Information Sheet on Ramsar Wetlands

Translation of original Information sheet by Charles Akin (August 2000)

1. **Date this sheet was completed/updated**: 30 September 1999

2. **Country**: Argentina

3. **Name of wetland**: Lagunas de Guanacache

4. **Geographical coordinates**:

32 00' - 32 35' South latitude
68 33' - 68 42' West longitude

5. **Altitude**: 450-550 metres above sea level

6. **Area**: approximately 580,000 hectares

7. **Overview**:

This wetland comprises a system of lakes and marshes fed by the Mendoza and San Juan rivers and much earlier by the Desagües del Bermejo. It is a system outside the mountains that feeds the Río Desaguadero. It is in the woodland phytogeographic province (Cabrera 1976), among groves of *algarrobo* and dunes. More than 200 kilometres long, Lagunas de Guanacache covers a potential area of 10,000 square kilometres, equivalent to 11 percent of the province of San Juan. There is a rich diversity of fauna in the wetland; more than 50 species of aquatic birds with more than 20,000 specimens and a local community of 2000 inhabitants whose customs and traditions are based on the lakes and who call themselves "Laguneros". The system has suffered changes from natural causes and atrophy, which have considerably decreased its surface. A conservation programme is currently being carried out.

8. **Wetland type**: Continental: N, P, R, Ts, U, W, Y

9. **Ramsar criteria**: 1a, 2a, 2d, 3a, 4a

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

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

Professor Heber José Sosa
Oficina de Ambiente de la Municipalidad de Lavalle, Mendoza
San Juan 549, Torre B1 11-48
5500 Ciudad, Mendoza, Argentina
Tel: (54 0261) 494 1617
Fax: (54 0261) 494 1166
e-mail: ambientelavalle@hotmail.com

Gerardo Vaquer

Jefe de Medio Ambiente de la Municipalidad de Lavalle
Beltrán 37
Lavalle, Mendoza
e-mail: ambientelavalle@hotmail.com

Silvana Vallvé
INDESHI - San Juan
e-mail: svallve@unsj.edu.ar

Justo Marquez
Dirección de Recursos Naturales Renovables de San Juan
e-mail: spolamb@impsat1.com.ar

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

1a Lake Guanacache is a wetland resulting from a natural enclave in the woodland phytogeographical province (Cabrera 1976). It was formerly one of the largest wetlands in the Gran Cuyo Region and has an important human population of mestizo origin (Buccher et al. 1998).

2a A variety of environments are habitats for a wide diversity of aquatic birds common to the Chaco woodland such as *Euxenura maguari* and *Chauna torcuata*. Also common are species that represent the Pampa province, *Plegadis chihi* and *Phoenicopterus chilensis*, and ducks in the genus *Anas*. There are also migratory birds (Charadriiformes and Scolopacidae), which use several habitats on the shores of the wetland in spring and summer. This area is an important stopping place for feeding and resting in route to the Ramsar Site Laguna Llancanelo, 400 kilometres farther south.

2d In the area around the lake, there is an area of dunes with several endemic species: *pichiciego* (*Chlamyphorus truncatus*), *ranita de monte* (*Pleurodema nebulosa*) and the flora *parrón* (*Ephedra boelkeri*) and *algarrobo guanaco* (*Prosopis argentina*). In the salt flats, is found the *rata vizcacha* or *rata canguro del salar* (*Tympanoctomys barrerae*). The following fish have been observed in the lakes: *otuno* (*Diplomystes* spp.), *bagre aterciopelado* (*Hatcheria* spp.) and *anguila de río* (*Symbranchus marmoratus*). In the mangroves and marshes, the *burrito salinero* (*Laterallus jamaicensis*) is an important aquatic bird because of its vulnerability.

3a With regard to the regularity for this criterion, it is important to consider this wetland's dynamics, given that the degree of fluctuation and maintenance depends on snow cycles in the cordillera. Partial surveys have been made in severval areas of the lake system during seasons of snow (all of the Guanacache system), and the results show that there are about 20,000 specimens.

