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Important Bird Areas AMERICAS

# ECUADOR

Tatiana Santander, Juan F. Freile & Sandra Loor-Vela



Almost the entire population of the Critically Endangered Waved Albatross (*Phoebastria irrorata*) breeds on one small island in the Galapagos. A substantial population decline is most likely due to threats from fisheries off the coasts of Ecuador and Peru.

Photo: Roy-de-Haas; [www.rarebirdyearbook.com](http://www.rarebirdyearbook.com)



## Country facts at a glance

Area:	256,370 km <sup>2</sup>
Population (2008):	13,832,885
Capital:	Quito
Altitude:	0–6310 m
<b>Number of IBAs:</b>	<b>107</b>
<b>Total IBA area:</b>	<b>9,143,530 ha</b>
<b>IBA coverage of land area:</b>	<b>36%</b>
Total number of birds:	1659
Globally threatened birds:	69
Globally threatened birds in IBAs:	64
Country endemics:	29

## General introduction

The Republic of Ecuador is located in the northwest of South America, straddling the equator. To the north the country borders Colombia, to the south and east with Peru and to the west lies the Pacific Ocean. The Galapagos archipelago is also part of Ecuador, at a distance of 956 km from its continental coast.

Ecuador is a unitary and democratic state, as is set out in the current constitution (updated in 2008). Executive functions lie with the President of the Republic and legislative functions with the National Congress, a unicameral body. Ecuador is legally divided into 24 provinces, and these, in turn, into cantons and parishes.

Ecuador is a multicultural country with an ethnically diverse population. The *mestizo* or mixed race population makes up the largest component of its inhabitants (approximately 60%). Indigenous peoples, belonging to different ethnic groups, represent the most important minority (more than 20%) as well as the most diverse. There are at least 17 native ethnic groups with their own languages and cultures. The “white” population, descendents of colonists and migrants, makes up about 10% of the population with Afro-Ecuadorians completing the remaining percentage. Approximately 54% of the population reside in urban centers.

The country is divided into four natural regions; the coast or littoral region extends from the Pacific Ocean to the western flanks of the Andes, reaching approximately 1300 m in altitude. The Sierra, or Andean region, is made up of the Andean mountain range or Cordillera above 1300 m between the Pacific and Amazonian foothills. The East, or Amazon, comprises the area below 1300 m to the east of the Andes, on the western extreme of the Amazon basin. Mountainous systems, independent of the Andes, exist in both the Pacific and Amazon region, but at lower elevations. Finally, the Galapagos Islands, or the insular region, is made up of 13 large islands, six smaller ones and more than 40 islets (Neill 1999, Josse 2001).

In spite of occupying only 0.19% of the Earth’s terrestrial surface, Ecuador is one of 17 megadiverse countries (Mittermeier *et al.* 1997). This is due to the country’s privileged geographic position, traversed by the Andes, allowing the formation of a diverse array of altitudinal gradients with high biological and cultural wealth. The presence of 31 river systems, the atmospheric influence of the Pacific Ocean and the Amazon region, as well as the circulation of the cold Humboldt and warm tropical oceanic currents determine a climatic gradient in addition to variation in temperature and rainfall regimes. These factors permit a wide variety of habitats and ecosystems, as well as at least five important areas for speciation (Chocó, Tumbes, Tropical Andes, Amazon and Andean internal valleys). According to the most recent classification system of vegetation types, proposed by Sierra (1999), 46 have been identified in continental Ecuador, from very humid forests to desert scrubland.

Coastal and Andean ecosystems are the most threatened, given that the majority of the Ecuadorian population lives in these regions. This had led to the almost complete disappearance of native forests and natural wetlands on the Pacific coasts and foothills, with the sole exception of the Chocó region, which is being deforested at an alarming rate. In the Andes, some forest remnants still exist on the outer slopes of the Cordillera, however, inter-Andean forests have suffered severe destruction, with less than 7% of original cover estimated to remain. Despite impacts from petroleum exploitation and increased colonization, the Amazon is still the most pristine region of Ecuador (Josse 2001, Ridgely & Greenfield 2001).



