

UNEP/CMS Dugong MoU First Official Signatory State Meeting

Update on  
the Okinawa Dugong  
in the UN International Year of Biodiversity



Photo: T. Higashionna

Save the Dugong Campaign Center (SDCC)  
Hideki Yoshikawa and Yoshiaki Ninagawa

# Topics

1. Status of the Okinawa dugong
2. Environment Impact Assessment (EIA) for Military Base Construction
3. Movements towards Protection and Conservation of the Okinawa Dugong
4. Conclusion: Better Future for the Okinawa dugong?

# Where is Okinawa?

## Areas of Distribution of Dugongs around the World



Okinawa

■ Area of distribution of dugongs

(Modification of UNEP 2000) Produced by Dugong Network Okinawa

# 1. Status of the Okinawa Dugong

MoE Red List (2007): Critically Endangered IA  
(highest risk of extinction)

an estimated number of less than 20~50 is often mentioned  
(although no definite estimation for the number of the  
Okinawa dugong has been provided).

Some protection measures have been taken, but their  
effectiveness has been unknown / un-examined.

Thus, UNEP/DEWA: Dugong Report (2002) still stands:  
“Unless measures are taken to protect dugong in the  
Okinawa region, they will soon be extinct in Japanese  
waters” (p46).

## Status of Dugongs in Japanese Laws

Act for the Protection of Cultural Properties:  
designated as a “natural monument” in 1955

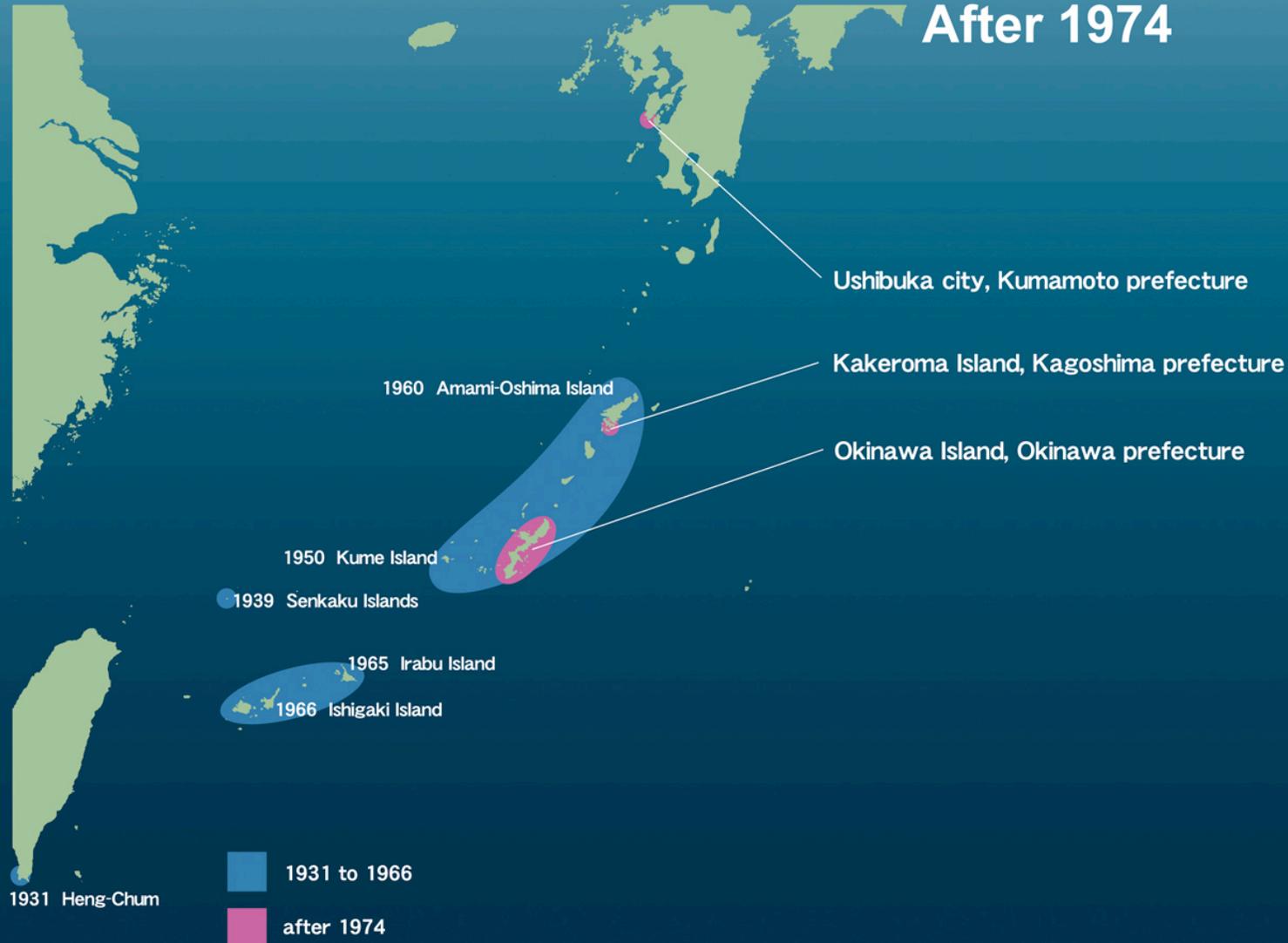
Act on the Protection of Fishery Resources:  
designated as a protected species in 1992