4a No studies have been made on the fish in Guanacache. There are sporadic data for this sector (Pozzi 1945 and Villanueva and 1995) and personal communications from regional specialists as well as information provided by the local community and occasional field observations made by the author.

Sectors	Partial surveys (specimens)
Laguna Las Trancas	5,000
Laguna Los Chanchos	3,000
Laguna del Rosario	1,000
Laguna El Toro	3,500
Bañados del Tulumaya	1,000
Bañados del Río San Juan	2,000
Laguna Guaquinchay	6,000
Laguna Meré	600
Laguna Pincheira	300
Total	22,400

13. **General location**:

The site is located in the area between the provinces of Mendoza, San Juan and San Luis and includes the water basins of the Mendoza and San Juan rivers. It is defined on the north by 32 latitude, to the west by Highway 40 up to the police checkpoint at Jocolí at kilometre 81 and to the east from 32 South latitude following a line up to the junction of the San Juan Luis-San border the place then up to called Las Trancas and the Sierra de las Quijadas National Park. The limits fixed for the site of Lagunas de Guanacache are practical because they include the river basins area of the the wetland. linked to change in They do not land rights any way the land uses in and other provinces. both This area includes part of the southern portion of the departments of Sarmiento and 25 de Mayo in San Juan province and the northern portion of the department of Lavalle in the province of Mendoza.

14. **Physical features**:

Formerly, the lakes occupied the low-altitude precordilleran valley located on the southern part of the

Indigenous species	Comments
1. *Otuno* (*Diplomystes* spp.)	Relic populations
2. *Bagre* (*Hatcheria* spp.)	Relic populations
3. *Anguila del río* (*Symbranchus marmoratus*)	Relic populations
4. *Madre de agua* (*Jenynsia lineata*)	Large populations. This species controls the density of mosquito populations (*Aedes* spp. and *Culex* spp.)
5. *Pejerrey* (*Odontesthes bonariensis*)	Found only during periods of flooding, migrating from the Río San Juan
6. *Dientudo*	Large populations migrating from the Río San Juan
Exotic species	
1. Carp (*Cyprinus carpio*)	Large populations that migrate up the San Juan and Mendoza rivers. A potential source of food for the local population.
2. Perch (*Percichthys* spp.)	Only when the lakes remain for long periods

eastern piedmont, called the Valle del Rio Guanacache or Valle del Agua at an altitude of approximately 600 metres above sea level. The Guanacache chain of lakes was once very extensive and led to the creation of a booming community of fishermen who disappeared when the lakes disappeared. At the beginning of the Holocene, the lakes covered about 7200 square kilometres (Gambier 1979-1981). The cities of Mendoza and San Juan were founded nearby. The large system of lakes, the Leyes and Tulumaya streams in Mendoza, the Agua Negra stream and the Cochagual swamps in San Juan acted as regulators of the water level in the lakes (Roig 1994). There is abundant documentation describing the broad expanse and volume of these lake systems (Larraín 1906 and Michieli 1979). The Lagunas de Guanacache are fed on the San Juan side by the Los Patos-San Juan system, formed by the Blanco, Calingasta, Castaño and Los Patos rivers. All of these rivers begin in the mountains of the Andean range between 30 30' and 32 30' South latitude. The system of old lakes and marshes is on the Mendocino alluvial plain, which forms part of an extensive morphological unit that Polanski (1952) called the "Gran Llanura de la Travesia". This large sedimentation basin extends along the orographic forests parallel to the precordillera, the Cordillera Frontal and the San Rafael Range in the west and the Sierras de San Luis (Sierras Pampeanas Occidentales) in the east. In the province of Mendoza, the system develops on the western piedmont, the Río San Juan in the north, the Desaguadero-Salado to the east and La Payunia to the south. Geologically, it is a deep depression filled with thick layers of sediments from the Tertiary and Quaternary (Abraham and Prieto 1981).