**Conservation and protected area system**



The National Protected Areas System (SNAP, in Spanish) was created in 1976 as part of the first National Conservation Strategy, published the same year (Putney 1976). Nine areas made up the system at the time, although the country already had a 40-year old protected area: the Galapagos National Park. The conservation strategy was updated at the end of the 1980s (Cifuentes *et al.* 1989 in Josse & Cano 2001). Subsequently, the Ministry of the Environment designed a Strategic Plan for the National Protected Areas System in Ecuador (Valarezo *et al.* 1999) which replaced the previous two strategies. This strategy brought the country into line with national commitments acquired as part of the Convention on Biological Diversity (Josse & Cano 2001). Since 1981, the SNAP has been governed and protected by the Forestry Law and the Natural Areas and Wildlife Conservation Law. The Ministry of the Environment is responsible for the system's administration (Lasso 2004).

Currently, the SNAP consists of 40 protected areas, 37 are continental, covering 4,822,009 ha (18% of Ecuador), one is insular: Galapagos National Park (693,700 ha) and two exclusively marine: Galapagos Marine Reserve, the second largest in the world at 14,110,000 ha (MAE 2009). Three of these areas have been recognized as World Heritage Sites: the Galapagos Islands, the Galapagos Marine Reserve and the Sangay National Park.

As well as the above protected areas, Ecuador also has other conservation areas, despite not being included in the SNAP. These zones include areas within the Amazon, such as Cuyabeno-Imuya, within the Cuyabeno fauna reserve, Tagaeri-Taromenane territory within and adjacent to Yasuní National Park. Additionally, all 12 Ramsar sites (wetlands of international importance) have state recognition, although they are not part of the SNAP either (Valencia-Rodríguez 2004). Furthermore, state and private forest reserves (160 areas in 2002) have a certain degree of protection, given that they are regulated by forestry legislation (Ayala 2002). Similarly, there are an important number of private or community conservation areas. The growing tendency towards private protected areas has led to the conformation of the Ecuadorian National

Network of Private Forests, an organization of more than 50 partners, protecting over 70,000 ha throughout the country. Currently, a draft strategic plan aims to increase the protected area system to include four subsystems of protected areas: a) state; b) municipal or provincial; c) community, indigenous peoples and Afro-American; and d) private (Ecolex pers comm.).

Ecuador has ratified and is signatory to several international agreements aimed at protecting the environment as well as cultural and natural heritage within the country. Among these are, Convention on Biological Diversity (ratified in 1993), World Heritage Convention (signed in 1973), Convention on Migratory Species (ratified in 2004), Convention on International Trade in Endangered Species of Wild Fauna and Flora (signed in 1974), Ramsar Convention on Wetlands (ratified in 1990). Ecuador has also signed bilateral environmental agreements with Peru and Colombia.

**“Ornithology in Ecuador is still at an early stage of development.”**

Ornithology in Ecuador is still at an early stage of development. From early times, it has been dominated by European and North American ornithologists, who have made an essential contribution to the knowledge of birds in the country. National researchers have contributed to a lesser extent and their work has mainly been restricted to the last three decades of the 20th century (Freile 2005). Exchange of information between national and foreign researchers is still inefficient, while the creation of instruments facilitating communication between the national ornithological community, such as electronic list servers, birding groups and national ornithological meetings, among others, still need to be strengthened (the 1st Ecuadorian Ornithological Meeting was held as recently as 2005). A national strategy for bird conservation, considered a priority (Freile & Rodas 2008), is currently being developed.



Seven IBAs have been designated in the Ecuadorian Amazon which covers 39,096 km<sup>2</sup>, representing approximately 0.5% of the total Amazon region. Photo: Murray Cooper



## Ornithological importance



The Near Threatened Toucan Barbet (*Semnornis ramphastinus*) meets three IBA criteria at six sites in Ecuador. Its threat category could be increased if habitat destruction continues within its range.  
Photo: Murray Cooper

The Vulnerable Long-wattled Umbrella-bird (*Cephalopterus penduliger*) is threatened by deforestation in its relatively small range. Its low call at leks, somewhat similar to a bull's bellow, can be heard up to 1 km away.  
Photo: Murray Cooper

Although Ecuador is one of the smallest countries in South America, it has the fourth highest bird diversity of any country in the world with at least 1659 species (Ridgely & Greenfield 2001, Wiedenfield 2006). It is only surpassed by the significantly larger countries of Brazil, Colombia and Peru. With nine Endemic Bird Areas covering continental Ecuador and a further area integrating the whole of the Galapagos archipelago, Ecuador has 169 restricted-range species according to Stattersfield *et al.* (1998), whereas Ridgely & Greenfield (2001) suggest 243 for the continental area of the country. Despite the high number of restricted-range species, only eight birds are endemic to continental Ecuador, with a further 21 restricted entirely to the Galapagos islands, without including marine species (Stattersfield *et al.* 1998).

