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**Agenda item 3: Regional Plan on Marine Litter Management in the Mediterranean and Related Best Practices**

**Adopt-a-Beach (Main Elements)**

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Annex I: Integration of “Adopt-a-Beach” measures with the National Monitoring Programmes for Beach Marine Litter

## **List of Abbreviations / Acronyms**

<b>COP</b>	Conference of the Parties
<b>EU</b>	European Union
<b>IMAP</b>	Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria
<b>MAP</b>	Mediterranean Action Plan
<b>NGO</b>	Non-Governmental Organizations
<b>PET</b>	Polyethylene Terephthalate
<b>PoW</b>	Programme of Work
<b>UN</b>	United Nations

## 1 Introduction

1. Article 10 of the Regional Plan on the management of marine litter in the Mediterranean, herein after referred to as Marine Litter Regional Plan, provides for the Contracting Parties to remove accumulated litter from Mediterranean beaches. This is achieved by applying by 2019, as appropriate, Adopt-a-Beach measures and or similar measures and enhancing public participation role with regard to marine litter management.

2. Article 14 of the Marine Litter Regional Plan stipulates that the Secretariat in cooperation with relevant international and regional organizations, shall prepare specific guidelines taking into account where appropriate existing guidelines, to support and facilitate the implementation of measures provided for in Article 10 of the Regional Plan (Adopt-a-Beach measures).

3. The present Adopt-a-Beach guidelines are prepared in the framework of the EU-funded Marine Litter MED project and MAP PoW 2018-2019, taking into account existing best practices, regional/ international experience.

4. The Adopt-a-Beach guidelines objective is to assist the Contracting Parties to reduce marine litter on beaches along the Mediterranean coastline with the active involvement of civil society and public.

## 2 Scope of the “Adopt-a-Beach” measures

5. The “Adopt-a-Beach” measures comprise of actions related to beach cleaning/ disposal and marine litter surveying programmes with an overall scope to help Mediterranean people to care about their coastline and clean it; to raise public awareness on the threat posed by marine litter; as well as to support the national marine litter monitoring programmes.

6. The “Adopt-a-Beach” measures aim to:
- i. Keep beaches clean and marine litter-free in the Mediterranean;
  - ii. Raise public awareness on the problem of marine litter;
  - iii. Educate citizens about the sources of marine litter and how they are generated;
  - iv. Enhance public support at country level, for national and international action to clean up coastal environments; and
  - v. Collect valuable data and information to assess the quantities and stranding fluxes of beach marine litter in the Mediterranean and to help achieve the reduction goal of 20% on beach marine litter by 2024 agreed by the Mediterranean countries, Contracting Parties to the Barcelona Convention by COP19.

## 3 Implementation phases of the “Adopt-a-Beach” measures

7. Adopt-a-Beach measures consist of four phases:
- a. Preparatory activities
  - b. Implementation activities
  - c. Reporting activities
  - d. Possible integration with current IMAP-based national monitoring programmes.

### 3.1 Preparatory activities

8. Preparatory activities entail the following tasks:
- a. Appointment of a ‘Beach Coordinator’;
  - b. Selection of candidate beaches;
  - c. Defining beach marine litter units;
  - d. Engagement of local communities

- e. Organizing teams of collection volunteers;
- f. Development of the awareness raising campaigns and training materials needed for the organization of outreach activities targeted to the local communities; and
- g. Securing necessary material and equipment needed for the cleaning/ disposal activities.

### 3.1.1 *Tasks of the “Beach Coordinator”*

9. The “Beach Coordinator” is in charge of the execution of the Adopt-a-Beach measures at local/ national level in order to report to national competent authorities the timely execution of the required tasks. The “Beach Coordinator” may be a member of the community, being in charge of and responsible for the implementation of the Adopt-a-Beach measures in the selected beaches, being in other terms the project manager of the Adopt-a-Beach measures. The “Beach Coordinator” may be appointed by the National Authorities, or the authorities being in charge for the implementation of the Adopt-a-Beach measures.

10. The main tasks of the “Beach Coordinator” are:

- a. Engage and coordinate the participation of the local communities, local authorities, NGOs, primary and secondary schools, civil society, volunteers etc.;
- b. Implement the beach selection criteria;
- c. Implement a harmonized methodology proposed under the present guideline document in consultation with National Authorities;
- d. Control the timely implementation of the Adopt-a-Beach measures based on the agreed work plan with national authorities;
- e. Train the volunteers and corresponding teams participating in the Adopt-a-Beach measures;
- f. Ensure that safety precautions are followed;
- g. Develop a national photo guide for beach marine litter including the marine litter items most commonly found on the beaches (i.e. pictures and a short description);
- h. Oversee the awareness raising campaign, including the preparation and development of the campaigns’ main messages and materials in consultation with the national authorities;
- i. Consider whether it is appropriate to implement additional steps as detailed below:
  - Identification of beach needs and priorities.
  - Control the production of information material on the conservation of the beach.
  - Develop an inventory of Adopt-a-Beach measures implemented at national level and ensure synergies and cooperation.
- j. Submit progress reports and data (e.g. number of volunteers, amounts and composition of marine litter collected, etc.) to national authorities; and
- k. Monitor and evaluate the costs, benefits and governance of the Adopt-a-Beach measures in order to assess the success of each measure and share lessons learnt.

### 3.1.2 *Selection of candidate beaches*

11. Information on beach environmental conditions is required to identify needs and priorities of the beach to be selected for the Adopt-a-Beach measures. This includes weather and sea prevailing conditions; proximity to local rivers, discharges of waste water, harbours, fishing grounds, shipping lanes or any other source of beach marine litter.

12. Environmental conditions of the beach should be established through an assessment checklist that considers aspects such as existing waste disposal bins and containers, type of bins and containers (with or without lids), existing recycling containers, information signs on permitted and prohibited uses, etc.

13. A typical assessment checklist is presented below:

ASSESSMENT CHECKLIST ON BEACH CONDITIONS	
Name of the beach	
Date	
Are there waste disposal bins and containers on the beach? (Y/N)	
What type of bins and containers? (with or without lids)	
Are there recycling containers on the beach? (Y/N)	
What waste fractions they collect?	
Are there information signs on permitted uses of the beach? (Y/N)	
Are there information signs that prohibit something? (Y/N)	
What is prohibited?	
Are you missing something on the beach (signs, toilets, etc.)? (Y/N)	
What are you missing?	

14. Different types of beaches should be considered for the Adopt-a-Beach measures (urban beaches, rural beaches, remote beaches, beaches close to riverine areas, river mouths, harbours, etc.) to have a comprehensive overview on the exposure of the beaches to marine litter sources. Special attention should be drawn to the contribution of local river streams on beach marine litter generation.

15. Adopt-a-Beach measures should be implemented in conjunction with the current IMAP-based national monitoring programme for marine litter. Accordingly, it should be ensured that beaches are selected under common criteria. These include:

- Year-round accessibility to volunteer teams and the local communities.
- Accessibility for ease marine litter removal.
- Posing no threat to endangered or protected species and their habitats, such as sea turtles, sea birds or shore birds, marine mammals or sensitive beach vegetation. Hence, this would exclude protected areas depending on local management arrangements.

### 3.1.3 Defining beach marine litter units

16. A beach marine litter unit consists of the whole beach. In case of long beaches, and depending on capacity of volunteer teams, the beach can be divided into several units or stretches for reporting purposes.

### 3.1.4 Engagement of local communities

17. Engagement of local communities should aim to sensibilise and engage to purpose the local communities, local authorities, NGOs, schools and civil society, to participate in the Adopt-a-Beach measures as well as to inform general public and their impacts.

### *3.1.5 Organizing teams of collection volunteers*

18. Volunteers should be organized in teams and assigned specific beach collection units in order to undertake collection activities.

19. Volunteer collection teams may comprise of 5 to 6 persons.

20. Each volunteer collection team should be assigned a team leader who oversees collection and recording activities.

### *3.1.6 Development of the awareness raising campaigns and training materials*

21. When designing the awareness raising campaign, the campaign slogan could be “Adopt your Beach” in order to enhance ownership of the beach among the volunteers. The following key messages of the awareness raising campaign can be disseminated:

- Marine litter is a global problem that can be solved if we act locally.
- Marine litter is a problem that can be solved if everyone takes responsibility for their actions.
- Marine litter harms the environment, and it is in everyone’s interest to solve the problem.
- Marine litter harms marine organisms (with a particular focus on sea turtles).
- Importance of recycling and reducing the use of single-use plastic items (e.g. plastic bags, PET bottles, etc.) and the need to replace these items with reusable items.