Wildlife Protection and Proper Hunting Act:  
designated for protection in 2003

Endangered Species Act: **Not Designated Yet**

# Declining Range of Dugongs in Japan

## Water Areas in which Dugongs Were Confirmed After 1974

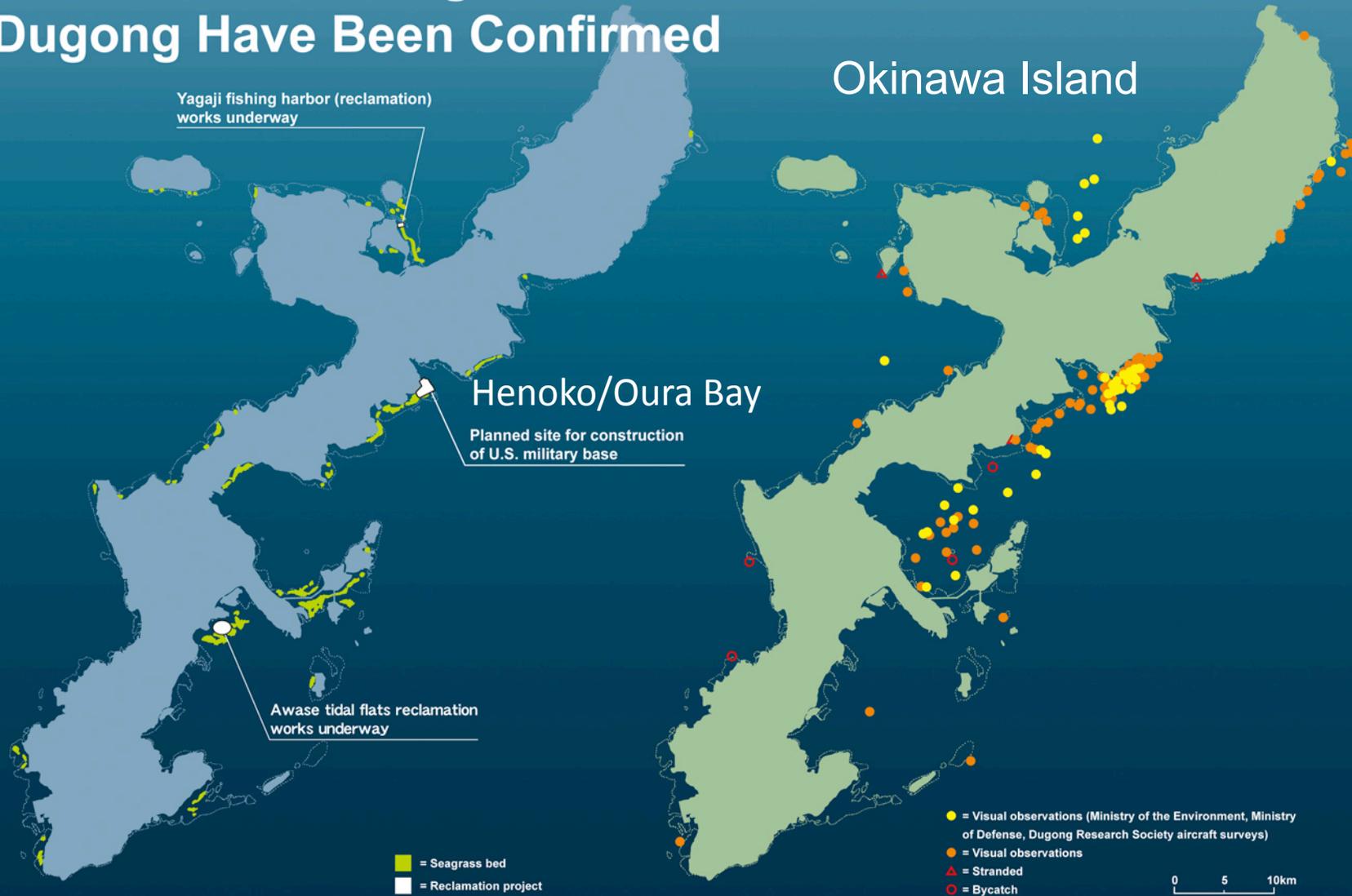


(Modification of Uchida 1994)

Produced by Dugong Network Okinawa  
Provided by T. Hosokawa

# Distribution of Seagrass Beds and Water Areas in Which Dugong Have Been Confirmed

Okinawa Island



(Seagrass distribution map = Modification of Toma 1991)

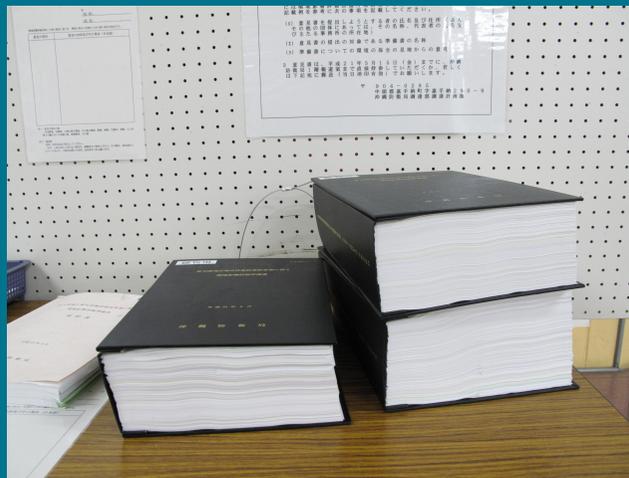
Produced by Dugong Network Okinawa

Provided by T. Hosokawa

Understanding of Okinawa dugongs' behavior and their habitats has been improved, especially through two recent government survey/research undertakings:

*Wide Range Survey/Research of Dugong and Seagrass Beds Fiscal Year 2001~2005 (Ministry of the Environment)*

*Draft Environment Impact Statement for Futenma Replacement Facilities (FRF) (Draft EIS) (2007)*



# Threats and Protection Measures

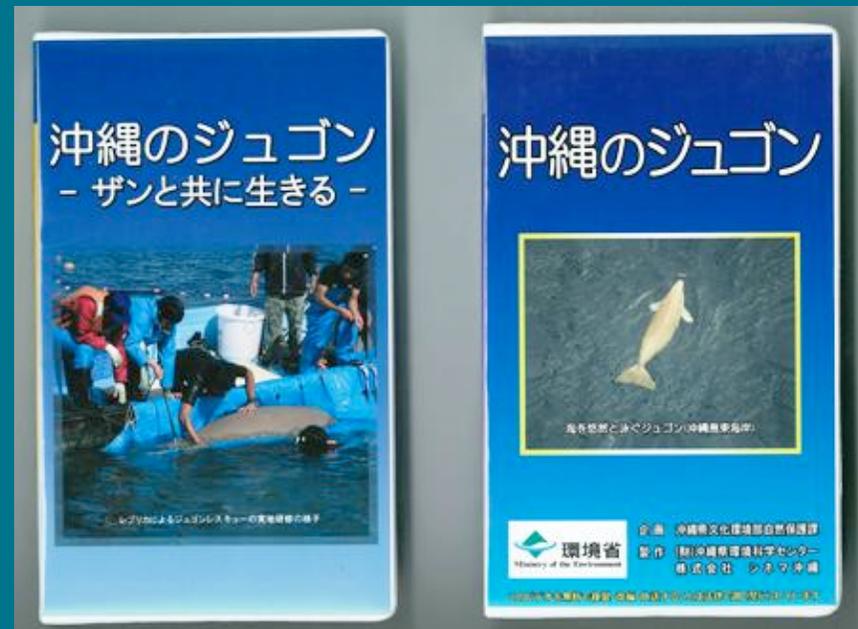
## 1. accidental by-catch:

in last 10 years, 7 dugongs were found dead. 3 of them were results of accidental by-catch.

## -“Dugong Rescue Project”

MoE, Okinawa Prefecture, Fishermen, and volunteers,

“Okinawa Dugong  
Living with Zan” (DVD)



2. degradation of coastal environment by runoff of soil and agrochemicals into the waters

-sediment control dams, restriction on agrochemical use

3. reclamation projects in coastal areas with seagrass beds  
Awase tidal flat area and Yagaji fishing port

-seagrass transplantation  
(not successful)

-coral transplantation  
( ? ? ? )



4. U.S. military training and accidents of amphibious vehicles in dugong habitat (Henoko)
5. Underwater blast from unexploded bombs (left over from WWII)

