

Information Sheet on Ramsar Wetlands

1. Date this sheet was completed/updated: September 2000

2. Country: Ecuador

3. Name of wetland: Isla Santay

4. Geographical coordinates:

2° 13' 14" South latitude
79° 50' 56" West longitude

5. Altitude: 0–10 metres above sea level

6. Area: An island of 2,200 hectares and 2,505 hectares of surrounding water for a total of 4705 hectares

7. Overview: Isla Santay is in the delta of the Guayas River just on the outskirts of the city of Guayaquil. It is an area of flat alluvial plains formed by fluvial-marine deposits and with a vegetation of halophytes that are subject to the influence of the tides and seasonal changes. Despite having been modified, this is the habitat of a large number of species and has a high biological diversity because it is located in an ecotone.

8. Wetland type: Marine/coastal I (An island that includes mangroves, flooded woodlands and freshwater areas subject to flooding)

9. Ramsar criteria: 2, 3, 4, 7, 8

10. Map of site included? Please tick yes -or- no

11. Name and address of the compiler of this form:

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12. Justification of the criteria selected under point 9, on previous page:

Criterion 2: There are 12 migratory species, 15 endemic species, 1 endangered

species and 2 vulnerable species

Criteria 3 and 4: Although the vegetation of this area has been modified, this is a long-standing refuge for birds that still nest on the island. It is probably the only known nesting site for *Amazona autumnalis* (an endangered species).

Criteria 7 and 8: This wetland is the habitat of a large population of fish species that interact with other animals in the food chain and that are of ecological and economic importance to local inhabitants. There is a large diversity of species because the island is located in the delta of the Guayas River, which forms an ecotone. The highly variable water conditions produce a large diversity of bioaquatic species that compose this ecosystem.

13. General location:

Isla Santay is located in the delta of the Guayas River, 800 metres east of the city of Guayaquil, in canton Durán, province of Guayas in the coastal region. There are 182 inhabitants living on the island (C.E.L. 1998).

14. Physical features:

Climate: The island's climate is Amw tropical monsoon (Koeppen). As a result, the island's climate strong seasonal variation. The rainy season begins in January and lasts until May, with maximum rainfall in March, while the dry season begins in June and ends in December, with light precipitation (*garúas*) between September and October. Average maximum and minimum temperatures range between 23° and 26° C. Nonetheless, maximum temperature is approximately 35° C, while average annual precipitation is 1112.8 millimetres.

Geology and soil: Isla Santay has relatively flat topography, which leads to frequent flooding during the rainy season. The soil is from the Quaternary (marine-estuarine clays) with recent sediment forming fluvial-marine deposits. The area's soils are poorly drained, saturated with water, high in salt content, dark coloured and deep clay-silts (Ei) forming halophytic soils. (See the soil and hydro-geological map of the Gulf of Guayaquil.)

15. Hydrological values: This island is located on the Guayas River, which is the most important river system in the Gulf of Guayaquil and the largest on the west coast of South America. The Guayas River has a length of 55 kilometres from the city of Guayaquil to Isla Verde. Its width is almost uniform between 1.5 and 3 kilometres, except in front of the city of Guayaquil, where it divides into branches that flow on both sides of the island, 6.7 kilometres wide. Its depth varies between 5 and 12 metres, being deepest in front of the city of Guayaquil.

Because of its location, the island receives marine and fluvial sediments from five sub-basins (Babahoyo, Chimbo, Churute, Daule and Taura rivers). In general, the area has alluvial, clay, saturated, dark and heavy soils. During the rainy season, it receives a large amount of sediment. When the water level drops, the soil on the western part of

the island separates into large compact blocks. On the eastern side, there is a large strip of mangrove (440 hectares), which has been maintained by capturing fluvial-marine deposits.

16. Ecological features:

Bioclimatic zone: Dry tropical

Life zone: Very dry tropical forest

Flooded area: Herbaceous and tree strata

Flood plain: Herbaceous, shrub, tree and vine strata

Mangrove area: Herbaceous, vine and tree strata

Farming area: Rice fields and pasture

17. Noteworthy flora: (Ecociencia, 1995)

Aquatic vegetation: *Eichornia craccypes*, *Lemna* spp., *Typha latifolia*

Herbaceous vegetation: Amaranthaceae, Asteraceae, Ciperaceae, Cucurbitaceae, Poaceae

Shrub vegetation: *Bixa orellana* (Bixaceae), *Gossypium herbaceum* (Malvaceae), Urticaceae

Tree vegetation: *Acacia* sp., *Albizia guachapela* (Mimosaceae), *Annona* sp. (Annonaceae), *Bauhinia aculeate*, *Caesalpinia paipai* (Caesalpinaceae), *Capparis* sp. (Capparidaceae), *Cecropia obtusifolia* (Cecropiaceae), *Cochlospermum vitifolium* (Cochlospermaceae), *Eritrina glauca*, *Ficus* sp. (Moraceae), *Guazuma ulmifolia* (Sterculiaceae), *Inga* sp., *Mimosa* sp., *Muntingia calabura* (Elaeocarpaceae), *Prosopis inermis* (Fabaceae), *Pseudobombax* sp. (Bombacaceae), Sapindaceae, *Triplaris* sp. (Polygonaceae)

