



UNITED
NATIONS

EP

UNEP/MED WG.468/12/Rev.1



UNITED NATIONS
ENVIRONMENT PROGRAMME
MEDITERRANEAN ACTION PLAN

9 August 2019
Original: English

Meeting of the MAP Focal Points

Athens, Greece 10-13 September 2019

Agenda Item 5: Specific Matters for Consideration and Action by the Meeting, including Draft Decisions

Draft Decision: Mediterranean Offshore Guidelines and Standards: (a) Common Standards and Guidance on the Disposal of Oil and Oily Mixtures and the Use and Disposal of Drilling Fluids and Cuttings; (b) Common Standards and Guidelines for Special Restrictions or Conditions for Specially Protected Areas (SPA) within the Framework of the Mediterranean Offshore Action Plan

For environmental and cost-saving 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 23 of the Protocol for the Protection of the Mediterranean Sea against Pollution Resulting from Exploration and Exploitation of the Continental Shelf and the Seabed and its Subsoil (1994) (Offshore Protocol), provides for the formulation and elaboration of international rules, standards and recommended practices and procedures for achieving the aims of the Protocol. In this context, the Mediterranean Offshore Action Plan, adopted by the 19th Meeting of the Contracting Parties (COP 19) (Athens, Greece, 9-12 February 2016) by Decision IG.22/3, provides, in its Specific Objectives 7 and 8, for the development and adoption of regional offshore standards and guidelines.

Article 10 of the Offshore Protocol provides for the formulation and adoption of common standards for the disposal of oil and oily mixtures from installations into the Protocol Area and common standards for the use and disposal of drilling fluids and drill cuttings into the Protocol Area, in accordance with the provisions of Annex V, A and Annex V, B to the Protocol respectively.

Article 21 of the Offshore Protocol provides that for the protection of the areas defined in the Protocol concerning Mediterranean Specially Protected Areas and any other area established by a Party and in furtherance of the goals stated therein, special measures shall be taken by the Parties to prevent, abate, combat and control pollution arising from activities in these areas.

The Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean (SPA/BD Protocol) provides in its Article 6 (e) for the required protection measures to be taken by the Parties, in conformity with international law and taking into account the characteristics of each Specially Protected Area (SPA), including the regulation or prohibition of any activity involving the exploration or modification of the soil or the exploitation of the subsoil of the land part, the seabed or its subsoil.

In accordance with Articles 23 and 10 of the Offshore Protocol and relevant provisions of the Offshore Action Plan, mentioned above, the Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC), in close cooperation with the Secretariat, developed the Common Standards and Guidance on the Disposal of Oil and Oily Mixtures and the Use and Disposal of Drilling Fluids and Cuttings.

In accordance with Articles 23 and 21 of the Offshore Protocol and relevant provisions of the Offshore Action Plan, as well as Article 6 of the SPA/BD Protocol, mentioned above, REMPEC in close cooperation with the Secretariat and the Specially Protected Areas Regional Activity Centre (SPA/RAC) developed the Common Standards and Guidelines for Special Restrictions or Conditions for Specially Protected Areas (SPAs) within the Framework of the Mediterranean Offshore Action Plan.

The objective of the present document is twofold: (i) to propose the Contracting Parties the adoption of common standards and guidance, with the view to harmonising regional practices in the Mediterranean Sea Area regarding the disposal of oil and oily mixtures, and the use and disposal of drilling fluids and cuttings and associated analytical measurements; and (ii) to propose the Contracting Parties the adoption of common standards and guidelines, with the view to providing guidance on the process regarding offshore activities in Specially Protected Areas (SPAs), covering the full range of development life cycle stages, including geophysical survey, exploratory drilling, field development and decommissioning, with the view to ensuring that no significant impacts are caused on Specially Protected Areas (SPAs).

The preparation of both common standards and guidelines followed a collective and fruitful consultative process, including the preparation and distribution of a questionnaire to the Contracting Parties as well as to oil and gas producers for feedback.

Descriptions of the best practices and guidance documentation reviewed and the rationale underpinning the common standards and guidelines included in the present document are provided in the documents [UNEP/MED WG.476/Inf.5](#) “Rationale for the Common Standards and Guidance on the Disposal of Oil and Oily Mixtures, and the Use and Disposal of Drilling Fluids and Cuttings” and [UNEP/MED WG.476/Inf.6](#) “Rationale for the Common Standards and Guidelines for Special Restrictions or Conditions for Specially Protected Areas (SPA) within the Framework of the Mediterranean Offshore Action Plan”.

Both common standards and guidelines have gone through a comprehensive review and revision process by different Mediterranean Action Plan (MAP) bodies in the current biennium, as follows:

- i. the Common Standards and Guidance on the Disposal of Oil and Oily Mixtures and the Use and Disposal of Drilling Fluids and Cuttings were reviewed by the Thirteenth Meeting of the Focal Points of the Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC) (Malta, 11-13 June 2019);
- ii. the Common Standards and Guidelines for Special Restrictions or Conditions for SPA within the Framework of the Mediterranean Offshore Action Plan were reviewed by the Fourteenth Meeting of the Specially Protected Areas and Biodiversity (SPA/BD) Thematic Focal Points (Portorož, Slovenia, 18-21 June 2019);
- iii. updated versions of both guidelines, including comments and suggestions received following the above-mentioned meetings, were reviewed by the Second Meeting of the Barcelona Convention Offshore Oil and Gas Group (OFOG) Sub-Group on Environmental Impact (Athens, Greece, 27-28 June 2019). The latter meeting approved the revised versions of the guidelines, as presented in the Annexes to this document, and recommended their submission to the meeting of the MAP Focal Points for its consideration.

One sentence in the Common Standards and Guidance on the Disposal of Oil and Oily Mixtures and the Use and Disposal of Drilling Fluids and Cuttings is included in square brackets for final consideration by the meeting of the MAP Focal Points, as recommended by the Second Meeting of the OFOG Sub-Group on Environmental Impact (Athens, Greece, 27-28 June 2019).

Another set of guidelines, regarding the Conduct of Environmental Impact Assessment (EIA), was prepared together with the present ones, following the consultation process described above. The Second Meeting of the OFOG Sub-Group on Environmental Impact revised these guidelines, concurred that they required further review and invited the Contracting Parties to provide additional proposals and suggestions for its finalization and submission to the next OFOG meeting during the biennium 2020-2021.