According to BirdLife International (2007), there are 127 threatened or Near Threatened (NT) species in Ecuador: seven Critically Endangered (CR), 16 Endangered (EN), 46 Vulnerable (VU) and 58 NT. In their analysis of threatened species at national level, Granizo *et al.* (2002) established 230 species in the following categories: 16 CR, 47 EN, 98 VU and 69 NT. Soberingly, of eight endemic species in Ecuador, seven are threatened at both global and national level.

### IBA Status encourages conservation of Critically Endangered species

Box 1

The IBA, Mindo y Estribaciones Occidentales del Volcán Pichíncha (EC043) provides habitat to 21 species of threatened and Near Threatened birds, in addition to a considerable number of endemic birds. Among these, is the Critically Endangered Black-breasted Puffleg (*Eriocnemis nigrivestis*), rediscovered in the area of Yanacocha, Verdecocha and forests belonging to the Alaspungo community, where the species had not been recorded for over 100 years. Despite the difficulties involved in studying this species, as well as a lack of information, several achievements have been made thanks to the support of other organizations and local communities. To date, two private reserves have been established, where birding tourism has been implemented. The Black-breasted Puffleg has also been designated as Quito's flagship species. A social and environmental diagnosis was carried out in the area and a species action plan was published. It is evident that since the designation of the IBA, tourist activity has developed significantly by becoming one of most renowned sites in the world for birding, where the majority of businesses revolve around or are related to this activity. Due to its economic importance and in terms of bird fauna, several local conservation initiatives have been developed, such as the creation of private reserves. Similarly, the level of knowledge generated in the IBA is greater than others in the province.



Photo: Murray Cooper

<sup>1</sup> Galápagos Heron (*Butorides sundevalli*) is no longer recognized by BirdLife International and has been lumped with Striated Heron (*Butorides striata*) and is therefore no longer considered a Galapagos endemic.  
<sup>2</sup> Changes in the 2008 IUCN Red List mean that Ecuador gains an additional CR species, Floreana Mockingbird (*Mimus trifasciatus*), uplisted from EN and an extra NT species, Peruvian Pelican (*Pelecanus thagus*) recently split from Brown Pelican (*Pelecanus occidentalis*). This directory uses 2007 red list categories throughout.



**IBA overview**



The IBA program in Ecuador began in October 1997 with the designation of the first IBA in Ecuador and South America: Mindo y Estribaciones Occidentales del Volcán Pichincha (EC043). In June 1998, the second IBA was declared at Bosque Protector Cerro Blanco (EC026). Between 1999 and 2000, the BirdLife partner CECIA (now known as Aves & Conservación) held three regional workshops to identify potential IBAs with the support of Conservation International - Ecuador, BirdLife International and the Ministry of the Environment. CECIA consolidated the program in 2003 with the designation of a national coordinator and the establishment of a steering committee consisting of the aforementioned institutions. The IBA program was widely publicized at national level and culminated in a National Workshop at the Universidad San Francisco de Quito (9–11 July 2003) and the later publication of a regional and national directory (Freile & Santander 2005a, 2005b). IBA identification resulted from the collaboration of an extensive network of scientists and conservationists throughout the country (more than 200 people), including government organization staff, local communities and indigenous groups.

In total, 107 IBAs were designated in Ecuador (Table 1, Figure 1), 97 of which are continental sites or islands and 10 are in the Galapagos Islands (Freile & Santander 2005a). IBAs have a total area of 91,435 km<sup>2</sup>, representing 35.7% of the country's total area. Of the Critically Endangered and Endangered species present in Ecuador, all but one are covered by the IBA network, and 92.5% of IBAs meet criterion A1. Thirteen globally threatened species are present in only one IBA. Seventy-four IBAs (65.4% of the total) are triggered by the A2 criterion, with at least one IBA for each of the 168 restricted-range species. One hundred and eighty-seven of the 227 biome-restricted species are covered in at least one of 45 IBAs meeting this criterion. A total of 23 IBAs maintain congregations of waterbird or marine species, including some migratory species. The majority of sites meet criterion A4i. However, the fourth criterion was not applied strictly, given the lack of population information on congregatory birds in the country. Twelve sites were identified for A4ii, especially for marine species nesting in large colonies on islands within the Galapagos archipelago, such as Isla de La Plata and Santa Clara. No site was identified for A4iv in Ecuador.