The current physiognomy of the lakes: There are several natural resevoirs, such as the large Tulumaya marshes, which receive surface rainwater runoff from drainage canals, caused by the flooding caused in the oases (areas of irrigated farming) during summer storms.

In years of heavy snowfall, the thawing that occurs at the end of the spring causes flooding from the Río Mendoza, partially or totally filling the lakes and marshes called Lagunas del Rosario and Laguna del Torro and the dry lake of Guanacache (formerly supplied by the Arroyo Tulumaya, which now dries up half way along, forming the Bañados del Tulumaya and preventing water from reaching the former lake). The Río San Juan is now the main tributary of most of the system, maintaining marshes and lakes in the northeastern part of the province in the part called Bañados de San Miguel and Las Trancas. As a result, drainage from the Mendoza and San Juan rivers plus the Leyes and Tulumaya streams forms, together with the light local rains, the main source of water. Underground water and the water basin on the western side of the precordillera: Sierras de La Peña, La Higuera and Villavicencio, are important sources of water. It is important to point out that the filling or partial filling of all of the system occurs through cycles of flooding as described by Malvárez (1999). Rodríguez (1966) argues that we are witnessing the final stage of the breakdown of the drainage network caused by the drying up of the cordilleran

rivers because of natural and atrophic phenomena. The system is dominated by the eolian cycle, whose deposits cover large parts of the fluvial and lake sediments.

15. **Hydrological values**:

The system receives surface rain water from the Mendoza and San Juan rivers and the Bañados del Bermejo, plus the Leyes and Tulumaya streams. The surface runoff is collected by two canals: Canal 4 from the west, which collects water from storms from the cerrilladas in the precordillera, and the Canal Cacique Guaymallen from the southwest, which collects water from flooding in the centre of the city of Mendoza. For flood control, the Bañados del Tulumaya (more than 5000 hectares of flooded swamps with lake vegetation) receive runoff from the city of Mendoza. They collect more than 200 cubic metres/second in just a few hours after each summer rain. As is characteristic of alluvial rivers, both the San Juan and Mendoza rivers deposit a large amount of material after each flood cycle. The accumulation of sediment has not yet been measured, but (according to the companies exploiting Canal 4, Media Agua and San Juan) "...after each flooding of the river, more than a metre of clay is deposited in the canals and the bottom of the lake..."

More information is given in the appendices on hydrology.

16. **Ecological features**:

The following habitats have been identified in order to determine the use of habitats by aquatic birds during surveys.

1. Flooded woodland: A wooded habitat of dunes, dry river beds, intermediate streams covered with wooded areas of *algarrobo* (*Prosopis flexuosa*), *chanar* (*Geofroean decorticans*) and *retamo* (*Bulnesia retama*). Flooding covers this habitat, leaving the shrub stratum under water, and only the crowns of the trees remain above water (green, dry or on the point of drying).

2. Flooded pasture: Areas of natural pastures and low bushes (steppe vegetation) dominated by communities of *pichanales* (*Psila spartioide*), *chilcales* (*Baccaris salicifolia*) with ground cover of salt grasses (*Ditischlis spicata* and *D. scoparia*), *chepica* (*Cynodon dactilon*) and tulle grass (*Mulhembergia asperifolia*) in this sector where the water is very shallow. Open areas, in the sunshine are frequented by domestic animals.

3. Water: The areas of water are formed by lakes of varying dimensions and depths. The water surface forms islands or small islands of sand, dunes with vegetation or soils with pastures and shrubs. They are usually freshwater, although the lakes formed from rainwater are sometimes brackish.

4. Mud banks: The edges of the lake or streams, along the dunes or on sandy soil (with or without vegetation). The

banks are usually narrow and the shrub association (*chilcales* and *pichanales*) begins immediately.

5. Gallery forest: Areas of woodland forming galleries in the river. The former main component of this habitat was *quebracho blanco* (*Apidospera quebracho-blanco*), but now there are only *Bulnesia retama, Prosopis flexuosa, Salix humboltiana* and *Tamarix gallica*. Willows are found only on the edges of the San Juan River associated with *algarrobo*, while quebracho was found in the Desaguadero, but only a few relic specimens remain (Sosa 1996). Tamarisk is found primarily on the edges of the Río Mendoza.

