When we talked about the West Indian Manatee, we are making reference to two subspecies, the Antillean manatee, *Trichechus manatus manatus*, and the Florida manatee, *Trichechus manatus latirostris*. From the data and information presented in the proposed rule, it is clear that the difference between these sub-species expand to the knowledge we have on their biology, their population size and conservation status, among others. The proposed rule is to downlist the West Indian manatee as a whole, from endangered to threatened. As a manager and biologist, working with this species, I urge you to reconsider the proposed rule, and suggest you evaluate them by sub-species. Their difference are remarkable, and the efforts conducted to protect and conserve the Florida manatee will drive the analysis to conclude that the species status has improve, while the truth is that the Antillean manatee faces a complete different reality.

Following are comments on the information included in the document (Federal Register)

Four items are listed as the basis for the proposed rule. The first one is a PVA analysis on the Florida manatee. As a conclusion of this analysis, it was estimated that this sub-species will not fall below 4,000 individuals over the next 100 years. This type of analysis has not been conducted for the two subspecies, or for the species in all of its range. A preliminary PVA conducted for the Antillean manatee indicates that the population is far from stable (Gomez, et al., 2012). This is an example of the differences regarding the conservation and research efforts concerning the two sub-species.

The second item listed as the basis for the proposed rule is the population estimate for the Florida manatee, 6,350, and for the Antillean manatee in Puerto Rico, 532. From those numbers, without a thorough PVA being conducted for the Antillean manatee in Puerto Rico, a conclusion is made that the numbers reflect a low percentage chance of this animal going extinct in the next 100 years. Again, the conclusion is being driven by the status and information of the Florida manatee. The information included for the Antillean manatee is only for those in Puerto Rico, lacking information of all the other countries of its range. The 532 estimate for the manatee population in Puerto Rico is an adjusted mean, which was recently calculated based on the data of 2010. That number has a 95% equal area confidence interval (CI) of 342-802. Based on manatee sightings and the lack of knowledge presented by people living on our coasts regarding manatee presence, it is likely that manatee population in Puerto Rico is on the low range of that CI. Having 342 individuals, considering threats, habitat degradation, illnesses, habitat displacement, and so on, reflects a high percentage chance of this sub-species going extinct in the next 100 years, or at least cease of being viable.
The third item listed as the basis for the proposed rule indicates that threats are being address and reduced throughout the species' range. Again, this is true for the Florida manatee, not for the Antillean manatee. Habitat fragmentation and loss is identified as the main threat of the species outside the US (which means for the Antillean manatee). On the discussion of this threat, further in the document (page 1015), only three countries could be mentioned as an example of recovery efforts being made, where areas are being at least designated as protected to conserve manatee habitat, Belize, Mexico and Trinidad. The designation doesn't go along with an actual implemented protection of the habitat, for which arriving to the conclusion that the threat is being addressed is not accurate or real. The habitat is still loss.

For the situation in Puerto Rico, the discussion on the habitat threat focuses in the sea grass areas as the main manatee habitat. Although it acknowledges that the data collected by PRDNER indicates that sea grasses are being severely impacted by anthropogenic actions, which also provoke a decrease on sea grass density and habitat fragmentation, it arrives to the conclusion that it is not a limiting factor, even when it is unknown how much sea grass is needed to sustain a large manatee population. These arguments do not follow a logic sequence. In addition, it doesn't take into account that the scant research conducted until know regarding manatee feeding habitat in Puerto Rico, suggests that the Antillean manatee might be a more specialized sea grass grazer, contrary to the Florida manatee (Lefebvre et al., 2000). This means that the whole extension of sea grasses in an area does not represent available food. This might be true for the Antillean manatee through out its range.

As an offset to this threat, for Puerto Rico, it indicates that there is a collective effort of different agencies to avoid, minimize and mitigate project impacts on important manatee habitat. In paper this is correct, but not in practice. For example, the Service developed standard permit conditions for boat races, such as observers protocol, that are provided to the US Coast Guard, which are then included as a requirement for the person requesting the permit to conduct the activity. Once the person gets the permit the activity is conducted without oversight. While conducting field oversight of these activities we have found that in most instances the observers used lack knowledge on what a manatee is, are drunk, pay attention to the race but not on manatee presence, and are not fulfilling the purpose of having a manatee observer in a race. Very often the amount of observers is not the amount required, few for the length of the circuit. This is in addition to the amount of illegal races that take place, those performed without permits. This is true for many of the actions mentioned to be performed with other agencies to offset the manatee fragmentation and loss of habitat threat, such as boat exclusion areas, no wake areas and construction conditions. In the time I have being evaluating and dealing with the evaluation of projects, developments and activities, I have not run across of many staff from other agencies verifying that their requirements are met. What I am describing is what I have observe the time I have been out in the field or what our staff have reported when verifying fulfillment with requirements.

