

Innovation in Biodiversity and Habitat Conservation: lessons learnt, EAS Congress 2009

Protection & Rehabilitation of Seagrass Beds in Shandong Province, China

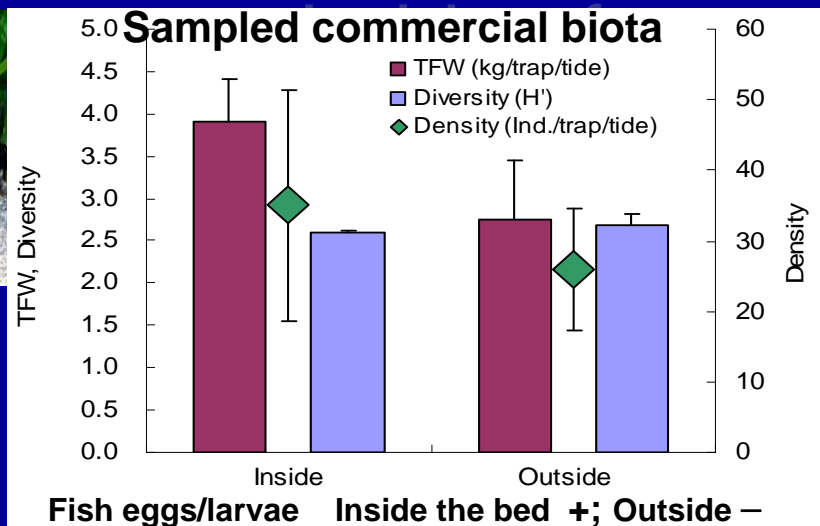
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Importance of the seagrass beds

- Host of high biodiversity
- Fisheries: spawning/nursery ground
- Local farmers: habitats for sea cucumber, clams, sea horses/dragons



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- Material for construction and decoration



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- Help abate climate change and related disasters:
Producing 12% of marine organic carbon (Duarte & Chiscano 1999)
with only 1% of total biomass of marine plants

