

Zone 5: West-south-west and southern South America: Chile, Argentina, Uruguay

Lic. María Mercedes Podestá
Instituto Nacional de Antropología y Pensamiento Latinoamericano
Buenos Aires, Argentina

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1 Profile of Zone:

Zone 5 is extremely rich in rock art sites in its various expressions: paintings or pictographs, engravings or petroglyphs, engravings-paintings, colored stone structures, and geoglyphs. The latter can be found in the Chilean Big North, and exceptionally in north-western Argentina. Most of them are open-air sites and their main supports are unprotected rocky shelters, blocks, rock substrata, and mountain slopes (Chilean geoglyphs). Sites in caves are less numerous and, although under rock, they are not deep and they almost always receive sunlight, except rare cases.

Aiming at a very general report that offers a summarized panorama of rock art in Latin America and the Caribbean, Zone 5 (West-south-west and southern South America-Chile, Argentina, Uruguay) may be divided in three large areas: a- the Andean Area, b- the Pampa-Patagonian Area and c- Area of the Río de la Plata Basin. Broadly speaking, these large divisions present similar geographic conditions and cultural aspects. These similarities are rock art examples with common and specific characteristics for each area, expressed in the types of representations, the topics presented, the techniques used, and the surfaces chosen, among other aspects.

Rock art practice by indigenous people in this part of the South American south is a very old tradition that began more than 10,000 years ago. It went on practically uninterrupted until it suffered an abrupt decline as of the period of the Spanish-aboriginal contact, at the beginning of the sixteenth century. In spite of this collapse, rock art expression went on –in some sub-areas until recently– although there were long periods without any production. In the Pampa-Patagonian and Andean areas, rock art production went on until the eighteenth, nineteenth, and mid-twentieth centuries, respectively. In spite of the changes, rock art expression wholly maintains its native roots, although the contribution of the Creole groups during the last stage is striking. Currently, some aboriginal and non-aboriginal communities inhabiting Zone 5 are somehow related to the rock art sites. The offerings left in some rock surfaces or the modern human and animal burials near some of the sites indicate that many of them are still considered sacred places by members of the local communities.

The general characteristics of the areas in Zone 5 are: (Fig. 1)

a-the *Andean Area*: it comprises the central-southern area of the Andes, which is the northern half of Chile (Big North, Small North, and Central Chile), and the Argentine northwest. Argentine Central-western region is also included in this Area. Archaeological research,

¹ The Spanish version is available in Annex III of the Thematic Study.

which backs the possibility of assigning rock art expressions to a specific chronological and cultural period, has enabled us to reconstruct ten millennia of rock art creation. We recognize a first stage during which the hunter-gatherer groups moving along the Andes Range – between the desert Chilean coast up to the *yungas* or forest in the Tucumán and Salta region towards the eastern part of the Area– created the first simple geometric paintings in small shelters and caves. Some millennia after that, the Andean farmer-shepherd groups, specialized in the raising of llamas, maintained the rock art tradition and included this animal’s figure in their thematic repertoires. In the later stages, they created the big geoglyphs along the main valleys of the Chilean Big North as an expression of the caravan system carried out with the help of the llama as beasts of burden. Towards the mid-fifteenth century, the Inca Empire expanded along the Andean Area, whose geopolitical center was located in Cusco (Peru). As of that time, there was a considerable reduction in the production of rock art expressions. This decline was emphasized during the period immediately following that time, which corresponds to the conquest and colonization of the Area by the Spanish culture. Rock art production had a brief resurgence –from the end of the nineteenth century to the mid-twentieth century– related to the activity of driving cattle in the northwest and center west of Argentina and, perhaps, in the north of Chile. There is ethnohistorical information about rock art production (García report, in Podestá 2003). After that, there was an interruption in the production of this symbolic expression.

In several regions of the Andean Area, rock art sequences have been found which cover large periods. Among some significant examples, we find the rock art sequence in Inca Cueva (Quebrada de Humahuaca, Jujuy, Argentina), Antofagasta de la Sierra (Las Parinas, Catamarca, Argentina), Sierras de Arica, in the Alto Loa River (Chile), among others (Podestá *et al.* 2005a, Berenguer 2004, Mostny & Niemeyer 1983, Schobinger & Gradin 1985, Schobinger & Strecker 2001).