There are 50 manatee protected areas in Florida. In Puerto Rico, the Service conducted a study to identify important manatee habitat. Besides many efforts on behalf from PRDNER to provide protection to these areas, long identified by the agency, no protection has been granted because of the developmental pressure these areas are subject to. One of the two areas considered as main manatee area for Puerto Rico, Jobos Bay, is at present under a great pressure. It is the
location where a natural gas pipeline is proposed, aside of many marinas. The pipeline will cross the area completely. We don't know the impact this will have on manatees. The other area of great importance for manatees in Puerto Rico, Ceiba-Fajardo (used to be a naval station), is where a shipbreaking company have just settle, a marina is being proposed, as well as boat races. The point I am bringing is that maybe in Florida many strategies are being implemented, but outside of US, the reality of the Antillean manatee is very different and we are very far from saying that the threat of manatee habitat fragmentation and loss is being offset so efficiently as to the point to feel comfortable with the outcomes achieve so far.

The fourth and final basis for the proposed action is that the species no longer meets the endangered definition. To arrive to this conclusion five criteria's are analyze:

(A) The present or threatened destruction, modification, or curtailment of its habitat or range;

As I discussed before, many habitat conservation strategies are being conducted in Florida, but not in other countries where the Antillean manatee lives. Although efforts are being taken, the implementation of these is difficult or none. Lack of staff, resources and funds are some of the limitations. In addition, we have ruling limitations. In Puerto Rico, although we have a regulation that establishes speed limit to 150 feet from shore, we don't have the staff to enforce it, nor the way to implement it outside of a public beach, because of the signing. The main manatee habitat, although long recognized as such, have no protection because of economical pressures. And of all the countries within the Antillean manatee range, only three has protected these habitats. The present or threatened destruction, modification, or curtailment of the Antillean manatee habitat or range is a significant threat.

(B) Overutilization for commercial, recreational, scientific, or educational purposes;

Poaching is a major threat through out most of the countries within the range of the Antillean manatee. This is a threat that could bring the species to extinction and responsible to cause extinction in some countries. This threat should not be disregard just by filling confident that initiatives being pursed will be positive. It is a clear and present threat for the Antillean manatee.

Harassment has increase, at least in Puerto Rico, with no legal consequences. It is not an anecdotal account, contrary to the information provided in the document. That is not the case for manatees in the US, where cases are processed and numerous measures are in place. In PR, we are at present trying to proceed legally against a person that harassed a mom and calf pair, for which until present no federal support has been received. In the past, manatee harassment cases taken to the attention to the Service has been dispatch with an orientation to the offender, who continued his practice. Although outreach and education by different stakeholder are being conducted, the efforts are not coordinated. Judging for the lack of knowledge of the public, considering the outreach efforts taken, many strategies are not efficient. The same situation is faced by the Antillean manatee through out its range, where uncontrolled tour operators are having a negative impact over the sub-species with no consequences.

Poaching by itself is a huge threat. If we add harassment it is concluded that the overutilization of the Antillean manatee for commercial and recreatonia purposes is a significant threat.
(C) Disease or predation; Not much is known regarding the disease impacts on the Antillean manatee, although much has been studied on the Florida manatee. In Puerto Rico, many examined carcasses are too decomposed to determined cause of death, but some have characteristics of having gone through an illness process or a wasting condition. We know of several cases of manatees that die of toxoplasmosis, but the limitations we have for tissue analysis prevent us from knowing the disease prevalence.

Through out the rest of the range of the Antillean manatee, much is unknown. Disease is a potential significant threat, especially when considering water quality problems faced throughout its range.

(D) The inadequacy of existing regulatory mechanisms; The document indicates that this is a moderate threat to the West Indian manatee. If from that analysis, we take out the considerations taken that apply only to the Florida manatee, where many measures are in place, we could conclude it is a significant threat. As I have mentioned through out these comments, the lack of implementation, enforcement and oversight, make many of the conservation strategies inefficient or fruitless. Downlisting the species may not have an impact in the Florida manatee, but it will in the Antillean manatee. Ruling and conservation measures, that are not currently strong enough because of lack of enforcement, will be more lenient.

(E) Other natural or manmade factors affecting its continued existence. This section mentions that the threat is consider moderate. But I urge you to evaluate this threat by sub-species. Many strategies are being implemented for the Florida manatee, but it is not the case for the Antillean manatee through out its range. For Puerto Rico, for example, the manatee population faces a different scenario regarding genetics. Entanglement with fishing line seems to be a big problem, frequently reported, of which we have no knowledge on how it is affecting the population.