Mangrove vegetation: *Acrostichum aurerum* (Pteridophyta), *Avicennia germinans* (Avicenniaceae), *Conocarpus erectus* (Combretaceae), *Laguncularia racemosa*, *Rhizophora harrisonii*, *R. mangle* (Rhizophoraceae), *Salicornia fruticosa*, *Zizhyus thysiflora*

Introduced species: *Oriza sativa*, *Zea mais* (Poaceae)

18. Noteworthy fauna:

Mammals (Man-Ging, 2000)

Artibeus jamaicensis, *Desmodus rotundus* (Phillostomidae)

Didelphys marsupialis (Didelphyidae)

Noctilio leporinus (Noctilionidae)

Myotis albescens (Vespertilionidae)

Nasua narica, *Procyon cancrivorus* (Procyonidae)

Mus musculus, *Oryzomys xantheolus*, *Ratus novergicus* (Muridae)

Tamandua mexicana (Myrmecophagidae)

Birds (Man-Ging, 2000)

[(**Mb**) = migratory boreal; (**Ma**) = migratory austral; (**V**) = vulnerable; (**E**) = endemic*; (**A**)

= threatened; (r) = resident; *Endemic species are considered vulnerable because of their limited distribution.]

Pelecanus occidentalis (Pelecanidae)

Fregata magnificens (Fregatidae)

Bubulcus ibis (**Mb partial**), *Butorides striatus*, *Dendrocygna bicolor*, *Egretta alba*, *E. thula*, *Florida caerulea* (**Mb**), *Nyctanassa violacea*, *Nycticorax nycticorax* (**Mb**) (Anatidae)

Cathartes aura (**Mb**), *Coragyps atratus* (Cathartidae)

Elanoides forficatus (**Mb** and **Ma, r**), *Parabuteo unicinctus* (Accipitridae)

Buteogallus meridionalis, *Falco sparverius*, *Herpetotheres cachinnans*, *Pandion haliaetus* (**Mb, A**), *Polyborus plancus* (Falconidae)

Glaucidium peruanum (**E**) (Strigidae)

Aramides axillaris (**V**) (Rallidae)

Jacana jacana (Jacanidae)

Charadrius semipalmatus (**Mb**) (Charadriidae)

Actitis macularia (**Mb**), *Calidris minutilla* (**Mb**), *Numenius phaeopus* (**Mb**) (Scolopacidae)

Sterna hirundo (**Mb**), *Xema sabini* (**Mb**) (Laridae)

Columbina buckeyi (**E**), *C. cruziana*, *Leptotilla verreauxi*, *Zenaida asiatica* (**V**) (Columbidae)

Amazona autumnalis (**E**), *Aratinga erythogenys* (**E**), *Brotogeris pyrrhopterus* (**E**),

Forpus coelestis (**E**) (Psittacidae)

Crotophaga ani, *C. sulcirostris* (Cuculidae)

Tyto alba (Tytonidae)

Chordeiles acutipennis (Caprimulgidae)

Streptoprocne zonaris (Apodidae)

Amazilia amazilia (**E**), *Phaethornis baroni* (**E**) (Trochilidae)

Chloroceryle americana (Alcedinidae)

Piculus rubiginosus (Picidae)

Lepidocolaptes souleyetii (Dendrocolaptidae)

Furnarius cinnamomeus (**E**) (Furnariidae)

Camptostoma obsoletum, *Elaenia* spp., *Euscarthmus meloryphus*, *Fluvicola nengeta*,

Megarhynchus pitangua, *Myiarchus phaeocephalus* (**E**), *Myiozetetes cayanensis*,

Myodynastes bairdii (**E**), *Pyrocephalus rubinus*, *Todirostrum cinereum*, *Tyrannus*

melancholicus, *T. niveigularis* (**E**) (Tyrannidae)

Phaeoprogne tapera, *Progne chalybea*, *Stelgidopteryx ruficollis* (Hirundinidae)

Campylorhynchus fasciatus (**E**), *Troglodytes aedon* (Troglodytidae)

Polioptila plumbea (Sylviidae)

Turdus maculirostris (**E**) (Turdidae)

Cyanocorax mystacalis (Corvidae)

Cacicus cela, *Dibes warszewiczi* (**E**), *Icterus mesomelas*, *Quiscalus mexicanus* (Emberizidae-Icterinae)

Basileuterus fraseri, *Dendroica erithachorides* (Emberizidae-Parulinae)

Coereba flaveola (Emberizidae-Coerebinae)

Euphonia lamirrostris, *Thraupis episcopus* (Emberizidae-Thraupinae)

Rhodospingus cruentus, *Sporophila aurita*, *S. nigricollis*, *S. obscura*, *S. telasco*, *Volatinia jacarina* (Emberizidae-Emberizinae)

