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**Agenda item 3: Regional Guidelines for Selected Marine Litter Prevention and Reduction Measures**

**Guidelines for the Implementation of the Adopt-a-beach Measures in the Mediterranean**

For environmental and economic reasons, this document is printed in a limited number. Delegates are kindly requested to bring their copies to meetings and not to request additional copies.

### **Note by the Secretariat**

Article 10 of the Regional Plan on Marine Litter Management in the Mediterranean (herein after referred to as Marine Litter Regional Plan), provides for the Contracting Parties to remove accumulated marine litter along the Mediterranean coastline. This is achieved by applying by 2019, as appropriate, Adopt-a-Beach measures and or similar measures, enhancing public participation and environmental awareness, and strengthening the role of communities around the region with regards to marine litter management.

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).

The present Adopt-a-Beach guidelines are prepared in the framework of the EU-funded Marine Litter MED project and the MAP Programme of Work (PoW) 2018-2019. The guidelines take into account existing best practices, regional/ international experience, as well as hands-on experiences and lessons learnt from the implementation of more than twenty (20) Adopt-a-beach pilots in nine (9) Mediterranean Countries benefiting from the EU-funded Marine Litter MED project (i.e. Egypt, Israel, Libya, Morocco, and Tunisia), and the Cooperation Agreement between UN Environment/MAP and the Italian Ministry for Environment, Land and Sea Protection (IMELS) (i.e. Albania, Bosnia and Herzegovina, and Montenegro).

The first version of the guidelines was presented during the Regional Meeting on Marine Litter Best Practices in Izmir, Turkey (9-10 October 2018), after which the Contracting Parties to the Barcelona Convention have provided MAP Secretariat and its MED POL Programme with feedback and input. The current version of the guidelines is brought to the attention of the participants of the Second Regional Meeting on Marine Litter Best Practices in Seville, Spain (8-10 April 2019), for their consideration and approval, for submission to MED POL Focal Points meeting scheduled end of May 2019.

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## **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>MED POL</b>	Mediterranean Pollution Assessment and Control Programme
<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. The Adopt-a-Beach measures comprise of actions related to beach clean-up, coupled with beach marine litter monitoring surveys implemented at national level. The overall scope of the Adopt-a-Beach measures is to help Mediterranean public communities to care about their coastline and keep it clean; to raise public awareness on the threat posed by marine litter; as well as to support the Mediterranean Countries to prepare and develop their national monitoring programmes for beach marine litter.

## 2 SCOPE OF THE ADOPT-A-BEACH MEASURES

2. The scope of the “Adopt-a-Beach” measures is to:
- i. Keep beaches clean and marine litter-free in the Mediterranean;
  - ii. Raise public awareness on the problem of marine litter;
  - iii. Inform citizens about marine litter sources, how they are produced and propose ways to minimize them;
  - iv. Enhance public participation at country level, to national and international clean-up actions for the coastal environment around the Mediterranean;
  - v. Support the preparation and development of the national monitoring programmes for beach marine litter in the Mediterranean; and
  - vi. Collect valuable data and information to assess the quantities and stranding fluxes of marine litter found along the Mediterranean coastlines and contribute to achieve the region-wide reduction target of 20% on beach marine litter by 2024.<sup>1</sup>

## 3 IMPLEMENTATION PHASES OF THE ADOPT-A-BEACH MEASURES

3. Adopt-a-Beach measures can be divided into four implementation phases:
- a. Preparatory activities;
  - b. Implementation activities;
  - c. Reporting activities;
  - d. Possible integration with current IMAP-based national monitoring programmes.<sup>2</sup>

### 3.1 Preparatory activities

4. 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.

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<sup>1</sup> Decision IG.22/10: Implementing the Marine Litter Regional Plan in the Mediterranean, Annex III: Marine Litter Environmental Targets (Available in: [English](#), [French](#), [Arabic](#), [Spanish](#)).

<sup>2</sup> Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria.

### 3.1.1 Tasks of the “Beach Coordinator”

5. The Beach Coordinator should be in charge of the execution of the different Adopt-a-Beach measures at local/ national level in a coordinated and consistent manner, and in synergy with the national monitoring programmes for beach marine litter. The Beach Coordinator should be responsible to report to national competent authorities and the timely execution of the required tasks. The Beach Coordinator may be a member of the community, being in charge of and responsible for, and having previous experience in the implementation of Adopt-a-Beach measures at local/national level. The Beach Coordinator may be appointed by the national authorities, or by the authorities being in charge for the implementation of the Adopt-a-Beach measures at local/national level.

6. The main tasks of the Beach Coordinator are to:

- a. Engage, support, and coordinate the participation of the local communities, local authorities, NGOs, primary and secondary schools, civil society, volunteers etc.;
- b. Select the appropriate beaches for the implementation of the Adopt-a-beach measures based on the MED POL beach selection criteria;
- c. Implement the adopt-a-beach methodology, proposed by MED POL under the present guidelines, in consultation with the national authorities;
- d. Control the timely implementation of the Adopt-a-Beach measures based on the previously agreed work plan with the national authorities;
- e. Train the volunteers, and corresponding teams, participating in the Adopt-a-Beach measures;
- f. Ensure that all safety precautions are followed;
- g. Develop a national photo guide for beach marine litter including the marine litter items most commonly found on beaches at national level (i.e. inclusion of a photograph and a brief description);
- h. Oversee the awareness raising campaign, including the preparation and development of the campaigns’ main messages and material in consultation with the national authorities;
- i. Consider whether it is appropriate (e.g. for beaches of particular concern or importance) to implement additional steps as detailed below:
  - Identification of beach needs and priorities;
  - Prepare and coordinate the development of information material about the conservation of the beach.
- j. Develop an inventory of Adopt-a-Beach measures implemented at national level and ensure synergies and cooperation;
- k. Submit progress reports and data (e.g. number of volunteers, amounts, types and composition of the collected marine litter, etc.) to national authorities; and
- l. 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

7. 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.

8. 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.

9. 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?	

10. Different types of beaches should be considered for selection for the implementation of the Adopt-a-Beach measures (urban beaches, rural beaches, remote beaches, beaches close to riverine areas, river mouths, harbours, etc.). This would allow 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. The diversity of the beach selection criteria, during the selection process is highly desirable to ensure that all possible different sources for beach marine litter, are well addressed in the collected data and information.

11. Further to the selection of beach, the Beach Coordinator should complete the MED POL Beach ID Form included in Annex II of this Guideline. This form should be filled for each beach respectively. The MED POL Beach ID Form should be updated once a year or earlier if the team of volunteers notice important changes in the surrounding environment (e.g. new developments or new types of uses, etc.).

12. Adopt-a-Beach measures should be implemented in conjunction with the current IMAP-based national monitoring programme for beach 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; and
- 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.

13. It is recommended that two (2) to four (4) beaches are selected at national level for each country when implementing Adopt-a-beach measures. Selection should be based on national coastal characteristics (e.g. length of the coastline, level of engagement of public communities, etc.). The beaches should be selected in synergy, and in coordination with those beaches identified for the official monitoring programmes for beach marine litter. If no official monitoring programme for beach marine litter is already in place at national level, then the beaches selected for the implementation of the Adopt-a-beach measures, based on the

MED POL selection criteria, could be used at a later stage as the basis for development of the national monitoring programme for beach marine litter.

### 3.1.3 Defining beach units

14. For Adopt-a-beach, 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.

15. Within each selected beach, a 100-m stretch should be defined where the marine litter items will be recorded by dedicated teams of volunteers, based on the specific methodology presented hereunder. The selection of the 100-m stretch should be done in synergy, and in cooperation with the 100-m stretch selected for the needs of the national monitoring programme for beach marine litter, if already in place, to ensure that no duplication occurs.

### 3.1.4 Defining beach marine litter units

16. The unit to be used to assess the beach marine litter density is 'number of items' and should be expressed as counts of marine litter items per 100-m stretch (i.e. items/100 m stretch). National teams may wish to also express beach marine litter density in 'number of items' per surface area<sup>3</sup> (i.e. marine litter items/m<sup>2</sup>); but this should only be done in addition to the counts of marine litter items per 100-m stretch. In addition, the main category types of litter items should be weighed.

17. For the whole beach, where the volunteers are active, more aggregated results (e.g. total weight (kg) per different categories (e.g. plastic, metal, etc.), total number of items, items per main categories) could supplement the data deriving from the 100-m stretch of the beach.

