBA process has played an important role. New protection categories include national parks, regional protected areas and private reserves.

Mexico - IBAs have been taken into account by the government to justify the creation of new protected areas and as well as in planning and priority setting processes (see p42 for details as to how IBAs are included within the North American Bird Conservation Initiative).

Peru - IBA status at some sites has been employed as a further justification for protected area recognition. Four recently declared "private conservation areas" included information on IBAs in their applications to the Institute of Natural Resources.

United States - The railroad company, Norfolk Southern, granted a conservation easement of just over 5000 ha of its privately owned wildlife preserve to Lowcountry Open Land Trust, which includes the Brosnan Forest IBA.

Table 1. Protected area coverage compared to IBA coverage by region[4]

Region	Protected areas (km²)	Total IBA area (km²)	IBA area within protected areas (km²)	% IBA coverage within protected areas
North America	764,097	307,469	142,620	46%
Central America	301,531	430,012	159,219	37%
Caribbean	68,670	46,427	28,392	61%
South America	2,516,091	2,283,232	1,166,810	51%
Total	**3,650,387**	**3,067,140**	**1,497,040**	**49%**

[1] The figures presented here are not necessarily an indication of effective protection in all countries. There are still many legally protected areas lacking adequate implementation and management capacity.
[2] Country status is given by the percentage of total IBAs which are partially or totally protected. TP: totally protected, PP: partially protected, NP: not protected; ND: No data.
[3] Data from the United States has yet to be incorporated into analyses of protection status.
[4] All areas were calculated from WDPA (2009), using IUCN categories I to VI, and IBA shapefiles. Analysis does not include United States, Chile and Guyana.

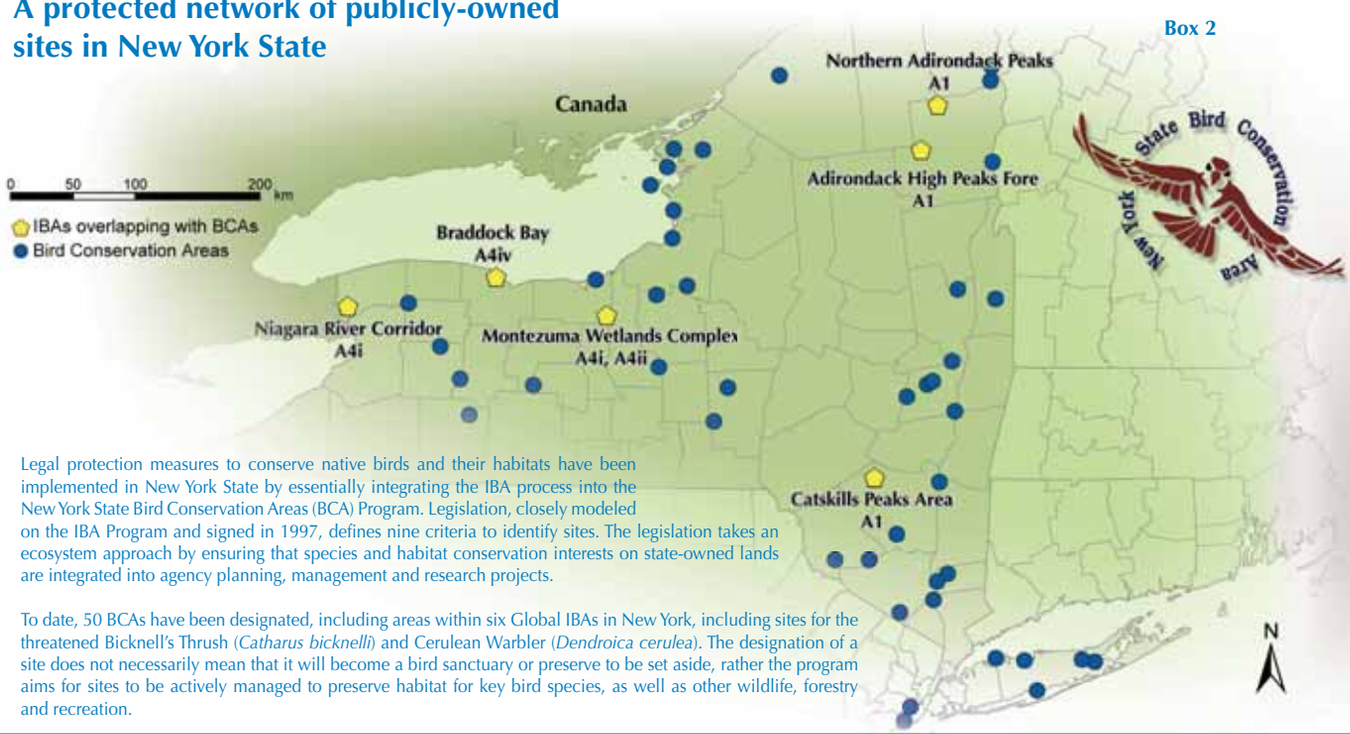
are compatible with or contribute to the biological value of a site. Also, it is not feasible to designate every IBA as a formal protected area due to such factors as resource limitations, conflicting land ownership, and high opportunity costs in productive landscapes, such as lowland forests and coastal zones.

Protection categories allowing genuine participation, mixed management and sustainable use need to be explored as alternative approaches to site-based conservation. Examples such as community-managed conservation areas and voluntary agreements with land-owners may even be more cost-effective and engage support from non-traditional sources. Moreover, these approaches may provide greater opportunities for sustainable human use of natural resources, and therefore, make a greater contribution to poverty alleviation among people for whom natural resources form a critical component of their livelihood strategies.

Photo: Murray Cooper

A protected network of publicly-owned sites in New York State

Box 2



Legal protection measures to conserve native birds and their habitats have been implemented in New York State by essentially integrating the IBA process into the New York State Bird Conservation Areas (BCA) Program. Legislation, closely modeled on the IBA Program and signed in 1997, defines nine criteria to identify sites. The legislation takes an ecosystem approach by ensuring that species and habitat conservation interests on state-owned lands are integrated into agency planning, management and research projects.

To date, 50 BCAs have been designated, including areas within six Global IBAs in New York, including sites for the threatened Bicknell's Thrush (*Catharus bicknelli*) and Cerulean Warbler (*Dendroica cerulea*). The designation of a site does not necessarily mean that it will become a bird sanctuary or preserve to be set aside, rather the program aims for sites to be actively managed to preserve habitat for key bird species, as well as other wildlife, forestry and recreation.

Map: New York State Department of Environmental Conservation/Audubon New York/BirdLife International

Future steps

Among the future steps for the IBA program are:

- Incorporate relevant IBAs into national protected area systems and voluntary conservation schemes (e.g. Western Hemisphere Shorebird Reserve Network)
- Seek official recognition of IBAs within national legislation and international agreements
- Explore private protection and conservation in IBAs
- Seek alternative protection mechanisms for IBAs
- Update information on protection status in the World Bird Database

The Vulnerable Coppery-chested Jacamar (*Galbula pastazae*) has been identified as a trigger species in eight Ecuadorian IBAs and could benefit from official recognition of IBAs (Box 1).
Photo: Murray Cooper

Focus on IBAs and threatened birds I

One in ten birds in the Americas is threatened with extinction. Of these, 75, or almost 40% the world total, are Critically Endangered (CR), placing a global responsibility on the region to prevent these species from being lost for ever. In the Americas, 18 species have become extinct since 1500. The number of threatened species is heavily concentrated in regions such as the Caribbean, the Tropical Andes of northern South America and Brazil's Atlantic Forest and Cerrado (Figure 1).

IBAs provide a way to assess conservation efforts taken for these species, given that most CR or Endangered (EN) species would benefit from a site-based conservation approach. To date, 206 CR and EN species are covered by 775 sites within the Americas IBA network (Table 1). However, of these, 47 trigger IBA criteria at only one site. This may be because the site is the only known location for the species (e.g. in the case of AZE sites, see following pages), but in other cases, more sites may need to be identified or searches undertaken for the species. Nevertheless, IBAs provide an effective means of setting priorities for threatened species in terms of identifying those sites where viable populations need to be conserved.

For the 16 CR or EN species not covered by the IBA network, eight are pelagic marine species and are under focus for marine IBA identification. However, most of the remaining species are of unknown status, and may already be extinct (Table 2). The most urgent action for these species will involve surveys to confirm their status. Other species which have been employed as trigger species, although they are without very recent records, must also have dedicated searches implemented to ascertain their status (Table 2).

Acting to save globally threatened species

Recognizing the need to act now for globally threatened bird species, BirdLife has launched a major new initiative: the Preventing Extinctions Program. This is spearheading greater conservation action, awareness and funding support for the world's most threatened birds, through appointing Species Guardians and Species Champions.

BirdLife Species Guardians are individuals or organizations who take on a responsibility to implement and/or stimulate conservation actions for a particular threatened species in a defined geographical area, usually a particular country. They also monitor the status of the species and identify the key actions needed. Species Guardians' activities typically include some of the following:

- Implementing priority actions for the species
- Developing a Species Action Plan, if one does not yet exist
- Facilitating the implementation of priority actions by other individuals or organizations
- Liaising and communicating with other individuals and organizations involved in carrying out research and taking action for the species
- Advocating for appropriate conservation measures to relevant authorities and institutions
- Monitoring the status of the species and the implementation and effect of actions by all parties

BirdLife Species Champions are a new global community of businesses, institutions and individuals who are stepping forward to provide the funding required to carry out the vital conservation measures BirdLife International has identified to help prevent bird extinctions. Species Champions also help publicize the urgent plight of the species chosen, and at the same time, gain important exposure themselves as being committed to protecting the planet's natural heritage.

See also: www.birdlife.org/extinction

Figure 1. Density of globally threatened birds (GTBs) in South America showing A1 IBAs for CR, EN and/or VU species.

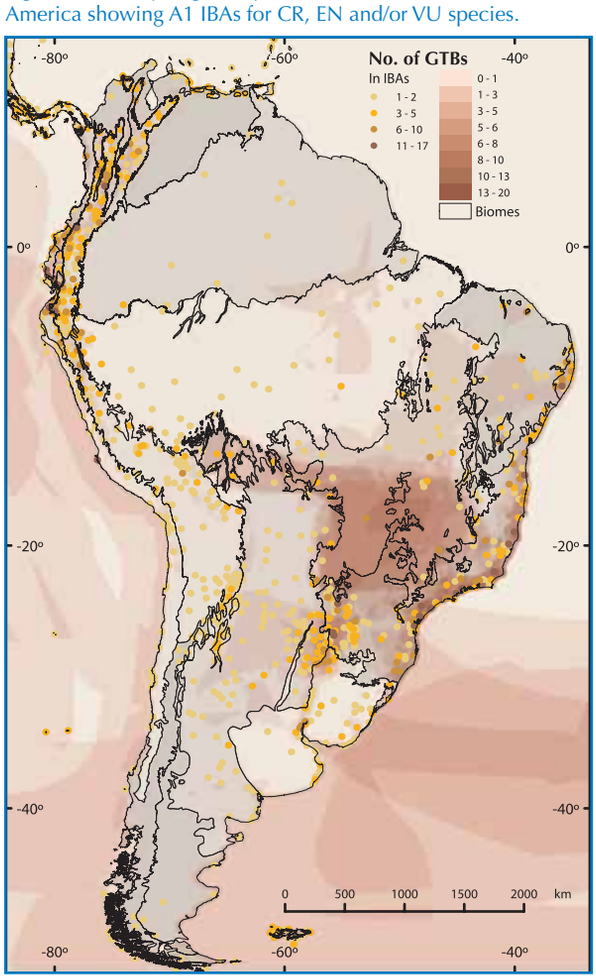


Table 1. No. of IBAs triggered by CR and EN species by country

Country	No. of CR or EN species	No. of IBAs	Country	No. of CR or EN species	No. of IBAs	Country	No. of CR or EN species	No. of IBAs
Brazil	48	151	Dominican Republic	5	7	Belize	2	4
Peru	38	67	Costa Rica	4	11	El Salvador	1	2
Colombia	35	68	Guatemala	4	8	St Vincent and the Grenadines	1	7
Ecuador	22	54	Honduras	3	11	Grenada	1	5
Mexico	17	55	Puerto Rico	3	9	Dominica	1	2
Bolivia	13	33	Jamaica	3	6	Montserrat	1	2
Venezuela	13	17	St Lucia	3	5	Trinidad and Tobago	1	2
Cuba	10	23	Haiti	3	3	Martinique	1	1
USA	7	17	Uruguay	3	7	Bermuda	1	1
Argentina	7	100	Canada	2	11	Falkland Islands (Malvinas)	1	8
Paraguay	7	27	Panama	2	13	Guyana	1	1
Chile	6	25	Nicaragua	2	11	Suriname	1	1

Table 2. Critically Endangered species without recent records

	Common name	Scientific name	Country	IBA where last reported	Date of last confirmed reports
Species employed as IBA triggers	Jamaica Petrel	*Pterodroma caribbaea*	Jamaica	John Crow Mountains (JM014)	1860 (unconfirmed reports from 1960)
	Jamaican Pauraque	*Siphonorhis americana*	Jamaica	Hellshire Hills (JM011)	1860 (unconfirmed reports from 1998)
	Turquoise-throated Puffleg	*Eriocnemis godini*	Ecuador	Valle de Guayllabamba (EC107)	1850 (unconfirmed report 1976)
	Kinglet Calyptura	*Calyptura cristata*	Brazil	Serra dos Órgãos (BR188)	1996
	Tachira Antpitta[1]	*Grallaria chthonia*	Venezuela	Parque Nacional El Tamá (VE043)	1956
	Semper's Warbler	*Leucopeza semperi*	St Lucia	Government Forest Reserve (LC002)	1972
Species not employed as IBA triggers	Guadalupe Storm-petrel	*Oceanodroma macrodactyla*	Mexico	(Isla Guadalupe; MX141)	1912
	Eskimo Curlew	*Numenius borealis*	Canada to Argentina	(St Lucy Shooting Swamps; BB002, Anderson River Delta; Canadian Regional IBA)	1963, 1989 respectively
	Glaucous Macaw	*Anodorhynchus glaucus*	Argentina, Paraguay, Uruguay, Brazil		1960s
	Spix's Macaw[2]	*Cyanopsitta spixii*	Brazil	(Curaçá – BR089)	2000
	Imperial Woodpecker	*Campephilus imperialis*	Mexico		1956
	Rio de Janeiro Antwren	*Myrmotherula fluminensis*	Brazil	(Região Serrana do Rio de Janeiro; BR186)	1982
	Bachman's Warbler	*Vermivora bachmanii*	US, Cuba		1988
	Hooded Seedeater	*Sporophila melanops*	Brazil		1823

Photo: Pete Morris; www.rarebirdsyearbook.com

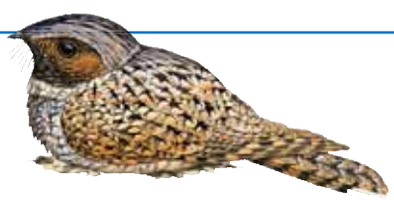
Support to threatened species conservation in the Americas

Box 1

By 2009, the Preventing Extinctions Program in the Americas had supported almost 30 projects in 11 countries, of which, 21 are focused on Critically Endangered birds and six are at AZE sites (see p27). Projects range in scope from reserve acquisition, research and monitoring to providing alternative options to sustaining local livelihoods where communities share resources with threatened species.

Three Species Champions, as well as many other program supporters, have already provided vital funding to conservation projects in the Americas. Additionally, the program's first global sponsor, the British Birdwatching Fair, is also Species Champion to two species in the region.

Three examples from across the region are highlighted below.



Puerto Rican Nightjar (*Caprimulgus noctitherus*)

Species Guardian:
Sociedad Ornitológica Puertorriqueña, Inc

A project to produce and implement a species action plan is currently underway for this species. As part of activities, a distribution map and habitat occupancy model are being developed, including a GIS tool for determining whether land holds suitable habitat for the species before field expeditions are carried out. A draft of the action plan will be presented to the Puerto Rican Nightjar Conservation Network later this year, and the possibility of endorsement by the Puerto Rican Department of Natural and Environmental Resources is under discussion.

