Organization of American States

WHMSI

**Technical and Financial Project Proposal Template**[1]

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|---|---|
| **Name of the Organization:**<br>Kutzari, Asociación para el Estudio y Conservación de las Tortugas Marinas, A.C. | **Type of Organization:**<br>Non-profit Organization |
| **Brief Description of the Organization:**<br>*Kutzari, Asociación para el Estudio y Conservación de las Tortugas Marinas A. C.* is a non-profit organization devoted to the conservation and research of sea turtles in Mexico. Its mission is to avoid the extinction of the Eastern Pacific leatherback turtle, and to achieve its recovery through a regional management plan, involving the local communities and governments along its distribution range, as well as to generate scientific knowledge of its biology and ecology. | |
| **Contact Person:**<br>Débora García | **Address:**<br>Calle Alemanes No. 16 Colonia El Paraíso, México DF 01130, Mexico. |
| **Telephone:**<br>(+52-55) 55162061 | **Email and Website:**<br>kutzariac@yahoo.com.mx<br>http://www.kutzari.org |
| **Project title:**<br>MONITORING OF THE SAND TEMPERATURES IN THE NESTING HABITAT OF THE LEATHERBACK TURTLE IN THE MEXICAN PACIFIC | |
| **Project Objective and Expected Outcomes:**<br>OBJECTIVES:<br>• To record the temperature variations of the sand at leatherback nest depth at four priority nesting beaches.<br>• To monitor such variations in temporal and spatial scale at each beach.<br>• To keep an accurate database of sand temperatures that will allow long-term monitoring of this parameter in relation to incubation of leatherback clutches, in order to detect possible impacts associated to climate change.<br><br>EXPECTED OUTCOMES:<br>• Standardized monitoring of sand temperatures at four index beaches.<br>• Integrated database of sand temperatures for use in a long-term monitoring program.<br>• Capacity building for a long-term monitoring program at four index beaches. | |
| **Target Population:**<br>Eastern Pacific Leatherback sea turtle (*Dermochelys coriacea*) | |
| **Amount Requested in USD:**<br>$18,140 | **Co-financing:**<br>$ 117,900 |

[1] The proposal can be written in English or Spanish

| Project Duration in Months: | Country: |
|---|---|
| 5 months (December to April) | Mexico |

2. **Project Summary:** An abstract of the proposal both in English and Spanish (300 words or less in each language) that should include geographic location, a brief description of the rationale, goal(s), objectives, specific project activities, target beneficiaries, and expected outputs.

SUMMARY:
The Mexican Pacific leatherback population, considered the largest in the world in the early 80's, has seen a reduction from several thousand females per season to a few dozen females estimated in recent seasons. Proyecto Laúd identified the major nesting sites as index beaches: Mexiquillo in Michoacán, Tierra Colorada in Guerrero, Cahuitán and Barra de la Cruz in Oaxaca. Currently under the auspice of CONANP (Mexican Commission for Natural Protected Areas) and in collaboration with ***Kutzari, Asociación para el Estudio y Conservación de las Tortugas Marinas A.C.***, the project compiles the data generated by government and non-government institutions in a single database, coordinates the protection efforts and standardizes the field methods throughout the nesting range. In 2007, the National Action Program for the Conservation of the Leatherback Turtle prioritized the lines of action in the country for the recovery of the species, which include maximum production of healthy hatchlings. The most important environmental factor affecting the hatchling production for this species is the incubation temperature. Given the threat that climate change poses to the recovery of this critically endangered population, this project aims to keep accurate records of the temperature of the sand at 80 cm (average depth of leatherback nests in this population) during nesting season 2012-2013 at the four index beaches, and to establish an integrated database of sand temperatures for use in a long-term monitoring program. Sand temperature will be recorded using electronic dataloggers placed in transects along the beach profile, at 80 cm of depth. Some dataloggers will be placed in actual leatherback nests and in clutches relocated to protected areas, in order to compare incubation conditions. A single, standardized database will be compiled and the information used for long-term management strategies.

RESUMEN:
La población de tortuga laúd del Pacífico mexicano, considerada la más grande del mundo a principios de los 80's, se ha reducido de varios miles de hembras anidadoras por temporada a unas cuantas docenas estimadas en temporadas recientes. El Proyecto Laúd identificó las principales playas índice: Mexiquillo, Michoacán, Tierra Colorada, Guerrero, Cahuitán y Barra de la Cruz, Oaxaca. Actualmente operado por CONANP (Comisión Nacional de Áreas Naturales Protegidas) y en colaboración con ***Kutzari, Asociación para el Estudio y Conservación de las Tortugas Marinas A.C.***, el proyecto compila la información generada por las instituciones involucradas en una base de datos común, coordina los esfuerzos de protección y estandariza los métodos de campo. En 2007, el Programa de Acción para la Conservación de la Tortuga Laúd priorizó las líneas de acción para recuperar a esta especie, las cuales incluyen lograr la máxima producción de crías saludables. El factor ambiental más importante que afecta la producción de crías de esta especie es la temperatura de incubación. Dada la amenaza que el cambio climático resulta para la recuperación de esta población en peligro crítico, este proyecto tiene como objetivo el registro preciso de la temperatura de la arena a 80 cm durante la temporada 2012-2013 en

las cuatro playas índice, e integrar una base de datos para su uso en un programa de monitoreo a largo plazo. La temperatura de la arena será registrada usando sensores electrónicos ("*dataloggers*") colocados en transectos a lo largo del perfil de playa, a 80 cm de profundidad. Algunos sensores serán colocados en nidos naturales de laúd, y en nidadas reubicadas a zonas protegidas, de manera que se tenga una comparación de las condiciones de incubación. Se compilará una base de datos estandarizada y la información será usada para estructurar estrategias de manejo a largo plazo.