**Table 1.** Important Bird Areas in Ecuador

IBA code	IBA name	Adm unit	Area (ha)	A1				A2	A3	A4			
				CR	EN	VU	NT			A4i	A4ii	A4iii	A4iv
EC001	Mataje-Cayapas-Santiago	Esmeraldas	70,000	1	4	4							
EC002	Territorio Étnico Awá y alrededores	Carchi, Esmeraldas	190,000	2	6	6	X	X					
EC003	Corredor Awacachi	Esmeraldas	25,000		3	9	X	X					
EC004	Cayapas-Santiago-Wimbí	Esmeraldas	60,000	2	5	9	X	X					
EC005	Verde-Ónzole-Cayapas-Canandé	Esmeraldas	205,567	2	5	9	X	X					
EC006	Cerro Mútiles	Esmeraldas	30	1	1								
EC007	Tonchigüe-Mompiche	Esmeraldas	45,000		3	3							
EC008	Reserva Ecológica Mache-Chindul	Esmeraldas	119,172	1	6	7		X					
EC009	Bosque Protector Cerro Pata de Pájaro	Manabí	4,333	1	1	1							
EC010	Hacienda Camarones	Manabí	4,000	2	2	4							
EC011	Reserva Biológica Tito Santos	Manabí	2,000	2	4	3	X						
EC012	Centro Científico Río Palenque	Los Ríos	167	2	3	2	X	X					
EC013	Ciénaga de La Segua	Manabí	1,742							X		X	
EC014	Refugio de Vida Silvestre Isla Corazón e Isla Fragata	Manabí	700		1	1	X			X		X	
EC015	Cordillera El Bálsamo	Manabí	50										
EC016	Isla de la Plata	Manabí	1,420	1	1					X	X	X	
EC017	Parque Nacional Machalilla y alrededores	Guayas, Manabí	60,000	5	8	3	X	X					
EC018	Reserva Ecológica Comunal Loma Alta	Guayas	6,000	5	8	2	X	X					
EC019	Humedales de Pacoa	Guayas	800							X		X	
EC020	Lagunas de Ecuasal-Salinas	Guayas	500	1		2	X			X		X	
EC021	Represa Velasco Ibarra	Guayas	424							X		X	
EC022	Engunga	Guayas	2,000		1	1							
EC023	Estación Científica Pedro Franco Dávila	Los Ríos	138		2	1	X						
EC024	Abras de Mantequilla	Los Ríos	22,500	3	2	1	X						
EC025	Bosque Protector Chongón-Colonche	Guayas	44,000	2			X	X					
EC026	Bosque Protector Cerro Blanco	Guayas	15,700	5	6	3	X	X					
EC027	Isla Santay	Guayas	4,705			1							
EC028	Ciénagas de Guayaquil	Guayas	30,000	1						X		X	
EC029	Reserva Ecológica Manglares-Churute	Guayas	49,984	4	7	5	X	X				X	
EC030	Manglares del golfo de Guayaquil	Guayas	200,000									X	
EC031	Isla Santa Clara	El Oro	46							X	X	X	
EC032	Bosque Protector Molleturo Mullopungo	Azuay, Cañar, Guayas	97,500	5	5	2	X						
EC033	Cerro de Hayas-Naranjal	Guayas	2,500	3	1	1							
EC034	Archipiélago de Jambelí	El Oro	30,000										X
EC035	Reserva Ecológica Arenillas	El Oro	17,082	3	3	3	X	X	X				
EC036	El Ángel-Cerro Golondrinas	Carchi	17,120		2	8	X	X					
EC037	Reserva Ecológica Cotacachi-Cayapas	Esmeraldas, Imbabura	345,275	1	1	7	12	X	X				
EC038	Intag-Toisán	Imbabura	34,000		1	5	X	X					
EC039	Bosque Protector Los Cedros	Imbabura	6,400	1	4	5	X						
EC040	Río Caoní	Pichincha	8,500		1	3		X					
EC041	Los Bancos-Milpe	Pichincha	4,000		2	5	X	X					
EC042	Maquipucuna-Río Guayllabamba	Pichincha	19,728		4	8	X	X					
EC043	Mindo y Estribaciones Occidentales del volcán Pichincha	Pichincha	74,340	1	1	6	12	X	X				
EC044	Río Toachi-Chiriboga	Pichincha	68,000	1	4	6	X	X					

IBA code	IBA name	Adm unit	Area (ha)	A1				A2	A3	A4				
				CR	EN	VU	NT			A4i	A4ii	A4iii	A4iv	
EC045	Reserva Ecológica Los Illinizas y alrededores	Pichincha	150,900		4	5			X					
EC046	Estación Biológica Guandera-Cerro Mongus	Carchi	12,000		4	3	X	X						
EC047	La Bonita-Santa Bárbara	Sucumbíos	12,000		1		X							
EC048	Reserva Ecológica Cofán-Bermejo	Sucumbíos	55,451		4	5	X							
EC049	Reserva Ecológica Cayambe-Coca	Imbabura, Napo, Pichincha, Sucumbíos	403,103		5	8	X	X						
EC050	Parque Nacional Sumaco-Napo Galeras	Napo	215,249		4	7	X							
EC051	Cordillera de Huacamayos-San Isidro-Sierra Azul	Napo	65,000		6	6	X	X						
EC052	Reserva Ecológica Antisana	Napo, Pichincha	120,000		1	4					X			
EC053	Refugio de Vida Silvestre Pasochoa	Pichincha	3,900			1								
EC054	Volcán Atacazo	Pichincha	8,500	1										
EC055	Parque Nacional Cotopaxi	Cotopaxi	33,393			1					X			
EC056	Parque Nacional Llanganates	Cotopaxi, Napo, Pastaza, Tungurahua	219,707		1	4	X	X						
EC057	Corredor Ecológico Llanganates-Sangay	Morona-Santiago, Pastaza, Tungurahua	42,052		2	3	X							
EC058	Bosque Protector Cashca Totoras	Bolívar	6,940		1									
EC059	Lago de Colta	Chimborazo	100			1								
EC060	Tiquibuzo	Bolívar	5,000			1								
EC061	Parque Nacional Sangay	Chimborazo, Morona- Santiago, Tungurahua	517,725		9	6	X	X						
EC062	Bosque Protector Dudas-Mazar	Cañar	75,000	1		2	X							
EC063	Cajas-Mazán	Azuay	31,844	1	2	2	X	X						
EC064	Yanuncay-Yanasacha	Azuay	38,100	1		1	X							
EC065	Montañas de Zapote-Najda	Azuay, Morona-Santiago	27,100		3	6	X	X						
EC066	Bosque Protector Moya-Molón	Azuay	26,270		2	1								
EC067	Reserva Yunguilla	Azuay	60	1			X							
EC068	Acanamá-Guashapamba-Aguirre	Loja	1,900		3	3	X							
EC069	Selva Alegre	Loja	10,000		2	1	X							
EC070	Daucay	Azuay, El Oro	1,300	4		1								
EC071	Reserva Buenaventura	El Oro	300	5	3	2	X							
EC072	Catacocha	Loja	3,500	1			X							
EC073	Bosque Protector Puyango	El Oro, Loja	2,659	3	3	2	X	X						
EC074	La Tagua	Loja	4,000	1	7	2	X	X						
EC075	Alamor-Celica	Loja	6,500	3	6	2	X	X						
EC076	Cañón del río Catamayo	Loja	28,000	3	8	3	X	X						
EC077	Bosque Protector Jatumpamba-Jorupe	Loja	8,000	2	7	3	X	X						
EC078	Tambo Negro	Loja	4,091	2	6	4	X	X						
EC079	Utuaña-Bosque de Hanne	Loja	281		4	1								
EC080	Cazaderos-Mangaurquillo	Loja	49,500	4	3	3	X	X						
EC081	Reserva Natural Tumbesía-La Ceiba-Zapotillo	Loja	17,350	4	6	3	X	X						
EC082	Cordillera de Kutukú	Morona-Santiago	311,500		4	9	X							
EC083	Cordillera del Cóndor	Morona-Santiago, Zamora-Chinchi	97,000		4	12	X	X						
EC084	Bosque Protector Alto Nangaritza	Zamora-Chinchi	130,420		4	4	X							
EC085	Parque Nacional Podocarpus	Loja, Zamora-Chinchi	147,400	1	7	8	X	X						
EC086	Bosque Protector Colambo-Yacuri	Loja, Zamora-Chinchi	73,300		5	5	X	X						
EC087	Reserva Comunal Bosque de Angashcola	Loja	2,000		3	2	X							
EC088	Reserva Tapichalaca	Zamora-Chinchi	2,000	1	2	3								
EC089	Palanda	Zamora-Chinchi	12,800		1									
EC090	Zumba-Chito	Zamora-Chinchi	14,200		3	1	X	X						
EC091	Reserva de Producción Faunística Cuyabeno	Sucumbíos	603,380			4	X	X						
EC092	Bajo Napo	Orellana, Sucumbíos	77,700			3	X	X						
EC093	Gran Yasuní	Orellana, Sucumbíos	1,600,000			3	X	X						
EC094	Arajuno-Alto Napo	Napo	3,115				X	X						
EC095	Río Conambo-Bobonaza	Pastaza	870,000			2	X							
EC096	Territorio Achuar	Morona-Santiago, Pastaza	700,000			4	X	X						
EC097	Isla San Cristóbal	Galápagos	55,808	1	1	2	X		X	X				
EC098	Isla Española	Galápagos	6,048	1		2	X		X	X	X			
EC099	Champion y Gardner de Floreana	Galápagos	76		1		X							
EC100	Isla Floreana	Galápagos	17,253	1	1	2	X		X	X				
EC101	Tierras altas de Santa Cruz	Galápagos	27,800	1		1	X		X	X				
EC102	Puerto Ayora	Galápagos	160			1	X		X	X				
EC103	Humedales del Sur de Isabela	Galápagos	872		1	1	X		X	X				
EC104	Tierras altas de Isabela	Galápagos	120,000	1		2	X		X	X				
EC105	Áreas costeras de Fernandina y del occidente de Isabela	Galápagos	140,000	1	2	2	X		X	X				
EC106	Tierras altas de Santiago	Galápagos	10,500	1		2	X		X	X				
EC107	Valle de Guayllabamba	Pichincha	23,000	1										



