

**Sayı** : 38591462 - 010.07.03 - 2020 - 1287

30/04/2020

Konu : Akdeniz'in Kükürt Emisyon Kontrol Alanı (SECA) İlan Edilmesi**Sirküler No :548**

Sayın Üyemiz,

Ulaştırma ve Altyapı Bakanlığı Denizcilik Genel Müdürlüğü tarafından Odamıza gönderilen 29.04.2020 tarihli Ek'te sunulan yazı ile;

Ülkemizin de taraf olduğu Barselona Sözleşmesi çerçevesinde Akdeniz deniz çevresinin korunması ve sürdürülebilir kullanımının sağlanması için kıyıdaş ülkeler arasında işbirliği çalışmalarının yürütüldüğü,

Barselona Sözleşmesi 21.Taraf Ülkeler Toplantısının 02-05 Aralık 2019 tarihleri arasında Napoli/İtalya'da yapıldığı, Sözleşme kapsamında 2 yıl boyunca (2018-2019) süre gelen çalışmaların, Ülke temsilcileri tarafından değerlendirilerek ve taslak karar metinleri üzerinde istişare edilerek nihai hale getirildiği ve kararları içeren rapora https://wedocs.unep.org/bitstream/handle/20.500.11822/30095/19ig24_22_eng.pdf adresinden ulaşılabildiği,

Bahse konu toplantıda, denizcilik sektörümüz ile ilgili Akdeniz'in SECA ilan edilmesi yönünde; 2022 yılı Nisan ayında Uluslararası Denizcilik Örgütü'nün Deniz Çevresi Koruma Komitesi'nin 78. Oturumuna Akdeniz'in SECA ilan edilmesi teklifinin sunulması ana oturumda tartışmaya açılmasının ve en geç 01 Mart 2024 tarihine kadar Akdeniz'in SECA ilan edilerek yürürlüğe girmesine yönelik bir yol haritasının belirlendiği,

Bu kapsamda, Akdeniz için Bölgesel Acil Müdahale (REMPEC) Merkezi tarafından gemilerin düşük sülfürlü yakıt kullanımına yönelik çalışmalar yapılarak, bu hazırlanan teknik dokümanların ülke görüşlerine açıldığı ve yazı ekinde gönderildiği belirtilmektedir.

Akdeniz'in SECA ilan edilmesine yönelik söz konusu çalışmanın, denizcilik sektörümüze etkilerinin, özellikle gemilerin yakıtı uyumu, yakıt tedarik imkanları, Akdeniz'de SECA'nın bölgemize ve sektörümüze etkilerini içeren teknik konuların ulusal ve uluslararası düzeyde değerlendirilerek, bu konudaki görüş ve önerilerinizin Ulaştırma ve Altyapı Bakanlığı Denizcilik Genel Müdürlüğü'ne iletilmek üzere 5 Haziran 2020 tarihine kadar Odamıza gönderilmesi hususunda bilgilerinizi arz ederim.

Saygılarımla,

*e-imza*İsmet SALİHOĞLU
Genel Sekreter**Ek:**

1- SECA Ön yazı (2 sayfa)



Bu belge, 5070 sayılı Elektronik İmza Kanuna göre Güvenli Elektronik İmza ile İmzalanmıştır.

Evrakı Doğrulamak İçin : <https://ebys.denizticaretodasi.org.tr/enVision/Dogrula/5D559B>

Bilgi için: Hayriye DEMİROĞLU Telefon: 02122520130/271 E-Posta: hayriye.demiroglu@denizticaretodasi.org.tr

Meclis-i Mebusan Caddesi No: 22 34427 Fındıklı - Beyoğlu - İstanbul Türkiye

Tel : +90 (212) 252 01 30 Faks: +90 (212) 293 79 35

Web: www.denizticaretodasi.org.tr E-mail: iletisim@denizticaretodasi.org.tr Kep: imeakdto@hs01.kep.tr.Odamızda
ISO 9001:2015
Kalite Yönetim
Sistemi
uygulanmaktadır.



- 2- EK-1 (3 sayfa)
- 3- EK-2 (7 sayfa)
- 4- EK-3 (5 sayfa)
- 5- EK-4 (6 sayfa)
- 6- EK-5 (8 sayfa)
- 7- EK-6 (6 sayfa)

Dağıtım:**Gereği:**

- Tüm Üyeler (WEB sayfası ve e-posta ile)
- Türk Armatörler Birliği
- S.S. Gemi Armatörleri Mot. Taş. Koop.
- Vapur Donatanları ve Acenteleri Derneği
- GİSBİR
- TÜRK LOYDU UYGUNLUK DEĞERLENDİRME HİZMETLERİ A.Ş.
- TÜRK LİM
- KOSDER
- Gemi Sahibi Firmalar

Bilgi:

- Meclis Başkanlık Divanı
- Yönetim Kurulu Başkan ve Üyeleri
- İMEAK DTO Çevre Komisyonu
- İMEAK DTO Meslek Komite Bşk.
- Meclis Üyeleri
- İMEAK DTO Şubeleri ve Temsilcilikleri



Bu belge, 5070 sayılı Elektronik İmza Kanuna göre Güvenli Elektronik İmza ile imzalanmıştır.

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Odamızda
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Sistemi
uygulanmaktadır.



T.C.
ULA TIRMA VE ALTYAPI BAKANLI I
Denizcilik Genel Müdürlü ü

Sayı :36712415-160.02-E.25677
Konu :Akdeniz'in Kükürt Emisyon Kontrol
Alanı (SECA) lan Edilmesi

29.04.2020

DAĞITIM YERLERİNE

Bilindiği üzere; Ülkemizin de taraf olduğu Akdeniz'in Deniz Ortamı ve Kıyı Bölgesinin Korunması Sözleşmesi (Barselona Sözleşmesi) çerçevesinde Akdeniz deniz çevresinin korunması ve sürdürülebilir kullanımının sağlanması için kıyıdaş ülkeler arasında işbirliği çalışmaları yürütülmektedir.

Bu çerçevede, Barselona Sözleşmesi 21. Taraf Ülkeler Toplantısı 02-05 Aralık 2019 tarihlerinde Napoli/İtalya'da yapılmıştır. Sözleşme kapsamında 2 yıl boyunca (2018-2019) süre gelen çalışmalar, Ülke temsilcileri tarafından değerlendirilerek ve taslak karar metinleri üzerinde istişare edilerek nihai hale getirilmiş olup, söz konusu kararları içeren rapora https://wedocs.unep.org/bitstream/handle/20.500.11822/30095/19ig24_22_eng.pdf adresinden ulaşılabilmektedir. Bu toplantıda denizcilik sektörümüz ile ilgili Akdeniz'in SECA ilan edilmesine yönelik yol haritası; 2022 yılı Nisan ayında Uluslararası Denizcilik Örgütü'nün Deniz Çevresi Koruma Komitesi'nin 78. Oturumuna Akdeniz'in SECA ilan edilmesi teklifinin sunulması ana oturumda tartışmaya açılması ve en geç 01 Mart 2024 tarihine kadar Akdeniz'in SECA ilan edilerek yürürlüğe girmesine yönelik bir yol haritası belirlenmiştir.

Bu kapsamda, Akdeniz kıyı ülkelerine uluslararası denizcilik sözleşmelerinin onaylanması, aktarılması ve uygulanmaları konusunda yardımcı olmak maksadıyla kurulmuş olan Akdeniz için Bölgesel Acil Müdahale (REMPEC) Merkezi, son yıllarda Akdeniz'in Kükürt Emisyon Kontrol Alanı (SECA) ilan edilmesine yönelik çalışmalar yürütmektedir. REMPEC tarafından gemilerin düşük sülfürlü yakıt kullanımına yönelik çalışmalar yapılarak, bu hazırlanan teknik dökümanlar ülke görüşlerine açılmış ve yazımız ekinde tarafınıza gönderilmektedir.

Söz konusu Akdenizin SECA ilan edilmesine yönelik çalışmanın, denizcilik sektörümüze etkilerinin, özellikle gemilerin yakıtı uyumu, yakıt tedarik imkanları, Akdeniz'de SECA'nın bölgemize ve sektörümüze etkilerini içeren teknik konuların ulusal ve uluslararası düzeyde

Not: 5070 sayılı Elektronik İmza Kanunu gere i bu belge elektronik imza ile imzalanmıştır.

Evrak Doğrulama Kodu : IAROLQHX Evrak Takip Adresi: <https://www.turkiye.gov.tr/udhb-ebys>
Hakkı Turaylıç Caddesi No:5 06338 Emek / Çankaya / ANKARA

Bilgi için:Fatih ENOL
Denizcilik Sörvey Mühendisi

Bağlı / İlgili / İlişkili Kurum ve Kuruluşlar





T.C.
ULA TIRMA VE ALTYAPI BAKANLI I
Denizcilik Genel M¼d¼rl¼ ü

Sayı :36712415-160.02-E.25677
Konu :Akdeniz'in K¼k¼rt Emisyon Kontrol
Alanı (SECA) lan Edilmesi

29.04.2020

deęerlendirilerek, g¼r¼şlerinizin 15 Haziran 2020 tarihine kadar Genel M¼d¼rl¼ę¼m¼ze g¼nderilmesi hususunda,

Bilgilerinizi ve gereęini rica ederim.

Ahmet Selçuk SERT
Bakan a.
Genel M¼d¼r V.

Ek :

- 1 - SECA Kapsamındaki Konular ve Planlanan Tarihler (3 sayfa)
- 2 - Faz 1-1. Paket Çalıřma Programı (6 sayfa)
- 3 - Faz 1-2. Paket Çalıřma Programı (5 sayfa)
- 4 - Faz 1-3. Paket Çalıřma Programı (6 sayfa)
- 5 - Faz 1-4. Paket Çalıřma Programı (8 sayfa)
- 6 - Faz 1-5. Paket Çalıřma Programı (6 sayfa)

Daęıtım:

İMEAK Deniz Ticaret Odasına
Mersin Deniz Ticaret Odasına
T¼rk Loydu Uygunluk Deęerlendirme Hizmetleri
A.ř. Tl Teknik Arge ve Tasarım Limited
řirketine
American Bureau Of Shippinge
Det Norske Veritas-Germanischer Lloyd
(Dnv-Gl)e
Lloyd's Register G¼zetim Ltd. řti.ne
Nippon Kaiji Kyokai İstanbul Ofisine
Rina Denizcilik ve Belgelendirme Ltd. řti.ne
Korean Register Of Shippinge

Not: 5070 sayılı Elektronik İmza Kanunu gere i bu belge elektronik imza ile imzalanmı tır.

Evrak Do rulama Kodu : IAROLQHX Evrak Takip Adresi: <https://www.turkiye.gov.tr/udhb-ebys>
Hakkı Turaylıç Caddesi No:5 06338 Emek / Çankaya / ANKARA

Bilgi için:Fatih ENOL
Denizcilik S¼rvey M¼hendisi

Baęlı / İlgili / İliřkili Kurum ve Kuruluřlar



Guidance for the SO_x ECA(s) Technical Committee of Experts

Phase 1

Background

COP 21¹, which adopted Decision IG.24/8², agreed to extend the mandate of the SO_x ECA(s) Technical Committee of Experts, until 30 April 2021, to oversee the completion of the knowledge gathering and the preparations of further studies, notably socio-economic impacts on individual Contracting Parties to the Barcelona Convention *inter alia* as indicated in the road map, including the development of their respective terms of reference, through correspondence coordinated by REMPEC, when examining the possibility of designating the proposed Med SO_x ECA.

COP 21 also requested the Secretariat to update the initial draft submission to the IMO for a proposal for the possible designation of the Med SO_x ECA, under the guidance of the SO_x ECA(s) Technical Committee of Experts in line with the agreed road map.

Further background information may be found on pages 1-3 of the Terms of Reference attached to the cover e-mail.

Work of the SO_x ECA(s) Technical Committee of Experts

With a view to facilitating the work of the SO_x ECA(s) Technical Committee of Experts, it will be expected, through correspondence coordinated by REMPEC, to:

1. **Phase 1:** review the draft Terms of Reference for the completion of the knowledge gathering and the preparations of further studies as well as the finalisation of the draft submission to the IMO, as prepared by the Secretariat³;
2. **Phase 2:** review the draft knowledge gathering reports, the draft further studies, the draft synopsis of the assessment as well as the updated initial draft submission to the IMO, as prepared by the Consultants, in consultation with the Secretariat;
3. **Phase 3:** review the final draft knowledge gathering reports, the final draft further studies as well as the finalised draft submission to the IMO, as prepared by the Consultants, in consultation with the Secretariat; and
4. **Phase 4:** review the draft report of the SO_x ECA(s) Technical Committee of Experts, as prepared by the Secretariat.

Schedule

	Commencement	Deadline for comments
Phase 1	31 March 2020	10 April 2020
Phase 2	28 September 2020	23 October 2020
Phase 3	7 December 2020	15 January 2021
Phase 4	15 February 2021	12 March 2021

¹ Twenty-first Ordinary Meeting of the Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (Barcelona Convention) and its Protocols (Naples, Italy, 2-5 December 2019).

² Road Map for a Proposal for the Possible Designation of the Mediterranean Sea, as a whole, as an Emission Control Area for Sulphur Oxides Pursuant to MARPOL Annex VI, within the Framework of the Barcelona Convention.

³ REMPEC, in cooperation with MED POL and Plan Bleu.

A detailed work plan for the SO_x ECA(s) Technical Committee of Experts (as of 31 March 2020) may be found in the **Annex** to the present document.

Working arrangements

The working arrangements related to working, drafting, correspondence, intersessional working and other groups, laid down in the Organization and method of work of the Maritime Safety Committee and the Marine Environment Protection Committee and their subsidiary bodies, as set out in the annex to Circular MSC-MEPC.1/Circ.5/Rev.1, will apply to the SO_x ECA(s) Technical Committee of Experts.

The working language will be English.

List of nominated experts on the SO_x ECA(s) Technical Committee of Experts

The list of nominated experts by the Contracting Parties to the Barcelona Convention on the SO_x ECA(s) Technical Committee of Experts is attached to the cover e-mail.

Kindly verify that the contact details are correct and inform us immediately should these need to be updated.

For those Mediterranean coastal States that have not yet nominated their representatives serving on the SO_x ECA(s) Technical Committee of Experts, the Centre strongly recommends the REMPEC Prevention Focal Points in copy of the cover e-mail, to do so jointly and, in consultation with their REMPEC Governmental Focal Points and their MAP Focal Points, at their earliest convenience.

Reference documents

Appendix III to MARPOL Annex VI, Decision IG.24/8 and Circular MSC-MEPC.1/Circ.5/Rev.1 may be found both in English and French for ease of reference at the following WeTransfer link: <https://we.tl/t-urYe8lCpUn>.

Phase 1

Phase 1 will seek to achieve convergence on the draft Terms of Reference for the completion of the knowledge gathering and the preparations of further studies as well as the finalisation of the draft submission to the IMO pursuant to the road map, as prepared by the Secretariat.

The set of draft Terms of Reference (5 in total) covers the following packages of work:

1. **Package 1:** Synopsis of the assessment and draft submission to the IMO;
2. **Package 2:** Quantification of the impacts associated with deposition of PM_{2.5} and air toxics;
3. **Package 3:** Land-based emissions controls of SO_x and PM in the Mediterranean coastal States;
4. **Package 4:** Additional economic impact evaluation; and
5. **Package 5:** Additional fuel supply and technology analyses.

The SO_x ECA(s) Technical Committee of Experts is invited to provide feedback and comments on the above-mentioned set of draft Terms of Reference (5 in total) by not later than end of business, Friday, 10 April 2020.

**Annex – Detailed work plan of the SO_x ECA(s) Technical Committee of Experts
(as of 31 March 2020)**

Packages	Tasks	Secretariat⁴	SO_x ECA(s) Technical Committee of Experts⁵
<u>Phase 1</u>			
1 to 5	Draft Terms of Reference	31 March 2020	10 April 2020
1 to 5	Final Terms of Reference	17 April 2020	
1 to 5	Consultants recruitment	20 April 2020 to 26 June 2020	
<u>Phase 2</u>			
1	Draft synopsis of the assessment	28 September 2020	23 October 2020
1	Updated initial draft submission to the IMO		
2, 3 and 4	Draft knowledge gathering reports		
4 and 5	Draft further studies		
<u>Phase 3</u>			
2, 3 and 4	Final draft knowledge gathering reports	7 December 2020	15 January 2021
4 and 5	Final draft further studies		
1	Finalised draft submission to the IMO		
<u>Phase 4</u>			
	Draft report of the SO_x ECA(s) Technical Committee of Experts	15 February 2021	12 March 2021
	Final report of the SO_x ECA(s) Technical Committee of Experts	26 March 2021	
<u>Main UNEP/MAP meetings in the biennium 2020-2021</u>			
	Fourteenth Meeting of the Focal Points of REMPEC	25-27 May 2021	
	Meeting of the MAP Focal Points	September 2021 (TBC)	
	Twenty-second Ordinary Meeting of the Contracting Parties to the Barcelona Convention and its Protocols	December 2021 (TBC)	

⁴ This column reflects the dates when REMPEC will initiate consultations within the SO_x ECA(s) Technical Committee of Experts.

⁵ This column reflects the deadlines by when input from the SO_x ECA(s) Technical Committee of Experts is required.

**MEDITERRANEAN ACTION PLAN (MAP)
REGIONAL MARINE POLLUTION EMERGENCY RESPONSE CENTRE FOR
THE MEDITERRANEAN SEA (REMPEC)**

TERMS OF REFERENCE FOR THE CONSULTANT

Mediterranean Trust Fund

Activity 2.7.1.2: Examine the possibility of designating the Mediterranean Sea as a whole as SO_x Emission Control Area under MARPOL Annex VI and effectively implement the existing energy efficiency measures

Budget line: 1214

FOR THE PREPARATION OF THE SYNOPSIS OF THE ASSESSMENT AND THE FINALISATION OF THE DRAFT SUBMISSION TO THE IMO PURSUANT TO THE ROAD MAP FOR A PROPOSAL FOR THE POSSIBLE DESIGNATION OF THE MED SO_x ECA

(Package 1)

Background

1 COP 19¹ adopted Decision IG.22/4 on the Regional Strategy for Prevention of and Response to Marine Pollution from Ships (2016-2021), hereinafter referred to as the Regional Strategy (2016-2021), which addresses the issue of the prevention of air pollution from ships in Specific Objectives 1 and 15.

2 In particular, Specific Objective 15 of the Regional Strategy (2016-2021) established a technical committee of experts, which worked through correspondence, nominated by the Contracting Parties to the Barcelona Convention, to carry out a technical and feasibility study to examine if it is appropriate, at the current stage, to put in place a road map for preparation of a submission to the International Maritime Organization (IMO) to designate as a sulphur oxides (SO_x) Emission Control Area (ECA) in certain areas of the Mediterranean Sea requiring specific environmental protection, and to explore possible further steps.

3 COP 20² agreed to include in the Programme of Work and Budget 2018-2019 of the Mediterranean Action Plan (MAP) of the United Nations Environment Programme (UNEP), also referred to as UNEP/MAP, an activity aimed at examining the possibility of designating the Mediterranean Sea, or parts thereof, as SO_x ECA(s), under Annex VI to the International Convention for the Prevention of Pollution from Ships (MARPOL) and effectively implementing the existing energy efficiency measures.

¹ Nineteenth Ordinary Meeting of the Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (Barcelona Convention) and its Protocols (Athens, Greece, 9-12 February 2016).

² Twentieth Ordinary Meeting of the Contracting Parties to the Barcelona Convention and its Protocols (Tirana, Albania, 17-20 December 2017).

4 In this context and, on the basis of the outcome of the work of the SO_x ECA(s) Technical Committee of Experts, coordinated by the Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC), including the Technical and Feasibility Study³ and the initial draft submission to the IMO⁴ prepared by REMPEC, COP 21⁵ adopted Decision IG.24/8 on the Road Map for a Proposal for the Possible Designation of the Mediterranean Sea, as a whole, as an Emission Control Area for Sulphur Oxides Pursuant to MARPOL Annex VI, within the Framework of the Barcelona Convention, hereinafter referred to as the road map, which outlines the process and details the related activities.

5 According to the road map, some knowledge gathering based on existing knowledge and studies⁶ should be completed and further studies should be carried out with a view to developing a mutually agreed joint and coordinated proposal for the possible designation of the Mediterranean Emission Control Area (Med SO_x ECA) in accordance with Appendix III (Criteria and procedures for designation of emission control areas) to MARPOL Annex VI, and with the view of formally submitting it to the 78th Session of the IMO's Marine Environment Protection Committee (MEPC 78) scheduled for 2022, as follows⁷:

(a) Knowledge gathering:

- synopsis of the assessment (**Package 1**);
- quantification of the impacts associated with deposition of PM_{2.5} and air toxics (**Package 2**);
- additional detail of land-based emissions controls of SO_x and PM in the Mediterranean coastal States (**Package 3**); and
- additional elements on the economic impacts on shipping engaged in international trade (**Package 4**).

(b) Further studies:

- additional economic impact evaluation, more precisely:
 - analyses of the impacts on shipping engaged in international trade as well as on trade modal shift outside the Mediterranean (**Package 4**); and
 - analyses of the impacts on short-sea shipping activity as well on the social and economic impact on Contracting Parties to the Barcelona Convention including on development for islands, insular and remote areas (**Package 4**).
- additional fuel supply and technology analyses (regional fuel production, fuel availability, and alternative compliance technologies) (**Package 5**).

³ entitled "Technical and feasibility study to examine the possibility of designating the Mediterranean Sea, or parts thereof, as SO_x ECA(s) under MARPOL Annex VI", as set out in the Appendix to document REMPEC/WG.45/INF.9.

⁴ entitled "Proposal to Designate the Mediterranean Sea area, [or parts thereof,] as an Emission Control Area for Sulphur Oxides [and Particulate Matter]", as set out in the Appendix to document REMPEC/WG.45/INF.10.

⁵ Twenty-first Ordinary Meeting of the Contracting Parties to the Barcelona Convention and its Protocols (Naples, Italy, 2-5 December 2019).

⁶ These include, amongst others, the Technical and Feasibility Study, the study entitled "The potential for cost-effective air emission reductions from international shipping through designation of further Emission Control Areas in EU waters with focus on the Mediterranean Sea" prepared by the European Commission as well as the study entitled "ECAMED: a Technical Feasibility Study for the Implementation of an Emission Control Area (ECA) in the Mediterranean Sea" prepared by France, as set out respectively in the Annex to document REMPEC/WG.45/INF.11 and the Annex to document REMPEC/WG.45/INF.12.

⁷ The associated package of work is identified and given in **bold**.

6 COP 21 agreed to extend the mandate of the SO_x ECA(s) Technical Committee of Experts, until 30 April 2021, to oversee the completion of the knowledge gathering and the preparations of further studies, notably socio-economic impacts on individual Contracting Parties to the Barcelona Convention *inter alia* as indicated in the road map, including the development of their respective terms of reference, through correspondence coordinated by REMPEC, when examining the possibility of designating the proposed Med SO_x ECA.

7 COP 21 also requested the Secretariat to update the initial draft submission to the IMO for a proposal for the possible designation of the Med SO_x ECA, under the guidance of the SO_x ECA(s) Technical Committee of Experts in line with the agreed road map.

8 To achieve this, REMPEC, the Mediterranean Pollution Assessment and Control Programme (MED POL) and the Plan Bleu Regional Activity Centre (PB/RAC), three UNEP/MAP components, are expected to lead the related activities that are grouped into the following five packages of work:

- .1 **Package 1:** Synopsis of the assessment and draft submission to the IMO;
- .2 **Package 2:** Quantification of the impacts associated with deposition of PM_{2.5} and air toxics;
- .3 **Package 3:** Land-based emissions controls of SO_x and PM in the Mediterranean coastal States;
- .4 **Package 4:** Additional economic impact evaluation; and
- .5 **Package 5:** Additional fuel supply and technology analyses.

9 Each package of work is designed to ensure the completion of the necessary knowledge gathering or the carrying out of the necessary further studies, as specified in paragraph 5 above, and shall contribute collectively to the implementation of the road map in a complimentary manner.

10 The packages of work are distinct in that they are different in nature and different in methodology requiring potentially different specialisms to undertake the work.

11 **Package 1**, which will be led by REMPEC in cooperation with MED POL and PB/RAC under the guidance of the SO_x ECA(s) Technical Committee of Experts, is envisaged of comprising knowledge gathering only, specifically to address the square brackets and the placeholders set out in the initial draft submission to the IMO, and is subject to the completion of the other packages of work (**Packages 2 to 5**) that are meant to provide the necessary input for the preparation of the synopsis of the assessment⁸ and the finalisation of the draft submission to the IMO.

12 The finalised draft submission to the IMO, which will integrate the synopsis of the assessment, to be prepared by the Consultant under **Package 1**, will be reviewed and validated by the SO_x ECA(s) Technical Committee of Experts before submission to the Fourteenth Meeting of the Focal Points of REMPEC, to be tentatively held in Malta from 25 to 27 May 2021, for its review and recommendations.

⁸ This addresses the placeholder set out in Section 3.1 of the initial draft submission to the IMO.

Objectives

13 The principal objectives of the consultancy services will be to prepare the synopsis of the assessment as well as to finalise the draft submission to the IMO pursuant to the road map with a view to more fully addressing the criteria and procedures for designation of emission control areas laid down in Appendix III to MARPOL Annex VI.

Assignment

14 For the completion of this consultancy, the Consultant shall:

- .1 attend a kick-off Meeting to be held through video-conference, preferably between **6 and 10 July 2020**, to discuss the content of the reference documents to be analysed, the scope of the assignment, as well as to collect all required information for the completion of this consultancy and to agree on the method of work and communication channel;
- .2 draft a brief kick-off Meeting report to be submitted to REMPEC reflecting the main outcomes of the meeting;
- .3 based on a review of the relevant emission inventory studies already undertaken, as well as the identification and review of further available information and data⁹, as required¹⁰ and where appropriate, identify whether the criteria set out in Appendix III to MARPOL Annex VI are appropriately addressed in the initial draft submission to the IMO or not, including the following:
 - .1 a description of the human populations and environmental areas at risk from the impacts of ship emissions;
 - .2 an inventory of SO_x and PM_{2.5} emissions from ships operating in the Mediterranean Sea¹¹ that are contributing to ambient concentrations of air pollution or to adverse environmental impacts¹²; and

⁹ This could include studies of the impact on human health in the existing SO_x ECA areas, especially in the North Sea, Baltic Sea and North American areas, that have over 5-year experience of marine fuels with a sulphur content of 0.10% (e.g. death reduction for cardiovascular diseases and cancer; reduction of disease of the younger asthmatic population; or rationale for evidence-based decision to adopt domestic emission control areas, for example, China).

¹⁰ For example, those of MED POL and those of the European Commission or the European Environment Agency (EEA).

¹¹ MARPOL (Art.2(4)) applies to all ships operating in the marine environment and so does not distinguish between domestic and international shipping. The provisions for the sulphur content of fuel oil used by a ship should therefore be considered as applying to all ships operating in the marine environment. Subject to data availability, the inventory should include current emissions emitted from all ships of 100 gross tonnage and above engaged in voyages within the Mediterranean Sea. Data on marine traffic in the proposed Med SO_x ECA should be identified, including the patterns and density (paragraph 3.1.6, Appendix III to MARPOL Annex VI).

¹² Quantification of the impacts associated with deposition of SO_x and PM_{2.5} for the Med SO_x ECA requires emissions to be estimated using baseline emission factors that reflect the use of 0.50% and 0.10% fuel oil respectively. If alternative emission factors have been used then justification with substantive references should be given.

- .3 a description of the impacts of the relevant emissions on human health and the environment, such as adverse impacts to terrestrial and aquatic ecosystems, areas of natural productivity, critical habitats, water quality and areas of cultural and scientific significance¹³, including the following:
 - .1 adverse impacts resulting from air pollution and particulate deposition/inhalation; and
 - .2 reduction in SO_x and PM_{2.5} as a consequence of the possible designation of the Med SO_x ECA, in particular, the quantification of the benefits to human health from these reductions.
- .4 prepare, in consultation with REMPEC, a brief report summarising the findings and conclusions of the work referred to in paragraph 14.3 above;
- .5 prepare, in consultation with REMPEC, a draft synopsis of the assessment required under paragraph 3.1.4 of Appendix III to MARPOL Annex VI, based on relevant studies, research and other materials related to the possible designation of the Med SO_x ECA;
- .6 update, in consultation with REMPEC, the initial draft submission to the IMO, integrating therein the draft synopsis of the assessment referred to above, addressing, as appropriate, the square brackets and the placeholders set out therein, including the description of further actions towards ratification¹⁴, as well as addressing, where appropriate, the issues raised in the brief report referred to above, based on Decision IG.24/8 as well as relevant studies, research and other materials related to the possible designation of the Med SO_x ECA;
- .7 revise, in consultation with REMPEC, the updated initial draft submission to the IMO, including the draft synopsis of the assessment, referred to above, further addressing, as appropriate, the placeholders set out therein, taking into consideration the outcome of the work carried out on the knowledge gathering and further studies (**Packages 2 to 5**) in accordance with the road map; and
- .8 finalise the revised draft submission to the IMO referred to above, taking into account the feedback and comments provided by REMPEC following consultations within the SO_x ECA(s) Technical Committee of Experts and with IMO, UNEP/MAP, in particular MED POL and PB/RAC, as well as taking into consideration the outcome of the further work carried out on the knowledge gathering and further studies (**Packages 2 to 5**) in accordance with the road map.

Geographical scope of the assignment

- 15 The Consultant will perform the assignment in his/her office/home.

Reporting

¹³ Even if not estimated in available studies, reference should be made to the fact that additional benefits are constituted also by the avoidance of damage to cultural heritage and this, together with the avoidance of poor air quality in some coastal areas, may have a positive impact on economic activity relating to tourism in the area.

¹⁴ This addresses the placeholder set out in Section 1.1 of the initial draft submission to the IMO.

16 The Consultant shall:

- .1 prepare and submit to REMPEC, not later than **17 July 2020**, the draft kick-off Meeting report referred to in paragraph 14.2 above;
- .2 prepare and submit to REMPEC, not later than **18 September 2020**, the summary report referred to in paragraph 14.4 above;
- .3 prepare and submit to REMPEC, not later than **18 September 2020**, the draft synopsis of the assessment referred to in paragraph 14.5 above;
- .4 prepare and submit to REMPEC, not later than **18 September 2020**, the updated initial draft submission to the IMO referred to in paragraph 14.6 above;
- .5 prepare and submit to REMPEC, not later than **16 October 2020**, the revised draft submission to the IMO referred to in paragraph 14.7 above; and
- .6 prepare and submit to REMPEC, not later than **27 November 2020**, the finalised draft submission to the IMO referred to in paragraph 14.8 above.

17 All documents produced by the Consultant shall be prepared using the Established Guidelines for the preparation of reports on seminars, symposia, courses, workshops and similar events, provided in Annex II to the “REMPEC Consultant Booklet” unless instructed otherwise by REMPEC (i.e. specific document template(s) to be provided by REMPEC) and shall be drafted in English as well as provided in electronic format using software compatible with Microsoft Office 2007.

18 The following disclaimer shall appear in all documents prepared by the Consultant:

“This activity is financed by the Mediterranean Trust Fund (MTF) and implemented by the Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC), in cooperation with the Mediterranean Pollution Assessment and Control Programme (MED POL) as well as the Plan Bleu Regional Activity Centre (PB/RAC) of the Mediterranean Action Plan (MAP) of the United Nations Environment Programme (UNEP).”

The views expressed in this document are those of the Consultant and are not attributed in any way to the United Nations, UNEP/MAP, MED POL, PB/RAC, the International Maritime Organization (IMO) or REMPEC.”.

Schedule

19 The work and tasks envisaged in the present document shall be completed by **30 November 2020**. The contract will be terminated upon the submission by the Consultant of the finalised draft submission to the IMO as well as certification by REMPEC that the performance of the duties and the work carried out are satisfactory.

20 Within that timeframe, the Consultant shall organise his/her work in the best possible manner and ensure the successful completion of the consultancy.

**MEDITERRANEAN ACTION PLAN (MAP)
REGIONAL MARINE POLLUTION EMERGENCY RESPONSE CENTRE FOR
THE MEDITERRANEAN SEA (REMPEC)**

TERMS OF REFERENCE FOR THE CONSULTANT

Mediterranean Trust Fund¹

Activity 2.7.1.2: Examine the possibility of designating the Mediterranean Sea as a whole as SO_x Emission Control Area under MARPOL Annex VI and effectively implement the existing energy efficiency measures

Budget line: 1214

FOR THE COMPLETION OF THE KNOWLEDGE GATHERING RELATED TO THE QUANTIFICATION OF THE IMPACTS ASSOCIATED WITH DEPOSITION OF PM_{2.5} AND AIR TOXICS PURSUANT TO THE ROAD MAP FOR A PROPOSAL FOR THE POSSIBLE DESIGNATION OF THE MED SO_x ECA

(Package 2)

Background

1 COP 19² adopted Decision IG.22/4 on the Regional Strategy for Prevention of and Response to Marine Pollution from Ships (2016-2021), hereinafter referred to as the Regional Strategy (2016-2021), which addresses the issue of the prevention of air pollution from ships in Specific Objectives 1 and 15.

2 In particular, Specific Objective 15 of the Regional Strategy (2016-2021) established a technical committee of experts, which worked through correspondence, nominated by the Contracting Parties to the Barcelona Convention, to carry out a technical and feasibility study to examine if it is appropriate, at the current stage, to put in place a road map for preparation of a submission to the International Maritime Organization (IMO) to designate as a sulphur oxides (SO_x) Emission Control Area (ECA) in certain areas of the Mediterranean Sea requiring specific environmental protection, and to explore possible further steps.

3 COP 20³ agreed to include in the Programme of Work and Budget 2018-2019 of the Mediterranean Action Plan (MAP) of the United Nations Environment Programme (UNEP), also referred to as UNEP/MAP, an activity aimed at examining the possibility of designating the Mediterranean Sea, or parts thereof, as SO_x ECA(s), under Annex VI to the International Convention for the Prevention of Pollution from Ships (MARPOL) and effectively implementing the existing energy efficiency measures.

¹ and possibly other sources of funds to be defined following consultations within the SO_x ECA(s) Technical Committee of Experts.

² Nineteenth Ordinary Meeting of the Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (Barcelona Convention) and its Protocols (Athens, Greece, 9-12 February 2016).

³ Twentieth Ordinary Meeting of the Contracting Parties to the Barcelona Convention and its Protocols (Tirana, Albania, 17-20 December 2017).

4 In this context and, on the basis of the outcome of the work of the SO_x ECA(s) Technical Committee of Experts, coordinated by the Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC), including the Technical and Feasibility Study⁴ and the initial draft submission to the IMO⁵ prepared by REMPEC, COP 21⁶ adopted Decision IG.24/8 on the Road Map for a Proposal for the Possible Designation of the Mediterranean Sea, as a whole, as an Emission Control Area for Sulphur Oxides Pursuant to MARPOL Annex VI, within the Framework of the Barcelona Convention, hereinafter referred to as the road map, which outlines the process and details the related activities.

5 According to the road map, some knowledge gathering based on existing knowledge and studies⁷ should be completed and further studies should be carried out with a view to developing a mutually agreed joint and coordinated proposal for the possible designation of the Mediterranean Emission Control Area (Med SO_x ECA) in accordance with Appendix III (Criteria and procedures for designation of emission control areas) to MARPOL Annex VI, and with the view of formally submitting it to the 78th Session of the IMO's Marine Environment Protection Committee (MEPC 78) scheduled for 2022, as follows⁸:

(a) Knowledge gathering:

- synopsis of the assessment (**Package 1**);
- quantification of the impacts associated with deposition of PM_{2.5} and air toxics (**Package 2**);
- additional detail of land-based emissions controls of SO_x and PM in the Mediterranean coastal States (**Package 3**); and
- additional elements on the economic impacts on shipping engaged in international trade (**Package 4**).

(b) Further studies:

- additional economic impact evaluation, more precisely:
 - analyses of the impacts on shipping engaged in international trade as well as on trade modal shift outside the Mediterranean (**Package 4**); and
 - analyses of the impacts on short-sea shipping activity as well on the social and economic impact on Contracting Parties to the Barcelona Convention including on development for islands, insular and remote areas (**Package 4**).
- additional fuel supply and technology analyses (regional fuel production, fuel availability, and alternative compliance technologies) (**Package 5**).

⁴ entitled "Technical and feasibility study to examine the possibility of designating the Mediterranean Sea, or parts thereof, as SO_x ECA(s) under MARPOL Annex VI", as set out in the Appendix to document REMPEC/WG.45/INF.9.

⁵ entitled "Proposal to Designate the Mediterranean Sea area, [or parts thereof,] as an Emission Control Area for Sulphur Oxides [and Particulate Matter]", as set out in the Appendix to document REMPEC/WG.45/INF.10.

⁶ Twenty-first Ordinary Meeting of the Contracting Parties to the Barcelona Convention and its Protocols (Naples, Italy, 2-5 December 2019).

⁷ These include, amongst others, the Technical and Feasibility Study, the study entitled "The potential for cost-effective air emission reductions from international shipping through designation of further Emission Control Areas in EU waters with focus on the Mediterranean Sea" prepared by the European Commission as well as the study entitled "ECAMED: a Technical Feasibility Study for the Implementation of an Emission Control Area (ECA) in the Mediterranean Sea" prepared by France, as set out respectively in the Annex to document REMPEC/WG.45/INF.11 and the Annex to document REMPEC/WG.45/INF.12.

⁸ The associated package of work is identified and given in **bold**.

6 COP 21 agreed to extend the mandate of the SO_x ECA(s) Technical Committee of Experts, until 30 April 2021, to oversee the completion of the knowledge gathering and the preparations of further studies, notably socio-economic impacts on individual Contracting Parties to the Barcelona Convention *inter alia* as indicated in the road map, including the development of their respective terms of reference, through correspondence coordinated by REMPEC, when examining the possibility of designating the proposed Med SO_x ECA.

7 COP 21 also requested the Secretariat to update the initial draft submission to the IMO for a proposal for the possible designation of the Med SO_x ECA, under the guidance of the SO_x ECA(s) Technical Committee of Experts in line with the agreed road map.

8 To achieve this, REMPEC, the Mediterranean Pollution Assessment and Control Programme (MED POL) and the Plan Bleu Regional Activity Centre (PB/RAC), three UNEP/MAP components, are expected to lead the related activities that are grouped into the following five packages of work:

- .1 **Package 1:** Synopsis of the assessment and draft submission to the IMO;
- .2 **Package 2:** Quantification of the impacts associated with deposition of PM_{2.5} and air toxics;
- .3 **Package 3:** Land-based emissions controls of SO_x and PM in the Mediterranean coastal States;
- .4 **Package 4:** Additional economic impact evaluation; and
- .5 **Package 5:** Additional fuel supply and technology analyses.

9 Each package of work is designed to ensure the completion of the necessary knowledge gathering or the carrying out of the necessary further studies, as specified in paragraph 5 above, and shall contribute collectively to the implementation of the road map in a complimentary manner.

10 The packages of work are distinct in that they are different in nature and different in methodology requiring potentially different specialisms to undertake the work.

11 **Package 2**, which will be led by REMPEC in cooperation with MED POL and overseen by the SO_x ECA(s) Technical Committee of Experts, through correspondence coordinated by REMPEC, is envisaged of comprising knowledge gathering only, specifically to quantify the impacts associated with deposition of PM_{2.5} and air toxics⁹, and is meant to provide the necessary input for the preparation of the synopsis of the assessment and the finalisation of the draft submission to the IMO under **Package 1**.

12 The finalised draft submission to the IMO, which will take into consideration the outcome of the work carried out on the knowledge gathering under **Package 2** in accordance with the road map, will be reviewed and validated by the SO_x ECA(s) Technical Committee of Experts before submission to the Fourteenth Meeting of the Focal Points of REMPEC, to be tentatively held in Malta from 25 to 27 May 2021, for its review and recommendations.

⁹ This addresses the placeholder set out in Section 5.3 of the initial draft submission to the IMO.

Objectives

13 The principal objectives of the consultancy services will be to complete the knowledge gathering related to the quantification of the impacts associated with deposition of PM_{2.5} and air toxics pursuant to the road map with a view to more fully addressing the criteria and procedures for designation of emission control areas laid down in Appendix III to MARPOL Annex VI.

Assignment

14 For the completion of this consultancy, the Consultant shall:

- .1 attend a kick-off Meeting to be held through video-conference, preferably between **6 and 10 July 2020**, to discuss the content of the reference documents to be analysed, the scope of the assignment, as well as to collect all required information for the completion of this consultancy and to agree on the method of work and communication channel;
- .2 draft a brief kick-off Meeting report to be submitted to REMPEC reflecting the main outcomes of the meeting;
- .3 prepare, in consultation with REMPEC, a draft knowledge gathering report on the quantification of the impacts associated with deposition of PM_{2.5} and air toxics, including a brief summary thereof, based on relevant studies, research and other materials related to the possible designation of the Med SO_x ECA; and
- .4 finalise the draft knowledge gathering report referred to above, taking into account the feedback and comments provided by REMPEC following consultations within the SO_x ECA(s) Technical Committee of Experts as well as with IMO, UNEP/MAP, in particular MED POL and PB/RAC.

Geographical scope of the assignment

15 The Consultant will perform the assignment in his/her office/home.

Reporting

16 The Consultant shall:

- .1 prepare and submit to REMPEC, not later than **17 July 2020**, the draft kick-off Meeting report referred to in paragraph 14.2 above;
- .2 prepare and submit to REMPEC, not later than **18 September 2020**, the draft knowledge gathering report referred to in paragraph 14.3 above; and
- .3 prepare and submit to REMPEC, not later than **13 November 2020**, the final draft knowledge gathering report referred to in paragraph 14.4 above.

17 All documents produced by the Consultant shall be prepared using the Established Guidelines for the preparation of reports on seminars, symposia, courses, workshops and similar events, provided in Annex II to the “REMPEC Consultant Booklet” unless instructed otherwise by REMPEC (i.e. specific document template(s) to be provided by REMPEC) and shall be drafted in English as well as provided in electronic format using software compatible with Microsoft Office 2007.

18 The following disclaimer shall appear in all documents prepared by the Consultant:

“This activity is financed by the Mediterranean Trust Fund (MTF)¹⁰ and implemented by the Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC), in cooperation with the Mediterranean Pollution Assessment and Control Programme (MED POL) as well as the Plan Bleu Regional Activity Centre (PB/RAC) of the Mediterranean Action Plan (MAP) of the United Nations Environment Programme (UNEP).

The views expressed in this document are those of the Consultant and are not attributed in any way to the United Nations, UNEP/MAP, MED POL, PB/RAC, the International Maritime Organization (IMO) or REMPEC.”.

Schedule

19 The work and tasks envisaged in the present document shall be completed by **16 November 2020**. The contract will be terminated upon the submission by the Consultant of the final draft knowledge gathering report as well as certification by REMPEC that the performance of the duties and the work carried out are satisfactory.

20 Within that timeframe, the Consultant shall organise his/her work in the best possible manner and ensure the successful completion of the consultancy.

¹⁰ and possibly other sources of funds to be defined following consultations within the SO_x ECA(s) Technical Committee of Experts.

**MEDITERRANEAN ACTION PLAN (MAP)
REGIONAL MARINE POLLUTION EMERGENCY RESPONSE CENTRE FOR
THE MEDITERRANEAN SEA (REMPEC)**

TERMS OF REFERENCE FOR THE CONSULTANT

Mediterranean Trust Fund¹

Activity 2.7.1.2: Examine the possibility of designating the Mediterranean Sea as a whole as SO_x Emission Control Area under MARPOL Annex VI and effectively implement the existing energy efficiency measures

Budget line: 1214

FOR THE COMPLETION OF THE KNOWLEDGE GATHERING RELATED TO LAND-BASED EMISSIONS CONTROLS OF SO_x AND PM IN THE MEDITERRANEAN COASTAL STATES PURSUANT TO THE ROAD MAP FOR A PROPOSAL FOR THE POSSIBLE DESIGNATION OF THE MED SO_x ECA

(Package 3)

Background

1 COP 19² adopted Decision IG.22/4 on the Regional Strategy for Prevention of and Response to Marine Pollution from Ships (2016-2021), hereinafter referred to as the Regional Strategy (2016-2021), which addresses the issue of the prevention of air pollution from ships in Specific Objectives 1 and 15.

2 In particular, Specific Objective 15 of the Regional Strategy (2016-2021) established a technical committee of experts, which worked through correspondence, nominated by the Contracting Parties to the Barcelona Convention, to carry out a technical and feasibility study to examine if it is appropriate, at the current stage, to put in place a road map for preparation of a submission to the International Maritime Organization (IMO) to designate as a sulphur oxides (SO_x) Emission Control Area (ECA) in certain areas of the Mediterranean Sea requiring specific environmental protection, and to explore possible further steps.

3 COP 20³ agreed to include in the Programme of Work and Budget 2018-2019 of the Mediterranean Action Plan (MAP) of the United Nations Environment Programme (UNEP), also referred to as UNEP/MAP, an activity aimed at examining the possibility of designating the Mediterranean Sea, or parts thereof, as SO_x ECA(s), under Annex VI to the International Convention for the Prevention of Pollution from Ships (MARPOL) and effectively implementing the existing energy efficiency measures.

¹ and possibly other sources of funds to be defined following consultations within the SO_x ECA(s) Technical Committee of Experts.

² Nineteenth Ordinary Meeting of the Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (Barcelona Convention) and its Protocols (Athens, Greece, 9-12 February 2016).

³ Twentieth Ordinary Meeting of the Contracting Parties to the Barcelona Convention and its Protocols (Tirana, Albania, 17-20 December 2017).

4 In this context and, on the basis of the outcome of the work of the SO_x ECA(s) Technical Committee of Experts, coordinated by the Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC), including the Technical and Feasibility Study⁴ and the initial draft submission to the IMO⁵ prepared by REMPEC, COP 21⁶ adopted Decision IG.24/8 on the Road Map for a Proposal for the Possible Designation of the Mediterranean Sea, as a whole, as an Emission Control Area for Sulphur Oxides Pursuant to MARPOL Annex VI, within the Framework of the Barcelona Convention, hereinafter referred to as the road map, which outlines the process and details the related activities.

5 According to the road map, some knowledge gathering based on existing knowledge and studies⁷ should be completed and further studies should be carried out with a view to developing a mutually agreed joint and coordinated proposal for the possible designation of the Mediterranean Emission Control Area (Med SO_x ECA) in accordance with Appendix III (Criteria and procedures for designation of emission control areas) to MARPOL Annex VI, and with the view of formally submitting it to the 78th Session of the IMO's Marine Environment Protection Committee (MEPC 78) scheduled for 2022, as follows⁸:

(a) Knowledge gathering:

- synopsis of the assessment (**Package 1**);
- quantification of the impacts associated with deposition of PM_{2.5} and air toxics (**Package 2**);
- additional detail of land-based emissions controls of SO_x and PM in the Mediterranean coastal States (**Package 3**); and
- additional elements on the economic impacts on shipping engaged in international trade (**Package 4**).

(b) Further studies:

- additional economic impact evaluation, more precisely:
 - analyses of the impacts on shipping engaged in international trade as well as on trade modal shift outside the Mediterranean (**Package 4**); and
 - analyses of the impacts on short-sea shipping activity as well on the social and economic impact on Contracting Parties to the Barcelona Convention including on development for islands, insular and remote areas (**Package 4**).
- additional fuel supply and technology analyses (regional fuel production, fuel availability, and alternative compliance technologies) (**Package 5**).

⁴ entitled "Technical and feasibility study to examine the possibility of designating the Mediterranean Sea, or parts thereof, as SO_x ECA(s) under MARPOL Annex VI", as set out in the Appendix to document REMPEC/WG.45/INF.9.

⁵ entitled "Proposal to Designate the Mediterranean Sea area, [or parts thereof,] as an Emission Control Area for Sulphur Oxides [and Particulate Matter]", as set out in the Appendix to document REMPEC/WG.45/INF.10.

⁶ Twenty-first Ordinary Meeting of the Contracting Parties to the Barcelona Convention and its Protocols (Naples, Italy, 2-5 December 2019).

⁷ These include, amongst others, the Technical and Feasibility Study, the study entitled "The potential for cost-effective air emission reductions from international shipping through designation of further Emission Control Areas in EU waters with focus on the Mediterranean Sea" prepared by the European Commission as well as the study entitled "ECAMED: a Technical Feasibility Study for the Implementation of an Emission Control Area (ECA) in the Mediterranean Sea" prepared by France, as set out respectively in the Annex to document REMPEC/WG.45/INF.11 and the Annex to document REMPEC/WG.45/INF.12.

⁸ The associated package of work is identified and given in **bold**.

6 COP 21 agreed to extend the mandate of the SO_x ECA(s) Technical Committee of Experts, until 30 April 2021, to oversee the completion of the knowledge gathering and the preparations of further studies, notably socio-economic impacts on individual Contracting Parties to the Barcelona Convention *inter alia* as indicated in the road map, including the development of their respective terms of reference, through correspondence coordinated by REMPEC, when examining the possibility of designating the proposed Med SO_x ECA.

7 COP 21 also requested the Secretariat to update the initial draft submission to the IMO for a proposal for the possible designation of the Med SO_x ECA, under the guidance of the SO_x ECA(s) Technical Committee of Experts in line with the agreed road map.

8 To achieve this, REMPEC, the Mediterranean Pollution Assessment and Control Programme (MED POL) and the Plan Bleu Regional Activity Centre (PB/RAC), three UNEP/MAP components, are expected to lead the related activities that are grouped into the following five packages of work:

- .1 **Package 1:** Synopsis of the assessment and draft submission to the IMO;
- .2 **Package 2:** Quantification of the impacts associated with deposition of PM_{2.5} and air toxics;
- .3 **Package 3:** Land-based emissions controls of SO_x and PM in the Mediterranean coastal States;
- .4 **Package 4:** Additional economic impact evaluation; and
- .5 **Package 5:** Additional fuel supply and technology analyses.

9 Each package of work is designed to ensure the completion of the necessary knowledge gathering or the carrying out of the necessary further studies, as specified in paragraph 5 above, and shall contribute collectively to the implementation of the road map in a complimentary manner.

10 The packages of work are distinct in that they are different in nature and different in methodology requiring potentially different specialisms to undertake the work.

11 **Package 3**, which will be led by MED POL in cooperation with REMPEC and overseen by the SO_x ECA(s) Technical Committee of Experts, through correspondence coordinated by REMPEC, is envisaged of comprising knowledge gathering only, specifically to provide additional details on land-based emissions controls of SO_x and PM in the Mediterranean coastal States⁹, and is meant to provide the necessary input for the finalisation of the draft submission to the IMO under **Package 1**.

12 The finalised draft submission to the IMO, which will take into consideration the outcome of the work carried out on the knowledge gathering under **Package 3** in accordance with the road map, will be reviewed and validated by the SO_x ECA(s) Technical Committee of Experts before submission to the Fourteenth Meeting of the Focal Points of REMPEC, to be tentatively held in Malta from 25 to 27 May 2021, for its review and recommendations.

⁹ This addresses the placeholders set out in Sections 8.1 and 8.2 of the initial draft submission to the IMO.

Objectives

13 The principal objectives of the consultancy services will be to complete the knowledge gathering related to land-based emissions controls of SO_x and PM in the Mediterranean coastal States pursuant to the road map with a view to more fully addressing the criteria and procedures for designation of emission control areas laid down in Appendix III to MARPOL Annex VI.

Assignment

14 For the completion of this consultancy, the Consultant shall:

- .1 attend a kick-off Meeting to be held through video-conference, preferably between **6 and 10 July 2020**, to discuss the content of the reference documents to be analysed, the scope of the assignment, as well as to collect all required information for the completion of this consultancy and to agree on the method of work and communication channel;
- .2 draft a brief kick-off Meeting report to be submitted to MED POL and REMPEC reflecting the main outcomes of the meeting;
- .3 identify land-based measures for the control of SO_x and PM emissions in the Mediterranean coastal States, including relevant to transport, which will run concurrent with the proposed Med SO_x ECA and affect the same human populations and environmental areas at risk and that will be protected through the designation of the proposed Med SO_x ECA¹⁰;
- .4 assess the SO_x and PM emission reduction and subsequent corresponding reduction in adverse impacts expected to be obtained for the human populations and environmental areas at risk through implementation of the land-based measures described in paragraph 14.3 above;
- .5 assess the relative costs of introducing the Med SO_x ECA in comparison with cost of land based controls¹¹, based on the information obtained by means of the work referred to in paragraph 14.4 above;

¹⁰ Existing EU analyses (from the European Commission and France, to mention a few), especially those contracted by the European Commission, use the same methodology as other analyses of European/EU policy initiatives, e.g. the land-based measures in the Directive (EU) 2016/2284 of the European Parliament and of the Council of 14 December 2016 on the reduction of national emissions of certain atmospheric pollutants, amending Directive 2003/35/EC and repealing Directive 2001/81/EC, also referred to as the National Emission Ceilings Directive (NEC Directive), and the 1999 Protocol to Abate Acidification, Eutrophication and Ground-level Ozone (Gothenburg Protocol) to the 1979 Convention on Long-range Transboundary Air Pollution (CLRTAP), and partly also EU climate policy. This means that relevant outputs may be directly comparable to these other EU analyses, and therefore much more applicable when for example comparing additional ship emission abatement measures with possible alternative additional abatement measures in other sectors especially from land sectors.

¹¹ The impact assessment studies contracted by the European Commission have the most up-to-date shipping inventories assessed by the European Maritime Safety Agency (EMSA) and the Finnish Meteorological Institute (FMI) emission projections for European land-based emission sources, so when looking at the impacts (and doing a cost-benefit analysis) at any given future date, this could result in a better reflection of the actual situation in e.g. 2025, 2030 or 2040.

- .6 prepare, in consultation with MED POL and REMPEC, a draft knowledge gathering report on the outcome of the work referred to in paragraphs 14.3 to 14.5 above, including a brief summary thereof; and
- .7 finalise the draft knowledge gathering report referred to above, taking into account the feedback and comments provided by MED POL and REMPEC following consultations within the SO_x ECA(s) Technical Committee of Experts as well as with IMO, UNEP/MAP, in particular PB/RAC.

Geographical scope of the assignment

15 The Consultant will perform the assignment in his/her office/home.

Reporting

16 The Consultant shall:

- .1 prepare and submit to MED POL and REMPEC, not later than **17 July 2020**, the draft kick-off Meeting report referred to in paragraph 14.2 above;
- .2 prepare and submit to MED POL and REMPEC, not later than **18 September 2020**, the draft knowledge gathering report referred to in paragraph 14.6 above; and
- .4 prepare and submit to MED POL and REMPEC, not later than **13 November 2020**, the final draft knowledge gathering report referred to in paragraph 14.7 above.

17 All documents produced by the Consultant shall be prepared using the Established Guidelines for the preparation of reports on seminars, symposia, courses, workshops and similar events, provided in Annex II to the "REMPEC Consultant Booklet" unless instructed otherwise by REMPEC (i.e. specific document template(s) to be provided by REMPEC) and shall be drafted in English as well as provided in electronic format using software compatible with Microsoft Office 2007.

18 The following disclaimer shall appear in all documents prepared by the Consultant:

"This activity is financed by the Mediterranean Trust Fund (MTF)¹² and implemented by the Mediterranean Pollution Assessment and Control Programme (MED POL) of the Mediterranean Action Plan (MAP) of the United Nations Environment Programme (UNEP), in cooperation with the Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC) and the Plan Bleu Regional Activity Centre (PB/RAC).

The views expressed in this document are those of the Consultant and are not attributed in any way to the United Nations, UNEP/MAP, MED POL, PB/RAC, the International Maritime Organization (IMO) or REMPEC."

¹² and possibly other sources of funds to be defined following consultations within the SO_x ECA(s) Technical Committee of Experts.

Schedule

19 The work and tasks envisaged in the present document shall be completed by **16 November 2020**. The contract will be terminated upon the submission by the Consultant of the final draft knowledge gathering report as well as certification by REMPEC that the performance of the duties and the work carried out are satisfactory.

20 Within that timeframe, the Consultant shall organise his/her work in the best possible manner and ensure the successful completion of the consultancy.

**MEDITERRANEAN ACTION PLAN (MAP)
REGIONAL MARINE POLLUTION EMERGENCY RESPONSE CENTRE FOR
THE MEDITERRANEAN SEA (REMPEC)**

TERMS OF REFERENCE FOR THE CONSULTANT

Mediterranean Trust Fund¹

Activity 2.7.1.2: Examine the possibility of designating the Mediterranean Sea as a whole as SO_x Emission Control Area under MARPOL Annex VI and effectively implement the existing energy efficiency measures

Budget line: TBC

FOR THE COMPLETION OF THE KNOWLEDGE GATHERING AND THE CARRYING OUT OF THE FURTHER STUDIES RELATED TO THE ADDITIONAL ECONOMIC IMPACT EVALUATION PURSUANT TO THE ROAD MAP FOR A PROPOSAL FOR THE POSSIBLE DESIGNATION OF THE MED SO_x ECA

(Package 4)

Background

1 COP 19² adopted Decision IG.22/4 on the Regional Strategy for Prevention of and Response to Marine Pollution from Ships (2016-2021), hereinafter referred to as the Regional Strategy (2016-2021), which addresses the issue of the prevention of air pollution from ships in Specific Objectives 1 and 15.

2 In particular, Specific Objective 15 of the Regional Strategy (2016-2021) established a technical committee of experts, which worked through correspondence, nominated by the Contracting Parties to the Barcelona Convention, to carry out a technical and feasibility study to examine if it is appropriate, at the current stage, to put in place a road map for preparation of a submission to the International Maritime Organization (IMO) to designate as a sulphur oxides (SO_x) Emission Control Area (ECA) in certain areas of the Mediterranean Sea requiring specific environmental protection, and to explore possible further steps.

3 COP 20³ agreed to include in the Programme of Work and Budget 2018-2019 of the Mediterranean Action Plan (MAP) of the United Nations Environment Programme (UNEP), also referred to as UNEP/MAP, an activity aimed at examining the possibility of designating the Mediterranean Sea, or parts thereof, as SO_x ECA(s), under Annex VI to the International Convention for the Prevention of Pollution from Ships (MARPOL) and effectively implementing the existing energy efficiency measures.

¹ and possibly other sources of funds to be defined following consultations within the SO_x ECA(s) Technical Committee of Experts.

² Nineteenth Ordinary Meeting of the Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (Barcelona Convention) and its Protocols (Athens, Greece, 9-12 February 2016).

³ Twentieth Ordinary Meeting of the Contracting Parties to the Barcelona Convention and its Protocols (Tirana, Albania, 17-20 December 2017).

4 In this context and, on the basis of the outcome of the work of the SO_x ECA(s) Technical Committee of Experts, coordinated by the Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC), including the Technical and Feasibility Study⁴ and the initial draft submission to the IMO⁵ prepared by REMPEC, COP 21⁶ adopted Decision IG.24/8 on the Road Map for a Proposal for the Possible Designation of the Mediterranean Sea, as a whole, as an Emission Control Area for Sulphur Oxides Pursuant to MARPOL Annex VI, within the Framework of the Barcelona Convention, hereinafter referred to as the road map, which outlines the process and details the related activities.

5 According to the road map, some knowledge gathering based on existing knowledge and studies⁷ should be completed and further studies should be carried out with a view to developing a mutually agreed joint and coordinated proposal for the possible designation of the Mediterranean Emission Control Area (Med SO_x ECA) in accordance with Appendix III (Criteria and procedures for designation of emission control areas) to MARPOL Annex VI, and with the view of formally submitting it to the 78th Session of the IMO's Marine Environment Protection Committee (MEPC 78) scheduled for 2022, as follows⁸:

(a) Knowledge gathering:

- synopsis of the assessment (**Package 1**);
- quantification of the impacts associated with deposition of PM_{2.5} and air toxics (**Package 2**);
- additional detail of land-based emissions controls of SO_x and PM in the Mediterranean coastal States (**Package 3**); and
- additional elements on the economic impacts on shipping engaged in international trade (**Package 4**).

(b) Further studies:

- additional economic impact evaluation, more precisely:
 - analyses of the impacts on shipping engaged in international trade as well as on trade modal shift outside the Mediterranean (**Package 4**); and
 - analyses of the impacts on short-sea shipping activity as well on the social and economic impact on Contracting Parties to the Barcelona Convention including on development for islands, insular and remote areas (**Package 4**).
- additional fuel supply and technology analyses (regional fuel production, fuel availability, and alternative compliance technologies) (**Package 5**).

⁴ entitled "Technical and feasibility study to examine the possibility of designating the Mediterranean Sea, or parts thereof, as SO_x ECA(s) under MARPOL Annex VI", as set out in the Appendix to document REMPEC/WG.45/INF.9.

⁵ entitled "Proposal to Designate the Mediterranean Sea area, [or parts thereof,] as an Emission Control Area for Sulphur Oxides [and Particulate Matter]", as set out in the Appendix to document REMPEC/WG.45/INF.10.

⁶ Twenty-first Ordinary Meeting of the Contracting Parties to the Barcelona Convention and its Protocols (Naples, Italy, 2-5 December 2019).

⁷ These include, amongst others, the Technical and Feasibility Study, the study entitled "The potential for cost-effective air emission reductions from international shipping through designation of further Emission Control Areas in EU waters with focus on the Mediterranean Sea" prepared by the European Commission as well as the study entitled "ECAMED: a Technical Feasibility Study for the Implementation of an Emission Control Area (ECA) in the Mediterranean Sea" prepared by France, as set out respectively in the Annex to document REMPEC/WG.45/INF.11 and the Annex to document REMPEC/WG.45/INF.12.

⁸ The associated package of work is identified and given in **bold**.

6 COP 21 agreed to extend the mandate of the SO_x ECA(s) Technical Committee of Experts, until 30 April 2021, to oversee the completion of the knowledge gathering and the preparations of further studies, notably socio-economic impacts on individual Contracting Parties to the Barcelona Convention *inter alia* as indicated in the road map, including the development of their respective terms of reference, through correspondence coordinated by REMPEC, when examining the possibility of designating the proposed Med SO_x ECA.

7 COP 21 also requested the Secretariat to update the initial draft submission to the IMO for a proposal for the possible designation of the Med SO_x ECA, under the guidance of the SO_x ECA(s) Technical Committee of Experts in line with the agreed road map.

8 To achieve this, REMPEC, the Mediterranean Pollution Assessment and Control Programme (MED POL) and the Plan Bleu Regional Activity Centre (PB/RAC), three UNEP/MAP components, are expected to lead the related activities that are grouped into the following five packages of work:

- .1 **Package 1:** Synopsis of the assessment and draft submission to the IMO;
- .2 **Package 2:** Quantification of the impacts associated with deposition of PM_{2.5} and air toxics;
- .3 **Package 3:** Land-based emissions controls of SO_x and PM in the Mediterranean coastal States;
- .4 **Package 4:** Additional economic impact evaluation; and
- .5 **Package 5:** Additional fuel supply and technology analyses.

9 Each package of work is designed to ensure the completion of the necessary knowledge gathering or the carrying out of the necessary further studies, as specified in paragraph 5 above, and shall contribute collectively to the implementation of the road map in a complimentary manner.

10 The packages of work are distinct in that they are different in nature and different in methodology requiring potentially different specialisms to undertake the work.

11 **Package 4**, which will be led by PB/RAC in cooperation with REMPEC and overseen by the SO_x ECA(s) Technical Committee of Experts, through correspondence coordinated by REMPEC, is envisaged of comprising knowledge gathering and further studies, specifically to provide additional elements on the economic impacts on shipping engaged in international trade⁹ and to make additional economic impact evaluation (more precisely: analyses of the impacts on shipping engaged in international trade as well as on trade modal shift outside the Mediterranean; and analyses of the impacts on short-sea shipping activity as well on the social and economic impact on Contracting Parties to the Barcelona Convention including on development for islands, insular and remote areas), and is meant to provide the necessary input for the finalisation of the draft submission to the IMO under **Package 1**.

⁹ This addresses the placeholder set out in Section 9.6 of the initial draft submission to the IMO.

- 12 The analyses referred to in paragraph 11 above shall be conducted separately:
- .1 at the level of the Mediterranean region, as a whole. Whenever practicable, the analyses shall differentiate impacts on countries or groups of countries with different specificities (i.e. but not limited to: (i) countries having ratified MARPOL Annex VI versus countries not having ratified it; (ii) countries that are Member States of the European Union versus countries that are not EU Member States; and (iii) countries with significant insularities and/or remote areas); and
 - .2 at the national level. Where practicable and, provided that the necessary external financial resources are mobilised in time by the Secretariat, the analyses shall be carried out for at least one pilot country in each of the following categories:
 - .1 countries not having ratified MARPOL Annex VI;
 - .2 countries having ratified MARPOL Annex VI, which are not EU Member States; and
 - .3 countries having ratified MARPOL Annex VI, which are EU Member States, with specific difficulties (e.g. domestic ferries, short distance lines, etc.).
- 13 The analyses referred to in paragraph 11 shall address separately the specific issues linked to:
- .1 international trade;
 - .2 short-sea shipping; and
 - .3 maritime transport to insular and/or remote areas in the Mediterranean and the socio-economic development of these areas.

14 The results of the analyses referred to in paragraph 11 shall be accompanied by a sensitivity analysis to the global oil barrel price, as an integral part of the knowledge gathering and the further studies. This will allow for future updating of the results of the said studies.

15 The finalised draft submission to the IMO, which will take into consideration the outcome of the work carried out on the knowledge gathering and the further study under **Package 4** in accordance with the road map, will be reviewed and validated by the SO_x ECA(s) Technical Committee of Experts before submission to the Fourteenth Meeting of the Focal Points of REMPEC, to be tentatively held in Malta from 25 to 27 May 2021, for its review and recommendations.

Objectives

16 The principal objectives of the consultancy services will be to complete the knowledge gathering and to carry out the further studies related to the additional economic impact evaluation pursuant to the road map with a view to more fully addressing the criteria and

procedures for designation of emission control areas laid down in Appendix III to MARPOL Annex VI.

Assignment

17 For the completion of this consultancy, the Consultant shall:

- .1 attend a kick-off Meeting to be held through video-conference, preferably between **6 and 10 July 2020**, to discuss the content of the reference documents to be analysed, the scope of the assignment, as well as to collect all required information for the completion of this consultancy and to agree on the method of work and communication channel;
- .2 draft a brief kick-off Meeting report to be submitted to PB/RAC and REMPEC reflecting the main outcomes of the meeting;
- .3 prepare, in consultation with PB/RAC and REMPEC, a draft knowledge gathering report on the economic impacts on shipping engaged in international trade, including a brief summary thereof, based on relevant studies, research and other materials related to the possible designation of the Med SO_x ECA;
- .4 prepare, in consultation with PB/RAC and REMPEC, draft further studies that cover the work referred to in paragraphs 18 and 19 below in an integrated manner;
- .5 finalise the draft knowledge gathering report referred to above, taking into account the feedback and comments provided by PB/RAC and REMPEC following consultations within the SO_x ECA(s) Technical Committee of Experts and with IMO, UNEP/MAP, in particular MED POL, as well as taking into consideration the outcome of the draft further studies when conducted at the level of the Mediterranean region, as a whole; and
- .6 finalise the draft further studies referred to above, taking into account the feedback and comments provided by PB/RAC and REMPEC following consultations within the SO_x ECA(s) Technical Committee of Experts as well as with IMO, UNEP/MAP, in particular MED POL;

18 For the analyses conducted both at the level of the Mediterranean region, as a whole, and at the national level, the Consultant shall:

- .1 analyse the potential permanent and transitional changes in competitiveness of the shipping industry, due to compliance with SO_x ECA requirements, possibly leading to (i) rerouting of shipping routes to maintain competitiveness; and/or (ii) a modal shift (change in transport mode from maritime to route/train/air transport) to occur as a market response to loss of competitiveness of shipping operators. This analysis shall include:
 - .1 an analysis of the sensitivity of SO_x ECA compliance-related cost changes in shipping companies and transported goods to rerouting and/or modal shift; including, but not limited to, the analysis of:
 - .1 changes in transport cost of goods and passengers transported via maritime transport and changes in demand for maritime

transport as a response to changing prices (price-elasticity of demand); and

- .2 changes in competitiveness of shipping compared to other transport modes.
 - .2 an identification of realistic options for modifying routes and/or for modal shift on those routes; and
 - .3 a brief outline of possible scenarios to mitigate adverse impacts linked to (the distribution of) costs, taking into account that the possible designation of the Med SO_x ECA would represent an additional effort of pollution reduction compared to the global 0.50% sulphur limit.
- .2 analyse the permanent and transitional additional costs and benefits and their distribution for economies and citizens. This analysis shall include:
- .1 an analysis of costs and benefits linked to potential modal shift or rerouting, as appropriate. For example, a modal shift towards railway transport could be beneficial for economies and the environment, while rerouting would also imply a rerouting of pollution, etc.;
 - .2 an analysis of the impacts of increased prices of transport on the purchasing power of citizens;
 - .3 an analysis of the influence on the development potential of affected areas; particularly in the case of remote areas connected to “mainland” through subsidised maritime traffic of goods and passengers¹⁰, the already observed economic impacts linked to the introduced 0.5% sulphur cap since January 2020 shall be identified and the additional potential economic impact of the Med SO_x ECA in such cases shall be analysed; and
 - .4 a brief outline of possible scenarios to mitigate adverse impacts, taking into account that the possible designation of the Med SO_x ECA would represent an additional effort of pollution reduction compared to the global 0.50% sulphur limit.
- .3 analyse the economic impacts on ports and refineries. This analyses shall include an assessment of the current and future potential for distortion of competition between Mediterranean Sea and non-Mediterranean Sea ports and refineries, but also between Mediterranean Sea ports and refineries themselves, bearing in mind that not all Contracting Parties to the Barcelona Convention are Parties to MARPOL Annex VI.

19 For the analyses conducted at the national level, in addition to the work referred to in paragraph 18 above, the Consultant shall also:

¹⁰ Where there is no alternative to be connected with the hinterland, local populations might be severely affected, not only in terms of transportation costs to be potentially transferred to the end-user, but also in terms of disproportionate financial burden to the public budget which covers the costs of public service contracts for securing the country's social and territorial cohesion.

- .1 assess the socio-economic impacts on relevant sectors, notably the maritime transport sector and the oil industry, and, possibly, other sectors such as fisheries¹¹; and
- .2 identify the key measures required to comply with the SO_x ECA requirements, and related implementation costs, including the need for investment, where appropriate.

Geographical scope of the assignment

20 The Consultant will perform the assignment in his/her office/home.

Reporting

21 The Consultant shall:

- .1 prepare and submit to PB/RAC and REMPEC, not later than **17 July 2020**, the draft kick-off Meeting report referred to in paragraph 17.2 above;
- .2 prepare and submit to PB/RAC and REMPEC, not later than **18 September 2020**, the draft knowledge gathering report referred to in paragraph 17.3 above;
- .3 prepare and submit to PB/RAC and REMPEC, not later than **18 September 2020**, the draft further studies referred to in paragraph 17.4 above;
- .4 prepare and submit to PB/RAC and REMPEC, not later than **13 November 2020**, the final draft knowledge gathering report referred to in paragraph 17.5 above; and
- .5 prepare and submit to PB/RAC and REMPEC, not later than **13 November 2020**, the final draft further studies referred to in paragraph 17.6 above.

22 All documents produced by the Consultant shall be prepared using the Established Guidelines for the preparation of reports on seminars, symposia, courses, workshops and similar events, provided in Annex II to the "REMPEC Consultant Booklet" unless instructed otherwise by REMPEC (i.e. specific document template(s) to be provided by REMPEC) and shall be drafted in English as well as provided in electronic format using software compatible with Microsoft Office 2007.

23 The following disclaimer shall appear in all documents prepared by the Consultant:

"This activity is financed by the Mediterranean Trust Fund (MTF)¹² and implemented by the Plan Bleu Regional Activity Centre (PB/RAC) of the Mediterranean Action Plan (MAP) of the United Nations Environment Programme (UNEP), in cooperation with the Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC) as well as the Mediterranean Pollution Assessment and Control Programme (MED POL).

¹¹ where the fishing fleet is numerically significant.

¹² and possibly other sources of funds to be defined following consultations within the SO_x ECA(s) Technical Committee of Experts.

The views expressed in this document are those of the Consultant and are not attributed in any way to the United Nations, UNEP/MAP, MED POL, PB/RAC, the International Maritime Organization (IMO) or REMPEC.”.

Schedule

24 The work and tasks envisaged in the present document shall be completed by **16 November 2020**. The contract will be terminated upon the submission by the Consultant of the final draft knowledge gathering report and the final draft further studies as well as certification by REMPEC that the performance of the duties and the work carried out are satisfactory.

25 Within that timeframe, the Consultant shall organise his/her work in the best possible manner and ensure the successful completion of the consultancy.

**MEDITERRANEAN ACTION PLAN (MAP)
REGIONAL MARINE POLLUTION EMERGENCY RESPONSE CENTRE FOR
THE MEDITERRANEAN SEA (REMPEC)**

TERMS OF REFERENCE FOR THE CONSULTANT

Mediterranean Trust Fund¹

Activity 2.7.1.2: Examine the possibility of designating the Mediterranean Sea as a whole as SO_x Emission Control Area under MARPOL Annex VI and effectively implement the existing energy efficiency measures

Budget line: 1214

FOR THE CARRYING OUT OF THE FURTHER STUDY RELATED TO FUEL SUPPLY AND TECHNOLOGY PURSUANT TO THE ROAD MAP FOR A PROPOSAL FOR THE POSSIBLE DESIGNATION OF THE MED SO_x ECA

(Package 5)

Background

1 COP 19² adopted Decision IG.22/4 on the Regional Strategy for Prevention of and Response to Marine Pollution from Ships (2016-2021), hereinafter referred to as the Regional Strategy (2016-2021), which addresses the issue of the prevention of air pollution from ships in Specific Objectives 1 and 15.

2 In particular, Specific Objective 15 of the Regional Strategy (2016-2021) established a technical committee of experts, which worked through correspondence, nominated by the Contracting Parties to the Barcelona Convention, to carry out a technical and feasibility study to examine if it is appropriate, at the current stage, to put in place a road map for preparation of a submission to the International Maritime Organization (IMO) to designate as a sulphur oxides (SO_x) Emission Control Area (ECA) in certain areas of the Mediterranean Sea requiring specific environmental protection, and to explore possible further steps.

3 COP 20³ agreed to include in the Programme of Work and Budget 2018-2019 of the Mediterranean Action Plan (MAP) of the United Nations Environment Programme (UNEP), also referred to as UNEP/MAP, an activity aimed at examining the possibility of designating the Mediterranean Sea, or parts thereof, as SO_x ECA(s), under Annex VI to the International Convention for the Prevention of Pollution from Ships (MARPOL) and effectively implementing the existing energy efficiency measures.

¹ and possibly other sources of funds to be defined following consultations within the SO_x ECA(s) Technical Committee of Experts.

² Nineteenth Ordinary Meeting of the Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (Barcelona Convention) and its Protocols (Athens, Greece, 9-12 February 2016).

³ Twentieth Ordinary Meeting of the Contracting Parties to the Barcelona Convention and its Protocols (Tirana, Albania, 17-20 December 2017).

4 In this context and, on the basis of the outcome of the work of the SO_x ECA(s) Technical Committee of Experts, coordinated by the Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC), including the Technical and Feasibility Study⁴ and the initial draft submission to the IMO⁵ prepared by REMPEC, COP 21⁶ adopted Decision IG.24/8 on the Road Map for a Proposal for the Possible Designation of the Mediterranean Sea, as a whole, as an Emission Control Area for Sulphur Oxides Pursuant to MARPOL Annex VI, within the Framework of the Barcelona Convention, hereinafter referred to as the road map, which outlines the process and details the related activities.

5 According to the road map, some knowledge gathering based on existing knowledge and studies⁷ should be completed and further studies should be carried out with a view to developing a mutually agreed joint and coordinated proposal for the possible designation of the Mediterranean Emission Control Area (Med SO_x ECA) in accordance with Appendix III (Criteria and procedures for designation of emission control areas) to MARPOL Annex VI, and with the view of formally submitting it to the 78th Session of the IMO's Marine Environment Protection Committee (MEPC 78) scheduled for 2022, as follows⁸:

(a) Knowledge gathering:

- synopsis of the assessment (**Package 1**);
- quantification of the impacts associated with deposition of PM_{2.5} and air toxics (**Package 2**);
- additional detail of land-based emissions controls of SO_x and PM in the Mediterranean coastal States (**Package 3**); and
- additional elements on the economic impacts on shipping engaged in international trade (**Package 4**).

(b) Further studies:

- additional economic impact evaluation, more precisely:
 - analyses of the impacts on shipping engaged in international trade as well as on trade modal shift outside the Mediterranean (**Package 4**); and
 - analyses of the impacts on short-sea shipping activity as well on the social and economic impact on Contracting Parties to the Barcelona Convention including on development for islands, insular and remote areas (**Package 4**).
- additional fuel supply and technology analyses (regional fuel production, fuel availability, and alternative compliance technologies) (**Package 5**).

⁴ entitled "Technical and feasibility study to examine the possibility of designating the Mediterranean Sea, or parts thereof, as SO_x ECA(s) under MARPOL Annex VI", as set out in the Appendix to document REMPEC/WG.45/INF.9.

⁵ entitled "Proposal to Designate the Mediterranean Sea area, [or parts thereof,] as an Emission Control Area for Sulphur Oxides [and Particulate Matter]", as set out in the Appendix to document REMPEC/WG.45/INF.10.

⁶ Twenty-first Ordinary Meeting of the Contracting Parties to the Barcelona Convention and its Protocols (Naples, Italy, 2-5 December 2019).

⁷ These include, amongst others, the Technical and Feasibility Study, the study entitled "The potential for cost-effective air emission reductions from international shipping through designation of further Emission Control Areas in EU waters with focus on the Mediterranean Sea" prepared by the European Commission as well as the study entitled "ECAMED: a Technical Feasibility Study for the Implementation of an Emission Control Area (ECA) in the Mediterranean Sea" prepared by France, as set out respectively in the Annex to document REMPEC/WG.45/INF.11 and the Annex to document REMPEC/WG.45/INF.12.

⁸ The associated package of work is identified and given in **bold**.

6 COP 21 agreed to extend the mandate of the SO_x ECA(s) Technical Committee of Experts, until 30 April 2021, to oversee the completion of the knowledge gathering and the preparations of further studies, notably socio-economic impacts on individual Contracting Parties to the Barcelona Convention *inter alia* as indicated in the road map, including the development of their respective terms of reference, through correspondence coordinated by REMPEC, when examining the possibility of designating the proposed Med SO_x ECA.

7 COP 21 also requested the Secretariat to update the initial draft submission to the IMO for a proposal for the possible designation of the Med SO_x ECA, under the guidance of the SO_x ECA(s) Technical Committee of Experts in line with the agreed road map.

8 To achieve this, REMPEC, the Mediterranean Pollution Assessment and Control Programme (MED POL) and the Plan Bleu Regional Activity Centre (PB/RAC), three UNEP/MAP components, are expected to lead the related activities that are grouped into the following five packages of work:

- .1 **Package 1:** Synopsis of the assessment and draft submission to the IMO;
- .2 **Package 2:** Quantification of the impacts associated with deposition of PM_{2.5} and air toxics;
- .3 **Package 3:** Land-based emissions controls of SO_x and PM in the Mediterranean coastal States;
- .4 **Package 4:** Additional economic impact evaluation; and
- .5 **Package 5:** Additional fuel supply and technology analyses.

9 Each package of work is designed to ensure the completion of the necessary knowledge gathering or the carrying out of the necessary further studies, as specified in paragraph 5 above, and shall contribute collectively to the implementation of the road map in a complimentary manner.

10 The packages of work are distinct in that they are different in nature and different in methodology requiring potentially different specialisms to undertake the work.

11 **Package 5**, which will be led by REMPEC and overseen by the SO_x ECA(s) Technical Committee of Experts, through correspondence coordinated by REMPEC, is envisaged of comprising a further study, specifically to make additional fuel supply and technology analyses (regional fuel production, fuel availability, and alternative compliance technologies), and is meant to provide the necessary input for the finalisation of the draft submission to the IMO under **Package 1**.

12 The finalised draft submission to the IMO, which will take into consideration the outcome of the work carried out on the further study under **Package 5** in accordance with the road map, will be reviewed and validated by the SO_x ECA(s) Technical Committee of Experts before submission to the Fourteenth Meeting of the Focal Points of REMPEC, to be tentatively held in Malta from 25 to 27 May 2021, for its review and recommendations.

Objectives

13 The principal objectives of the consultancy services will be to carry out the further study related to fuel supply and technology pursuant to the road map with a view to more fully addressing the criteria and procedures for designation of emission control areas laid down in Appendix III to MARPOL Annex VI.

Assignment

14 For the completion of this consultancy, the Consultant shall:

- .1 attend a kick-off Meeting to be held through video-conference, preferably between **6 and 10 July 2020**, to discuss the content of the reference documents to be analysed, the scope of the assignment, as well as to collect all required information for the completion of this consultancy and to agree on the method of work and communication channel;
- .2 draft a brief kick-off Meeting report to be submitted to REMPEC reflecting the main outcomes of the meeting;
- .3 identify and collate information and data on fuel supply/availability and other information with a focus on reports and studies issued following the coming into effect of the global sulphur limit on 1 January 2020 (0.50% sulphur compliant fuel oil required to be used by ships operating outside designated emission control areas), in particular identifying the impact, if any, on the availability of 0.10% sulphur compliant fuel oil in the Mediterranean Sea in 2025;
- .4 assess the compliant fuel oil demand projections for the 0.10% sulphur compliant fuel oil in the Mediterranean Sea in 2025 on the basis of the outcome of the Technical and Feasibility Study and other relevant studies;
- .5 assess the ability of the refinery industry that services the Mediterranean region to supply the projected demand for 0.10% sulphur compliant fuel oil in the Mediterranean Sea in 2025;
- .6 assess availability of 0.10% sulphur compliant fuel oil that could be supplied outside the Mediterranean Sea to ships routinely sailing through the Mediterranean Sea;
- .7 assess, using the most recent forecasts available, the availability, current use and future uptake to comply with the 0.10% requirement of alternative compliance technologies (Exhaust Gas Cleaning Systems – EGCS⁹) or alternative fuel (Liquefied Natural Gas – LNG) in the Mediterranean Sea, including their economic viability¹⁰;

⁹ also known as “scrubbers”.

¹⁰ For an economic assessment of the uptake of technologies and alternative fuels, an explanation of the likely investment horizon, investment parameters and macroeconomic factors should be provided. For EGCS (scrubbers), the continued availability of Heavy Fuel Oil (HFO) and forecast of price spread should be part of the assessment.

- .8 identify and assess, including a sensitivity analysis, scenarios resulting from international, regional or national laws that may be forthcoming to promote or hinder the adoption of such alternative compliance technologies and fuel, including work by IMO to address environmental effects of discharge water from EGCS and to reduce Greenhouse Gases (GHG) emissions from ships;
- .9 prepare, in consultation with REMPEC, a draft further study that covers the work referred to in paragraphs 14.3 to 14.8 above in an integrated manner; and
- .10 finalise the draft further study referred to above, taking into account the feedback and comments provided by REMPEC following consultations within the SO_x ECA(s) Technical Committee of Experts as well as with IMO, UNEP/MAP, in particular MED POL and PB/RAC.

Geographical scope of the assignment

- 15 The Consultant will perform the assignment in his/her office/home.

Reporting

- 16 The Consultant shall:

- .1 prepare and submit to REMPEC, not later than **17 July 2020**, the draft kick-off Meeting report referred to in paragraph 14.2 above;
- .2 prepare and submit to REMPEC, not later than **18 September 2020**, the draft further study referred to in paragraph 14.9 above; and
- .4 prepare and submit to REMPEC, not later than **13 November 2020**, the final draft further study referred to in paragraph 14.10 above.

17 All documents produced by the Consultant shall be prepared using the Established Guidelines for the preparation of reports on seminars, symposia, courses, workshops and similar events, provided in Annex II to the “REMPEC Consultant Booklet” unless instructed otherwise by REMPEC (i.e. specific document template(s) to be provided by REMPEC) and shall be drafted in English as well as provided in electronic format using software compatible with Microsoft Office 2007.

- 18 The following disclaimer shall appear in all documents prepared by the Consultant:

“This activity is financed by the Mediterranean Trust Fund (MTF)¹¹ and implemented by the Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC), in cooperation with the Mediterranean Pollution Assessment and Control Programme (MED POL) as well as the Plan Bleu Regional Activity Centre (PB/RAC) of the Mediterranean Action Plan (MAP) of the United Nations Environment Programme (UNEP).

¹¹ and possibly other sources of funds to be defined following consultations within the SO_x ECA(s) Technical Committee of Experts.

The views expressed in this document are those of the Consultant and are not attributed in any way to the United Nations, UNEP/MAP, MED POL, PB/RAC, the International Maritime Organization (IMO) or REMPEC.”.

Schedule

19 The work and tasks envisaged in the present document shall be completed by **16 November 2020**. The contract will be terminated upon the submission by the Consultant of the final draft further study as well as certification by REMPEC that the performance of the duties and the work carried out are satisfactory.

20 Within that timeframe, the Consultant shall organise his/her work in the best possible manner and ensure the successful completion of the consultancy.