3. **Organization's Experience** (300 words or less)
Kutzari signed a Collaboration Agreement with the Mexican Government through CONANP in 2006, in order to have joint efforts for the recovery of the Mexican Pacific leatherback. Since then, Kutzari and CONANP have had joint operation of the Leatherback Project, with conservation activities in the index beaches, shared resources, infrastructure and personnel from both organizations. Kutzari obtains funding from international sources every year in order to support the conservation activities at the index beaches. Such sources include the USFWS Marine Turtle Conservation Fund and grants from the National Fish and Wildlife Foundation's Sea Turtle Conservation Fund. The organization provides field technicians trained in the most accepted management procedures, most of which have several years of experience in the conservation of sea turtles.

4. **Project Narrative Description (Maximum 10 pages):** This section should include the content below in which the following questions should be addressed: what is proposed and what is its relevance (objectives and relevance), how the work will be done (methodology), what will be achieved, what outputs will be delivered, how the project success will be measured (monitoring and evaluation methodology). This should be developed in the format below:

4.1. **Rationale:** Describe the project's value to the conservation of the migratory species categories and habitats of greatest concern outlined in Section I of the Request for Proposals: why it is important that this project be implemented (e.g., which commonly recognized need is addressed by the proposal). Describe any overlap or complementarities with existing tools or projects developed by your organization or others. Describe how this proposal will fill existing gaps.

The leatherback turtle (*Dermochelys coriacea*) is listed as Critically Endangered in the IUCN Red List (Sarti, 2000). The Eastern Pacific population has been deemed particularly vulnerable to environmental changes that disturb the incubation microclimate, given the sensitivity the species has to temperature fluctuations (Santidrian *et al*., 2012). The leatherback is also considered a priority species for conservation in Mexico, and many conservation actions and resources have been implemented for its recovery since the early 80's (Sarti *et al.,* 2007). These actions mainly focused on protection of reproductive adults and clutches from poaching and predation and monitoring of nesting trends, but there were few efforts in monitoring of actual environmental conditions that might affect the production of hatchlings. In 2008, the National Action Plan for the Conservation of the Leatherback Turtle identified climate change as a potential threat for the recovery of the Mexican Pacific leatherback, since the incubation microclimate is expected to change to warmer and dryer conditions over time. Several management strategies have been proposed, but first we need to understand the current temperature profiles at each priority nesting beach (both temporal and spatial patterns) and keep a long-term record to track changes over time in order to be able to suggest the best management actions.

**4.2. Baseline:** Describe the current situation that the project intends to address as a point of reference to measure success upon project completion. Briefly provide quantitative and/or qualitative information on the existing conditions that support the need for the project.

Currently the project measures incubation temperature using thermocouples (copper-constantan) placed in "fake nests" (holes of the same depth as a natural leatherback nest) or in actual nests with eggs, but the salinity and humidity conditions of the beach tend to corrode the probes, affecting the accuracy of the readings over time. Also, this kind of measurement requires that technicians personally make the readings during day and night, putting extra workload on the field teams.

**4.3. Project Goals and Purpose:** Project goals must be clearly defined and directly relevant to the need(s) identified above. Project purpose must be measurable, realistic (attainable within the project's period of performance), and be directly relevant to the priority area identified (See Section I of the Request for Proposals).

The project goal on the long term is to have a management strategy that decreases the impact of a potential degradation of the incubation conditions due to any increase in sand temperature. This proposal is considered for one nesting season (2012-2013) and will start a database with results of temperature monitoring and hatching success at four index beaches, which will support the long term goal.

The project purpose is to have protected leatherback clutches at the index beaches with a hatching success similar to the average for the species (50%; Eckert *et al*., 2009), under incubation conditions that can keep this hatching success rate on the long term.

**4.4. Project Outputs and Indicators:** Describe the quantitative and qualitative outputs that the project expects to deliver. Explain how you will monitor progress as well as the indicators that will be used to assess if the expected outputs are achieved.

1. One standardized database of sand temperatures, compiling the information from four index beaches for season 2012-2013. The verification information will come from the actual measurements of the dataloggers at the end of the season or at the end of the incubation period for dataloggers placed in actual nests with eggs.
2. Leatherback clutches with hatching success close to 50%. The hatching success will be verified at the end of the incubation period of each clutch, by the results of the post-emergence excavation and evaluation of nest contents. These data will be compiled on a database that will be verified on a monthly basis by the project coordinators.
3. Management recommendations derived from the data obtained from monitoring activities. Such recommendations will be written in a final technical report that will also include the analysis of the monitoring data.

**4.5. Project Activities and Methodology:** Discuss all proposed project activities and describe the methodologies to be applied to implement the project. In this section the relation between project objectives and activities should be clear. Describe the innovative approach and technical methodology for carrying out the activities and obtaining the expected output, and the degree of detail of such output.

1. Establishment of protection camps in four index beaches: Mexiquillo, Michoacán State, Tierra Colorada, Guerrero State, Cahuitán and Barra de la Cruz, Oaxaca State. Field teams will start the conservation activities for season 2012-2013 on November 1st, starting beach patrols in order to locate nesting leatherback females and protect clutches. These patrols will occur every night until the females cease nesting, regularly in April. Clutches that are in danger to be lost to predation, poaching or flooding will be relocated to a beach hatchery (fenced area of beach in which the clutches are reburied in cavities of similar size and depth to the original one). The beach hatchery is protected and has surveillance 24/7. All field methods will be standardized among beaches, following international accepted procedures (Eckert et al., 2000).
2. Control transects: At each index beach, 5 control transects will be placed to monitor sand temperature along the beaches. Each transect will have 5 dataloggers placed perpendicularly to the beach profile, in holes at a depth of 80 cm (figure 1); the dataloggers will be programmed to record temperature every hour for the duration of the season.