For information on trigger species at each IBA, see individual site accounts at BirdLife's Data Zone: [www.birdlife.org/datazone/sites/](http://www.birdlife.org/datazone/sites/)

## Important Bird Areas AMERICAS

With respect to migratory birds, 132 terrestrial, aquatic or marine species have been recorded in Ecuador. Among those of global conservation concern are Cerulean Warbler (*Dendroica cerulea*; VU), Buff-breasted Sandpiper (*Tryngites subruficollis*; NT), Elegant Tern (*Sterna elegans*; NT), Olive-sided Flycatcher (*Contopus cooperi*; NT) and Golden-winged Warbler (*Vermivora chrysoptera*; NT). All IBAs have populations of migratory species, however, little information exists as to their habitat requirements on wintering grounds, routes taken and the threats they face, among others.

Approximately 90% of IBAs are located within a Biodiversity Hotspot (Myers et al. 2000) with the Tropical Andes Hotspot containing the highest number of IBAs. Within this Hotspot, 19 IBAs were designated in the Cónдор-Kutukú Conservation Corridor alone, highlighting the IBA program's fundamental importance in providing a selection of sites on which to focus funds and implement urgent conservation actions within regional priority setting schemes. Furthermore, all 12 Ramsar sites designated in Ecuador have been identified as IBAs as well as two World Heritage Sites (UNESCO 2005a): Galapagos National Park and the Galapagos Marine Reserve (10 IBAs in the whole archipelago); and the Sangay National Park. Ecuador's three Biosphere Reserves, Galapagos Islands, Yasuní and Sumaco (UNESCO 2005b) are also IBAs.

**“IBAs provide a means to focus funds and implement urgent conservation actions within regional priority setting schemes.”**

In general, areas identified as IBAs are reasonably covered by the National System of Protected Areas as well as through other forms of protection. Of 107 IBAs, 25 are totally covered by the protected area system, 22 do not have any legal protection and 60 are partially protected (Figure 1). In the latter category, a small number contain legally protected areas, 20% contain forest reserves and the remaining sites contain one or more of the following protection categories: private or community reserves, indigenous territories (many with large territories relatively well conserved), biosphere reserves and Ramsar sites.