The development of the Mediterranean Offshore Guidelines and Standards is in line with the MAP Mid-Term Strategy (MTS) 2016-2021 (Decision IG.22/1), in particular its Core Theme on Land and Sea-based Pollution. They are expected to contribute to the implementation of the MTS Key Output 2.2.1 “Guidelines, decision-support tools, common standards and criteria provided for in the Protocols and the Regional Plans, developed and/or updated for key priority substances or sectors”.

The Thirteenth Meeting of the Focal Points of REMPEC and the Second Meeting of the OFOG Sub-Group on Environmental Impact stressed that the effective implementation of the Mediterranean Offshore Guidelines and Standards and the development of additional common standards and guidelines in accordance with the Mediterranean Offshore Action Plan will require concrete activities, especially technical meetings and capacity building activities, coupled with adequate financial and human resources, to be included in the MAP Programme of Work (PoW) 2020-2021.

In line with the conclusions and recommendations of the Second Meeting of the OFOG Sub-Group on Environmental Impact, two Contracting Parties submitted comments on the guidelines. These

comments are reflected in the present document in footnotes, for consideration by the Meeting of the MAP Focal Points.

Draft Decision IG.24/9

Mediterranean Offshore Guidelines and Standards: (a) Common Standards and Guidance on the Disposal of Oil and Oily Mixtures and the Use and Disposal of Drilling Fluids and Cuttings; (b) Common Standards and Guidelines for Special Restrictions or Conditions for Specially Protected Areas (SPA) within the Framework of the Mediterranean Offshore Action Plan

The Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols at their twenty-first meeting,

Recalling United Nations General Assembly resolution 70/1 of 25 September 2015, entitled “Transforming our world: the 2030 Agenda for Sustainable Development”,

Recalling also the United Nations Environment Assembly resolutions of 15 March 2019, UNEP/EA.4/Res.10, entitled “Innovation on biodiversity and land degradation”, and UNEP/EA.4/Res. 21, entitled “Towards a pollution-free planet”,

Having regard to the Protocol for the Protection of the Mediterranean Sea against Pollution Resulting from Exploration and Exploitation of the Continental Shelf and the Seabed and its Subsoil (1994) (hereinafter Offshore Protocol), in particular Article 23 (1) thereof requesting that international rules, standards and recommended practices and procedures for achieving the aims of the Protocol shall be formulated and elaborated, Article 10 thereof requesting that common standards for the disposal of oil and oily mixtures from installations into the Protocol Area and for the use and disposal of drilling fluids and drill cuttings into the Protocol Area shall be formulated and adopted by the Parties, and Article 21 thereof requesting that for the protection of the areas defined in the Protocol concerning Mediterranean Specially Protected Areas and any other area established by a Party and in furtherance of the goals stated therein, special measures shall be taken by the Parties to prevent, abate, combat and control pollution arising from activities in these areas,

Having regard to the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean (1995), in particular Article 6 (e) thereof requesting that the required protection measures for Specially Protected Areas (SPAs) shall be taken by the Parties, in conformity with international law and taking into account the characteristics of each Specially Protected Area (SPA), including the regulation or prohibition of any activity involving the exploration or modification of the soil or the exploitation of the subsoil of the land part, the seabed or its subsoil,

Recalling Decision IG.22/3, adopted by the Contracting Parties at their 19th Meeting (COP 19) (Athens, Greece, 9-12 February 2016), on the Mediterranean Offshore Action Plan in the Framework of the Protocol for the Protection of the Mediterranean Sea against Pollution resulting from Exploration and Exploitation of the Continental Shelf and the Seabed and its Subsoil, in particular its Specific Objectives 7 and 8 providing for the development and adoption of regional offshore standards and guidelines,

Recognizing the need for, and benefits deriving from limiting and/or avoiding activities concerning exploration and/or exploitation of the resources as defined in the Offshore Protocol in Specially Protected Areas in the Mediterranean, and *bearing in mind* that neither under the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean (1995) nor the Offshore Protocol there is a general prohibition to conduct such activities,

Noting the increasing trends and projections of offshore oil and gas exploration and exploitation activities in the Mediterranean region,

Taking into account the potential impacts from offshore oil and gas exploration and exploitation activities on the marine and coastal environment, and the need to prevent, abate, combat and control pollution resulting from these activities,

Committed to implement the Sustainable Development Goal 14 (Life below Water) and specifically its targets 14.1 providing for the prevention and significant reduction of marine pollution of all kinds by 2025, and 14.2 providing for sustainable management and protection of marine and coastal ecosystems to avoid significant adverse impacts, by 2020,

Having considered the reports of the Thirteenth Meeting of the Focal Points of the Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC) (Malta, 11-13 June 2019), the Fourteenth Meeting of the Specially Protected Areas and Biodiversity (SPA/BD) Thematic Focal Points (Portorož, Slovenia, 18-21 June 2019), and the Second Meeting of the Barcelona Convention Offshore Oil and Gas Group (OFOG) Sub-Group on Environmental Impact (Athens, Greece, 27-28 June 2019),

1. *Adopt* the Common Standards and Guidance on the Disposal of Oil and Oily Mixtures and the Use and Disposal of Drilling Fluids and Cuttings, set out in Annex I to the present decision;
2. *Adopt* the Common Standards and Guidelines for Special Restrictions or Conditions for Specially Protected Areas (SPA) within the Framework of the Mediterranean Offshore Action Plan, set out in Annex II to the present decision;
3. *Request* the Contracting Parties to make every effort for the effective implementation of the Common Standards and Guidance on the Disposal of Oil and Oily Mixtures and the Use and Disposal of Drilling Fluids and Cuttings, taking into account the best available, environmentally effective and economically appropriate techniques and the internationally accepted standards, regarding the use, storage and discharge of harmful or noxious substances and materials;
4. *Request* the Contracting Parties to make every effort for the effective implementation of the Common Standards and Guidelines for Special Restrictions or Conditions for SPAs within the Framework of the Mediterranean Offshore Action Plan, bearing in mind that all appropriate measures shall be taken to prevent, abate, combat and control pollution resulting from offshore activities and if necessary, to prohibit offshore activities in Specially Protected Areas (SPAs);
5. *Urge* the Contracting Parties to control and timely report on the disposal of oil and oily mixtures and the use and disposal of drilling fluids and cuttings, using the online Barcelona Convention Reporting System (BCRS), in line with the reporting obligations under Article 26 of the Barcelona Convention and Article 30 of the Offshore Protocol;
6. *Urge* the Contracting Parties to report on the adoption of special measures to prevent, abate, combat and control pollution arising from offshore activities in Specially Protected Areas (SPAs), using the online Barcelona Convention Reporting System (BCRS) in line with the reporting obligations under Article 26 of the Barcelona Convention, Article 30 of the Offshore Protocol and Article 23 of the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean;
7. *Invite* the Contracting Parties, the Secretariat, relevant international organizations and the industry to explore a collaborative approach to strengthen the financial and human resources of the Mediterranean Action Plan (MAP) System, with a view to establishing a sustainable and commensurate support to facilitate the implementation of the Offshore Protocol and the Mediterranean Offshore Action Plan; and
8. *Request* the Secretariat and relevant Mediterranean Action Plan (MAP) Components to support the Contracting Parties in the implementation of the Offshore Protocols and the Mediterranean Offshore Guidelines and Standards, including through technical meetings, sharing of best practices and strengthening of capacities, within available resources;