22. The following awareness raising materials are recommended:

- Logo of Adopt-a-Beach measures to enhance their corporate image;
- Poster for exhibitions and dissemination activities;
- Leaflets including the information on the Adopt-a-Beach measures and national/local facts and figures on marine litter; and
- Flags of the Adopt-a-Beach measures to be used as an identifier for the selected beaches.

23. The official launch of the Adopt-a-Beach measures should be covered by the press (e.g. local journals and other mass media). Press releases should be pre-drafted to inform the general public about the implementation of the activities and related outcomes.

### *3.1.7 Securing necessary material and equipment*

24. Specific materials and equipment are necessary to conduct beach collections. This includes:

- Digital camera;
- Hand-held GPS unit;
- Extra batteries (ideally rechargeable batteries);
- 100-metre tape measure (fiberglass preferred);
- Flag markers/stakes;
- First aid kit (to include sunscreen, bug spray, drinking water);
- Protective gloves;
- Scissors/knife;
- Clipboard for each surveyor;
- Recording forms (printed on waterproof paper);
- Pencils;

- Rubbish bags;
- Rigid container and sealable lid to collect sharp items such as needles, etc.;
- Appropriate clothing;
- Scales (if possible to weigh your bags of collected litter); and
- National photo guide to assist the volunteers with the identification and categorization of marine litter items. The photo guide should include the items commonly found on national beaches and their corresponding pictures and should be developed by the coordinator.

### 3.2 Implementation activities

25. Implementation activities include three tasks:
- a. Monitoring of marine litter;
  - b. Collection, recording and disposal of beach litter;
  - c. Safety and security precautions.

#### 3.2.1 *Monitoring of marine litter*

26. Beach litter collection activity should be carried out on a regular basis preferably from the same groups of volunteers, under the same standardized methodology which will give the opportunity to the national authority and to policy makers to analyze and compare the results obtained.

27. Every effort should be made to implement monitoring procedures similar to those used for collection of data for IMAP-based national marine litter monitoring indicators. Accordingly, it is recommended that the Adopt-a-Beach measures are conducted on the selected beaches at least twice a year in spring and autumn and ideally four times in spring, summer, autumn and winter. Relevant local/national authorities should be notified for the schedule of these measures for proper coordination, if necessary.

#### 3.2.2 *Collection, recording and disposal of beach litter*

28. Beach litter collection consists of collecting of all marine litter items found along the selected beaches and their disposal in beach waste bins or by means of the municipal waste collection containers.

29. All marine litter items of different sizes and types found on the beaches should be collected by the assigned volunteer teams. There are no upper size-limits for marine litter items found on the beaches to be collected. For big and heavy items arrangements with local waste management authorities should be undertaken. Items bigger than 2.5 cm should be sorted out by category type (plastic, paper, metal, glass, etc.), weighed and recorded in terms of total number of items by category. Larger items that cannot be removed *safely* by the volunteers should be left on the beach. Local municipalities should be informed for their appropriate removal. The collected marine litter items should be properly disposed following sound environmental disposal manner. Ideally, Adopt-a-Beach measures should use municipal waste management schemes, and therefore the collected marine litter should be disposed using municipal waste collection containers. If these do not exist, local municipalities should be informed for appropriate action, and alternatives should be explored.

30. Items found in the sample unit should be classified by type and recorded on the [MED POL Beach Litter Survey Form](#). Data should be entered on the form while picking up the litter item. Unknown litter or items that are not on the survey form should be noted in the appropriate "other item box". A short description of the item should then be included on the survey form. If possible, digital photos should be taken of unknown items.

31. During the survey, all litter items should be sorted by category type, weighed and then removed from the beach. Larger items that cannot be removed *safely* by the surveyors should be marked, for example with paint spray (which meets environmentally friendly standards) so that they are not counted again at the next survey.