Illustration: Àngels Jutglar

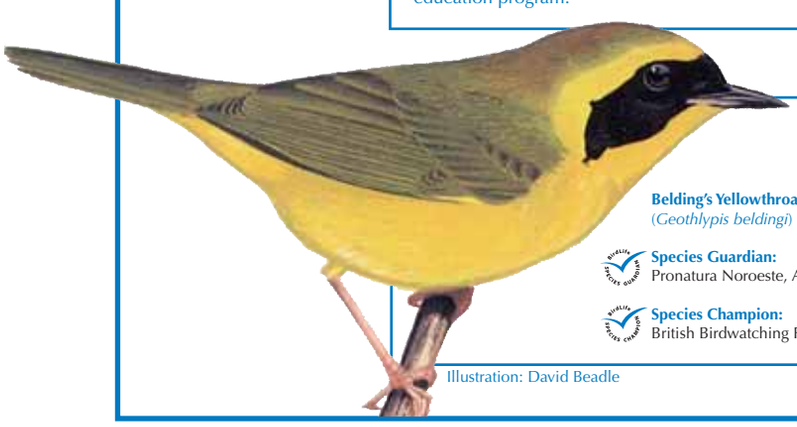
Black-breasted puffleg
(*Eriocnemis nigrivestis*)

Species Guardian:
Aves & Conservación

Species Champion:
The Blackwood Family

The Black-breasted Puffleg is endemic to Ecuador where its small population is declining due to deforestation within an already severely fragmented habitat and, increasingly, from the impacts of climate change. The Species Guardian began a project in 2009 to implement a range of concrete conservation measures identified as high-priorities in the recently-published Black-bellied Puffleg Species Action Plan. The principle actions covered by this three-year project proposal are; advocacy at government and community levels, protection of vital habitat and a local conservation education program.

Illustration: Richard Allen



Belding's Yellowthroat
(*Geothlypis beldingi*)

Species Guardian:
Pronatura Noroeste, A. C.

Species Champion:
British Birdwatching Fair

The Species Guardian is currently finalizing a Conservation Area Plan for the Estero San José, a critical site for the species, and recently nominated a Ramsar site. Research on population numbers and ecology has also provided new information on the species at this site and other historically important localities which will be used in a Species Action Plan. Outreach materials have been produced for local communities and bird guides have also been trained to strengthen livelihood links with the species' conservation. A local bird festival took place in April 2009, including talks and birding activities.

Illustration: David Beadle

[1] This species was uplisted to CR in 2008.
[2] Captive populations exist of this species.

Focus on IBAs and threatened birds II

The Alliance for Zero Extinction (AZE) is a global initiative of 68 biodiversity conservation organizations, including BirdLife International and a number of national BirdLife Partners. Its aim is to prevent extinctions by identifying and safeguarding all sites holding the last remaining population of one or more Critically Endangered or Endangered species. Therefore, the Alliance's goal is to create a front line of defense against extinction by eliminating threats and restoring habitat at these sites.

IBAs are an excellent source of information for proposing AZE sites for birds. The application of IBA criteria to identify sites means that information on population sizes has been gathered for most threatened species in the Americas. Furthermore, IBA delimitation attempts to ensure that sites are of a suitable size to maintain these populations in the long term. Additionally, an estimated 50–60% of AZE sites identified for non-avian species also qualify as IBAs (for non-AZE trigger birds). The subset of IBAs qualifying as AZE sites are among the highest conservation priorities in the hemisphere to prevent imminent extinctions where practically the entire remaining population of a Critically Endangered (CR) or Endangered (EN) bird is confined to a single site (Box 1).

The inventory of AZE sites provides a critically important tool for nations seeking to meet the 2010 biodiversity target of the Convention on Biological Diversity (CBD) to reduce biodiversity loss. The disappearance of these AZE sites would mean the certain extinction of one or more species. AZE sites thus present a unique opportunity to take immediate action towards the 2010 CBD targets not only for their

Box 1

How are AZE sites identified?

AZE uses the following criteria to identify sites (Ricketts *et al.* 2005):

1. **Endangerment:** An AZE site must contain at least one Endangered (EN) or Critically Endangered (CR) species, as listed on the IUCN Red List.
2. **Irreplaceability:** An AZE site should only be designated if it is the sole area where an EN or CR species occurs, or contains more than ≈95% of the species' known global resident population for at least one life history segment (e.g. breeding or wintering).
3. **Discreteness:** The area must have a definable boundary within which the character of habitats, biological communities, and/or management issues have more in common with each other than they do with those in adjacent areas.

To date, AZE sites have been identified for those taxonomic groups which have been systematically assessed for global threat level: mammals, birds, some reptiles (crocodilians, iguanas, turtles and tortoises), amphibians and conifers. Other taxa will be added as data become available.

See also: www.zeroextinction.org • www.birdlife.org/action/science/aze/index.html

Paria Peninsula National Park (VE019) qualifies as an AZE site for Scissor-tailed Hummingbird (*Hylonympha macrocerca*) whose breeding range is estimated at just 230 km². Photos: David Southall

AZE sites in the Americas

Analysing IBA data is a logical first step in identifying AZE sites for birds. The original AZE dataset (available at www.zeroextinction.org) included sites for the Americas that were identified before the IBA inventory had been completed in the region. As part of the 2009 review of the dataset, a preliminary analysis of all sites applying for CR and EN species in the Americas was recently undertaken. Nevertheless, these draft results (Appendix 3) will be superseded by the final AZE review, due out at the end of 2009.

According to this preliminary analysis, a revised set of 58 AZE sites have been proposed for the Americas, covering 69 CR and EN species (Figure 1, Appendix 3)[1]. However, several of these are not expected to qualify as AZE sites when confirmation of species populations at other sites is obtained. Of the 69 species, 54 were included in 46 AZE sites in 2005, the remaining 15 species are proposed for the first time in 2009, mainly due to new information and changes in Red List category.

South America has the most AZE sites (43) and species (43) in the region, with 16 sites in Brazil, seven in both Mexico and Ecuador (five of which are in the Galapagos Islands) and six in Peru. Most AZE sites are nominated for just one bird species, although six sites are nominated for two, one site in the Galapagos Islands (EC105) for three and Islas Revillagigedo (MX031) in Mexico for four. Sites range in size from the 60 ha of Reserva Yunguilla (EC067) in Ecuador to 2,976,727 ha of the combined site of Rio Tacutu (including the IBAs of Savanas do Rio Cotingo; BR002 and Lavrados de Roraima; BR003) in Brazil. Twelve of the proposed AZE sites are not protected in any form; of the rest, 19 are totally protected and 14 partially. However, this means that 30 of the species at most imminent risk of extinction remain inadequately protected.

Although all IBAs, by definition, are immensely important for conservation, these 58 AZE sites represent the last hope for 69 species of threatened birds in the Americas. Ensuring the conservation of these sites (e.g. correct management of the protected areas and seeking legal protection for the unprotected areas) must be considered among the most urgent actions to be undertaken in the region (e.g. Box 2).

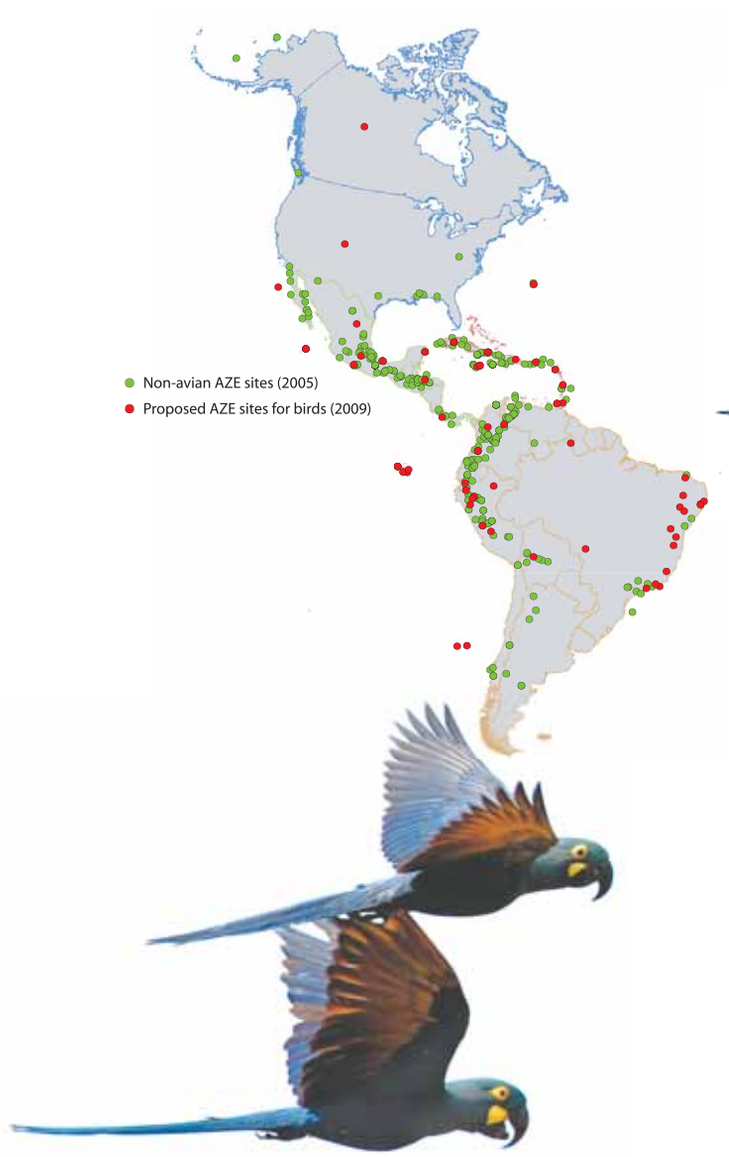
[1] Of the 84 species triggering AZE criteria in 2005, 16 no longer apply due to new data on their distribution and/or population sizes; in two cases, their Red List category has been downgraded as a result: Rondonia Bushbird (*Clytoctantes atrogularis*) and Baudo Oropendola (*Psarocolius cassini*).

unique threatened species, but also for the many thousands of other less threatened taxa that occur alongside those species triggering AZE criteria at each site.

AZE sites were first identified in 2005. Almost five years later, the Alliance for Zero Extinction is currently reviewing and updating the site inventory at global level. In the first stage of this process, all sites nominated in 2005 have been reviewed based on the current IBA species records for CR and EN species. In a second stage, this information will be made available online (see Globally Threatened Bird Forums for more details - http://www.birdlifeforums.org/) in order to solicit comments and new information. The resulting new list of AZE sites will be available at the end of 2009 on the AZE website (www.zeroextinction.org).

Trinidad's Northern Range is an AZE site for Trinidad Piping-guan (*Pipile pipile*)
Photo: Alfredo Colón Archilla

Figure 1. Location of draft 2009 AZE sites in the Americas



IBA conservation enhanced by support to AZE sites

Box 2

AZE designation provides IBAs with further justification and focus for conservation investment. American Bird Conservancy[2] (ABC), as a founding member of AZE, is advancing conservation efforts with the bird species that trigger them, at 40 AZE sites in 13 countries in Latin America and the Caribbean. Conservation actions include, direct land protection through the purchase of 12,906 ha, including the creation of new private reserves at 10 AZE sites and significant additions to seven others. ABC and Fundación ProAves, for example, created the Reserva Natural el Dorado in Colombia's Sierra Nevada de Santa Marta to protect the Santa Marta Parakeet (*Pyrrhura viridicata*), Santa Marta Sabrewing (*Campylopterus phainopeplus*), and Santa Marta Bush-tyrant (*Myiotheretes pernix*), as well as six globally threatened AZE-listed frogs. ABC also worked with Asociación Ecosistemas Andinos in the Alto Mayo region of northern Peru to create the Abra Patricia-Alto Nieva Private Conservation Area (PE058), key for the Endangered Long-whiskered Owlet (*Xenoglaux loweryi*) and Ochre-fronted Antpitta (*Grallaricula ochraceifrons*). In Brazil, ABC and Fundação Biodiversitas significantly expanded the Canudos Biological Station (BR090) and guard facilities, offering increased protection for the global population of Lear's Macaw (*Anodorhynchus leari*). In part due to these efforts, the macaw has recently been downlisted from Critically Endangered to Endangered in 2009.

Lear's Macaw (*Anodorhynchus leari*) has been downlisted to EN in 2009 partly thanks to conservation work.
Photo: Adriano Gambarini

[2] American Bird Conservancy (ABC), a US-based nongovernmental organization, is dedicated to the protection and conservation of native birds and their habitats throughout the Americas, especially the threatened resident and migratory birds in Latin America and the Caribbean.

Focus on IBAs and Neotropical migrants I

An estimated 19% of all bird species in the world are migratory[1], 11% of which are threatened or Near Threatened according to the IUCN red list (Kirby *et al*. 2008). In the Americas, at least 819 species have migratory populations (approximately 19% of all birds), of which 8% are threatened or Near Threatened. There are two major terrestrial migratory systems in the Americas, the Nearctic-Neotropical system, and the South American austral system, the most extensive system in the southern hemisphere (Chesser 1994). Numbers of Nearctic-Neotropical migratory species have been estimated at between 340 and 420 (Rappole *et al*. 1995, USFWS 2009, Stotz *et al*. 1996), while at least 220 species have been considered to be austral migrants (Chesser 1994).

Studies, especially from long-term data sets in North America, have shown that many Nearctic-Neotropical migrants are in rapid decline (Robbins *et al*. 1989; Kirby *et al*. 2008). Threats include agricultural activities resulting in habitat loss or degradation, and mortality from artificial structures along migratory routes, such as powerlines, buildings, and wind turbines, among others.

A total of 68 Neotropical migrants trigger A1 and A4 IBA criteria (see Methods) at 513 sites throughout the Americas (Table 1). Nearly half (44%) of these IBAs have been identified in North America on migrant's breeding grounds. Smaller numbers of IBAs in other regions maybe due to the fact that data are less readily available on population numbers outside of North America (necessary for IBA identification) and individuals may be more dispersed, meaning that thresholds are not met. However, recent efforts to document migratory populations in these regions have provided more information (Box 2). The majority of landbirds (mainly Passeriformes) concentrate in Central America, the Caribbean and Colombia outside of the breeding period, whereas waterbirds (and shorebirds in particular) are more widely distributed, although the coasts of Suriname and French Guiana, and certain sites in Chile and Argentina are of especial importance for this group.

IBAs manage to capture the most critical sites for migratory birds and thus offer a valuable framework for protecting these species, given that a network of sites and organizations already exists, facilitating the coordination of cross-border initiatives. It is fundamental to plan large-scale conservation actions over the length and width of flyways (Box 1), taking into consideration that the majority of migratory species are widely distributed over their breeding and wintering ranges and spend large parts of their life cycles in different countries and continents (Kirby *et al*. 2008). Furthermore, conserving critical IBAs for migrants will also conserve many resident species of conservation concern.

The conservation of the 513 IBAs triggered by Neotropical migrants would also benefit many resident threatened species, including 11 Critically Endangered species, 58 Endangered and 90 Vulnerable.

Table 1. Number of IBAs with Neotropical migratory species

Region	Landbird	Soaring birds	Waterbird	Total
North America	36	2	192	228
Central America	106	11	48	150
Caribbean	31	1	18	46
South America	14	1	75	89
Total	**187**	**15**	**333**	**513**

Box 2

Identification of Neotropical migrants within IBAs

Since 2003, BirdLife has coordinated five projects funded by the US Neotropical Migratory Bird Conservation Act (NMBCA) aimed at identifying priority IBAs (key stop-over and wintering sites) for the conservation of Neotropical migratory birds in the Tropical Andes, Central America and the Caribbean, the Guianas, Argentina and Chile, and the Pampas grasslands (of Argentina, Brazil, Paraguay and Uruguay) As well as identifying IBAs for migrants, a series of activities and mechanisms were also proposed during the projects, including habitat management, other conservation actions and environmental education for local communities focused on migrant species.

Thanks to these projects, more than 30,000 records of Neotropical migrants have been obtained from IBAs in the project study areas, of which information for the Tropical Andes is available online[2].