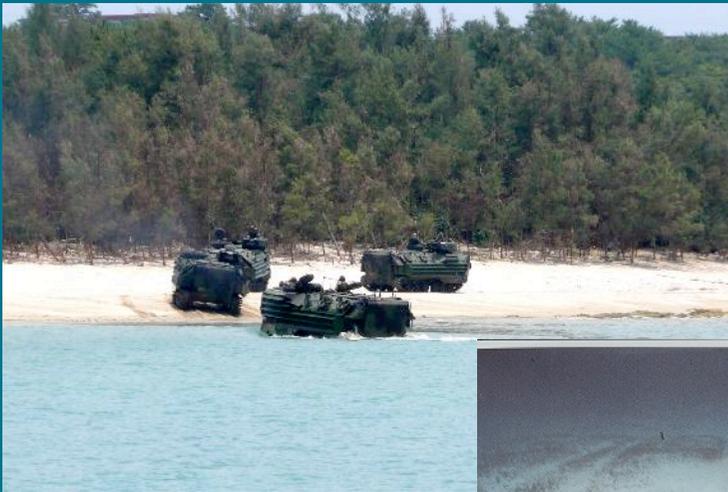
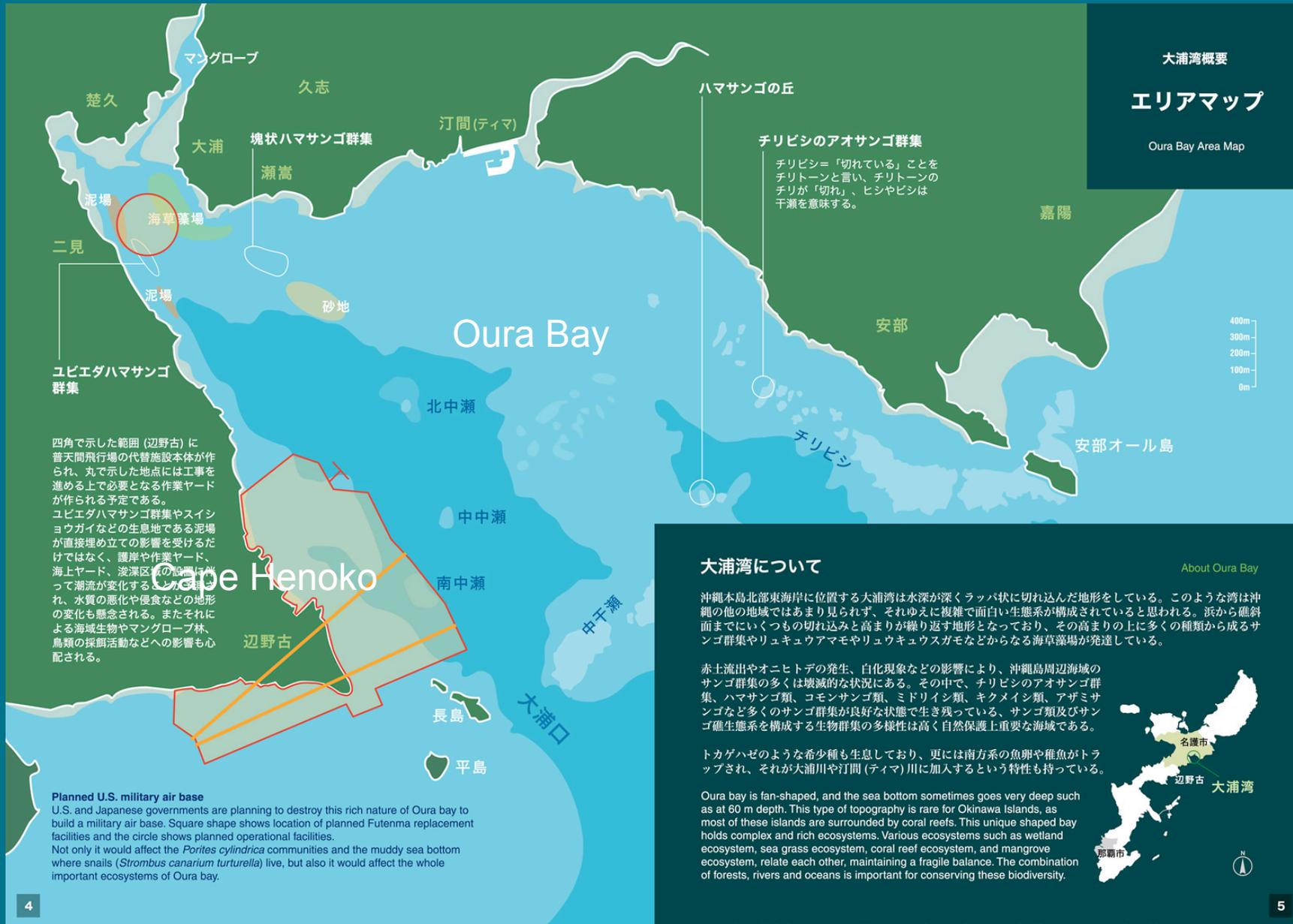
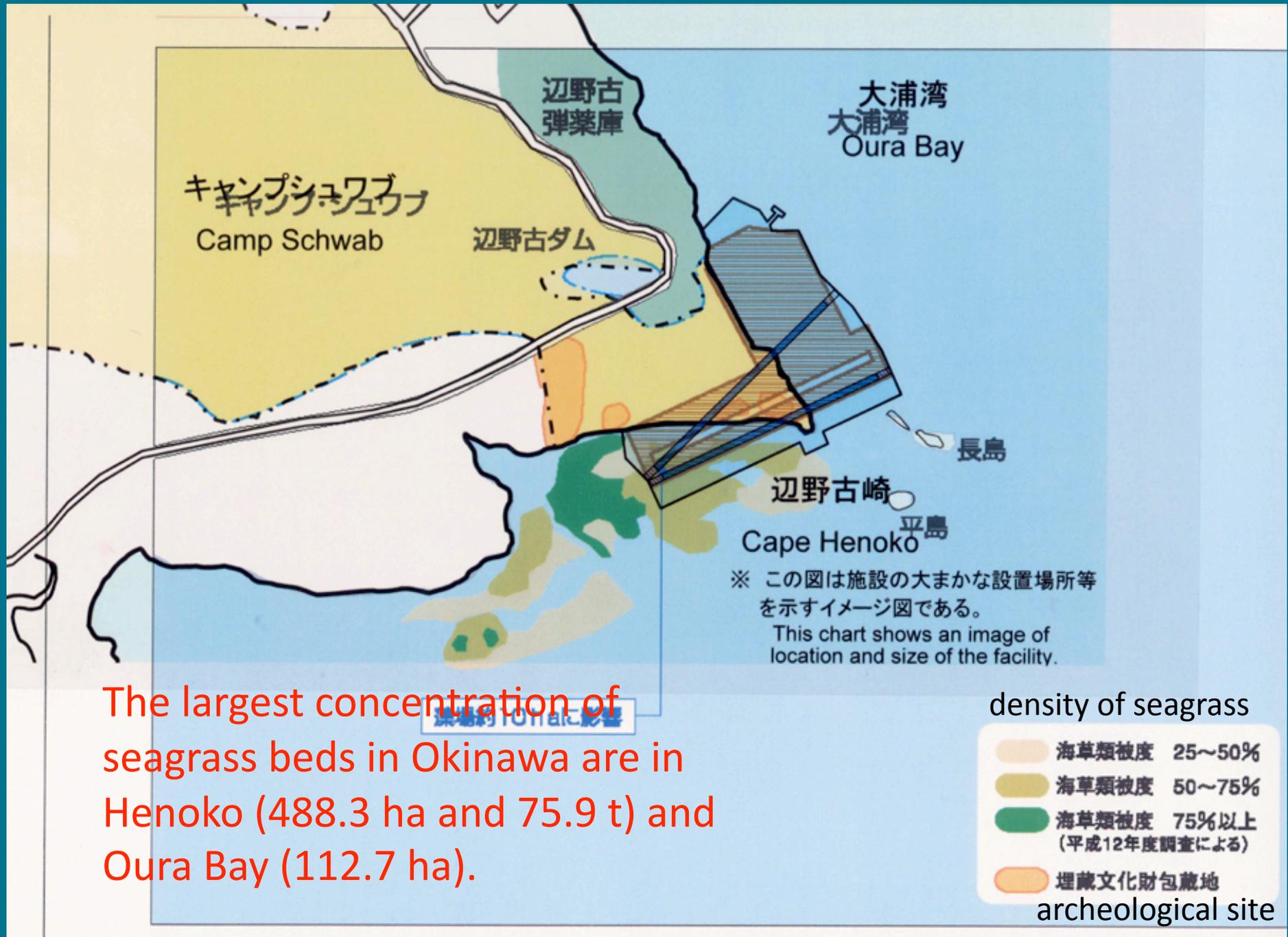