32. Useful information can be obtained also with regard to beach litter typology, quantity, weight, seasonal variation, etc. This information should be recorded during the collection activities. This information can be used to propose ways and measures to prevent and minimize the generation and accumulation of marine litter on beaches in the future.

### 3.2.3 *Safety and security precautions*

33. Any circumstances that may lead to unsafe situations for the volunteers such as heavy wastes, strong winds, etc. should be avoided.

34. Safety of volunteers should be ensured at all times. The safety of the volunteers must always come first. Since the Adopt-a-Beach measures are carried out in the field, there are a few inherent hazards. Caution should be used, and the general safety precautions presented below should be respected:

- Wear appropriate clothing. Be sure to wear close-toed shoes and gloves when handling debris as there may be sharp edges;
- If you come across a potentially hazardous material (e.g. oil or chemical drums, gas cans, propane tanks), contact competent authorities to report the item, providing as much information as possible. Do not touch the material or attempt to move it;
- Large, heavy objects should be left in place. Do not attempt to lift heavy debris objects as they may have additional water weight and lifting them could result in injury. Inform local authorities;
- When in doubt, don't pick it up! If unsure of an item, do not touch it. If the item is potentially hazardous, report it to the appropriate authorities;
- Do not conduct field operations in severe weather conditions;
- Be aware of your surroundings and be mindful of 'trip and fall' hazards;
- Carry a means of communication for emergencies, for example a cell phone.
- Always carry a first aid kit. The kit should include an emergency water supply and sunscreen, as well as bug spray;
- Understand the symptoms of heat stress and actions to treat it;
- Make sure to carry enough water;
- Let someone know where you are and when you expect to return;
- The volunteer team should be composed of at least two people.

### 3.3 Reporting activities

35. Reporting activities include two key tasks:

- a. Developing a national database on Adopt-a-Beach measures
- b. Posters and publicity information materials on items found on the beach.

#### 3.3.1 *Developing a national database on Adopt-a-Beach measures*

36. It is recommended to develop a national database on Adopt-a-Beach measures updated and hosted by the National Competent Authority for the protection of the marine environment.

This is a task that should be coordinated at the national level, and the coordinator of the Adopt-a-Beach measures should encourage national authorities to develop and maintain this database.

### 3.3.2 *Posters and publicity information*

37. Information material on the conservation of the beach such as posters, panels or signs should be produced and placed at the beaches participating in the Adopt-a-Beach measures to inform the general public and also disseminate the activities developed within these measures.

38. Publicity materials could also contain recommendations and advice to create a responsible behavior to beach users. Therefore, information material should be drafted according to the results of the beach needs and priorities identified and the data obtained during the beach litter collection activities, to draw attention to some frequent and abundant item for instance.

39. Main elements of the information materials may address:

- The problem of marine litter (quantity, composition and effects) with the indication of some local data if available;
- Use the bins, do not throw litter on the beach, fish and birds can eat it;
- Avoid throwing cigarette butts in the sand. The cigarette butts are not made of paper, are not biodegradable and can stay in the marine and coastal for decades even if they are fragmented to smaller items;
- Do not abandon glass bottles, they can break and cause injuries to other beach goers;
- If you eat on the beach, do not forget to pick up the leftovers.

40. The participation of the volunteers in this process is key to enhance ownership. Editing and layout of the publicity material should be managed by the coordinator of the Adopt-a-Beach measures.

41. The Beach Coordinator should produce an assessment report containing data and results obtained above to inform local authorities about beach needs on marine litter and recommendations to improve beach state in the future. In this sense, it is very important to include what are the most abundant items and when they are found to identify potential sources and to tackle appropriate prevention measures.

### 3.4 Possible integration of “Adopt-a-Beach” measures with the National Monitoring Programmes for Beach Marine Litter

42. When Adopt-a-Beach measures implementation has matured, and monitoring, collection and reporting is undertaken regularly and generating reliable data and information, national authorities may consider incorporating the selected beach(es) into the IMAP-based national monitoring system, as appropriate. Monitoring procedures recommended under IMAP are included in Annex I to this guideline.

#### **4 References**

- DeFishGear Project. Methodology for Monitoring Marine Litter on Beaches-Macro-Debris (>2.5cm).
- OSPAR Commission (2010). Guideline for Monitoring Marine Litter on the Beaches in the OSPAR Maritime Area.
- Submon (2017). Proyecto Un mar sin desperdicio-¡Apadrinad la playa!-.  
<https://www.estrategiasmarinas.info/un-mar-sin-desperdicio-apadrina>. Available only in Spanish.
- UN Environment/MAP (2016). Integrated Monitoring and Assessment Guidance (UNEP(DEPI)/MED IG.22/Inf.7).

**Annex I**

**Integration of “Adopt-a-Beach” measures with the National Monitoring Programmes for Beach  
Marine Litter**

## **Integration of “Adopt-a-Beach” measures with the National Monitoring Programmes for Beach Marine Litter**

1. When Adopt-a-Beach measures are undertaken on a regular basis (2 times a year or even seasonally) in the selected beaches, a 100-m stretch of beach should be isolated to implement the official monitoring programme on beach marine litter. Such an arrangement should be priority agreed with the corresponding national authorities, being in charge and responsible for the implementation of the marine litter monitoring programme on beaches.

### **A. Selection of beaches to implement the national monitoring programmes**

2. In the selected beaches, according to criteria stated in Section 2.2.1 with regards to typology of beaches to have a comprehensive view on exposure of the beaches to marine litter sources, the sites to be monitored should be selected randomly but taking into consideration following criteria:

- A minimum length of 100 m;
- Low to moderate slope (~1.5-4.5 °), which excludes very shallow tidal mudflat areas;
- Clear access to sea (not blocked by breakwaters or jetties);
- Accessible to survey teams all year round;
- Accessible for ease marine litter removal;
- Ideally not be subject to cleaning activities and corresponding communication should be done with the local authorities/local municipality. In case that they are subjected to marine litter collection activities the timing of non-survey related beach cleaning must be known such that marine litter flux rates (the amount of litter accumulation per unit time) can be determined.
- Posing no threat to endangered or protected species and their habitats, such as sea turtles, sea birds or shore birds, marine mammals or sensitive beach vegetation; in many cases this would exclude protected areas, but it depends on local management arrangements.

3. In each site selection, these criteria should be followed as closely as possible. However, when making the final selection of the beaches to be monitored the surveyors can use their expert judgment and experience related to the coastal area and marine litter situation in their respective country.

### **B. Sampling unit**

4. A sampling unit is defined as a fixed section of a beach covering the whole area from the strandline to the back of the beach. The sampling unit should be one or two 100-metre stretch of beach, depending on the case, along the strandline and reaching to the back of the beach. The back of the beach needs to be explicitly identified using coastal features such as the presence of vegetation, dunes, cliff base, road, fence or other anthropogenic structures such as seawalls (either piled boulders or concrete structures).

5. The same sampling units should be monitored for all repeat surveys. In order to define the boundaries of each sampling unit, permanent reference points can be used, and coordinates should be obtained by GPS. In case of heavily littered beaches, 100-metre stretches may be too difficult to survey and therefore two (2) 50-metre stretches separated at least by a 50-metre stretch should be surveyed instead.

### **C. Frequency and timing of surveys**

6. It is recommended that the Adopt-a-Beach measures are conducted in the selected beaches at least 2 times a year in spring and autumn and ideally 4 times in: Spring, Summer, Autumn and Winter. The proposed surveys periods are as follows:

- Winter: Mid-December–mid-January
- Spring: April
- Summer: Mid-June–mid-July
- Autumn: Mid-September–mid-October

7. Any circumstances that may lead to unsafe situations for the surveyors such as heavy winds, etc. should be avoided. The safety of the surveyors must always come first.

#### **D. Pre-survey characterization of sites**

8. Before any sampling begins, shoreline characterization should be completed for each 100 m site. The GPS coordinates of the sampling unit should be recorded. A site ID name should be created. The site's special features, including characterization of the type of substrate (sand, pebbles, etc.), beach topography, beach usage, distances from urban settlements, shipping lanes, river mouths, etc. should be recorded using the [MED POL Marine Litter Beach ID Form](#). Digital photographs should be taken to document the physical characteristics of the monitoring site.

#### **E. Size limits and classes to be surveyed**

9. There are no upper size-limits for marine litter items found on beaches. The lower size-limit is proposed at 2.5 cm. However, also smaller sized items like the caps, lids, cigarette butts and other similar items should be included in the quantification of beach marine litter. For big and heavy items arrangements with local waste management authorities should be done.

#### **F. Collection and identification of litter**

10. Items found in the sample unit should be classified by type and accordingly entered on the [MED POL Beach Litter Survey Form](#). Data should be entered on the form while picking up the litter item.

11. Unknown litter or items that are not on the survey form should be noted in the appropriate "other item box". A short description of the item should then be included on the survey form. If possible, digital photos should be taken of unknown items.

12. For interpreting small pieces of litter in a harmonized way, this guidance should be followed:

- Pieces of litter that are recognizable e.g. as a shopping bag (G3) should be registered as such.
- Pieces of materials those are not recognizable as an item e.g. plastic and/or polystyrene pieces should be counted according to their size (G75-G77).

13. During the survey, all litter items should be sorted by category type, weighed and then removed from the beach. Larger items that cannot be removed (safely) by the surveyors should be marked, for example with paint spray (which meets environmentally friendly standards) so that they are not counted again at the next survey.

14. The litter collected should be disposed of properly. Ideally, monitoring activities should use municipal waste management; therefore, marine litter collected should be disposed in the municipal selective collection containers. If these do not exist local municipalities should be informed for appropriate action.

## G. Quantification of litter

15. The unit to be used to assess the marine litter density is ‘number of items’ and should be expressed as counts of marine litter items per 100 m. In addition, the main category types of litter items should be weighed.

## H. Materials and equipment

16. The following materials and equipment are necessary to run the beach surveys:

- i. Digital camera;
- ii. Hand-held GPS unit;
- iii. Extra batteries (ideally rechargeable batteries);
- iv. 100-metre tape measure (fiberglass preferred);
- v. Flag markers/stakes;
- vi. First aid kit (to include sunscreen, bug spray, drinking water);
- vii. Protective gloves;
- viii. Scissors/knife;
- ix. Clipboard for each surveyor;
- x. Recording forms (printed on waterproof paper);
- xi. Pencils;
- xii. Rubbish bags;
- xiii. Rigid container and sealable lid to collect sharp items such as needles, etc.;
- xiv. Appropriate clothing;
- xv. Scales (if possible to weigh your bags of collected litter);
- xvi. National photo guide to assist the volunteers with the identification and categorization of marine litter items. The photo guide should include the items commonly found on national beaches and their corresponding pictures and should be developed by the coordinator.

## I. Safety and security precautions

17. Safety of surveyors should be ensured at all times. Since this work is carried out in the field, there are a few inherent hazards. Caution should be used, and the general safety guidelines presented below should be followed.

- Wear appropriate clothing. Be sure to wear close-toed shoes and gloves when handling debris as there may be sharp edges.
- If you come across a potentially hazardous material (e.g. oil or chemical drums, gas cans, propane tanks), contact competent authorities to report the item, providing as much information as possible. Do not touch the material or attempt to move it.
- Large, heavy objects should be left in place. Do not attempt to lift heavy debris objects as they may have additional water weight and lifting them could result in injury. Inform local authorities.
- When in doubt, don't pick it up! If unsure of an item, do not touch it. If the item is potentially hazardous, report it to the appropriate authorities.
- Do not conduct field operations in severe weather conditions.
- Be aware of your surroundings and be mindful of ‘trip and fall’ hazards.
- Carry a means of communication for emergencies, for example a cell phone.
- Always carry a first aid kit. The kit should include an emergency water supply and sunscreen, as well as bug spray.
- Understand the symptoms of heat stress and actions to treat it.
- Make sure to carry enough water.
- Let someone know where you are and when you expect to return.

- The surveyor team should be composed of at least two people.

#### **J. Additional considerations**

18. The amount and type of litter found on beaches can be influenced by different circumstances. To ensure that data will be analyzed and interpreted properly these circumstances must be recorded. Indicative examples of such circumstances include: events that may lead to unusual types and/or amounts of litter (e.g. shipping container losses, overflows of sewage treatment systems, etc.); difficult weather conditions (e.g. heavy winds or rain, etc.); replenishment/nourishment of the beach; etc.