Yellow Warbler (*Dendroica petechia*)
Photo: Rebecca Field

[1] A migratory species can be defined as "a species where a substantial portion of the global or a regional population makes regular cyclical movements beyond the breeding range, with predictable timing and destinations (Kirby *et al*. 2008). Rappole *et al*. (1995) defines a Neotropical migrant as all or part of whose populations breed north of the Tropic of Cancer and winter south of that line.
[2] www.birdlife.org/action/science/sites/neotrops/andes/sites.html

Photo: Milo Burcham

Flyways program links IBAs and migratory species across a hemisphere

Box 1

BirdLife International's Flyways initiative in the Americas aims to develop cross-border coordination to stop declines in migratory birds. A series of projects have been developed as part of this program, linking sites and people through conservation, education and research. Two of the principal projects that BirdLife is supporting are:

Linking communities, wetlands and migratory birds
Sites within the IBA and Western Hemisphere Shorebird Reserve networks at Chaplin Lake (Saskatchewan, Canada), Great Salt Lake (Utah, USA) and Marismas Nacionales (Nayarit, Mexico) are linked by their importance for ten migratory species (Figure 1). The project, begun in 1996, works to connect people living along a shorebird migration flyway and to conserve associated birds throughout their range, using science, education and ecotourism.

Conserving sites linked by migrants in Peru, Chile and Argentina
This project seeks to implement conservation actions at four high priority sites in Argentina, Chile and Peru that share three migratory species of conservation concern with the "Linking communities" project sites. The project will connect communities at the four sites in the south with communities at the three northern sites (Figure 1).

Laguna Grande (AR074) in Catamarca, Argentina, one of the sites linked by its importance to shorebirds. It also supports 18,000 Near Threatened Puna Flamingos (*Phoenicoparrus jamesi*).
Photo: Jonathan Stacey

Focus on IBAs and Neotropical migrants II

Convention on Migratory Species of Wild Animals

The Convention on Migratory Species (CMS), also known as the Bonn Convention, was adopted in 1979 and came into force in 1983, with the aim of protecting migratory species that cross international borders. As of August 2009, the CMS had 112 parties, including 30 countries or overseas territories in the Americas, with a further two Americas countries (Brazil, USA) participating in CMS agreements.

CMS Parties strive towards strictly protecting migratory species threatened with extinction, and listed on Appendix I of the convention. Objectives include the conservation or restoration of their habitats, mitigating obstacles to migration and controlling other factors that might endanger them. Besides establishing obligations for each State joining the convention, CMS promotes concerted action among the Range States, or states lying within the same migratory species' distribution. Migratory species that need or would significantly benefit from international cooperation are listed on Appendix II. The Convention encourages the Range States to conclude global or regional agreements for these species.

Information on IBAs can assist parties to meet these commitments, for example, by protecting IBAs where Appendix I species occur, or by identifying suitable areas of habitat for each bird species covered by international agreements under Appendix II.

To date, one Agreement (legally binding treaty) and three MoUs (less formal instruments) of direct relevance to bird conservation in the Americas have been developed under the auspices of CMS. These are:

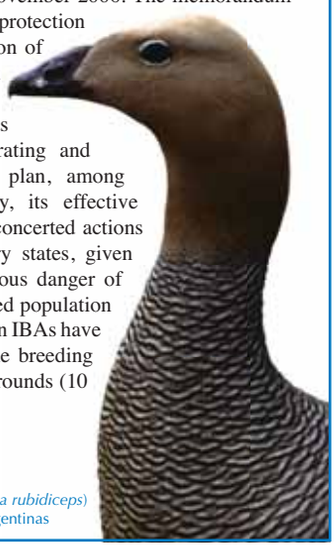
Agreement on the Conservation of Albatrosses and Petrels (ACAP) is a multilateral agreement which seeks to coordinate international activity to mitigate known threats to albatross and petrel populations. ACAP came into force in February 2004 and as of January 2009 had 13 Parties, including 11 territories and countries in the Americas (Argentina, Chile, Ecuador, French Overseas Territories, Peru, UK Overseas Territories and Uruguay). Currently, ACAP applies to all of the world's albatross species plus the *Macronectes* and *Procellaria* petrels. Many breeding colonies of these species have been identified as IBAs, and the ongoing work to identify marine IBAs will help promote their conservation on the high seas.

Black-browed Albatross (*Thalassarche melanophrys*)
Photo: James Lowen; www.pbase.com/james_lowen

The Memorandum of Understanding (MoU) on **Conservation of Southern South American Migratory Grassland Bird Species and their Habitats** became effective on 26 August 2007 and was signed by the governments of Argentina, Paraguay, Uruguay and Brazil (although not a CMS member). Loss and fragmentation of grassland habitats and illegal capture and trade have been the main reasons for the decline in the populations of several southern grassland species. Threatened migratory grassland birds covered by this agreement include Buff-breasted Sandpiper (*Tryngites subruficollis*), Strange-tailed Tyrant (*Alectrurus risora*), Cock-tailed Tyrant (*Alectrurus tricolor*), Chestnut Seedeater (*Sporophila cinnamomea*), Rufous-rumped Seedeater (*Sporophila hypochroma*), Marsh Seedeater (*Sporophila palustris*), Entre Ríos Seedeater (*Sporophila zelichi*) and Saffron-cowled Blackbird (*Xanthopsar flavus*). A total of 111 IBAs have been identified for all of these species in the above four countries, and form a blueprint for site-based conservation action under the framework of the agreement.

Chestnut Seedeater (*Sporophila cinnamomea*)
Photo: Joaquín Aldabe

The MoU on the **Conservation of the Ruddy-headed Goose (*Chloephaga rubidiceps*)** between Argentina and Chile became effective on 21 November 2006. The memorandum aims to provide effective protection for the mainland population of this species (listed in both appendices) by identifying factors contributing to its critical status and elaborating and implementing an action plan, among other activities. Currently, its effective conservation depends on concerted actions between the two signatory states, given that the species is in serious danger of extinction with an estimated population of 1000 individuals. Sixteen IBAs have been identified on both the breeding (six sites) and wintering grounds (10 sites) for this species.



Ruddy-headed Goose (*Chloephaga rubidiceps*)
Photo: Daniel A. Gómez/Aves Argentinas

The MoU on the **Conservation of High Andean Flamingos and Their Habitats** was signed in December 2008 by Bolivia, Chile and Peru with the aim of providing effective protection for the populations of high Andean flamingos and their habitats. As part of the MoU, an action plan will be developed to guide the conservation actions of the signatories, for example, promoting coordination of these actions, facilitating international cooperation, improving knowledge of the species, management, research, awareness and the exchange of information. A major component of the action plan has already been advanced by the High Andean Flamingo Conservation Group, through a priority site analysis for these species.

Chilean Flamingo (*Phoenicopterus chilensis*)
Photo: Murray Cooper

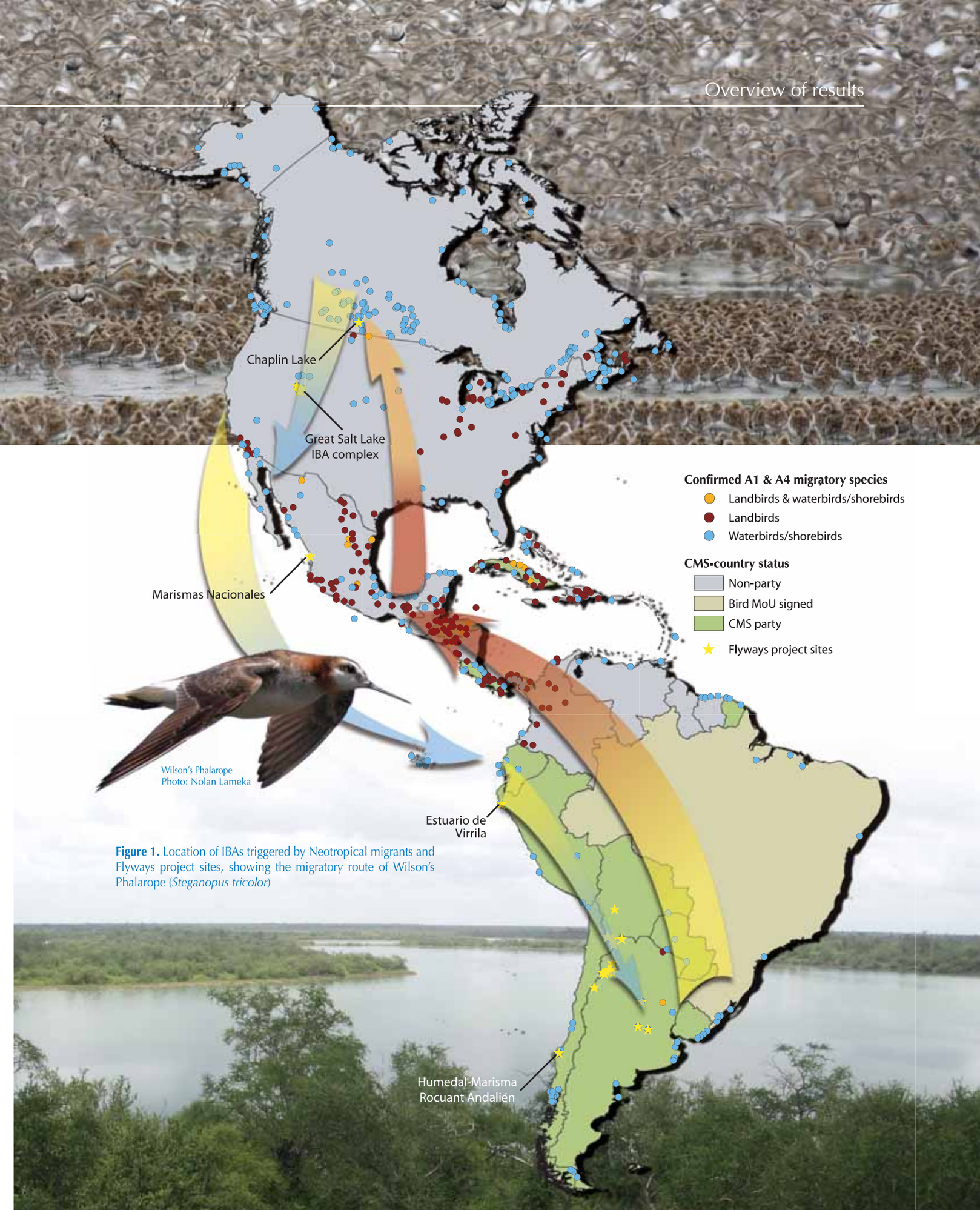


Figure 1. Location of IBAs triggered by Neotropical migrants and Flyways project sites, showing the migratory route of Wilson's Phalarope (*Steganopus tricolor*)

Lagunas Saladas - Riacho Yacaré (PY010) is globally important for non-breeding populations of Wilson's Phalarope.
Photo: Silvia Centrón

Focus on IBAs and waterbird conservation

The IBA program, the Western Hemisphere Shorebird Reserve Network (WHSRN) and Ramsar sites are complementary approaches to waterbird conservation in the Americas. All three initiatives use similar criteria to identify sites, that is, numerical thresholds or percentage population threshold for waterbird species. However, there are important differences in each initiative, Ramsar is a legally binding international convention which requires government participation to designate sites. IBAs and WHSRN are both civil society initiatives, although sites joining WHSRN require the landowner to sign an agreement to further the site's conservation, which is not the case with IBAs.

The technical criteria for site designation are also slightly different. For example, WHSRN and Ramsar include recognized subspecies and/or geographically discrete breeding populations to calculate biogeographic population thresholds. IBA trigger species are only recognized at species level, and currently use global or biogeographic population thresholds depending on whether the trigger species is defined as a waterbird or not (see Methods). Waterbird population estimates for designating Ramsar sites were first published in 1994, and now provide an essential source of information for identification of sites within the IBA program and WHSRN (Rose & Scott 1994, Wetlands International 2006).

Given the similarities between the initiatives, sites identified as IBAs (under A4 criteria) for their importance to waterbird congregations can be flagged as candidate sites for designation under the Ramsar convention (Box 1) and/or WHSRN (Box 2), in the case of those identified for shorebirds. For example, Bahía de Panama (PA041) was nominated an IBA in 1999, later declared a Ramsar site in 2003, joined

IBAs and Ramsar sites

To date, 343 Ramsar sites have been identified in the Americas (Ramsar 2009), of these, 125 qualify under specific criteria for birds (criteria 5 and/or 6) of the Ramsar convention (Table 1). Of the total number of Ramsar sites in the region, 158 are also IBAs, in that their boundaries overlap partially or wholly. However, of these, 56 IBAs are not designated for waterbirds and the Ramsar sites they overlap with may qualify under other criteria other than for birds. A further 406 IBAs, covering 16 million ha, could be considered as candidate Ramsar sites[1], in that they qualify under criteria 5 or 6 (Appendix 4a), triggered by 140 species of waterbird (Table 1)

North America holds the largest number of candidate Ramsar sites (57% of the total) based on population data belonging to 67 species at IBAs (a number that is likely to increase once the process of global IBA identification in the United States is completed). South America has the second highest number of candidate Ramsar sites (23%), although based on a slightly greater number of species (68). However, the relative number of candidate sites between the regions is probably in part a reflection of the degree of knowledge of waterbird population data.

Table 1. Number of IBAs, current and candidate Ramsar sites

Region	Ramsar sites	IBAs overlapping with Ramsar sites	IBAs as candidate Ramsar sites
North America	60	20	233
Central America	153	58	14
Caribbean	36	21	65
South America	94	59	94
Total	**343**	**158**	**406**

Long Pond (AI005) is one of 24 potential WHRSN sites in the Caribbean. The site is privately owned and under pressure from development.
Photo: Farah Mukhida/ANT

IBAs and WHSRN

Seventy-seven WHSRN sites have been indentified to date in the Americas (WHSRN 2009), of which the majority are in the USA (42) and Mexico (13). A total of 38 IBAs included in this directory overlap entirely or partly with these WHRSN sites (Table 2). Additionally, 158 IBAs in 28 countries or territories are also candidate WHSRN sites[2] in that they meet the WHSRN criteria for 44 shorebird species, including 23 sites in the Caribbean, a region where WHSRN sites have not been identified to date. Undoubtedly, further IBAs, especially in the United States and Mexico, will qualify as WHSRN sites when population data become available. Five of the candidate IBAs qualify as WHSRN sites of Hemispheric importance (all located in North America except for GF002 Littoral in French Guiana), eight as WHSRN sites of International importance (all in North America), and the rest (143) are WHSRN sites of Regional importance (Appendix 4b).

These candidate sites cover an area greater than the 18 million hectares, 50 of them are fully protected, 52 partially protected and the remainder not protected (53) or information on protection status lacks (3).

Table 2. IBAs and WHSRN sites in the Americas

Region	WHSRN category	Existing WHSRN sites	IBAs overlapping with WHSRN sites	Candidate WHSRN sites
North America	Hemispheric	12	2	4
	International	12	2	8
	Regional	24	13	55
Central America	Hemispheric	3	3	0
	International	6	4	0
	Regional	6	1	16
Caribbean	Regional	0	0	23
South America	Hemispheric	7	4	1
	International	3	4[3]	0
	Regional	4	3	51
Total		**77**	**38**	**158**

WHSRN in 2005, and was finally declared a protected area in 2009, providing tangible benefits for the site's conservation.

The WHSRN initiative also provides a convenient scheme for setting priorities among IBAs identified for shorebirds through the three categories of site identification (Box 2). Information on IBAs can also assist parties to the Ramsar convention to deliver on their commitments, for example in national wetland policies, or their use as a basis for national wetland monitoring programs. IBA monitoring data can also help identify sites that should be listed on the Montreux Record, as well as pinpointing the required conservation actions. The Montreux Record is a list of Ramsar sites where changes in ecological character have occurred, are occurring, or are likely to occur as a result of technological developments, pollution or other human interference.

Bahía de Asunción (PY024) was declared a protected area and joined the Western Hemisphere Shorebird Reserve Network after its initial identification as an IBA in 2003.
Photo: Arne Lesterhuis

The Ramsar convention

Box 1

The Ramsar convention, officially known as the Convention on Wetlands of International Importance especially as Waterfowl Habitat, was adopted in 1971 and came into force in 1975. As of August 2009, the convention had 159 parties, including 51 countries or territories in the Americas region (as defined in this directory). The only Americas countries not currently parties to the convention are Dominica, Grenada, Guyana, Haiti, St Kitts and Nevis, and St Vincent and the Grenadines.