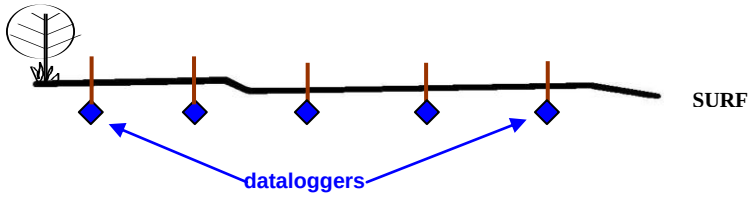


**Figure 1. Placement of dataloggers in beach control transect**

3. Monitoring of incubation temperatures: 25 dataloggers will be placed inside protected nests with eggs. Inside each nest one datalogger will be placed among the eggs at the moment of laying (in case of *in situ* nests) or at the moment of egg reburial (in case of relocated nests). The dataloggers will be programmed to record temperature every hour and will remain inside the nests until the emergence of the hatchlings, after which the nests will be excavated, the dataloggers removed and the contents of the nest counted in order to assess hatching success. The monitoring of nests will include nestings from the start, middle and end of the season, to evaluate the temporal temperature fluctuations.
4. Compiling of database: At the end of the season all dataloggers will be recovered from the transects and the remaining nests. The information will be downloaded and compiled in a single database, which will be analyzed, considering spatial and temporal profiles per beach for the season.

**4.6. Logical Framework:** Complete a Logical Framework for the project using the format below:

| Narrative Summary | Performance Indicators | Means of Verification | Assumptions/Risks |
|---|---|---|---|
| ***Goal***<br>Management strategy that decreases the impact of a potential degradation of the | 1.- Production of leatherback hatchlings under optimum incubation conditions | 1.- Database with results of temperature monitoring and hatching success that includes the index | 1.- Funding is available for the long-term monitoring activities |

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| incubation conditions due to the increase in sand temperature caused by climate change. | | beaches on the long term | |
| ***Purpose***<br>Leatherback turtle clutches at the index beaches of the Mexican Pacific show a hatching success similar to the average for the species, under conditions that can keep them on the long term. | 1.- Percentage of hatch success at index beaches<br>2.- Temperature of the sand at incubation depth<br>3.- Number of hatchlings recruited to the population | 1.- Evaluation of leatherback nest contents post-emergence<br>2.- Temperature profiles at beach transects and leatherback nests<br>3.- Results of nest protection activities | 1.- Management techniques are maintained on the long term at all index beaches.<br>2.- All dataloggers function correctly and aren't lost to beach dynamics.<br>3.- Extreme weather conditions don't preclude the monitoring of beaches. |
| ***Outputs***<br>1.- We have a standardized database of sand temperatures<br>2.- Hatching success records shown by leatherback clutches are close to 50%<br>3.- We have recommendations for the management of clutches derived from the information obtained with the monitoring activities | 1.- Compiled and standardized database with information from four index beaches for season 2012-2013<br>2.- Evaluation of hatching success for leatherback clutches at four index beaches<br>3.- Technical report with analysis of results of monitoring activities and recommendations derived from it. | 1.- Measurements from dataloggers placed at nest depth<br>2.- Data from post-emergence nest excavation and evaluation of contents<br>3.- Technical report available | 1.- Field teams stay for the whole season and perform monitoring activities at all index beaches<br>2.- All dataloggers function correctly and aren't lost to beach dynamics.<br>3.- Management techniques are performed as expected in all cases |
| ***Activities***<br>Output 1:<br>1.1 Place temperature dataloggers in transects along the beach profile at four index beaches, as control.<br>1.2 Place temperature dataloggers in leatherback nests (*in situ* and relocated)<br>1.3 Compile information for the index beaches into a single database<br><br>Output 2:<br>2.1 Protection of clutches, either *in* | Output 1:<br>Purchase of dataloggers.- $10,640 (*requested to WHMSI*)<br><br>Output 2:<br>Salary for 1 field technician.- $7,500 (*requested to WHMSI*)<br><br>Salaries for 3 field technicians.- $22,500 (*provided by Kutzari*)<br><br>Salaries for 4 field coordinators.- $36,000 (*provided by CONANP*)<br><br>Other equipment, infrastructure and operation costs.- $59,400 | Output 1:<br>1.- Receipts for purchase of dataloggers<br>2.- Measurement data from dataloggers<br>3.- Compiled database<br><br>Output 2:<br>1.- Contracts for field technicians<br>2.- Field forms with records from monitoring activities<br>3.- Technical report with analysis of data from monitoring activities | 1.- Availability of purchased equipments<br>2.- Availability of trained field technicians<br>3.- Field teams stay for the whole season and perform monitoring activities at all index beaches |

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| *situ* or relocated to protected area.<br>2.2 Evaluation of hatching success and hatchling recruitment from protected clutches | (*Kutzari/CONANP*) | | |

**4.7. Time frame / work plan:** Develop a work plan using the template below. Indicate when activities, milestones and outputs will be accomplished, as well as responsible person and indicator. The proposed work plan should be consistent with the technical approach and methodology, showing understanding of the Terms of Reference and ability to translate them into a feasible working plan. A list of the final documents, including reports, presentations, outreach material to be delivered as final output, should be included here in the column "Output".

| Work Plan | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Activity** | **Output** | **Months** | | | | | | | | | | | | **Responsible** | **Indicator** | **Budget** | | |
| | | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | | | **WHMSI Funds** | **Co-Financing** | **Total (US$)** |
| **1.1. Establishment of protection camps in four index beaches** | | | | | | | | | | | | | | | | | | |
| 1.1.1 Adaptation and maintenance of camp facilities | Tech. report | X | | | | | | | | | | | | CONANP | No. of functioning camps | | $ 5,000 | $5,000 |
| 1.1.2 Beach patrols for location of nesting females | Tech. report | X | X | X | X | X | | | | | | | | CONANP/KUTZARI | No. of patrol rounds | $7,500 | $108,600 | $116,100 |
| 1.1.3 Protection of clutches | Tech. report | X | X | X | X | X | | | | | | | | CONANP/KUTZARI | No. of protected clutches | | $ 1,300 | $ 1,300 |
| **1.2. Monitoring of temperature at control transects** | | | | | | | | | | | | | | | | | | |
| 1.2.1 Placement of dataloggers and continuous monitoring | database | X | X | X | X | X | | | | | | | | CONANP/KUTZARI | No. of dataloggers placed in transects | $5,320 | | $5,320 |
| **1.3. Monitoring of temperature in leatherback nests** | | | | | | | | | | | | | | | | | | |
| 1.3.1 Placement of dataloggers and continuous monitoring | database | X | X | X | X | X | | | | | | | | CONANP/KUTZARI | No. of dataloggers placed in transects | $5,320 | | $5,320 |
| **1.4. Compiling of database and data analysis** | | | | | | | | | | | | | | | | | | |
| 1.4.1 Recovery of dataloggers, data download and analysis | database | | | | | | X | X | X | | | | | CONANP/KUTZARI | Temperature data | | $ 3,000 | $3,000 |
| 1.4.2 Final Report | Tech. report | | | | | | | | | X | | | | CONANP/KUTZARI | Final Technical report | | | |
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| | | | | | | | | | | | | | | | **Total:** | **$18,140** | **$117,900** | **$136,040** |

**4.8. Monitoring and Evaluation:** Describe the methodology to be used to monitor progress and evaluate the project's accomplishments and impact.

Field coordinators will provide monthly reports on advances in nest protection and evaluation of hatch success through the nesting season. The data from monitoring of sand temperature will be downloaded by field coordinators and sent to the Project Coordinators as soon as the dataloggers are retrieved from the transects and nests.

**4.9. Team Composition and Task Assignment:** Indicate the structure and composition of your team. List the name of staff, organization, area of expertise, position assigned, and task assigned.

| Name | Organization | Area of expertise | Position | Task |
|---|---|---|---|---|
| Adriana Laura Sarti | CONANP | Biology and conservation of sea turtles | Project Coordinator | General Coordination of the project, monitoring and evaluation of the progress, data analysis |
| Ana Rebeca Barragán | CONANP | Biology and conservation of sea turtles | Project Coordinator | Monitoring and evaluation of the progress, field supervision, data analysis |
| Patricia Solís | KUTZARI | NGO Administration | Coordinator of Field Activities | Equipment acquisition, funding administration, overview of field activities regarding fund management |
| Carlos Salas | KUTZARI | Leatherback turtle conservation | Field Coordinator in Mexiquillo | Coordination of beach patrols and data gathering, training of technicians and volunteers, data compiling and analysis |
| Enrique Ocampo | CONANP | Leatherback turtle conservation | Field Coordinator in Tierra Colorada | Coordination of beach patrols and data gathering, training of technicians and volunteers, data compiling and analysis |
| Rosario Juarez | CONANP | Leatherback turtle conservation | Field Coordinator in Cahuitán | Coordination of beach patrols and data gathering, training of technicians and volunteers, data compiling and analysis |
| Alejandro Tavera | CONANP | Leatherback turtle conservation | Field Coordinator in Barra de la Cruz | Coordination of beach patrols and data gathering, training of technicians and volunteers, data compiling and analysis |

**4.10. CVs of Proposed Staff:** In addition to the general information about the individual, it would be helpful to have work undertaken by the individual that best illustrates capability to handle the tasks assigned.

## CURRICULUM VITAE OF PROJECT COORDINATORS

### ADRIANA LAURA SARTI MARTINEZ

**CURRENT POSITION**:

- Coordinator of the National Sea Turtle Conservation Program. Dirección de Especies Prioritarias para la Conservación, Comisión Nacional de Areas Naturales Protegidas (CONANP), SEMARNAT, Mexico. Principal Activities: To develop ongoing research on the status of the sea turtle populations in Mexico, to give technical opinion regarding research projects submitted to the institution for authorization, institutional advisory and data collection. ……2007 to date.

**OTHER RECENT POSITIONS**:

- Senior Researcher Level "A". Dirección General de Vida Silvestre, SEMARNAT, Mexico. Principal Activities: To develop ongoing research on the status of the sea turtle populations in Mexico, to give technical opinion regarding research projects submitted to the institution for authorization, institutional advisory and data collection. ……2000 to 2007.
- Senior Researcher Level "A". Instituto Nacional de la Pesca, SEMARNAP, Mexico. Principal Activities: To develop ongoing research on the status of the sea turtle populations in Mexico, to give technical opinion regarding research projects submitted to the institution for authorization, institutional advisory and data collection. ……1995 to 2000.

**STUDIES**:

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| POSTGRADUATE STUDIES: | Master in Science degree. Facultad de Ciencias, UNAM (Biology). |
| UNDERGRADUATE STUDIES: | Biology Major. Facultad de Ciencias, UNAM. 1978-1982. |
| SOCIAL SERVICE: | Coastal Ecology Lab. Instituto de Ciencias del Mar y Limnología, UNAM |
| PROFESSIONAL THESIS: | "Estudio Prospectivo de la Distribución, Abundancia y Diversidad de los Anelidos Poliquetos de la zona norte del Golfo de California". |
| PROFESSIONAL EXAMINATION: | August 17, 1984 |
| **LANGUAGES:** | English: Translate 90%, Speaks 80% |

PROFESSIONAL THESIS DIRECTION AND SYNODAL EXAMINER (REVIEWER): Since 1986 I've directed 10 Biology Major Bachelor thesis, from which 8 are finished and 2 are in process, and reviewed 13 thesis projects as Synodal Examiner. My participation as Director and Synodal Examiner consists in the orientation and advisory for the development of a specific research project, which involves bibliographic revisions, definition of objectives, hypotheses and methods, production of results through experimentation and data analysis. All theses directed were focused on ecology and biology of sea turtles.

**PRESENTATIONS IN CONGRESSES, WORKSHOPS AND SYMPOSIA:**

INTERNATIONAL: 20 international meetings, including paper and poster presentations in 10 Annual Sea Turtle Symposia and Workshops, and 5 Latin American Sea Turtle Specialist meetings.

NATIONAL: 15 national meetings in Mexico since 1982, including paper and poster presentations in 8 Interuniversities Meetings on Sea Turtle Conservation, 1 National Zoology Congress and 1 National Herpetology Meeting.

GUEST LECTURES: I've been invited to give 8 lectures in different national meetings, with the theme of sea turtle conservation and research.

**RESEARCH PROJECTS**

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| Projects coordinated or directed since 1983: | 20 |
| Projects in collaboration or advisory since 1983: | 19 |

**PUBLICATIONS.**

- Book Chapters: 1
- Book Reviews: 2
- Articles in Scientific and Divulgation Journals: 7
- Edition of Congress Presentation Proceedings: 2
- Articles in Congress Proceedings, peer-reviewed: 5
- Articles in Congress Proceedings, not reviewed: 8
- Short Abstracts in Congress Proceedings 20
- Technical Reports: 30
- Translation of Book Chapters: 1

**Some of the most recent publications are:**

- Sarti, L., A.R. Barragán, D. García, N. García, P. Huerta and F. Vargas. 2007. Conservation and biology of the leatherback turtle in the Mexican Pacific. Chelonian Conservation and Biology 6(1): 70-78
- Dutton, P.; L. Sarti.; R. Márquez. and D. Squires. in: L. Fernandez and R.T. Carson (eds), Both Sides of the Border, 429-453. ©2002. Kluwer Academic Publishers. Printed in the Netherlands.
- Sarti M. L., 2000. Sustentabilidad y Pesca Responsable en México: Evaluación y Manejo 1997-1998 capítulo de la tortuga laúd. Instituto Nacional de la Pesca-SEMARNAP.
- Sarti M., L.; S. Eckert., A. Barragán R. y N. García. 1999. Estimation of leatherback sea turtle population in the Eastern Pacific coast during 1998-1999 nesting season. Final Report NMFS, Hubbs Sea World Research Institute, Facultad de Ciencias Instituto Nacional de la Pesca

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## ANA REBECA BARRAGÁN ROCHA

Education

**1993 - 1996** **Facultad de Ciencias, UNAM** **México D.F.**

M. Sc. In Animal Biology

Thesis: "Population genetics of the leatherback turtle, *Dermochelys coriacea*, in the Mexican Pacific"

**1985 - 1989** **Facultad de Ciencias, UNAM** **México D.F.**

Graduate Biologist

Graduated with the thesis "Anatomical study of the ventricular valvular system in the sea turtles *Lepidochelys olivacea* and *Dermochelys coriacea*" in 1992

Professional experience

**Current position**

Subdirector of the Marine Species Program ..... 2012

Technical support for the National Sea Turtle Conservation Program, CONANP ..... 2008 - 2012

President Kutzari, Asociación para el Estudio y Conservación de las Tortugas Marinas, A.C. ..... 2004-2008

- Principal Investigator Kutzari, A.C. Mexico D.F.
  Coordination of field activities and research in the biological station at Cahuitán, for the Leatherback Monitoring Project in the Mexican Pacific. Responsible of maintaining good data quality, maintenance of the equipment and data analysis. Implementation of population management techniques. …… 2000-2008
- 1998 - 2000 Sandy Point National Wildlife Refuge St. Croix, USVI
  Principal Investigator
- Coordination of the research activities at the Sandy Point NWR. Monitoring of the leatherback nesting population and implementation of management techniques. Coordination and training of EarthWatch volunteers.
- 1997 - 1998 Caribbean Conservation Corporation Florida, USA
  Research Coordinator
- Coordination of field activities and research for the Leatherback Monitoring Program in Tortuguero, Costa Rica. Responsible for training the field assistants. Implementation of management techniques.