According to available information, the expansion or intensification of agricultural activities, burning of vegetation, selective logging and unsustainable exploitation of renewable resources are the principal threats to the conservation of most IBAs. Furthermore, unregulated tourism could affect the reproductive success of several species whilst unsustainable hunting and illegal trafficking of species also constitutes a seri-

**Figure 1.** Location of Important Bird Areas in Ecuador







ous threat to certain populations of birds (mainly cracids and psittacids). Similarly, the overexploitation of wax palms (*Ceroxylon* spp.) to celebrate Palm Sunday is one of the principal reasons for the serious demise of two species of parrots: the Critically Endangered Yellow-eared Parrot (*Ognorhynchus icterotis*), possibly extinct in Ecuador, and the Vulnerable Golden-plumed Parakeet (*Leptosittaca branickii*). In many cases, large scale industrial processes are responsible for the elevated rates of deforestation, such as the critical state of forests in the Chocó region, where the majority have been converted to African Palm plantations. Wetlands have been equally affected, especially in coastal systems and in the Andes where the majority have been polluted or have been modified by large-scale infrastructure such as dams or shrimp farms. Additionally, if a new law on medium and large-scale open-cast mining is passed, it would rapidly become the greatest threat to IBAs in Ecuador. Threats to avifauna in the Galapagos are different and are associated with the presence of introduced species, diseases and phenomena, such as strong and continued El Niño events, as well as incompatible fishing practices. Finally, these threats are accentuated by the already-felt effects of climate change, with populations of threatened and endemic birds in the Andean region probably the most affected.

The Vulnerable Golden-plumed Parakeet (*Leptosittaca branickii*) has been severely affected by overexploitation of wax palms (*Ceroxylon* sp.) to celebrate Palm Sunday. Photo: Murray Cooper

## Opportunities



Aves & Conservación (BirdLife in Ecuador and the IBA coordinating organization) considers the IBA program one of its most strategic mechanisms for achieving its institutional objectives. Therefore, the organization is currently developing a National IBA Conservation Strategy which will encourage the participation of all organizations involved in the IBA program. Collaboration between environmental authorities, local government and other organizations is fundamental to meet the objectives of such an ambitious program. In fact, Aves & Conservación and the Ministry of the Environment have been convening strategic alliances to advance the country's commitments to international agreements, such as the conservation of Waved Albatross (*Phoebastria irrorata*) within the Agreement on the Conservation of Albatrosses and Petrels.

An important step forward for the program was the landmark decision on the part of the Ministry of the Environment to officially recognize IBAs as areas of public interest for bird conservation, as well as a protection mechanism for birds in Ecuador (Ministerial Agreement 001, Official Register No 550 of 23 March 2005). Furthermore, the Ecuadorian chapter of the Tropical Andes IBA Directory (Freile & Santander 2005a) has been recognized as an official document on threatened species, protected by the Ecuadorian state.

Ecuador has already implemented a gap analysis for biodiversity conservation and priority setting on continental Ecuador as part of the CBD framework. In this study, a preliminary evaluation of spatial agreement between IBAs and proposed priority areas highlighted the fact that IBAs located in the Chocó and Tumbesian regions cover a significant percentage of the total gaps identified in the coastal region (Cuesta *et al.* 2006).

**“IBAs have become the pretext for the organization of diverse groups of people with a common purpose: biodiversity conservation.”**

The formation of Local Conservation Groups (LCGs) and their empowerment with respect to IBAs has resulted in actions going beyond just training. IBAs have become the pretext allowing the organization of a diverse group of people with a common purpose: concern and interest to conserve biodiversity by promoting an adequate use of resources through awareness raising. LCGs have a multiplying effect which has encouraged cooperation and local leadership, demonstrated, for example, in the tasks taken on by LCGs in the northwest of Pichincha to challenge the imminent threats posed by the extensive mining concessions in the region.

Independently of the work carried out by Aves & Conservación, organizations in Ecuador have appropriated the IBA program and use it to support research proposal development as well as bird and other biodiversity conservation in IBAs within their areas of influence. The program helps to identify information gaps and set priorities for actions at different levels.



Local Conservation Groups have been set up in three IBAs in northwest Ecuador, after receiving training they will help to carry out long-term site monitoring.