The convention provides a framework for international cooperation for the conservation and wise use of wetlands[4], and as such, parties have a commitment to promote the wise-use of all wetlands in their territory, to designate suitable sites for inclusion on the List of Wetlands of International Importance (Ramsar Sites), and to promote their conservation.

As of August 2009, the parties had designated 1847 Ramsar Sites globally, with 343 sites in the Americas.

Of the eight criteria that Ramsar has established to identify important wetlands, two specifically focus on waterbirds:

- **Criteria 5:** A wetland should be considered internationally important if it regularly supports 20,000 waterbirds (similar to IBA criterion A4iii).
- **Criteria 6:** 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 (similar to IBA criteria A4i).

Western Hemisphere Shorebird Reserve Network

Box 2

WHSRN is a site-focused shorebird conservation strategy launched in 1985. During the last 20 years, over 8.4 million hectares of shorebird habitat have been brought under the auspices of the initiative. Its principal aims are to:

- Build a strong network of key sites used by shorebirds throughout their migratory ranges.
- Develop science and management tools that expand the scope and pace of habitat conservation at each site within the Network.
- Establish local, regional and international recognition for sites, raising new public awareness and generating conservation funding opportunities.
- Serve as an international resource, convener and strategist for issues related to shorebird and habitat conservation.

The network currently has 77 sites in 10 countries across the Americas, from Alaska in the north to Tierra del Fuego in southern South America. Three categories of sites, and one of Landscapes, are defined according to their importance for shorebirds:

- **Sites/Landscapes of Hemispheric Importance:**
  - at least 500,000 shorebirds annually, or
  - at least 30% of the biogeographic population for a species
- **Sites of International Importance:**
  - at least 100,000 shorebirds annually, or
  - at least 10% of the biogeographic population for a species
- **Sites of Regional Importance:**
  - at least 20,000 shorebirds annually, or
  - at least 1% of the biogeographic population for a species

Western and Semipalmated Sandpipers in the Upper Bay of Panama, an IBA, Ramsar and WHSRN site.
Photo: Karl Kaufmann

[1] Although these sites meet the Ramsar criteria 5 or 6, other factors such as government approval and whether the wetland definition also would need to be taken into account if sites are to be considered for a designation process.
[2] Although these sites meet the biological criteria for inclusion in WHSRN, aspects such as site ownership and willingness to sign a site agreement must also be taken into account.
[3] Two IBAs in Argentina (AR258 and AR230) overlap with a single WHSRN site (Bahía de San Antonio).
[4] The convention defines wetlands 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".

Focus on IBAs and other biodiversity

A greater amount of information is available on the status and distribution of birds in the Americas than for any other major taxonomic group. Studies in other regions have shown that birds can be a highly effective means of setting geographical priorities for conservation in the absence of detailed data on other taxa (e.g. Howard *et al*. 1998, Brooks *et al*. 2001, Burgess *et al*. 2002, Pain *et al*. 2005, Tushabe *et al*. 2006). Consequently, conservation of the IBA network can be expected to make a major contribution to the conservation of wider biodiversity, and identification of IBAs can contribute to the identification of a network of globally important sites for conservation, termed Key Biodiversity Areas (KBAs).

IBAs provided the original basis for the KBA concept, and the criteria for identifying both are very similar (see Methods, Langhammer *et al*. 2007, Eken *et al*. 2004). Consequently, with few exceptions (due to slight differences in the application of the criteria), IBAs classify as KBAs for birds, and thus form a subset of KBAs. As IBA inventories are generally well developed throughout the hemisphere, they can serve as the basis for identifying KBAs as has been the case in countries such as Nicaragua and El Salvador (Box 1), and in the Caribbean (Box 2).

Key Biodiversity Areas

Key Biodiversity Areas (KBAs) are sites of global significance for the conservation of biodiversity. They are identified nationally using simple, globally standardized criteria and thresholds. As the building blocks for implementing an ecosystem approach and maintaining effective ecological networks, KBAs are the starting point for landscape-level conservation planning. Governments, inter-governmental organizations, NGOs, the private sector and other stakeholders can use KBAs as a tool to identify and augment national systems of globally

Photo: IAvH

Box 1

IBAs provide baseline for identifying KBAs in El Salvador and Nicaragua

The preexistence of IBAs in both El Salvador and Nicaragua enabled an efficient (and extremely rapid in the case of El Salvador) identification of KBAs. Given that information on bird distributions is far greater than for any other taxa, the first task was to assemble data on the distribution of globally-threatened plants, amphibians, reptiles and mammals. Validation workshops were then held to consolidate the proposed sites in both countries. In El Salvador, 12 of the country's 20 IBAs qualified as KBAs, and only six additional sites in the country were identified as KBAs, due to the presence of globally threatened trees, amphibians and reptiles[1]. In Nicaragua, 16 of 37 IBAs are included in the 17 KBAs identified, although only 47% of all KBAs are triggered by avian species.

IBAs which did not qualify as KBAs highlighted the methodological differences between the two site-based priority setting methods. Those IBAs which qualify under the restricted-range criterion (A2) but do not meet the KBA threshold of holding 5% of the global population of these species (Langhammer *et al.* 2007) were not confirmed as KBAs. Although most Central American restricted-range species have not been evaluated to determine their global population sizes, it is not expected that current IBAs, especially the smaller ones, would hold such a high proportion of the species' overall population. Species with very small ranges (e.g. some amphibians restricted to essentially one site) are often considered globally threatened and therefore trigger the KBA vulnerability criteria. However, for others (e.g. some plant species) it is widely assumed that further inventories will eventually document broader distributions. IBAs qualifying under the biome-restricted criterion (A3) were not identified as KBAs as this criterion has yet to be developed for KBAs.

In El Salvador, KBAs cover 16% of the country's area, whereas IBAs cover 15%. Combined, 20% of El Salvador's territory is of global importance for biodiversity conservation. This figure is very high considering that only about 20% of the country has natural habitat cover, and only 3% is formally protected. In summary, where there is natural habitat, there are globally-threatened species.

Both IBAs and KBAs are employed as tools for managing natural areas in Nicaragua. Recently the Bosawas IBA (NI024) and KBA in Nicaragua and the Río Plátano IBA (HN008) in Honduras were used to support the designation of a transboundary biosphere reserve. This binational initiative aims to safeguard the "Heart of the Mesoamerican Biological Corridor" in an area representing the largest complex of protected areas in Central America.

KBA designation will undoubtedly help mobilize conservation actions and act as a tool for site management at IBAs given that further arguments have been provided for their conservation through their declaration as globally important for other taxa.

The Critically Endangered Black-eyed Tree Frog (*Agalychnis moreletii*) triggers KBA criteria at El Imposible National Park (KBA and IBA).
Photo: Vladlen Henríquez/SalvaNATURA

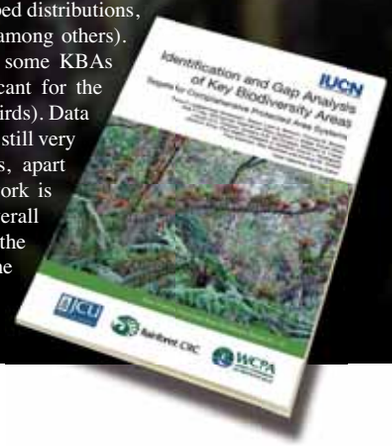
[1] The final KBA report detailing El Salvador's 18 KBAs is available from www.salvanatura.org/.

important sites for conservation. KBAs extend the IBA concept to other taxonomic groups and they are now being identified in many parts of the world by a range of organizations. Examples of other taxon-specific approaches, feeding into the KBA model, include Important Plant Areas (Anderson 2002, Plantlife International 2004), Prime Butterfly Areas (Van Swaay & Warren 2003), Important Mammal Areas (Linzey 2002), and Important Sites for Freshwater Biodiversity (Darwall & Vié 2005), with prototype criteria developed for freshwater mollusks, fish and for marine systems (Edgar *et al*. 2008).

As with IBAs, KBAs are identified based on populations of threatened or geographically concentrated species, based on two criteria:

- **Vulnerability:** Regular occurrence of a globally threatened species (according to the IUCN Red List) at the site.
- **Irreplaceability:** Site holds a threshold percentage of a species' global population at any stage of the species' lifecycle (applicable to species with restricted ranges, clumped distributions, globally significant congregations, among others).

Most IBAs classify as KBAs, but some KBAs are not IBAs (i.e. they are significant for the conservation of other taxa, but not birds). Data on species status and distribution are still very scanty for most taxonomic groups, apart from birds. As such, the IBA network is a good first approximation to the overall network of KBAs, as it includes the bulk of other target taxa as well as the most significant sites for threatened and restricted-range species.



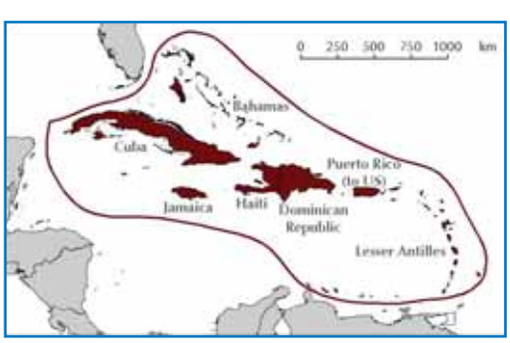
IBAs play a key role in identifying funding priorities in Caribbean Hotspot

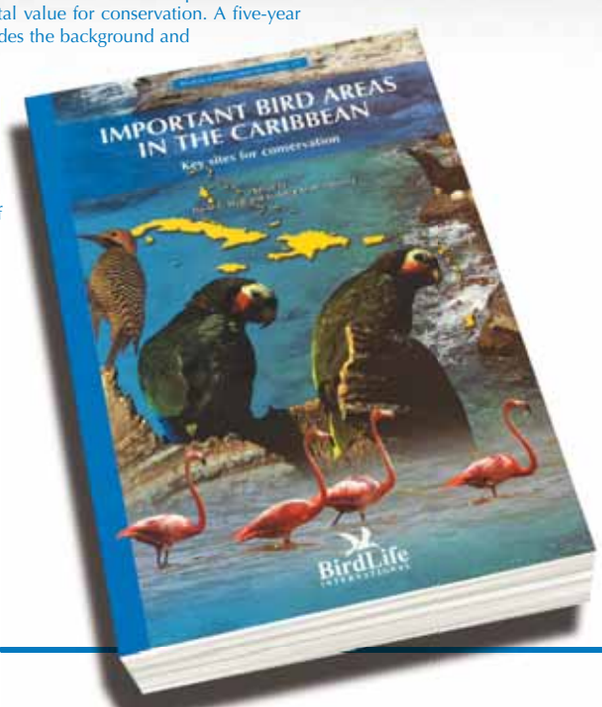
Box 2

Since 2001, the process of identifying Important Bird Areas in the Caribbean (BirdLife International 2008a, this directory) has brought together a wealth of institutions and individuals in a joint effort to pinpoint globally important sites for conservation. A total of 268 global IBAs were identified during this process and were recently employed as the basis for identifying Key Biodiversity Areas (KBAs) in the Caribbean Islands Hotspot (Mittermeier *et al.* 2004). These sites will play a key role within the Critical Ecosystem Partnership Fund (CEPF) Caribbean Ecosystem Profile.

The purpose of the Ecosystem Profile, drafted by BirdLife International, is to provide an overview of biodiversity values, conservation targets and causes of biodiversity loss, coupled with an assessment of existing and planned conservation activities in the hotspot. This information will then be used to identify the niche where CEPF investment can provide the greatest incremental value for conservation. A five-year CEPF investment strategy is an integral part of each Ecosystem Profile which in turn provides the background and context to the strategy.

The Ecosystem Profile was finalized at four workshops (three national and one regional) in June and July, 2009, with the participation of 30 countries and territories, 160 institutions and more than 200 local actors. In total, 252 KBAs were identified for the region, of which 25 were considered as highest priority sites. Also as part of the profile, four strategic directions were identified, including thematic areas such as coordination, capacity building, legislation, climate change adaptation and invasive species. These key areas of work and priorities for funding will be included in the five-year investment strategy.





Îlet de Vieux-Fort (GP009), Guadaloupe
Photo: Anthony Levesque

Focus on IBAs and global scale conservation priorities

Whereas IBAs define priorities at the site scale, the 34 biodiversity hotspots, defined by Conservation International (Mittermeier *et al*. 1999, 2004), establish priorities at the regional scale. Hotspots are defined as areas of exceptionally unique biodiversity (holding at least 1500 endemic vascular plants; Myers 1988) undergoing exceptional loss of habitat (70% or more of their original vegetation). Natural vegetation in these areas of high endemism once covered 23,490,101 km^2 throughout the world, now only 14.4% of this area remains. In the Americas, nine hotpots have been defined, covering a total area of 7,594,885 km^2 of which just 20% remains under original vegetation. Almost 75% of the total Hotspot area lies in South America, within five Hotspots. There are four Hotspots in Central America, two in North America and one in the Caribbean.

An additional regional priority setting approach are Wilderness Areas, defined as large (at least 10,000 km^2) biogeographical units with more than 70% of original vegetation still intact and low human population density (less than or equal to five people per km^2; Mittermeier *et al*. 2002, 2003). Half of the 24 Wilderness Areas identified in the world are in the Americas, with the largest areas being the Boreal Forests and Amazonia. Wilderness Areas in the Americas cover over 20 million km^2, approximately half the hemisphere's area. Most Wilderness Areas are not particularly speciose, and the vast majority of species endemic to Wilderness Areas are concentrated into just five high biodiversity ones, two of which occur in the Americas: Amazonia and the North American desert-complex of northern Mexico and the southwestern USA.

IBAs and Hotspots

More than half (57%) of IBAs lie within one of the nine Hotspots in the Americas. By regions, nearly all IBAs in Central America and the Caribbean lie within Hotspots, with all but eight of the Caribbean's IBAs falling within the Caribbean Islands Hotspot. Exceptions are those sites in Bermuda, and Trinidad and Tobago, biogeographically outside the Caribbean. In South America, over 60% of IBAs fall within a Hotspot. At least a quarter of the IBAs are fully protected in all but three Hotspots in the Americas.

IBA coverage of Hotspot total area is generally low (Table 1), however, this is to be expected given that Hotspots have less than 70% of their original vegetation intact, and IBAs generally have high levels of original vegetation, as required by the bird populations they aim to protect. When IBA area within Hotspots is compared to the area of remaining vegetation, differences are much less with the exception of California Floristic Province (Table 1), where the global IBA inventory is yet to be completed.