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| Languages | English: Translates 100%, Speaks 100% |
| Scholarships | Scholarship given by U.S. Agency for International Development and the National Science Foundation to assist to the 1P$^{stP}$ Workshop on Conservation Genetics of Sea Turtles, University of Florida, USA. February 1994. Grant DEB-9225082.<br>Postgraduate Excellence Scholarship given by CONACyT, Mexico, to study a Master in Science degree in Animal Biology, Facultad de Ciencias, UNAM. |
| Awards received | 1998 Archie Carr Best Student Poster in the 18th Annual Symposium on Sea Turtle Biology and Conservation. |
| Congresses, Symposia and Meetings | International: 15<br>National: 8 |
| Thesis advised and directed | Advised: 6<br>Directed: 4 |
| Publications | Peered reviewed: 5<br>Not peered: 4<br>Technical Reports: 15 |
| Examples of Publications | - Sarti, L., **A.R. Barragán**, D. García, N. García, P. Huerta and F. Vargas. 2007. Conservation and biology of the leatherback turtle in the Mexican Pacific. Chelonian Conservation and Biology 6(1): 70-78<br>- Dutton, P.H.; B.W. Bowen, D.W. Owens, **A.R. Barragán** and S.K. Davis. Global phylogeography of the leatherback turtle Dermochelys coriacea: shallow phylogenetic history in an ancient organismal lineage. J. Zoology. (1999) 248: 397-409. |
| Other Activities | Member of the Board of Directors of the International Sea Turtle Society. 2006-2011<br>Translation of some chapters of the Sea Turtle Research Techniques Manual edited by the IUCN Marine Turtle Specialists Group. 1999 |

5. **Budget (2 pages):** A detailed budget should be submitted in US dollars showing how WHMSI financial resources will be used, and if applicable, how that support fits together with co-financing provided by your institution or partner institution(s). Clearly indicate budget items for which WHMSI funds would be used. Information on salaries may include staff name, position and rate. Travel should include number of flights, per-diem, local transportation, miscellaneous expenses, etc. Other expenses must provide description, quantity, unit price, and total.

| Item | WHMSI (requested) | Kutzari A.C. | CONANP | Total |
|---|---|---|---|---|
| Personnel salaries | $ 7,500 | $ 22,500 | $ 36,000 | $ 66,000 |
| Food supplies | | $ 8,000 | | $ 8,000 |
| Transportation | | $ 1,500 | $ 600 | $ 2,100 |
| Fuel | | | $ 20,000 | $ 20,000 |
| Field supplies and materials | | | $ 1,300 | $ 1,300 |
| Computer and field equipment | $ 10,640 | $ 3,000 | | $ 13,640 |
| Vehicles (in-kind) | | | $ 20,000 | $ 20,000 |
| Camp facilities (in-kind) | | $ 5,000 | | $ 5,000 |
| **TOTAL** | **$ 18,140** | **$ 40,000** | **$ 77,900** | **$ 136,040** |

**DETAILED BUDGET (WHMSI requested)**

**SALARIES**

| | | Cost per month | Total Cost | WHMSI (requested) | Kutzari AC | CONANP |
|---|---|---|---|---|---|---|
| Field Coordinator Cahuitan | Full-time for one season (5 months) | $ 1,800 | $ 9,000 | | | $ 9,000 |
| Field Technician Cahuitan | | $ 1,500 | $ 7,500 | | $ 7,500 | |
| Field Coordinator Tierra Colorada | | $ 1,800 | $ 9,000 | | | $ 9,000 |
| Field Technician Tierra Colorada (requested) | | $ 1,500 | $ 7,500 | $ 7,500 | | |
| Field Coordinator Mexiquillo | | $ 1,800 | $ 9,000 | | | $ 9,000 |
| Field Technician Mexiquillo | | $ 1,500 | $ 7,500 | | $ 7,500 | |
| Field Coordinator Barra de la Cruz | | $ 1,800 | $ 9,000 | | | $ 9,000 |
| Field Technician Barra de la Cruz | | $ 1,500 | $ 7,500 | | $ 7,500 | |
| TOTAL | | | **$ 66,000** | **$ 7,500** | **$ 22,500** | **$ 36,000** |

**COMPUTER AND FIELD EQUIPMENT**

| | | Unit cost | Total Cost | USFWS (requested) | Kutzari | CONANP |
|---|---|---|---|---|---|---|
| Equipment for tagging females: metal tags, pliers, PITs, DNA guns, scanners. | Equipment used in 4 index beaches. In-kind contribution by Kutzari A.C., cost estimated | | $ 3,000 | | $ 3,000 | |
| Dataloggers: HOBO Pendant 8K-UA-001-08 | 50 dataloggers per beach; 4 index beaches | $ 50 | $ 10,000 | $ 10,000 | | |
| HOBO Pendant Base Station | one per beach; 4 index beaches | $ 65 | $ 260 | $ 260 | | |
| Software: HOBOware Pro | one per beach; 4 index beaches | $ 95 | $ 380 | $ 380 | | |
| TOTAL | | | $ 13,640 | **$ 10,640** | $ 3,000 | |

**Annex 1: Document proving the legal existence of your Organization**

FCO. XAVIER ARREDONDO GALVAN

NOTARIO PUBLICO No. 173 DEL D.F.
NOTARIO DEL PATRIMONIO INMUEBLE FEDERAL

ESCRITURA NUM. 33109

VOLUMEN NUM. 697

CONTIENE CONSTITUCION DE: "KUIDARE, ASOCIACION PARA EL ESTUDIO Y CONSERVACION DE LAS TORTUGAS MARINAS", A. C.