Reptiles and amphibians (Man-Ging, 2000)

Anolis sp., *Iguana iguana*, *Ophryossooides iridiscens* (Iguanidae)
Ameiva sp. (Teiidae)
Chelydra serpentina (Chelydridae)
Leptodeira septentrionalis (Colubridae)
Boa constrictor (Boidae)
Bothrops asper (Viperidae)
Bufo marinus (Bufonidae)

Fish (Man-Ging, 2000)

Arius jordani (Ariidae)
Lile stolifera (Clupeidae)
Poecilia reticulata (Poeciliidae)
Centropomus unionensis (Centropomidae)
Polynemus approximans (Polynemidae)
Gobioides peruanus (Gobioididae)
Mugil curema (Mugilidae)
Ologoplites saurus (Carangidae)
Eucinostomus californiensis (Gerreidae)
Dormitator latifrons (Gobiidae)
Aequidens rivulatus (Cichlidae)

Invertebrates

Ucides occidentalis
Macrobrachium sp.
Callinectes sp.
Anadara tuberculosa

19. Social and cultural values:

There is very little information on the social life on the island during the colonial period and later during the republic, but it is known that a powerful social circle dominated the ranches on Santay. Simon Bolivar, an important person in the history of Latin America, was on the island on 30 August 1829, drafting the Treaty of Guayaquil, which was later signed with General San Martin.

Because the island is in the area of Guayaquil and Durán, an area of several ancestral cultures (Milagro-Quevedo, Huancavilca, Punáes), it is possible that archaeological sites will be found on the island that reveal temporary human settlements of several cultures that fought for control of transportation and trade up stream on the Guayas River (Parducci 1974; Sánchez 1995). The inhabitants are descendants of workers on the cattle ranches that were on the island. They are from among the inhabitants of Chanduy (Canton Santa Elena) and fished, farmed seasonally and raised pigs, goats and chickens locally. Most of the inhabitants are Catholics and celebrate religious holidays.

20. Land tenure/ownership of:

At the site: This island has belonged to the Banco Ecuatoriano de la Vivienda since 1983.

21. Current land use:

At the site: A large number of families raise goats, pigs and chickens for sale and consumption. Cattle are occasionally used as a form of payment for services provided. A few families grow rice and maize during the rainy season.

In the surrounding area: The main livelihood is fishing, which has considerably decreased because of contamination of the river. In the morning, fishermen go to the markets in Guayaquil and Durán to sell the fish they caught during the night.

22. Factors (past, present or potential) adversely affecting the site's ecological character, including changes in land use and development projects:

At the site: The growth of the city and the surrounding neighbourhoods affects the ecological characteristics of the area. The human settlements in Canton Guayaquil contribute most of the industrial and domestic pollution. As a result, the island is considered to be a critical area on the Ecuadorian continental coast.

In the surrounding area: The shores of the island have continually been altered over time. Nonetheless, it is the ancestral home and nesting site of many bird species. Industrial interests want to convert the island into an industrial park, including construction of a major bridge dividing it into a tax-free area and an ecological area, but this proposal is not supported by environmental interests. The ministers for the environment and housing have agreed to declare the island a recreation and ecotourism area. Only the decree is lacking. A project for developing tourism (Proyecto Isla Santay, Fundación Malecón 2000) is not supported by the local population and does not meet criteria for environmental protection. This project proposes constructing buildings for ecotourism, sports fields and docks.

23. Conservation measures taken:

Project DAPIS (Declaratoria de Areas Protegidas para la Isla Santay) by the Coastal Ecological Committee (C.E.L.) and German Technical Cooperation (DED)

24. Conservation measures proposed but not yet implemented:

The Coastal Ecological Committee (C.E.L.) is preparing plans for the "Programme for the conservation and sustainable development of the Isla Santay wetland" in order to protect resources and promote community development.

25. Current scientific research and facilities:

The following study is being carried out: “Survey of the biodiversity on Isla Santay” by Corinne Marechal under the auspices of the Leopold III Foundation for Nature Conservation (Belgium) and the Rotary Club of La Louvière (Belgium).

26. Current conservation education:

“Programa Educacional y Comunitario San Jacinto de Santay” and the “Proyecto de Alfabetización Intergeneracional para los Moradores de la Isla Santay” carried out by the youth group “Las Extraordinarias” and C.E.L.

27. Current recreation and tourism:

The local community celebrates Catholic feast days every year on 17 August, San Jacinto Day, and on 24 September, the Fiesta of Nuestra Senora de la Merced. The local inhabitants invite fishermen and persons from La Unión (a village near the parish of Taura) to the feast. These are the only recreational activities for the inhabitants of San Jacinto de Santay. Occasionally, the inhabitants serve as guides for researchers, journalists and visitors.

28. Jurisdiction:

The administration of Cantón Durán is responsible for this wetland.

29. Management authority:

The Subsecretaría de Desarrollo Sostenible (Coastal region) of the Ministry for the Environment is responsible for environmental management.

30. Bibliographical references: