Kemp's Ridley Recovery Team
Meeting Minutes
12-13 June 2003
El Paraiso, Barra del Tordo, Mexico

Team Members in Attendance (in alphabetical order):

Dr. Pat Burchfield - Gladys Porter Zoo
Ms. Robyn Cobb - U.S. Fish and Wildlife Service
Ms. Therese Conant - U.S. National Marine Fisheries Service
Ms. Sheryan Epperly - U.S. National Marine Fisheries Service
Sr. Jose Maria Reyes Gomez - Director General de Vida Silvestre / SEMARNAT
Mr. Les Hodgson - National Fisheries Institute
Dr. Patricia Luevano - State of Tamaulipas Government, Mexico
Dr. Steve Morreale - Cornell University
Dr. Dave Owens - Grice Marine Lab, College of Charleston
Mr. Earl Possardt - U.S. Fish and Wildlife Service
Mr. Mike Ray - Texas Parks and Wildlife Department

Guest Speakers:

Dr. Alan Bolten - University of Florida
Sr. Rafael Bravo Gamboa - SEMARNAT / Veracruz
Dr. Thane Wibbels - University of Alabama
Mr. Jack Woody - U.S. Fish and Wildlife Service (Ret.)
Mr. Jaime Pena - Gladys Porter Zoo

Guest Participants:

Dr. Karen Bjorndal - University of Florida
Sr. Jorge Cardenas - SEMARNAT
Sra. Lilia Estrada - SEMARNAT
Dr. Georgita Ruiz - Director General de Vida Silvestre / SEMARNAT
Sr. Alfonso Banda - Pronatura Noreste in Matamoros (NGO)
Sr. Alfonso Gonzalez Lira - Environmental Guardians
Ms. Laura Tangley - National Wildlife Federation
Sra. Sonia Ortiz - Aventur (Translator)
Mr. Tom Shearer - U.S. Fish & Wildlife Service

Rapporteur:

Ms. Kristy Long - U.S. National Marine Fisheries Service

Welcome and Introductions: Sr. Cardenas thanked Dr. Burchfield for his efforts throughout the years with the Kemp's ridley. He also thanked Dr. Luevano and Mr. Woody for all of their hard work to recover Kemp's ridleys.

Ms. Ruiz stressed the importance of her participation in these meetings due to her history working with Kemp's as well as seeing old friends and colleagues. She would like to renew and revise agreements to work on this issue as the old agreement was made with Pesca, the previous federal agency that handled marine turtle issues, and not Vida Silvestre where marine turtle

management authority now resides. In Mexico, formal agreements must be negotiated between federal and state organizations. She noted that the Mexican portion of the team was not as strongly represented as the U.S. portion. Ms. Ruiz suggested appointing additional Mexican team members (e.g., representatives from PROFEPA, INE, the Fisheries Institute) to strengthen representation. She also mentioned her desire to increase information exchange between the Recovery Team and the Yucatan and Tamaulipas turtle projects.

Presentation on Mexico/U.S. Kemp's Ridley Conservation History (Jack Woody): At the time when U.S./Mexican joint projects for the Kemp's ridley began, Mr. Woody coordinated activities with Fauna Silvestre as Pesca or SEMARNAT were not formed yet. At that point the National Park Service (NPS) was working on a project to transplant loggerheads from the east coast of the U.S. to Padre Island, TX. The FWS evaluated Padre Island to determine suitability. Mr. Woody noted that loggerheads would have problems in Padre Island, but Kemp's ridleys did not have these same problems. Historical record indicated that loggerheads were the primary nesters, but that was only a few nests per year and there were no significant nesting data. He suggested evaluating Kemp's ridleys because their populations were declining. Mr. Woody contacted Rene Marquez in Mexico and brought Mexican, NPS, and FWS representatives together to discuss the issue. FWS agreed to supply funds and equipment as well as match personnel at Rancho Nuevo. It was decided that the U.S. would take 2000-3000 eggs per year from Rancho Nuevo to Padre Island in an attempt to establish a nesting population there. The first field season commenced in 1978 without much activity. Mr. Woody went through congressional contacts to get significant funding appropriated directly for turtles. Not all funds went to Rancho Nuevo, but were spread over many studies related to the Kemp's ridley. Mr. Woody noted that challenges were greater in the bureaucratic and political arena as opposed to those in the field. He also explained the difficulties in establishing an international program. NMFS' involvement began in 1979 with the headstart program on Padre Island and Galveston. Mr. Woody ran the bureaucracy portion, but Dr. Burchfield ran the field portion. Mr. Woody commended Dr. Burchfield for being an integral part of the program and noted that Kemp's ridley conservation wouldn't be where it is without him.

Presentation on Veracruz Sea Turtle Program (Rafael Bravo): While Kemp's do nest in the Mexican state of Veracruz, green turtles are the primary nesters. The program meets every four months to coordinate activities. The program began in 1994 with 12 Kemp's ridley nests, but the current number of nests is around 160. Recently, the program has been incubating eggs in Styrofoam coolers, which are kept indoors, in an attempt to manipulate temperatures. Translocation to coolers is done to avoid the loss of nests due to high predation rates; corrals are only used during the height of the nesting season. About 80% of Kemp's ridley nests are placed in the coolers while 20% are left *in situ*.

For green turtles, when there are more than 120 eggs per nest, they divide the eggs up and place them into two different nests in the corral, so as not to crowd them. Survival rate is 63%, 10% of nests are stolen, and 10% are lost to natural causes. Hatching success of incubated nests is 74% whereas hatching success for *in situ* nests is 55%. Thus far, 37 females have been identified with 4 recaptures. Green turtles exhibit a bi-annual remigration pattern at Veracruz.

Shark Fishery Norma: First, Dr. Lueveno explained the problem surrounding the shark fishery. The fishers are required to fish close to shore, which makes the definition of the nesting beaches very important. The ranges of the protected areas have been extended from the previous Norma document. Dr. Luevano proposed including the other Kemp's nesting beaches from La Pesca to Tepehuajes to Rancho Nuevo. Additionally, she proposed including green turtles in the Norma, which would extend the length of time for the designated protected areas and thus increase protection. The season would be extended from beyond the original May to July designation. Reportedly, all male Kemp's are not migrating, some are staying in the Gulf of Mexico off the nesting beaches. Therefore, banning nets off the nesting beaches and extending the protected zone to nearshore areas would provide increased protection to the turtles . A comment was made to include the nesting areas in Veracruz as well. In the original Norma document, Rancho Nuevo and "adjacent beaches" were protected. However, when Rancho Nuevo became a sanctuary, the "adjacent beaches" reference was dropped. Team members continued discussion on the importance of re-inserting and defining "adjacent beaches" in order to ban nets from the nearshore waters.

Team members noted the importance of addressing gillnets, but inquired whether any regulations exist for longline fisheries. Mexican representatives informed the group that longline legislation is in the process of being developed. The legislation includes a regulation which limits the length of line, but longlining is currently allowed in nearshore areas. The legislation has many loopholes and could actually allow more harm than current standards.
The Mexicans noted that they must have internal discussions before the Team can make suggestions on how to address the problem.

A Team member noted that there is precious little data on male ridleys available, for example one personal communication describes a mating pair in the nearshore zone during the winter. In the hopes of gaining more knowledge on the population, SEMARNAT and other federal agencies are currently discussing a proposal to put observers onboard fishing vessels.

The stakeholders for the shark fishery would probably be representatives from PESCA, which represents all states, not just Tamaulipas. The Team noted that they need to include the actual fishers as well as others in the industry, such as restauranteurs, processors, exporters, etc. One team member pointed out that by the time the recovery plan comes out, this issue with the shark fishery might have passed. Another team member mentioned that it may be possible for shark fishers to change their fishing system to one with longlines and hooks, as opposed to gillnets. The group discussed the U.S. experiments in the Northeast Distant Area in the North Atlantic Ocean and the Azores in terms of hook and bait type to reduce turtle bycatch. Team members suggested forming a small working group to discuss this issue further.

Presentation on the Loggerhead Stakeholder Meeting Planning Process (Alan Bolten): The process selected by the Loggerhead Recovery Team may serve the Kemp's Team well, but it is NOT the only process that can be successful for planning a stakeholder meeting. In hindsight, the Loggerhead Team learned that most of their anxiety regarding the meeting was unfounded. Worries included whether stakeholders would be receptive to a presentation on the process of recovery planning rather than seeing a product and whether the meeting would prove worthwhile

for stakeholders who traveled on their own funding. As it turned out, stakeholders were thrilled to be consulted before a product was developed. Overall feedback on the stakeholders meeting was extremely positive, and will surely aid in future buy-in when the plan is finalized and implemented. The input received from the stakeholders meeting will be incorporated and posted on the web within the next month. At that time, stakeholders will again have a chance to comment through the website.

The Loggerhead Team invited about 120 stakeholders, and out of those about 45 people attended. Some of those who could not attend sent recommended replacements, which the loggerhead team considered and usually extended an invitation. There were one or two additional stakeholders who came with invited stakeholders, which the team just accepted and added to already formed breakout groups. Both environmental and industry groups were represented at the meeting. Budget was not a consideration when deciding whom to invite. The Loggerhead Team sat down with the 400 or so identified stakeholders and discussed each one individually to determine whether they were representative of a certain stakeholder category to participate. Stakeholder categories were identified as federal, state, and local governments, regional fisheries management organizations, fishing industry, other industry, non-governmental organizations, researchers, and other.

In terms of format, the Loggerhead Team spent one morning giving presentations on basic biological information, current population estimates, the recovery planning process, and recovery criteria. One morning was sufficient enough to cover these topics. The subsequent 1.5 days were spent in prearranged breakout groups. However, the Loggerhead Team felt another half day or even full day would have been beneficial to further discuss issues in breakout groups.

The Loggerhead Team devised two sets of breakouts groups. The first randomly divided all the stakeholders into three groups, which each discussed the same set of questions related to the presentations given on the first morning. The second set of breakout groups were developed based on types of threats: 1. Marine fisheries, 2. Marine non-fisheries (e.g., boating, oil and gas activities), and 3. Terrestrial (e.g., beach nourishment, beach debris, construction of jetties). A Kemp's team member questioned whether one stakeholder group was more difficult to deal with than the others. Dr. Bolten explained that the marine fisheries stakeholders came with a little more energy than some of the other stakeholder groups. The fisheries industry was more concerned about the impact of this document and making sure they were not singled out. After the stakeholders meeting, they understood how fisheries bycatch fits into the overall threat assessment for turtle recovery.

The Loggerhead Team has an email list for all those who participated in the meeting and those that were invited but did not attend. Emails are sent when new material has been posted on the web.

Regarding stakeholder input, the Loggerhead Team received about three pages of comments on the threats table, some cosmetic, some substantive. They discussed this input thoroughly to decide whether to use a certain recommendation and documented the rationale for those they chose not to implement. Additionally, the Loggerhead Team has thoroughly documented the

rationale for each individual threat in the comment boxes of the threats tables in lieu of performing additional analysis suggested by stakeholders. The Team felt they must set a limit for how much time and effort they were capable of expending.

The Team discussed whether the budget will allow for stakeholder travel funds. They decided to table that issue until after the participation list has been formalized. Team members inquired whether anyone was excluded from the Loggerhead stakeholders meeting solely based on lack of funds. Dr. Bolten explained that yes, people from the eastern Atlantic and Mediterranean who have stewardship responsibilities for these populations of loggerheads were not invited due to budget constraints.

The Team questioned whether the Loggerhead Team had any background information available before the stakeholders meeting. The Loggerhead Team had hoped to have more available than they did, mostly background information on recovery planning was available as opposed to biology and population trend information.

The Team discussed whether holding two separate meetings - one in the US and one in Mexico - would be feasible. The Team decided to first develop the stakeholders participant list before deciding that, especially since Dr. Bolten pointed out the benefits of interactions between fishers of both countries. Also for consideration are translation, transportation, visas, and other logistical challenges if there is only one meeting. Dr. Bolten noted that having two meetings will cause difficulty in synthesizing input and recommendations between different groups of stakeholders. Others noted that fishing techniques and sectors, laws, customs, and practices are different between the two countries. If there are two meetings, the Team decided to standardize the list of questions to ensure that similar discussions ensue at both meetings. After the Team decides on a clear vision for the stakeholders meeting, the questions can be developed to help achieve that vision. Also, based on cultural language differences, questions may be phrased differently, and therefore, formation of the vision, goals, and objectives is essential. Cultural differences must also be considered in terms of what solutions are possible and practical to address certain threats

The Team discussed whether to have the stakeholders meeting as the next team meeting in October or wait until sometime after that. Someone pointed out that it might be beneficial to have most of the background material written and compiled before the stakeholders meeting, as the Loggerhead Team wished they had done. Additionally, Mexican participation on the Team will likely increase. It is important to have the bi-national team fully formed with a clear vision before the stakeholders meeting. The Team decided to have a regular recovery team meeting in October and then have a stakeholders meeting in early 2004. Discussion continued regarding additional Kemp's Team members and whether there should be a cap to ensure smooth operation of the team. Some team members stressed the importance of bringing in additional team members who can greatly contribute in developing the recovery plan, as opposed to bringing in representatives who may not have the background to play a functioning role on the team.

Objectives, format, and size of the stakeholder meeting will be discussed and decided at the October meeting. Dr. Bolten suggesting coming to the October meeting with locations and

prices, etc. for the stakeholders meeting as these logistics take much time to finalize.

Mr. Possardt will make setting up the website a priority.

Next Meeting: The Team decided to meet immediately after the Kemp's Ridley Working Group meeting in late October. The meeting location will be in Victoria, Mexico.

Presentation on the Loggerhead Threats Analysis Table (Alan Bolten): Consistency among recovery teams is very important for stakeholders. Dr. Bolten noted that the team should justify how each threat was quantified for readers. The Loggerhead Team cited two recent journal articles published on recovery planning. They used the articles' criticisms to devise a system to quantify threats and subsequently assign recovery actions to address those threats.

A summary table was developed to elucidate the greatest threat to a certain life stage (i.e., the summary table is read horizontally) or to determine which lifestage a certain category of threats is having the greatest impact on (i.e., summary table is read vertically). The annual mortality estimates were adjusted by reproductive equivalents. Dr. Bolten explained how the Loggerhead Team used a Delphic approach when data were unavailable to document levels of mortality. A Delphic approach brings together experts (e.g., Kemp's recovery team) to make "best guess" estimates and predictions. When the experts estimate mortality, it will be clearly stated in the comment section of that cell. An indirect effect, such as debris ingestion, could reduce growth rate if feeding capacity is reduced or could increase risk of predation. A colored cell represents a minimum estimate, i.e., where there is a color, the team felt they could quantify mortality. If the estimate does not have data to support it, the team has marked that box with a symbol such as a question mark, but clearly states that in the comment box. Matrix models incorporate many assumptions, e.g., 50:50 sex ratio. Therefore, it is important to document these assumptions and the process the Team went through. Total mortality numbers on the summary table should be considered an index of relative impacts of each threat by life stage. The Loggerhead Team is considering adding another row after total mortality called "manageable" mortality.

Discussion ensued regarding the use of data for other species in comparison with Kemp's or loggerheads. Dr. Bolten felt that as long as estimates, and the rationale behind those estimates, are clearly documented it is acceptable.

Dr. Bolten explained that the Loggerhead Team plans on transferring the threats table spreadsheets into html files to post them on the Loggerhead Recovery Team page. Html files will still enable the reader to view the comments for each cell.

Dr. Bolten clarified that the threats assessment table is for both anthropogenic and natural mortality.

Presentation on Kemp's Reproductive Equivalents (Sheryan Epperly): Ms. Epperly explained the life history model that Dr. Selina Heppell has devised. Dr. Heppell has been helping the

Kemp's Team to determine reproductive equivalents, similar to the process used by the Loggerhead Team, for using in conjunction with the threats tables. Please note the model is still a work in progress and may change substantially as it is finalized.

Dr. Heppell and Ms. Epperly have decided to use an age at maturity of 10 years. Increased survivorship in 1990, has been called the TED effect, but it can really be any change that decreased mortality and increased survival. To determine length of pelagic stage, they assessed strandings in the 20-30cm size class and a mark-recapture study, which showed the pelagic stage to be about 1.6 years. In the model they have used an estimate of 2 years for the length of the pelagic stage. Year 1 includes up to year one - eggs, hatchlings, neonates.

The Team discussed differential sex based mortality. At this point there are no available data to indicate a skewed sex ratio. It does not necessarily matter for all the life stages leading up to adult, although it may matter for adults. Reproductive equivalents would change only if there was an extremely skewed sex ratio, for which the definition is unclear. There is no estimate currently for a non-breeding adult. For the Kemp's ridley model, a remigration interval of 2 years was used. Other Team members remarked that this estimate is very conservative as some current estimates put the interval at 1.4 years. Density dependence is an important consideration that may not be currently included in the model. Ms. Epperly volunteered to check into this.

Dr. Heppell suggested not grouping certain age classes into stages (like the Loggerhead Team did); she suggests instead finding the average size of the animals killed and then referring back to the actual reproductive value. Team members questioned what is gained by changing the approach to the threats table. Dr. Bolten reiterated that reproductive equivalents are really an index and it may be unwieldy to have 10 age classes rather than stages. Precision in this population model is not necessarily as important, since there are many assumptions throughout the whole process. The final reproductive equivalents or values can be used to develop a summary table for the stakeholders meeting, with the caveat that these numbers are going to change, are not final, etc. This index should be used to develop recovery actions. Team members noted that it is critical to elucidate the differences in survival rates between *in situ* and corral nests.

Update on Status of Nesting (Dr. Luevano): Currently, 7,000 nests have been recorded. The three corrals at Rancho Nuevo are at full capacity. Economic capacity has also been reached, meaning there are no additional funds to build corrals or hire more staff to patrol beaches. After talking with Mexican authorities, they are establishing a pilot study and a protocol to leave nests *in situ*. First, the pilot study must have clear direction on how and where *in situ* nests will be protected for the rest of the 2003 nesting season. The Mexican portion of the Team asked for the collective knowledge of the Team to assist in devising the protocol for the pilot study.

The protocol should be dynamic to accommodate changes throughout the season at the different camps. Leaving the nests *in situ* means marking nests, gathering data from the nests and watching them. *In situ* nests can still be predated. Perfect opportunity to get data on *in situ* nesting with the 7000 protected nests as a safety net. There were so few *in situ* nests years ago that the only study performed documented multiple predation events per nest per night; there was

no survival for *in situ* nests. Therefore, there is no information available on predator risk at Rancho Nuevo. Team members noted to be careful not to extrapolate flooding or storms over all beaches and all years. One member remarked that this is a prime opportunity to estimate hatchling production, i.e., a subset of nests will be used to get an average by monitoring hatching rate. Monitoring 100 nests would probably be enough to determine hatching rate. To get the hatching success for the whole population these estimates could be extrapolated using the total number of nests on the beach. Other things to monitor for *in situ* nests include 1. number of hatchlings that reach the sea; number of nests laid; nest survival; and hatching success.

Since workers do not have to relocate nests they will have time for tagging. They have enough pit tags to last the rest of the season, but no inconel tags. Ms. Epperly volunteered to get inconel tags for the camps (1000) and a few more hundred pit tags. The team discussed whether it was worthwhile to opportunistically tag these females if an 80% saturation tagging could not be achieved (since it's late in the season). Opinions differed amongst team members. Some thought that gaining incidental information on tag returns plus the increasing possibility that during future years more nests will be left *in situ* would lead to more tagging. Also, this information may lead to information on remigration intervals and density dependence. One Team member suggested having a separate team of workers who only tag, as opposed to relocating eggs, dependent on budget.