SECCION _____ SERIE _____ TOMO _____ TOL. _____ FOJAS _____ No. _____

FOLIO REAL _____ FECHA _____

Progreso No. 158 Planta Baja esquina Salvador Novo
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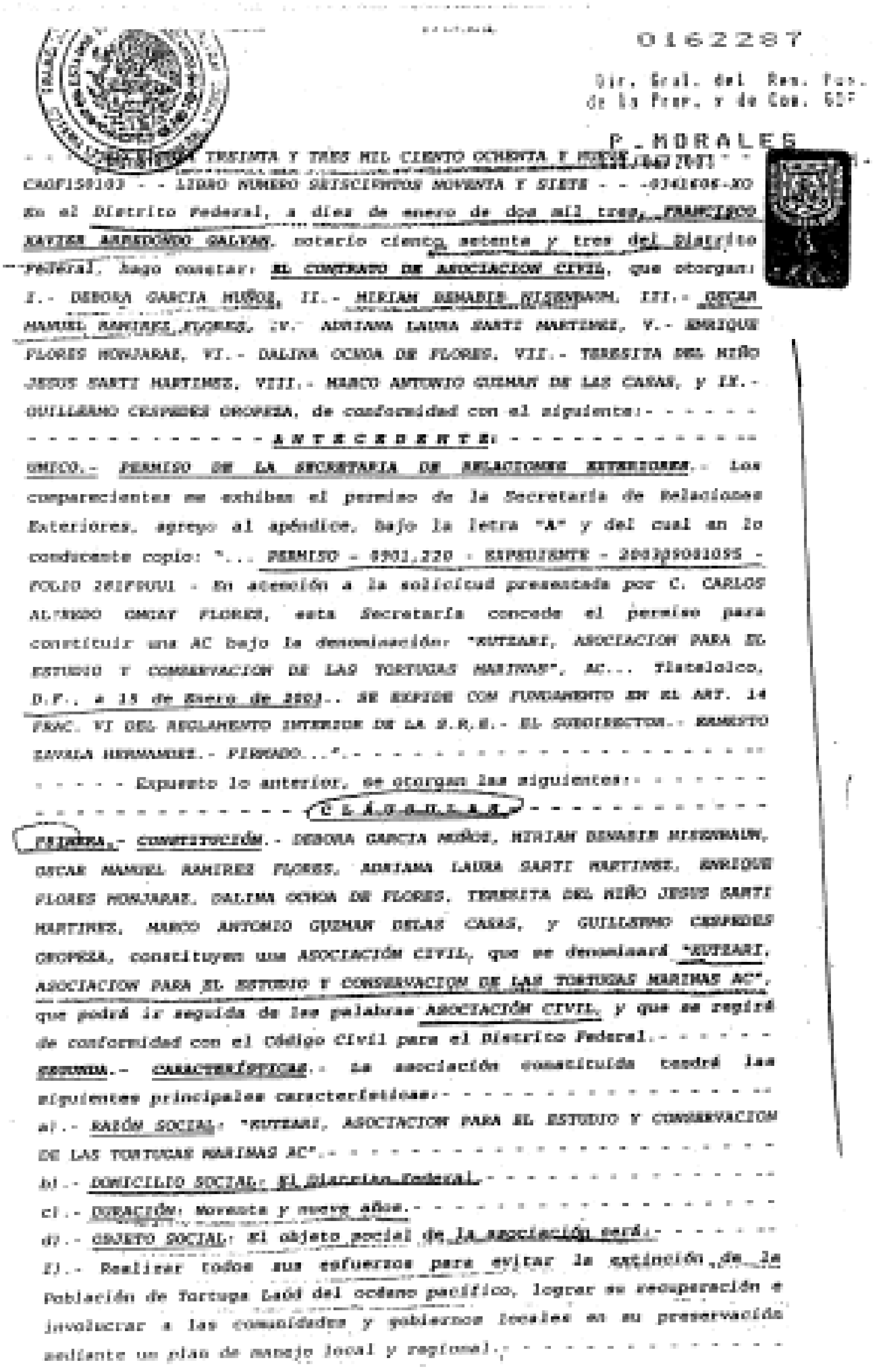

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Dir. Gral. del Reg. Pub.
de la Prop. y de Com. GDF

P. MORALES

- - - TREINTA Y TRES MIL CIENTO OCHENTA Y NUEVE [illegible]

CAOF150103 - - LIBRO NUMERO SEISCIENTOS NOVENTA Y SIETE - - -0341606-XO

En el Distrito Federal, a diez de enero de dos mil tres, FRANCISCO XAVIER ARREDONDO GALVAN, notario ciento setenta y tres del Distrito Federal, hago constar: EL CONTRATO DE ASOCIACION CIVIL, que otorgan: I.- DEBORA GARCIA MUÑOZ, II.- MIRIAM BENABIB NISENBAUM, III.- OSCAR MANUEL RAMIREZ FLORES, IV.- ADRIANA LAURA SARTI MARTINEZ, V.- ENRIQUE FLORES MONJARAZ, VI.- DALINA OCHOA DE FLORES, VII.- TERESITA DEL NIÑO JESUS SARTI MARTINEZ, VIII.- MARCO ANTONIO GUZMAN DE LAS CASAS, y IX.- GUILLERMO CESPEDES OROPEZA, de conformidad con el siguiente:- - - - - -

- - - - - - - - - - - - - - **ANTECEDENTE:** - - - - - - - - - - - - - - -

UNICO.- PERMISO DE LA SECRETARIA DE RELACIONES EXTERIORES.- Los comparecientes me exhiben el permiso de la Secretaría de Relaciones Exteriores, agrego al apéndice, bajo la letra "A" y del cual en lo conducente copio: "... PERMISO - 0901,220 - EXPEDIENTE - 200309081055 - FOLIO 261F0UU1 - En atención a la solicitud presentada por C. CARLOS ALFREDO OMGAT FLORES, esta Secretaría concede el permiso para constituir una AC bajo la denominación: "KUTZARI, ASOCIACION PARA EL ESTUDIO Y CONSERVACION DE LAS TORTUGAS MARINAS", AC... Tlatelolco, D.F., a 15 de Enero de 2003.. SE EXPIDE CON FUNDAMENTO EN EL ART. 14 FRAC. VI DEL REGLAMENTO INTERIOR DE LA S.R.E.- EL SUBDIRECTOR.- ERNESTO ZAVALA HERNANDEZ.- FIRMADO...".- - - - - - - - - - - - - - - - - - - -

- - - - - Expuesto lo anterior, se otorgan las siguientes:- - - - - - -

- - - - - - - - - - - - - - **CLÁUSULAS:** - - - - - - - - - - - - - - -

PRIMERA.- CONSTITUCIÓN.- DEBORA GARCIA MUÑOZ, MIRIAM BENABIB NISENBAUM, OSCAR MANUEL RAMIREZ FLORES, ADRIANA LAURA SARTI MARTINEZ, ENRIQUE FLORES MONJARAZ, DALINA OCHOA DE FLORES, TERESITA DEL NIÑO JESUS SARTI MARTINEZ, MARCO ANTONIO GUZMAN DELAS CASAS, y GUILLERMO CESPEDES OROPEZA, constituyen una ASOCIACIÓN CIVIL, que se denominará "KUTZARI, ASOCIACION PARA EL ESTUDIO Y CONSERVACION DE LAS TORTUGAS MARINAS AC", que podrá ir seguida de las palabras ASOCIACIÓN CIVIL, y que se regirá de conformidad con el Código Civil para el Distrito Federal.- - - - - - -

SEGUNDA.- CARACTERÍSTICAS.- La asociación constituida tendrá las siguientes principales características:- - - - - - - - - - - - - - - - -

a).- RAZÓN SOCIAL: "KUTZARI, ASOCIACION PARA EL ESTUDIO Y CONSERVACION DE LAS TORTUGAS MARINAS AC".- - - - - - - - - - - - - - - - - - - -

b).- DOMICILIO SOCIAL: El Distrito Federal.- - - - - - - - - - - - - - -

c).- DURACIÓN: Noventa y nueve años.- - - - - - - - - - - - - - - - - -

d).- OBJETO SOCIAL: El objeto social de la asociación será:- - - - - - -

I).- Realizar todos sus esfuerzos para evitar la extinción de la Población de Tortuga Laúd del océano pacífico, lograr su recuperación e involucrar a las comunidades y gobiernos locales en su preservación mediante un plan de manejo local y regional.- - - - - - - - - - - - - - -

*No. de Reg. CONANP/DAJ/CC006/01*

*Convenio de Concertación CONANP- KUTZARI, A.C.*

**Convenio de Concertación que suscriben por una parte la Secretaría de Medio Ambiente y Recursos Naturales, a través de la Comisión Nacional de Áreas Naturales Protegidas, representada por su Presidente, el C. Ernesto Enkerlin Hoeflich, asistido en este acto por el Biól. David Guillérmez Carbonell, Director General de Manejo para la Conservación, y por otra parte, la asociación civil denominada Kutzari, Asociación para el Estudio y Conservación de las Tortugas Marinas, A.C., representada por su Presidenta, la C. Ana Rebeca Barragán Rocha, partes a las que en lo sucesivo y para efectos de brevedad en el presente instrumento se les denominará como la "CONANP" y "KUTZARI" respectivamente, con el objeto de llevar a cabo diversas acciones inherentes al Proyecto denominado "Proyecto Laúd: Recuperación de la Tortuga Laúd (Dermochelys coriacea) en el Pacífico Oriental", de conformidad con los antecedentes, declaraciones y cláusulas siguientes:**

## ANTECEDENTES

I.- El Plan Nacional de Desarrollo 2001-2006, en su Capítulo denominado Áreas de Desarrollo Social y Humano, en específico en el subtítulo Desarrollo en Armonía con la Naturaleza estipula que, uno de los objetivos fundamentales que se pretende alcanzar es el desarrollo social y humano armónico con la naturaleza, lo que implica fortalecer la cultura de cuidado del medio ambiente para no comprometer el futuro de las nuevas generaciones; considerar los efectos no deseados de las políticas en el deterioro de la naturaleza; construir una cultura ciudadana de cuidado del medio ambiente, y estimular la conciencia de la relación entre el bienestar y el desarrollo en equilibrio con la naturaleza.

En este sentido, el Plan Nacional prevé diversas estrategias, entre las cuales destaca la protección y conservación de los ecosistemas más representativos del país y su diversidad biológica, especialmente de aquellas especies sujetas a alguna categoría de protección. Esta estrategia, busca entre otras acciones, incorporar nuevas áreas naturales a un régimen de protección y conservación y al mismo tiempo promover alternativas económicas para sus pobladores, mediante la participación social.

II.- El Programa de Medio Ambiente y Recursos Naturales 2001-2006, contempla medidas específicas para impulsar nuevas formas de participación que alienten al ciudadano de manera individual y en grupos organizados, a intervenir en la formulación y ejecución de la política ambiental y mantener una actitud vigilante sobre los recursos y el medio ambiente. También se ha previsto otorgar atención prioritaria a los asuntos de las mujeres y los pueblos indígenas, grupos sociales frecuentemente excluidos de la formulación y ejecución de políticas públicas, pero de importancia fundamental para proteger el ambiente y conservar la biodiversidad, asimismo establece la