

MEMO

Five Points of Concern Regarding the Okinawa Defense Bureau's Final Environmental Impact Statement for the Futenma Replacement Facility

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In December 2012, the Okinawa Defense Bureau issued its Final Environmental Impact Statement (Final EIS) for the construction and operation of the Futenma Replacement Facility (FRF) in the area of Henoko and Oura Bay, Okinawa, Japan.ⁱ The Final EIS provides detailed descriptions of the biodiversity rich environment of the area. It pays special attention to the Okinawa dugong with a sub-section (Chapter 6 6.16) extensively devoted to the Okinawa dugong. This reflects the importance of the Okinawa dugong as an endangered species, a cultural icon of Okinawa, and as a "Natural Monument" of Japan.

The Final EIS concludes in essence that the construction and operation of the FRF will not have adverse impacts on the environment and that the proposed mitigation measures are appropriate and sufficient. With regard to the Okinawa dugong, the Final EIS makes the argument, again in essence, that the Okinawa dugong's use of the area of Henoko and Oura Bay is sporadic and limited, therefore, the FRF will not have adverse impacts on the Okinawa dugong. It also makes the argument that the proposed mitigation measures, which will be applied when dugongs incidentally come into the area of Henoko and Oura Bay, are appropriate and sufficient.

Many environmental NGOs find this overall conclusion and the arguments regarding the Okinawa dugong problematic.ⁱⁱ Many also share the view that these problems need to be recognized by all those who are involved in or associated with the process of the construction and operation of the FRF.

In the following, I will present five points of concern regarding the Okinawa Defense Bureau's Final EIS especially in relation to the Okinawa dugong. These five points have been drawn from NGOs' reviewing of the Final EIA and other related documents in both Japanese and English.

1. The Final EIS does not establish the size nor status of a population of the Okinawa dugong.

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In the Final EIS, no attempts were made to conduct modeling using methods accepted by marine mammal biologists to estimate the overall size and status of the dugong population in Okinawa. Accordingly, no estimates were made for the viability of the population of the Okinawa dugong based upon that size and status.

The Final EIS does include a Population Viability Analysis (PVA) for Okinawa dugongs. The purpose of conducting this PVA is stated as “to evaluate whether the decrease of seagrass beds due to the installation of facilities may reduce the environmental carrying capacity and affect the maintenance of the population of the dugong.”ⁱⁱⁱ It concludes that “the result of PVA showed that there was no significant difference of the extinction risks between the cases with or without the reduction of environmental carrying capacity due to the implementation of the project. Therefore, it is thought that impact of the maintenance of the population of dugong due to the loss of seagrass beds caused by the installation of the FRF will be small.”^{iv} However, the PVA is based mainly upon the data on three individual dugongs identified in the EIA process. Moreover, it uses the total area of seagrass beds of Okinawa Island and the total area of seagrass beds of Okinawa Prefecture as base values in calculating carrying capacity, and regards the areas of seagrass beds that would be lost by the FRF as percentages of the total areas of seagrass beds. It ignores the fact that the areas where dugongs and their feeding trails have been found in recent years are limited to the coastal areas of the northern part of Okinawa Island.

2. The value of the area of Henoko and Oura Bay as habitat for the Okinawa dugong is purposely underestimated.

The Final EIS discusses that during the EIA dugongs were sighted and their feeding trails were found most often in the area of Kayo. Dugongs were sighted sporadically and far fewer dugong feeding trails were found in the area of Henoko and Oura Bay. By such comparison, the Final EIS concludes that the dugongs’ use of Henoko and Oura Bay is limited. According to this conclusion, the construction and operation of the FRF will not have adverse impacts on the Okinawa dugong.

This methodology and the conclusions drawn are problematic. The sporadic and limited use of Henoko and Oura Bay by dugongs does not negate the fact that the area is an important area for the survival of the Okinawa dugong. As stated above, although there are other coastal areas of Okinawa Island and of other islands that have seagrass beds, the areas where dugongs and their feeding trails have been found in recent years are limited to the coastal areas of the northern part of Okinawa Island.^v In other words, dugongs appear to prefer Henoko and Oura Bay to other areas as feeding grounds.

In fact, recent surveys by the Okinawa Defense Bureau, private citizens, and NGOs

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have confirmed that dugongs use the area of Henoko and Oura Bay. In June 2011 private citizens found feeding trails in the interior of Oura Bay.^{vi} Information requested by Kyodo News revealed that the Okinawa Defense Bureau's surveys found four feeding trails at the construction site in April, seven in May, and one in June in 2012.^{vii} Citizens again found feeding trails in Oura Bay in March 2013.^{viii} Most recently, NGO members found several dugong feeding trails on the proposed construction site on May 16, 2014.^{ix}

Moreover, as the Final EIS shows, the size of seagrass beds in the area of Henoko is 141–148 ha and this size is the largest in the waters around Okinawa Island. Given that the dugong feeding trails were often found in the area of Henoko in the past, this area should be considered as an important feeding ground for the present dugong population, dugongs' population recovery process, and future dugong populations.

Finally, although the terms of Henoko, Oura Bay, Kayo, and Abu, among many others, may indicate that they are distinctive areas/ with boundaries, they are basically the recognition of the areas by local people and people involved in the EIA. These areas exist within a range of 10 kilometers. Thus, considering them as separate areas immune from impacts from each other is problematic.

3. Many of the proposed mitigation measures to ensure the survival of the Okinawa dugong are not scientifically proven, nor were they consistent with scientific findings.

The mitigation measures proposed for the construction of the FRF include: 1) assigning a lookout person to ensure that construction ship to avoid collisions with dugongs; 2) setting up a sonar-equipped-warning system so that construction work can be stopped when a dugong is found near the construction area; and 3) using "low noise" construction methods and equipment to mitigate the impact of construction noise on dugongs. The effectiveness of such methods and equipment is unproven and questionable.^x

The Final EIS also proposes transplanting seagrass to different locations of the seagrass beds that would be lost by reclamation work. To support the effectiveness of this measure, the Final EIS refers to cases at Nakagusuku Port (Awase District) and an example from the Fisheries Agency's Fisheries Research Agency. As shown by the NACS-J,^{xi} however, the former ended in failure, and the latter was not examined thoroughly. Moreover, the seagrass transplant candidate sites offshore Toyohara and Kushi are not appropriate since among many other reasons problems of red soil run off are prominent in these areas.^{xii}

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4. The EIA process lacks transparency and accountability.

During the EIA process, despite continuing requests from NGOs, the Okinawa Defense Bureau refused to tell who were analyzing data and assessing the impacts of the FRF on the Okinawa dugong. To date, we do not know who the experts were.

Furthermore, as discussed above, it took Kyodo News Agency's requests through the Act on Access to Information Held by Administrative Organs (or Freedom of Information Act) to reveal the Okinawa Defense Bureau's 2012 discoveries of dugong feeding trails in the construction site and in the area of Henoko and Oura Bay. The Okinawa Defense Bureau did not reveal the information to the public because "the information was not intended to be provided to the public."^{xiii}

5. Exchange of information between the Japanese government and the U.S. Department of Defense (DoD) is critical and it needs to be examined and evaluated.

Exchange of information between the Okinawa Defense Bureau and the DoD requires translation of documents from Japanese to English or vice versa. Given the massive volume of documents involved in the EIA and related surveys, it is not clear whether all the necessary documents and information from the EIA and related activities have been provided by the Japanese government to the DoD.

For example, while the Final EIS discusses and presents the Governor's Comments made on the EIS, it does not provide what many consider the most important part of the Governor's Comments: "The construction will have adverse effects" and "even with the proposed measures, it is impossible to ensure the conservation of social environment and natural environment."^{xiv}

In the process of application for land reclamation permit, the Okinawa Defense Bureau submitted new information that, for the purpose of land reclamation, soil and rock will be extracted from areas near the seagrass beds of Kayo where dugong feeding trails are often found. Moreover, the Okinawa Defense Bureau submitted information that the routes of ships that carry soil and rock to the construction site around Okinawa Island will overlap the routes of dugongs traversing around Okinawa Island.

It is not clear whether and how the Japanese government have provided these pieces of information to the DoD.

Concluding Note

The Final EIS should be considered as a most important environmental document for both the US and Japanese government because so much is at stake, whether politically, diplomatically, or environmentally. As such, it deserves and requires the

best scientific methodologies and knowledge.

However, as outlined above, the Final EIS has many critical problems. Whoever uses the Final EIA to make decisions should be aware of these and should engage in critical examination of the Final EIA before using it.

ⁱ Okinawa Defense Bureau. 2012. *Futenmahikojoyo daitaishisetsu kensetsujigyo ni kakaru kankyoeikyo hyokasho (Hoseigo)* [Futenma Replacement Facility Construction Project: Final Environmental Impact Statement]. The document is in Japanese and is available at <http://www.mod.go.jp/rdb/okinawa/07oshirase/chotatsu/hyoukasyohosei/hyoukasyohosei.html>

ⁱⁱ See for example Nature Conservation Society of Japan. 2013. “*Futenmahikojoyo daitaishisetsu kensetsujigyo ni kakaru kankyoeikyo hyokasho (Hoseigo)*” *eno iken no riyusho* [Statement of Reasons behind Opinions on *Futenma Replacement Facility Construction Project: Final Environmental Impact Statement*] available at <http://www.nacsj.or.jp/katsudo/henoko/2013/02/post-59.html>

See also the comments (in Japanese) by the Citizens’ Network for Biodiversity in Okinawa available at <http://okinawabd.ti-da.net/e4399901.html>.

ⁱⁱⁱ Ministry of Defense and Okinawa Defense Bureau. 2013. *Futenma Replacement Facility Construction Project Final Environmental Impact Statement Abstract*. This document is in English.

^{iv} Ibid.

^v See Ministry of the Environment. 2002–2005. *Jyugon to moba no koikiteki chosa houkokusho* [Report on Wide-Area Survey of Dugongs and Seagrass Meadows, Fiscal 2001–2004].

^{vi} *The Okinawa Times*. 2011. “Jyugon hamiato: Ourawan oku de hatsumi” [Dugong Feeding Trails: First Discovery in the Interior of Oura Bay]. June 7.

^{vii} *Kyodo News*. 2013. “Henoko oki de jyugon kakunin futenma isetsusaki ni hamiato: Boeikyoku kohyo sezu” [Dugong Sighted Offshore Henoko, Feeding Trails Found at the Construction Site: No Disclosure by the Defense Bureau]. September 22.

^{viii} *Ryukyu Shimpō*. 2013. “Ourawan ni jyugon no hamiato: Kokunai saishin jyukyu ten roku metoru” [Dugong Trenches Found on Seafloor 19.6 meter Deep in Oura Bay]. April 3.

^{ix} Okinawa Times. 2014. “Jyugon no hamiato saikakunin Henoko no isetsu yoteichi” [Dugong Feeding Trenches Discovered Again at the Construction Site in Henoko]. May 16. Also Available at <http://www.okinawatimes.co.jp/article.php?id=69859>

^x Nature Conservation Society of Japan. 2013. “*Futenmahikojoyo daitaishisetsu kensetsujigyo ni kakaru kankyoeikyo hyokasho (Hoseigo)*” *eno iken no riyusho* [Statement of Reasons behind Opinions on *Futenma Replacement Facility Construction Project: Final Environmental Impact Statement*].

^{xi} Ibid.

^{xii} Ibid.

^{xiii} *Kyodo News*. 2013. “Henoko oki de jyugon kakunin futenma isetsusaki ni hamiato: Boeikyoku kohyo sezu” [Dugong Sighted Offshore Henoko, Feeding Trails Found at the Construction Site: No Disclosure by the Defense Bureau]. September 22.

^{xiv} See the Governor’s Comments (in Japanese) on the EIS available at <http://www.pref.okinawa.lg.jp/site/kankyo/seisaku/hyoka/tetsuzuki/documents/iken-68.pdf>