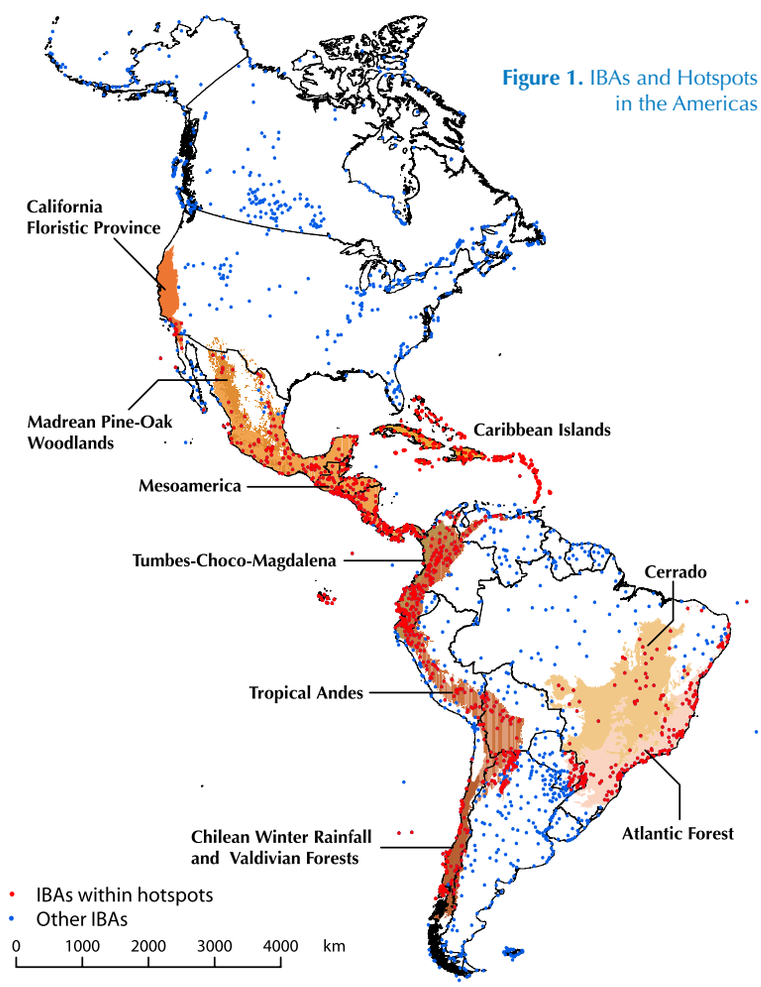


Figure 1. IBAs and Hotspots in the Americas

Table 1. Coverage of Hotspots by IBAs in the Americas

Hotspot	No of IBAs within hotspot	Total IBA area within Hotspot (km^2)	Percentage coverage by IBAs[1]	Percentage of remaining native vegetation[2] in Hotspot	Percentage of IBAs totally protected
Caribbean Islands	263	32,032.8	14.0	10.0	34.4
California Floristic Province	13	5,000.7	1.7	25.0	7.7
Madrean Pine - Oak Woodlands	54	62,497.9	13.6	20.0	11.1
Mesoamerica	261	280,355.3	24.9	20.0	29.9
Tumbes - Choco - Magdalena	101	32,602.3	11.9	24.0	43.6
Tropical Andes	356	260,459.4	16.9	25.0	36.5
Cerrado	58	126,904.6	6.3	21.6	20.7
Atlantic Forest	169	77,731.1	6.3	8.1	24.3
Chilean Winter Rainfall - Valdivian Forests	79	46,602.3	11.7	30.0	39.2
Total	**1,354**	**923,701.6**	**12.2**	**20.1**	**32.0**

[1] Calculated according to IBA and Hotspot/Wilderness Area shapefiles. Where IBA shapefiles were not available (Chile, US & Guyana), areas of IBAs whose central coordinates fell within the Hotspot were summed.
[2] Taken from Mittermeier *et al*. (2004).

IBAs and Wilderness Areas

Identifying IBAs is more challenging in Wilderness Areas where site-based conservation may not always be the most appropriate approach. Given that Wilderness Areas represent large tracts of generally homogenous vegetation, the difficulty lies in identifying particular sites of a manageable size for conservation (see Focus on IBAs in the Amazon, p39). Of the Wilderness Areas in the Americas, most IBAs have been identified in Amazonia (Table 2), although most IBAs per km² occur in Bañados del Este. However, percentage cover of Wilderness Areas and average area of IBAs reflects the difficulties in delimiting sites for conservation management, but given that such a large area of the hemisphere remains relatively intact, more efforts need to be made in establishing long-term conservation initiatives to protect these vast landscapes.

Figure 2. IBAs and Wilderness Areas in the Americas

Table 2. Coverage of Wilderness Areas by IBAs in the Americas

Wilderness Areas		IBAs			
Name	Area (km²)[3]	Number	Total area (km²)	Average area (km²)	Percentage cover of Wilderness Area
Arctic Tundra	3,500,000	91	269,622.1	2,962.9	8%
Boreal Forest	5,450,000	86	129,759.6	1,508.8	2%
Northwest Pacific	315,000	47	20,591.5	438.1	7%
Northern Rockies	570,500	5	444.0	88.8	0%
Appalachian Mountains	249,000	11	11,512.5	1,046.6	5%
North American Deserts	**1,416,134**	**32**	**78,540.0**	**2,454.4**	**6%**
Colorado Meseta	326,400	5	4,427.0	885.4	1%
Mojave Desert	130,634	3	808.1	269.4	1%
Sonoran and Baja California Deserts	324,300	15	42,313.6	2,820.9	13%
Chihuahuan Desert	634,800	9	30,991.3	3,443.5	5%
Llanos	451,474	15	98,012.7	6,534.2	22%
Amazonia	**6,683,926**	**136**	**1,220,164.6**	**8,971.8**	**18%**
Caatinga	735,000	21	23,991.4	1,142.4	3%
Pantanal	210,000	10	83,036.6	8,303.7	40%
Chaco	996,600	83	169,057.4	2,036.8	17%
Coastal Deserts of Peru and Chile	290,032	47	23,319.2	496.2	8%
Bañados del Este	38,500	11	18,962.0	1,723.8	49%
Magallanic Forests	147,200	22	20,223.3	919.2	14%
Patagonia	550,400	55	74,761.3	1,359.3	14%
Total	**21,603,766**	**672**	**2,241,998.1**	**3,336.3**	**10%**

[3] Taken from Mittermeier *et al*. (2002).

Focus on IBAs in the Amazon

The Amazon

The Amazon is home to more species of plants and animals than any other Wilderness Area (Mittermeier *et al*. 2002) with perhaps 30% of the world's species found there (see IBAs and global scale conservation priorities - p37). Recent surveys indicate at least 40,000 species of plants (30,000 considered endemic), 1500 species of birds (263 endemics), 427 mammals (173 endemics), 387 reptiles (216 endemics) and 427 amphibians (364 endemics). The Amazon is also home to a wealth of indigenous cultures with about 350 known tribes, many of which now have greatly reduced populations (e.g. about one third of the 170 tribes in the Brazilian Amazon have populations of less than 200 people Mittermeier *et al*. 2002).

Threats to the Amazon are equal to its immense size. Since 2000, deforestation rates in the Brazilian Amazon have averaged 21,000 km^2 per year, likely implying the loss of significant biodiversity (INPE 2007). Logging remains the biggest threat, through clear-cutting and selective-extraction, with the area selectively logged approximately equal to the deforested area.

Although the Amazon benefits from a number of conservation initiatives, no single reserve is currently protected to the extent required, and over the entire basin, just 8.3% of the area benefits from some form of protection (Mittermeier *et al*. 2002). Conservation in the Amazon requires a landscape-level approach. Such approaches typically involve the identification and integration into broader socio-political agendas of inter-connected networks of core conservation areas (e.g. IBAs), linked by habitat corridors.

IBAs in the Amazon

The Amazon basin, as with other Wilderness Areas, is characterized by large expanses of relatively homogeneous habitat, a scarcity of biodiversity distribution data, which when available is often biased towards access routes such as roads and rivers, and a lack of information regarding land tenure (compounded by the fact that in many areas formal land management structures do not exist). These present significant challenges for the identification of IBAs, and bring into question the validity of site-based approaches to conservation in Wilderness Areas. Perhaps the most significant benefit of identifying IBAs in such areas is the opportunity it provides for proactive conservation investments by protecting the most important sites for biodiversity conservation before threats to these areas intensify and more habitat and species are lost. Protecting biodiversity, however, is not the only benefit from conserving IBAs. The benefits of conserving these areas are also critical to people. These benefits include provisioning services, such as commerce based on non-timber forest products and the safeguarding of clean water sources, regulating services, including climate regulation through the reduction of emissions from tropical forest destruction, and cultural services, which can range from the maintenance of spiritual practices to educational opportunities.

The challenges to identifying IBAs in the Amazon were resolved through combining species data with maps of soil types, topography, forest types, and logging concessions. In addition, socio-economic data were used to guide the delineation process, to avoid areas that are already heavily utilized or socio-politically complex, and to incorporate existing protected areas into the IBA network. Importantly, it was recognized that there is no theoretical maximum size for an IBA, and where appropriate, large IBAs were identified. Of the 68 IBAs in the Americas over 1 million ha in size, 47 lie within the Amazon basin, including the largest IBA in the world: 7,351,066 ha at Tabocais, in Brazil. However, it is important to bear in mind that the identification of IBAs in Wilderness Areas reflects our state of knowledge and says nothing regarding the conservation importance of surrounding areas not identified as IBAs. These should be considered, at a minimum, as priority areas for research, and potentially as priority areas for conservation through a landscape-scale approach.

To date 132 IBAs have been identified in the Amazon basin (Figure 1) covering a total area of approximately 119,333,769 ha (17.15% of the total area): seven in Ecuador, 10 in Colombia, 13 in Peru, 14 in Bolivia, 18 in Venezuela, 42 in Brazil, nine in Suriname, 10 in Guyana and nine in French Guiana. Average size of IBAs in the Amazon is 932,296 ha, considerably larger than the average size of IBAs across the Americas at 140,347 ha. In the Amazon region, 100 IBAs were triggered by the A1 criterion, with a total of 105 globally threatened and Near Threatened species (Table 1), 86 were triggered by the A2 criterion (Table 2), 74 by A3 (Table 2) and 11 under A4 criteria.

Table 1. Threatened and Near Threatened species triggering IBA criteria in the Amazon region

IUCN category	No. of Species triggering IBA criteria in the Amazon	No. of IBAs containing A1 trigger species according to IUCN category
CR	5	9
EN	13	32
VU	31	36
NT	56	84
Total	**105**	**100**

Table 2. Restricted-range and biome-restricted species by EBA/Biome triggering IBA criteria in the Amazon region

Biome code	EBA code	EBA/Biome name	No. of species	No. IBAs per EBA/Biome
ANT		**Amazonia North and Tepuis**	**79**	**19**
	EBA044	Ecuador-Peru East Andes	8	3
	EBA063	Rio Branco gallery forest	2	4
	EBA064	Tepuis	36	17
	EBA065	Orinoco-Negro white-sand forest	12	12
	PEBA001	(Suriname coast)	5	3
	SA019	Macarena mountains (secondary area)	1	1
	SA020	Sierra de Chiribiquete (secondary area)	1	1
	PSA003	(White-spotted Antvireo range)	1	1
	PSA004	(Coastal mangroves of French Guiana and Brazil)	1	5
AMS		**Amazonia South**	**118**	**46**
	EBA047	Andean ridge-top forests	2	1
	EBA053	Peruvian East Andean foothills	20	4
	EBA054	Bolivian and Peruvian lower yungas	6	2
	EBA068	South-east Peruvian lowlands	12	11
	PSA005	"Cordillera Azul" // ('Cushabatay' mountains)	2	1
	SA023	Upper Inambari valley (secondary area)	1	1
	SA025	Rio Ji-paraná (secondary area)	1	2
	SA026	Rio Guaporé (secondary area)	1	2
	SA027	Beni lowlands (secondary area)	1	3
	SA029	Borba (secondary area)	1	2
	SA030	Upper Rio Cururu (secondary area)	1	1
ANT/AMS				
	EBA067	Amazon flooded forest	4	7
	EBA066	Upper Amazon-Napo lowlands	11	14

Threats to Amazonian IBAs

Increasing environmental degradation is altering ecosystem services in the Amazon. The most frequent direct threats affecting Amazonian IBAs are: agricultural expansion and intensification; over-exploitation, persecution and control of species; and energy production and mining (Figure 2; BirdLife International 2008b). Direct threats are limited to human activities.

Figure 2. Threats to Amazonian IBAs (n = 127)

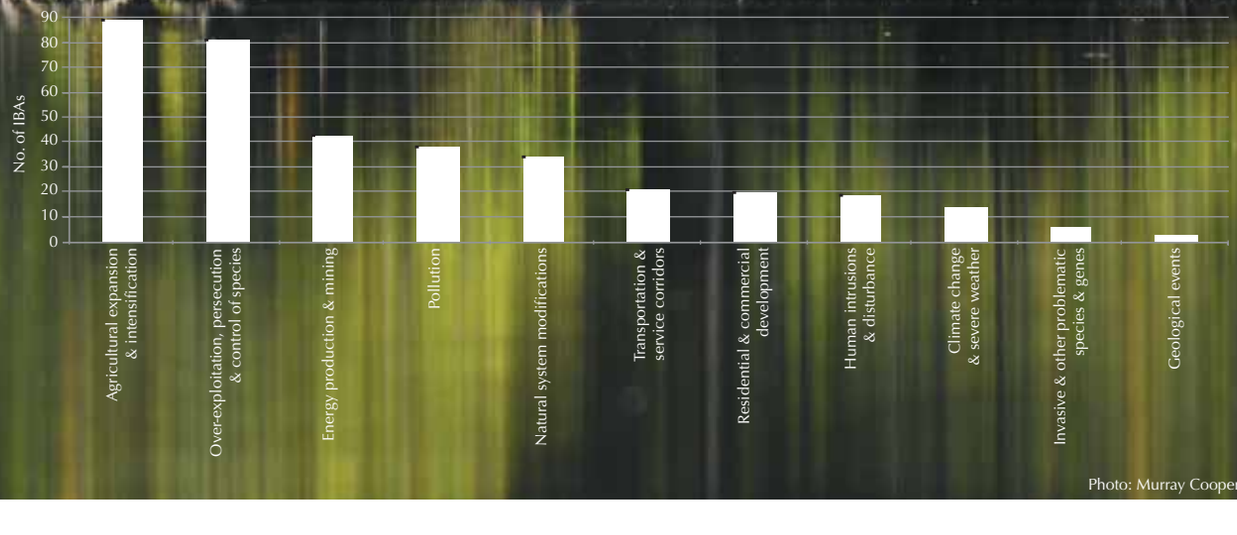


Photo: Murray Cooper

Initiative for the Integration of Regional Infrastructure in South America

Box 1

The Initiative for the Integration of Regional Infrastructure in South America (IIRSA) was established at the First Meeting of South American Presidents in Brasilia in 2000. The initiative aims to develop transport, energy and telecommunications infrastructure in order to achieve greater integration between the 12 South American countries (Figure 1).

The objectives set out by IIRSA are:

- Develop and modernize transport, energy and telecommunications infrastructure in an integral manner in South America.
- Improve competitiveness of South American economies as well as their insertion into international markets.
- Promote fair and sustainable economic and social development in South American countries.

IIRSA is implemented through 10 key regions for integration and development. Four of these key areas fall within the Amazon basin: the Amazon region, Andean region, Peruvian-Bolivian-Brazilian region and the Guiana Shield. Within each of these regions, transport or communications infrastructure will be built, linking countries and industries in order to make way for the development of more than 500 projects which have been proposed within IIRSA. The regional initiative aims to facilitate transport for both internal consumption as well as export to global markets.

According to official sources, direct impacts from new roads will affect areas within approximately 2 km on either side with indirect impacts felt up to a distance of 50 km. The main impacts are: deforestation, degradation, increase in trade of flora and fauna, displacement of indigenous and peasant farmer communities from project development sites and proliferation of diseases, among others. Many IBAs will be directly affected by the construction of infrastructure including roads, waterways, train tracks, oil pipelines, airports, ports and power stations, among others. This mosaic of proposed infrastructure will also affect the integrity of major rivers, such as the Branco, Napo and the Amazon itself, if they are modified in order to make them navigable all year round, as has been proposed. Furthermore, large tracts of forest will be affected by the construction of new roads and access routes, allowing products to be transported from one region to another. Already, in Peru, displacements have been reported of local communities near the Madeira river, as well as large loss of forest in Brazil, Ecuador and Bolivia (ICAA 2009).

It will be necessary to establish educational campaigns for civil society in general, require the funders behind IIRSA to comply with their environmental safeguard policies and promote strategic environmental impact assessments as obligatory requirements for the implementation of any large-scale infrastructure project, among other actions.

