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CONVENTION CONCERNING THE PROTECTION OF THE WORLD CULTURAL AND NATURAL HERITAGE

BUREAU OF THE WORLD HERITAGE COMMITTEE

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Information Document: Report of the Mission to the Whale Sanctuary of El Vizcaino, Mexico, 23 – 28 August 1999

SUMMARY

Following the request of the World Heritage Committee and its Bureau and the invitation of the Mexican authorities a mission was carried out to the Whale Sanctuary of El Vizcaino from 23 to 28 August 1999. The full report and the recommendations of the mission are contained in this information document, which should be read alongside the section concerning the state of conservation of the Whale Sanctuary of El Vizcaino included in the working document WHC-99/CONF.208/5.

Action required: The Bureau may wish to transmit the report to the World Heritage Committee for examination and transmits the recommendations contained on page 3, 4 and 5 to the Committee for consideration. The Bureau may wish to note that any decision to proceed with the development at San Ignacio would require a review of the implications concerning the state of conservation of the site.

REPORT ON THE MISSION TO THE WHALES SANCTUARY OF EL VIZCAINO (MEXICO) FROM 22 TO 28 AUGUST 1999

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ACKNOWLEDGEMENTS

The mission team wishes to express its appreciation and gratitude to the Mexican authorities for having invited this mission and for the warm welcome to Mexico. The mission in particular thanks the local communities, living in the vicinity of the World Heritage Site, for their interest and all the information provided to the mission team.

EXECUTIVE SUMMARY AND LIST OF RECOMMENDATIONS

The mission team highlights articles 4, 5 and 6 of the World Heritage Convention, and in particular that: "Each State Party to this Convention recognises that the duty of ensuring the identification, protection, conservation, presentation and transmission to future generations of the cultural and natural heritage....situated on its territory, belongs primarily to that State. It will do all it can to this end, to the utmost of its own resources and, where appropriate, with any international assistance and co-operation, in particular, financial, artistic, scientific and technical, which it may be able to obtain."

Following the assessment of the information made available to the mission team in background documentation, meetings with Government officials, representatives of non-governmental organisations, local communities and other stakeholders and through observations during a field visit from 24 to 26 August 1999, the mission team comes to conclusions and recommendations listed below.

The mission wishes to emphasise the outstanding efforts of the Mexican Government in protecting the El Vizcaino World Heritage site and UNESCO Biosphere Reserve through a number of national programmes and international instruments. El Vizcaino remains an example for both international co-operation to enhance capacity building and improve administrative operations, and for facilitating the involvement of local people through a number of programmes with the 'ejidos' (communally owned property).

The mission team was impressed by the present condition of the site as a whole and appreciated the ongoing efforts by local people, the staff of the Biosphere Reserve, Exportadora de Sal (ESSA) and governmental regulators to maintain and enhance the integrity of the site. In particular, the team was reassured about the conservation status of grey whales and wished to emphasise the importance of Mexico's demonstrated commitment to population monitoring, scientific research, and habitat protection for this flagship species of the World Heritage site.

CONCLUSIONS AND RECOMMENDATIONS

Conservation History

1. The mission **recommends** that the zoning and sub-zoning of the El Vizcaino Biosphere Reserve takes account of the World Heritage area.

Management of the property

1. The mission notes that the Management Plan for the Biosphere Reserve has been submitted for approval. It **strongly recommends** that the authorities prepare a separate management section for the two lagoons, which compose the World Heritage site. The authorities may wish to consider a specific request for funding under technical co-operation from the World Heritage Fund.
2. The mission welcomes the support from international and bilateral donor agencies and **fully supports** the submission of a second phase for the Global Environment Facility (GEF) project.
3. The mission acknowledges the efforts of the Mexican Government to protect the site through multiple international and national agreements (e.g. Whale Sanctuary, World Heritage designation, UNESCO Biosphere Reserve). The mission **recommends** that an integrated planning and information management system be developed to improve efficiency, reduce duplication, and ensure compatibility.

Whales

1. The mission team acknowledges the scientific efforts by Mexico and other countries to document grey whale population trends, mortality and calf production, and to investigate causes of mortality. The mission **strongly encourages** that this work be continued.
2. The mission **recommends** that the World Heritage Committee encourage other range countries to participate in the conservation efforts to protect the migratory route and feeding habitat of grey whales.

Salt production

Ojo de Liebre
(Specific recommendations on the existing ESSA facility are directed at either the company or the government, whichever is appropriate.)

The mission received reports that indicated improvements in the operations of the existing salt works. The mission invites the State Party to report on:

a) Measures to avoid accumulation of brine and its proper management;
b) Progress towards minimising noise in and near the lagoon in accordance with relevant international standards;
c) Results of the Voluntary Audit;
d) Evaluation and implementation of approaches to enhancing the aesthetic quality of the facility, particularly in areas bordering the lagoon.

San Ignacio
The mission notes that a review of the proposed saltworks at San Ignacio was not explicitly included in its Terms of Reference because the project proponent had not yet made its

submission to the proper authorities. Nevertheless, because it was a major issue raised by government representatives, NGOs, ESSA and members of local governments and communities during the presentations and site visit, the mission feels compelled to highlight the following points:

a) The mission noted the process that is under way for evaluating the environmental and social risks involved in this project. However, as indicated above, the results of this process had not been submitted to the Government of Mexico prior to the mission and therefore no analysis could be made.
b) The mission invites the Government of Mexico to take fully into account the World Heritage values of the site when evaluating the proposal, which would include not only the population of grey whales and other wildlife, but also the integrity of the landscape and the ecosystem.

Sustainable development and tourism

1. The mission, having met with local tour operators and representatives from communities, **recommends** that tourism products and services be diversified. The mission notes that the Biosphere Reserve, which includes one cultural and one natural World Heritage site, has great tourism potential, but that development of this potential has to be managed carefully.
2. Recognising the extraordinary potential of the resources of the site, an overall strategy for sustainable tourism in the Reserve could be developed. A comprehensive programme based on experiences gained with regard to responsible tourism, including whale and bird watching, would allow a better diversification of tourism services and products with a high quality environmental image. The mission invites the Government to consider a specific label of the Biosphere Reserve and the World Heritage site to characterise such quality.
3. The mission **recommends** that the Mexican authorities consider carrying out a study on the diversification of tourism, which might be funded from the World Heritage Fund, or through collaboration with the Man and the Biosphere (MAB) programme.
4. The mission **recommends** development by the appropriate authorities of environmental plans for human settlements in the area, in consultation with all affected parties.
5. Considering that a high proportion of the Reserve's value is in the form of exploitation of fishing resources, the mission **recommends** that projects to diversify the fishing sector include the following aspects: the generation of new activities with a high added value, the promotion of activities that will tend to redirect effort away from over-exploited marine species, and the identification of new markets.

OVERALL CONCLUSION

The mission team submits the recommendations above for consideration by the Mexican authorities and the World Heritage Committee. In conclusion, the mission team does not consider the World Heritage site under present circumstances to be in danger, and scientific data show that the whale population is not endangered and continues to increase. However, if any significant change to the present situation should occur, documented by appropriate evidence, the conclusion concerning the site's status under the World Heritage Convention should be promptly re-evaluated in co-operation and co-ordination with the State Party, and appropriate consideration should be given to all relevant Parties and the World Heritage Committee.

1 BACKGROUND TO THE MISSION

1.1 History of the inscription of the Whale Sanctuary of El Vizcaino on the World Heritage List

The site was originally nominated in 1989 by the Mexican Government for both its natural and cultural values as the "Reserva del Vizcaino" (N/C 554). Following an IUCN and ICOMOS evaluation, which considered there were no functional links between the lagoons and the rock art sites, the nomination was revised and presented as the natural site of the "Whales Sanctuary of El Vizcaino" (N 554bis) and the cultural property of the “Rock Paintings of the Sierra de San Francisco” (C 714). The World Heritage Committee at its seventeenth session held in Cartagena/Colombia, 1993, inscribed both properties on the UNESCO World Heritage List.

1.2 Criteria and World Heritage values

The mission team noted that in the original nomination of El Vizcaino for the World Heritage list, the Government of Mexico proposed natural criteria (ii), (iii) and (iv). The IUCN evaluation of October 1993 states: “Within the total area of the Vizcaino Biosphere Reserve, World Heritage values are primarily concentrated in the two nominated coastal lagoons where the whale breeding and parturition concentrations occur. Along with the birdlife on the shorelines and enclosed islands, the lagoons are two areas of international importance that satisfy natural criterion (iv).” The IUCN report also notes a number of issues with regard to the conditions of integrity, which will be referred to in Section 2 of this report.

The World Heritage Committee reviewed the IUCN evaluation and inscribed the Whale Sanctuary of El Vizcaino on the World Heritage List under natural criterion (iv)[1]. The coastal lagoons of Ojo de Liebre and San Ignacio are very important reproduction and wintering sites for the grey whale, and also provides seasonal or year-round habitat for marine turtles and other wildlife.

The team noted the decision of the World Heritage Committee to base the inscription of the site solely on the basis of criterion (iv). Nevertheless, the team recognised that the site may have also qualified for inscription under criteria (ii) and (iii). The lagoon ecosystems have exceptional value for the biological diversity that they support and ecological services that they provide (criterion ii). The landscapes bordering Laguna Ojo de Liebre and San Ignacio, which include extensive *salitrales* (salt barrens), are unique to this portion of the outer coast of Baja California. The undeveloped, nearly pristine waters and shoreline of Laguna San Ignacio, in particular, constitute ‘superlative natural features of exceptional beauty’ (criterion iii).

1.3 Examination of the State of Conservation by the World Heritage Committee and its Bureau

[1] “contain the most important and significant natural habitats for in-situ conservation of biological diversity, including those containing threatened species of outstanding universal value from the point of view of science or conservation.”

The World Heritage Committee reviewed a number of reports on the state of conservation of the Whale Sanctuary of El Vizcaino, during its nineteenth, twentieth, twenty-first and twenty-second sessions, in 1995, 1996, 1997 and 1998, respectively and the Bureau of the World Heritage Committee during its nineteenth, twentieth, twenty-first, twenty-second and twenty-third sessions, in 1996, 1997, 1998 and 1999 . Concerns were expressed over the plans to build an industrial salt production plant at San Ignacio. The Government of Mexico provided a report to the twenty-second extraordinary session of the Bureau held in Kyoto, Japan, November 1998, which requested the World Heritage Centre to transmit it to IUCN for review. The Bureau was pleased to note that the State Party, upon receipt of IUCN's comments on the report, would invite a mission to the site as soon as possible. The Bureau requested that the mission should prepare an up-to-date state of conservation report on the Whale Sanctuary of El Vizcaino, and submit it to the twenty-third session of the Committee in 1999.

1.4 Justification of the mission

Following the request of the World Heritage Committee, the Bureau of the World Heritage Committee at its twenty-third session was informed that the Mexican authorities, via their letter of 7 May 1999, invited the mission. A meeting between the Delegation of Mexico, the World Heritage Centre and IUCN took place during the twenty-third session of the World Heritage Bureau (5 to 10 July 1999) to discuss the Terms of Reference of the mission (included in Annex 6.1). The multinational and crossdisciplinary mission team was composed of four international and three national participants from different scientific disciplines. The List of Participants is included in Annex 6.2 and the programme and itinerary of the mission is attached as Annex 6.3. The list of organisations and individuals present at meetings of the mission team is included as Annex 6.4 and the documents submitted to the mission team as Annex 6.5.

2 NATIONAL POLICY FOR THE PRESERVATION AND MANAGEMENT OF THE WORLD HERITAGE PROPERTY

2.1 National Legal and Institutional Framework

Mexico has a long history of conservation, which is appropriate in view of the high biodiversity richness of the country. Mexico is considered one of the most important centres of mega-diversity in the world. The first protected area of Mexico was established in 1876 in Desierto de los Leones. Since that time Mexico has been working to develop and implement of a number of conservation and sustainable use programmes. Conservation and sustainable use policies and programmes are included in the National Development Plan for 1995-2000, which identifies as a priority the conservation and sustainable use of biodiversity in natural protected areas. At present the National System of Natural Protected Areas consists of 114 protected areas, which represents approximately 6.2% of the national territory.

The legal framework for conservation and sustainable use of biodiversity in Mexico is the General Law of Ecological Balance and Protection of the Environment that was adopted in 1995. This law represents an umbrella for the development and application of other specific environmental laws and regulations. It includes obligations and procedures for Environmental Impact Assessment (EIA) and approval of new investments.

The institution responsible for the application of this law and for the development, implementation and control of conservation programmes is the Ministry for Environment, Natural Resources and Fisheries (Secretaria de Medio Ambiente, Recursos Naturales y Pesca – SEMARNAP) created on 28 December 1994. The policy of SEMARNAP is to promote the integration of natural resource conservation and management under regional development schemes that can contribute to poverty alleviation and rural development. SEMARNAP is also responsible for environmental audits, control and surveillance by the General Attorney for the Environment (Procuraduria Federal de Proteccion al Ambiente, PROFEPA).

2.2 Protected area legislation and conservation history of the World Heritage property

The first effort to protect the natural resources of this area was initiated in 1936 when Mexico and USA signed an agreement for the protection of migratory birds in the region of El Vizcaino. In 1949 Mexico became part of the International Whaling Commission to manage and conserve whale populations, including the grey whales.

Federal Decree of 6 December 1971, promulgated on 14 January 1972, declared Laguna Ojo de Liebre a marine refuge for whales. On 28 March 1980, this Decree was modified to include the lagoons of Manuela and Guerrero Negro. On 11 September 1972 a Decree established Laguna Ojo de Liebre and Laguna San Ignacio as refuges for migratory birds and wildlife. On 16 July 1979, another Decree established Laguna San Ignacio as a refuge for female grey whales and calves and as a "tourist attraction zone".

El Vizcaino Biosphere Reserve, which includes the World Heritage Site, was approved by the government as a National Biosphere Reserve in 1988 and was internationally recognised as a Biosphere Reserve under UNESCO's Man and Biosphere Reserve Programme in 1993. Laguna San Ignacio and Laguna Ojo de Liebre were inscribed in the World Heritage List in 1993.

Ten additional national regulations apply to conservation of the World Heritage Property, including 131-ECOL- 1998 that strictly regulates the development of whale watching activities, intended to protect grey whales and to conserve their habitat. The grey whale has also been declared by the National Government as a species of National Conservation Priority, under the National Wildlife Programme. This provides a conservation status in coastal marine waters of Mexico.

The 1988 Decree that established El Vizcaino Biosphere Reserve also legally established its core and buffer zones, with regulations for the use of each of these zones. The present zoning represents a potential problem for conservation of the World Heritage Property, which is considered under this legislation as part of the buffer zone, thus allowing sustainable use activities in both Laguna San Ignacio and Laguna Ojo de Liebre.

Recommendation
The mission recommends that the zoning and sub-zoning of the El Vizcaino Biosphere Reserve takes account of the World Heritage area.

2.3 Management structure

The Biosphere Reserve of El Vizcaino has a personnel structure which is composed of 12 professionals and 17 technicians who work in six main programmes: for the recovery of the peninsular pronghorn, the sustainable use of bighorn sheep, the conservation of grey whales, sustainable fisheries, environmental education and environmental impact assessment.

Concerning the two lagoons, two social surveillance committees have been established, in co-ordination with the PROFEPA, mainly to mitigate poaching threats and report unusual observations (e.g. whale strandings, dead turtles, fish die-offs) in the lagoons. Investigations are carried out on fisheries capacities, regulations, fishing gears and seasons. These committees have all the needed infrastructure and financial means at their disposal and co-operate closely with the local communities.

The infrastructure of the Reserve includes the headquarters office, two visitor centres under construction, two biological stations, and an enclosure for a breeding herd of pronghorns, as well as sign posts. The Reserve is equipped with 13 vehicles, radio transmitters with 400km reach, and other communication systems as well as computers. The Reserve has a yearly budgetary envelope of 857,000 US$, broken down by source in the following table (in US$):

Ford Motor Company	70,000
Global Environment Fcaility (GEF)	170,000
Agencia Espanola de Cooperacion Internacional (AECI)	320,000
SEMARNAP	97,000
Programa de Borrego Cimarron (Bighorn sheep)	200,000
TOTAL	**857,000**

The Management Plan for the Biosphere Reserve has gone through a consensus process (Consejo Tecnico Asesor) involving 63 organisations and has been submitted for approval.

The site benefits from both international donor agencies and national support, more than any other of the protected areas in Mexico. The first phase of a GEF project (FANP 1) has been successfully completed and a monitoring and evaluation system with baseline data for the whole Reserve is in place. A second phase is under preparation.

El Vizcaino remains an example for both international co-operation to enhance capacity building and improve administrative operations, and for the improvement of the involvement of local people through a number of programmes with the “ejidos” (communally owned properties).

It is important to emphasise that UNESCO Biosphere Reserves perform very specific functions as expressed in the Seville Strategy adopted in 1995. In this context, the process of planning and management for El Vizcaino Biosphere Reserve should comply with the Statutory Framework of the World Network of Biosphere Reserves and “strive to be sites of excellence to explore and demonstrate approaches to conservation and sustainable development on a regional scale” (Article 3).

Recommendation

1. The mission notes that the Management Plan for the Biosphere Reserve has been submitted for approval. It strongly recommends that the authorities prepare a separate management section for the two lagoons, which compose the World Heritage site. The authorities may wish to consider a specific request for funding under technical co-operation from the World Heritage Fund.
2. The mission welcomes the support from international and bilateral donor agencies and fully supports the submission of a second phase for the Global Environment Facility (GEF) project.
3. The mission acknowledges the efforts of the Mexican Government to protect the site through multiple international and national agreements (e.g. Whale Sanctuary, World Heritage designation, UNESCO Biosphere Reserve). The mission recommends that an integrated planning and information management system be developed to improve efficiency, reduce duplication, and ensure compatibility.

3 ASSESSMENT OF ISSUES

3.1 Whale population

The grey whale is the only living species in the baleen whale family Eschrichtiidae. Although in historic times the species occurred on both sides of the Atlantic Ocean, it had become extinct there by the end of the 19th century. Only two populations survive, both in the North Pacific Ocean. The western or Asian population migrates between the Sea of Okhotsk (summer) and the South China Sea (winter). The eastern or American stock migrates between the Bering/Chukchi Seas (summer) and the coast of Baja California (winter). The Asian population is very small and continues to face serious problems of habitat degradation and occasional illegal killing. In contrast, the American (Californian) population has dramatically recovered from the depletion caused by whaling in the 19th and 20th centuries. It therefore represents the best hope for the long-term survival of this family of whales, the Eschrichtiidae.

There are approximately 26,000 grey whales in the eastern Pacific population today. This population has been increasing at an average rate of about 2.5% per year since 1967-68. Although the "original" (pre-commercial exploitation) abundance is uncertain, some authorities believe that this population is nearing its carrying capacity level and that the rate of increase is declining. In other words, mortality and reproduction may be coming close to an equilibrium. During the period of recovery, the population has been subjected to a certain amount of continued hunting at the northern end of its range (an average of about 140 grey whales taken per year from 1970-98 in Russia), incidental mortality in fishing gear and from vessel strikes, disturbance by marine traffic and industrial activity along the migration route, and exposure to vessel activity and the salt-mining operations at Guerrero Negro and Laguna Ojo de Liebre since the 1950s.

In the 1998-99 season (December-May) 114 dead grey whales were documented along the Mexican coast, giving rise to speculation in the media about the causes of this exceptionally high mortality. Similarly high mortality was reported along the American coast during the 1998-99 migration. The strandings in Mexico were scattered in time and space and therefore were not related to a single 'mortality event' (die-off). An unusual feature of the 1998-99 mortality was that most of the dead whales were adult females. Also in this year, grey whales were seen much farther south along the Mexican coast than is normally the case. Although

several hypotheses have been discussed, no conclusive explanation has been given for these anomalies in 1998-99 (see Annex 6.6).

There is no recent evidence to suggest that conditions for grey whales have deteriorated in either Laguna Ojo de Liebre or Laguna San Ignacio. Strict new measures to reduce the risk of disturbance to the whales were recently developed and implemented by SEMERNAP, in close consultation and collaboration with the administration of the Biosphere Reserve, researchers from universities and federal institutes, and local tour operators. All human activity, except scientific research under permit, is banned inside the lagoons during the whale season. Also, whalewatching in the lagoon mouths and elsewhere is strictly regulated. Protection of the whales and their winter habitat in the lagoons by Mexico has played a major role in the population's recovery.

Without a formal project proposal and Environmental Impact Statement from the proponents of the San Ignacio salt production operation, the Government of Mexico could not provide the documentation needed for evaluating the potential impact on grey whales. Nevertheless, the mission took note of the potential problems identified in the Terms of Reference prepared by the *ad hoc* International Scientific Committee (see Annex 6.7). The Government of Mexico has acted responsibly in establishing a transparent and rigorous process of evaluating the potential risks of the proposed saltworks at San Ignacio to grey whales and other marine biota.

The mission noted that there is a large amount of past, ongoing and planned research on grey whales in Mexico, the United States and Russia. Co-operation and sharing of information has been increasing both within Mexico and between Mexico and the other range states. The International Whaling Commission's Scientific Committee is the forum in which information is exchanged and research priorities are considered. This situation offers the opportunity for UNESCO to establish links with other bodies, notably the International Whaling Commission.

Clarification of other species using the site

In the documentation leading to inscription of this site, reference has been made to a number of marine species that either do not occur at all in the lagoons, or that occur there only rarely. The mission considered it useful to clarify this information in order to prevent future misunderstanding.

Only two cetacean species regularly inhabit the two lagoons. Bottlenose dolphins are present year-round and grey whales primarily during the winter season from January through March. Blue whales do not visit the lagoons of the Reserve.

Only one species of pinniped, the California sea lion, is a regular inhabitant of the lagoons. Northern elephant seals occasionally enter Laguna Ojo de Liebre. Harbour seals do not occur in the lagoons.

Only two species of marine turtle, both endangered, are known to occur in the lagoons, with the black turtle (*Chelonia agasizzi* or *C. mydas agasizzi*) the more common and the loggerhead turtle (*Caretta caretta)* the less common. Their use of the lagoons is thought to be primarily for feeding. No marine turtles are known to nest on beaches inside the lagoons.

The lagoons provide habitat for a diverse and abundant avifauna, including a remarkable density of nesting ospreys at Ojo de Liebre, peregrine falcons, white and brown pelicans,

cormorants, royal eagles, bald eagles, brant geese and many shorebird species. Small patches of mangroves exist at San Ignacio, the northern limit for these ecologically important plants on the west coast of North America.

Recommendations

1. The mission team acknowledges the scientific efforts by Mexico and other countries to document grey whale population trends, mortality and calf production, and to investigate causes of mortality. The mission strongly encourages that this work be continued.
2. The mission recommends that the World Heritage Committee encourage other range countries to participate in the conservation efforts to protect the migratory route and feeding habitat of grey whales.

3.2 SALT PRODUCTION IN THE EL VIZCAINO RESERVE

First and foremost, it must be stated in general terms, that the production or cultivation of salt in wetlands and coastal lagoon systems constitutes one of the most well-integrated and best-adapted of all human activities that involve these environments. Manipulation of the stagnant areas through dikes to help mould the solar salt concentrating ponds results in a set of thin sheets of water, which almost always possess extraordinary value for avifauna. The solar evaporation saltflats usually embrace an ecosystem of surprising wealth and beauty.

Nonetheless, it is also necessary to state that all saltworks comprise two distinct areas: the cultivation areas, and the industrial areas, wherein the salt is processed, stored and transported.

The saltworks in the El Vizcaino Biosphere Reserve represent a phenomenon of great magnitude, extending over a very large area, with characteristics that demand specific treatment. These saltworks are unique in that they border and partially fall within a maritime-coastal region that has been declared a World Heritage Site.

Of the salt industry in the area of the reserve, two completely different situations must be addressed in evaluating the development even though only a single business group is involved. The first situation pertains to the saltworks at Guerrero Negro, affecting both Laguna Ojo de Liebre and Laguna Guerrero Negro, while the second pertains to a proposed new saltworks complex at Laguna San Ignacio. The World Heritage site consists of both lagoons (see Annex 6.8).

THE OJO DE LIEBRE LAGOON

THE GUERRERO NEGRO SALTWORKS

Description : The Guerrero Negro saltworks unfold over a vast area of the perimeter of Laguna Ojo de Liebre. With its 30,000 hectares of concentration ponds and 3,000 of crystallising ponds, it heads the list in world production: 7.5 million metric tons per year. This figure represents 35% of present world production of 22 million metric tons of evaporated marine salt. This is, therefore, a truly unique saltworks, bearing in mind that other comparable saltworks in Australia do not exceed 2 million metric tons in annual production. Moreover, the other great saltworks of recent times, such as those in San Francisco and on the

Mediterranean coast, do not exceed 1 million metric tons of annual production. Scale is therefore a critical factor when evaluating the environmental compatibility and integration of this industry with this particular environment.

Salt production in Guerrero Negro began in 1954, that is to say, nearly 40 years before the region was included on the World Heritage List (1993) and in the Biosphere Reserve Network (1993), and 34 years before being declared a national Biosphere Reserve (1988). The exploitation of salt at Laguna Ojo de Liebre and Guerrero Negro was clearly a pre-existing condition during the environmental evaluation processes that led to these declarations.

Evaluation: The saltworks possesses undeniable social and economic value in the El Vizcaino region. A substantial portion of the regional economy is linked to this industry. As is true of most evaporative saltworks, its mere presence provides an outstanding refuge for avifauna, and constitutes a relatively low-impact way of using the land productively.

Also, however, there are environmental costs and risks associated with the saltworks and its related infrastructure. Responsible public officials and the company itself have demonstrated their awareness of the environmental risks and they have taken preventive and corrective measures to account for them.

For the most part, the problems detected and the risk factors are centred around the operation in the industrial phase of the saltworks complex, specifically: the generation of brine, washing, noise, transportation and associated infrastructure.

1. Generation of Brine

Following the crystallisation of the salt, the resulting brine must be disposed of. The brine is hyper-saline water, highly concentrated in magnesium and bromide salts. Approximate figures for this exploitation yield a volume of approximately 3 million square meters per year, using the average residual amount of 10 centimetres on the surface of the crystalliser. Brine waters can, from time to time, be re-utilised to extract more salt. The company has foreseen such re-utilisation and expects it to increase the production by 1.5 million metric tons. Nevertheless, in the best-case scenario, this re-utilisation process can only be done once, after which the remaining brine must be completely disposed of.

The once-proposed solution of building a huge pond of accumulated brine has been judged non-viable on environmental grounds. Any breaching of the dikes would constitute a wholly unacceptable risk to the lagoon.

In conventional smaller saltworks, the bittern brine generally is not a focal source of pollution. When bitterns are disposed in open seas in significantly lower volumes than that produced by this saltworks, they are rapidly diluted, without affecting marine life at all. Therefore, brine constitutes a particular risk factor in this instance primarily because of the scale involved.

ESSA has been aware of this risk and has proposed a technical solution that consists of installing a system of diffusers to control dilution of the effluents near the mouth of Laguna Guerrero Negro, to the north of the complex and away from the Laguna Ojo de Liebre (at a rate of 1:100 approximately). A solution to avoid any risk of discharges into the lagoon is fundamental to guarantee the conservation of the area and its values.

2. Washing

The salt washing process also generates vast amounts of gypsum. This by-product is stored at an adjoining facility, and subsequently used in maintenance of roads and dikes. This does not represent any pollution threat.

3. Noise

The continuous pumping of seawater into Laguna Ojo de Liebre into the concentration ponds is carried out through a pumping unit located at the south end of the lagoon. The pumped volume reaches an average of 15 cubic meters per second. The diesel pumps used for the pumping generate a certain constant amount of noise in the surrounding environment.

The effects of this noise on lagoon animals, including grey whales, have not been studied in detail. In considering the issue of impacts of noise on whales, International Whaling Commissions (IWC) Scientific Committees standing Working Group on Environmental Concerns observed at its 1999 meeting that the risks associated with noise can not be easily quantified for most species at present. The working group also noted, however, that it was precautionary to reduce the exposure of mothers, calves and breeding animals to noise as much as possible (see Annex 6.6).

4. Transportation

The salt is loaded onto barges with a capacity of 6000 metric tons, and sent toward the neighbouring island of Cedros, a distance of 100 kilometres. At this latter site a storage plant has been established, as well as an unloading pier with a capacity to accommodate vessels of more than 100,000 metric tons. This process entails continual traffic of barges along the northern border of the lagoon. However, it has been determined that there is no noticeable effect on the grey whale, according to testimony received.

5. Industrial Area and associated infrastructure

The industrial portion of the saltworks complex covers a surface of approximately 1,000 hectares (4% of the whole area), including piling area, workshops, services, pier, electrical centre and washing area.

ESSA has acceded to a Voluntary Audit by the Government of Mexico, which cites 298 observations requiring improvements in the environmental management of productive processes remediation. Of this number, 79 related to environmental risk issues and of these 4 were considered significant.

Aside from the saltworks activity *per se*, it is important to highlight the urban development of Guerrero Negro which has resulted from the presence of the saltworks. It is extremely important to develop an environmental strategy for managing the impacts of Guerrero Negro's growth on the surrounding wildlife, other natural resources and landscape. The generation of waste, residual waters and general infrastructure are factors to consider in protecting the ecological integrity of Laguna Ojo de Liebre.

Recommendations

Ojo de Liebre

(Specific recommendations on the existing ESSA facility are directed at either the company or the government, whichever is appropriate.)

The mission received reports that indicated improvements in the operations of the existing saltworks. The mission invites the State Party to report on:

a) Measures to avoid accumulation of brine and its proper management;
b) Progress towards minimising noise in and near the lagoon in accordance with relevant international standards;
c) Results of the Voluntary Audit;
d) Evaluation and implementation of approaches to enhancing the aesthetic quality of the facility, particularly in areas bordering the lagoon.

LAGUNA DE SAN IGNACIO PROJECT

ESSA has proposed to establish a new saltworks complex on the saltflats around Laguna San Ignacio.

This represents a radically different situation from that at Guerrero Negro, at least from the perspective of preserving the values and integrity of the World Heritage site. The new saltworks complex would be of similar magnitude and extent (7 million metric tons of production foreseen) to that of Guerrero Negro and it would involve the development of land that is included within the World Heritage site. The saltworks would border Laguna San Ignacio, which is a Whale Sanctuary.

The proposal to develop new saltworks in the salitrales of San Ignacio implies a large-scale transformation of the landscape, directly affecting some 30.000 ha. (ESSA presentation of 24 August 1999). This would constitute a substantial and significant change from the current condition of the site. The magnitude of this operation is reflected in the following data, supplied by the project's proponents:

1. Creation of 26,500 hectares of concentrating ponds in the San Ignacio saltflats, partially located inside the World Heritage site.
2. Construction of 2,700 hectares of crystallisers at the edge of the lagoon.
3. Construction of the industrial complex and associated residences.
4. Construction of a conveyor belt covering 5 kilometres, reaching the new port facilities.
5. Construction and development of a loading pier of 2.3 kilometres, in the vicinity of Punta Abreojos, with capacity to handle large vessels (6 km to the west of the lagoon).
6. *Ex novo* implementation of all basic infrastructure, such as water and electricity. In sum, the electrical routing requires over 60 kilometres.
7. The construction works would span a period of approximately 10 years.
8. Roughly thirty percent of the projected saltworks is located within the area designated a World Heritage site.

The project would be developed in an area presently dominated by a fishing economy and which has a modest amount of eco-tourism.

It is important to consider the social and demographic implications of the project. As has occurred with Guerrero Negro town, it is reasonable to anticipate population growth of considerable scale. Immigration will certainly take place as a consequence of the new development. These factors would have an impact on the conservation of the area's natural resources. It is important that these impacts be evaluated scientifically and mitigated as appropriate.

The new project would clearly bring major changes to the land surrounding Laguna San Ignacio, which is currently the best preserved (i.e. most nearly pristine) lagoon system in Baja California. Though salt ponds themselves constitute a relatively low impact use of the environment, the associated installations (industrial area, infrastructure, and pier) would involve a major changes to the land inside and near the World Heritage site. At least a part of the area would be transformed into urban and industrial land.

Recommendations

San Ignacio

The mission notes that a review of the proposed saltworks at San Ignacio was not explicitly included in its Terms of Reference because the project proponent had not yet made its submission to the proper authorities. Nevertheless, because it was a major issue raised by government representatives, NGOs, ESSA and members of local governments and communities during the presentations and site visit, the mission feels compelled to highlight the following points:

a) The mission noted the process that is under way for evaluating the environmental and social risks involved in this project. However, as indicated above, the results of this process had not been submitted to the Government of Mexico prior to the mission and therefore no analysis could be made.

b) The mission invites the Government of Mexico to take fully into account the World Heritage values of the site when evaluating the proposal, which would include not only the population of grey whales and other wildlife, but also the integrity of the landscape and the ecosystem.

3.3 Sustainable development, including social aspects, fisheries and tourism

The mission observed that important efforts have been made since 1996 to preserve the values of the Biosphere Reserve and particularly the World Heritage site. Some of the programs, demonstration projects and actions are in fact oriented towards community-based sustainable development, and involve conservation, management and use of natural resources. Most of these are focussed on the conservation of key species based on an operative and programmatic plan, which was achieved by consensus of more than 60 organisations. The large extent of the area (2, 546, 746 ha) and the complexity of the issues have not prevented the successful management of this important Biosphere Reserve. Financial and technical advice is constantly being sought.

Conservation priorities emphasise both the environment as a whole and emblematic species (e.g. the grey whale, the pronghorn, the bighorn sheep and fisheries within the zone). It was noted that a more detailed design for the inter-connections among the existing elements is needed.

The main productive activities are focused on eco-tourism during the winter season, fishing and salt production. There is potential to develop bird watching, visits to the salt production facilities, sport fishing, kayaking, hiking, and visiting cultural sites such as the rock art and cave paintings at the Sierra de San Francisco, also a World Heritage site, and improve cultural and environmental education (e.g. school programmes, museums). To the extent that any of

these activities are already being pursued, they are nevertheless either incipient or underdeveloped.

Efforts are being made to ensure that have tourism developed in a responsible manner, and in this context attention should be given to the recent regulations on whale watching activities (see section 3.1).

Fishing activities in the World Heritage site are concentrated at present focused to a variety of clams, lobster, crabs, shrimp and several fish species. These fisheries are subject to management by the national fisheries in co-operation with the Biosphere Reserve and local fishermen co-operatives. Cropping of algae and cultivating of oysters in the estuaries are additional production activities in the site. Improvement of the communities' organisation is being achieved through social committees.

The use of a label indicating that products originated from a World Heritage site and Biosphere Reserve would be one way of adding value to such products.

Recommendation

1. The mission, having met with local tour operators and representatives from communities, recommends that tourism products and services be diversified. The mission notes that the Biosphere Reserve, which includes one cultural and one natural World Heritage site, has great tourism potential, but that development of this potential has to be managed carefully.
2. Recognising the extraordinary potential of the resources of the site, an overall strategy for sustainable tourism in the Reserve could be developed. A comprehensive programme based on experiences gained with regard to responsible tourism, including whale and bird watching, would allow a better diversification of tourism services and products with a high quality environmental image. The mission invites the Government to consider a specific label of the Biosphere Reserve and the World Heritage site to characterise such quality.
3. The mission recommends that the Mexican authorities consider carrying out a study on the diversification of tourism, which might be funded from the World Heritage Fund, or through collaboration with the Man and the Biosphere (MAB) programme.
4. The mission recommends development by the appropriate authorities of environmental plans for human settlements in the area, in consultation with all affected parties.
5. Considering that a high proportion of the Reserve's value is in the form of exploitation of fishing resources, the mission recommends that projects to diversify the fishing sector include the following aspects: the generation of new activities with a high added value, the promotion of activities that will tend to redirect effort away from over-exploited marine species, and the identification of new markets.

3.4 Conditions of integrity

According to the criteria for inclusion of natural properties in the World Heritage List, sites nominated should fulfil the conditions of integrity under article 44 (b) of the Operational Guidelines for the Implementation of the World Heritage Convention. This implies the fulfilment of the conditions of integrity at the time of inscription and the need to ensure the their long-term maintenance to ensure the conservation of the site. It also implies that conditions of integrity need to be considered for the site as a whole and not only in relation to

particular species or groups of species. For the El Vizcaino World Heritage site these conditions need to be maintained for the two areas inscribed as one under a single nomination: Laguna San Ignacio and Laguna Ojo de Liebre.

Considering that this site was inscribed under criterion (iv) of article 44 (a), as containing the most important and significant natural habitats for *in situ* conservation, the application of the conditions of integrity goes beyond the maintenance of the grey whale population. Conditions of integrity have to ensure the conservation of the natural habitats contained in this World Heritage site as a requirement for ensuring the conservation of the species dependent upon these habitats.

When reviewing both areas as a single World Heritage site, it is important to recognise that under the present circumstances the conditions of integrity have been maintained and a number of recommendations from IUCN at the time of inscription regarding management actions have been implemented. This should be acknowledged as demonstrating the strong commitment of the Mexican government regarding the protection of the site. The company operating the saltworks at Guerrero Negro (Laguna Ojo de Liebre) must also be acknowledged for dedicating resources to greening their industrial activities based on the recommendations of the environmental audit by PROFEPA.

This World Heritage site as a whole retains its quality and significance as a largely natural habitat, thus fulfilling the criteria and conditions of integrity for which it was inscribed in 1993. In evaluating the site as a whole, the existing saltworks directly occupies less than 10% of the area of the Ojo de Liebre portion of the World Heritage site. The mission team concludes that, at present, Laguna San Ignacio is in relatively pristine condition. Activities such as artisanal fishing and whale watching have been developed using environmental criteria as well as local knowledge, and thus are contributing to the protection of the site.

The mission officially received information, through presentations by both the salt company (ESSA) and the scientific group carrying out the EIA, concerning plans by ESSA to establish a new salt work facility in Laguna San Ignacio. Such a project could threaten the conditions of integrity of the site. The mission noted that the EIA for this project is currently under preparation and will be, once finalised, submitted to the relevant authorities. At present, no decision has been taken related to this proposal.

According to the information received, such a project would imply the transformation of a large area inside the World Heritage boundaries of Laguna San Ignacio for the construction of evaporation and crystallisation ponds. The mission questioned whether this would comply with condition of integrity 44 (b) (iv). The mission in particular discussed the secondary impacts of such a project (condition of integrity 44 (b) (vi)), with the effects of human encroachment and impacts of resource use, waste disposal, pollution and other aspects.

4 ASSESSMENT OF THE STATE OF CONSERVATION OF THE SITE

On the basis of the information submitted to the mission team, presented during meetings with a variety of individual citizens and institutional representatives (see Annex 6.4), and obtained during the site visit, factors affecting the property can be summarised as follows:

- Incidental and localised pollution related to the saltworks in Laguna Ojo de Liebre, as described in the report on the environmental audit to ESSA prepared by PROFEPA. Most of the problems identified by PROFEPA have been addressed but the company is still working to improve its operations so to minimise the risk of impacts to this lagoon.

- Lack of an environmental plan for the town of Guerrero Negro that includes recommendations for wastewater management and waste disposal.

- Localised pollution related to the lack of sanitary infrastructure in new small settlements in the coastal areas. The effects of this pollution are undocumented but represent a potential threat to the long-term integrity of the site.

- Illegal fisheries in the two lagoons and in coastal waters of the World Heritage site. This threat is decreasing due to the control and surveillance committees established by local fishermen groups in both Laguna San Ignacio and Laguna Ojo de Liebre.

- In Laguna San Ignacio the mission team observed the dirt tracks, towers for geodesic surveys, and core samples for soil and geological studies related to the feasibility studies for the proposed saltworks project.

The lack of a specific long-term management plan for the World Heritage site is a problem. However, the site is well managed and protected by using operational short-term management measures under the framework of the management plan prepared for El Vizcaino Biosphere Reserve.

5 CONCLUSIONS

The mission team received an enormous amount of written documentation and consulted extensively – within the time constraints of the mission - with Government representatives, NGOs and local stakeholders.

The issues were found to be extremely complex and could certainly not be reduced to a concern about one species (e.g. grey whales) or a single incident (e.g. brine spill). In fact, the team specifically considered a variety of issues including the management structure, the integrity of the site, status of the whale population, salt production, sustainable use and tourism.

The World Heritage area, composed of the two lagoons Ojo de Liebre and San Ignacio, retains its quality and significance as a largely natural habitat and fulfils the criteria and conditions of integrity for which it was inscribed in 1993.

The mission team notes that the proposed new saltworks at Laguna San Ignacio would transform the landscape of a large area near and partially inside the World Heritage site. Also,

there are concerns about the potential environmental and socio-economic effects, which the mission team notes are being comprehensively and responsibly evaluated and considered within an EIA process by the Government of Mexico.

Finally, the mission team concludes that the World Heritage site under present circumstances is not in danger, and scientific data show that the whale population is not endangered and continues to increase. However, if any significant change to the present situation should occur, documented by appropriate evidence, the conclusion concerning the site's status under the World Heritage Convention should be promptly re-evaluated in co-operation and co-ordination with the State Party, and appropriate consideration should be given to all relevant Parties and the World Heritage Convention.

6. ANNEXES

ANNEX 6.1 Terms of Reference

Terms of Reference of the mission to the Whale Sanctuary of El Vizcaino (Mexico)

Goals and objectives of the mission:

(a) Obtain a balanced evaluation of the state of conservation of the Whale Sanctuary of El Vizcaino World Heritage site based on available information, scientific evidence, and consultation with relevant organizations.

(b) Review of the information on the saline operation and determine and describe any actual threat to the World Heritage values of the Whale Sanctuary of El Vizcaino.

(c) Prepare practical recommendations based on a synthesis of results from (a) and (b), to be presented to the Mexican Government and to the UNESCO World Heritage Committee and its Bureau (November/December 1999).

ANNEX 6.2 Mission team

International participants

Dr. Mechtild Rössler (Team leader)
Greographer, Programme Specialist for natural heritage and cultural landscapes, responsible officer for the Americas, UNESCO World Heritage Centre;

Dr. Pedro Rosabal
IUCN Protected Areas Programme, specialist in landscape ecology and regional planning;

Dr. Randall Reeves
Specialist in marine mammals, Chairperson of the IUCN Species Survival Commission (SSC) Cetacean Specialist Group;

Dr. Cipriano Marin
Vice-Secretary General of INSULA/Man and the Biosphere (MAB), Secretary General of the World Conference on Sustainable Tourism; Specialist in salt production;

National Participants

Dr. Lorenzo Rojas, Head of the National Marine Mammals Programme of Mexico in Baja California, Instituto Nacional de la Pesca, Biologist;

M.C. Hector Perez-Cortez, Regional Coordinator of the National Marine Mammals Programme in Baja California Sur, Instituto Nacional de la Pesca, Biologist ;

Victor Sanchez, Biologist, Director of the El Vizcaino Biosphere Reserve, Instituto Nacional de Ecologia.

ANNEX 6.3 Itinerary and Programme

PROGRAMA DE TRABAJO DE LA MISIÓN DE LA UNESCO

22 de Agosto

Tarde	Llegada a la Ciudad de México. Hospedaje en el Hotel Sevilla Palace, Paseo de la Reforma No. 105. Tel. 5 – 705-28-00

23 de agosto

08:45 a 9:00 hrs.	Traslado a la Secretaría de Relaciones Exteriores
09:00 a 12:30 hrs.	Reunión de la Misión con funcionarios de SEMARNAP, SECOFI, SEP y SRE. (Sala Magna) ➢ Presentación sobre el desarrollo de la Misión ➢ Revisión y Aprobación del Programa de Trabajo ➢ Presentación de las Políticas y Programas Nacionales: • Política y Estrategia de SEMARNAP: Lic. Enrique Provencio • Área Naturales Protegidas en México: Biól. David Gutiérrez Carbonell • Cumplimiento de la Ley y Auditorias Ambientales: Mtro. Antonio Azuela
12:30 a 12:45 hrs.	Receso
12:45 a 14:15 hrs.	Reunión con Organizaciones No Gubernamentales. (Sala Magna ó Sala 3)
14:15 a 14:30 hrs.	Receso
14:30 a 16:30 hrs.	Comida que ofrece a la Misión la Emb. Carmen Moreno de Del Cueto, Subsecretaria para Naciones Unidas, Africa y Medio Oriente. Invitados: representantes de instituciones gubernamentales, ONG’s y del sector privado. (Salón de Recepciones de la Cancillería)

17:00 hrs.	La Oficina de la UNESCO en México distribuye a la prensa una Declaración escrita de la Misión.
17:00 a 18:15	Reunión de Coordinación Interna de la Misión.
19:45 hrs.	Salida a la Ciudad de Hermosillo, Sonora Hospedaje en el Hotel Araiza

24 de agosto

08:30 a 10:00 hrs.	Traslado de Hermosillo a Guerrero Negro
10:00 a 10:20 hrs.	Traslado e instalación en el Hotel La Pinta
10:20 a 10:30 hrs.	Traslado del Hotel a ESSA
10:30 a 14:00 hrs.	Visita a las Instalaciones de la Exportadora de Sal, S. A. Presentación sobre aspectos oceanográficos de la Laguna de San Ignacio
14:00 a 15:30 hrs.	Comida de trabajo. Revisión de Aspectos Metodológicos del Estudio de Impacto Ambiental. (Restaurante Mal Arrimo)
16:00 a las 19:00 hrs.	Revisión y Cotejo de las Evidencias Científicas: • Conservación y Manejo de REBIVI: Biól. Víctor Sánchez • Estado de Conservación de la Ballena Gris: M. en C. Héctor Pérez • Estado de Conservación de otras Especies de Flora y Fauna en el Sitio: Biól. Humberto Berlanga
19:00 a 20:00 hrs.	Receso
20:00 a 22:00 hrs.	Cena en el Restaurante Mal Arrimo

25 de Agosto

07:00 a 8:00 hrs.	Desayuno en el Hotel La Pinta
08:00 a 8:30 hrs.	Salida de Guerrero Negro a la Laguna Ojo de Liebre

08:30 a 10:30 hrs.	Recorrido en la laguna Ojo de Liebre
10:30 a 11:00 hrs.	Traslado a Guerrero Negro.
11:00 a 12:30 hrs.	Reunión con prestadores de servicios turísticos y el Comité de Turismo. (Restaurante Mal Arrimo)
12:45 a 15:30 hrs.	Aplicación de la Ley, PROFEPA: Subprocurador Víctor Ramírez. (Restaurante Mal Arrimo)
15:30 a 16:00 hrs.	Reunión con representantes de la Alianza de los Pueblos Y Ejidos Sudcalifornianos.
16:00 a 17:30 hrs.	Comida de Trabajo. Presentación del Emb. Alberto Székely Asesor Jurídico de la Coalición Internacional para la Defensa de la Laguna de San Ignacio.
17:30 a 18:30 hrs.	Proyectos de Cooperación Internacional, Araucaria y FMCN. (Restaurante Mal Arrimo)
17:30 a 17:45 hrs.	Traslado al Hotel La Pinta

26 de agosto

07:00 a 7:30 hrs.	Desayuno en el Hotel La Pinta (Entrega de equipaje, el personal de apoyo se encargará de él hasta su documentación en el Aeropuerto de La Paz)
07:30 a 07:45	Traslado al Aeropuerto de Guerrero Negro
07:45 a 08:15 hrs.	Traslado a Punta Abreojos.
08:15 a 9:30 hrs.	Entrevista con pobladores de Punta Abreojos.
09:45 a 10:15 hrs.	Traslado al pueblo de San Ignacio
10:30 a 12:00 hrs.	Reunión con organizaciones de pescadores y el Comité de Pesca en San Ignacio. (Hotel La Pinta)
12:00 a 14:00 hrs.	Salida a la Ciudad de La Paz. (Comida durante el vuelo)
14:30 a 15: 00 hrs.	Reunión con el Ejecutivo Estatal.
15:00 a 16:00 hrs.	Reunión con las Fracciones Parlamentarias del Congreso Estatal.
16:30 a 20:20 hrs.	Traslado a la Ciudad de México. (Aeroméxico, vuelo 435)

20:20 a 21:00 hrs.	Llegada al Hotel Sevilla Palace

27 de Agosto

8:45 a 9:30 hrs.	Traslado del Hotel Sevilla Palace a la Secretaría de Medio Ambiente, Recursos Naturales y Pesca (SEMARNAP)
9:30 a 10:30 hrs.	Reunión de la Misión con Miembros de la Comisión de la H. Cámara de Diputados. (Sala de Usos Múltiples de SEMARNAP).
10:30 a 10:45 hrs.	Receso
10:45 a 14:00 hrs.	Reunión de Trabajo de la Misión. (Sala de Usos Múltiples de SEMARNAP).
14:00 a 15:30 hrs.	Comida ofrecida por la PROFEPA (Restaurante La Cava)
16:00 a 18:00 hrs.	Reunión de Trabajo de la Misión. (Sala de Usos Múltiples de SEMARNAP).
18:00 a 22:40 hrs.	Reunión de Trabajo con funcionarios del Grupo Intersecretarial. (Sala de Usos Múltiples de SEMARNAP).

Annex 6.4 List of organizations and individuals present at meetings of the mission team

(a) Meeting with non-governmental organizations on 23 August 1999

Alberto Székely	Abogado de la Coalición Internacional para la Defensa de la Laguna
Andrés Rosental	Coordinador de la CDLSI (Coalición para la defensa de Laguna San Ignacio).
Jared Blumenfeld	IFAW (International Fund for Animal Welfare)
Jacob Scherr	NRDC (Nature Resources Defense Council)
Patricia Martínez Ríos	Proesteros
José de Jesús Varela	NCPA, Ejido Luis Echeverria Alvarez, Kuyima, Laguna Baja California Sur A.C.
José Warman	Espacios Naturales y Desarrollo Sostenible AC
Cesar Rafael Chávez	Conservation International México, A.C.
Juan Carlos Barrera Guevara	World Wildlife Fund, México, A.C.
José G. Macklish Gomez	Consejo Ciudadano de Guerrero Negro, A.C.
J. Alvaro Miranda Alvarado	Consejo Ciudadano de Guerrero Negro, A.C.
Flavio Cházaro Ramírez	PRONATURA A.C.
Lorenzo Rosenzwieg	Fondo Mexicano para la Conservación de la Naturaleza (FMCN)
Enrique Beltrán G.	IMERNAR (Instituto Mexicano de Recursos Naturales Renovables
Claudia Macias PérezTejada	IMERNAR (Instituto Mexicano de Recursos Naturales Renovables
Patricio Robles Gil	Unidos Para La Conservación
Carlos Manterola	Unidos Para La Conservación A.C.
Martha Delgado	Unión de Grupos Ambientalistas, I.A.P.

(b) Lista de functionarios participantes, reunion Matutina, Agosto 23, 1999

Enrique Provencio, Presidente del Instituto Nacional de Ecología, SEMARNAP
Dámaso Luna Corona, Director General de Medio Ambiente y Recursos Naturales, SRE
Antonio Azuela, Procurador Federal de Protección al Ambiente, PROFEPA
Jorge Nieto, Representante de la UNESCO en México
Sofía Leticia Morales, Directora General de Asuntos Internacionales, SEP
José Luis Samaniego, Titular de la Coordinación de Asuntos Internacionales, SEMARNAP
José Sánchez Gutiérrez, Representante Alterno de México ante la UNESCO
Hector Valezzi Zafra, Director General de Organismos Internacionales Especializados, SRE
Víctor Sánchez, Director de la Biosfera El Vizcaíno
Francisca Méndez, Directora de Recursos Naturales, SRE
Oscar Ramírez Flores, Director General de Investigación en Procesos para el Desarrollo Sustentable, INP
Leonardo Ortiz Villacorta, Director de Información Internacional, SRE
Lorenzo Rojas Bracho, Coordinador del Programa Nacional de Mamíferos Marinos, INP
María Teresa Bandala Medina, Directora de Medio Ambiente, SRE
Hector Pérez Cortes, Coordinador regional del Programa Nacional de Mamíferos Marinos, INP
Víctor Ramírez, Subprocurador de Recursos Naturales, PROFEPA
Miguel Angel Cáceres C., Director de Organismos Especializados, SRE
Ricardo Belmontes, Director de Política y Acuerdos Pesqueros Internacionales, SEMARNAP

Hugo Guzmán, Director General de Acuerdos y Cooperación Internacional, SEMARNAP

(c) Listado de Asistencia a las reuniones en Guerrero Negro, B.C.S., agosto 24 y 25, 1999

FUNCIONARIOS DEL GOBIERNO FEDERAL:

Javier Medina (SECOFI)
José Sánchez (SRE)
Dámaso Luna (SRE)
José Luis Samaniego (SEMARNAP)
Alejandra Nuñez (SEMARNAP)
David Gutiérrez (INE)
Oscar Ramírez (INP)
Salvador Musalem (SECOFI)
Leonardo Ortiz (SRE)

Manuel Escorza (UNESCO MEXICO)

Agosto 24, 1999

Ing. Juan I. Bremer	Director General	ESSA
B. Le Boeuf		UCSC
Ing. Joaquín Ardura	Director Administrativo	ESSA
Juan Antonio Flores	Investigación y desarrollo	ESSA
Edmundo Elorduy	Director Técnico	ESSA
Dr. Clinton Wiant		SCRIPPS
Dr. Paul Dayton		SCRIPPS
M.C. Jorge Urban		UABCS. IWC
M.C. Antonio Navarro		UABCS
Dr. Enrique Ongay		UABCS
Alfredo Bermudez		PROFEPA
Humberto Berlanga		INE

Agosto 25, 1999

Consejo Ciudadano de Guerrero Negro:
Leonor Cota
Mercedes Mesa
Martha Delgado
Armando Hernández
Humberto Ibarra
Erik García
Antonio Ceseña
Rodolfo Garaizar

Lic. Héctor Herrera	ESSA
Alberto Zsekely	Centro Mexicano de Derecho Ambiental
Alfredo Bermudez	PROFEPA

Laguna Ojo de Liebre:
***Malarrimo Eco-tours**
Enrique Achoy Lopez
Enrique Achoy Cota.
***Laguna Tours**
Beatriz Bremer
***Mario´s Tours**
Mario Maya Abarca
Ejido Benito Juárez
Martín Muñoz Moran
ONG. Festival Cultural de la Ballena Gris A.C.
Lic. María del Carmen Trujillo Dorantes

Laguna San Ignacio:
****Kuyima Servicios Ecoturisticos**
José de Jesus Varela Glavan.
****Bioparque Marino Rancho San Cristobal**
Jorge Alberto Peón Rico.
****Laguna Whale Watching**
Francisco Mayoral Gonzalez.
**Jorge Fischer Romero.
**Romualdo Fischer Liera
**Antonio Aguilar Osuna.
**Raul Eduardo López Gongora.
**Eduardo Sedano Moya.
Victor Ramirez Subprocurador de la PROFEPA.

*integrantes de la ONG Unión Protectora Ecoturistica de la Biosfera del Vizcaíno A.C.
** Integrantes de la ONG Laguna Baja California Sur A.C.

(d) Functionarios del estado de baja california sur participantes en la reunión del 26 Agosto 1999 por la tarde

Leonel Cota Montaño, Gobernador del Estado de B.C.S.
Rodimiro Amaya Téllez, Secretario General de Gobierno
Jesús Druk González, Secretario de Finanzas
Benito Murillo Aguilar, Presidente de la Gran Comisión del Congreso del Estado.
Siria Verdugo Davis, Presidenta de la Comisión de Ecología del Congreso del Estado.
Víctor Martínez Escobar, Diputado, Partido Acción Nacional
Pedro Osuna, Diputado, Partido de la Revolución Democrática
Juan Sánchez, Diputado, Partido Revolucionario Institucional
César Uzcanga, Diputado, Partido del Trabajo

(e) funcionarios participantes el 27 Agosto 1999

José Luis Samaniego, Titular de la Coordinación de Asuntos Internacionales, SEMARNAP
Javier Medina, Director General de Enlace con el Congreso, SECOFI

Dámaso Luna Corona, Director General de Medio Ambiente y Recursos Naturales, SRE
José Sánchez Gutiérrez, Representante Alterno de México ante la UNESCO
Miguel Angel Cáceres C., Director de Organismos Especializados, SRE
Oscar Ramírez Flores, Director General de Investigación en Procesos para el Desarrollo Sustentable, INP
David Gutiérrez Carbonel, Director General de Conservación y Manejo de ANP'S

ANNEX 6.5 List of documents submitted to the mission team

1. DECRETOS DE PROTECCION

1.1 DECRETO por el que se declara la reserva de la biosfera "El Vizcaíno", ubicado en el Municipio de Mulegé, BCS. - Diario Oficial noviembre de 1988.

1.2 DECRETO por el que se modifica el diverso de 6 de diciembre de 1971, declarándose como zona de refugio para ballenas y ballenatos las aguas del complejo Laguna Ojo de Liebre, ubicados en Baja California Sur. - Diario Oficial marzo de 1980.

1.3 DECRETO por el que se declara como refugio para ballenas grávidas y ballenatos y zona de atracción Turística-Marítima, las aguas de la zona interior de la Laguna de San Ignacio, en el Estado de Baja California Sur. - Diario Oficial julio de 1979.

1.4 DECRETO que declara zona de refugio para ballenas y ballenatos, las aguas del área de la Laguna Ojo de Liebre al sur de la Bahía de Sebastián Vizcaíno, en el litoral del Océano Pacífico territorio de Baja California. - Diario Oficial enero de 1972.

2. NORMAS OFICIALES MEXICANAS.

2.1 NORMA Oficial Mexicana NOM-004-PESC-1993, para regular el aprovechamiento de la almeja catarina, en aguas de jurisdicción federal de los estados de Baja California y Baja California Sur. Diario Oficial diciembre 1993.

2.2 NORMA Oficial Mexicana NOM-005-PESC-1993, para regular el aprovechamiento de las poblaciones de las distintas especies de abulón en aguas de jurisdicción federal de la Península de Baja California. Diario Oficial diciembre 1993.

2.3 NORMA Oficial Mexicana NOM-006-PESC-1993, para regular el aprovechamiento de todas las especies de langosta en las aguas de jurisdicción federal del Golfo de México y Mar Caribe, así como del Océano Pacífico incluyendo el Golfo de California. Diario Oficial diciembre 1993.

2.4 MODIFICACION a la Norma Oficial Mexicana NOM-006-PESC-1993, Para regular el aprovechamiento de todas las especies de langosta en las aguas de jurisdicción federal del Golfo de México y Mar Caribe, así como del Océano Pacífico incluyendo el Golfo de California. Diario Oficial junio 1997.

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12. INFORMACION BÁSICA EL VIZCAINO

12.1 Programa de Manejo de la Reserva de Biosfera de El Vizcaino

12.2 Programas de Conservación

12.3 Aspectos socioeconómicos

12.4 Inspección y vigilancia

13. RESUMEN DEL PROGRAMA DE MENEJO DE LA RESERVA DE BIOSFERA DE EL VIZCAINO

14. ACCIONES DE LA PROCURADURÍA FEDERAL DE PROTECCIÓN AL AMBIENTE EN LA RESERVA DE EL VIZCAINO (Anexos)

15. SINTESIS CARTOGRÁFICA, Escala 1:250.000

16. GESTION AMBIENTAL MEXICANA – CD-Rom

17. LEY GENERAL DEL EQUILIBRIO ECOLÓGICO Y PROTECCIÓN AL AMBIENTE

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Edita: Scpp Punta Abreojos s.c.l, Diciembre 1998

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34. VERSION ESTENOGRÁFICA DE LA REUNIÓN CELEBRADA POR LA COMISIÓN INVESTIGADORA

Cámara de Diputados

35. CARPETA INFORMATIVA PARA LA VISITA DE LA MISIÓN DE LA UNESCO

Exportadora de Sal, S.A. de C.V.

36. BACKGROUND DOCUMENT FOR THE MISSION TO THE WHALE SANCTUARY OF EL VIZCAINO (MEXICO)

UNESCO World Heritage Centre, 1999

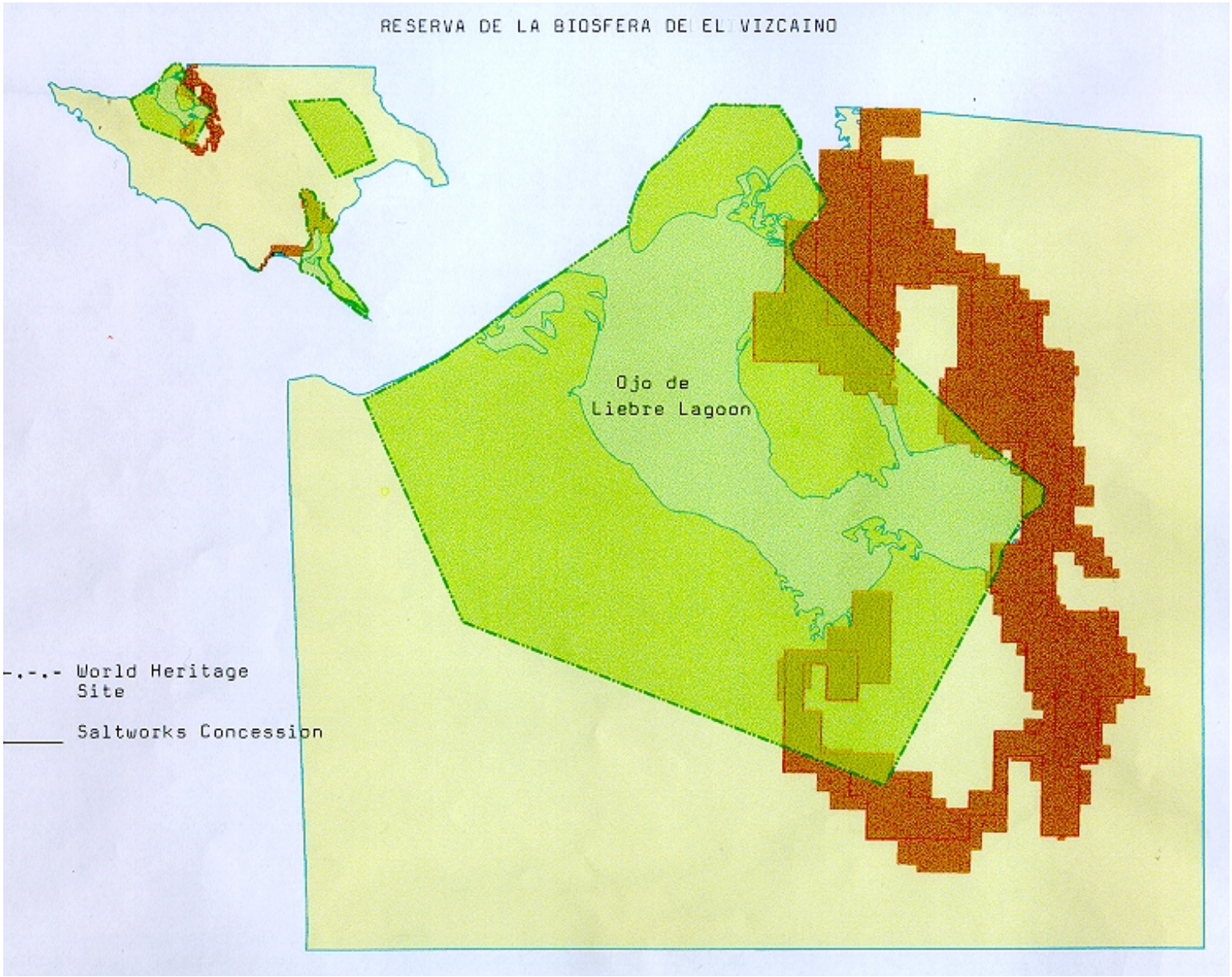
ANNEX 6.6 Excerpts from the 1999 report of the IWC Scientific Committee

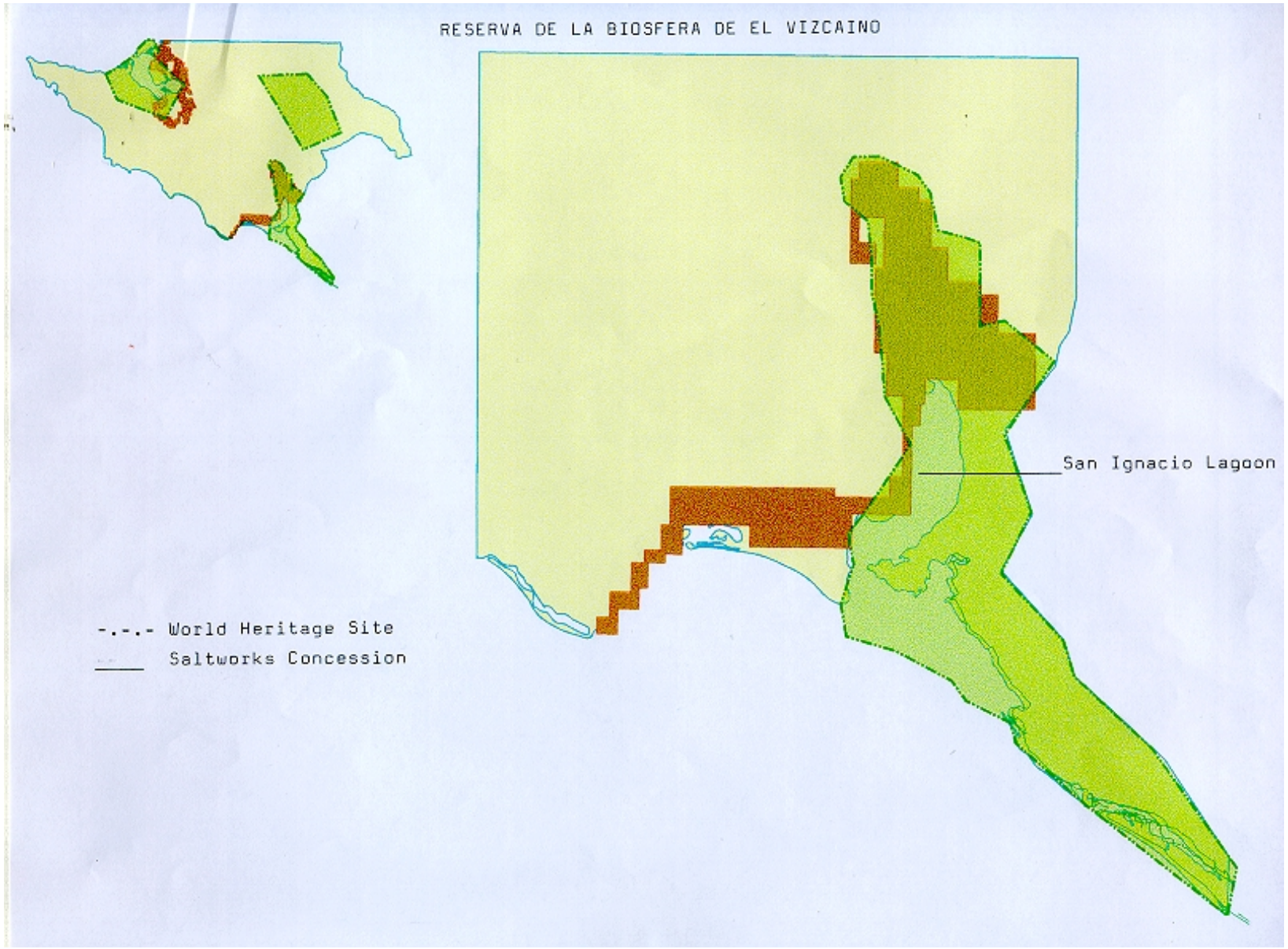
ANNEX 6.7 Terms of Reference of the International Scientific Committee to evaluate potential impacts of the proposed saltworks project at Laguna San Ignacio

ANNEX 6.8 Maps

(a) Reserva de la Biosfera de El Vizcaino: Laguna Oje de Liebre (World Heritage area and saltworks concession)

(b) Reserva de la Biosfera de El Vizcaino: Laguna San Ignacio (World Heritage area and saltworks concession)


RESERVA DE LA BIOSFERA DE EL VIZCAINO
Ojo de
Liebre Lagoon
-.-.- World Heritage
Site
Saltworks Concession


RESERVA DE LA BIOSFERA DE EL VIZCAINO
San Ignacio Lagoon
-.-.- World Heritage Site
Saltworks Concession