6. Swamps: Formed by low ground of sedimentary origin with higrophytic vegetation (Cirujano et al. 1992), forming wide trenches, represented by communities of *Juncus, Phragmites* and *Typha*. In some cases they are permanent.

7. Salt flats: Land below water level with highly saline soils without vegetation, with remnants of molluscs (*Litoridinas* and *Planorbis*), in many cases forming layers of shells. They are usually covered by rainwater in the summer.

17. **Noteworthy flora**:

Composition of the most common vegetative communities

18. **Noteworthy fauna**:

The fauna in these regions clearly represents the

Stratum	Community	Composition
Arboreal	*Algarrobal*	*Atamisquea emarginata*, *Bulnesia retama*, *Prosopis flexuosa*
	Chañaral	*Condalia* spp., *Geoffroea decorticans*, *Lycium* spp.
Shrub	*Jarillar*	*Larrea cuneifolia*, *L. divaricata*, *L. nitidans*, *Ximenia americana*
	Lamaral	*Condalia* spp., *Prosopis alpataco*
	Zampal	*Allenrolfea vaginata*, *Atriplex* spp., *Soaeda divaricata*
	Chilcal	*Baccaris spartioidea*, *Tamarix gallica*, *Tessaria absinthioides*
	Lake	*Juncus balticus*, *Phragmites australis*, *Scirpus californicus*, *Typha dominguensis*
Herbaceous	*Junquillar*	*Ibicella parodii*, *Sporobolus rigens*
	Dry grassland	*Panicum urvilleanum*, *Pappophorum* spp., *Trichloris crinita*
	Flooded grassland	*Bacopa monnieri*, *Carex*

zoogeographical province. It is widely distributed, but towards the northeast there appear elements that are native to the Chaco and towards the south there is an overlapping with species from Patagonia and several of the areas of the Pampa. Marsupials are represented by *Didelphis azarae* and *Thilamys pusilla*. The edentate and the cats are by far the most conspicuous species of fauna in the region and include the armadillos (*Chaetophractus* spp.) and the *piche* (*Zaedyus pichiy*), which migrates from Patagonia, the *mataco* (*Tolypeutes mataco*) from the Chaco and the *pichiciego* (*Chlamyphorus truncatus*), an inhabitant of the dunes. Cats such as the Geoffroy's cat (*Oncifelis geoffroyi salinarum*), *Felis pajeros*, the Eyra cat (*Herpailurus yaguarondi*) and the puma (*Puma concolor*) are found throughout the shrub portion of the site.