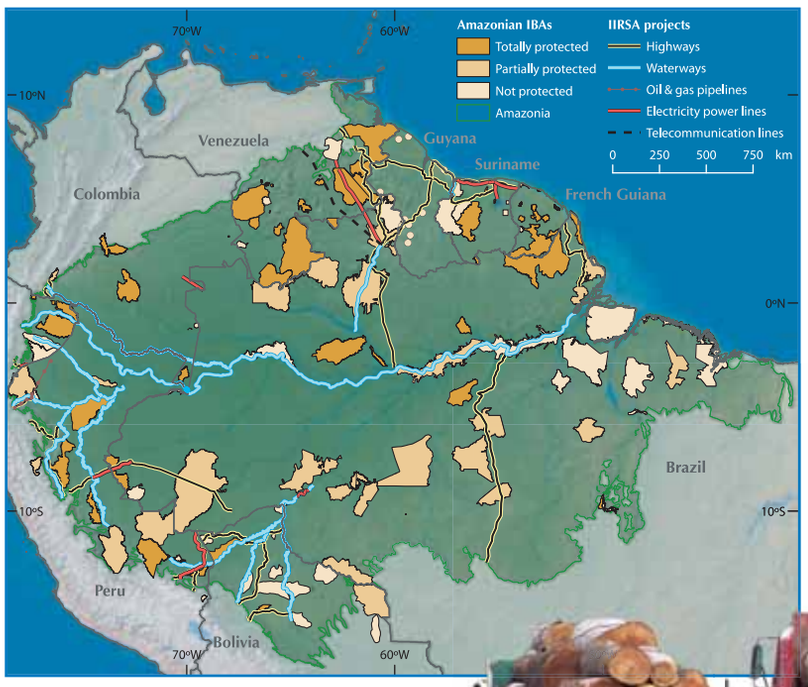


Figure 1. Location of Important Bird Areas and principal IIRSA projects in the Amazon region

Threats to Amazonian ecosystems include logging and energy production. Photo: Victor Utreras

Focus on IBAS and Multilateral Environmental Agreements

The World Heritage Site of Tikal is part of the core area of tha Maya Biosphere Reserve in Guatemala.
Photo: Knut Eisermann

National governments in the Americas are party to a number of multilateral environmental agreements (Appendix 5), established to promote biodiversity conservation and sustainable use of natural resources. Additionally, there are a number of other mechanisms that promote international cooperation for the conservation of biodiversity and natural resources, including bilateral and trilateral agreements (e.g. Box 1). Some of the major agreements and conventions are described briefly below, highlighting the ways in which conservation of the Americas IBA network would assist national governments and donors to meet their commitments under them. Others are described in sections on IBAs and waterbird conservation (p33), IBAs and CBD commitments (p43) and IBAs and Neotropical migrants (p29).

- **UNESCO Man and the Biosphere Programme (MAB)** aims to develop a basis for the conservation and sustainable use of biological diversity by improving the relationship between people and their environment. Countries participating in MAB are expected to designate one or more Biosphere Reserves, which are examples of terrestrial and coastal ecosystems where solutions are promoted to reconcile biodiversity conservation with its sustainable use. Information on IBAs can assist National MAB Committees to identify candidate sites for designation as Biosphere Reserves. A total of 116 IBAs overlap with the biosphere reserves identified in the Americas (Appendix 5).

- **UNESCO World Heritage Convention (WHC)** aims to identify and conserve cultural and natural monuments, and sites of outstanding universal value. Parties to WHC have a commitment to nominate suitable World Heritage Sites for recognition by the United Nations Educational, Scientific and Cultural Organization (UNESCO). Of the 155 sites nominated in the Americas, the majority are cultural sites. In order to redress this imbalance, WHC wishes to see more natural monuments nominated. As a significant number of the Americas's IBAs have outstanding biological and other natural values, information on IBAs can be used to assist parties to identify candidate sites for nomination as World Heritage Sites. Six sites in the Americas are on the World Heritage in Danger list (Appendix 5), the IBA monitoring protocol could help to pinpoint where corrective action is needed in the case of natural sites.

- **Convention on International Trade in Endangered Species of Fauna and Flora (CITES)** aims to regulate international trade in wildlife and wildlife products through international cooperation, while recognizing national sovereignty over wildlife resources. CITES has three appendices listing species for which trade is controlled:

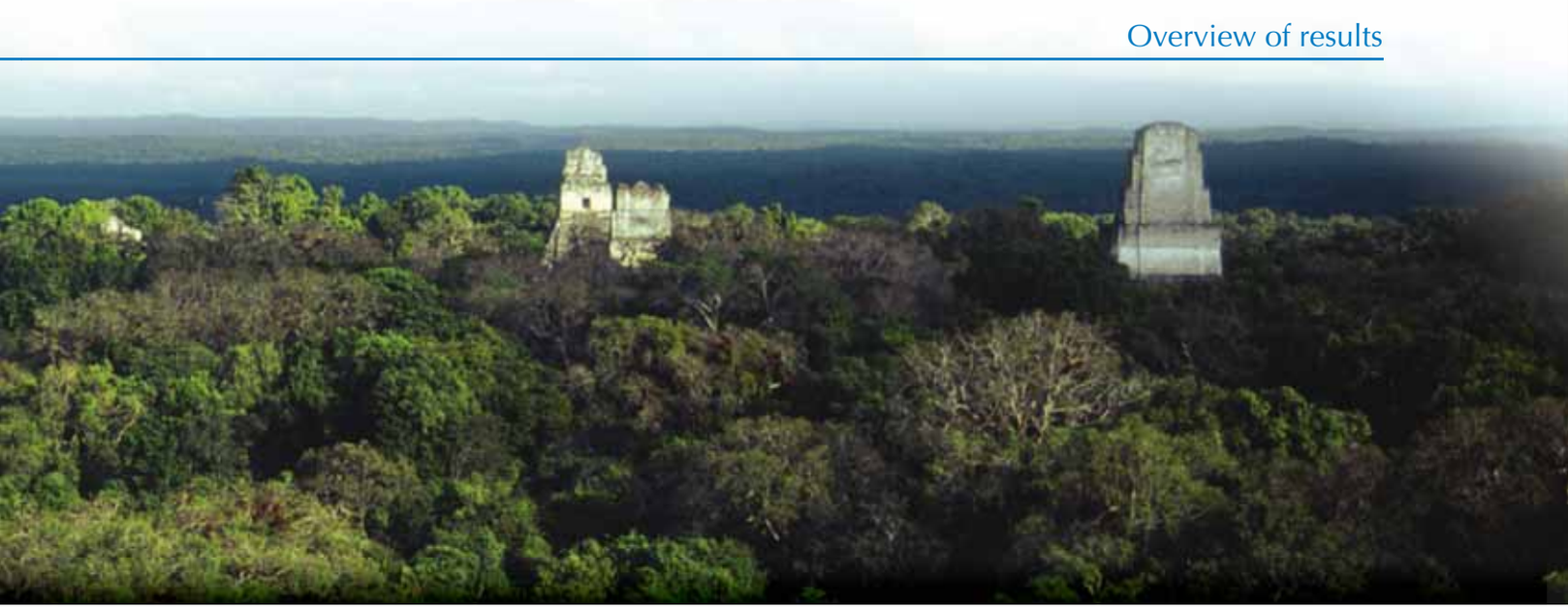
  - Appendix I lists species threatened with extinction and for which trade is prohibited except in exceptional, non-commercial circumstances;
  - Appendix II includes species not necessarily threatened with extinction, but in which trade must be controlled in order to avoid utilization incompatible with their survival;
  - Appendix III contains species that are protected in at least one country which has asked other CITES Parties for assistance in controlling trade.

  In the Americas, CITES lists 59 bird species and five subspecies on Appendix I, 648 species and one subspecies on Appendix II, and 21 species on Appendix III, as of May 2009. Of the almost 500 globally threatened bird species in the Americas, 119 are included on CITES Appendix I, II or III, and most of these species occur in important populations at IBAs. The Americas IBA network can provide a focus for the efforts of national governments to implement CITES, for example by identifying sites with significant populations of bird species threatened by the wildlife trade, requiring strengthened enforcement, public awareness raising, and other targeted conservation actions.

- **United National Framework Convention on Climate Change (UNFCCC) and Kyoto Protocol** sets an overall framework for intergovernmental efforts to tackle the challenge posed by climate change. It recognizes that the climate system is a shared resource whose stability can be affected by industrial and other emissions of carbon dioxide and other greenhouse gases. The convention facilitates the sharing of information, cooperation and the establishment of national strategies in preparation for climate change. The Kyoto Protocol sets binding targets for 37 industrialized countries and the European community to reduce greenhouse gas emissions through three mechanisms: Emissions trading – known as "the carbon market"; clean development mechanisms; and joint implementation. IBAs provide opportunities to implement these mechanisms, for example, by providing information on carbon capture at forested sites.

- **United Nations Convention to Combat Desertification (UNCCD)** aims to combat desertification and to mitigate the effects of drought. Implementation of the UNCCD is guided by the development of regional and national action programs. Opportunities exist to incorporate IBAs into these action programs, thereby assisting them to more fully address biodiversity conservation of threatened species and sites. In addition, integration of IBAs into regional and national action programs could help to ensure that activities to combat desertification and mitigate the effects of drought, such as afforestation and irrigation, do not have negative impacts on important sites for biodiversity conservation.

- **Protocol Concerning Specially Protected Areas and Wildlife (SPAW)** to the Cartagena Convention (officially the Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region) aims to protect marine and coastline resources that many Caribbean countries depend



on for economically important activities such as tourism and fishing. Among its objectives are to increase the number and effectiveness of protected areas, develop regional capacity for biodiversity conservation, and coordinate activities with other multilateral environmental agreements. SPAW also contributes to the regionalisation of global conventions and initiatives such as the CBD, CITES and Ramsar. For example, a memorandum of cooperation exists between the Ramsar Convention and SPAW to assist the identification of wetlands as potential Ramsar sites or protected areas under the SPAW protocol. Using Caribbean IBAs meeting appropriate A4 criteria as a shadow list for both Ramsar and SPAW in this context could also help to avoid duplication of efforts in site identification (see IBAs and waterbird conservation p33). Species conservation is considered through the provision of three annexes to the Protocol. Annex II, containing 41 bird species, is a list of marine and coastal fauna protected by the protocol, for which all capture and trade is prohibited. Annex III, including 12 bird species, is a list of flora and fauna to be maintained at sustainable levels. Thirty-two and seven bird species from annexes II and III, respectively, trigger IBA criteria in the Caribbean. Of these species, 24 have been confirmed in more than 150 IBAs throughout the Caribbean. Therefore, ensuring protection at these IBAs could help parties meet their obligations with regard to the protection and recovery of these species, taken on at ratification.

- **Millennium Development Goals (MDGs)** are a series of time-bound and measurable goals and targets for combating poverty, hunger, disease, illiteracy, environmental degradation and discrimination against women, set out at the United Nations Millennium Summit in 2000. The conservation of the Americas IBA network would assist national governments to meet Millennium Development Goal No. 7 (Ensure Environmental Sustainability), which sets a target for the international community to "integrate the principles of sustainable development into country policies and programs and reverse the loss of environmental resources" by 2015. The IBA network provides a very useful tool for monitoring progress towards this target, especially as it is relevant to two of its indicators: "proportion of land area covered by forest" and "ratio of area protected to maintain biological diversity to surface area".

North American Bird Conservation Initiative (NABCI)

Box 1

NABCI is an agreement among organizations and agencies from Canada, Mexico and the USA, with support from the North American Commission for Environmental Cooperation (CEC). The agreement aims to ensure the long-term health of North America's native bird populations by increasing the effectiveness of existing and new bird conservation initiatives, enhancing coordination among the initiatives and fostering greater cooperation among the continent's three national governments. NABCI's primary role is to coordinate the efforts of four major bird plans:

- North American Waterfowl Management Plan
- Partners in Flight (for landbirds)
- National Shorebird Conservation Plans
- North American Waterbird Conservation Plan

NABCI partners have adopted the IBA approach; in fact, the CEC council resolution (99-3) which approved the NABCI strategy and action plan, specifically underlined the value of NABCI for "further developing the efforts of the CEC to facilitate the establishment of a North American Network of Important Bird Areas". The IBA program has been especially significant in Mexico, where it has united the bird conservation movement and stimulated the first analysis of sites and issues important for bird conservation. In fact, IBAs were adopted as the vertebral column of this initiative in Mexico. As a result, five priority IBAs for North America were identified in Mexico where regional alliances have been promoted, initiating joint actions with both the United States and Canada.

Mangroves in Ría Lagartos (MX186), one of Mexico's priority IBAs.
Photo: Rosa Ma. Vidal

Focus on IBAs and CBD commitments

Reserva La Ceiba
Photo: NCI-Ecuador

IBA network supports national commitments under the Convention on Biological Diversity

The conservation of the Americas IBA network will assist national governments to meet their commitments under multilateral environmental agreements, such as the Convention on Biological Diversity (Box 1). Given that birds are excellent indicators of status and trends of biodiversity, information on IBAs, including the threatened species within them, is of great importance in implementing the convention. BirdLife has worked closely with the convention at global level through a scientific advisory capacity and with the convention Secretariat. For example, the IBA monitoring protocol was taken into account in establishing indicators for assessing progress towards the 2010 biodiversity targets, especially with regard to coverage of protected areas. At national level, BirdLife partners and collaborating organizations have also contributed to the development and application of National Biodiversity Strategies and Action Plans as well as in other areas of the convention's implementation (Box 2, Box 3).

The convention has a focus on *in situ* conservation, and of special relevance to the IBA program is Article 8(a) which commits parties to establish "a system of protected areas, or areas where special measures need to be taken to conserve biological diversity". The Americas IBA network provides an objective scientific basis for the review and expansion of protected areas networks in the region. A commitment was made to completing such a review, or "gap analysis" by 2009. This analysis will also be necessary for reporting on the "coverage of protected areas" indicator, provisionally adopted by the Parties for measuring progress towards the 2010 target of reducing biodiversity loss (Box 1). In fact, an IBA protection index will be published in *Global Biodiversity Outlook 3*, the flagship publication of the CBD, in 2010 as a global-scale indicator of progress to protect biodiversity at the site level. Countries in the Americas already taking IBAs into account for national gap analyses include Ecuador, Cuba, Jamaica, Mexico, Nicaragua, Paraguay (Box 3) and Peru. Another aspect of these analyses is that of marine environments, where BirdLife's work to identify marine IBAs is at that forefront of efforts to identify priority marine areas (see IBAs in the Marine Environment p21).

Information on the conservation status of IBAs, compiled through national IBA monitoring programs, can also make an important contribution to reporting on progress towards achieving the 2010 (and other) CBD targets. IBA networks have been employed by at least five countries in the Americas in CBD national reports and biodiversity strategies, citing IBAs as tools to meet different commitments within five of the convention's articles, including issues such as international cooperation, protection of habitat for migratory species, inventories and monitoring at species level and legislation for threatened species. IBAs have also played an important role in planning and priority setting within Biodiversity Strategies and Action Plans (NBSAPs) at national and regional level. Conversely, NBSAPs present an opportunity for official recognition of national IBA networks within national conservation plans.

The CBD is increasingly emphasizing links between conservation and poverty reduction as a major consideration in the development of a revised strategic plan and post 2010 target. The IBA approach to site conservation, working with local communities (including establishing local conservation groups) and building local and national institutional capacity, provides valuable models for effective site conservation helping to meet local, national and global conservation and development goals.

Box 1

Convention on Biological Diversity (CBD)

Convention on Biological Diversity

A pact was made among the vast majority of the world's governments at the Earth Summit in Rio de Janeiro, in 1992, to set out commitments for maintaining the world's biological diversity alongside economic development. The resulting convention, coming into force in 1993, established three major goals: the conservation of biological diversity, the sustainable use of its components, and the fair and equitable sharing of its benefits.

As of January 2009, the convention had 191 contracting parties, including 34 countries and 14 overseas territories in the Americas region[1]. The United States is the only country in the Americas not party to the convention, in addition to some United Kingdom Overseas Territories (Appendix 5).

Globally, the convention established seven thematic programs and several cross-cutting issues to guide future work on its implementation. Among these is the 2010 Biodiversity Target, which aims to achieve by 2010 "a significant reduction of the current rate of biodiversity loss at the global, regional and national level as a contribution to poverty alleviation and to the benefit of all life on Earth". Another important cross-cutting issue is the Program of Work on Protected Areas aimed at establishing and maintaining comprehensive, effectively managed, and ecologically representative national and regional systems of protected areas. Commitments have been made to complete these systems for terrestrial areas by 2010 and marine areas by 2012. Among the requirements of this program is the identification of unrepresented biomes and species within protected areas (Box 3).