These late season *in situ* nests are marked with a longer stick, which is painted white and has double flags to demarcate them differently from nests in the sex-ratio study (also *in-situ*).

Presentation on Captive Kemp's Ridleys Population, Ixcaret (Jaime Peña): In March, Mr. Peña met with folks in Ixcaret, Mexico to check on the status of the captive Kemp's ridley population, which was set up when only 600 turtles remained in the population. The Caymen Island turtle farm created a captive stock, composed of 100 juveniles taken from Galveston and 100 hatchlings from different nests. The Caymen Island turtle program worked successfully for a number of years and then stopped, at which point alternatives were sought. The captive program transferred 57 females and 52 males to Ixcaret in 1999. The program pit tagged females for many reasons, including a plan to release several turtles at Rancho Nuevo. Currently, there are 47 females and 46 adult males, of which only 15 belong to the original captive group. Some nesting has occurred. In 2001, there were 29 nests, 1,727 eggs, and 11 hatchlings, of which 1 survived. In 2002, there were 18 nests, 1,044 eggs, and 21 hatchlings, of which 9 survived. So far in 2003, there were 26 nests, 1,689 eggs, and 129 hatchlings, of which 108 are still alive. Average clutch size was 59, 58, and 65 for 2001, 2002, and 2003, respectively.

The project is in the process of deciding the future of the program. None of the research on these captive animals occurred as promised when the program began. They have identified serveral options: 1. release the 15 original turtles into the wild (after genetic analysis) and give the others to aquaria; 2. Release all adults and send the others to aquaria; 3. Keep a small number of animals for exhibition at Ixcaret, release the rest or give them to aquaria; 4. Release all the turtles into the areas where they usually occur; and 5. Euthanasia. Mr. Peña explained that the turtles are not exactly healthy and robust. Animals cannot be released without permission from the state

government of Quintana Roo. The program is currently negotiating with the state of Quintana Roo.

The program has asked the Kemp's ridley recovery team for their input. However, the Kemp's recovery team is tasked with revising a recovery plan for NMFS, FWS, and SEMARNAT; it is not an advisory body. Team members did note that this information should be included in the threats table under captive releases. Team members felt that if SEMARNAT were to officially ask the Kemp's recovery team for an opinion it would be appropriate to comment.

Male Ridley Movements Off Nesting Beach Research: Dr. Shaver has received a grant from the Fish and Wildlife Foundation to tag 8-9 male Kemp's ridley turtles. NMFS will provide funding for the satellite time. As Dr. Shaver was unable to attend this meeting she asked the group to discuss options for when (i.e., in the summer or winter) and where (e.g., off Rancho Nuevo or Tepehuajes) to tag the animals. She will probably use satellite tags that record location as opposed to tags which record dive profiles. Ms. Epperly will check to see if additional tags are available, as well as check on the satellite cost. Several people in the camps have experience satellite tagging Kemp's ridleys. Mating occurs a month before nesting begins, which would be an ideal time to begin tagging. All males are likely to be off the nesting beaches early in the season. Team members noted that there probably is a resident population of ridleys, which was has been documented by the last tagging study. With respect to the shark fishery it might be beneficial to find out more about the resident population. Sperm storage does occur in Kemp's and mating does occur in winter months. Adult males have been seen off Padre Island. One of the 11 previously tagged males traveled north to Mansfield Channel. The Team discussed the ideal time to attach the tags. In terms of the shark fishery, it is important to document that a substantial resident population occurs off the nesting beaches. This needs to be balanced with the charge of the recovery team to address all threats; data on movement is severely lacking and may shed light on other aspects of ridley life history. Sample sizes for most satellite studies are too small in general. Defining the research question is important in determining whether to use satellite telemetry. If the question is to find out whether a resident population exists, the question can be better answered by boat or plane surveys for a mark-recapture study. It is hard to survey by plane because the Gulf of Mexico waters are murky. However, we might not need to know whether the population is "resident", as long as they are using the waters at other times of the year they are still at risk. It is important to find the season the turtles are using the waters because the shark fishery cannot be banned the whole year.

One Team member suggested figuring out the probability of finding an individual in a certain area to get the proportion of animals in different areas. Another suggested attaching all transmitters within a close time frame to find the diffusion rate from that area, possibly 30 days before nesting. The type of transmitter matters because there will likely be a loss rate before the shark season even begins in October. The Team noted that to determine the percentage of males that leave the area it might be best to attach tags in spring. Then perform a second stage of the study and attach tags during the fall to determine the proportion still around in the spring.

Presentation on the status of the "Norma" (Jose Maria Reyes): Two things that SEMARNAT was tasked with at the last recovery team meeting in Brownsville were to fill in the threats table

and get information on the shark fishery Norma. For the threats table, they have asked university researchers for assistance and have not received much reply. Some information on toxic waste and pollution and climate change are available and being processed. For the studies needed on pollution, they have a lot of people in the camps that would like to work but they do not have the knowledge to do these projects. Therefore, Sr. Reyes requested the Team to forward information on scholarships or training programs.

Sr. Reyes was not present during the first day's discussion of the shark fishery norma but was able to bring the most recent information on the changes to the proposal which he presented. The Norma has been changed substantially and from a net fishery to a long line fishery. This does not preclude impacts to the Kemp's ridley population but may substantially reduce them. In the tuna longline fishery, 11 Kemp's ridleys were incidentally captured between 1994 and 2001. Leatherbacks were the primary species captured as bycatch (34 between 1994 and 2001). In the original Norma there were 34 areas for protection including only natural areas cited as sanctuaries or protected areas; in this new version there are 121 areas including nesting beaches, foraging areas, and mating areas based on scientific information. The original Norma only contained Rancho Nuevo as a nesting beach; the new one includes the other beaches including those in Veracruz. Some of the beaches are important for other species of turtles, such as green turtles. The new version also increases the period of time for protection based on the nesting seasons for species other than Kemp's ridleys. The original proposal was for 17.5 km from March to June, whereas the new one extends the season to September and encompasses more kilometers of beach. The new Norma includes a national scientific information system for the public, which documents information on incidental catches of sea turtles. Permit holders are required to log incidental captures. The original Norma protected just the beach and 5 km of the sea, whereas the new version proposes the nesting beach plus 5 km on either side and 10 km of the sea.

The new Norma bans the use of turtle meat as fishing bait. Fishers are required to take observers on board if requested, but there is no mechanism to form a national observer program included in the Norma. Additionally, fishers are required to take workshops on conserving species at risk to increase awareness, especially with regard to dehookers and line cutters. Another workshop planned for boat owners and operators is a workshop on how to aid incidentally caught turtles. SEMARNAT recognizes that fishers have no knowledge of at-sea turtle handling and suggested having observers onboard to supervise. The Norma requires longline fishers to use 18/0 circle hooks, with a maximum of 500 hooks per line. Currently, in the medium depth fishery there is a 900 hook maximum per boat. In one particular area, longline fishers make 2-3 hour sets, using 9 km of line with lots of hooks. The shark Norma totally bans the use of nets for shark fishers. The Norma does not limit the number of boats permitted in the longline fishery, located outside the protected areas. The Norma will be a working draft for the next two months.

Team members noted that the interactions between 18/0 circle hooks and Kemp's ridleys are unknown. One Team member inquired about the bait type used in this longline fishery. The Team noted that the Norma is specific to target catch, e.g. shark, and it might be better to regulate the gear as opposed to the target. Loopholes exist, for example, which would allow fishers to use nets for species other than shark. Sr. Reyes explained that the Mexican government is trying to regulate each specific fishery by target catch, with no multi-species fisheries. Fishers are only

allowed one permit for a specific fishery, not multiple fisheries. In addition, SEMARNAT has applied for a grant to enable electronic vessel monitoring systems.

Assignments:

- Threats table comments due to Ms. Conant and Mr. Possardt – **31 JULY 2003**
- The Team will identify more stakeholders and complete stakeholder contact names, addresses, and email addresses. Stakeholder information should be sent to Mr. Possardt and Ms. Long - **1 SEPTEMBER 2003**.