Rodents are also abundantly represented, with the most frequent being the *mara* (*Dolichotis australis*), the viscacha (*Lagostomus maximus*) and the *coipo* (*Myocastor coypus*), with several pilot projects made by the local inhabitants. In 1990, about 4000 skins were gathered for sale under the supervision of the Dirección de Recursos Naturales of the province of Mendoza (Chamboleirón 1993). There are several small mammals among which are the *ratón de campo* (*Graomys* spp. and *Akodon* spp.) and the *cuises* (*Microcavia australis* and *Galea musteloides*). In halophilic areas, there is the *rata canguro del salar* (*Tympanoctomys barrerae*). Among the birds, the runners are represented by the ñandú (*Rhea americana*) and the partridges (*Nothura darwini, N. maluchas* and *Eudromia elegans*). The Falconiformes are *Buteo polyosoma, Cathartes aura, Circus cunereus, Coragyps atratus, Falco* spp. and *Spiziapteryx circumcinctus*, among others. There are other species in the shrub area such as the *chuna* (*Chunga burmeisteri*) and pigeons (*Columba* spp., *Columbina picui* and *Zenaida auriculata*). Among the Psittaciformes are the *Cyanoliseus patagonus* and *Myopsitta monachus* and flying down from the precordillera in large flocks during the winter the *Bolborhynchus ayamara*. Among the common birds of the Pampa area are the *dormilón* (*Podager ñacunda, Furarius rufus* and *Pseudoseisura lophotes*), the *carpinteros* (*Colaptes melanochloros, Picoides mixtus, Melanerpes cactorum*) and the *trepadores* or *chincheros* (*Lepidocolaptes angustirostris* and *Drymornis bridgesii*). The passerines are relatively varied, but the eminently representative bird the *gallitos del monte* (*Rhinocrypta lanceolata* and *Teledromas fuscus*) should be mentioned. For information on the aquatic birds in this region, see the annexes (Sosa et al. 1998). There is a great diversity of lower invertebrates. The anurans have elements that participate in their distribution to other zoogeographical areas such as the *Bufo arenarum, Leptodactylus ocellatus* and others that are indigenous such as *Pleurodema nebulosa, P. bufonina* and *Odontophrynus occidentalis*. There are lizards in the genera *Homonota, Liolaemus* and *Phymaturus* with more than ten species; *matuastos* (*Diplolaemus, Leiosaurus* and *Pristidactylus*), the Argentine *teju* (*Tupinambis rufescens*), preferring the dune areas which offer better conditions for the development of this community (Videla-Puig 1994). Snakes are represented by the boa constrictor (*Boa constrictor*), Colubridae of the genera *Clelia, Philodryas* and

Pseudotomodon and the vipers *Botrops ammodytoides, B. neuwiedi diporus* and *Micrurus pyrrhocryptus.* The only tortoise is the *Chelonoidis chilensis*, which is abundant in the *algarrobo* forests. There are many, many invertebrates. Most important are those that are endemic or connected to humans because of social or health reasons. Two species limited to the area are the *soifugos* (*Nummuncia mendoza* and *Procleobis burmesteri*), the scorpion *Bothriurus burmeisteri* and the *grillo-topo* (*Gryllotalpa claraziana*). Among the important forms for medical and health are the triatomides (*Triatoma infestans* and *T. platensis*) and the gasteropod (*Australorbis peregrinus*) (Roig 1972, Videla et al. 1997 and Correa 1999).

19. **Social and cultural values**:

Historical documents show that the lake area experienced periods of human occupation of some importance. Towards the beginning was the Huarpe, followed by missionaries and conquerors giving Guanacache importance that declined in the following centuries. At the beginning of the eighteenth century, the villas of Asunción, San Miguel and Tulumaya as well as others gave the area around the lake an atypical characteristic with real signs of progress. At the end of the nineteenth century, the lakes provided abundant fisheries for the city of San Juan and created employment. Decline began at the beginning of the twentieth century. The Lagunas de Guanacache were occupied by a local indigenous culture known as Huarpe, that was affected by the occupation and domination of the Incas. Later, this culture was replaced at the fall of the Incan empire by the Spanish conquest of Peru (1530). After the Spanish conquest, San Juan was abandoned by the Incas. The local inhabitants continued with the Incan customs and livestock and farming practices until Spanish colonization.

The indigenous population that lived in the Cuyo region at the time of the Spanish conquest at the middle of the sixteenth century extended over a broad area at the base of the Andean range in three fertile valleys on the precordilleran piedmont between 31 and 34 South latitude and on an axis between 68 and 69 West latitude. From north to south, the valleys are Tucuma (Caria), Guentota (Cuyo) and Uco (Jaurúa). These valleys were formed by the San Juan, Mendoza and Tunuyán rivers respectively. The first two flow from west to east into the lake area called Lagunas de Guanacache.

