

**Decision IG.20/9**

**Criteria and Standards for bathing waters quality in the framework of the implementation of Article 7 of the LBS Protocol**

*The 17<sup>th</sup> meeting of the Contracting parties*

*Having regard to Article 7(1) C of the Protocol for the Protection of the Mediterranean Sea against pollution from land based sources and activities, as amended in 1996 herein after referred to as the LBS Protocol, that provides for regional cooperation in progressively formulating and adopting common guidelines, standards and criteria dealing with the quality of sea-water used for specific purposes that is necessary for the protection of human health, living resources and ecosystems,*

*Being aware of the risks for public health associated to bathing in contaminated waters,*

*Considering the considerable tourist influx in the Mediterranean region and the central role that tourism plays in the development of the Mediterranean coastal states,*

*Bearing also in mind that the beaches and the adjacent bathing waters are among the most attractive tourist destinations common to all Mediterranean countries,*

*Acknowledging the need to efficiently exploit the tourist industry without jeopardizing the health of the tourists and swimmers in general,*

*Recalling the Interim Quality criteria for bathing waters adopted in 1985 by the Contracting Parties to the Convention for the Protection of the Mediterranean Sea against pollution, within the context of the thirteen common measures,*

*Considering the new Guidelines for safe recreational water environments published by the World Health Organization in 2003 and revised in 2008,*

***Decides*** to adopt the criteria and standards for bathing waters in the Mediterranean region, which are contained in the annex to this decision, noting that nothing in this decision prevents the Contracting Parties from adopting stricter standards;

***Urges*** the Contracting Parties to take the necessary measures to ensure the implementation of the Criteria and Standards for bathing waters in the Mediterranean region and establish beach profile for each bathing water within a period of four years and to report to the Secretariat on progress achieved through biennial reporting on the implementation of the LBS Protocol as provided for in its Article 13.

***Requests*** the Secretariat to organize capacity building programmes for the Contracting Parties to comply with the adopted criteria and standards



## ANNEX

### CRITERIA AND STANDARDS FOR BATHING WATERS IN THE MEDITERRANEAN REGION

#### Introduction

The Contracting Parties to the Barcelona Convention adopted in 1985 an interim common criteria and standards for coastal recreational waters, with a view to update them when more evidence would be provided. A new proposal was prepared ten years later but, as at the same time a proposal of a European Council Directive was tabled on the same subject, it was decided to postpone any decision and wait until the new Directive would be operational to avoid any duplication of efforts regarding microbiological analyses and elaboration of data. In the meantime, WHO developed the "Guidelines for Safe Recreational-water Environments" launched in 2003 and the EU abandoned their old proposal and started a new one linked to the WHO Guidelines. Finally, a new EC Directive was adopted by the European Parliament in 2006, and the Mediterranean countries have proposed criteria and standards that comply with both the WHO guidelines and the EC Directive.

The Mediterranean guidelines for bathing waters were formulated in 2007 based on the WHO guidelines for "Safe Recreational Water Environments" and on the EC Directive for "Bathing Waters". The proposal was made in an effort to provide updated criteria and standards that can be used in the Mediterranean countries and to harmonize their legislation in order to provide homogenous data. In addition, in 2009, the guidelines were coupled with the instructions for the preparation of water quality profiles that were used by several countries. As a result, national water quality profiles were presented during the "Consultation meeting for the finalization and approval of criteria and standards for bathing waters along with beach profiles", held in Athens from 8-9 November 2010. The meeting recommended to approve the criteria and standards as well as the methodology used and to present them at the MED POL Focal Points meeting in 2011 with the view at their transmission for approval and adoption at the meetings of the MAP Focal Points and the Contracting Parties to the Barcelona Convention. It is to be noted that all countries in the Mediterranean undertook pilot studies for the preparation of bathing waters quality profiles, with the assistance of WHO/MED POL.

The main objective of the revised criteria and standards for bathing waters in Mediterranean countries, is to reduce gastroenteritis and other waterborne health risks. They are based on scientific knowledge related to the protection of human health and the environment as well as environmental management experience. They also provide better and earlier information to citizens about the quality of their bathing waters and they range from simple sampling and monitoring of bathing waters to bathing quality management.

The revised criteria and standards require monitoring, assessment and classification of bathing water quality status that is referred to as "excellent", "good", "sufficient" and "poor quality", with each qualification linked to clear numerical quality standards of bacteriological quality. In addition to monitoring, the preparation of beach profiles or bathing water profiles is also required as the most important element introduced in the revised criteria and standards. Their aim is to provide swimmers, as well as authorities, with information about physical, geographical and hydrological characteristics of a bathing water, as well as possible sources of pollution impacting on bathing water quality.

A bathing water profile is primarily intended to improve the understanding of the faecal sources and routes of pollution, and focuses on intestinal enterococci, the indicator for faecal pollution. The new parameter is in fact more representative for faecal pollution than the old one.

Information on the route by which and the extent to which the bathing water quality is negatively influenced should be available. In fact, the manager of the bathing water location will have to give an estimate of which sources of emission negatively influence the bathing water quality and through which dispersion routes. Important is the type of emission (continuous/non-recurrent, specific source/diffuse sources). Moreover, the location-specific characteristics of the bathing water (flowing or isolated) play a decisive role. All the above aspects make the bathing water profile the basis on which the manager can better understand the risks of contamination and propose appropriate measures.

The bathing water profile can therefore be used to better substantiate the management measures taken and to make a better use of funds for the remedial measures.. At the same time, the bathing water profile can be used to inform the society/citizens of the quality of the bathing water and the management measures taken.

In this context, compliance will refer to appropriate management measures and quality assurance, not merely to measuring and calculations.

### **Criteria<sup>1</sup> and standards**

#### Microbial Water Quality Assessment Category (based on Intestinal enterococci (cfu/100 mL))

<b>Category</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>
Limit values	<100*	101-200*	185**	>185**(1)
Water quality	Excellent quality	Good quality	Sufficient	Poor quality/ Immediate Action

Minimum sampling frequency: at least one per month and not less than four in a bathing period including an initial one prior to the start of the bathing period.

\* 95th percentile intestinal enterococci/100 mL (applying the formula 95th Percentile = antilog ( $\mu + 1,65 \sigma$ ))

\*\* 90th percentile intestinal enterococci/100 mL (90th Percentile=antilog ( $\mu + 1,282 \sigma$ ),  $\mu$ =calculated arithmetic mean of the log10 values;  $\sigma$ = calculated standard deviation of the log10 values.

(1) For single sample appropriate action is recommended to be carried out once the count for IE exceeds 500 cfu/100 mL

- For classification purposes at least 12 sample results are needed spread over 3-4 bathing seasons
- Reference method of analysis: ISO 7899-2 based on membrane filtration technique or any other approved technique
- Transitional period 4 years (starting by 1<sup>st</sup> January 2012)

<sup>1</sup> These criteria should be revised in the light of the experience of the Contracting Parties on this application and the possible progress in other specific fora in 2015

In combination with the above criteria and standards, a profile should be prepared for each of the bathing water assessed, as follows:

### PREPARATION OF BEACH PROFILES (BATHING WATER PROFILES)

Beach profiles should be prepared following a standardized format similar to that provided here below, a copy of which should be displayed for public information on the beach.

In addition, a map has to be included with the sampling points, sources of pollution, facilities and any other relevant information. The classification of the beach as described in the table above should also be included.

#### Standardized format: General bathing water profile

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##### General Information

Name of beach and bathing area:.....

Location:.....Location on the map (grid reference):.....

Latitude:..... Longitude:.....

Length.....m wide.. .....m depth... .....m gradient.....cm

Type of bathing area:

open  confined  natural  lake  estuarine  marine

Type of bathing area: sand rocky pebble grass other.....

Public facilities: No. of: Toilets..... Showers..... Litter bins.....

Is there in place any information system indicating water quality? Yes No

Are methods in place to warn the people of danger? No

Yes: Flags megaphones Digital panels other.....

Accessibility: Road Path No access. Is there an adequate parking area? Yes No

Beach usage: swimming sailing motor sports other.....

Number of bathers at peak usage (e.g. Sunday).....

Are dogs or other animals present at the beach? Yes Type..... Number..... No

Water colour: Transparent Not transparent brown green reddish

Are there any algae present? Yes Type..... Amount..... No

Does the beach look clean? Yes No Specify type of dirt.....

Characteristics of surrounding area: (more than one category can be used)

- urban    residential    industrial    agricultural    dunes  
 river mouth    hills & mountains    grassland   other.....

Potential sources of contamination to be specified

- Wastewater discharges    River or stream discharge    Other discharges  
 Other sources

Average water temperature: (during season) max/min.....

Prevailing wind (N/S/E/W):.....

Prevailing current (N/S/E/W):.....

Distance between mean high and low water:.....

Beach manager or contact in case of pollution incident:

Phone: ..... Mobile phone: ..... Fax: .....  
e-mail: .....

Address:.....

Organisation:.....

Management team at the bathing area

- .....  
-.....  
-.....  
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