Seagrass distributions along Shandong Peninsular

Sea grass 1950-70s

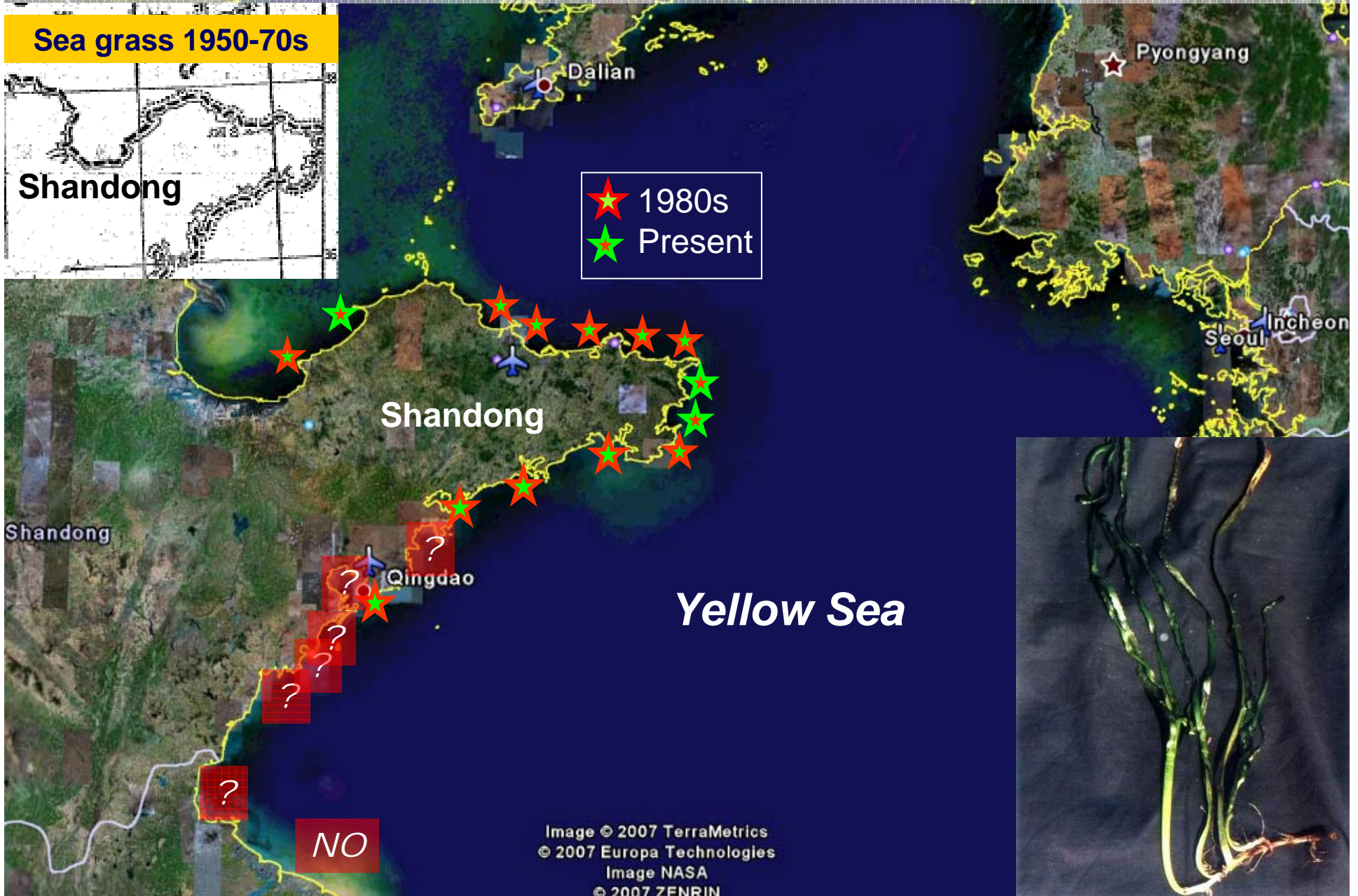


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Seagrasses along the coast of Shandong

1950-70s

- *Phyllospadix iwalensis* Makino, *Zoster marina* L., *Z. caespitosa* Miki
- biomass 920-1480 g/m² (Shandong coast)

1980s

- *Zostera marina* 200-500 g/m²
- *Phyllospadix iwatensis*, *Ruppia maritima* L.

Now

- *Zostera* sp. 750 g/m² (yet with limited area)

Threats to the seagrass beds

- Degradation of the sea environment by the adjacent aquaculture
- Threats from the coastal engineering, esp. reclamation
- Potential damage to the sod due to mal-use of seagrass (transplanting, fishing, etc)
- **Lack of sustainable mechanism and financial support**, due to lack of binding measures (MPA, etc.) from the government and public involvement

Management/protection measures (1)

In place / on-going:

- Management and volunteer protection by local fishery company (fishery company in cooperation with YSLME)
- Improving public awareness (small contract demo of YSLME)
- Improving stakeholder training (small contract demo of YSLME)
- Improving management of the habitat (demo of YSLME, & MPA network for experience exchange)
- First dedicated website on seagrass of North China Sea (<http://www.seagrass.org.cn>)
- Latest approved: Germ Bank of Submerged Plants in the Sea off Chudao (Shandong Province Ocean & Fishery Department, 2009) – first official protection/management



Protection/management measures(2)

Suggested/in preparation:

- Establishment of the more seagrass beds as local and national Marine Protection Area, which ensures protection of the habitat with wise management and exploitation (dually benefiting the nature and the local stakeholders)
- Implement of habitat restoration
- Trial of the mode integrating governmental investment and co-financing and management by the wide public

Other suggests/thoughts

- Mapping & monitoring (improvement of knowledge)
- Artificial seeding and planting (enhancement)
- Facilitation (seagrass rafts ? where benthic growth inhibited)
- Association of actions, e.g. combination of commercial demands (fisheries, eco-tours) with opportunities from concerns of climate change and CO₂ reduction (green quota trade)
- More programs (academic study, demo of restoration)



National S&T Backup Project

National Public Welfare Project

National/YSLME Project

Summary

- The seagrass beds of Shandong Pr. are important
- These seagrass beds are facing threats & declining
- Various efforts being made toward integrated management
- It takes time for the results to turn out yet signs show they're making effects



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- 2009年7月31日在荣成举办海草(藻)床知识讲座 (45, 2009\08\03)
- 《中国海草(藻)床生态恢复与保护研讨会》在威海召开... (48, 2009\07\17)
- 项目组召开协调会, 商谈在荣成举办培训班事宜 (83, 2009\06\12)
- 2009年6月11日实地考察大叶藻生长情况 (104, 2009\06\11)
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Thank you

This study was funded by the UNDP/GEF YSLME
Project