In these valleys, the Huarpe population used the natural resources, such as the guanaco (*Lama guanicoe*), the *mara* (*Dolichotys australis*), the armadillo (*Chaetophractus villorosus*), the jaguar (*Panthera onca*) plus other small species in the streams and lakes such as partridge (*Nothura* spp. and *Eudromia elegans*) and ducks (*Anas* spp.). They made use of indigenous flora such as the *drupas de chañar* and *algarrobo* beans, raw material for the preparation of alcoholic drinks and bread. The fruit of the *algarrobo* was gathered in the large forests of the central valleys called *algarrobales*. Also of importance was the hunting of wildlife such as the guanaco, ñandú (*Rhea americana*), European hare (*Lepus*

europesus), partridge and a large variety of ducks (*Anas* spp. and *Netta peposaca*) and other large birds in the lakes (Abraham de Vazquez and Prieto 1981 and Gambier 1979 and 1993).

Furthermore, they irrigated the valleys using a system of channels for water from the rivers, creating pastures for domestic animals, especially cattle, sheep and goats. Because of irrigation, agriculture was an important Huarpe activity especially maize (*Zea mays*), pumpkin (*Cucurbita* spp.), quinoa, beans, squash (*Logenesia* spp.) and *mate*. From the marshes with hydrophilous vegetation they consumed the sweet roots of reeds (*Scirpus californicus*), *junquillo* (*Sporobolus rigens*) (considered by Roig 1994 to be *Schoenoplectus californicus*), fish: native trout (*Percichtys trucha*), catfish (*Hachteria* spp.), *otuno* (*Diplomystes viedmensis cuyanus*) and waterfowl. For moving about in the lake, the inhabitants used rafts built with the abundant reeds (Gambier 1993 and Roig 1994). The availability of resources and the indigenous population led to the founding of the two important Spanish colonies in Cuyo: the city of Mendoza in the Guenota valley and the city of San Juan de la Frontera in the valley of Caria in 1561 and 1562.

20. **Land tenure/ownership of**:

It is a known fact that the problem of land tenure in the Lavalle desert is compounded by a lack of existing records. The most recent land record dates from 1918. It identifies government land that has most probably varied during the past 80 years and private property for which title was the exception and not the rule. The origin of this lack of order is quite complex. Perhaps it has something to do with the well-known "Sayanca inheritance", but according to information from tenants, this inheritance did not lead to the current conflicts. At the end of the nineteenth century or at the beginning of the twentieth, access to these documents was unfortunately impossible. There was an attempt to organize land titles, but impossible formal demands did not match the reality of long-held holdings and the situation became even more complicated, instead of creating order in the titles. The reality is that the *puestero* is the traditional occupant (untitled owner) of this land. But either because it is government land or disputed private property, their status is not only that of non-owner, but simply precarious occupier, lacking stability and security of occupancy. To this is added a lack of precision in existing titles. A precarious occupant without title hesitates to improve his holding and animal production, remaining at a level of subsistence.

In order to solve this problem, the government of the province of Mendoza, through the Dirección de Ordenamiento Ambiental y Desarrollo Urbano, created the "Programa Arraigo de Puesteros" (Law 6086/93), which attempts to grant title to current occupiers. In addition, a law has been passed for the expropriation of 700,000 hectares to be transferred to each of the occupiers in Lavalle and those in the other departments in the province. So far, 800 *puesteros* have been identified in

the Lavalle desert (Dirección de Cadastro of the Municipality of Lavalle).

21. **Current land use**:

Ranching: An important economic factor in the region; primarily the raising of goats. The areas of grazing are community property and are part of the dry parts of the lakes (when water level decreases) or are areas near the aquatic environments (swamps, marshes or flooded grasslands).

Community pasture: The community creates grazing areas, in other words, the *puestero* grazes his animals in areas shared with other neighbouring *puesteros*. Fencing is not used. The animals are grouped in flocks, which are sometimes composed of goats of different owners. They use shared pasture and rotate in light of the availability of pasture. In cases of unproductive pastures, the *puesteros* take their herds for grazing farther away. The land is not rented, it is used only as long as there is grazing in a form of transhumance.

Agriculture: When the water decreases, the dry areas are used for growing many types of short-cycle vegetables (maize, squash, melon, watermelon, sunflower and other garden vegetables). It is important to mention that when the water decreases, soil humidity is retained for up to six months (personal communication from Puestero Gerónimo Quiroga). No irrigation is used, and production does not depend on rainfall.

