



Marine litter Management In Egypt

Introduction-projects-Future plans

Sameh AYOUB, Ph.D
Head of Environmental Quality Department
EEAA - Alexandria
National Focal Point for Marine litter



Contents

1- ML definition & sources

2- Historical background & Necessity of implementation
(BC, EcAp,MLRAP, IMAP)

3- Ongoing work

4- Future plan



Marine litter is any persistent, manufactured or processed solid material discarded, disposed of or abandoned in the marine and coastal environment

It may be visible (**macrolitter**), hardly visible or even invisible (**microlitter**)...



Land-based sources

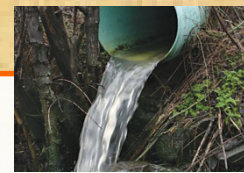
littering of beaches, coastal areas



untreated municipal sewerage



industrial outfalls



discharge from storm water drains



land-fills





Sea-based sources

fishing industry



shipping (e.g. transport, fishing)



offshore mining and extraction



illegal dumping at the sea



discarded fishing gear





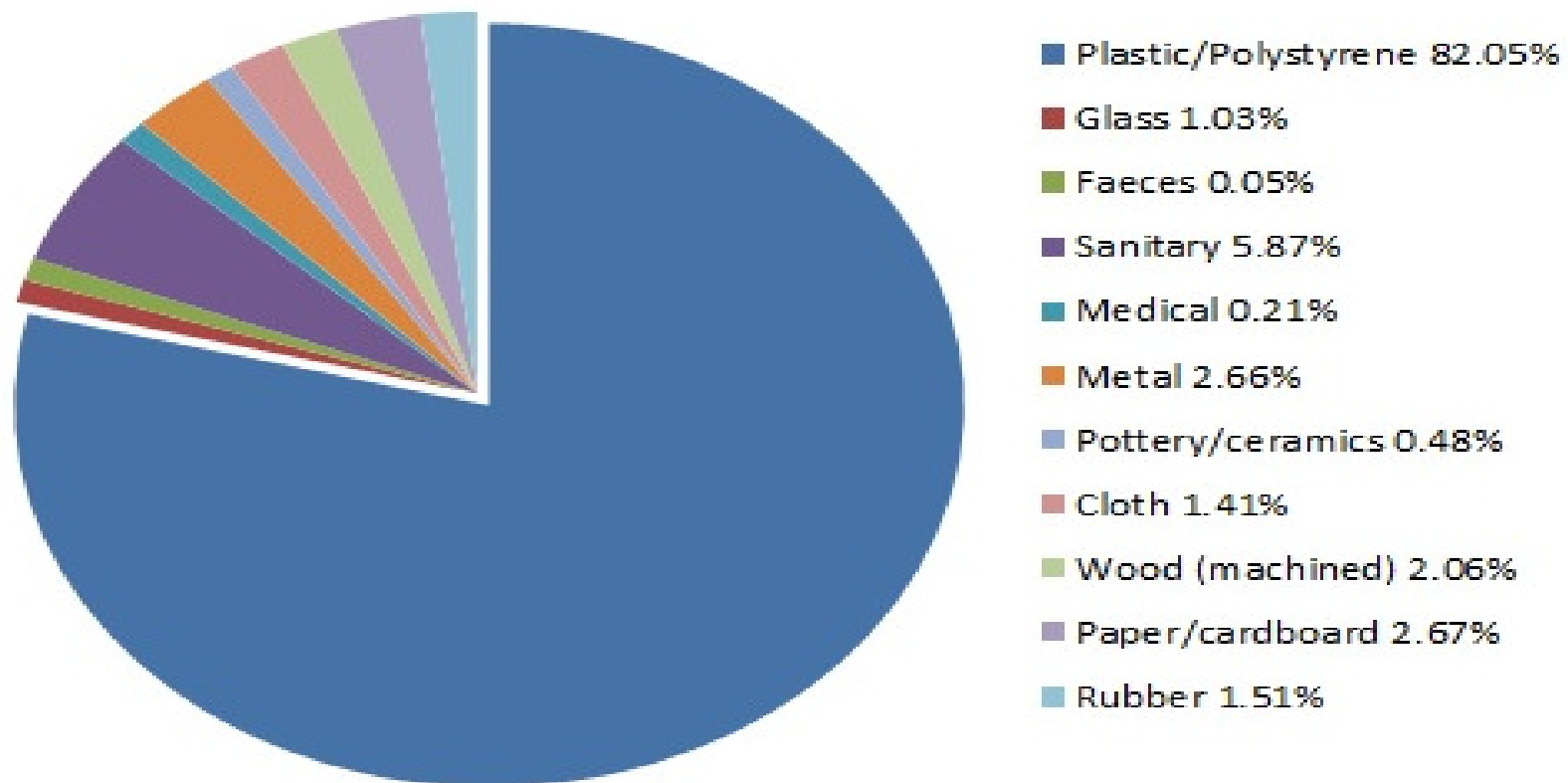
SOURCES OF MARINE LITTER





Marine Litter Composition

Survey Type: **100m** Year: **2014** Number of surveys: **252**
Country: **All** Region: **All** Search: **All**









- The Albatross is the largest sea bird in the world and has a wing span of over 10 feet. It is estimated that 40% of these young birds die from ingesting plastic.
- The islands where they live are located in the middle of the Pacific Ocean which reportedly has the largest concentration of plastic trash found in any of our oceans. The area of plastic trash is often referred to as “The Great Pacific Garbage Patch” and has been described as being almost twice the size of Texas.













© John Cancalosi



- About 100,000 animals such as dolphins, turtles, whales, penguins are killed every year due to plastic bags. Many animals ingest plastic bags, mistaking them for food, and therefore die. And worse, the ingested plastic bag remains intact even after the death and decomposition of the animal. Thus, it lies around in the landscape where another victim may ingest it.
- Toxic effect when sea foods consumed by human

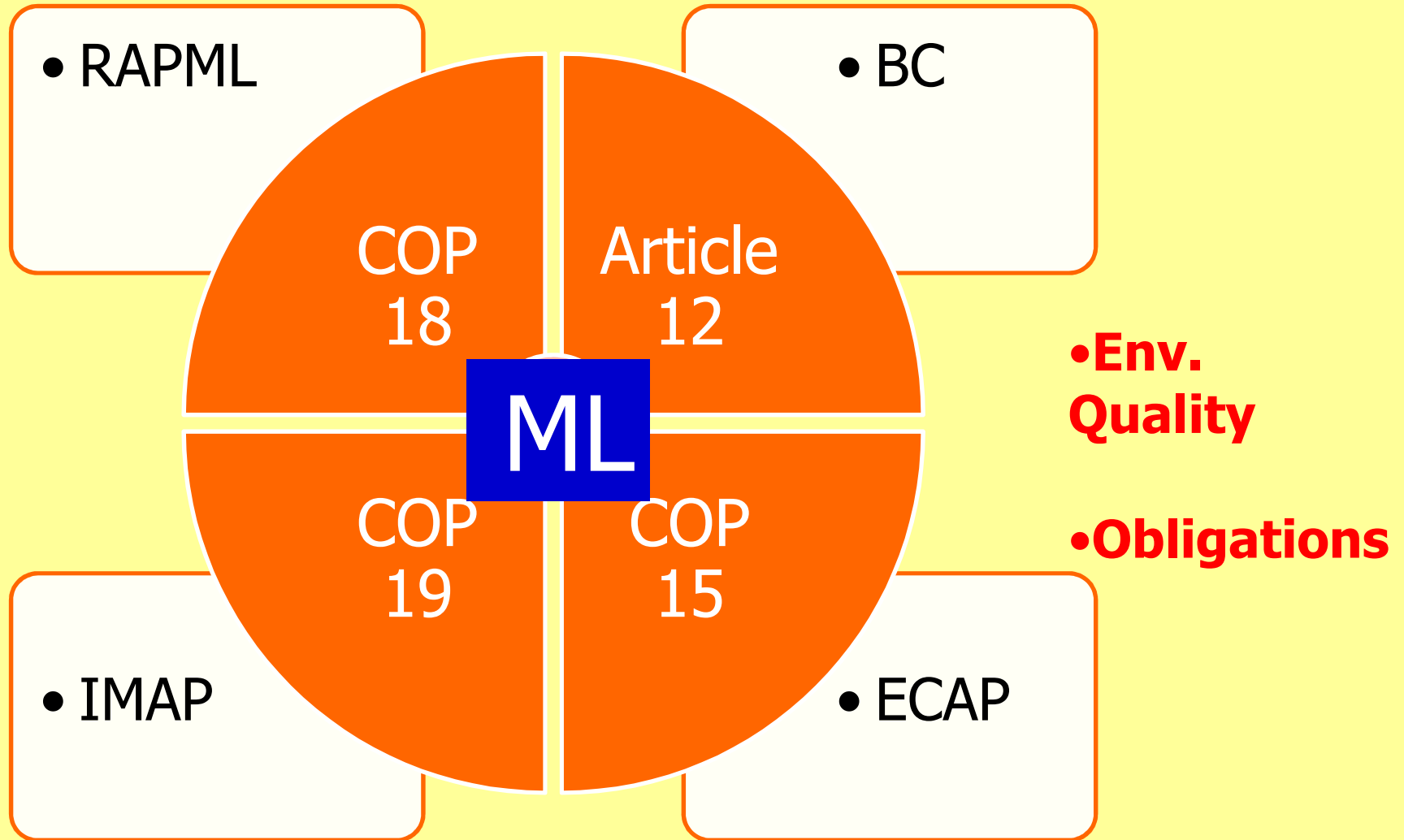


Coastal Population and Waste/plastic generation in the Mediterranean countries

Country	Coastal population ¹	Waste generation rate [kg/person/day] ²	% Inadequately managed waste ³	Waste generation [kg/day]	Inadequately managed plastic waste [kg/day] ⁷	Plastic waste littered [kg/day] ⁷
Albania	2 530 533	0,77	45	1 948 510	77 897	3 488
Algeria	16 556 580	1,2	58	19 867 896	1 378 693	47 484
Bosnia/Herzegovina	585 582	1,2	40	702 698	33 813	1 679
Croatia	1 602 782	2,1	9	3 365 842	37 053	8 044
Cyprus	840 556	2,07	0	1 739 951	831	4 158
Egypt	21 750 943	1,37	67	29 798 792	2 572 170	77 179
France	17 287 280	1,92	0	33 191 578	0	66 051
Greece	9 794 702	2	0	19 589 404	0	38 983
Israel	6 677 810	2,12	1	14 156 957	12 577	39 498
Italy	33 822 532	2,23	0	75 424 246	0	89 755
Lebanon	3 890 871	1,18	34	4 591 228	123 700	7 300
Libya	4 050 128	1,2	23	4 860 154	132 985	11 616
Malta	404 707	1,78	6	720 378	5 456	1 722
Monaco	34 050	2,1	0	71 505	0	171
Montenegro	260 336	1,2	30	312 403	11 353	747
Morocco	17 303 431	1,46	66	25 263 009	824 650	25 010
Palestine	3 045 258	0,79	6	2 405 754	11 515	3 825
Slovenia	336 594	1,21	1	407 279	550	973
Spain	22 771 488	2,13	0	48 503 269	0	125 623
Syria	3 621 997	1,37	65	4 962 136	419 763	12 852
Tunisia	7 274 973	1,2	60	8 729 968	621 077	20 865
Turkey	34 042 862	1,77	16	60 255 866	1 187 323	144 012
Total/mean	208 519 478	2	23	360 939 138	7 451 413	731 036



Historical background & Necessity of implementation





1- BC (Barcelona Convention) 1976

Regional convention adopted in 1976 to prevent and abate pollution from ships, aircraft and land based sources in the Mediterranean Sea.

1995 ...for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (Barcelona Convention) -



2- Ec Ap (Ecosystems Approach) COP 15, 2008

A strategy for the integrated management of land, water and living resources that promoted conservation and sustainable use .

Strategic goals:

- 1.To protect, allow recovery, and restore the structure and function of marine and coastal ecosystems – thus also protecting marine biodiversity to achieve sustainable use.
- 2.To reduce pollution in the marine and coastal environment so as to ensure that there are no significant impacts or risks to human and/or ecosystem health and/or on the uses of the sea and the coasts.
- 3.To preserve, enhance, and restore a balance between human activities and natural resources in the sea and the coasts and reduce their vulnerability to risks.



3- (MLRAP).

COP 18, 2013

The ML regional Plan provides for comprehensive and integrated Marine Litter prevention and management based on Article 15 of the **LBS** Protocol and several relevant Articles under the other Protocols of the Barcelona Convention (**Dumping**, Prevention and Emergency, Biodiversity, ICZM Protocols).

The main objectives of the ML Regional Plan are to prevent and reduce ML generation and its impact on marine and coastal environment in order to achieve good environmental status (GES) as per the relevant Mediterranean ecological objectives and ecosystem approach based Marine Litter related targets adopted by UNEP/MAP in



4- (IMAP) Integrated Monitoring and Assessment Programme and related Assessment Criteria

(COP 19, 2016),

- Enable for the first time a quantitative, integrated analysis of the state of the marine and coastal environment, covering pollution and **marine litter**, biodiversity, non-indigenous species, coast, and hydrography, based on common regional indicators, targets and Good Environmental Status (GES) descriptions.

- **Common Indicator 22:** Trends in the amount of litter washed ashore and/or deposited on coastlines (EO10);
- **Common Indicator 23:** Trends in the amount of litter in the water column including micro plastics and on the seafloor (EO10)
- **Candidate Indicator 24:** Trends in the amount of litter ingested by or entangling marine organisms focusing on selected mammals, marine birds, and marine turtles (EO10).



History and background

Athens, 13 – 15 May 2014

Supporting the implementation of the Regional Action Plan on Marine Litter Management in the Mediterranean

Athens, Greece, 30 March - 1 April 2015

Meeting of the Integrated Monitoring Correspondence Group

Tirana, Albania, 19-20 July 2016

Regional Meeting on the Further Implementation of the Regional Plan for the Management of Marine Litter in the Mediterranean

Marseille, France, 19-21 Oct. 2016

Meeting of the Ecosystem Approach Correspondence Group on Pollution Monitoring

Rome, Italy, 10-12 Jul. 2018

Meeting on Integrated Monitoring and assessment program, challenges



Ongoing Work


1- SWIM_H2020- EFH-EG-3

Assessment of marine litter in the Egyptian Mediterranean coastline and proposed management options

2- SSFA- MED-POL

Adopt a beach , Fishing for Litter

- Floating litter
- Micro plastic <5mm
- Sea floor litter



1- H2020- EFH-EG-3

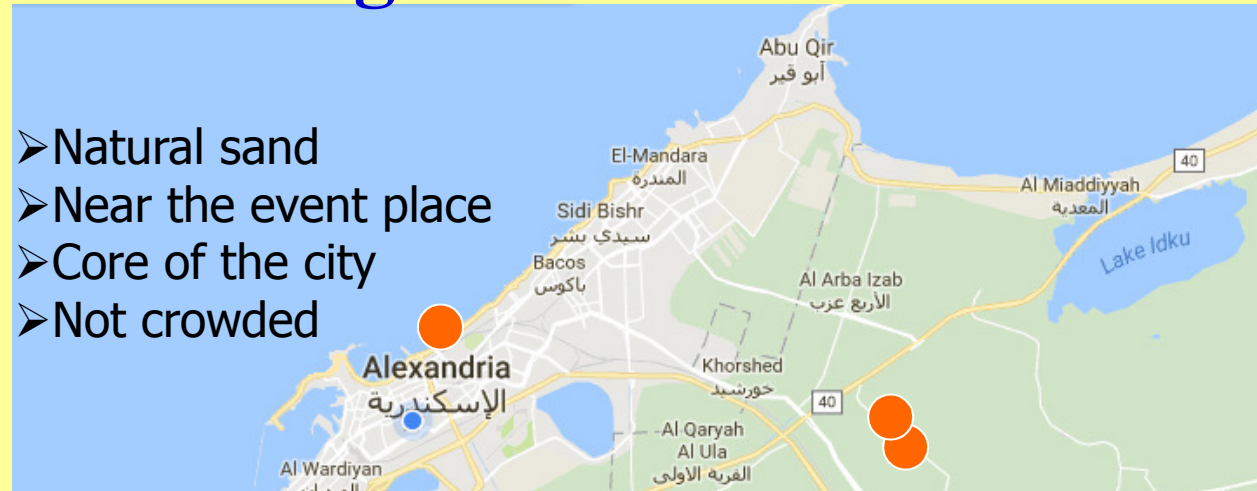
- **Task 1:** Carry out marine litter pilot surveys (including a workshop) on the Med Coast of Egypt along with a literature review focusing on strengthening the evidence base concerning marine litter and in particular plastics.
- **Task 2:** Compile a document with 'best' available techniques and methodologies for monitoring marine litter in the coastal and marine environment and short listing of best environmental practices for management of marine litter.
- **Task 3:** Carry out a literature review on the degradation process for plastics.
- **Task 4:** Review the socioeconomic implications of marine litter.

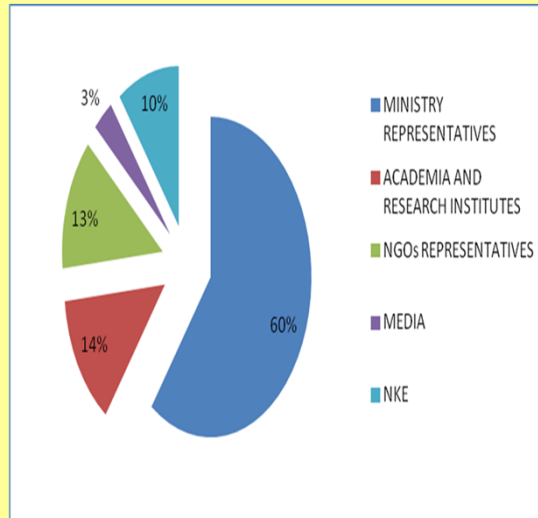


Training site



- Natural sand
- Near the event place
- Core of the city
- Not crowded



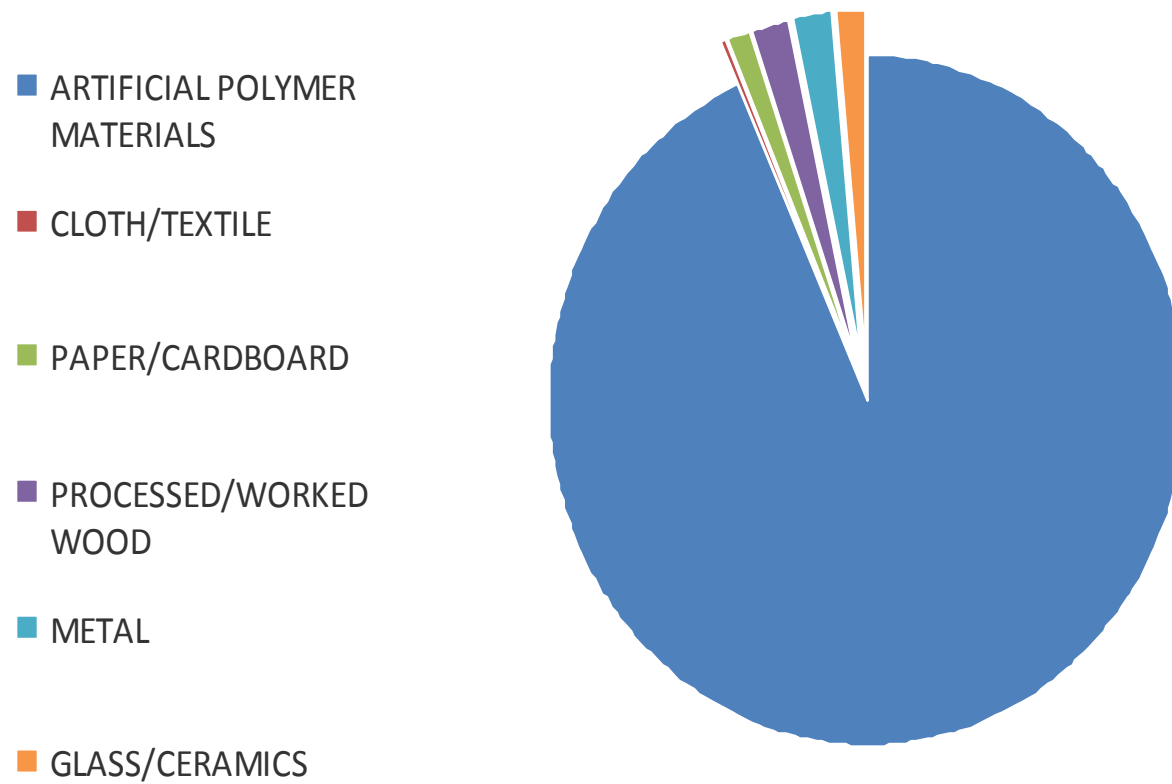


Code	Items name
G1	4/6-pack yokes, six-pack rings
G3	Shopping bags, incl. pieces
G4	Small plastic bags, e.g. freezer bags, including pieces
G5	Plastic bag collective roll; what remains from rip-off plastic bags
G7	10.5=> Drink bottles
G8	10.5< Drink bottles
G9	Cleaner/cleanser bottles & containers
G10	Food containers incl. fast food containers
G11	Beach use related cosmetic bottles and containers, e.g. Sunblocks
G12	Other cosmetics bottles & containers
G13	Other bottles & containers (drums)
G14	Engine oil bottles & containers <50 cm
G15	Engine oil bottles & containers > 50 cm
G16	Jerry cans (square plastic containers with handle)
G17	Injection gun containers
G18	Crates and containers / baskets
G19	Car parts
G21	Plastic caps/lids from drinks
G22	Plastic caps/lids from chemicals, detergents (non-food)
G23	Plastic caps/lids unidentified
G24	Plastic rings from bottle caps/lids
G25	Tobacco pouches / plastic cigarette box packaging



Results

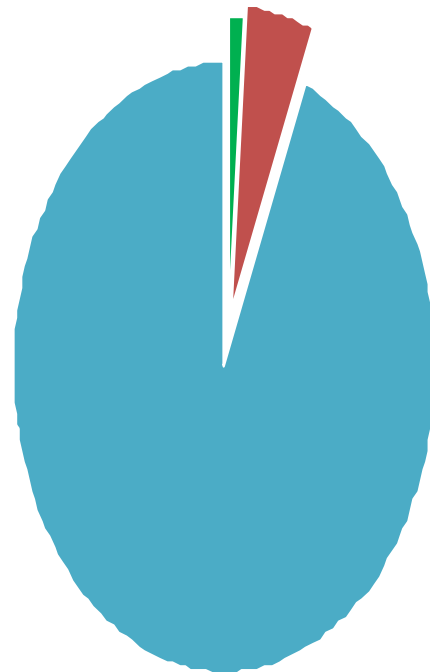
Marine litter main materials





Marine litter main sources

- Fishing
- Non-sourced
- Illegal dumping
- Shipping
- Tourism





Plastic

wide range of synthetic or semi synthetic organic solid materials

suitable for the manufacture of industrial products.
typically polymers Polyethylene, polyvinyl chloride, polystyrene



- In 2014, some 311 Mio t of plastics were produced and only 14% of plastic is collected for recycling globally.

Country	Estimated amount of plastic waste tons /year	Estimated plastic leakage into the ocean /sea tons /year
Egypt	4.5 million tons per year	150'000 – 390'000 t
Mexico	7.28 million tons per year	101'000 t
Morocco	1 million ton per year	50'000 to 120'000 t
Philippines	2.7 million tons per year	280'000 to 750'000 t

plastic waste from reaching the sea. In a business-as-usual scenario the ocean is expected to contain 1 ton of plastics for every 3 tons of fish by 2025 and by 2050 more plastics than fish



9.1 B TONS OF PLASTIC PRODUCED

6.9 B TONS OF PLASTIC WASTE



9% RECYCLED

12% INCINERATED

79% IN LANDFILLS

13.2 B TONS OF WASTE IN LANDFILL BY 2050
if trends continue





2- SSFA- MED-POL

2.5 Implementation of the Regional Plan on Marine Litter:

Implementation of Activities within the framework of the Marine Litter MED Project:

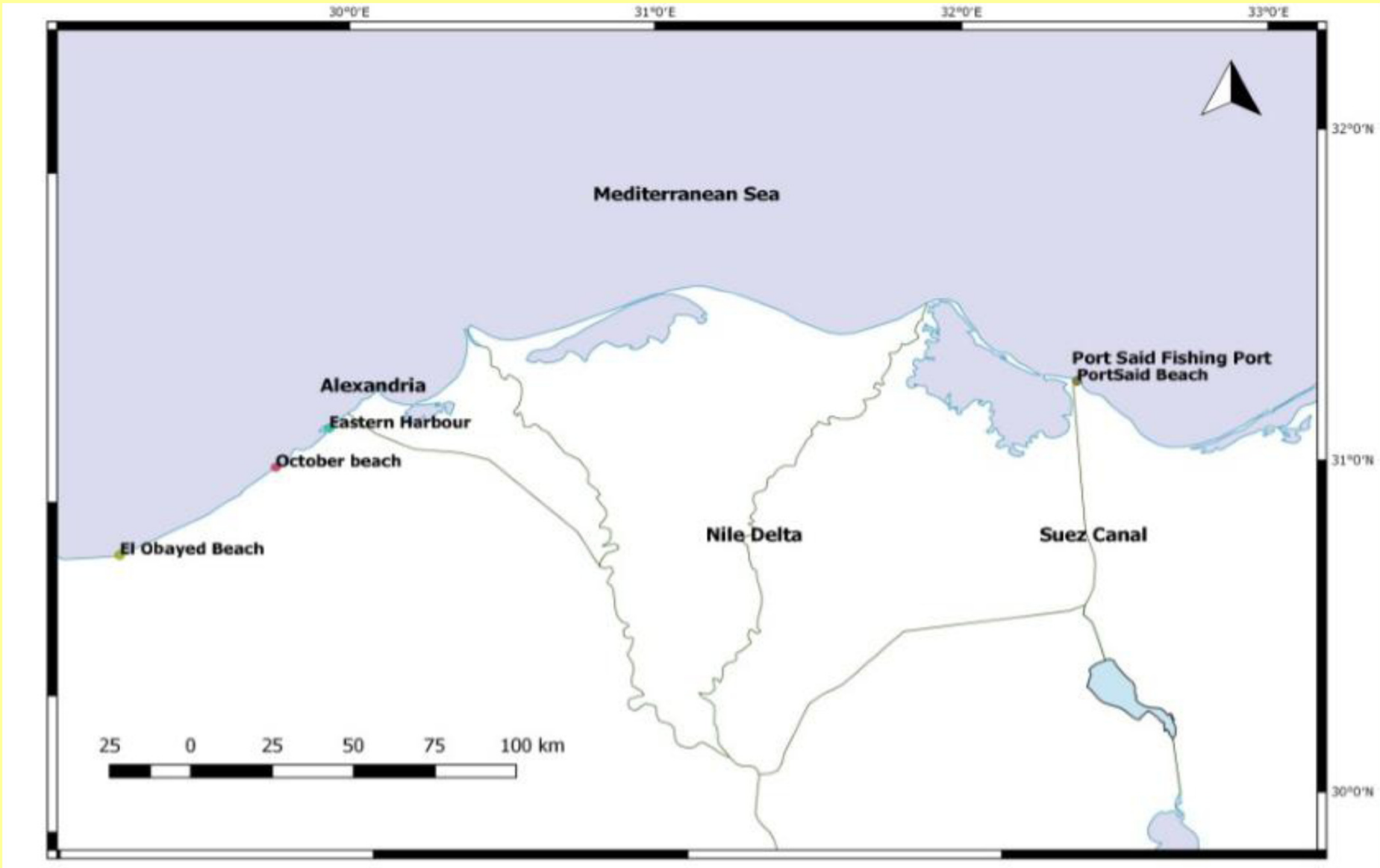
i. “Fishing-for-litter” pilots:

- a. Undertake Awareness raising activities at national and local level on the issue of marine litter found on the seafloor and its effect on the marine environment;
- b. Enhance national and local capacity on the application of “Fishing-for-litter” measure;
- c. Prepare and implement a monitoring programme, collect information on types, quantities, weight and sources of marine litter items found on the seafloor based on citizens science principle and report them to the National Authorities;
- d. Identify among which of the areas marine litter is mostly accumulating and which types of marine litter are dominant; _____
- e. Ensure proper collection, disposal and management of the collected marine litter at ports;
- f. Provide feedback on the effectiveness of the implementation of the Fishing for Litter guidelines adopted by COP 19 (IG 22/10);
- g. Prepare periodical reports on the activities undertaken.



ii. “Adopt a beach” pilots:

- a. Select two beaches per country close to river mouths as appropriate;
- b. Identify the local partner in charge of the project;
- c. Undertake two awareness campaign on national and 2 at local levels on the issue of marine litter stranded at beaches and their effect on the marine and coastal environment;
- d. Carry out a national workshop to disseminate best practices related to “Adopt-a-beach” measures;
- e. Prepare and implement a monitoring programme, collect information on types, quantities, weight and sources of marine litter items found stranded on beaches based on citizen science principle and report them to National Authorities;
- f. Investigate and record on periodical basis the contribution of local rivers on marine litter found on beaches;
- g. Undertake periodic clean-up of the selected beaches;
- h. Prepare periodical reports on the activities undertaken.





Expected Output of the project

- 1- General overview of the health status of the study sites before and after the pilot projects.**
- 2- Producing training material to guide the Implementation of the “Fishing-for-Litter” and “Adopt-a-Beach” pilots based on Egypt’s needs under common standards together with those pilots implemented to the beneficiary to the Marine Litter MED project.**
- 3- Monitoring program and data analysis for FfL at Port Said port and Alexandria Eastern Harbor.**
- 4- Describe the methodology of implementation and collaboration with fishermen communities, Egyptian Sea Scouts club and local scientific institutions**
- 5- Analysis of litter from beaches and fish nets (litter from seafloor)**



6- Enhance the understanding of Fishing for litter measures to improve reception and waste disposal by fishermen in shelters and ports on national level

7- Increase awareness: workshops, awareness activities (with fishermen, local authorities, universities, NGOs and the community)

8- Clean up activity for the 3 sites Adopt a beach taking into account safety rules and cooperation with local authorities for proper disposal of collected marine litter

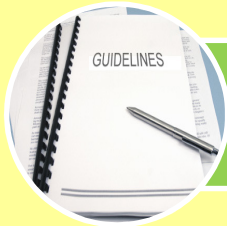
9- Future plan for ML management in Egypt based on the pilots output



Future plan



Plastic waste reduction program



Preparing guidelines for ML
Management for all stakeholders



Standard monitoring program

Tanta, Mansura, Suez, Beheira



Thank you very much
For your attention