### 3.1.5 Engagement of local communities

18. Engagement of local communities should aim to sensitize and engage to purpose the local communities, local authorities, NGOs, schools and civil society, to participate in the Adopt-a-Beach measures, to inform general public about the positive impacts of the measure in minimizing the stranded marine litter items along the coastlines. To this extent, no team should be excluded, having ensured in prior that a proper training of all the related communities and team members can be delivered.

### 3.1.6 Organizing teams of collection volunteers

19. Volunteers should be organized in teams to collect marine litter along the selected beach(es). Well-trained teams should be also assigned on the specific beach stretch (100 m), after having received special instructions from the Beach Coordinator. Volunteers should be organized in small teams, comprising of 5 to 6 persons each. According to the total number of volunteers and the corresponding number of teams, a beach grid should be established. Each team should be in charge for the collection of marine litter items on a specific cell of the beach grid.

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<sup>3</sup> Based on the international experience, European (i.e. EU MSFD) and the experience from the other Regional Seas (e.g. OSPAR), the counts of marine litter items found on beaches, in items/100m stretch has proven to work quite well. The quantification of marine litter items found on beaches in items per surface areas may arise problems, especially for areas where low and high tides are present.



20. Each team of volunteers should have a team leader who oversees marine litter collection, and to be in charge for the proper recording of the different marine litter items. The Beach Coordinator should control, coordinate and supervise the whole process.

### 3.1.7 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 environmental problem that can be solved if we act in a coordinated way;
- 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 information about the Adopt-a-Beach measures and national/local facts and figures on marine litter, including the marine litter definition; 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.

### 3.1.8 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);

- 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;
- Paint spray for large and/or heavy items.

### 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, on the same beaches and 100-m stretch, under the same standardized methodology which will give the opportunity to the national authority and to policy makers to compile, analyze and compare the obtained results.

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. The grouping of marine litter items, under same categories, while collecting marine litter items from the beaches may facilitate significantly the collection process.

29. All marine litter items, of different sizes and types, found on the beaches should be collected and then removed from the beach by the assigned teams of volunteers. There is no upper size-limit for the collection of marine litter items found on the beaches.

30. For big and heavy items, special arrangements with local waste management authorities should be made. For the selected beaches, and in particular for the 100-m stretch, 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, and total weight per each category. Items found in the 100 m stretch should be recorded on the MED POL Beach Survey Form, included under Annex III to the present report. Unknown marine litter items or items that are not included in the MED POL Beach Survey Form should be noted in the appropriate "other item" box. A short description of the item should then be included on the MED POL Beach Survey Form. If possible, digital photos of unknown items should be taken.

31. Larger items that cannot be removed safely by the volunteers should be left on the beach after having them marked (e.g. with a paint spray which meets environmentally friendly standards), so that they are not counted again in the next marine litter survey. Local municipalities should be informed for their removal.

32. The collected marine litter items should be properly disposed following sound environmental disposal practices. 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.

33. Useful information can be also obtained with regards to beach marine 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

34. Safety of volunteers should be always ensured. Any circumstances that may lead to unsafe situations for the volunteers (e.g. heavy wastes, strong winds, etc.) should be avoided. 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 marine litter 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 marine litter items 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 and coastal environment. This is a task that should be coordinated at the national level, and the Beach Coordinator should encourage national authorities to develop and maintain this database.

### 3.3.2 Posters and publicity information

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

38. Publicity material 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:

- Explanation of the problem of marine litter (quantity, composition and effects) with the indication of some local and national data;
- Clarification of misinterpretations about what marine litter and relevant issues (e.g. cigarette butts are not made of paper, biodegradability and application of single-use plastics, etc.). Messages should be clear;
- Using trash bins; avoiding throwing away marine litter on beaches which adversely impact fish and other marine organisms;
- Avoid throwing away cigarette butts on beaches. Clarifying that cigarette butts are not made of paper; are not biodegradable; and persist in the marine and coastal environment for years to come, even if they are fragmented into smaller items;
- Avoiding abandoning glass bottles as they can break and cause injuries to other beach goers; and
- Picking up leftovers when consuming food items on the beach.

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 Beach 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 the abundance of marine litter on the selected beaches, its possible effect, as well as to provide recommendations on how 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.

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<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 100-metre stretch of beach, along the strandline and reaching to the back of the beach. For beaches having length of several kilometers, two stretches of 100 m, may be considered. 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 Beach ID Form, included under Annex II to the present report. 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. Such big items should only be noted in the monitoring sheets. It is recommended to check the entire beach for big or heavy items (or some major part if the length of the beach is very lengthy) and list all large items. Special arrangements with the local waste management authorities should be in place in order to remove those big items from the beaches in an environmentally sound way.

### **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 Survey Form, included under Annex III to the present report. Data should be entered on the form while picking up the litter item.

1. Unknown litter or items that are not on the MED POL Beach Survey Form should be noted in the appropriate "other item box". A short description of the item should then be included on the MED POL Beach Survey Form. If possible, digital photos should be taken of unknown items.

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

- Pieces/fragments of marine litter items that are recognizable with a high level of confidence that are part of the same marine litter item (e.g. G3: shopping bags) should be registered as one item under the corresponding category (i.e. G3).
- Pieces of marine litter items that are not recognizable as a single marine litter item should be counted according to their material type (e.g. plastic, polystyrene pieces) and size (e.g. G75-G77).



12. 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.

13. 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**

14. 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 (i.e. items / 100m). National teams may wish to also express counts of marine litter items per surface area<sup>4</sup> (i.e. marine litter items / m<sup>2</sup>), but this should only be done in addition to the counts of marine litter items per 100 m stretch. In addition, the main category types of litter items should be weighed.

### **H. Materials and equipment**

15. 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,
- xvii. Paint spray for large and/or heavy items.

### **I. Safety and security precautions**

16. 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:

- Surveyors should wear appropriate clothing. Be sure to wear close-toed shoes and gloves when handling marine litter as there may be sharp edges.

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<sup>4</sup> Based on the international experience, European (i.e. EU MSFD) and the experience from the other Regional Seas (e.g. OSPAR), the counts of marine litter items found on beaches, in items/100m stretch has proven to work quite well. The quantification of marine litter items found on beaches in items per surface areas may arise problems, especially for areas where low and high tides are present.

- If surveyors come across to potentially hazardous materials and/or items (e.g. oil or chemical drums, gas cans, propane tanks), the local authorities should be contacted by the Beach Coordinator in order to report the corresponding item/s. The hazardous materials and/or items should not be touched by the surveyors and no attempt to re/move it should be done.
- Large, heavy objects should be left in place. Do not attempt to lift heavy marine litter items as they may have additional water weight and lifting them could result in injury. Local authorities should be informed by the Beach Coordinator in the case of existence of such items.
- When in doubt, don't pick it up! If unsure of an item, do not touch it. If the item is potentially hazardous, the Beach Coordinator should 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**

17. 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.

**Annex II**

**MED POL Beach ID Form**

MED POL Beach ID Form			
<b>Name of the beach:</b>			
<b>National beach ID:</b>			
<b>Contracting Party:</b>			
① Beach width (m) at mean low spring tide:		② Beach width (m) at mean high spring tide (m):	
③ Total length of beach (m):		④ Back of the beach: (e.g dunes)	
⑤ GPS coordinates start 100 m (wgs84 – dd mm ss.ss)		⑥ GPS coordinates end 100 m (wgs84 – dd mm ss.ss)	
⑤ GPS coordinates start 100 m (IF REPLICATE) (wgs84 – dd mm ss.ss)		⑥ GPS coordinates end 100 m (IF REPLICATE) (wgs84 – dd mm ss.ss)	
Prevailing currents off the beach:	N E S W	Prevailing winds:	N E S W
When you look from the beach to the sea, what direction is the beach facing?			N E S W
Type of beach material (% coverage): (e.g. sand 60%, pebbles 40%)			
Beach topography: (e.g. slope 20%)			
Are there any objects in the sea (e.g. a pier) that influence the currents? (If YES, specify)			
<b>Major beach usage (local people, swimming and sunbathing, fishing, surfing, sailing etc.):</b>			
1. _____, seasonal or whole year round: _____			
2. _____, seasonal or whole year round: _____			
3. _____, seasonal or whole year round: _____			
<b>Access to the beach:</b>			
Pedestrian: <input type="checkbox"/> Vehicle: <input type="checkbox"/> Boats: <input type="checkbox"/>			
<b>Nearest town:</b>			
Name: _____		Distance to the beach: _____ km	Population: _____
<b>Is there any development behind the beach?</b>		No <input type="checkbox"/>	Yes <input type="checkbox"/>
		Describe: _____	
<b>Are there food and/or drink outlets on the beach?</b>		No <input type="checkbox"/>	Yes <input type="checkbox"/>
Distance from the survey area (m): _____			
Present all year round:		Yes <input type="checkbox"/>	No <input type="checkbox"/>
		Specify month: _____	
Position of food and/or drink outlet in relation to the survey area:		N E S W	
<b>Distance from the beach to the nearest shipping lane (km):</b>			
What is the estimated traffic density: (number of ships/year):		_____	
Is it used mainly by merchant ships, fishing vessels or all kinds:		_____	
Position of shipping lane in relation to survey area:		N E S W	

**Distance from the beach to the nearest harbour (km):**

Name of the harbour: \_\_\_\_\_

Is the harbour entrance facing the survey area? Yes  No

Position of harbour in relation to survey area: N E S W

Type of harbour: \_\_\_\_\_

Size of harbour (number of ships): \_\_\_\_\_

**Distance from the beach to the nearest river mouth (km):**

Name of the river: \_\_\_\_\_

What is the position of river mouth in relation to survey area: N E S W

**Distance from the beach to the nearest discharge or discharges of waste water (km):**

Position of discharge points in relation to survey area: N E S W

**How often is the beach cleaned?**

All year round: Daily  Weekly  Monthly  Other: \_\_\_\_\_

Seasonal, *please specify in months*: Daily  Weekly  Monthly  Other: \_\_\_\_\_

What method is used: Manual  Mechanical

Who is responsible for the cleaning? \_\_\_\_\_

Additional comments and observations about this beach: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Please include:**

1. A map of the beach
2. A map of the beach and of the local surroundings. When relevant please mark on this map the following:
 

i) Nearest town	ii) Food/drink outlets	iii) Nearest shipping lane
iv) Nearest harbour	v) Nearest river mouth	vi) Discharge or discharges of waste water
3. A regional map

Is this an amendment to an existing questionnaire: Yes  No

Date questionnaire is filled in: \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ (dd/mm/yyyy)

Name: \_\_\_\_\_

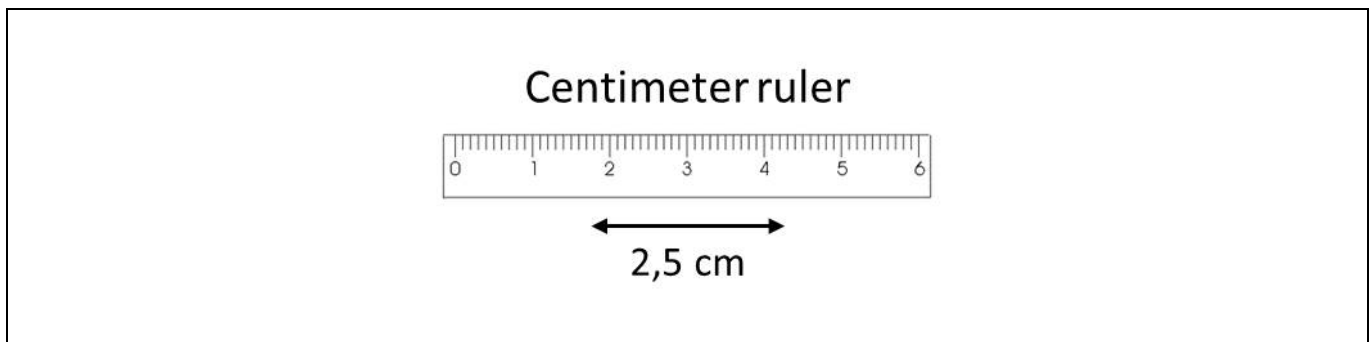
Phone number: \_\_\_\_\_

E-mail: \_\_\_\_\_

**Annex III**  
**MED POL Beach Survey Form**

MED POL Beach Survey Form	
Name of the beach:	
National beach ID:	
Contracting Party:	
Date of survey (dd/mm/yyyy)	
Number of surveyors:	
Survey contact details:	Name: _____ Phone number: _____ Email address: _____
Previous conducted survey (dd/mm/yyyy)	

Additional Information
<p><b>Did you divert from the predetermined 100 m?</b></p> <p>No <input type="checkbox"/> Yes <input type="checkbox"/></p> <p>If YES, please specify new GPS coordinates: _____</p>
<p><b>Did any of the following weather conditions affect the data of the survey?</b></p> <p>Wind <input type="checkbox"/> Rain <input type="checkbox"/> Sand storm <input type="checkbox"/> Fog <input type="checkbox"/> Snow <input type="checkbox"/> Exceptionally high tide <input type="checkbox"/></p>
<p><b>Did you find stranded or dead animals?</b></p> <p>Yes <input type="checkbox"/> No <input type="checkbox"/> If YES how many: _____</p> <p>Describe the animals, or note the species name if known: _____</p> <p>Stranded animals: Dead <input type="checkbox"/> Alive <input type="checkbox"/></p> <p>Is the animal entangled in litter? Yes <input type="checkbox"/> No <input type="checkbox"/> If YES, specify litter item: _____</p>
<p><b>Were there any circumstances that influenced the survey?</b></p> <p>For example, tracks on the beach (cleaning or other), recent replenishment of the beach or other? Please specify: _____</p>
<p><b>Were there any unusual marine litter items and/or marine litter loads?</b></p> <p>Please specify: _____</p>



ID <sup>5</sup>	PLASTIC/POLYSTYRENE	N° Items	Weight
G1	4/6-pack yokes, six-pack rings		
G3	Shopping bags incl. pieces		
G4	Small plastic bags, e.g. freezer bags incl. pieces		
G5	Plastic bag collective role; what remains from rip-off plastic bags		
G7/G8	Drink bottles		
G9	Cleaner bottles & containers		
G10	Food containers incl. fast food containers		
G11	Beach use related cosmetic bottles and containers, e.g. Sunblocks		
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 (including nozzles)		
G13	Other bottles & containers		
G18	Crates and containers / baskets		
G19	Car parts		
G21/24	Plastic caps and lids (including rings from bottle caps/lids)		
G26	Cigarette lighters		
G27	Cigarette butts and filters		
G28	Pens and pen lids		
G29	Combs/hair brushes/sunglasses		
G30/31	Crisps packets/sweets wrappers/ Lolly sticks		
G32	Toys and party poppers		
G33	Cups and cup lids		
G34/35	Cutlery and trays/Straws and stirrers		
G36	Fertiliser/animal feed bags		
G37	Mesh vegetable bags		
G40	Gloves (washing up)		
G41	Gloves (industrial/professional rubber gloves)		
G42	Crab/lobster pots and tops		
G43	Tags (fishing and industry)		
G44	Octopus pots		
G45	Mussels nets, Oyster nets including plastic stoppers		
G46	Oyster trays (round from oyster cultures)		
G47	Plastic sheeting from mussel culture (Tahitians)		
G49	Rope (diameter more than 1cm)		
G50	String and cord (diameter less than 1 cm)		
G53	Nets and pieces of net < 50 cm		

<sup>5</sup> The allocated codes may be revised in the near future.



G54	Nets and pieces of net > 50 cm		
G56	Tangled nets/cord		
G57/58	Fish boxes - plastic or polystyrene		
G59	Fishing line/monofilament (angling)		
G60	Light sticks (tubes with fluid) incl. Packaging		
G62/63	Floats for fishing nets/ Buoys		
G65	Buckets		
G66	Strapping bands		
G67	Sheets, industrial packaging, plastic sheeting		
G68	Fibre glass/fragments		
G69	Hard hats/Helmets		
G70	Shotgun cartridges		
G71	Shoes/sandals		
G73	Foam sponge		
G75	Plastic/polystyrene pieces 0 - 2.5 cm		
G76	Plastic/polystyrene pieces 2.5 cm - 50 cm		
G77	Plastic/polystyrene pieces > 50 cm		
G91	Biomass holder from sewage treatment plants		
G124	Other plastic/polystyrene items (identifiable) including fragments		
	<i>Please specify the items included in G124:</i>		
		<b>Total N° Items</b>	<b>Total Weight</b>

ID	RUBBER	N° Items	Weight
G125	Balloons and balloon sticks		
G127	Rubber boots		
G128	Tyres and belts		
G134	Other rubber pieces		
	<i>Please specify the items included in G134</i>		
		<b>Total N° Items</b>	<b>Total Weight</b>

ID	CLOTH	N° Items	Weight
G137	Clothing / rags (clothing, hats, towels)		
G138	Shoes and sandals (e.g. Leather, cloth)		
G141	Carpet & Furnishing		
G140	Sacking (hessian)		
G145	Other textiles (incl. rags)		
	<i>Please specify the items included in G145</i>		
		<b>Total N° Items</b>	<b>Total Weight</b>

ID	PAPER / CARDBOARD	N° Items	Weight
G147	Paper bags		
G148	Cardboard (boxes & fragments)		
G150	Cartons/Tetrapack Milk		
G151	Cartons/Tetrapack (others)		
G152	Cigarette packets		
G153	Cups, food trays, food wrappers, drink containers		
G154	Newspapers & magazines		
G158	Other paper items, including fragments		
	<i>Please specify the items included in G158</i>		
		<b>Total N° Items</b>	<b>Total Weight</b>

ID	PROCESSED / WORKED WOOD	N° Items	Weight
G159	Corks		
G160/161	Pallets / Processed timber		
G162	Crates		
G163	Crab/lobster pots		
G164	Fish boxes		
G165	Ice-cream sticks, chip forks, chopsticks, toothpicks		
G166	Paint brushes		
G171	Other wood < 50 cm		
	<i>Please specify the items included in G171</i>		
G172	Other wood > 50 cm		
	<i>Please specify the items included in G172</i>		
		<b>Total N° Items</b>	<b>Total Weight</b>

ID	METAL	N° Items	Weight
G174	Aerosol/Spray cans industry		
G175	Cans (beverage)		

G176	Cans (food)		
G177	Foil wrappers, aluminium foil		
G178	Bottle caps, lids & pull tabs		
G179	Disposable BBQ's		
G180	Appliances (refrigerators, washers, etc.)		
G182	Fishing related (weights, sinkers, lures, hooks)		
G184	Lobster/crab pots		
G186	Industrial scrap		
G187	Drums, e.g. oil		
G190	Paint tins		
G191	Wire, wire mesh, barbed wire		
G198	Other metal pieces < 50 cm		
	<i>Please specify the items included in G198</i>		
G199	Other metal pieces > 50 cm		
	<i>Please specify the items included in G199</i>		
		<b>Total N° Items</b>	<b>Total Weight</b>

ID	GLASS	N° Items	Weight
G200	Bottles incl. pieces		
G202	Light bulbs		
G208	Glass fragments >2.5cm		
G210a	Other glass items		
	<i>Please specify the items included in G210a</i>		
		<b>Total N° Items</b>	<b>Total Weight</b>

ID	CERAMICS	N° Items	Weight
G204	Construction material (brick, cement, pipes)		
G207	Octopus pots		
G208	Ceramic fragments >2.5cm		
G210b	Other ceramics items		
	<i>Please specify the items included in G210b</i>		
	<i>Please specify the items included in G158</i>		
		<b>Total N° Items</b>	<b>Total Weight</b>

ID	SANITARY WASTE	N° Items	Weight
G95	Cotton bud sticks		
G96	Sanitary towels/panty liners/backing strips		
G97	Toilet fresheners		
G98	Diapers/nappies		

G133	Condoms (incl. packaging)		
G144	Tampons and tampon applicators		
	Other sanitary waste		
	<i>Please specify the other sanitary items</i>		
		<b>Total N° Items</b>	<b>Total Weight</b>

ID	MEDICAL WASTE	N° Items	Weight
G99	Syringes/needles		
G100	Medical/Pharmaceuticals containers/tubes		
G211	Other medical items (swabs, bandaging, adhesive plaster etc.)		
	<i>Please specify the items included in G211</i>		
		<b>Total N° Items</b>	<b>Total Weight</b>

ID	PARAFFIN/WAX PIECES	N° Items	Weight
G213	Paraffin/Wax		
		<b>Total N° Items</b>	<b>Total Weight</b>

<p><b>Presence of industrial pellets?</b>          YES <input type="checkbox"/> NO <input type="checkbox"/></p>
<p><b>Presence of oil tars?</b>          YES <input type="checkbox"/> NO <input type="checkbox"/></p>
<p><b>Additional Comments:</b> _____          _____          _____          _____          _____</p>