b-the *Pampa-Patagonian Area*: this area comprises the Patagonia and the Pampa regions. The former includes the southern part of Argentina and Chile, south of rivers Colorado and Bio Bío, and the wide plains (“*pampas*”) in Argentina. Patagonia has the Andean Range as its axis, with lake environments surrounded by forests (Patagonian Andes Forest) and rain forests (Valdivian Forest). Towards the east of the ranges stretches a wide semidesertic plateau with steppe vegetation reaching the coasts of the Atlantic Ocean. To the west, Patagonia borders the Pacific Ocean. In Tierra del Fuego Island (Chile and Argentina), the southernmost end of the American continent, there is no record of rock art expressions. The Pampas region (Wet Pampa and Dry Pampa), on the other side, comprises mainly the provinces of La Pampa and Buenos Aires (Argentina). These are plains with some low mountains encompassing a wide area of the Atlantic coastline.

The first evidence of human settlement in the area goes back 12,000 years, and rock art production goes back more than 10,000 years in Santa Cruz Central Plateau (according to Paunero, in Podestá *et al.* 2005b). Subsistence during this long period was based on hunting and gathering, and the guanaco was these groups’ main prey.

As in the Andean Area, many rock art sequences have been scientifically defined. Among them, the Pinturas River sequence (province of Santa Cruz, Argentina) with Cueva de las Manos –*Cave of the Hands*– (UNESCO World Heritage site) as its main example, La María sequence (Santa Cruz central plateau, Argentina), and Chico River (Chile), among others.

c- *Area of the Río de la Plata Basin*²: includes the whole of Uruguay and the north-eastern area of Argentina. It stretches towards the north across Brazilian territory. The Area comprises the lowlands washed by the Río de la Plata tributaries, among which, the most important are the Paraná and Uruguay rivers. While the area east of the Uruguay River (belonging to Uruguayan territory) concentrates a significant amount of rock art sites, the one located west of the river (Argentine northeast), with some exceptions, has no record of sites featuring rock art expressions. This absence is due to the lack of rock surfaces for its execution. The defined age for the execution of the first groups of geometrical engravings in the area of north-eastern Uruguay is 8,000 or 9,000 years BP. For paintings, the age is between 3,000 and 600 years (Consens 2000 and 2002). Part of this chronology is based on estimates and should be supported by systematic archaeological works.

Other: Rapa Nui Island (Easter Island), in the middle of the Pacific Ocean, 3,850 kilometres away from the coast of Chile (Chilean jurisdiction), has an important rock art heritage.

1.1 Links with other zones:

The three areas are closely related to neighbouring regions, and the Andean Area, to Zone 4, which encompasses most of the so-called Central Andean Area. On the other hand, rock art in Uruguay (Area of the Río de la Plata Basin) is linked with sites in southern Brazil (Zone 3). Rapa Nui (Easter Island) bears a clear connection with Polynesian rock art (Lee 1992).

2 Known sites:

As it was mentioned, Zone 5 is extremely rich in rock art sites. An Argentine documentation survey carried out until 1985 enlisted 1,500 sites (Renard de Coquet 1988) (see details in point 3). Andean and Pampa-Patagonia Areas are prominent in the number of rock art sites.

In the following paragraph there is a list with the main rock art sites regions (Area and country of location). It is necessary to considerer that each region could include dozens or hundreds of rock art sites. The Outstanding Universal Value sites and rock art sequences are also mentioned. In the list I have pointed out if the site has a specific heritage nomination.

- 1: World Heritage sites (WHS).
- 2: sites of utmost importance which have either been proposed for World Heritage status (WHTLa), or might be considered in the near future to be declared World Heritage site (WH Tentative List) in other words sites with potential to justify “OUV” (outstanding universal value) in World Heritage terms (WHTLb).
- 3: sites which will probably not be considered for the World Heritage list, but have been declared National Heritage site (NHa) or should be registered as such in the future (NHb) (Loubser 2001, see report Zone 4 by Strecker).

² This denomination was taken from Consens 1998 with modifications, as the Pampas region is not included in it.

2. *a- Andean Area*: (regions and sites are mentioned from North to South).

CHILE:

Regions and rock art sites of Norte Grande: (from the Peru-Chile limit; 17° - 27° South latitude)

Lluta River

Azapa River

Camarones River

Tiliviche Gorge

Tarapacá Gorge: an outstanding geoglyph is Cerro Unitas

Guatacondo Gorge (Tamentica Oasis) and Mani Gorge

Pampa del Tamarugal. Outstanding geoglyphs are “Pintados” or “Cerros Pintados” (NH)

Loa and Salado rivers (Antofagasta region). An outstanding site is “Taira”. In 2005 Toconce-Ayquina region (Salado River Basin) was included in the World Heritage Tentative List (WHTLa). The region comprises a big quantity of rock art sites (report by Gallardo and Castro, see Museo de Arte Precolombino 1999).

San Pedro de Atacama Region (WHTLa)

Quebrada del Médano

Las Lizas site.

Rock art sites and regions in Norte Chico (27° - 32° South latitude):

El Encanto gorge (Limarí style)

Elqui river

Río Grande and Río Limarí (Limarí style). Stand out Mialqui rock art sites

Combarbalá region

Hurtado river region

Illapel river

Choapa river.

Rock art sites and regions in Central Chile: (32° -39° South latitude)

Aconcagua River- Putaendo Valley (Aconcagua River Style).

Guaiquivilo River (Guaiquivilo Style)

Achibueno River.

ARGENTINA:

Rock art sites and regions in NW and Central - West Areas in Argentina:

Yavi

Quebrada de Humahuaca (WHS), in the buffer zone stylistic rock art sequence of Quebrada Inca Cueva stands out. Other sites: Pintoscayoc region: Abrigo de los Emplumados and Alero de las Circunferencias; Coctaca, Cerro Negro; Los Pintados de Sapagua; Hornaditas, others.

Los Cardones National Park

Valle del Cajón

Antofagasta de la Sierra and Laguna Blanca. Stylistic rock art sequence of Antofagasta de la Sierra stands out. One of the sites “Campo de las Tobas” was nominated (NHa). Both regions are in Las Parinas area (WHTLa).

Cerro Pintado (localidad de Las Juntas, Guachipas) (NHa) (WHTLb)

Quebrada del Toro: Tastil rock art

Valle Calchaquí (WHTLa):

Fiambalá region: an outstanding site is Guanchincito.

Villa Castelli-Vinchina area
Palancho or Paluque (NHb)
Ischigualasto/Talampaya National Park (NHa) (both WHS) (nominated under “natural criteria” with many rock art sites).
Sierra de Ancasti (WHTLb) (La Tunita style)
Famatina-Campana area
Cerro Colorado (NHa)
Guasapampa
Sierra de Comechingones
El Tunduqueral
Cordillera de Ansilta
Payunia

Chile/Argentina: “Qhapaq Ñan” (WHTLa), rock art sites are included in its direct and buffer areas.

2. b- Pampa-Patagonia area:

CHILE:

Includes Chilean Patagonia (39° - 55° South latitude)

The “Chilean Patagonia Rock Art” is included in the Tentative List (WHTLa). Main regions are: 1- Aysen (includes Rio Chico style) and 2- Magallanes (Ultima Esperanza and Pali-Aike zones). Pali-Aike includes two sites listed in the Tentative List (WHTLa): Pali Aike and Fell caves. The last one, with human occupations dated 11.000 years before present, presents rock art paintings.

ARGENTINA:

Tandilia and Ventania Systems

Lihue Calel

Quehue

Chosmalal

Piedra del Aguila area

Colomichicó

Aluminé, Lacar, Traful and Nahuel Huapi lakes

Pilcaniyeu region

Manso river low basin.

Andean zone 42°

Lago Puelo and Los Alerces National Parks

Piedra Parada (Chubut river) (NHb)

Valdés Península (WHS) and Atlantic coast. Province of Chubut

Perito Moreno National Park

Posadas-Pueyrredón lakes

River Pinturas, includes Cueva de las Manos site (NHa-WHS)

Central plateau of Province of Santa Cruz: Los Toldos, Piedra Museo, Cerro Tres Tetas, Estancia La María, El Ceibo (NHb) (WHTLb)

Strobel and Cardiel lakes

Santa Cruz river.

2. c- Area of the Rio de la Plata Basin:

As it was mentioned before, the north-eastern area of Argentina, one of the extended regions of this area, has only three rock art sites registered. On the contrary, on the east of the Uruguay River, which comprises the Republic of Uruguay, two big regions with rock art sites have been recorded.

URUGUAY:

North-eastern Uruguay:

Ñandubay (Department of Artigas)

Túmulo

Colonia Rubio (Tangarupá stream) and Itapebí

Arapey: outstanding sites are La Soledad and Las Piedritas

Cuchilla del Fuego

Department of Salto (NHa).

South-Central Uruguay:

Chamangá stream, Porongos stream, Grande stream, “Puntas del Arroyo San José”, Pinto stream (Department of Flores). “Localidad Rupestre Chamangá” (NH) is an outstanding rock art place. Fifteen sites have been proposed to the Tentative List (WHTLa).

Sauce Vullanueva, Arroyo Pajar, Cerro Copotón, Arroyo del Pescado (todos en el departamento Florida)

Arroyo Maestre Campo (Department of Durazno)

Arroyo de la Virgen, Sierra Mahoma (Department of San José)

Cerro pan de Azúcar, Cerro Cortez (Department of Maldonado)

Colonia Quevedo (Department of Colonia).

Note: a third part of the sites mentioned above are national heritage sites (NHa).

2.d- Other: Rapa Nui National Park (Easter Island) (WHS)

2.1 Sites with the most significant rock art:

The following sites are those which have been identified as having a special significance which makes them stand out from the others listed in item 2 according to my criteria and those of the representatives of the countries comprising Zone 5. These are sites with outstanding characteristics which justify their future inclusion on the World Heritage List. They should be given priority.

2.1.1 Andean Area:

CHILE:

Geoglyphs of the Lluta, Azapa, Camarones, Tiliviche, Tarapacá, Pampa del Tamarugal valleys as well as the “Pintados” site, among others.

Justification of outstanding value: the geoglyphs of the Chilean desert area are rock art sites which have outstanding value because of their impressive appearance, aesthetic value and technical execution. This type of rock art occurs very infrequently worldwide. In South America, these sites only occur in the Nazca Plain, Peru (Zone 4) and are included in the World Heritage List and identified with the name “Lines and Geoglyphs of Nasca and Pampas

de Jumana.” They are a cultural expression of the pre-Hispanic settlers who travelled many times through the valleys that cross the desert using llamas to carry loads of goods. The geoglyphs bear witness to this ancient system of desert caravans and it is possible that they had ritual meaning. (Note: see the proposal in Conclusions, item 7, to consider integrating these sites with the World Heritage Site “Lines and Geoglyphs of Nasca,” Peru.)

Rock art of the Loa and Salado rivers (Atacama Desert)

Justification of outstanding value: one of the most long-lasting and representative sequences of rock art in the Andean Area is found along the Loa River and its tributary the Salado river, in the Atacama Desert. The sites of carved and painted art located along the banks of these rivers are excellent examples of how rock art sites act as a "symbolic appropriation of territory" (Gallardo *et al.* 1999:61). The site “Taira” stands out for its painted and engraved expressions of great aesthetic value. Some of the sites are included in the Chilean proposal “Toconce-Ayquina Region” (WHTLa) and have been defined as a cultural landscape. The communities of this region maintain ancestral ties with the environment in the same way that ancient Andean peoples have for 9,000 years (Castro 2002, Gallard *et al.* 1999, Museum of Pre-Columbian Art (Chile) 1999).

ARGENTINA:

Cerro Pintado (in the areas of Las Juntas and Guachipas) (WHTLb)

Justification for inscription: Cerro Pintado consists of a group of sites located on a hill with paintings of striking aesthetic quality. The art is the symbolic expression of groups of farmers and livestock owners who inhabited this Andean region prior to the arrival of the Spanish and at the time of first contact between Hispanic and indigenous peoples. Of particularly important symbolic value are groups of polychrome representations of “shield-bearers.”

Sierra de Ancasti (Catamarca)

Justification of outstanding value: This group of cave painting sites in the Sierra de Ancasti is an expression of the ceremonial practices of people of the Aguada Culture who inhabited the region between about 900 and 1200 years AD. Ritual practices that included the use of hallucinogenic substances are expressed through the medium of rock art of exceptional aesthetic value. It is possible that the location of the sites with rock art represented enclaves along the Cebil Route, an important communication network connecting groups of people from diverse Andean regions.

2.1.2 Pampa-Patagonia Area

CHILE:

Rock Art of Chilean Patagonia (WHTLa)

Justification for inscription: These rock art sites are the cultural expression of the oldest inhabitants of the most southerly region of South America. They represent the way of life of a hunter-gatherer society which occupied Chilean Patagonia thousands of years ago.

ARGENTINA:

Santacruceña Central Plateau:

Los Toldos, Piedra Museo, Cerro Tres Tetras, Estancia La María, El Ceibo, La Reconquista.

Justification of outstanding value: The hundreds of rock painting sites located in this zone of the Patagonian Steppe in Argentina are the expression of the first hunters and gatherers who occupied this environment at the beginning of the inhabitation of the area that occurred towards the end of the Pleistocene (12,000 years ago). One of the oldest occurrences of rock

art in South America, they are located in an almost pristine landscape where one can imagine the hunting way of life which disappeared long ago (Podestá 2002). This graphic art has exceptional aesthetic value and includes representations of both extinct Patagonian fauna and species still present in the area (note: as explained in item 7, these sites could be included with “Cueva de las Manos, Río Pinturas”).

2.1.3 Río de la Plata Basin

URUGUAY:

Chamangá Rock Art Area (WHTLa)

Justification for inscription: The Chamangá area of Uruguay has the largest concentration of rock paintings in the country. The rock art was done by groups of hunters, gatherers and fishers in pre-Hispanic times. In this region occur different examples of the rock art of south-central Uruguay including such features as painted hands.

3 Research and Documentation:

Interest in Argentina’s rock art began towards the end of the 19th century. Since then, the study of rock art has been included in scientific research and, most particularly, in archaeology. A national register enlists 1,500 rock art sites until 1986 all over the country (Renard de Coquet 1988). Many documentation projects have been conducted in Argentina in recent years. In 2001 was completed an “Archaeological Map and Rock Art Catalogue” which records rock art sites in the province of Jujuy (Andean Area) (Fernández Distel 2001). PAR (Rock Art Program) (University of Buenos Aires) has organized a computerised database which compiles more than 2,000 registered rock art sites (Rolandi *et al.* 2004).

In Andean the Area, the National Institute of Anthropology’s (INAPL) Program registered more than 30 rock art shelters in Cerro Pintado (Las Juntas, Guachipas) (NHa) (WHTLb) and more than 20 in Ischigualasto. Alvarez Rodriguez has recorded 47 rock art sites in Guasapampa; Rocchietti has published a regional synthesis which includes more than 30 sites in Sierra of Comechingones; Lanza have been working on the documentation of engravings located in the Calchaquí valley, among other examples which show the impetus of the rock art research in the last years. In Pampa-Patagonia Area, Oliva has summarized the information on 21 rock painting sites in Ventania system, Paunero has registered more than 86 sites in Estancia La María, Podestá and Bellelli have documented around 30 sites in Comarca Andina 42° and Manso river. New documentations of rock art have been carried out recently in Strobel and Cardiel lakes (Goñi y Re) and in the Santa Cruz river (Franco and Fiore).

The National Parks Administration (APN) is developing a “Program of Management of Cultural Resources” which focuses its activities on investigation, conservation and heritage diffusion, as part of the strategy of conservation. Until 2002 it has recorded 119 rock art sites in ten national parks. Some of these sites (25) are included in research archaeological projects (report by Ferraro).

It is possible to estimate that the actual number of sites in Argentina could be close to 4,000 which are distributed mainly in Andean and Pampa-Patagonia areas (Podestá 2003, Rolandi *et al.* 2004, Strecker & Podestá 2006).

In Argentina a recent development of methods and techniques is being implemented. The firsts direct dating methods using AMS (accelerator mass spectrometry) were used in the

Andean Area. Pigments and associated materials from several rock paintings sites were analyzed as part of an Argentinean-Canadian (Canadian Conservation Institute, Ottawa) research project to study selected rock art sites in the country. Other mineral pigment analyses have recently been reported (Podestá 2003, Wainwright *et al.* 2002).

Chile shares with Argentina a similar theoretical and methodological approach, and rock art research is framed within archaeological research. There are thorough documentation works throughout the territory, and numerous university specialists are devoted to the subject, and several stylistic sequences have been defined in the different regions. Of great importance are the works by the Archaeological Museum of San Miguel de Azapa (Arica) and the University of Tarapacá with the Big North geoglyphs, a cultural heritage with exceptional characteristics comparable to those in Zone 4 (Nazca, Peru, declared a World Heritage Site), and those of the Loa and Salado rivers (Berenguer 2004), among others.

New techniques, such as low-altitude aerial photographs, have been implemented in Norte Grande chileno to record geoglyphs in Quebrada de Guatacondo, Pintados and Honda in northern Chile with superb results (report by Clarkson and Briones). In Rapa Nui (Easter Island) some intensive works have been carried out and more than 4000 rock art representations have been documented (Lee 1992).

In Uruguay (Area of the Río de la Plata Basin) progress of archaeological research on rock art occurred as of the '70s, although there are records since the end of the nineteenth century. Of enormous importance are the works by Figueira, Figuerido, Consens, Bepali, Femeninas, Peláez, Florines, and Martínez, among others. According to some of these researchers, large areas of the territory were never approached in a systematic way (Florines *et al.* 2004:1). Some ten years ago, surveys increased in northern Uruguay and hundreds of rock art sites were discovered although they are still not inventoried. In many cases, conclusions related to the cultural and chronological assignment of rock art sites have been made regardless of any other archaeological information. Thus, most of these should be considered trials. The sites' characteristics, plus the lack of archaeological research, have prevented us from setting an accurate correlation among sites with rock art and stratified occupation sequences. For example, Consens (1995) informs about the execution of more than 30 archaeological surveys with sterile results. Part of this problem may be ascribed to the lack of rock art specialists (professionals) mainly due to the scarce resources for these studies in university environments (Consens 2000).

4 Protection:

Rock art sites- considered as part of archaeological record- are protected by state legislations:

- *Argentina*: law of "Protection of the Archaeological and Paleontological Heritage" N° 25.743 (2003) and Regulatory Decree N° 10.22 (2004).
- *Chile*: law of "National Monuments" N° 17.288 (1970). Regulatory Decree N° 484 (1990) of the Educational Ministry: "Reglamento sobre excavaciones y/o Prospecciones Arqueológicas, Antropológicas y Paleontológicas".
- *Uruguay*: Heritage Law 14.040. Regulatory Decree N° 10/1971. Other laws: Ley de Ordenamiento Territorial y Medio Ambiente, N° 16.466 and its Regulatory Decree N° 435/1994. Law N° 17. 234 created the "National System of Protected Natural Areas"

which includes the protection of rock art sites (for example: Localidad Rupestre Chamangá).

Some rock art sites also have the status of National Heritage and have specific legislation: (see National Heritage Sites- NH- in point 2).

4.1- National Institutions in charge of rock art sites protection:

- *Argentina:* Instituto Nacional de Antropología y Pensamiento Latinoamericano (INAPL). Secretaría de Cultura de la Nación. Contact to: Dra. Diana Rolandi. Address: 3 de febrero 1379. (1426) Ciudad de Buenos Aires. Phone number: (54+11) 47843371. www.inapl.gov.ar NGO: CIAR-SAA. Address: Av. Santa Fe 983, 1059 Buenos Aires, Argentina; National Parks Administration (APN) www.parquesnacionales.gov.ar; Comisión Nacional de Museos y de Monumentos y Lugares Históricos, Secretaría de Cultura de la Nación.
- *Chile:* Consejo de Monumentos Nacionales de Chile (CMN). Contact to: Mrs. Nivia Palma, Mr. Oscar Acuña. Address: Av. Vicuña Mackenna n° 84. Providencia, Santiago, Chile. PC: 750.0910. Phone number: 56-2-665 15 16/ 56-2-665-15 18; Servicio Nacional de Turismo (SERNATUR). www.monumentos.cl/pu001.htm
- *Uruguay:* Comisión de Patrimonio Cultural de la Nación, Departamento de Arqueología. Contact to: Elianne Martínez. Phone number: (598+2) 9157681; NGO: CIARU, Address: Casilla de Correo 18.007. Montevideo, Uruguay. Phone number: (598+2) 5064313. Contact to: Mario Consens.

5 Conservation and Management:

National institutions related to conservation and management are mentioned above (4.1).

There are organizations that work at a provincial/departmental level such as museums, agencies or culture and tourism secretariats, and universities. National institutions are responsible for keeping the national record of archaeological sites where rock art records are included.

Records have a detailed inventory of rock art sites entered through computer databases and mappings.

The INAPL has been working since 1995 on “Documentation and Conservation of rock art in Argentina Program”. Several organizations have provided their advice as well as economic assistance. A professional in conservation from the Canadian Conservation Institute, Ottawa, has been in charge of laboratory analysis (Wainwright *et al.* 2002). The main objectives of the Program are: 1- documentation of rock art sites, 2- recording of rock art deterioration processes, 3- computerised image databases, among others. Chile also has a detailed rock art record.

In Argentina and Chile management plans are increasing: this is notable in Quebrada de Humahuaca, Palancho, Ischigualasto/Talampaya, Lihue Calel and Lanin National Parks, Manso River, Comarca Andina 42° (Bellelli *et al.* 2005), Los Alerces National Park, Cueva de las Manos (Onetto 2001), La María, Lago Roca (Argentina); Quebrada de Huatacondo,

Calle de Codpa in Tarapacá, Choapa River (Chile), among others (Ortiz Troncoso 2001). There is information about a project carried out in Uruguay in 1998 on rock art in Flores (Chamangá stream), interrupted some years later (Florines report).

Management plans usually include the following steps: rock art documentation, path design, interpretation for the visiting public through explanatory brochures and signage, boardwalks or protective fence building, guides' training, site guards, in addition to other facilities for the visitors in more intensive use sites (Ischigualasto/ Talampaya, Los Alerces National Park, Cueva de las Manos). There are few cases of sites closure (Cerro Pintado, Las Juntas, Guachipas, Cueva de las Manos, Argentina) although the results have not been effective. In Uruguay, there have also been closures with adverse effects (Florines, personal communication).

Just before the new millennium, we could sense certain concern to include local communities in the decision-making process in relation to the value enhancement of rock art sites. Thus, we intend to stop the monopolized management of archaeological resources. One of the goals for management plans is the creation of the first site commissions to preserve the cultural heritage, an issue which is currently being increasingly developed. Some efforts worth mentioning are: Cueva de las Manos (Onetto 2001, Podestá & Onetto 2004), Cerro Pintado in Comarca Andina 42° and Paredón Lanfré in Manso River (Bellelli *et al.* 2005), (Argentina); Tamentica-1 in Quebrada de Huatacondo, Valle de Codpa (Tarapacá) (Ajata & Briones 2004), San Pedro de Atacama (Chile). In Uruguay, there is a site in the Localidad Rupestre (Rock Art Area) Chamangá for whose preservation an inter-institutional commission has been formed that includes owners of the site plot (Martínez & Florines, personal communication).

Few rock art restoration works have been carried out because, except rare cases, they are not considered adequate, or there have not been enough resources to that end. The main project in the Area, that started three decades ago, was the one that involved geoglyphs restoration in Lluta, Azapa, Chiza and Tiliviche, Pampa del Tamarugal (Pintados and Cerro Unitas geoglyphs included) (Luis Briones, Universidad de Tarapacá and SERMATUR). Another case is n° 19 site in San Pedro de Atacama (Muñoz *et al.* 2001). In Argentina there are some cleaning works of rock art surfaces (Rolandi *et al.* 1998).

The contemporary use of rock art is focused on the tourist activity (in the three countries). As was explained in point 1, there are few cases, mainly in the Andean Area, where sites are still valued by local communities. This is expressed through offerings left in some of them, the burials carried out near them, and the popular beliefs related to the "sacred".

6 Main threats:

Rock art is a non-renewable cultural resource which is particularly sensitive to deterioration due to its exposure and attraction. The tourist boom which broke out a few decades ago has facilitated visitors' access to places formerly protected due to their isolation and inaccessibility. Nowadays this phenomenon has alarmingly accelerated and has put in serious danger sites which had been naturally preserved for hundreds or thousands of years. There is an increasing concern regarding site preservation in Chile and Argentina but few results have been obtained so far. Many of them are related to new tourism developments: Quebrada de Huamahuaca including Inca Cueva site, Antofagasta de la Sierra, Palancho, Talampaya/Ischigualasto, Cerro Tundukueral are some of the examples in Andean Area/Argentina. In Chile the main conservation projects have been developed in the Big

North with the geoglyphs and in Choapa River sites (report by Briones and Guerra) and in Sierras de Tandil, Colomichicó, Comarca Andina 42°, Cueva de las Manos, Estancia La María in Pampa-Patagonia Area (Argentina). In some of these cases a management site committee has been created: Cerro Pintado and Cueva de las Manos. Tourism in Uruguay does not affect rock art sites yet, as the tourism offer is focused on other attractions (Nelsys Fusco report, Cultural Heritage Commission, Uruguay).

There have been damages caused by the increase of large public works, the construction of gas pipelines, electricity links, roads, and hydroelectric dams. Environmental Impact Assessment (EIA) has frequently omitted recommendations for the preservation of archaeological heritage sites. Sometimes, the weakness of control authorities increases the seriousness of the deterioration process of sites. For example, see the cases of Minera Alumbreira (Argentina), archaeological site #19 in San Pedro de Atacama (Chile) (Muñoz G. *et al.* 2001). In Uruguay, there has been information of the destruction caused by stone extraction, especially granite (that serves as a rock art surface). The sites in the Chamangá Stream, in Flores Department, have been particularly damaged, with an estimated loss of around 30% of the department's paintings (Consens 1998, Florines 2004). Similar threats have been recorded in the Andean Area, both in Chile and Argentina. As an example, we can mention the quarries in Guasamayo (Alvarez Rodríguez, personal communication). Cattle production constitutes another significant threat (construction of low stone walls, the animals that lean against the rock to rub their bodies, etc.) in Uruguay. The same happens in Chile and Argentina, where we often learn about the loss of paintings due not only to the direct action of herds against the rocks, but also to the "levelling" of fields for cattle production. The farming activity might be another cause of rock art heritage destruction due to the fields "clearance".