9. *Request* the Secretariat with the technical support of REMPEC to continue the work and finalize the Guidelines for the Conduct of Environmental Impact Assessment (EIA), mandated by the Offshore Action Plan (Specific Objective 8), taking into consideration additional proposals and suggestions to be provided by the Contracting Parties, for the consideration of the next OFOG meeting during the first year of the 2020-2021 biennium, for submission to the 22nd Meeting of the Contracting Parties (COP 22).

Annex I

Mediterranean Offshore Guidelines and Standards: Common Standards and Guidance on the Disposal of Oil and Oily Mixtures and the Use and Disposal of Drilling Fluids and Cuttings

List of Abbreviations / Acronyms

BEP	Best Environmental Practice
BTEX	Benzene, Toluene, Ethylbenzene and Xylene (ortho-xylene, meta-xylene and para-xylene)
CEFAS	The Centre for Environment, Fisheries and Aquaculture Science
FPSOs	Floating Production Storage and Offloading Facilities
FSUs	Floating Storage Units
GC-FID	Gas Chromatography and Flame Ionisation Detection
GC-MS	Gas Chromatography - Mass Spectrometry
IFC	International Finance Corporation
IMO	International Maritime Organisation
IOGP	International Association of Oil and Gas Producers
IR	Infra-red
NADF	Non-Aqueous Based Fluids
NORM	Naturally Occurring Radioactive Material
OCNS	Offshore Chemical Notification Scheme
OSPAR	Convention for the Protection of the Marine Environment of the North-east Atlantic
PAH	Polycyclic aromatic hydrocarbons
SPA	Specially Protected Areas
WBM	Water Based Drilling Fluids

1. Use and disposal of drilling fluids and cuttings

1.1. Introduction

1. This chapter of the document provides guidance on the use and disposal of drilling fluids and cuttings from offshore oil and gas installations in the Mediterranean Sea. This guidance has been derived from international best practices as outlined by organisations and institutions such as the Secretariat of the Convention for the Protection of the Marine Environment of the North-east Atlantic (OSPAR), International Finance Corporation (IFC)/World Bank and the International Association of Oil and Gas Producers (IOGP), as well as from countries with mature oil and gas industry with well-developed regulatory frameworks, such the UK, Norway, the Netherlands and the US.

1.2. Legislative Background

2. All countries around the Mediterranean Sea have signed up to the Barcelona Convention. As such, the Barcelona Convention and its supporting Protocol on the Protection of the Mediterranean Sea against Pollution Resulting from Exploration and Exploitation of the Continental Shelf and the Seabed and its Subsoil (Offshore Protocol), provide the overarching regional legal driver unpinning this guidance document.

3. Article 8 of the Offshore Protocol imposes a general obligation upon Operators to use the best available, environmentally effective and economically appropriate techniques. Operators should also observe internationally accepted standards regarding wastes, as well as for the use, storage and discharge of harmful or noxious substances and materials with a view to minimizing the risk of pollution. Articles 9 and 10 of the Protocol provide more specific requirements on the use and disposal of drilling fluids and cuttings.

4. This guidance document provides further definition/clarification to the general obligations outlined above.

1.3. Use and Disposal of Drilling Fluids and Cuttings

1.3.1 The Chemical Use Plan

5. A Chemical Use Plan shall be prepared for the use of all drilling fluids by the Operator.¹ The Chemical Use Plan must quantify and assess the environmental risk of each chemical additive that may potentially be used during the drilling, cementing and completion of the well. Subsequent well operations, including well intervention, workover, suspension and abandonment operations will be subject to similar requirements. The Chemical Use Plan should include all chemicals that will be onboard the drilling unit, comprising all operational as well as contingency chemicals. Only chemical additives that are approved for use by the Competent Authority² may be used. In order to be approved by the Competent Authority all chemicals must be tested for toxicity, bioaccumulation and biodegradability. If the Competent Authority does not have a defined chemical authorisation system in place, the Offshore Chemical Notification Scheme (OCNS) chemical list used by the UK and the Netherlands should be used as a proxy. The Centre for Environment, Fisheries and Aquaculture Science (CEFAS) list of chemical additives is updated regularly and is available at: <https://www.cefas.co.uk/cefas-data-hub/offshore-chemical-notification-scheme/>.

¹ Algeria commented that interlinkages between data and the Chemical Use Plan should be ensured in the Environmental Impact Assessment.

² Algeria proposed to define the term Competent Authorities.

6. The Chemical Plan shall be submitted to the Competent Authority for review and approval. Operations may only commence once the Competent Authority has issued a permit, specifying usage and discharge, and monitoring and reporting conditions.³

1.3.2. Water Based Drilling Fluids

7. Water based drilling fluids (WBM) are the most commonly used drilling fluids. WBMs consist of water mixed with bentonite clay and barium sulphate (barite) to control mud density and thus, hydrostatic head. Other substances⁴ are added to gain the desired drilling properties (OGP, 2003⁵; IOGP, 2016⁶).

8. Effective solids control equipment shall be used to remove formation solids from the drilling fluid and to recover the used drilling fluid, so that it can be reused. Under most circumstances, used WBM and associated drill cuttings may be disposed of by discharging into the sea. A permit⁷ from the Competent Authority must be obtained for the usage and discharge of WBM offshore and WBM cuttings, as described in section 1.3.1 above.

1.3.3. Non-Aqueous Based Fluids

9. Non-aqueous based fluids (NADF) are regularly used to drill the deeper sections of wells when using NADF is considered advantageous over drilling with WBM as it can provide faster drilling rates, increased stability in water-sensitive rock formations and is more effective for drilling deviated, deep, high temperature wells. NADFs comprise all non-water and non-water dispersible base fluids, including mineral and synthetic oil base fluids (OGP, 2003; IOGP, 2016).

10. The use of NADF of sufficiently low toxicity (i.e. with a total aromatic hydrocarbon content < 5% and PAH content < 0.35%) is permitted for use in the deeper well sections (i.e. from the 12¼" section onwards). The use of diesel-based drilling fluids is prohibited.

11. The discharge of NADF to the sea is prohibited. Any unused or recovered NADF from the drilling operations shall be shipped back to shore, where it may either be reconditioned for re-use, or can be treated for appropriate disposal onshore. Alternatively, used NADF and NADF contaminated cuttings may be disposed of by re-injection into a suitable porous rock formation, if it can be proven this represents Best Environmental Practice (BEP) and if permitted to do so by the Competent Authority.

12. Drill cuttings contaminated with NADF may only be discharged⁸ if they are (thermally) treated and contain less than 1% oil content by dry weight (i.e. less than 10 grams of oil per kg of dry cuttings). The discharge point of the cuttings⁹ should be well below the surface of the water

³ Algeria proposed to define monitoring indicators.

⁴ Algeria proposed to define the type of substances.

⁵ OGP, 2003. Environmental aspects of the use and disposal of non-aqueous drilling fluids associated with offshore oil & gas operations. International Association of Oil & Gas Producers. Report No. 342, May 2003.

⁶ IOGP, 2016. Environmental fate and effects of ocean discharge of drill cuttings and associated drilling fluids from offshore oil and gas operations. International Association of Oil and Gas Producers. Report No. 543, March 2016.

⁷ Algeria proposed to clarify whether such permission was subject to studies or analysis, to assess the impact on to benthos and to clarify that in case cutting contains naturally occurring radioactive materials (NORM) the discharge should be suspended.

⁸ Cyprus proposed to add at this point the phrase "offshore" after the word "discharged".

⁹ Cyprus proposed to rephrase the sentence as follows: The offshore discharge point of the treated cuttings.

(i.e. at least 15 m below sea surface).¹⁰ The discharge of any drill cuttings contaminated with NADF¹¹ in specially protected areas (SPA) is prohibited under all circumstances.¹²

1.3.4. Discharge of Cuttings Contaminated with Reservoir Fluids

13. When drilling through reservoir sections of the well, cuttings from the payzone (oil-bearing formation) returned to the surface along with their associated drilling fluids may be contaminated with (small amounts of) liquid reservoir hydrocarbons (i.e. crude oil or condensate). Any cuttings and/or WBM contaminated with reservoir fluids should be contained and sent back to shore for appropriate treatment¹³ and disposal. Alternatively, these cuttings may be re-injected into a suitable formation, if possible to do so or –if permitted by the Competent Authority, treated and cleaned to meet the environmental performance limits (see paragraph 12) so that they can be discharged to the sea. Permitted discharges should be monitored and subject to reporting to the Competent Authority.

2. Disposal of oil and oily mixtures

2.1. Introduction

14. This chapter of the document provides guidance on the disposal of oil and oily mixtures from offshore oil and gas installations in the Mediterranean Sea. This guidance has been derived from international best practices as outlined by organisations and institutions such as OSPAR, IFC/World Bank and IOGP, as well as from countries with mature oil and gas industry with well-developed regulatory frameworks, such the U.K., Norway, the Netherlands and the U.S.

15. Oil and oily mixtures are generated throughout various stages and processes onboard offshore oil and gas installations and will need to be managed and disposed of in a responsible manner. For example, drilling operations generating oil contaminated fluids include well clean-up, cementing, mud pit cleaning and operations where well bore fluids become contaminated with oil-based mud, crude oil or condensate. In addition, fluids from rig floor drains and other tank cleaning operations are also be¹⁴ included. During the production phase, the main sources of oil and oily mixtures will be produced water, produced reservoir sands and scales, and machinery space drainage.

2.2. Legal Background

16. The Barcelona Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (“the Barcelona Convention”) and its Protocols provide the overarching environmental legal framework in the Mediterranean Sea Region.

17. The 22 Contracting Parties to the Barcelona Convention are: Albania, Algeria, Bosnia and Herzegovina, Croatia, Cyprus, Egypt, France, Greece, Israel, Italy, Lebanon, Libya, Malta, Monaco, Montenegro, Morocco, Slovenia, Spain, Syria, Tunisia, Turkey, and the European Union.

18. The Protocol for the Protection of the Mediterranean Sea against Pollution Resulting from Exploration and Exploitation of the Continental Shelf and the Seabed and its Subsoil (adopted in 1994), entered into force in 2011. The Protocol, known as “The Offshore Protocol”, sets out

¹⁰ Algeria proposed to clarify whether the limit is linked to the saline aquifers’ levels.

¹¹ Cyprus proposed to add at this point the phrase “at any concentration” after the word “NADF”.

¹² Algeria proposed to define limitation for certain heavy metal concentrations.

¹³ Algeria proposed to clarify that re-injection should be subject to treatment, analysis and monitoring and that the efficiency of the cleaning process should be measured against thermal treatment.

¹⁴ Cyprus proposed to delete “be” before included, as an editorial amendment.

specific commitments for the Contracting Parties to “take appropriate measures to prevent, abate, combat and control pollution in the Protocol Area resulting from activities, inter alia by ensuring that the best available techniques, environmentally effective and economically appropriate, are used for this purpose”.

19. One of the commitments in the Offshore Protocol is for the Contracting Parties to formulate and adopt common standards for the disposal of oil and oily mixtures from installations into the Protocol Area.

20. In addition to the specific requirements for the Contracting Parties set out in the Offshore Protocol, MARPOL Annex I, provides the worldwide standard for oil content of machinery space drainage from ships, as well as for fixed or floating platforms including drilling rigs, floating production, storage and offloading facilities (FPSOs) used for the offshore production and storage of oil, and floating storage units (FSUs) used for the offshore storage of produced oil. These fixed or floating platforms must comply with the same requirements applicable to ships having a gross tonnage of 400 or greater.

21. The Mediterranean Sea is designated as a “Special Area” under Annex I¹⁵ and is therefore subject to more stringent requirements than those that apply outside Special Areas.

2.3. Produced Water Discharges

22. The term “produced water” is used for formation water that is produced along with the oil from the reservoir, as well as for water that is condensed during the production process. Produced water is separated from the produced hydrocarbon fraction onboard the offshore installation.

23. Where possible, produced water¹⁶ should be re-injected back into the reservoir¹⁷. If re-injection is not possible, then the produced water may be discharged under the permitting and reporting conditions described below.

2.3.1. Discharge Limits

24. The discharge of produced water is allowed¹⁸ if the oil and grease content does not exceed 30 mg/l¹⁹, as an average in any calendar month. The discharge concentration of oil in produced water shall not exceed 100 mg/l at any time.²⁰

25. The dilution of treated or untreated produced water for the purpose of lowering the average concentration of oil or achieving compliance with the performance standard is prohibited. If produced water is mixed with other waters after the treatment process, the Operator must be able to demonstrate that the original concentration of the oil content in the produced water can be measured, and the quantity of oil discharged can be calculated.

¹⁵ Cyprus proposed to specify “MARPOL Annex I”

¹⁶ Cyprus proposed to review the definition of the term “produced water” to also mention gas reservoir

¹⁷ Algeria proposed to define the type of reservoir (i.e. prolific reservoir or pre-salt reservoirs (*réservoir salifère*)).

¹⁸ Cyprus proposed to add the word “only” after the word “allowed”

¹⁹ Algeria proposed to review the threshold noting that the Mediterranean is semi-enclosed sea.

²⁰ Cyprus proposed that if stringer limits are set elsewhere in national laws of the Parties, then the stricter limits shall apply.

26. Batch discharges of ²¹produced water are permitted. A batch discharge is an intermittent discharge where treatment of produced water to remove oil takes place between batches, for example settlement/slops tanks with capability for oil removal.²²

2.3.2. Sampling

27. The sampling strategy for dispersed oil in produced water depends on the volume of produced water discharged, and the type of installation. The frequency and timing of sampling should make sure that samples are representative of the effluent, taking into account operational aspects and logistics. For manned offshore installations which discharge continuously, the determination of the quantity of dispersed oil discharged should be based on the results of continuous monitoring or at least two (2) times a day. Samples should be taken at equal time intervals. The first sample should be taken within 4 hours of the start of the discharge, after which the minimum sample frequency shall be as detailed in the table, below.²³

28. The sampling point must be immediately after the last item of treatment equipment in, or downstream of, a turbulent region, and in any case before any subsequent dilution.

Table 1. Oily Mixtures Discharged Per Discharge Point for Manned Installations²⁴

Type of Discharge	Discharge Amount Per Annum	Sample Frequency and Analysis
Dispersed oil	< 2000 kg	Once a week
	≥ 2000 kg	Every second day
BTEX	< 200 kg	Twice a year
	200 kg to 2000 kg	Once every quarter (i.e. 4 times per year)
	≥ 2000 kg	Once per week
BTEX = Benzene, toluene, ethylbenzene and xylene (ortho-xylene, meta-xylene and para-xylene)		

29. In addition to the dispersed oil content, produced water may also contain dissolved hydrocarbons (PAH and phenols), heavy metals, inorganic compounds from the formation (both dissolved salts and precipitates) and Naturally Occurring Radioactive Material (NORM). Therefore, the concentration of heavy metals and PAH compounds, BTEX, phenols, alkyl phenols and carboxylic acids in discharges should also be determined as part of the analysis of produced water²⁵.

30. These pollutants should be limited, including adding recommendation for standards or recommendation to use technology that can reduce polluting substances (BAT) [to comply with the environmental limits applicable in each Contracting Party according to their national legislation]²⁶.

2.3.3. Analysis of Dispersed Oil Content and BTEX

²¹ Cyprus proposed to add the work “treated” before the word “produced”.

²² Algeria proposed to define thresholds for other pollutant parameters.

²³ Cyprus proposed that if stringer limits are set elsewhere in national laws of the Parties, then the stricter limits shall apply.

²⁴ Cyprus proposed to add a column for unmanned installations.

²⁵ Cyprus proposed to add the following at the end of the sentence “, in same frequency as indicated for the BTEX in Table 1.

²⁶ The text is inserted in square brackets for final consideration by the MAP Focal Points Meeting.

31. The dispersed oil content in produced water should be determined by means of gas chromatography and flame ionisation detection (GC-FID), as described in OSPAR Agreement 2005/15. This method is designed for produced water and other types of waste water discharged from gas, condensate and oil platforms and allows the determination of the dispersed oil content in concentrations above 0.1 mg/l.

32. The OSPAR produced water analysis reference method is a modified version of the ISO 9377-2 method. This method is to be used only for the determination of dispersed oil in produced water. This method is not to be used for the determination of oil in other discharges for oil on sand, drains discharges, etc. Details of this sample analysis method are published in: 'Oil in Produced Water Analysis – Revised Guideline on Criteria for Alternative Methods Acceptance and General Guidelines on Sample Taking and Handling – OSPAR Agreement 2006-6'.

33. For certain instances, there may be scope to use a simpler analysis method offshore if that has been correlated against the OSPAR Reference Method in an onshore laboratory. Therefore, a suitable Infra-red (IR) analysis method (or other analysis methods) may be accepted as an 'alternative' analysis method, but only if it is correlated against the OSPAR Reference Method.

34. Additional guidance on alternative sampling methods can be found in a guidance document published by the UK Department of Energy and Climate Change: Methodology for the Sampling and Analysis of Produced Water and Other Hydrocarbon Discharges (DECC, 2014).

35. The 'BTEX content' should be determined by taking the sum of the levels of BTEX obtained by the application of the static headspace method described in ISO 11423-1, using gas chromatography - mass spectrometry (GC-MS) or another method that produces equivalent results. The amount of BTEX should be calculated on the basis of the quantity of water per year (m³) and the yearly flow-weighted average values of BTEX analysed in the produced water discharged into the sea.

2.4. Drainage System Discharges

36. Discharges from drainage systems (open/closed, hazardous/non-hazardous discharge to a 40 mg/l monthly average oil concentration limit or maximum values - 30 mg/l Total Petroleum Hydrocarbon (TPH)/Total Oil&Grease (TOG) and 15 mg/l mineral oil.²⁷

2.4.1. Machinery Space Drainage Discharges

37. Because the MARPOL Annex I standards for machinery space drainage (such as slops and bilges) are already implemented worldwide, no additional requirements are required for with regard to drainage of drilling rigs and platforms.

38. The following MARPOL requirements should be met:

- The drilling rig or platform must be equipped "as far as practicable" with the oil filtration equipment and the discharge of oil or oily mixtures from machinery drainage spaces is prohibited unless the oil content does not exceed 15 ppm;
- All facilities are required to keep a record of all operations involving oil or oily mixture discharges;
- Oil filtering equipment must be of an approved design by the Administration, must be provided with an alarm arrangement to indicate when the 15-ppm level cannot be

²⁷ Algeria proposed to define thresholds for other pollutant parameters.

maintained, and must ensure that any discharge of oily mixtures is automatically stopped when the oil content exceeds 15 ppm.

39. For further information, the Revised Guidelines and Specifications for Pollution Prevention Equipment for Machinery Space Bilges of Ships are contained in resolution MEPC.107(49). The IMO maintains a list of approved oil filtering equipment.

40. For new and future installations, sampling of the Open Drain System collected waste should be undertaken once a month.

2.5. Produced Sand and Scale Discharges

41. Annex V (A.2) of the Offshore Protocol states that all “Oily waste and sludges from separation processes shall be transported to shore”.

42. Therefore, any reservoir sand and production scales contaminated with oil (e.g. sludges or slurries removed from processing vessels) should be transported to shore for appropriate treatment and disposal.

2.6. Other Operational Discharges

43. Most discharges of oil will normally be routed to the production process, produced water treatment system, or to the drainage systems, and will be treated to minimise the discharge of oil. Therefore, such discharges will be subject to the same discharge limits for produced water and drainage systems, as discussed in Sections 2.3 and 2.4 above. For example, displacement water (ballast water) from storage facilities for oil is subject to the same discharge requirements as produced water.

44. Notwithstanding the above, it is accepted that certain operations may result in a separate discharge of oil into the marine environment, for example during certain types of maintenance or sub-sea pipeline operations e.g. installation tie-in, commissioning and decommissioning operations. In all cases where such a discharge of oil is planned, the Operator must obtain a permit/consent from the Competent Authority. Each permit application should contain sufficient information to allow an assessment of the potential environmental impacts and to justify the proposed discharge.

Bibliography

DECC, 2011. *Guidance Notes Decommissioning of Offshore Oil and Gas Installations and Pipelines under the Petroleum Act 1998*. Produced by Offshore Decommissioning Unit Department of Energy and Climate Change. Version 6, March 2011.

DECC. 2014. *Methodology for the Sampling and Analysis of Produced Water and Other Hydrocarbon Discharges*. UK Department of Energy and Climate Change, February 2014.

EPA, 2000. *Analytical Method Guidance for EPA Method 1664A Implementation and Use (40 CFR part 136)*. EPA/821-R-00-003. February 2000.

ISO 5667-3:2012. *Water Quality - Sampling – Part 3: Preservation and handling of water samples*.

ISO 5667-12:2017. *Water Quality - Sampling – Part 12: Guidance on sampling of bottom sediments from rivers, lakes and estuarine areas*.

ISO 5667-19:2004. *Water Quality - Sampling – Part 19: Guidance on sampling in marine sediments*.

ISO 9377-2:2000. *Water quality - Determination of hydrocarbon oil index - Part 2: Method using solvent extraction and gas chromatography*

ISO 14423-1:1997. *Water quality - Determination of benzene and some derivatives - Part 1: Head-space gas chromatographic method*.

ISO 16665:2013. *Water Quality - Guidelines for quantitative sampling and sample processing of marine soft-bottom macrofaunal*.

Mijnbouwregeling, 2017. *Hoofdstuk 9. Gebruik en lozen van oliehoudende mengsels en chemicaliën – Mining Regulations of the Netherlands, Chapter 9 – The use and discharge of oily mixtures and chemicals*. <http://wetten.overheid.nl/BWBR0014468/2017-08-29#Hoofdstuk9>.

NOROG, 2016. *Guidance document for characterization of offshore drill cuttings piles*. Norsk Olje & Gas. Version 4, 21 October 2016.

OSPAR Agreement 2005-15 (As amended in 2011). *OSPAR Reference Method of Analysis for the Determination of the Dispersed Oil Content in Produced Water*. Amendments to this Agreement were adopted by OIC 2011. See OIC 11/13/1, paragraph 2.10

OSPAR Agreement 2006-6. *Oil in produced water analysis - Guideline on criteria for alternative method acceptance and general guidelines on sample taking and handling*.

OSPAR Agreement 2017-03. *Guidelines for the Sampling and Analysis of Cuttings Piles*.

Annex II

Mediterranean Offshore Guidelines and Standards: Common Standards and Guidelines for Special Restrictions or Conditions for Specially Protected Areas (SPA) within the Framework of the Mediterranean Offshore Action Plan

List of Abbreviations / Acronyms

BWM Convention	Ballast Water Management Convention
EIA	Environmental Impact Assessment
IMO	International Maritime Organization
IPIECA	International Petroleum Industry Environmental Conservation Association
JNCC	Joint Nature Conservation Committee (UK government advisory body)
MARPOL	International Convention for the Prevention of Pollution from Ships
OSPAR	Convention for the Protection of the Marine Environment of the North-east Atlantic. (Oslo Paris Commission)
PAM	Passive acoustic monitoring
ROV	Remotely-operated vehicle
SPA	Specially Protected Areas
SPAMI	Specially Protected Area of Mediterranean Importance

1. Introduction

1. This present document provides guidelines for special restrictions or conditions to offshore activities for Specially Protected Areas (SPAs), as provided for in the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean, and any other areas established by the Parties, as appropriate, as provided for in the Article 21 of the Offshore Protocol, with particular reference to the offshore oil and gas industry as an example of an exploration and exploitation industry relevant to the Offshore Protocol. They are drawn from a review of existing best practices and industry and statutory guidance that is already in place in countries with mature oil and gas industries and reflect a range of measures that have been implemented or recommended to mitigate for potential adverse effects of explorative and exploitative activities on valued habitats and species both in the Mediterranean and worldwide.

2. The guidelines cover the full range of development life cycle stages of offshore activities including the initial geophysical survey, exploratory drilling, field development and decommissioning and contribute to the harmonisation of working practices across Contracting Parties in accordance with Specific objectives, 3, 7 and 8 of the Mediterranean Offshore Action Plan in the framework of the Protocol for the Protection of the Mediterranean Sea against Pollution resulting from Exploration and Exploitation of the Continental Shelf and the Seabed and its Subsoil (Decision IG.22/3). The following guidelines are provided for key aspects of the different development phases of offshore developments.

2. Geophysical Survey

2.1. Permitting

3. Underwater sound produced during geophysical surveys has the potential to disturb protected marine species including mammals, reptiles and fish resulting in physiological damage or alterations in behaviour. Therefore, where proposed, geophysical surveys should be permitted and approved by the relevant Competent Authority using the most up to date knowledge of the spatial and temporal distributions and life cycle stages of protected species within the proposed area of investigation so that sensitive locations and periods can be avoided.

4. Geophysical surveys should be undertaken during the least sensitive period, in terms of spawning, nesting and migration of protected species and as agreed with the Competent Authority prior to the commencement of the survey. Peak spawning, nesting and migration periods should be avoided.

5. Prior to the issue of permits for geophysical survey, survey contractors or project proponents should adequately demonstrate to the Competent Authority the need for the conduct of the proposed geophysical survey and the alternatives considered.

2.2. Conduct of the Geophysical Field Survey

6. IPIECA OGP Report 436 and Ballast Water Management Convention guidelines together with Strategic Priorities and Actions of the Mediterranean Strategy on Ship's Ballast Water Management should be adhered to during marine geophysical surveys and the following measures should be adopted:

- Local vessels should be used for the conduct of the geophysical survey where possible. This includes the survey vessels used for the deployment of geophysical equipment as well as chase vessels which are used to protect seismic cables and other towed equipment;
- Vessels used during geophysical survey should be restricted to those which have documented non-native species capabilities, such as ballast water treatment and management systems, in accordance with the IMO's International Convention for the Control and Management of Ship's Ballast Water and Sediments;
- A review of marine species records for the presence of alien invasive species in ports that are to be used for the mobilisation and demobilisation of geophysical surveys should be undertaken prior to the commencement of the survey, the findings of which should be reported to the Competent Authority as part of the permit application;
- In light of species inventory data for mobilisation and demobilisation ports, the vessel non-native species capabilities, the vessel origin and the intended area of the activity, a risk assessment of the potential for the introduction and spread of alien invasive species due to the intended survey should be conducted and reported to the competent authorities prior to the commencement of the survey and as part of the permit application. Risk assessments should refer to relevant emerging research on the relationships between vessel traffic and invasive alien species;
- IPIECA guidelines on minimising the risk of introducing and spreading alien species should be adopted and vessels should adhere to the requirements of the BWM Convention, as appropriate. Removal of biofouling from vessel hulls, equipment, rigs, and plant should be conducted at the source of the biofouling and in a way that does not increase the risk of the further spread of non-native species. Where appropriate the Guidelines for the control and management of ships' biofouling to minimize the transfer of invasive aquatic species (Biofouling Guidelines) (resolution MEPC.207(62)) shall be implemented.

7. Geophysical surveys should be conducted using the lowest sound intensities and over the smallest geographical area possible.

8. In the absence of national guidance, and for high seas areas beyond national jurisdictions, JNCC Seismic Survey Guidance for the mitigation of potential effects to marine mammals should be referred to, taking into account special local circumstances. Certified observers should conduct searches from a sufficiently high platform to monitor a mitigation zone of 500 m around the sound source for the presence of sensitive species for a minimum of 30 minutes in waters < 200 m deep or 60 minutes in waters > 200 m deep during each soft-start and prior to the noise emitting survey equipment operating at full energy. If marine mammals, cetaceans or turtles are detected within the mitigation zone during the pre-shooting search (visually or acoustically), the soft-start must be delayed until their passage, or the transit of the vessel, results in them being outside of the mitigation zone. There must be a minimum of a 20-minute delay from the time of the last detection within the mitigation zone and the commencement of the soft-start. Shooting may continue if a marine mammal is observed within the mitigation zone after shooting has commenced. Passive acoustic monitoring (PAM) equipment should be used by trained personnel to detect the presence of marine mammals during periods of darkness and poor visibility. Procedures for line turns should be agreed with the relevant Competent Authority, or as per 2017 JNCC advice. Documentation of the soft start must be presented to the Competent Authority during and after the survey as proof of the soft start being done.

9. Turtles have the potential to become entangled in tail buoys during field surveys causing physiological damage and mortality. Therefore, guards should be fitted to all tail buoys used during field surveys in areas likely to support turtles i.e. near known turtle nesting and feeding sites. Turtle entanglement preventing gear must be used by the survey vessel.

10. Vessels should comply with MARPOL guidelines for the control of oily discharges, recognising the extra levels of controls imposed under the IMO designation of the whole Mediterranean Sea as a Special Area.

3. Offshore Drilling Operations

3.1. Permitting

11. Activities within SPAs and any other areas established by the Parties, as appropriate, as provided for in the Article 21 of the Offshore Protocol should be subject to an Environmental Impact Assessment (EIA) as per Article 17 of the SPA/BD Protocol, and may only be undertaken in accordance with individually assigned permit conditions.

12. Concentrations of all chemicals and substances proposed to be discharged should be identified, quantified and risk assessed in a permit application, as referred to in the Guidelines for the conduct of EIA, prior to the commencement of offshore activities. The Competent Authority will review the permit application and only issue consent once satisfied²⁸ no significant environmental effects will result from the planned activities, with particular consideration being given to the conservation objectives for which the SPA and any other areas established by the Parties, as appropriate, as provided for in the Article 21 of the Offshore Protocol are designated.

3.2. Siting

13. Wells and other seabed infrastructure should be sited in areas that cause the least damage to sensitive habitats and species, as far as this is practicable,²⁹ and in consideration of other potential seabed impacts, such as anchor positioning.

14. Wells and other seabed infrastructure should be sited in consideration of the potential interest features of specially protected areas that are likely to be designated in the future, for example proposed offshore SPAMIs, as far as is practicable.

3.3. Conduct of Drilling Activities

15. Exploratory drilling activities should be adopted or adapted for use in Mediterranean situations including the following measures:

- Use dynamic positioning rigs to avoid the use of mooring anchors in potential sensitive seabed areas;
- Pre-lay anchors prior to the arrival of the rig to achieve accuracy in positioning of anchors and chains and to avoid corals and environmentally sensitive habitats;

²⁸ Cyprus proposed to replace “once satisfied” by “if”

²⁹ Cyprus proposed to delete “, as far as this is practicable,” and instead add the following sentence at the end of the paragraph “If this is not practicable, then other alternatives shall be examined to minimise the risk of damage to sensitive habitats and species.”

- Avoid grappling for pick-up of anchor chains and to employ ROV or pick up buoys for this purpose;
- Replace anchor chains in part by fibre (nylon) wire and make buoyant by attaching buoys to the fibre wire to avoid interference with sensitive seabed features;
- Use larger, heavier anchor or larger dimension anchor chain to reduce the chain length to reduce the footprint and add flexibility in anchor positioning.

16. Methods for monitoring drilling activities in specially protected areas and any other areas established by the Parties, as appropriate, as provided for in the Article 21 of the Offshore Protocol, should be specific to the features for which the site is designated and draw upon existing standards where suitable (e.g. PERSGA/GEF, 2004). Monitoring programs should include methods for detecting previously unknown sensitive habitats that might be affected from the activity, for example side scan sonar and ROV surveys of sonar targets.

17. The Common Standards and Guidance on the Disposal of Oil and Oily Mixtures and the Use and Disposal of Drilling Fluids and Cuttings, presented in Annex I to the present document, provides guidance on the use and disposal of drilling fluids and cuttings and should be referred to when proposing offshore drilling activities. In particular, the environmental profile of drilling fluids and other chemical additives should be considered, and the least environmentally harmful alternatives should be chosen, where possible. The discharge of drill cuttings and non-aqueous (oil) based drilling fluids is prohibited in SPAs.

18. MARPOL guidance should be adhered to as a minimum standard regarding the control of wastes, oily discharges and ballast waters recognising the extra levels of controls imposed under the IMO designation of the whole Mediterranean Sea as a Special Area.

19. Dedicated spill response resources should be kept³⁰ at a suitable onshore site if drilling occurs inside or close to a specially protected area, and any other areas established by the Parties, as appropriate, as provided for in the Article 21 of the Offshore Protocol, in accordance with the requirements of the Offshore Protocol. Where appropriate, additional local resources should be considered to enhance oil spill resilience and contingency planning.

4. Field Development

4.1. Permitting

20. Discharge concentrations of all chemical additives proposed to be discharged should be identified, quantified and risk assessed in a permit application prior to the commencement of activities. The Competent Authority will review the permit application and only issue consent once satisfied no significant environmental effects will result from the planned activities, as referred to in the Guidelines for the Conduct of EIA.

21. Any permit application for activities inside or close to a special protection area will require a scientifically robust environmental assessment, in line with the Guidelines for the Conduct of EIA.

³⁰ Cyprus proposed to add the following text “as close as possible (on the drilling rig and supporting vessels) and” after the word “kept”.

4.2. Offshore Activities

22. Contracting Parties should spatially or temporally restrict or prohibit discharges in sensitive areas or during important life cycle stages and should minimise flaring during critical bird migration periods.
23. The environmental profile of chemical additives should be considered and the least environmentally harmful alternatives should be chosen, where possible.
24. All discharges to sea shall be monitored and reported to the Competent Authority, in line with consent conditions.
25. Use of biologically relevant species is recommended for ecotoxicological and bioaccumulation studies. A list of key indicator species should be developed and agreed for specific habitat types and regions for the purposes of condition monitoring, as necessary.
26. Incorporation of site-specific environmental monitoring with regional programmes should be adopted, where appropriate, to allow for the interpretation of data within the wider context. Monitoring equipment should be appropriate to the habitat and species being monitored. Non-destructive sampling techniques, such as video and photography surveillance via remote or diver techniques is recommended in hard substrate areas, sea grass beds and areas where a high density of sensitive species occur.
27. Pipelines, cables, coastal intakes and outfalls, jetties, moorings and other seabed structures should not directly impact on biologically sensitive species and habitats. Sediment plumes arising from seabed construction works should be minimised as far as practicable. Minimum separation zones or the use of turbidity curtains should be used where relevant to protect key habitats and species from predicted adverse sediment impacts, as agreed with the Competent Authority. In cases where sedimentation due to dredging is suspected to reach a sensitive habitat, an Environmental Monitoring and Management Program (EMMP) needs to be established. The EMMP needs to include online monitoring of turbidity, with an ability to respond in the field when turbidity between the works and a sensitive habitat rises above ambient levels, so as to prevent the sedimentation cloud to reach the habitat.
28. Light emissions should be reduced as far as practicable in line with existing [OSPAR Guidance](#) (Guidelines to reduce the impact of offshore installations lighting on birds in the OSPAR maritime area (OSPAR Agreement, 2015-08)).
29. Dedicated spill response resources should be kept³¹ at a suitable onshore site if the development is within or close to a specially protected area and any other areas established by the Parties, as appropriate, as provided for in the Article 21 of the Offshore Protocol, in accordance with the requirements of the Offshore Protocol. Where appropriate, additional local resources should be considered to enhance oil spill resilience and contingency planning.

³¹ Cyprus proposed to add the following text “as close as possible (on the drilling rig and supporting vessels) and” after the word “kept”.

5. Decommissioning

30. All platform structures should be removed from within the boundaries of specially protected areas unless there are over-riding and agreed reasons why these should remain in situ, in which case their suitability for conversion to a reef should be assessed.
31. All process fluids, fuel oils, produced solids and other chemicals and lubricating oils are to be drained or flushed from the decommissioned items and transported to shore for disposal.
32. Pipelines should be subject to a comparative assessment to determine the most suitable decommissioning options from those outlined in Article 20.2 of the Offshore Protocol.
33. Cuttings piles on the seabed should remain in situ on decommissioning unless there are significant over-riding reasons for removal.³²
34. The use of mechanical cuttings tools should be favoured over the use of explosives. If explosives are used, their use should be fully justified and supported by an assessment of the potential impact on protected and sensitive species and which should form part of the EIA and licence application. JNCC Guidelines, or similar, should be used to mitigate effects on protected species.
35. Post-decommissioning environmental seabed surveys should be undertaken. The scope and number of repeat decommissioning environmental surveys should be risk-based and developed in consultation with the relevant Competent Authority.
36. Post-decommissioning debris search and removal surveys of the site should be conducted to ensure that no debris remains on the seabed. The surveys should cover an area of 500 m radius around the site of the decommissioned installation and 100 m either side of any decommissioned pipelines.

³² Cyprus proposed to clarify paragraph 33 by the replacing the whole paragraph by the following: "If cuttings piles are present on the seabed, it should be assessed if it is environmentally safe to remain in situ or removed on decommissioning, unless there are significant over-riding reasons for removal."