Photo Team Zan

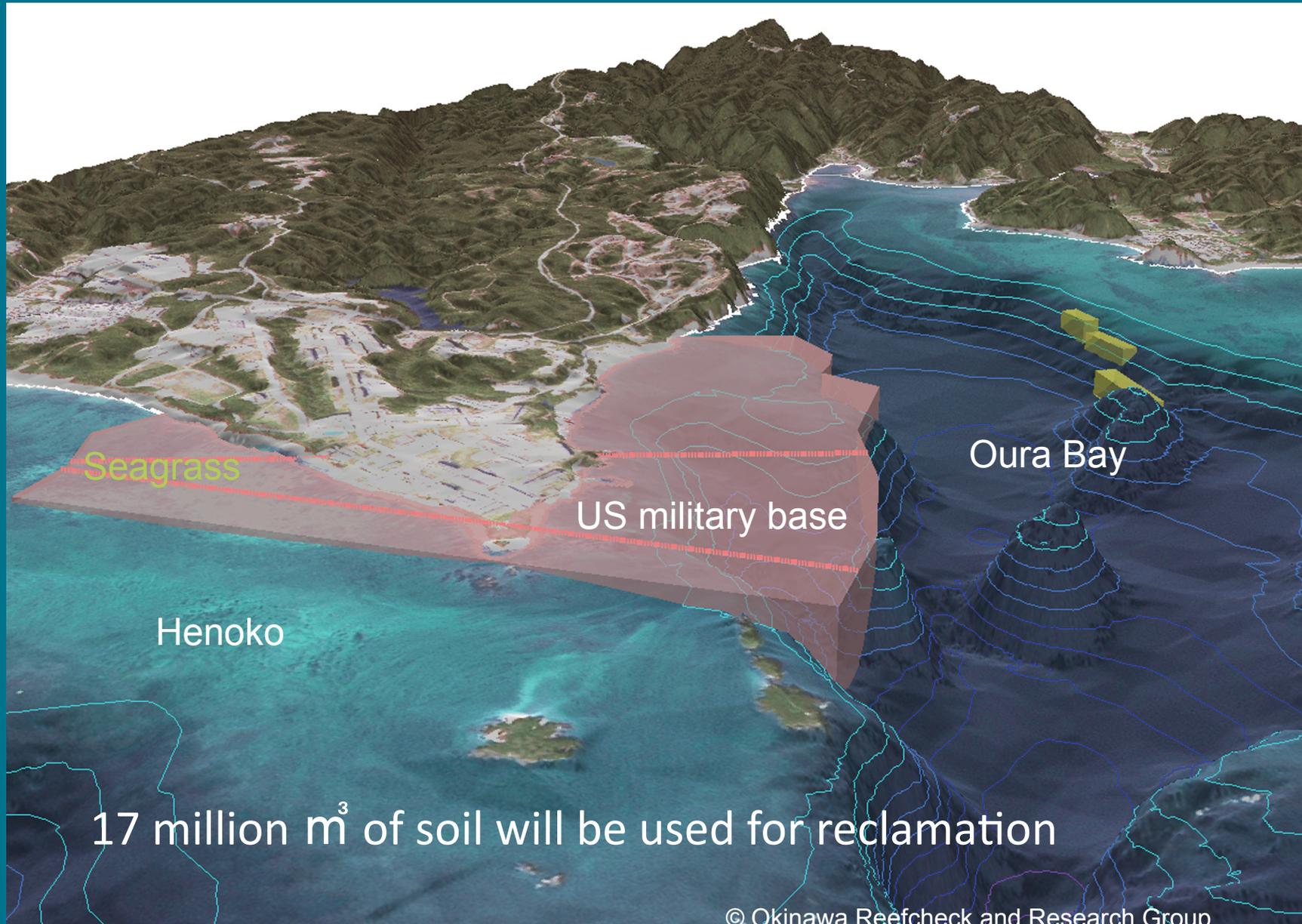
# 6. Plan to build US military base in Henoko and Oura Bay





The largest concentration of seagrass beds in Okinawa are in Henoko (488.3 ha and 75.9 t) and Oura Bay (112.7 ha).

# 3-D view of the construction plan and Henoko and Oura Bay



17 million m<sup>3</sup> of soil will be used for reclamation

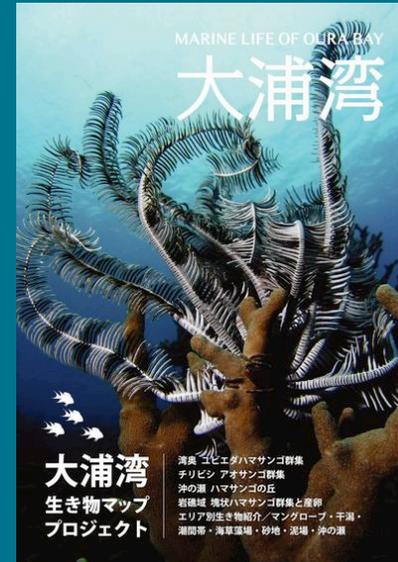
# Biodiversity of Henoko and Oura Bay is at risk:

This area is one of the most well-preserved environmental areas in Okinawa, ironically, due to the presence of US military base, Camp Schwab.

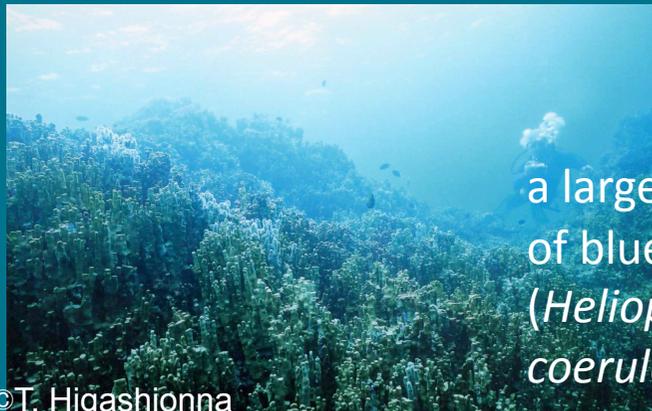


Black-neck tern  
(*Sterna sumatrana*)  
from Australia

©T. Higashionna



Copies of the booklet (Okinawa Reefcheck and Research Group) are available for distribution:



a large colony  
of blue coral  
(*Heliopora coerulea*)

©T. Higashionna



## 2 Environment Impact Assessment (EIA) for Military Base Construction

EIA is required by, with a view to protecting the environment.

Public involvement in EIA is guaranteed in EIA, in form of submission of public comments.

“Zero-option” is not stipulated in EIA Japanese law.

Can EIA function as an effective legal and scientific tool for dugong protection and conservation?

# Okinawa Defense Bureau's EIA

1. Scoping Document (August, 2007)  
-public and governor's comments
2. Survey/ Research  
(March, 2008~March, 2009)

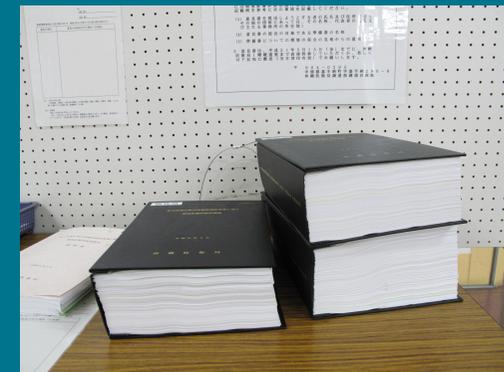


©SDCC

3. Draft Environment Impact Statement (EIS) (April, 2009)  
-public and governor's comments

**NOW TA THIS STAGE**

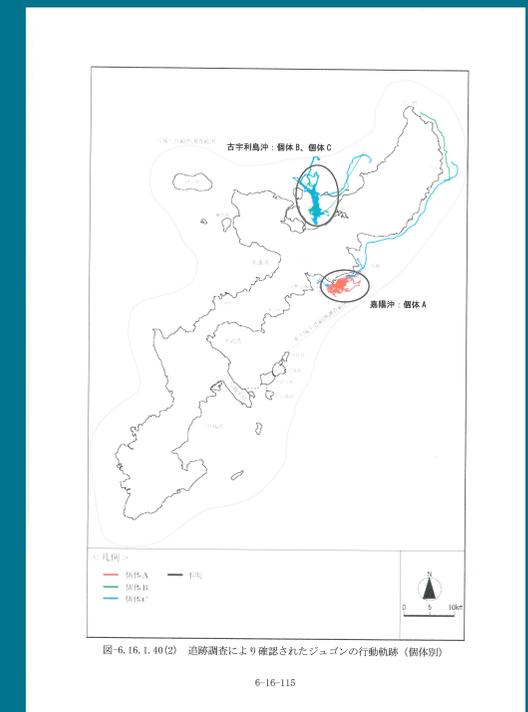
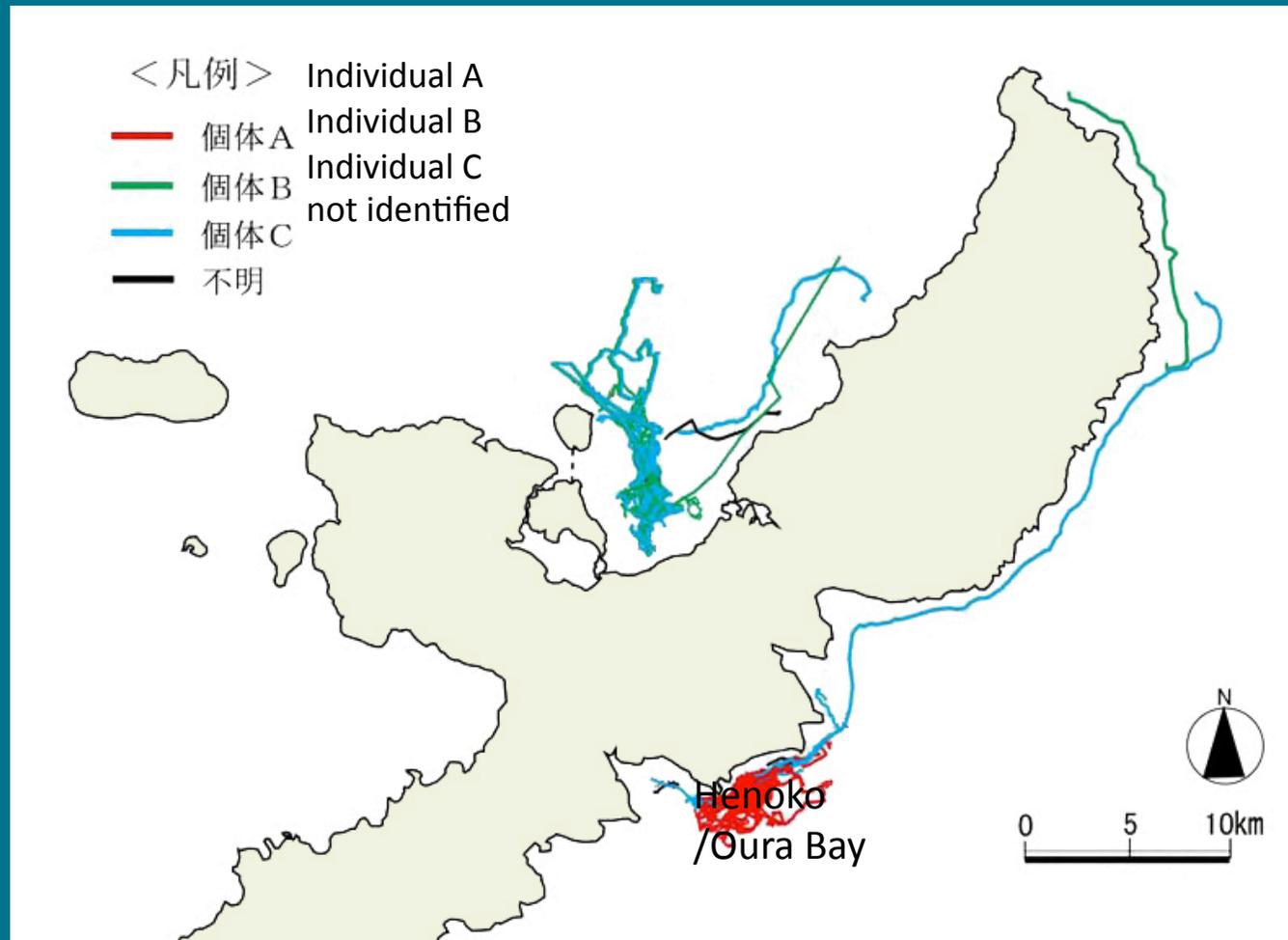
4. Final EIS  
-governor's and minister's comments



5. If Final EIS is approved, actual construction will begin.

Okinawa DB's EIA has provided a better understanding of Okinawa dugongs' behaviors and of their habitat.

## Movement of dugongs in the northern area of Okinawa Island



# Movement of dugongs in and outside Oura Bay

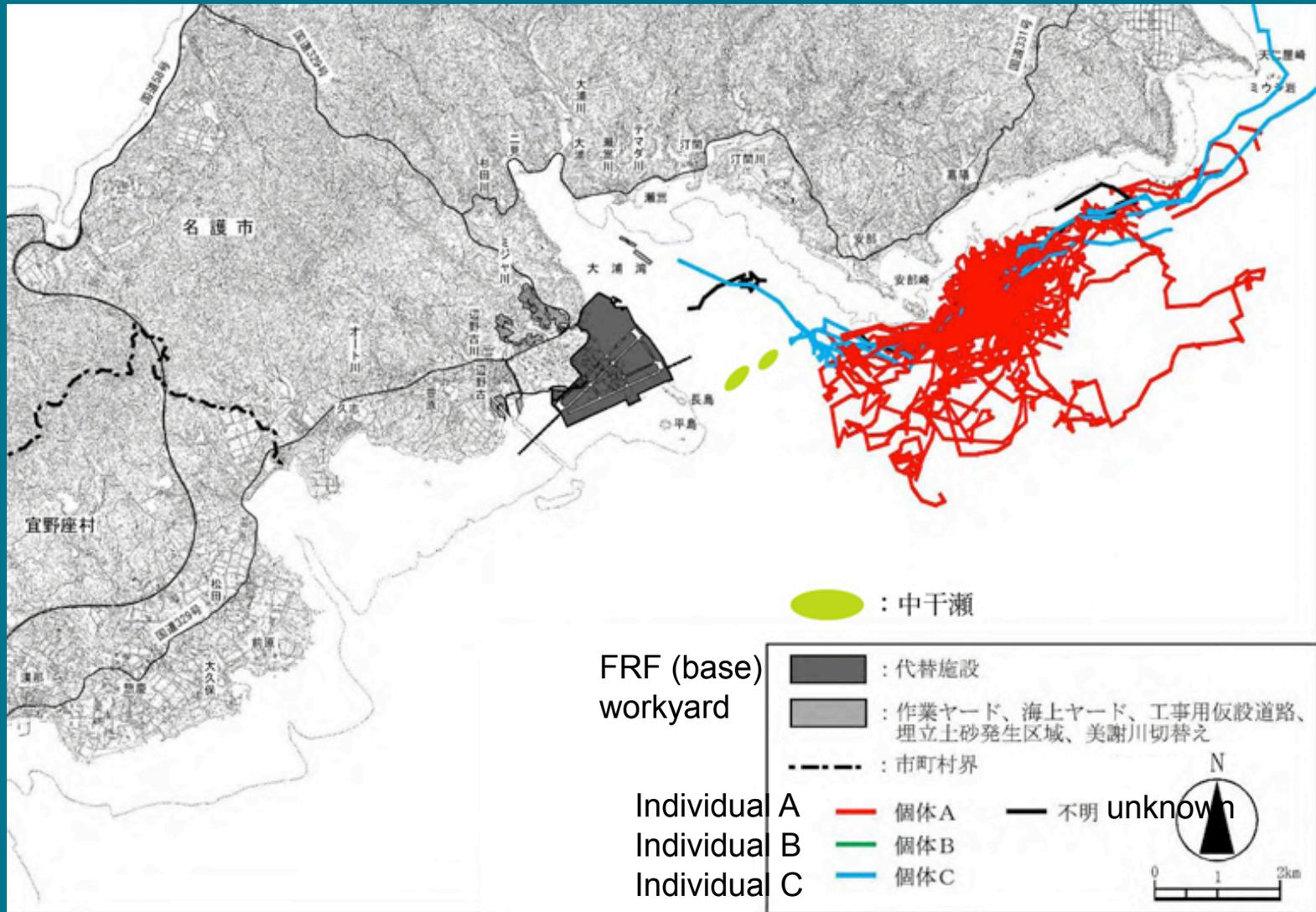


図-6. 16. 1. 44(2) 対象事業実施区域周辺海域におけるジュゴンの出現状況 (個別別)

## Draft EIS Conclusions:

Northern coastal area of Okinawa Island is dugong habitat

The “minimum number of dugong sighted” is three.

No dugongs in the Henoko area.

No dugong sighted, no dugong-trenches found

Mitigation measures are sufficient.

Watchmen will be on board, and the ship/boat will be slowed down when dugongs are in the vicinity;

Seagrass transplant will be carried out.

Thus, military base construction will have no impact on the the dugong population.

\* The names of the experts consulted are withheld.

# Questioning Draft EIS: No dugong in Henoko?

## MoE's research result (2005) superimposed on Draft EIS (2009)

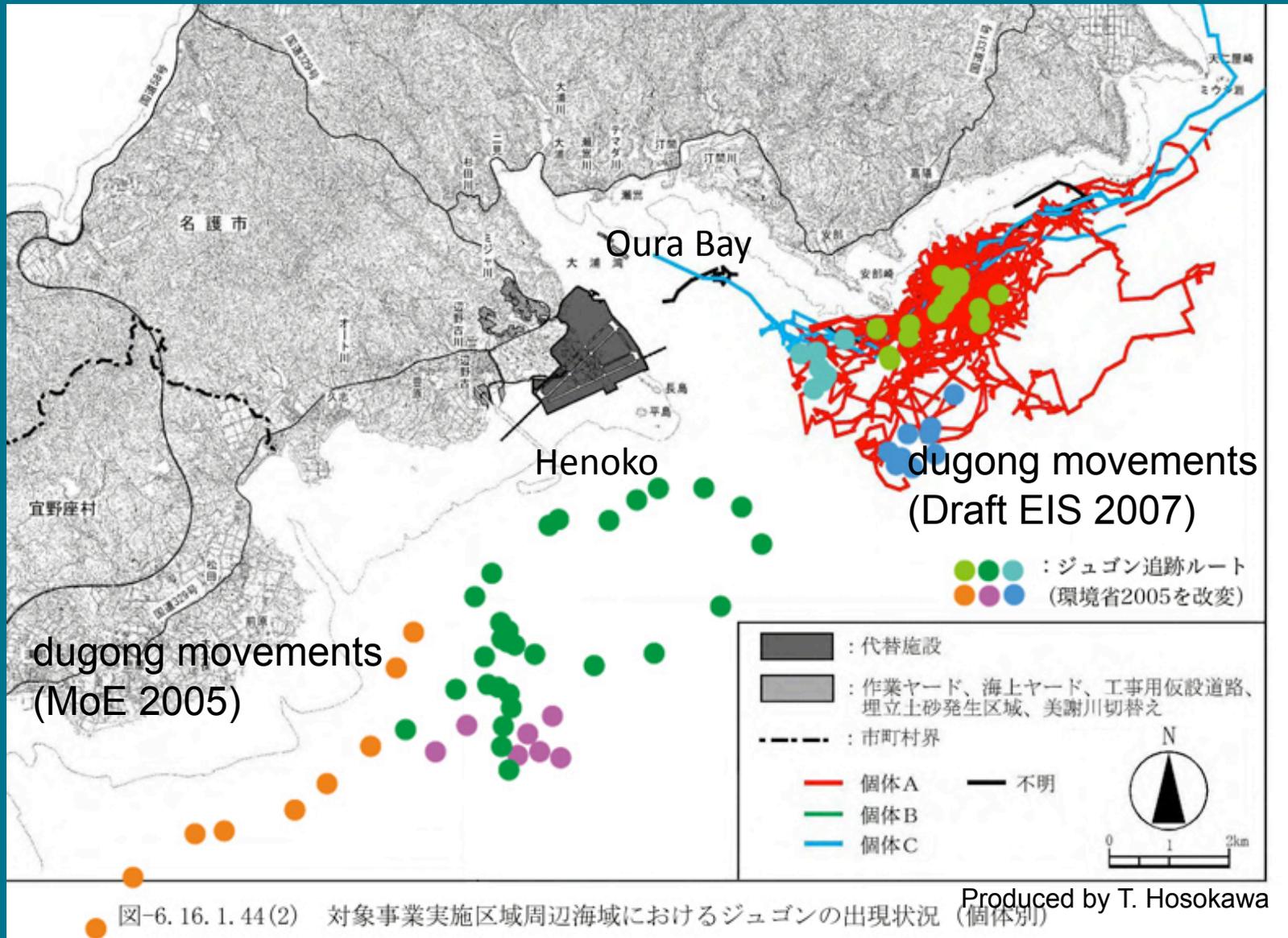
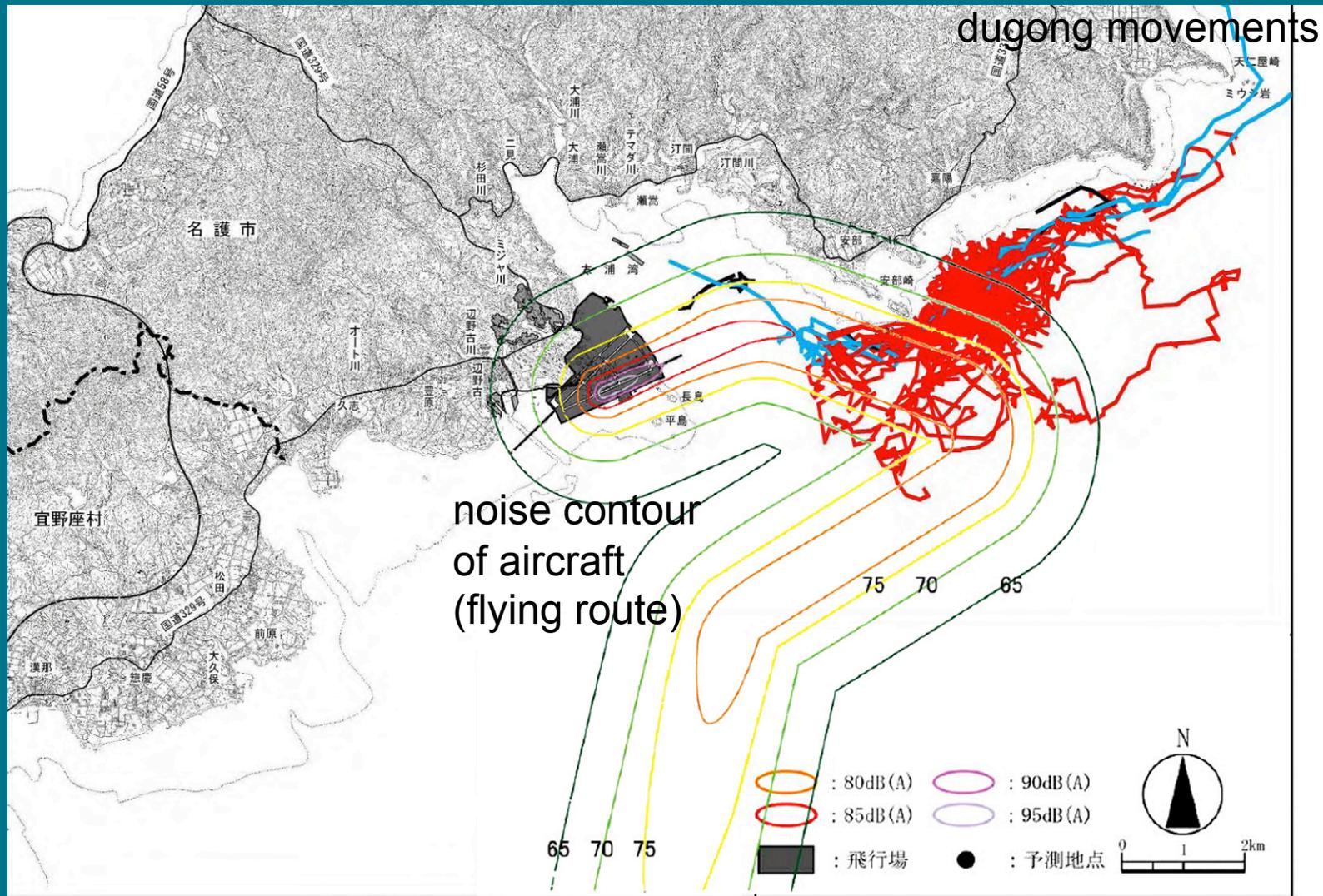


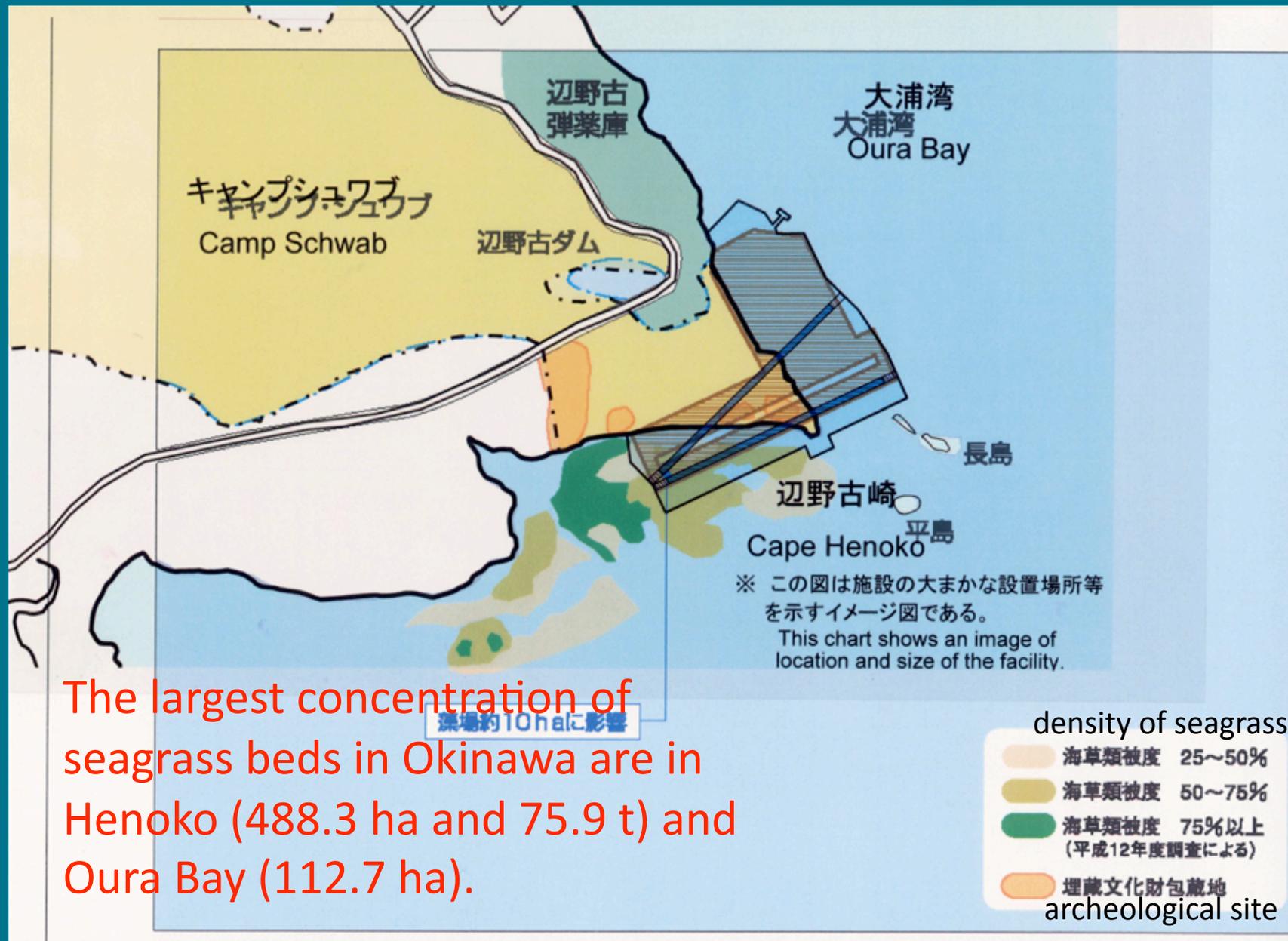
図-6. 16. 1. 44(2) 対象事業実施区域周辺海域におけるジュゴンの出現状況 (個別別) Produced by T. Hosokawa

# Questioning the Draft EIS: No impact on dugongs?



参考図-6.3.8 CH-53の飛行時におけるピーク騒音レベル (L<sub>max</sub>) 予測コンター (25方向着陸 (VFR))

# Questioning the Draft EIS: No Impact on Dugongs?



The largest concentration of seagrass beds in Okinawa are in Henoko (488.3 ha and 75.9 t) and Oura Bay (112.7 ha).

