

RESOLUTION 3.23

COMMERCIAL WHALE-WATCHING: TOWARDS A LABEL

The Meeting of the Parties to the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and contiguous Atlantic area:

Considering that whale-watching activities for commercial purposes are constantly increasing in the area under the Agreement, Certain that tourist whale-watching is a remarkable awareness and education tool provided the activity is correctly carried on,

Recognizing the need to regulate this activity,

Hailing the initiative of the Spanish Government to publish their Royal Decree on creating a Mobile Protection Space for cetaceans, particularly concerning the regulating of whalewatching,

Aware of the importance of environmental labels at national and international level,

Recognizing that eco-labels aim at promoting products that comply with the principles of sustainable development,

Also *recognizing* that eco-labels are an attractive way of informing consumers about the environmental consequences of their choices,

Recalling Principle 8 of the Rio Declaration, according to which "in order to achieve sustainable development and a better quality of life for all peoples, the states should reduce and eliminate non-viable ways of producing and consuming and promote the appropriate demographic policies",

Recalling:

- Article II 1 of the Agreement, according to which the Parties forbid and take all the steps necessary to eliminate any deliberate taking of cetaceans, including harassing them or trying to engage in any such activity,
- Section 2 of Annex 2 to the Agreement, providing for the crafting of guidelines and/or codes of conduct to regulate or manage activities that create interactions between humans and cetaceans, such as tourist activities,
- Recommendation 2.1 on the "identification and encouragement of economic activities that help to mitigate anthropic impacts on cetaceans" encouraging the Parties, the Riparian States and the European Commission, directly or through the appropriate Bodies, to identify means of encouraging economic activities that help mitigate human/cetacean
- interactions,

Recalling the Resolution 1.11 on "Guidelines for commercial cetacean-watching activities in the ACCOBAMS area", adopted within the framework of ACCOBAMS,

Appreciating the collaboration established in this field particularly between ACCOBAMS and PELAGOS,

- 1. Encourages the Secretariat to pursue its collaboration with PELAGOS;
- 2. *Encourages* the Parties to develop a label, in priority within the PELAGOS area, in the shape of a test, which will confer on whale-watching a sustainable development aspect;



- 3. Adopts guidelines to obtain a label for whale-watching operators in the PELAGOS and ACCOBAMS area, as presented in the Annex I of the present Resolution;
- 4. *Makes* the Scientific Committee, in collaboration with PELAGOS experts and the ACCOBAMS and PELAGOS Secretariats, responsible for defining:
 - the content of training for operators,
 - measures to check the application of the label,
 - a communication strategy,
 - criteria for assessing the label.
- 5. *Makes* the Secretariat, in collaboration with the Agreement's Scientific Committee, responsible for presenting to the next Meeting of Parties a draft label based on the guidelines mentioned below.



ANNEX 1

PROPOSAL OF GUIDELINES FOR ACQUIRING A LABEL FOR WHALE-WHATCHING OPERATORS IN THE PELAGOS / ACCOBAMS AREA

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Introduction

Many works have shown that there has been a sizeable development of whale-watching activity in the Mediterranean. But in the absence of a management or regulation programme, this development is everywhere taking place in an uncontrolled manner and does not usually meet the ecological, sociological and economic stakes this activity underpins.

Thus, in accordance with their commitments, the PELAGOS Sanctuary and the ACCOBAMS Agreement have chosen to promote voluntary management of this activity in the form of a label for structures that are committed to a quality and ecological responsibility approach. Decided on in consultation with the operators, the guidelines of this system are presented in this document in two parts: operators' commitments, and the coordinating body's commitments. These contract specifications can be modified as our knowledge advances, the activity of whale-watching changes, and the thoughts of the work groups suggested below develop. For this reason, this document must be revised every two years.

The label may be requested by all whale-watching operators who promote their whale-watching activities at sea to the public, whether this is for commercial, pedagogic, social or scientific ends.

A. Operators' commitments

1. Undergoing training

High-quality whale-watching requires a fairly great level of skill. This is why the training of staff on board is suggested, under the scientific responsibility of institutions. This training will aim at:

- a. giving added value to the outings of the concerned operators
- b. offering the public quality service and an ecologically controlled approach
- c. mitigating the activity's impacts on cetaceans and helping protect them
- d. and thus ensuring that whale-watching has a sustainable future.

This training, that will last at least one week, will concern the following fields:

- Presenting and identifying the main species of cetacean population in the Mediterranean
- Notions of settlements' and populations' physiology, biology and ecology
- Special ecological features of cetaceans in the Mediterranean (particularly the degree of endemism), threats and conservation status
- Presenting and identifying other species that can be watched at sea (avifauna and ichthyofauna)
- Special ecological features of the Mediterranean
- Roles and importance of cetaceans in the Mediterranean ecosystem
- Regulations specific to cetaceans that can be applied in the Mediterranean, and presentation of the ACCOBAMS Agreement and the PELAGOS Sanctuary
- Reminder of the stakes and values of whale-watching
- Code of Good Conduct for whale-watching and signs of disturbance to be taken into consideration when approaching them (notions of ethology)
- Environmental education for the public: information to be circulated
- Interest of research, databases on cetaceans and teaching of a scientific observation guide that can be applied by operators
- Practical part (sea outings as far as is possible)

To obtain the label, the operators' promise, firstly, that the person responsible for the structure has undergone this training and, also, that each outing will be accompanied by at least one trained person. The only valid training is that which is completed from start to finish, with a recognized final test. The training may be rendered null and void if the label's contract specifications are flouted (§B.2).

The captain of the boat or the helmsman will make sure that the recommendations of the trained person are respected, particularly as regards approaching the cetaceans.



The initial training is free. There will be a charge for training given after suspension for flouting the contract specifications.

2. Applying the Code of Good Conduct

To get a label, operators promise to apply the Code of Good Conduct that appears in Appendix 1.

3. Contribution to research programmes

Collaboration between researchers and whale-watching bodies is vital for designing high-quality activity. This contribution to research constitutes added value for operators, a rich supplement for passengers, a logistical aid for researchers and an asset for the conservation of cetaceans. It may take the shape of observation sheets filled in by the operators, intended to enrich databases. But it can also be seen as a more in-depth form of cooperation in the context of a precise research programme.

3.1. Observation sheets

Operators promise to participate in enriching the joint ACCOBAMS-CIESM-PELAGOS database. To this end, a cetacean observation sheet is provided to whale-watching structures (cf. Appendix 2). It contains elementary data such as the state of the sea, the GPS position, the species concerned and the number of individuals or the direction taken by the animals. This data is collected with an observation effort ('on the transect') according to the positions of the operators and in accordance with the teaching given in the above-mentioned training. The operators promise to fill in the sheets at each outing and to hand them in every month.

3.2. Working group on having a scientist on board in the context of specific research programmes

In the context of specific research programmes, this will involve analysing the possibility of putting a scientist on board units that hold a sizeable number of people (over 12 passengers). For such a step it is necessary to have a good grasp of the means made available (boat speed, height of observer's eyes, sectors prospected and regularity of outings, possibility of having acoustic devices at one's disposal, etc.). It must therefore automatically be the subject of consultation between the operators and scientists within a work group. This must determine:

- the means made available by the operators for research
- how the researchers make their contribution in return (e.g. the scientist participates in informing the passengers).

The results of this reflection must systematically be made available to the scientists who bring all new projects. Then they can study the logistical possibilities offered by the operators and see whether they are compatible with their programme, in order to reduce, if need be, the budgets set aside for the boats.

Label-holding operators with units that carry more than 12 passengers promise to participate in this work group.

4. Modes of whale-watching outings

Label-holding operators promise to organise outings that have a naturalist side rather than being strictly focused on cetaceans, in accordance with what is taught in the above-mentioned training. The aim is to mitigate the pressure on the animals while making sure the public are made aware and satisfied.

With a view to limiting the consumption of fuel and making the public really aware, excursions must last sufficiently long (at least half a day, on average a whole day, ideally several days).

Game fishing combined with whale-watching in a single package is not tolerated (the fishing techniques being incompatible with the Code of Good Conduct). To hold labels, structures which offer both activities must organise them in separate excursions.

Commercial swimming with cetaceans' is not tolerated at this stage within the framework of the label. This item will be assessed during the regular updates of the contract specifications (§B.5).

Spotting from the air is tolerated at this stage but is strongly advised against. This item will be assessed during the regular updates of the contract specifications.

Whale-watching in Corsica and on the island of Lampedusa could be subjected to particular recommendations and dispensations from the present contract specifications. If need be, when the time comes, these will be appended to them.



Label-holding operators must provide their passengers with packaging that enables waste to be selectively sorted. As far as is possible, the boats must have tanks to recuperate waste water.

5. Message to be delivered to passengers

In accordance with the Code of Good Conduct, label-holding operators promise to deliver a quality message on board with a common base that includes:

- a description and identification of cetacean species and other species that can be observed
- notions of biology and ecology on Mediterranean ecosystems and cetaceans
- an introduction to the ACCOBAMS and PELAGOS Agreements
- existing threats generally and those linked in priority to any observation activity that does not respect the Code of Good Conduct.

The message must focus on a naturalist approach, not solely on cetaceans.

At the end of the day, a standard assessment sheet will be distributed to customers, who will be invited to transmit their observations to the PELAGOS and ACCOBAMS Executive Secretariats.

6. Contribution to work groups

Direct issues or those related to whale-watching will arise from the work groups in which operators will be invited to participate. These work groups will particularly handle the following topics:

- contribution to research programmes (cf. §3.2)
- research and development to limit the activity's dependence on fossil fuels
- the acoustic insulation of hulls, shafts and motors.

B. Commitments of 'coordinator bodies'

The training structure and/or authority granting the label and checking it and/or the Executive Secretariats of PELAGOS and ACCOBAMS and National Focal Points. This item remains to be clarified

1. Communication

The coordinator bodies promise to deliver a label to registered operators supporting a quality, environment-friendly approach. To promote this label, three tools will be established:

- visual displays to be affixed to the boats and reception centres of the concerned operators
- the use of various means of communication for the public (web page about ACCOBAMS's and PELAGOS's internet sites, PELAGOS National Day, media, and awareness of the prescribers of the tourist offer involved in whalewatching, such as tourist information offices and booking centres, guiding the public towards label-holding operators, etc.)
- a regular (annual) reference work2 made available to the public (available in tourist information offices, town halls or naturalist shops). It will present:
- whale-watching activity in the Mediterranean and the stakes involved
- the Code of Good Conduct
- the species that can be observed, their identification, and some basic knowledge about ecology
- the interest of calling on label-holding operators (pledge of an ecological approach and quality service regarding education)
- a complete list of label-holding operators, their rates and their address, phone number, etc.

The coordinator bodies will help develop a set of pedagogical tools for operators and their customers (posters, Code of Good Conduct, etc.). Like the Michelin Guide.



2. Making sure the contract specifications are respected

The coordinator bodies promise to make regular assessments to check that the label-holding operators are respecting the contract specifications defined in this document. To make such assessments, boats will be boarded anonymously. All label-holding operators will be visited at least once a year, more often if necessary (if, for example, there is flouting of specifications, or frequent return of unsatisfactory assessment sheets, cf. §A.5). If the promises regarding the label are not kept, a penalty is imposed. This is done at two levels: that of the staff on board who have undergone the training (the training is then null and void and has to be retaken) and/or at that of the operator (his label may be suspended). The table below summarizes this assessment system.

Infringement	Level	Description of the penalty
1 st report	Staff who have undergone training	Recommendation associated with a reminder of the contract specifications
	Structure (operator)	Recommendation associated with a reminder of the contract specifications
2 nd report	Staff who have undergone training	Warning, possibly associated with invalidation of the training, depending on how serious the infringement is
	Structure (operator)	Warning, possibly associated with suspension of the label for a period of one to two years, depending on how serious the infringement is
	Staff who have undergone training	Invalidation of the training
3 rd report	Structure (operator)	The label is cancelled and for a period of 3 to 5 years no request for renewal may be made. The person responsible for the structure must once again undergo training if he wishes to request that the label be granted again when the cancellation period is over

If after a second infringement report is made a person (who has undergone the training) or a structure (a label-holder) does not commit an infringement for three consecutive years, he is once again considered as though he had never committed any infringement.

3. Advance towards an official status for controlling whale-watching

As well as this label, PELAGOS and ACCOBAMS agree on the need eventually to control whale-watching by a regulatory tool. To this end, this involves taking all the steps leading to whale-watching being granted official status (so far inexistent). This status will mean that the activity can in future be subjected to 'declaration' or even 'authorization' (delivery of licences). This regulatory approach can go hand in hand with the voluntary label approach, since:

- it will take more time to be enforceable
- and, in the future, it will replace the voluntary approach, which will then only concern regulating the number of operators in keeping with the reception capacity of the sites.

4. Consideration of the other categories of whale-watching

ACCOBAMS and PELAGOS agree on the need, eventually, to appraise and control the other categories of whale-watching (pleasure boating and indirectly commercial, such as game fishing and sea trips). The aim is to effectively and comprehensively protect cetaceans against everything that whale-watching encompasses and act so that the efforts of those working in the field are not wiped out by the possible bad behaviour of other bodies involved in whale-watching.

5. Revision

These contract specifications will be revised a year after they enter into force, and then every three years.



Works consulted to compose this document

- ACCOBAMS (2004) Guidelines for Commercial Cetacean-Watching Activities in the Black Sea, the Mediterranean Sea and Contiguous Atlantic Area. 30 p.
- ACCOBAMS (2006) Compte-rendu de la réunion "encadrement de l'activité de whale-watching". 3 p.
- ACCOBAMS (2007) Procès verbal de la réunion des opérateurs et prescripteurs français, italiens et monégasques de whalewatching. Le 23 avril 2007 à Monaco. 10 p. + annexes.
- BEAUBRUN P.-C. (2002) Disturbance to Mediterranean cetaceans caused by whale watching. In: *G. Notarbartolo di Sciara (Ed.), Cetaceans of the Mediterranean and Black Seas: state of knowledge and conservation strategies.* A report of the ACCOBAMS Secretariat, Monaco, February 2002. Section 12, 26 p.
- C.M.C. & N.M.F.S. (1988) Proceedings of the Workshop to Review and Evaluate Whale Watching Programs and Management Needs. Nov. 14-16, Monterrey, California, 53 p.
- FORTUNA C., CANESE S., GIUSTI M., LAURIANO G., MACKELWORTH P. & GRECO S. (2004) Review of Italian whale-watching: status, problems and prospective. *SC/56/WW4*, *56th International Whaling Commission Scientific Committee, Sorrento, Italy.* 15 pp.
- HOYT E. (2001) Whale watching 2001: worldwide tourism numbers, expenditures, and expanding socioeconomic benefits. A special report for the International Fund for Animal Welfare. 159 p. [En ligne] consulté le 13 septembre 2005. Adresse URL: http://www.ifaw.org/ifaw/general/default.aspx?oid=35453.
- HOYT E. (2004) Observer les Cétacés en Europe : Le guide complet des sites d'observation des baleines, dauphins et marsouins. Editions Safran. 110 p.
- IFAW (1997) Report of the workshop on the legal aspects of whale watching. Puentas Arenas, Chile, 17-20 November 1997. 48 p. IFAW, TETHYS RESEARCH INSTITUTE & EUROPE CONSERVATION (1995) Report of the Workshop on the Scientific Aspects of Managing Whale Watching. Montecastello di Vibio, Italy. 40 p. [En ligne] consulté le 12 décembre 2005. Adresse URL: www.helsinki.fi/~lauhakan/whale/education/ifaw/vibio/content.html.
- IFAW, WWF & WDCS (1997) Report of the International Workshop on the Educational Values of Whale Watching, Provincetown, Massachusetts, USA. 40 p. [En ligne] consulté le 13 septembre 2005. Adresse URL: http://www.helsinki.fi/~lauhakan/whale/education/ifaw/evalues/e1.html.
- IWC (2004) Report of the Workshop on the Science for Sustainable Whale Watching, Captown, South Africa, 6-9 march 2004.

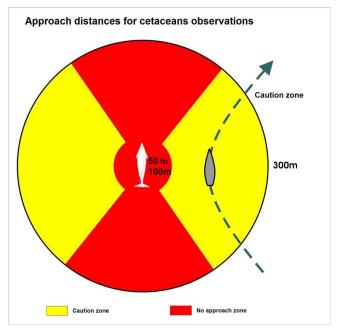
 Report of the IWC, 29 p. [En ligne] consulté le 14 septembre 2005. Adresse URL: http://www.iwcoffice.org/documents/sci com/WW Workshop.pdf.
- MALCOLM C. & DUFFUS D. (1998) Whale-watching research workshop report, Summary. World Marine Mammal Science Conference, Monaco, January 18, 1998
- MAYOL P. & BEAUBRUN P. (2005) Le Whale Watching en Méditerranée française : Etat des lieux et perspectives. Recensement des opérateurs, diagnostic socio-économique et écologique de l'activité, propositions préliminaires de gestion. Rapport réalisé pour le compte du Ministère de l'Ecologie et du Développement Durable. 104 p.
- MAYOL P., FORTUNA C. & STURLESE A. (édition prévue fin 2006) Livret à destination des opérateurs de whale-watching. Document réalisé dans le cadre de la collaboration PELAGOS (Sanctuaire pour les Mammifères marins) /ACCOBAMS (Accord sur la Conservation des Cétacés de la Mer Noire, de la Méditerranée et de la zone Atlantique adjacente).
- ONERC (2005) *Un climat à la dérive : comment s'adapter* ? Rapport au Premier ministre et au Parlement, 24 juin 2005. 109 p. [En ligne] consulté le 24octobre 2005. Adresse URL : http://www.ecologie.gouv.fr/article.php3?id article=4311.
- PETT S., MCKAY C.J. & ARCHER J.H. (1990) The Resources and Uses of Stellwagen Bank, Part I: Technical Report on the Resources and Uses of Stellwagen Bank and Part II: Proceddings of the Stellwagen Bank Conference. Urban Harbors Institute, University of Massachusetts, Boston and Center for Marine Conservation, Washington, DC. [Two vols. bound together] 77 p et 134 p.
- SAMUELS A., BEJDER L. & HEINRICH S. (2000) A review of Literature Pertaining to Swimming with the Wild Dolphins. Marine Mammal Commission, Maryland, 58 p. [En ligne] consulté le 12 septembre 2005. Adresse URL: http://www.mmc.gov/reports/contract/pdf/samuelsreport.pdf.
- SEARS R. (1994) Whale-watching and its impact on marine mammal research. *Proceedings of the 8th annual conference of the European Cetacean Society*, 8: 30-31
- TILOT V. (2004) Plan de Gestion du Sanctuaire pour les mammifères marins en Méditerranée « PELAGOS ». 111 p.



Appendix 1 Code of Conduct for whale-watching in the Mediterranean

Whale-watching can be a source of serious disturbance if it is incorrectly done. The following rules enable us to limit our impacts on the vital behaviour of dolphins and whales (hunting, resting or inter-individual socialising). Whether one is a pleasure boater, a fisherman, a whale-watching operator or any other user of the marine environment, the rules set out below apply in the same way, in the PELAGOS Sanctuary and elsewhere.

The following illustration defines two essential zones for those approaching cetaceans – the vigilance zone (yellow) and the forbidden zone (red).



1. Vigilance zone (yellow)

The (300m) vigilance zone defines the sector in which the disturbance caused by your boat (presence, noise and exhaust) are strongly experienced by the animals. When you enter this zone, you must respect strict rules in your behaviour to mitigate this disturbance:

The boat's speed must be constant, set by the slowest animal. It must not be greater than 5 knots

- The approach must be made according to a trajectory that gradually aligns itself parallel to the animals' path (green arrow in the illustration). The boat thus takes up its position abeam the animals, following their direction
- It is forbidden to make any sudden change of speed or direction
- To limit acoustic disturbance, sounders and sonars must be turned off
- Be even more vigilant and restrict your approach distance if you notice the presence of newborn animals
- You must instantly leave the vigilance zone if the animals show they are disturbed: for example, flight (speeding up, changing direction, trying to get away from the observer) must be seen as disturbance
- Observation time is restricted to half an hour
- If several boats are present, only one is tolerated within the vigilance zone. Observation time is then shortened to a quarter of an hour, and the other boats must wait outside the 300m zone. Radio contact between the different boats will enable coordination of observation
- When the observation ends, the boat must gradually leave the site, taking a route that unambiguously signals that it is departing. The speed will remain moderate up to a sufficient distance to avoid the risk of collision

2. Forbidden zone (red)

The forbidden zone defines the sector within which your boat must never go (except if the cetaceans spontaneously approach the boat). The distance is 100m for whales and sperm whales and 50m for dolphins. If you go nearer than



this, the cetaceans will see your presence as a danger or an intrusion on their vital space, and their behaviour will be greatly disturbed by it.

Also, the boat must not get there before the animals (reduced field of vision). Nor must the boat approach from behind, for it will then be seen as a pursuer

When the boat reaches the edge of the forbidden zone, its relative speed must be cut to zero and its motor put out of gear, idling.

It is forbidden to go inside groups for this will cause social disturbance.

3. Special case when animals spontaneously approach the boat

When cetaceans come up to the boat of their own accord, passengers must not try to touch them, either directly or with an instrument, or swim near them, or feed them. Most of the above rules hold good, especially the ban on going inside groups and the respect for slow, regular movement.

4. Generally speaking...

The moment cetaceans are spotted, or at a distance of 1,000m, special vigilance is necessary and a speed of 10 knots only is essential: other animals may be present in the sector, and the risk of collision is not negligible. Moreover, a higher speed would be likely to disturb the animals, even at a great distance. Generally speaking, whale-watching is not recommended in the 5-mile coastal strip, for the cetaceans there are already very much disturbed by human activity.

An operator must accompany his outing with an educational address on cetaceans and the marine environment. This must be given by a qualified, trained guide. He must be able to identify the species encountered, determine their phases of activity, and notice possible disturbances.

5. In brief

- Keep a slow pace and calm, constant progress from the moment the cetaceans are spotted, particularly within the 300m zone
- No approach nearer than 50m for dolphins and 100m for whales and sperm whales
- Length of observation restricted to 30 minutes, 15 minutes if other boats are waiting
- Only one boat within the 300m zone
- Never try to touch, feed, or swim with a cetacean.



Appendix 2: Observation sheet

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