At the national level, implementation of the CBD is guided by National Biodiversity Strategies and Action Plans (NBSAPs) which set out priorities for biodiversity conservation. These documents are used, in part, to guide investment from the Global Environment Facility and other funding sources. NBSAPs have been completed for all countries in the Americas except for one. Additionally, eight countries in the region have yet to present their third national report, due in 2006.

[1] See Methods for a definition of the Americas as used in this directory.

DarwinNet - a regional Clearing House Mechanism

Box 2

The Tumbesian dry forests of Ecuador and Peru, within the Tumbesian Endemic Bird Area (Stattersfield *et al.* 1998) and the Tumbes-Chocó-Magdalena Hotspot (Mittermeier *et al.* 2004), is recognized as one of the most threatened biota on earth and a global conservation priority. This region has exceptional levels of endemism, but widespread habitat destruction has meant that less than 5% of the area remains forested (Stattersfield *et al.* 1998), resulting in many globally threatened species.

One of the main challenges to addressing threats affecting this binational region was the lack of access to and exchange of information, particularly for decision-makers who were unaware of its high biological importance. Working with the governments of Ecuador and Peru, as well as national NGOs, BirdLife International established an ecoregion-based Clearing House Mechanism (CHM). The resulting DarwinNet[2] is the only subregional or thematic CHM to date and aims to provide necessary information for informed decision-making processes. Thus, DarwinNet seeks to raise awareness within and outside the region, establish conservation priorities and build capacities for conservation amongst stakeholders and society, consolidating policies for land use and development that are consistent with the conservation, sustainable use of biodiversity and the sustenance of local livelihoods. As such, IBAs can provide the basis for conservation priority setting and create awareness of the biological importance of certain areas with regard to decisions on land use.

The first stage of IBA identification concluded in 2005 for both Peru and Ecuador. During the first phase of the binational project (2004–2006), IBA information was employed to support the implementation of the CBD as well as the regional biodiversity strategy for Tropical Andean countries of the Andean Community (Decision 523).

During its second phase (2006–2007), DarwinNet aimed to promote local stakeholder and caretaker networks to conserve IBAs both within and outside the national system of protected areas. Subsequently, IBAs also played an important role in the Tumbesian region of Peru by providing baseline information for the establishment of a regional system of protected areas.

Rufous flycatcher (*Myiarchus semirufus*) is endemic to the Tumbesian region.
Photo: Gary Rosenberg

IBAs contribute to national gap analyses

Box 3

In the region to date, the majority of investment in site-based conservation by national governments and donor agencies has been in the development of protected areas systems. However, protected areas systems are rarely developed systematically. Globally, there are major gaps in existing systems with regard to critical habitat types, biomes and threatened species (Rodrigues *et al*. 2004). Because IBAs are identified according to objective, scientific criteria, irrespective of current protection status, many sites lie outside of existing national protected areas systems (37% in the Americas). Therefore, the IBA network can be used as a tool to review existing national protected areas systems, identify gaps in coverage, and identify candidate sites for expansion or designation of protected areas to address these gaps.

By establishing contact with the national CBD focal point, Guyra Paraguay (BirdLife in Paraguay) was able to support the development and implementation of specific programs to achieve CBD obligations in the country. In particular, Guyra Paraguay, with the active participation of the Ministry of the Environment, supported the preparation of an ecosystem gap analysis (Rodas *et al.* 2006), preparing the way for analyses at other levels, such as species. The analysis highlighted a better ecosystem coverage by IBAs than the existing protected area system, providing an opportunity to use IBAs in possible expansion of the protected areas system. The final document was presented at a side event during the 8th Conference of the Parties in Curitiba, Brazil, before being made available to policy makers.

Side event at the 8th Conference of the Parties in Curitiba, Brazil.
Photo: Guyra Paraguay

[2] www.darwinnet.org

Focus on IBAs and donor safeguard policies

IBAs can play an important role in siting large-scale development projects.
Photo: Óscar Rodas

Relevance of IBAs to donor safeguard policies

Many multilateral and bilateral development banks have introduced environmental safeguard policies to ensure that appropriate measures are taken to mitigate potential negative impacts of their financing operations. These policies provide a basis for safeguarding important sites for biodiversity conservation, including IBAs, from incompatible development. Adoption of IBAs as a tool to guide implementation of donor safeguard policies has great potential to assist their effective implementation, through: (i) generating greater coherence and clarity about the implementation of safeguard policies between donor agencies and borrowers; (ii) ensuring increased consistency and transparency of safeguard policies, and promoting greater public trust in donor agencies; and (iii) assisting standardization and comparability among safeguard policies, thereby reducing opportunities for borrowers to "shop around" for donors with less stringent safeguard requirements. Environmental safeguard policies of three major multilateral donors operating in the Americas are outlined below, highlighting ways in which the adoption of the IBA network as a standard source of information on important sites for biodiversity conservation could support their implementation.

The global IBA network, including IBAs in the Americas, are also a main component of IBAT, a tool to guide businesses in siting development projects by providing an "all-in-one" source of information on critical sites for biodiversity conservation. The internet based tool with GIS capability, will also help lenders to comply with donor safeguard policies by allowing them to overlay proposed development sites with spatial biodiversity information (Box 1).

The World Bank

The principle environmental safeguard policy of the World Bank is the Operational Policy (OP)/Bank Procedure (BP) 4.01 on Environmental Assessment. An evaluation is conducted for each investment loan to determine the extent and type of Environmental Assessment to be implemented, and whether the project triggers any other safeguard policy. Of these other safeguard policies, the most relevant to the Americas IBA network are OP/BP 4.04 on Natural Habitats and OP/BP 4.36 on Forests. Responsibility for undertaking the EIAs required by the World Bank's safeguard policies lies with the borrower government, while the World Bank is responsible for overall compliance with the policies. OP/BP 4.04 on Natural Habitats prohibits World Bank support for projects that would lead to the significant loss or degradation of any Critical Natural Habitats, which comprise natural habitats that are either:

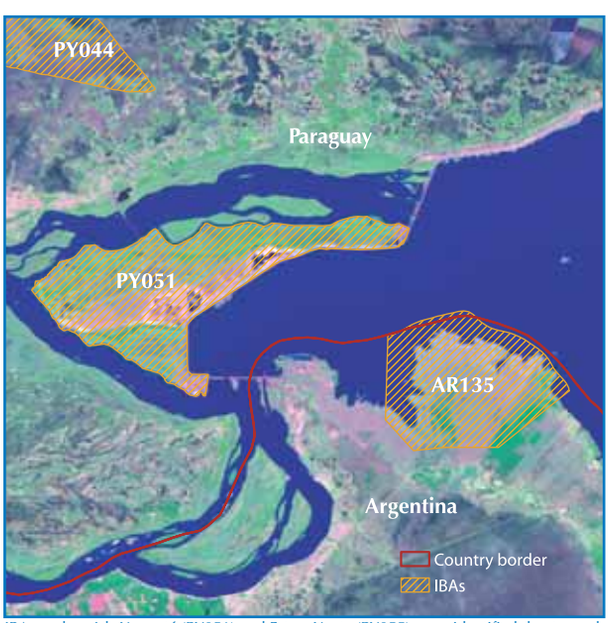
- legally protected;
- officially proposed for protection; or
- unprotected but of known high conservation value.

The latter category may include sites with known high suitability for biodiversity conservation or sites that are critical for rare, vulnerable, migratory or threatened species (World Bank 2001), a clear case for including IBAs as Critical Natural Habitats.

In most Americas countries, lists of legally protected sites and sites officially proposed for protection are available from government departments responsible for development and management of national protected areas systems. However, adoption of the Americas IBA network as a standard source of information could support the implementation of OP/BP 4.043, by providing a standard list of Critical Natural Habitats that are unprotected but of known high conservation value; information that is typically not otherwise available in an agreed, standardized format. OP/BP 4.36 on Forests prohibits World Bank support for projects that would involve significant conversion or degradation of Critical Forest Areas or related Critical Natural Habitats. Critical Forest Areas are forest areas that qualify as Critical Natural Habitats under OP/BP 4.04. Consequently, adoption of the Americas IBA network as a standard source of information for OP/BP 4.36 could support its implementation in a similar way to OP/BP 4.04.

International Finance Corporation (IFC)

The safeguard policies currently in use by IFC are based on those of the World Bank, with adaptations to reflect the private sector focus of IFC's investments. Like the World Bank, IFC has safeguard policies on Environmental Assessment, Natural Habitats and Forests. IFC recently undertook a comprehensive review of its safeguard policies (CAO 2002). Among other things, this review identified lack of clarity about what constitutes a Natural Habitat to be a major source of disagreements



IBAs such as Isla Yacyretá (PY051) and Estero Ypyta (PY055) were identified due to work relating to the environmental impact assessment of the controversial Yacyretá dam, funded by the World Bank and the Inter-American Development Bank.
Basemap: Landsat ETM image

IBAT provides integral biodiversity information to businesses and development agencies

In order to comply with donor safeguard policies, it is necessary to have access to up-to-date biodiversity information when choosing locations for development projects. In determining which sites can be classed as critical natural habitat, IBAs, as discussed above, already provide a mapped network of highly important sites for bird and wider biodiversity conservation. However, other important national and international conservation planning initiatives, such as national protected area systems, Endemic Bird Areas, Wilderness Areas, World Heritage sites, AZE sites, Biosphere Reserves and Ramsar sites, among others, provide additional information on which areas may be considered as highly suitable or critical for biodiversity conservation.

IBAT for business is an online planning tool providing users with accurate and up-to-date information on all the above initiatives in order to support critical business decisions, including project siting. By allowing spatial information to be downloaded, the tool can provide the answers to critical questions, such as:

- Are any of the proposed project sites within or adjacent to a critical site for biodiversity or protected area?
- Which of the proposed project sites presents the least amount of biodiversity risk?

Box 1

The system can also be used to inform the implementation of corporate biodiversity policies, including aspects such as developing action plans to manage for biodiversity impacts, assessing risks associated with potential sourcing regions, reporting on corporate biodiversity performance and screening potential investments. Incorporating IBAT within project planning processes at the earliest stages enables consideration of alternative projects or locations while such changes remain economically viable. IBAT for business is the result of a conservation partnership among BirdLife International, Conservation International and United Nations Environment Programme World Conservation Monitoring Centre.

See also: www.ibatforbusiness.org

between IFC and national governments. By promoting coherence and clarity, adoption of the Americas IBA network as a standard source of information for the application of relevant safeguard policies could make a significant contribution to addressing this issue.

Inter-American Development Bank

The Inter-American Development Bank was the first Multilateral Development Bank to adopt an Environment Policy in 1979, requiring the institution to ensure the environmental quality of its operations and support environmental projects in the region. A new Environment and Safeguards Policy (IDB 2006), as part of the IDB's Environment Strategy (IDB 2003) was released in 2006, strengthening the IDB's commitment to the environment through mainstreaming environmental considerations into its social and economic development objectives. The current safeguard policy aims to ensure that all IDB operations and activities are environmentally sustainability.

Within the IDB's safeguard policy, Critical Natural Habitats are defined in a similar manner to those of the World Bank. These include unprotected areas of known high conservation value, crucial for threatened or Near Threatened species listed on the IUCN Red List, or critical for the viability of species' migratory routes (IDB 2006). The IDB's safeguard policy should ensure that projects converting or degrading these critical habitats are not supported.

Focus on IBAs and private companies

Many private companies can have direct impacts on natural habitats in which they operate, either at a local level or across a series of countries, in the case of large multinational companies. Awareness of the presence of IBAs at all scales will assist in development planning that takes account of globally significant biodiversity interests.

Increasingly in recent years, it has become apparent that negative impacts on the environment is not good for business. In fact, careful attention to ecosystems services and biodiversity can be more cost effective and sustainable in the medium and long-term, than the avoidance of such responsibilities. Furthermore, a corporation's involvement in IBA conservation can also be beneficial in terms of obligations within national legislation.

To prevent negative impacts, companies need guidance and useful tools, not just regulation. IBAs provide a priority-setting tool that is useful for corporations to understand where they should or should not be locating their operational developments on the ground. IBAs can also provide extensive understanding of where such biodiversity priorities need to be appreciated, safeguarded and managed. In addition, the emerging profile that IBAs are gaining with the World Bank and the International Finance Corporation with respect to their safeguard policies on Critical Natural Habitats (see IBAs and safeguard policies, p45) also provides significant leverage in guiding business development and practice, where development financing requires their input.

Involvement of private companies in the Americas IBA program has taken different forms; from nominating sites and funding conservation projects within them (e.g. Box 1) to becoming actively involved in IBA conservation as a means of fulfilling joint objectives. For example, two strategic partnerships enabling businesses to appreciate the importance of biodiversity conservation and integrating such values into their core operations are with Rio Tinto (Box 2) and CEMEX (Box 3).

Among the future steps for the IBA program are:

- Compile and share experiences of successful IBA conservation with private companies
- Prepare information for companies outlining benefits gained by supporting the IBA program
- Create long-term relationships between IBAs and private companies beyond simple funding of conservation projects

Box 1

Corporate donations fund small projects and launch a Caretaker Network for Canadian IBAs

"TransCanada believes in building relationships in the communities in which we live and work and this philosophy is shared with the Caretaker Network Program. Caretakers work with the community to promote Important Bird Areas and to ensure that local conservation ideas are put into action."

Brian McConaghy, Vice-president of Community, Safety and Environment, TransCanada Corporation.

Since 1999, 11 corporations have supported local conservation initiatives as part of the Canadian IBA program. Donations have ranged between $2000 and $100,000 and have been used to support around 100 diverse projects at many IBAs across the country, including global and non-global sites. Now, TransCanada Corporation has committed $1 million Canadian dollars over the next five years as a national sponsor of the Canadian IBA Caretakers Network. This invaluable corporate support will enable the establishment of a network of Caretakers for many of Canada's close to 600 regional and global IBAs and will ensure that the sites are closely monitored and better safeguarded from threats.

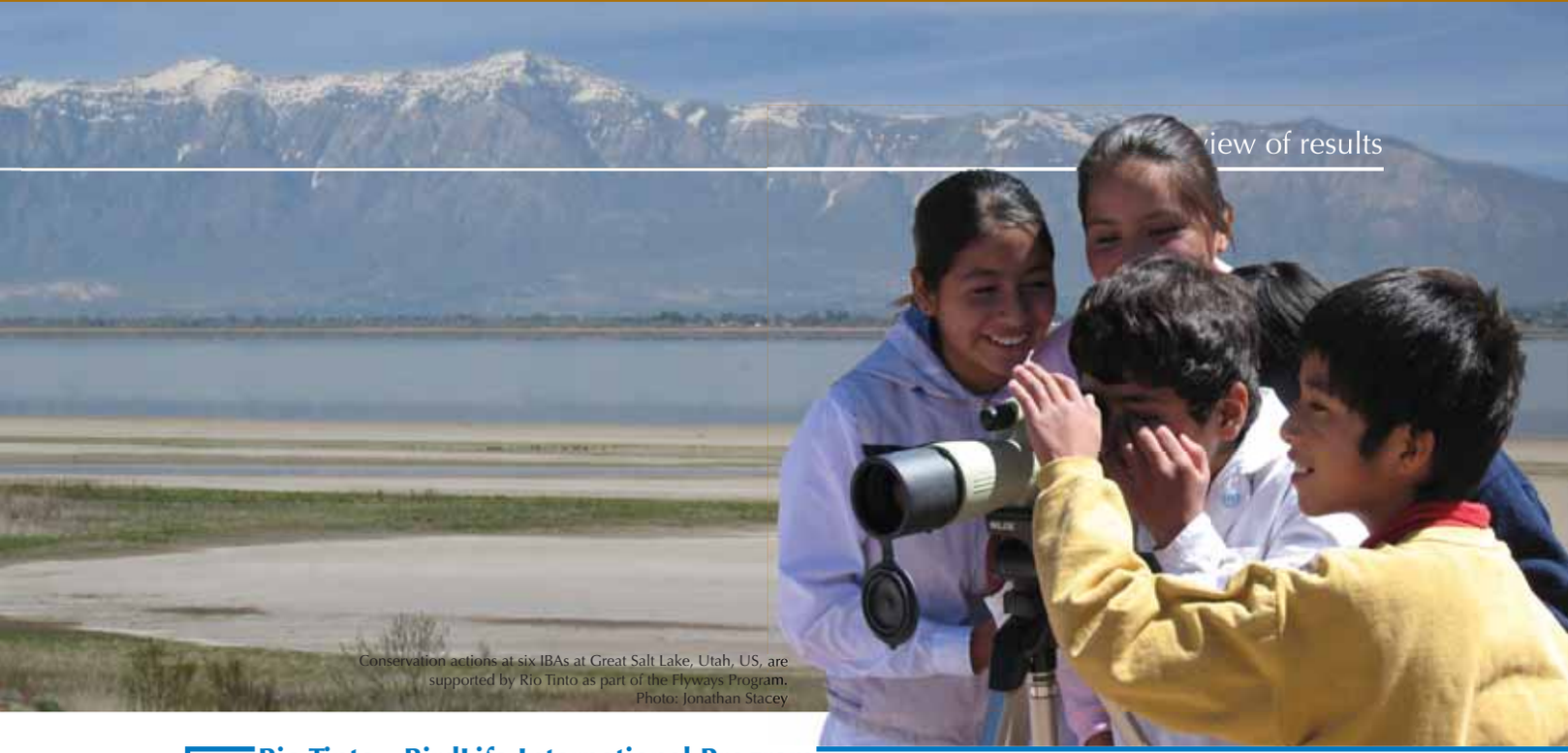
Companies like TransCanada Corporation support the Canadian IBA program because it ties in with their corporate social responsibility ethics or guidelines. The program is particularly appealing to corporations wishing to support on-the-ground activities in communities where the company operates. Importantly, employees of some donor corporations have become involved in work carried out by the Local Conservation Group at IBAs, creating a closer relationship with IBA conservation, going beyond the simple relationship of funder - implementing organization.