# Movement to protect the Okinawa dugong:

環境アセスメント準備書に  
意見書を出しました！

ジュゴン保護キャンペーンセンター (SDCC)  
「普天間飛行場代替施設建設事業に係る  
環境影響評価準備書に対する意見書集



◆ジュゴン保護キャンペーンセンター◆  
2010年は国際ジュゴン年&国際生物多様性年  
『基地ではなく 保護区を』



involvement with EIA  
process



public awareness campaign



citizens' research



protest



petition gathering



outreach/education

# Movement to protect the Okinawa dugong and promote dugong conservation world-wide

IUCN Rec. and Res.

Japanese Government  
to conduct an EIA with all options;

to establish and declare an action plan for dugong conservation;

US Government

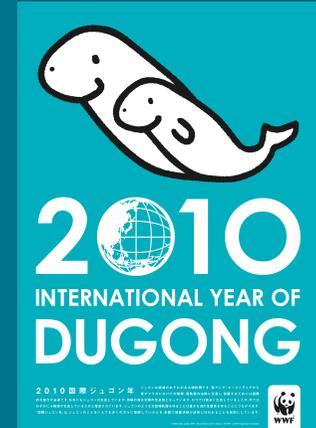
to work with the Japanese government to complete the EIA process;

UNEP/CMS

to promote the conservation of the Dugong during the UN 2010 International Year of Biodiversity;

Dugong range countries

to make efforts to minimize adverse effects on the Dugong and participate in the Dugong MoU.



## US Dugong Lawsuit (ruling in Jan. 2008)

US Department of Defense (DoD) played an important role in the base construction plan;

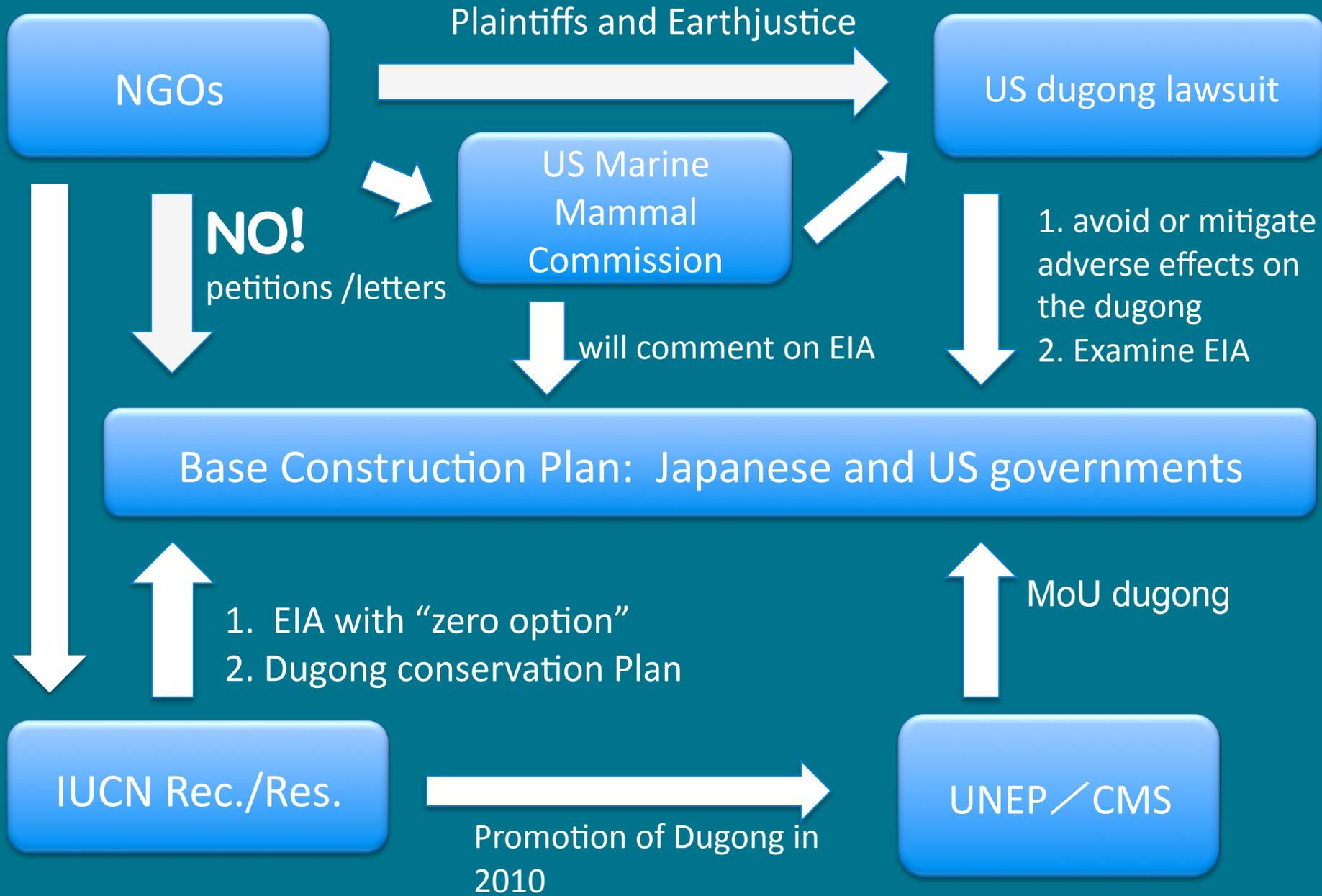
DoD has failed to comply with the requirements of National Historic Preservation Act (NHPA) section 402, thus has to comply with NHPA section 402.

“take into consideration” and avoid or mitigate the effects of the construction on the historical and cultural importance of the Okinawa dugong.

examine the “scope” and “range” of the Japanese EIA to determine whether DoD can incorporate it in its compliance with NHPA.



# International movement to protect the Okinawa dugong



## Conclusion: Better Future for the Okinawa Dugong

The status of the Okinawa dugong still remains on the verge of extinction although more research/survey has been conducted;

Many threats are still there although some measures have been taken;

Military base construction plan remains a major threat and the political nature of the issue makes dugong conservation in Okinawa extremely difficult;

However, as illustrated with the case of EIA, even in this difficult situation , we still see the roles and relevance of science, laws, organizations, and individual efforts.

For that, we remain optimistic for the Okinawa dugong and dugongs in other parts of the world.

Congratulations on  
UNEP/CMS Dugong MoU First Official Signatory State Meeting

and



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