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"First they ignore you, then they laugh at you, then they fight you, then you win."

Mahatma Gandhi (Indian Philosopher, internationally esteemed for his doctrine of nonviolent protest, 1869-1948)



The Egyptian Marine Living Resources of the Red Sea-Conservation Challenges and HEPCA's Role (lessons learned)

- **Presentation content:**
 - **Introduction to the Red Sea living resources (limited but valuable)**
 - **Red Sea living resources between conservation and development/uses; Lessons learned and challenges for sustainable uses**
 - **Summary on HEPCA's overview & roles**



Brief on HEPCA conservation roles with emphasis on solid waste management in the Egyptian Red Sea

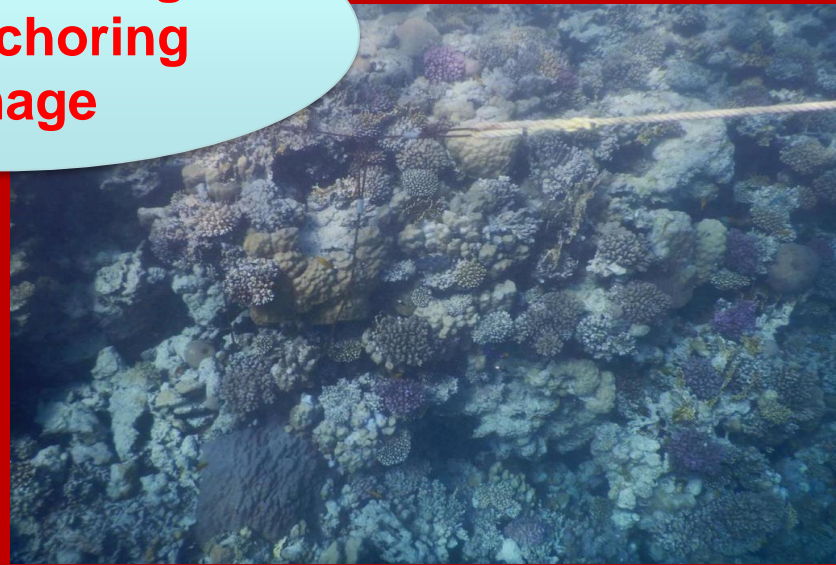
- **Presentation content:**
 - Introduction HEPCA
 - Brief on HEPCA's conservations roles
 - HEPCA and solid waste (successful story)

How we are?

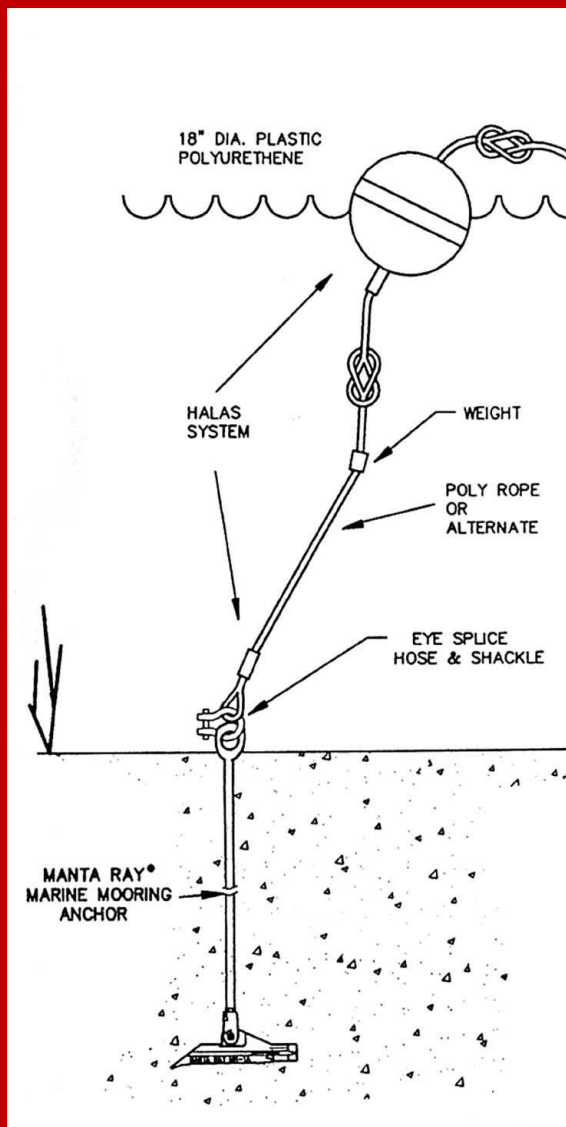
HEPCA (Hurghada Environment preservation and Conservation Association) is an EGYPTIAN NGO specializing in the field of marine and land conservation in the Egyptian Red Sea. What began with a dozen of concerned individuals (divers and dive operators), grew through the years to become a large network of scientists, professional divers, industry experts, and community members who are pro-active in protecting and preserving the natural resources of the Red Sea, as well as supporting the local community. HEPCA is declared officially in 1995. See www.hepca.org



**Start: Avoiding
boat anchoring
damage**



The start: mooring installation





Mooring Project

The largest mooring system in the world.
Preventing coral destruction due to
irresponsible anchoring.



Mooring from Garbage

Protecting Our Resources

Supporting law enforcement and management of Sensitive habitats and key species



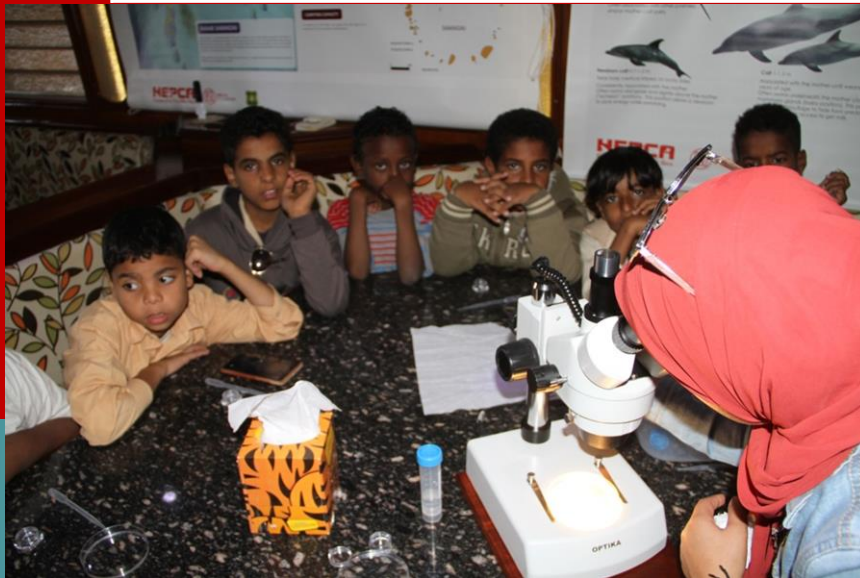
Support Education & Research





Investing in Children & Youth

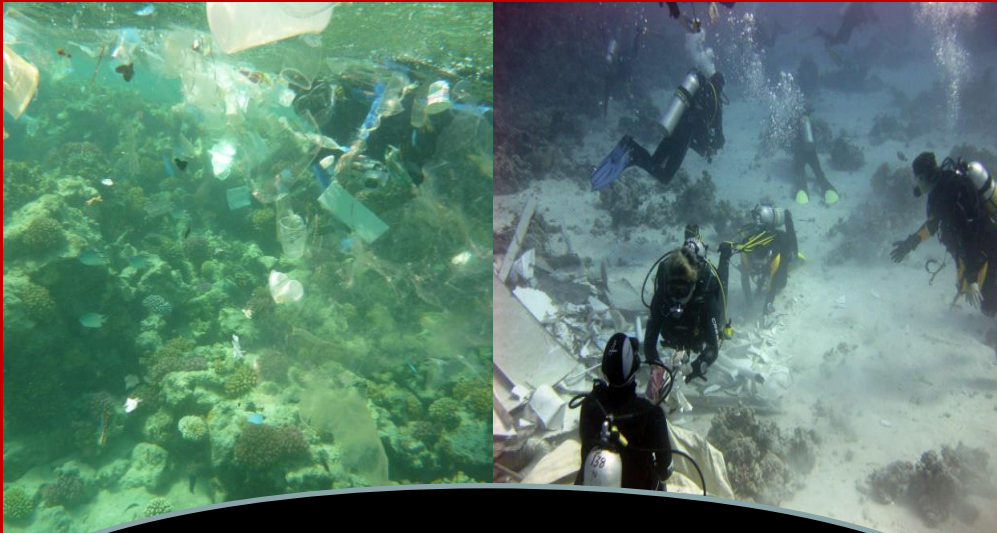
Outreach & awareness



Solid waste management, success story

Start: Clean ups campaigns

- Underwater and above water continuing clean ups
- Community based conservation



**Lesson : un- sufficient without
effective SW management process on
land**

Marsa Alam Solid Waste Management



Solid Waste Management Marsa Alam



for more information visit us at
www.hepca.com



KEPCO
CARING FOR THE SEA

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KEPCO
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HEPCA
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www.hepca.com

Jumbo 8000
4.6 DIESEL DIRECT INJECTION



HEPCA
CARING FOR THE RED SEA

Social Dimensi





Expanded far south
HEPCA-LIFE2



Hurghada Solid Waste Management



24 compactors, 5 Loaders, 6 Broom cars, 56 garbage collection cars of different sizes.



Workers and employees 680 in total and 390 sweepers





48

HAYAH
حياة
مشروع إدارة
الوظائف العمليه

مشروع تحت إشراف

مشروع شوندورات البحر الاحمر
اكبر نظام لحماية الشعاب المرجانية في العالم
أحد مشروعات جمعية الحفاظة على البيئة مبيكا

NEPCA
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NEPCA
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HEPCA
Solid Waste Management Project
Hurgada
Caring For The Red Sea
Hurgada Environmental Protection and Cooperation Authority



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HEPCA
مؤسسة نهر النيل
للمياه
مصر
مياه النظيفة من قلب النيل

HEPCA
CARING FOR THE RED SEA

HEPCA
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Hurghada Solid waste Recycling plant 400 tons/day









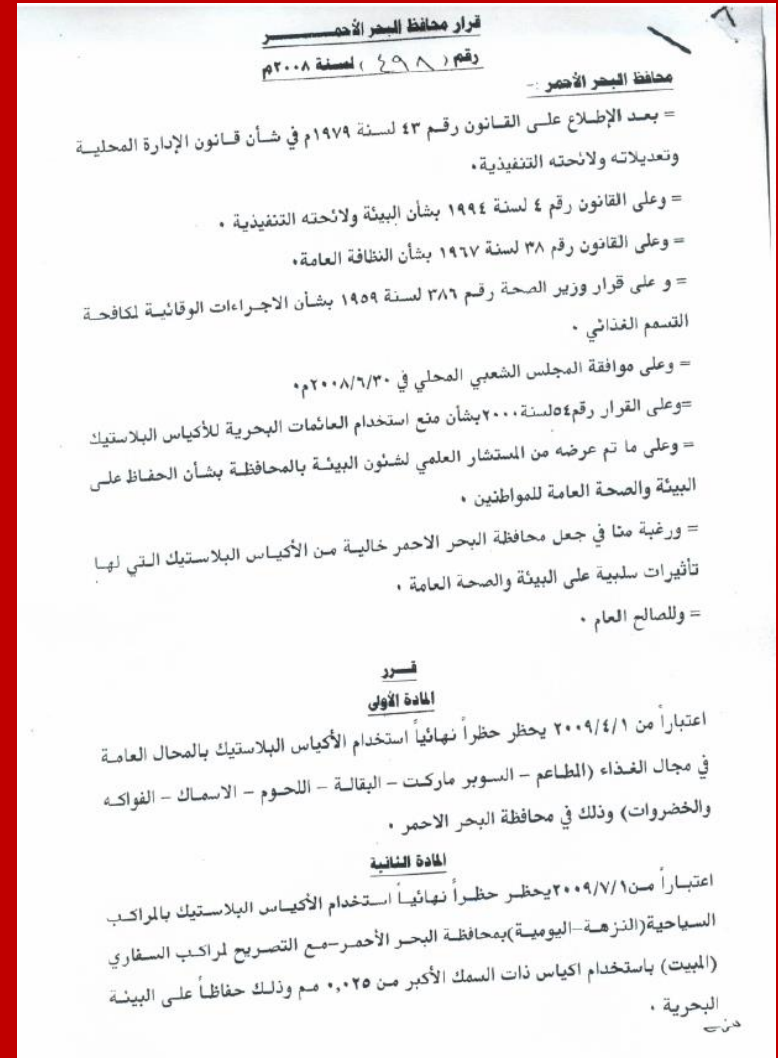




RS Governorate/HEPCA Experience in banning single use plastics

Start:

- 1- Governor Decree No. 54/2000:
Banning plastic bags on pleasure boats
- 2- Governor Decree No. 489, 2008:
Banning light plastic bags in food stalls
Banning plastic bags less than 25
micron thickness in pleasure boats



The Governor Decree, 2018

The ban of the single-use of plastic bags will apply on any food related outlets within the Red Sea like Restaurants, Coffee shops, Supermarkets, Groceries, Butchers, Fisheries, Fruits and Vegetables shops and Pharmacies, and will also ban single-use plastic cutleries used in food and beverage in Restaurants & Coffee shops as well as Safari and daily boats such as knives, plugs, plastic hooks, cups and dishes except for the usage of the heavy duty garbage bags. In addition to the above, the Red Sea governorate will not give authorization for plants to produce plastic bags within the city.

ينص القرار على حظر استخدام الأكياس البلاستيك بالمحال العاملة في مجال الغذاء (المطاعم – السوبر ماركت – البقالة – اللحوم – الأسماك – الفواكه والخضروات) وكذلك الصيدليات، كما يحظر حظرا نهائيا استخدام الأكياس البلاستيك و الأدوات البلاستيك والتي تستخدم لمرة واحدة في كافة أنشطة المشروبات والأطعمة مثل السكاكين والمعالق والشوك البلاستيك والأكواب والأطباق و الماصات (الشاليموه) بالمطاعم وكذلك المراكب السياحية كافة (السفاري - النزهة – اليومية) بمحافظة البحر الأحمر عدا الأكياس الثقيلة الخاصة بتجميع القمامة حفاظا على البيئة البحرية، كما ينص القرار عدم الترخيص لمصانع انتاج الاكياس الخفيفة داخل نطاق محافظة البحر الاحمر.

Red Sea Hotels – plastic free

Our goal is to reduce the amount of one-way plastic in Red Sea Hotels

- **Phase I**
 - Stop disposable plastic in the all-inclusive operation
- **Phase II**
 - Replace plastic all-inclusive bracelets by organic bracelets
- **Phase III**
 - Stop plastic amenities in guest rooms, Stop plastic laundry bags
- **Phase IV**
 - Equipe Housekeeping, kitchen and admin with organic working equipments
- **Phase V**
 - Replace plastic decorations with decorations of organic materials



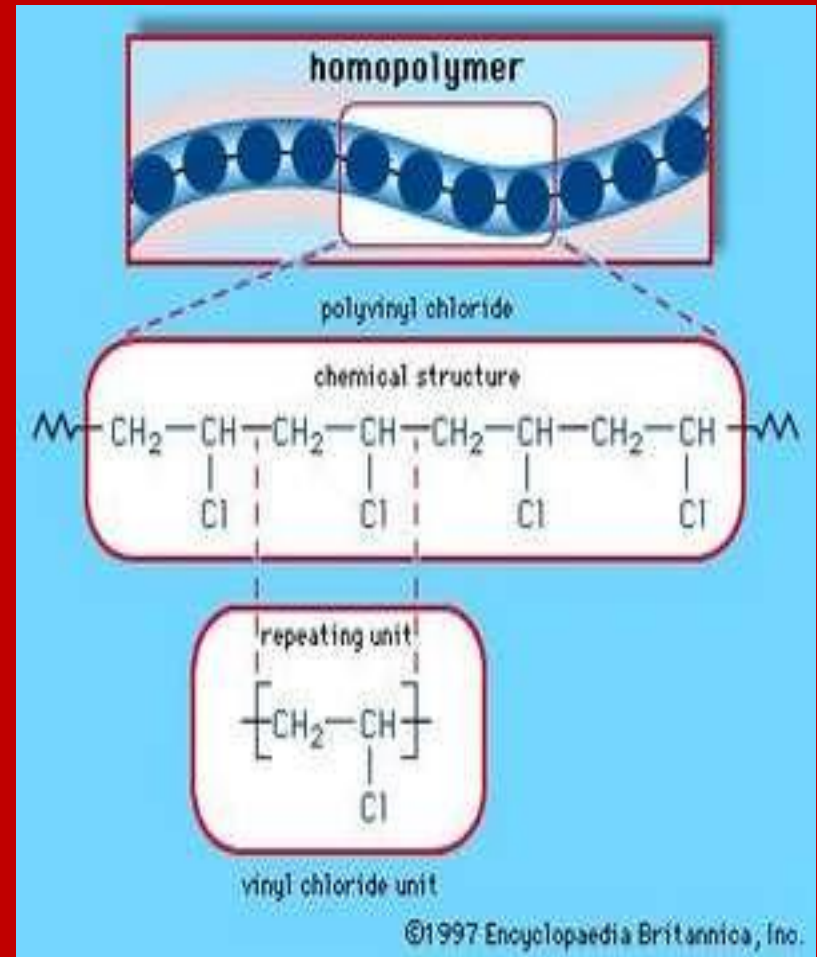
Biodegradable plastic bags

Is it true or commercial fraud



Biodegradable plastic

- All plastic are degrading by bacteria , i.e. biodegradation
- Polymers are just fragmenting the long hydrocarbon chain in smaller chains
- Theoretically, this increase the surface of the plastic plastics and accelerate the rate of degradation under certain condition:
 - 30oC temperature
 - Enough UV light
 - Enough oxygen
 - “No available in marine or dumping sites”



Major publicity success: HEPCA and the Red Sea Governorate were selected by the Egyptian National Program of solid waste as Model for implementing the Extended Producer Responsibility(EPR), (https://m.facebook.com/story.php?story_fbid=142303531416403&id=100069102704325&sfnsn=scwspwa in Arabic).

Coca Cola/HEPCA cooperative project

“Towards more efficient municipal solid waste management plan for the city of Hurghada”

Goal

“improve the MSW management process for the City of Hurghada, with emphasis on collection and recycling of PET ”.

Through several specific objectives as follows:

- 1-Encourage the community to be engaged in the MSW management process: (cleanup and awareness campaigns, outreach programs).**
- 2- Improve solid waste collection efficiency by 10-15%:**
- 3: Improve the PET collection quantities and quality, and enhance the PET recycling process:**

Future aspiration

-  Install PET recycling plant of 7,000 tones/year
-  Install garbage bag production line to reduce introduction of plastic bags
-  Recycling of organic waste, as feed for animals (restaurants & kitchens, 100 tons/day)
- Recycling of RDF
-  Reduce the reject by at least 30%
-  Banning the single use plastics based on community support, and providing more and more of multiple use bags
-  Build an educational Solid waste recycling Center

In conclusion:

- **It is Questionable: EPR (Extended Producers responsibility) OR EIR (Extended Impactors Responsibility) ??**
- **Raising the values of the recyclable materials by producers, will solve the problem**
- **I do believe that the SW management problems are not due financial constrains, the lack of proper management (HEPCA, as a case)**
- **NGOs/SW management is a win-win situation as a huge revenue generation tool to cover cost needs for their conservation activities**
- **Civil societies including non-profit NGOs are the key factor to solve the solid waste management in many cities (HEPCA's case)**

إعلان الغردقة

نحو الإستخدام المستدام
للموارد الطبيعية للبحر الأحمر



Thank you