Photo: Tatiana Santander

Furthermore, IBAs have also awoken an interest in the private sector, specifically, in the case of EcoFondo in Ecuador (C. Pacheco pers comm.). The EcoFondo is a fund of US \$16,930,000 destined to environmental conservation in Ecuador with validity until 2022. This initiative was born as a result of a decision made by the companies OCP Ecuador S.A. and EnCana Corporation, with support from a group of NGOs, among them Aves & Conservación (at the time CECIA) and the BirdLife International Secretariat in Quito. Its objective is to support local and community efforts in conserving Ecuador's natural heritage by means of funding projects with local participation in selected areas.

In the last three years, more than US \$1.5m have allowed the conservation of 12 IBAs in Ecuador, located in the Tumbesian, Chocó and Amazon regions: Reserva Ecológica Cayambe-Coca, Bosque Protector Cerro Blanco, Parque Nacional Machalilla, Isla Santa Clara, Isla Sangay, Cazareros-Mangaurquillo (La Ceiba), Reserva Ecológica Antisana, Gran Yasuní, Reserva de Producción Faunística Cuyabeno and three IBAs in northwest Pichincha. Aves & Conservación is implementing a project at these three priority IBAs through Local Conservation Groups (Box 2).

Box 2

**Local Conservation Groups develop economic alternatives within IBA**

Once the first stages of the IBA program in Ecuador had been completed, work began on conservation and monitoring projects. In the northwest of the Pichincha province, Local Conservation Groups (LCGs) were successfully supported in three IBAs (Mindo y Estribaciones Occidentales del Volcán Pichincha; EC043, Los Bancos-Milpe; EC041 and Río Caoní; EC040). Local capacity building was carried out with LCGs in observation and identification of birds as well as project development. Training is focused on building a basis for future stages of the project as well as monitoring and developing sustainable economic alternatives, such as tourism. As part of a participative process, a conservation plan was prepared for each IBA, allowing future actions to be oriented towards the establishment of protected areas, improving local actors' management capability, and bird monitoring.



Local Conservation Group at Los Bancos-Milpe IBA (EC041) during training workshop on bird observation and identification. Photo: Tatiana Santander

Photo: Tatiana Santander

Many of Ecuador's IBAs face severe threats, but seen as priority sites, they also generate a great interest in their conservation. Local communities and private landowners within IBAs need to be informed of the program and of conservation initiatives for their conservation and sustainable management (e.g. Box 3). This awareness raising among these

actors aims to encourage the conservation of their forested areas as well as current and potential benefits provided by IBAs, thus creating local support for conservation. This activity is not only the responsibility of Aves & Conservación, but of the whole of its network of local partners, which is in constant expansion.

**Further information**



**Data sources**

Data provided by all those who contributed to IBA identification in Ecuador.

**National IBA Directory**

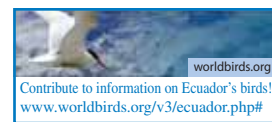
Áreas Importantes para la Conservación de las Aves en Ecuador (Freile & Santander 2005b).

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## Private sector involvement in priority site for shorebird conservation

Box 3



Marcela Aguiñaga, Minister of the Environment for Ecuador at the designation ceremony of Ecuador's first WHRSN site, Lagunas de Ecuasal-Salinas (EC020).  
Photo: Itala Yépez

Sixty-six species of migratory and congregatory birds, both waterbirds and marine species, have been recorded in Ecuador. Greatest numbers of these have been counted in two coastal IBAs, Humedales de Pacoa (EC019) and Lagunas de Ecuasal-Salinas (EC020), both of which regularly maintain more than 20,000 waterbirds. Their recognition as IBAs has allowed contacts to be established with the owners of these salt pans, facilitating their nomination and later approval within the Western Hemisphere Shorebird Reserve Network (WHSRN). As a result, the project "Conserving priority IBAs for migratory waterbirds in Ecuador" is currently being implemented, in which wetland conservation is supported by emphasizing the value provided by birds to site owners, government organizations and local communities. As well as strengthening public policy in the area, other training activities are implemented in the identification and monitoring of waterbird populations, encouraging the creation of a birders club in the Santa Elena Peninsula and the forthcoming publication of a guide to the waterbirds of Ecuador.

Photo: Tatiana Santander