Other aspects that hamper the good development of rock art study and protection are caused by the conflicts within the sphere of the state agencies themselves, and the conflicts among these and other non-governmental agencies. The latter have been discussed in Uruguay (see Consens 2000). The former, more serious still, occur within the shared action spheres between the tourism and culture areas. These are frequently opposed as regards decisions related to the public use of rock art sites. This controversy is also present in Argentine cases. The scarce resources assigned to the protection of archaeological sites disappear more quickly when they are not jointly managed.

Conclusion and recommendations for the Zone

Over the last two decades a variety of regional rock art studies, especially in Chile and Argentina, have produced substantial increases in the number of rock art sites recorded. New efforts have been made to continue this task especially in Uruguay where rock art research is not enough developed. In this country more archaeological research must be made in order to emphasize scientific studies on rock art.

In Zone 5 direct methods for dating rock art sites are beginning, but so far concern only a tiny fraction of the total number of sites. The use of this method is still very expensive for scholars who have to make requests for international cooperation in order to secure funding for dating.

In spite of the achievements reached until now, many efforts must be made in visitor management, interpretation and policy of rock art in the future. Many places, prematurely opened to the public, are suffering acts of vandalism which will lead irreversibly to their complete destruction. These sites urgently need the implementation of a management plan to

establish actions to prevent and stop more damage. At the same time more budget is necessary to implement management plans, especially in Uruguay.

The three countries should implement stricter controls of the environmental impact assessment in relation to large public works, as sites are often affected by them. Uruguay should try harder to come to agreements with national authorities associated with the mining industry to minimize damages on rock art by stone extraction activities. In the Chamangá region there have been good results thanks to the steps taken.

It is vital to continue organizing “site commissions” to manage rock art sites with good results. These commissions should be formed by local community members, apart from the representatives of different interested areas. Otherwise, experience indicates not only that management plans do not produce good results but also that they are often abandoned with negative consequences for the sites.

Rock art sites in Chile and Argentina are well represented in the Tentative Lists, as these are included in several of the general proposals made, although rock art is not the specifically privileged asset (examples: Las Parinas, Valles Calchaquíes in Argentina, Toconce-Ayquina, San Pedro de Atacama, and Pali Aike – Cueva Fell in Chile and Qhapaq Ñan in Zones 2, 4, and 5). Consequently, we may suppose that new sites might be included in the World Heritage List in the future. This does not occur in Uruguay, with only one site recently included in the Tentative List. This means that it is recommendable to increase the efforts in Uruguay to reverse the situation. It is also important to stress that among all the nominations in Chile and Argentina, only one, “Cave of the Hands, Pinturas River” belongs specifically to a site for its values related to rock art expression. “Talampaya-Ischigualasto” a WHS nominated under natural criteria, also includes many rock art sites already documented (Rolandi *et al.* 2004). These, besides other cultural assets, might justify a consideration of the asset as a mixed cultural heritage. In Zone 5, there are two mentions in the Tentative List justified by the presence of rock art: “Rock Art in Patagonia” and “Chamangá Rock Art Area” (Chile and Uruguay, respectively). Efforts should be focused on these proposals to increase the list of the World Heritage with rock art sites. It is recommendable to join efforts so that these nominations materialize in the next few years. Moreover, I suggest including in the Tentative List the sites with geoglyphs in the Chilean Big North. These, together with the site “Lines and geoglyphs of Nasca and Pampa de Jumana” (Peru) constitute a cultural heritage of exceptional characteristics. A joint work could be carried out with Peru (Zone 4 in this report) to consider a shared nomination. Argentina, on the other hand, might include other rock art sites such as Sierra de Ancasti and Cerro Pintado (Las Juntas, Guachipas) (NHa) (WHTLb) to the Tentative List. Sites in the Central Plateau (Santa Cruz) should be likewise considered, and maybe they could be unified to the World Heritage Site of “Cave of the Hands, Pinturas River”.

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See illustrations Annexe IV: page 225

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