Examples of projects supported by corporate donations include:

Habitat restoration and monitoring at Fraser River Estuary IBA (CA057) which has the highest number of trigger species (12) of all Canadian IBAs, as well as being a vital stopover site for Western Sandpiper (*Calidris mauri*).

Environmental awareness at Eastern Cape Sable Island IBA (CA225), including week-long nature camps, aimed at both children and adults. The program informs local residents of the importance of this IBA to migrating shorebirds and breeding species, such as the Near Threatened Piping Plover (*Charadrius melodus*).

Photo: Nature Canada



Conservation actions at six IBAs at Great Salt Lake, Utah, US, are supported by Rio Tinto as part of the Flyways Program.
Photo: Jonathan Stacey

Rio Tinto - BirdLife International Program

Box 2

BirdLife International and Rio Tinto have been working together for mutual biodiversity conservation goals since 2001. Within the activities contemplated in this partnership are the development of conservation projects relevant to mining operations where the company has responsibility for significant land holding or leases. In the Americas, projects are currently in progress in several states in the US, as well as in Paraguay, Argentina, Chile, Bolivia and Peru.

In terms of site protection, the concept of IBA stewardship has developed significantly within the company by targeting conservation actions on IBAs associated with mining operations. The company and its many subsidiaries have come to appreciate that IBAs provide positive opportunities in guiding collaborative conservation effort, especially with local communities and Local Conservation Groups. Many of these companies have sustainable development programs that seek to address community-based sustainable livelihood initiatives, environmental education and conservation action, and IBAs provide ideal opportunities to ensure that their investment and action in such activities are effectively targeted to priority sites and issues. Specific support to IBA conservation includes the following examples:

- Rio Tinto has supported flamingo conservation in the Altiplano-Puna of Argentina, Chile, Peru and Bolivia through the High Andean Flamingo Conservation Group (GCFA, in Spanish), addressing research and education priorities at IBAs crucial to this species' needs, and aligned with both Ramsar and High Andean Wetland Strategy objectives. Recently, the project was extended to include the design and implementation of a network of wetlands of importance for threatened flamingo species, including 16 IBAs. One of the wetland complexes included in the network, Lagunas altoandinas y puneñas de Catamarca, covers six IBAs in Catamarca, Argentina, to the south of Tincalayu, the Rio Tinto Minerals borates mine.

- Recognizing that IBAs can be building blocks of networks, Rio Tinto has recently supported the development of a Western Hemisphere Flyways Program, addressing community-based conservation objectives at a number of IBAs critical for migratory waterfowl/ shorebirds in Canada, the United States, Mexico, Argentina, Peru and Chile. All the sites selected are crucial for the migratory life history of a suite of selected migratory species. Such an initiative is aligned with wider institutional programs for migratory species in the Americas, for example, the Western Hemisphere Shorebird Reserve Network (see p33) and Neotropical Migratory Bird Conservation Act, which has recently approved support for the above initiative.

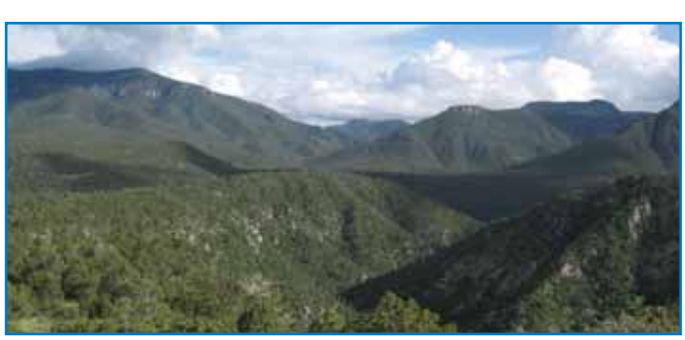
- Rio Tinto has supported the publication of a number of local and national IBA directories in the United States, Brazil, Paraguay and Uruguay. Such support cultivates a stronger relationship between business and IBAs and recognition that such sites can help business achieve its sustainable development goals in a targeted manner.

Río del los Patos in northeast Catamarca, Argentina
Photos: Jonathan Stacey

CEMEX and BirdLife work together to identify priority sites

Box 3

BirdLife has an emerging partnership with CEMEX, the Mexican-based global cement and aggregates company, one of the leading corporations in its sector. BirdLife is currently working with the company to identify and prioritize important sites for biodiversity in relation to its many cement plants and quarries worldwide, many of which are in the Americas. Through this exercise, CEMEX and BirdLife will be able to overlay priority sites (protected areas and IBAs) with CEMEX's many operations, and in particular, those that merit priority action through collaborative partnership, or represent significant biodiversity risks or opportunities that the company can avoid, manage or support. In such an exercise, knowing the location of IBAs and what they are important for is crucial to developing a strategic management tool for the company.



Sierra Maderas del Carmen (MX063), CEMEX own and manage this IBA.
Photo: Jonathan Stacey

Focus on IBAs and local communities

IBAs are not only important for birds and biodiversity but also for socio-economic development at local and national levels. Communities often live within IBAs, and in the majority of cases, sites play an integral part in development and society. Therefore, the conservation of ecosystem goods and services provided by IBAs often contributes significantly to human livelihoods. For example, coastal IBAs may be a source of marine products for fishing communities, while forest IBAs may be a sustainable source of products, such as fuelwood and medicinal plants, for rural communities. Consequently, provided that the socio-economic benefits of IBAs can be equitably shared and their biological values simultaneously maintained, IBA conservation should be an objective shared by conservationists and local communities alike.

Given that IBAs represent a major component within the livelihoods of many rural communities, it is essential that these communities are involved in the conservation of the sites they depend on. However, this will only be possible if the development needs of local communities are combined with these conservation activities, making those that live within IBAs the most important actors in their protection. This can involve aspects such as recuperation of ancestral knowledge, promotion of sustainable use of natural resources and the creation of networks to share experiences. Groups also take part in more typical conservation activities such as bird monitoring, environmental education and habitat restoration, among others. Additionally, in large cities, or in countries where communities do not depend directly on IBAs for their livelihoods, IBAs need to be valued for their importance to recreation, especially with regard to tourism.

Box 1

Local Conservation Groups in the Americas

Products for sale at the Maya Mountains IBA.
Photo: Belize Audubon Society

There are several experiences of Local Conservation Groups working towards IBA conservation while exploiting natural resources within IBAs in a sustainable manner. Examples exist from Argentina, Belize, Bolivia, Dominican Republic, Ecuador, El Salvador, Mexico and Paraguay, among others. BirdLife partners and local communities are increasingly aware that IBA conservation must be linked to agricultural activities or sustainable exploitation which favors the wellbeing of local communities or other groups depending on IBAs for their subsistence.

The **Belize** Audubon Society (BAS) has managed to consolidate a system for conserving IBAs with local communities who depend on the sites' natural resources. This program has been in operation for more than 15 years, and local communities now take responsibility for conservation and monitoring activities, as well as activities contributing to their livelihoods. For example, jewelry is made from non-timber forest products harvested from IBAs by communities in the north of the country and souvenir are produced by the women's group, Mujeres Maya, at the Maya Mountains and southern reserves IBA (BZ006).

BAS established a relationship with the Maya indigenous community in 1988 following a conflict due to proposed entrance fees to Cockscomb Basin Wildlife Sanctuary, managed by BAS. After negotiation, BAS came to an agreement with the Maya community exempting community members from paying the entrance fees and which gave 10% of the charge back to the community. This paved the way for the establishment of the Maya women's group in 1989. Activities providing direct income to the community from sales at the sanctuary include a gift shop, sustainable fishing and products derived from cattle ranching. Through work by Local Conservation Groups such as these in Belize, a stronger constituency for IBA conservation within protected areas is created.

In **Mexico**, the BirdLife affiliate, Pronatura, has consolidated a series of experiences into a community conservation program with diverse local groups in several IBAs. LCGs in Mexico are also involved in initiatives related to IBA monitoring (including identification of threats) and conservation activities in the field. Positive results have brought improvements to local livelihoods as well to the conservation status of IBAs where the communities live. For example:

- **La Sepultura** (MX166) Sustainable harvesting of xate palm leaves for use in floral arrangements has permitted the conservation of larges areas of forest. An organization has been established to oversee activities such as sharing experiences, organization of the harvest, quality control, access to markets and a nursery for propagating palms for reforesting.

- **El Triunfo** (MX169) For more than 10 years, coffee producers have been involved in IBA conservation through organic shade coffee production, bird monitoring and community ecotourism. Almost 15 organizations currently participate in these activities.

Recently, LCGs started a process to obtain legal recognition for IBAs in the areas where they live or for those sites on which their livelihoods depend. *Conservation Certification* is the official mechanism that the National Protected Areas Commission (CONANP, in Spanish) has established for certifying community conservation initiatives in the country. Pronatura has supported and worked alongside communities in obtaining this certification.

Aves & Conservación, the BirdLife partner in **Ecuador**, has consolidated Local Conservation Groups in three IBAs (Río Caoní; EC040, Los Bancos-Milpe; EC041 and Mindo y Estribaciones Occidentales del Volcán Pichincha; EC043). As well as implementing activities such as ecotourism, sustainable agriculture and environmental education, the three groups have produced site conservation strategies as a tool for lobbying the regional authorities in order to include their environmental agendas in those of the local authorities.

Exchanging experiences among the three Local Conservation Groups at Peñón del Río Blanco in Los Bancos-Milpe IBA (EC041)
Photo: Aves & Conservación

Thus, local groups have been formed to support conservation at IBAs, while at the same time receiving direct and indirect benefits from the sites. BirdLife International defines Local Conservation Groups (LCGs) as "comprised predominantly of volunteers, that have as their objective the conservation of one or more IBAs, and which work under the auspices of a formal or informal agreement with the BirdLife Partner". LCGs have a wide variety of roles in IBA conservation, relating to birding groups, local activism, private enterprise and community development and livelihoods, among others. LCGs also act as a communications channel between the wider local community and national organizations, such as government agencies, researchers and NGOs, including the BirdLife partner, among others.

There are many experiences of work with LCGs in the Americas, a review of these groups and activities in 2005 found 209 local groups active in the region in 12 countries where BirdLife has an institutional presence (Kerry 2005). Although the majority of groups were in Canada and the United States, important networks of local groups were also present in Belize and Mexico. Experiences now exist with Local Conservation Groups in 17 countries across the Americas, making important contributions to IBA conservation (Box 1, Figure 1). In countries such as Argentina, Canada and the United States, IBA conservation is also furthered by birding groups which are not necessarily from local communities nor depend on the IBA for their subsistence. Local communities, not necessarily linked to LCGs or a BirdLife partner, also make important contributions to IBA conservation in many other countries, often in alliance with other NGOs or businesses (e.g. Box 2).

Figure 1. Countries where Local Conservation Groups have been established[1]

Photo: Aves & Conservación

Local community and company alliance supports watershed protection in two IBAs in Ecuador

Box 2

The IBAs of Cayambe-Coca (ECO49) and Antisana (ECO52) in northern Ecuador provide most of the water to the 2,000,000 inhabitants of the country's capital city, Quito, as well as the Ecuador Bottling Company Corp (EBC) responsible for bottling Coca-Cola products in the country. To protect these hugely important ecosystems services, EBC is working together with CARE Ecuador and local communities in Papallacta, Jamanco and Tambo to reforest 144 ha in the above IBAs over a four year period. More than 260 families benefit from this program through their work in three community nurseries where 40,000 plants will be produced. This will support efforts to ensure the provision of water from this watershed to the city of Quito including that used by EBC for its products. Also, 100 smallholdings will be established as part of the project to grow native Andean crops for local consumption and of cultural value. This initiative will help to ensure the local communities' food security as well as create small business initiatives, mainly for women.

Reserva Ecológica Cayambe-Coca (EC049)
Photo: Amiro Pérez-Leroux

[1] Not all LCGs are shown on this map, and many other local organizations also work at IBAs. In the United States, LCG information will be compiled when the global IBA identification process is completed.

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AMERICAS IBA program

Future steps

The IBA program is a dynamic process, needing regular updating and revision as new information becomes available and changes occur in threats and bird populations across the region. Thus, the program is not a linear sequence of identification, conservation action and monitoring, rather, it is an assemblage of actions which ensure the conservation of the hemisphere's most important sites for bird conservation.

Among the most important future steps in the Americas IBA program are conservation planning, priority setting and monitoring, which, when combined provide an efficient way to set out future conservation actions at each site, and assess their effectiveness.

Conservation planning

IBA conservation strategies are important tools at different scales, including local, national and regional level. A conservation strategy can help build networks between sites and organizations or local groups linked to particular sites by providing common objectives to IBA conservation. Conservation strategies are also useful for advocacy purposes. Strategies should include information and activities on issues such as threatened bird conservation, priority habitats, policy approaches for IBA conservation, linkages to conventions, international agreements and potential funding sources. Strategies should have suitable time frames, measurable criteria to evaluate their effectiveness as well as defining responsibilities for activities in a participative manner.

Priority setting

By definition, all IBA are priority sites for bird conservation. However, urgent actions are needed at some sites more than others. Given that all resources for conservation are limited, it is important to establish where actions should be targeted first. The BirdLife Partnership has developed a method for setting priorities between IBAs based on biological priorities and the degree of threat at each site. Biological priority is measured by combining data for trigger species at each site with that for wider biodiversity of conservation concern, if available. Threats at each site are evaluated via the IBA monitoring framework (using the IUCN threat classification). In order for priorities to be accepted and used effectively for conservation planning, it is important that the priority setting process is implemented in a participative manner.

Monitoring

To conserve a network of internationally important sites for birds and biodiversity effectively, it is vital to know what the general conservation status of sites is on a regular basis. The BirdLife Partnership has developed an IBA monitoring framework to provide a standardized way of assigning scores for the condition of IBAs (State), threats to IBAs (Pressure) and conservation actions taken at IBAs (Response). This scoring system makes it possible to integrate a wide range of information, which may often be qualitative rather than quantitative, and can come from many different monitoring methods. Data can be collected by management authority staff, Local Conservation Group members, or other volunteers (e.g. those that contribute to "Worldbirds", see inside back cover). Because the framework is standardized, it allows national data to be compiled regionally and globally, which is proving a powerful tool for international conservation advocacy and fundraising.

Photo: Murray Cooper