For preparation for planting, family groups are organized from several holdings. The community organizes itself to share the work. After the 1997 flood, this type of organization occurred only at the place called Lagunas del Rosario. The periods for growing crops depend on occasional flooding during years of snow. Another important economic activity, especially in the towns in the area in the province of San Juan, is the cutting of junquillo (*Sporobolus rigens*), a Graminaea used for making brooms and handcrafted baskets.

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

This system is degrading slowly. The causes of the deterioration are very diverse, but can be placed in the following categories:

- Long periods of drought

- Erosion and the formation of potholes in the tributaries of the Rio Desaguadero. A series of canals were dug in the region in order to divert the river for the construction of roads and highways and to avoid having to fill in access to road bridges. This has increased the speed of water flow and led to erosion.

- Increased use of water in the oases to increase farm land upstream

- Tectonic considerations. The substratum of this large depression, formed by blocks, is suffering differential movements of raising and subsidence. The geographical centre of the basin has moved to the southeast and less than 250 metres of Quaternary thickness has been measured.

23. **Conservation measures taken**:

No attempt had been made to create a protected area at the site. A rehabilitation plan is being carried out with the active participation of intermediaries and the local community (See annexes).

24. **Conservation measures proposed but not yet implemented**:

The current objective is that the site be submitted to the RAMSAR Bureau in order to begin a programme of wise management. As a first activity and in order to prepare for the declaration of the area as a Ramsar site and to facilitate its sustainable management, a training workshop was held from 31 May to 5 June 1999 for the local community and intermediaries for the rehabilitation and management of the site. The objective of this first workshop was to plan short, medium and long-term strategies for the rehabilitation and later management of the wetland. Field work is being carried out as part of the planning for the rehabilitation. There is also a proposal for the protection of Guanacache as a biological corridor because this site is a basic link for many migratory species (Sistema Provincial de Areas Protegidas, Marquez et al. 1991).

25. **Current scientific research and facilities**:

Geological, biological and social survey of the current situation in the Lagunas de Guanacache (Sosa et al. 1997)

Archaeological study of the populations associated with Río Mendoza (Chiavaza 1998)

26. **Current conservation education**:

See annexes "Proyecto Turístico Guanacache" (Municipalidad de Lavalle).

27. **Current recreation and tourism**:

See annexes "Proyecto Turístico Guanacache" (Municipalidad de Lavalle).

28. **Jurisdiction**:

In the province of Mendoza, this site belongs to the province and management is the responsibility of the Ministerio de Ambiente y Obras Públicas of the provincial government.

In the province of San Juan, jurisdiction is provincial and management is the responsibility of the Ministerio de la Producción, Infraestructura y Medio Ambiente

29. **Management authority**:

Mendoza

Ministerio de Ambiente y Obras Públicas of the Mendoza provincial government

Minister Eduardo Sancho
Casa de Gobierno, Cpo. Central 8 piso
Subsecretaria de Medio Ambiente
Elena Abraham
Calle Peltier s/n
5500 Mendoza
Tel.: (54 0261) 492 867

San Juan

Ministerio de la Producción, Infraestructura y Medio Ambiente del Gobierno de San Juan
Minister Guillermo de Miguel

In the field

Mendoza

Oficina de Medio Ambiente de la Municipalidad de Lavalle
Intendente Sebastián Brizuela
Beltrán 37
5535 Lavalle, Mendoza
Tel.: (54 0261) 494 1617
Fax: (54 0261) 494 1166
e-mail: ambientelavalle@hotmail.com

San Juan

Instituto de Investigaciones Hidrobiológicas (INDESHI)
Directora Irma Moreno de Terzano
El Pinar s/n
San Juan
Tel.: (54 0264) 433 1640
e-mail: svallve@unsj.edu.ar

Subsecretaría de Política Ambiental
Gobierno de San Juan
Subsecretaria Zulma Virginia Invernizzi

30. **Bibliographical references**: