有關識別及標籤
油魚/鱈魚的指引

Guidelines on Identification and Labelling of Oilfish/Cod

食物安全中心
Centre for Food Safety

目 錄

CONTENT

有關識別及標籤油魚／鱈魚的指引

I. 引言

本指引載列有關可引致排油腹瀉魚類的定名、標籤和處理及其他相關事宜的建議。本指引適用於所有從事魚類買賣的進口商、批發商和零售商(包括食肆)。本指引純屬建議性質。業界人士宜採用這份由業界、消費者組織、政府部門代表和學者共同制定的指引。此外，業界必須注意不得對食物作出虛假的說明，並須遵守所有有關的本港法例。雖然指引主要爲業界而制定，但消費者亦宜參閱指引，以便更了解有關情況。

II. 背景

1. 事件

食物安全中心(中心)於二零零七年初宣布，有市民投訴進食標籤爲“鱈魚”的魚類後出現排油腹瀉。經中心調查後，相信涉及的魚製品是以“鱈魚”或相若名稱出售的“油魚”。該等症狀懷疑是由有關魚製品所含難以消化的蠟酯所致。

中心因應事件成立了工作小組，成員包括政府部門、業界和消費者組織的代表以及學者，就“油魚”及“鱈魚”的定名及標籤工作向業界提供意見。工作小組成員名單見附件 1。

2. 關於“油魚”及“玉梭魚”

每種魚類只有一個獲確認的學名，而每個學名均是獨一無二及國際通行的。由於學名通常較長和複雜，爲方便溝通和買賣，俗名應運而生。不過，由於一種魚類可能會有超過一個俗名，或不同的魚類有相同的俗名，甚至不同地區或同一地區內的人會採用不同俗名，因此單憑俗名識別或標籤魚類會十分混亂。

俗名爲“油魚” (學名：*Ruvettus pretiosus*；中文譯名：棘鱗蛇鯖)和俗名爲“玉梭魚” (學名：*Lepidocybium flavobrunneum*；中文譯名：異鱗蛇鯖)的魚類(以下統稱

爲“油魚”)脂肪含量豐富，而且天然含有蠟酯。這兩種魚類的脂肪含量極高，當中超過 90%屬於蠟酯。牠們同屬鱸形目的蛇鯖科。根據聯合國糧食及農業組織(糧農組織)[1] 和FishBase[2] 的資料，蛇鯖科現時約有 24 個已知品種，當中有些亦可能含蠟酯。上述兩個品種是最常被指與排油腹瀉有關的。蛇鯖科魚類詳見附件 2。

棘鱗蛇鯖(*Ruvettus pretiosus*)的皮膚非常粗糙，鱗片上滿布刺狀骨，腹部輪廓上有中腹脊棱，全身呈褐色或深褐色。胸鰭和腹鰭末端爲黑色。幼魚後背部和臀鰭的邊緣均爲白色。背鰭有 13 至 15 條鰭棘及 15 至 18 條鰭條；臀鰭沒有鰭棘但有 15 至 18 條鰭條；脊椎骨有 32 節。棘鱗蛇鯖的最長長度爲 200 厘米，而最重爲 63.5 公斤。[2]

棘鱗蛇鯖 *(Ruvettus pretiosus)*

(照片由 John E. Randall 所攝，載於 FishBase 網頁 http://www.fishbase.org)

[1] 糧農組織水產與漁業情報系統品種名錄 (http://www.fao.org/fi/website/FIRetrieveAction.do?dom=org&xml=FIDI_STAT_org.xml&xp_nav=1)

[2] FishBase (http://www.fishbase.org)

異鱗蛇鯖(*Lepidocybium flavobrunneum*)幾乎渾身呈深褐色，並隨着成長變爲幾近黑色。其第一背鰭非常低，尾柄的兩旁有凸出的脊棱，而每條脊棱上下均有一條較小的輔助脊棱。此外，魚身兩邊各有一條曲紋側線。背鰭有 8 至 9 條鰭棘及 16 至 18 條鰭條；臀鰭有 1 至 2 條鰭棘及 12 至 14 條鰭條；脊椎骨有 31 節。異鱗蛇鯖最長可達 200 厘米，而最重爲 45 公斤。[2]

異鱗蛇鯖 *(Lepidocybium flavobrunneum)*

(照片由 Pedro Niny Duarte 所攝 (c) ImagDOP，載於 FishBase 網頁 http://www.fishbase.org)

棘鱗蛇鯖和異鱗蛇鯖通常以魚扒或魚塊出售。一旦切開後，兩者便頗難辨認。概括而言，牠們均有“海棉狀骨”，當中的小孔滿布油囊，其白色魚肉含大量脂質，尤其是蠟酯。

棘鱗蛇鯖 *(Ruvettus pretiosus)*

異鱗蛇鯖 *(Lepidocybium flavobrunneum)*

3. 關於蠟酯

蠟酯自然存在於“油魚”等某些海魚中。“油魚”含有極多蠟酯。蠟酯在人體內難以消化，因而囤積在直腸，可導致排油腹瀉，並出現胃痙攣以至急性腹瀉等不適。排油腹瀉跟普通腹瀉不同，不會導致體液流失，因此不會致命。並非所有吃了這些魚類的人均會受影響。食用人士如有不適，一般會在進食有關魚類後 30 分鐘至 36 小時內出現症狀，並在 24 至 48 小時內痊癒。

4. 關於“鱈魚”

根據科學分類，“鱈魚”泛指鱈科的魚類及屬於鱈形目的相關品種。根據糧農組織和 FishBase 兩個機構的資料，鱈科現時有接近 60 個已知品種，鱈形目則有接近 500 個已知品種。鱈形目魚類詳見附件 3。本港市面上較常見的有“太平洋鱈魚”(英文俗名：“Pacific cod”；學名：*Gadus macrocephalus*)、“大西洋鱈魚”(英文俗名：“Atlantic cod”；學名：*Gadus morhua*)、“狹鱈”(英文俗名：“Alaska pollack”；學名：*Theragra chalcogramma*)、“黑線鱈魚”(英文俗名：“Haddock”；學名：*Melanogrammus aeglefinus*)、“藍尖尾無鬚鱈”(英文俗名：“Blue grenadier”/“Hoki”；學名：*Macruronus novaezelandiae*)。

不過，科學分類與市場情況卻有不一致之處。在市場上，“鱈魚”亦被用作多種魚類(包括部分並非鱈形目的魚類)的俗名，但一向用“鱈魚”作爲俗名的魚類並不會有上述的潛在健康危害。本港市面上以“鱈”或“cod”爲俗名而不屬鱈形目魚類的例子包括：

- 屬於裸蓋魚科及鮋形目而學名爲 *Anoplopoma fimbria* 的魚類，其市面上的中文俗名爲“銀鱈魚”(英文俗名：“Black cod”/“Sablefish”)，科學文獻所採用的中文俗名則爲“裸蓋魚”(糧農組織建議英文俗名：“Sablefish”)；

- 屬於南極魚科及鱸亞目而學名爲 *Dissostichus eleginoides* 及 *Dissostichus mawsoni* 的兩種魚類，其市面上的中文俗名爲“白鱈魚”(英文俗名：“Chilean seabass”/“Mero”/“Toothfish”)。至於科學文獻所採用的中文俗名，*Dissostichus eleginoides* 是“小鱗犬牙南極魚”(糧農組織建議英文俗名：“Patagonian toothfish”)，而 *Dissostichus mawsoni* 則爲“鱗頭犬牙南極魚”(糧農組織建議英文俗名：“Antarctic toothfish”)。

由於市場情況複雜，因此不能在此盡錄所有有關魚類。

從上文可見，蛇鯖科和鱈科的魚類屬於不同目，兩者並無關係。棘鱗蛇鯖和異鱗蛇鯖均屬蛇鯖科，以往一般亦沒有人認爲牠們屬於“鱈魚”和／或“鱈魚類”。

III. 國際間做法及本港立法方向

1. 關於“油魚”及“玉梭魚”

由於棘鱗蛇鯖和異鱗蛇鯖可能令人不適，有些國家已就該兩種魚類的出售、定名和食用制定規定或提出建議。

除日本和意大利，很多地區均容許進口及買賣棘鱗蛇鯖和異鱗蛇鯖，而部分地區則就有關買賣發出指引或作出特別要求，包括美國、加拿大、新加坡。美國食物及藥物管理局建議避免進口這兩種魚類或進行州內／跨州買賣，又要求海鮮生產商／加工商告知準買家／賣家進食這些魚類可引致腹瀉。澳洲昆士蘭省政府強烈建議不要以“玉梭魚”入饌。新西蘭政府建議業界不要提供連皮的棘鱗蛇鯖或異鱗蛇鯖供顧客食用，而食肆亦應告知顧客有關進食這些魚類的健康風險。新加坡當局已指令食物業界正確標示該兩種魚類，以便消費者易於識別。新加坡及加拿大當局均建議採用能減少脂肪含量的方法(例如烤)烹調這兩種魚類。根據《歐洲委員會規例》(EC/2074/2005)，新鮮、經配製和經加工的蛇鯖科(尤其是棘鱗蛇鯖和異鱗蛇鯖)魚製品，只可透過已包裝形式在市場上出售，並必須加上適當標籤，就配製／烹調方法及魚類含有可造成腸胃不適物質的風險，向消費者提供資料，同時必須在標籤附上學名及俗名。有關國際間做法的簡表見附件 4。

2. 關於魚類劃一定名的做法

現時，國際上並無劃一的魚類定名制度或一覽表。部分海外國家及地區採取了不同措施以劃一魚類名稱。舉例來說，《歐洲委員會規例》(EC/104/2000)規定，歐洲聯盟成員國公布區內的魚類認可商業名稱一覽表，當中包括每種魚類的學名，以官方語言或成員國語言訂定的魚類名稱及有關地區或區域接受或容許的其他名稱；英國已在法例中訂明不同品種魚類的“商業名稱”；美國食物及藥物管理局已就進口及國內海產整編了認可俗名一覽表供業界參考；澳洲政府及海產業界則共同就國內及進口的主要商業魚類和國內鰭魚制定劃一名稱一覽表；新西蘭已制定認可俗名及學名一覽表作爲標示魚類的指引；加拿大亦已發出魚類及海產認可俗名一覽表。

3. 本地立法方向

在本港方面，政府已循下列方向着手研究制訂有關規管魚類及魚製品的法律架構，包括進口商登記制度、衞生証明，以及保存供應、分銷和售賣記錄等。

IV. 對“油魚”及“鱈魚”的定名建議

只用俗名而不用學名的做法並不理想。如果只用俗名而又沒有劃一的俗名，在進口、批發和零售層面均可能會出現問題。就對消費者有潛在健康影響的魚類而言，如“油魚”，這種情況尤其不理想。

由於棘鱗蛇鯖和異鱗蛇鯖可影響人們的健康，工作小組認爲宜劃一其俗名，並就採用包含“鱈”字或“cod”的俗名方面提出切實可行的建議，以作爲處理俗名混亂問題的第一步。

1. 關於“油魚”的建議

工作小組建議把棘鱗蛇鯖 (*Ruvettus pretiosus*) 和異鱗蛇鯖 (*Lepidocybium flavobrunneum*) 的中、英文俗名定爲“**蠟油魚**”和“**oilfish**”，同時不可使用“鱈魚”等任何其他俗名，讓業界和消費者區別。若有證據顯示其他魚類可引起類似的健康問題，此建議亦適用於該等魚類。

2. 關於“鱈魚”的建議

工作小組亦就“鱈魚”的定名作出下列建議：

(a) 只有鱈形目魚類才可採用包含“鱈”字或

"cod"的俗名((b)情況除外)；及

(b) 就 *Anoplopoma fimbria, Dissostichus eleginoides* 及 *Dissostichus mawsoni* 三種魚類而言，若魚商在標籤、餐牌或食物牌上同時提供有關魚類的學名，科學文獻所採用的俗名或糧農組織建議的俗名，便可繼續使用市場上現行的俗名。

所有與建議(b)部分有關的名稱詳列如下：

學名	科學文獻內中文俗名	糧農組織建議英文俗名	市場現行中文俗名	市場現行英文俗名
Anoplopoma fimbria	裸蓋魚	Sablefish	銀鱈魚	Black cod/ Sablefish
Dissostichus eleginoides	小鱗犬牙南極魚	Patagonian toothfish	白鱈魚	Chilean seabass/ Mero/ Toothfish
Dissostichus mawsoni	鱗頭犬牙南極魚	Antarctic toothfish	白鱈魚	Chilean seabass/ Mero/ Toothfish

以下示例解釋使用 *Anoplopoma fimbria*, *Dissostichus eleginoides* 及 *Dissostichus mawsoni* 的市場現行中文俗名時標籤應包括的資料：

例一：銀鱈魚 (*Anoplopoma fimbria)*

例二：銀鱈魚 (裸蓋魚)

例三：銀鱈魚 (Sablefish)

例四：白鱈魚 (*Dissostichus eleginoides*)

例五：白鱈魚 (小鱗犬牙南極魚)

例六：白鱈魚 (Patagonian toothfish)

例七：白鱈魚 (*Dissostichus mawsoni*)

例八：白鱈魚 (鱗頭犬牙南極魚)

例九：白鱈魚 (Antarctic toothfish)

上述建議是邁向劃一魚類俗名的第一步。雖然可影響人們健康的魚類(即“蠟油魚”)是關注焦點，但工作小組有見早前“蠟油魚”和“鱈魚”事件而引起的問題，故亦處理有關“鱈魚”的定名建議。以劃一俗名的角度來說，*Anoplopoma fimbria*、*Dissostichus eleginoides*及*Dissostichus mawsoni*三個魚類品種沿用包含“鱈”字或“cod”的俗名，可能並非最理想的做法，但工作小組考慮到這些俗名沿用已久，在市場上廣爲業界及消費者所接受，而最重要的是，有別於“蠟油魚”，它們並不會對消費者健康構成潛在影響。在現階段而言，這是朝正確方向切實可行的第一步。更改這些俗名可能會令消費者和業界更加混亂。此外，建議要求同時提供學名、糧農組織建議的名稱或科學文獻接受的俗名的做法有助教育消費者對魚類的認識，而這一點對消費者在挑選食物時作出知情選擇是十分重要的。

V. 給業界有關識別及標籤魚類的建議

業界應參考下列程序，以識別魚類品種和在標籤上採用適當名稱，讓消費者作出知情的選擇：

1. 進口商：

(a) 要求供應商提供由出口國食物／衞生當局發出的衞生證明書。有關衞生證明書應載有魚類的學名。

(b) 告知買家魚類的正確學名。

2. 分銷商或批發商：

(a) 採用有關魚類的學名，與進口商或供應商核實魚類品種。

(b) 告知買家魚類的正確學名。

(c) 在標籤上採用魚類的學名和恰當的俗名。

以棘鱗蛇鯖 (*Ruvettus pretiosus*) 和異鱗蛇鯖 (*Lepidocybium flavobrunneum*) 而言，其中、英文俗名應爲“蠟油魚”和“oilfish”，不可採用其他俗名。至於“鱈魚”，只有鱈形目的魚類才應採用包含“鱈”字或“cod”的俗名；*Anoplopoma fimbria, Dissostichus eleginoides* 及 *Dissostichus mawsoni* 三種魚類則例外，可在符合指引第 IV 部分的條件下繼續使用現行包含“鱈”字或“cod”的俗名。

3. 零售商或膳食供應商：

(a) 採用有關魚類的學名，與分銷商或批發商核實魚類品種。

(b) 在食物標籤、食物牌及／或餐牌上向消費者展示恰當的俗名。如情況許可，應提供學名。

以棘鱗蛇鯖 (*Ruvettus pretiosus*) 和異鱗蛇鯖 (*Lepidocybium flavobrunneum*) 而言，其中、英文俗名應爲“蠟油魚”和“oilfish”，不可採用其他俗名。至於“鱈魚”，只有鱈形目的魚類才應採用包含“鱈”字或“cod”的俗名；*Anoplopoma fimbria, Dissostichus eleginoides* 及 *Dissostichus mawsoni* 三種魚類則例外，可在符合指引第 IV 部分的條件下繼續使用現行包含“鱈”字或“cod”的俗名。

(c) 有需要時向消費者提供額外資料。

以“蠟油魚”爲例，應提供配製及烹調方法和進食“蠟油魚”的潛在風險。以下是部分外國魚商採用的建議字句，供業界參考：

<u>警告聲明</u>

i) 此魚可令部分人士出現消化系統不適。

ii) 如懷孕、腸胃有毛病或吸收能力欠佳，不應進食此魚。

iii) 如首次吃這類魚，應只吃小量。

iv) 如進食這類魚後感到腸胃不適，日後切勿再吃。如持續不適，應求醫。

配製／烹調方法

i) 這類魚必須採用能夠去除大部分魚油的方法配製和烹調，然後才供人食用。

ii) 棄掉用作烹調的液體，切勿用作配製醬汁或其他食品。

4. 一般建議：

(a) 瀏覽以下網頁，以取得有關魚產品的分類資料：

i) 透過漁農自然護理署網頁瀏覽“聯合國糧農組織水產與漁業情報系統”：http://www.hk-fish.net/chi/links/links.htm

ii) FishBase: http://www.fishbase.org

(b) 向可靠的來源採購魚類及魚製品，不應循不當途徑購買魚類。

(c) 小心檢查(包括細閱標籤)購入的魚類，例如確保購入的“鱈魚”並非是“蠟油魚”或相關魚類充當的。

VI. 指引檢討

在可能含蠟酯的魚類中，本指引主要涵蓋棘鱗蛇鯖和異鱗蛇鯖兩個品種，因爲根據業界和專家的資料，本港市面上出售而可能會引致排油腹瀉的魚類現時只有這兩種。日後如發現任何其他可引致同類問題的魚類品種，本指引亦適用於該等魚類。

市面上的魚類品種十分繁多，而俗名引起的問題並非香港獨有。鑑於“蠟油魚”對健康有潛在不良影響，作爲第一步，本指引就“蠟油魚”及“鱈魚”提出建議。政府將繼續監察情況，並於適當時候與業界和其他有關人士檢討指引。

食物環境衞生署
食物安全中心
鱈魚／油魚定名工作小組
二零零七年七月

GUIDELINES ON IDENTIFICATION AND LABELLING OF OILFISH/ COD

I. Introduction

The Guidelines contain recommendations on the naming, labelling and handling of fish causing oily diarrhoea, and on some related issues. The Guidelines are applicable to all importers, wholesalers and retailers (including restaurants) of the fish trade. The Guidelines are advisory in nature, and members of the trade are encouraged to adopt the Guidelines which have been jointly developed by representatives of the trade, consumer body, government departments, and academics. Members of the trade are reminded that they should not falsely describe their food products, and should observe all relevant laws of Hong Kong. While the Guidelines are mainly for the trade, consumers are also encouraged to refer to them for better understanding of the situation.

II. Background

1. The Incident

The Centre for Food Safety (CFS) announced in early 2007 that it had received complaints from members of the public of oily diarrhoea after consumption of fish products labelled as "codfish". After investigation by the CFS, the fish products in question were believed to be "oilfish" marketed as "cod" or using names similar to "cod". The symptoms were suspected to be caused by the presence of indigestible wax ester in the fish products concerned.

In response to the incident, a Working Group was set up by the CFS, comprising representatives from government departments, the trade, consumer group and academics, to advise the trade in the appropriate naming and labelling of "oilfish" and "cod". Membership of the Working Group is provided in Annex 1.

2. About "Oilfish" and "Escolar"

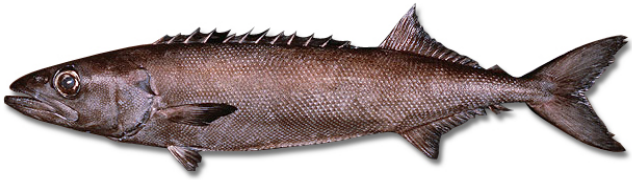
Each fish species has only one valid scientific name which is unique and universally recognised. As scientific names are usually rather long and complicated, common names emerged for easier communication and marketing purposes. Using common names alone to identify or label fish species, however, can be confusing, as one species may have more than one common name or several species may share the same common name. Furthermore, common names often vary across or even within regions.

The fish species commonly known as “oilfish”, with the scientific name of *Ruvettus pretiosus*, and the other one commonly known as “escolar”, with the scientific name of *Lepidocybium flavobrunneum* (collectively referred to as “oilfish” below), are rich in fat and contain naturally present wax ester. The fat content of these fish is very high, and wax ester contributes more than 90% of the fat content. Both species belong to the family Gempylidae under the order Perciformes. According to the Food and Agriculture Organization of the United Nations (FAO)[1] and FishBase[2], there are currently about 24 fish species known under the family Gempylidae which may contain wax ester, and the two species mentioned above are most commonly reported to be associated with oily diarrhoea. Fish species under the family Gempylidae are listed in Annex 2.

Ruvettus pretiosus has very rough skin, its scales are interspersed with spinous bony tubercles, and has a mid-ventral (abdominal) keel on the ventral contour. Its body is uniformly brown to dark brown, and the tips of the pectoral and pelvic fins are black. The margins of the second dorsal and anal fins are white in young fish. *Ruvettus pretiosus* has 13-15 dorsal spines, 15-18 dorsal soft rays, no anal spine, 15-18 anal soft rays, and 32 vertebrae. The maximum length of *Ruvettus pretiosus* is 200 cm, and the maximum weight is 63.5 kg.[2]

[1] FAO Aquatic Sciences and Fisheries Information System Species List (http://www.fao.org/fi/website/FIRetrieveAction.do?dom=org&xml=FIDI_STAT_org.xml&xp_nav=1)
[2] FishBase (http://www.fishbase.org)

Ruvettus pretiosus



(Photo by John E. Randall, available from FishBase at URL: http://www.fishbase.org)

Lepidocybium flavobrunneum is almost uniformly dark brown in colour, which becomes almost black with age. The first dorsal fin of *Lepidocybium flavobrunneum* is very low. Each side of the caudal peduncle has a prominent keel which is flanked by 2 small supplementary keels, one above and one below. There is a single, sinuous lateral line on each side of the body. *Lepidocybium flavobrunneum* has 8-9 dorsal spines, 16-18 dorsal soft rays, 1-2 anal spines, 12-14 anal soft rays, and 31 vertebrae. The maximum length of *Lepidocybium flavobrunneum* is 200 cm and the maximum weight is 45 kg.[2]

Lepidocybium flavobrunneum

(Photo by Pedro Niny Duarte (c) ImagDOP, available from FishBase at URL: http://www.fishbase.org)

Ruvettus pretiosus and *Lepidocybium flavobrunneum* are usually sold as steak or fillets. Once cut up, they become difficult to identify. As a crude guide, they both have "spongy bones" with the holes filled with oil sacs, and have white muscles rich in lipid, in particular wax ester.

Ruvettus pretiosus

Lepidocybium flavobrunneum

3. About Wax Ester

Wax ester is naturally present in certain species of marine fish, including "oilfish". The wax ester content in "oilfish" is very high. In humans, wax ester is indigestible and thus accumulates in the rectum and may cause oily diarrhoea and discomfort ranging from stomach cramps to rapid loose bowel movements. Unlike other forms of

diarrhoea, oily diarrhoea caused by indigestible wax ester does not cause loss of body fluid and is not life-threatening. Not all people are affected. If symptoms occur, onset time ranges from 30 minutes to 36 hours after consumption of the fish. Recovery is expected within 24 to 48 hours in affected individuals.

4. About "Cod"

According to scientific classification, "cod" generally refers to fish in the family Gadidae and related species within the order Gadiformes. According to the FAO and FishBase, there are currently close to 60 fish species known under the family Gadidae and close to 500 fish species known under the order Gadiformes. Fish species under the order Gadiformes is at Annex 3. The ones more often seen in the local market include "Pacific cod" (Chinese common name: "太平洋鱈魚"; scientific name: *Gadus macrocephalus*), "Atlantic cod" (Chinese common name: "大西洋鱈魚"; scientific name: *Gadus morhua*), "Alaska pollack" (Chinese common name: "狹鱈"; scientific name: *Theragra chalcogramma*), "Haddock" (Chinese common name: "黑線鱈魚"; scientific name: *Melanogrammus aeglefinus*), "Blue grenadier"/ "Hoki" (Chinese common name: "藍尖尾無鬚鱈"; scientific name: *Macruronus novaezelandiae*).

There are, however, some discrepancies between the scientific classification and the market situation. In the market, "cod" has been used as the common name of a range of fish species, including some that do not belong to the order Gadiformes. However, those fish using the common name of "cod" do not have potential health hazards as

mentioned above. Examples of fish species bearing common names containing “cod” or “鱈” in the local market but not belonging to the order Gadiformes include:

- *Anoplopoma fimbria*, a fish species belonging to the family Anoplopomatidae and the order Scorpaeniformes, has been in the market bearing the common name of “Black cod”/ “Sablefish” in English (Chinese common name: “銀鱈魚”). The English common name recommended by the FAO for this species is “Sablefish” (Chinese common name used in scientific literature : “裸蓋魚”);

- *Dissostichus eleginoides* and *Dissostichus mawsoni*, fish species belonging to the family Nototheniidae and the order Percoidei, have been in the market bearing the English common names of “Chilean seabass”/ “Mero”/ “Toothfish” (Chinese common name: “白鱈魚”). The English common name recommended by FAO for *Dissostichus eleginoides* is “Patagonian toothfish” (Chinese common name used in scientific literature: “小鱗犬牙南極魚”); and that for *Dissostichus mawsoni* is “Antarctic toothfish” (Chinese common name used in scientific literature: “鱗頭犬牙南極魚”).

Due to the complex market situation, it is not possible to provide an exhaustive list.

As seen from the above, fishes within the families Gempylidae

and Gadidae are classified under two different orders and are not related. *Ruvettus pretiosus* and *Lepidocybium flavobrunneum* are members of the family Gempylidae and have not been commonly considered as “cod” and/or “cod family” in the past.

III. International Practice and Direction of Local Legislation

1. On "Oilfish" and "Escolar"

Due to the possible health effects of *Ruvettus pretiosus* and *Lepidocybium flavobrunneum*, a number of countries have set requirements or made recommendations on the marketing, naming and consuming of the fish.

With the exception of Japan and Italy, the sale and import of *Ruvettus pretiosus* and *Lepidocybium flavobrunneum* is permitted in many jurisdictions, with precautionary advisories or special requiremens on the relevant sale in place in some jurisdictions, including the US, Canada, Singapore. The US Food and Drug Administration advises against importation and intrastate/interstate marketing of the two fish species and requests seafood manufacturers/processors to inform potential buyers/sellers of the purgative effect associated with the consumption of these fish. The Australian Queensland Government strongly recommends that "escolar" should not be used for catering purposes. In New Zealand, it is not recommended to serve any of these species with the skin on in commercial settings and food operators should advise their customers of the health risks associated with consumption of the fish. In Singapore, the authority has instructed food traders to correctly label the two fish species so that consumers can easily identify them. Both Singaporean and Canadian authorities recommend cooking method (e.g. grilling) to reduce the fat content in the fish. According to the European Commission Regulation (EC/2074/2005), fresh, prepared and

processed fishery products belonging to the family Gempylidae, in particular *Ruvettus pretiosus* and *Lepidocybium flavobrunneum*, may only be placed on the market in wrapped/packaged form and must be appropriately labelled to provide information to the consumers on preparation/cooking methods and on the risk related to the presence of substances with adverse gastrointestinal effects. The scientific name must accompany the common name on the label as well. A summary table of international practices is at Annex 4.

2. On Standardisation of Fish Names

Up till now, a standard fish naming system or list is not available internationally. Various measures have been adopted in some overseas jurisdictions to bring about standardisation of fish names. For example, the European Council Regulation (EC/104/2000) requires Member States of the European Union to publish a list of the commercial designations accepted in their territory, including the scientific name for each species, its name in the official language or languages of the Member States and other name(s) accepted or permitted locally or regionally; in the UK, the "commercial designations" of different fish species are prescribed in the law; in the US, a list of acceptable market names for imported and domestically available seafood has been compiled by the US Food and Drug Administration for reference by the trade; the Australian Government and the seafood industry have jointly developed a list of standard fish names for commercially important domestic and imported species of fish as well as domestic finfish; in New Zealand, a list of recognised common names and scientific names has been produced to provide

guidance in fish labelling; in Canada, a list of acceptable common names for fish and seafood has also been issued.

3. Direction of Local Legislation

Locally, the Government has begun examining the establishment of a legislative framework on the control of fish and fish products, in the direction of importer registration, health certification, as well as keeping of records of supplies, distribution, and sales, etc.

IV. Recommendations on the Naming of "Oilfish" and "Cod"

The use of common names in place of scientific names is not desirable. If only common name is used, and standardised common names are absent, it may pose problems at the import, wholesale and retail levels. This is particularly undesirable with respect to fish with potential health implications, such as "oilfish".

The Working Group considers it appropriate, as the first step to address the confusion over the use of common names, to standardise the common names of *Ruvettus pretiosus* and *Lepidocybium flavobrunneum* due to their health implications, and to lay down practical recommendations on the use of common names containing "cod" or "鱈".

1. Recommendation on "Oilfish"

The Working Group recommends that for easy distinction by trade members and consumers, *Ruvettus pretiosus* and *Lepidocybium flavobrunneum* should be labelled as "**oilfish**" in English and "**蠟油魚**" in Chinese as the common names, and no other common names, including "cod", should be used. This recommendation may be extended to other fish species in light of evidence that similar health-related problems are caused.

2. Recommendation on "Cod"

In relation to "cod", the Working Group also makes the following recommendation :

(a) Only fish belonging to the order Gadiformes should use common name containing the word "cod"/"鱈" (except for situation under (b)); and

(b) In relation to *Anoplopoma fimbria*, *Dissostichus eleginoides* and *Dissostichus mawsoni*, the existing common name in the market may continue to be used, provided that the corresponding scientific name, common name used in scientific literature or common name recommended by the FAO is supplemented at the same time, including on the food label, menu or food sign.

All the names relevant to part (b) of the recommendation are listed in detail below:

Scientific Name	**FAO Recommended English Common Name**	**Chinese Common Name in Scientific Literature**	**Existing English Market Common Name**	**Existing Chinese Market Common Name**
Anoplopoma fimbria	Sablefish	裸蓋魚	Black cod/ Sablefish	銀鱈魚
Dissostichus eleginoides	Patagonian toothfish	小鱗犬牙南極魚	Chilean seabass/ Mero/ Toothfish	白鱈魚
Dissostichus mawsoni	Antarctic toothfish	鱗頭犬牙南極魚	Chilean seabass/ Mero/ Toothfish	白鱈魚

Examples illustrating how *Anoplopoma fimbria*, *Dissostichus eleginoides* and *Dissostichus mawsoni* should be labelled when the existing English market common names listed above are used:

Example 1: Black Cod (*Anoplopoma fimbria)*

Example 2: Black Cod (Sablefish)

Example 3: Chilean Seabass (*Dissostichus eleginoides*)

Example 4: Chilean Seabass (Patagonian toothfish)

Example 5: Mero (*Dissostichus eleginoides*)

Example 6: Mero (Patagonian toothfish)

Example 7: Chilean Seabass (*Dissostichus mawsoni*)

Example 8: Chilean Seabass (Antarctic toothfish)

Example 9: Mero (*Dissostichus mawsoni*)

Example 10: Mero (Antarctic toothfish)

The recommendations above represent a first step towards standardising common names among fish species. While fish with potential adverse health implications, namely "oilfish", merits the most attention, the Working Group, noting the earlier incident regarding "oilfish" and "cod", also makes recommendations related to the naming of "cod". While the continued use of common names containing the word "cod" or "鱈" in relation to the three species of *Anoplopoma fimbria*, *Dissostichus eleginoides* and *Dissostichus mawsoni* may not be the most desirable measure in terms of standardisation of common names, the Working Group considers it a practical first step towards the right direction at the present stage, given that such common names have been in use for a long time, and have been widely accepted in the

market by the trade and the consumers. Most importantly, unlike "oilfish", these fish species do not pose potential health problems to consumers. Changes in such names may cause further confusion to the consumers and the trade. Moreover, the recommendation to also provide the scientific name, FAO recommended name or common name recognised in scientific literature at the same time can serve to educate consumers on knowledge in the fish species, which is essential for consumers to make informed choices in their food selection.

V. Advice to the Trade on Species Identification and Labelling

The trade is advised to make reference to the following procedures to identify fish species and to use the appropriate fish names on the labels to allow consumers to make informed choices:

1. For Importer:

(a) Request the suppliers to provide a health certificate issued by the food/health authority of the exporting country. The health certificate should include the scientific names of the fish species.

(b) Inform buyers of the correct scientific name of the fish species.

2. For Distributor or Wholesaler:

(a) Check and verify with importers or suppliers for species identification by using the scientific name of the fish involved.

(b) Inform buyers of the correct scientific name of the fish species.

(c) Put the scientific and proper common names of the fish species on the label.

For *Ruvettus pretiosus* and *Lepidocybium flavobrunneum*, the common name should be "oilfish" in English and "蠟油魚" in Chinese, and no other names should be used. For "cod", only fish belonging to the order Gadiformes should use common names containing the word "cod" or "鱈"; except for *Anoplopoma fimbria*, *Dissostichus eleginoides* and *Dissostichus mawsoni*, for which the existing common names containing the word "cod" or "鱈"

may continue to be used, provided that conditions set out in Part IV of the Guidelines are fulfilled.

3. For Retailer or Caterer:

(a) Check and verify with distributors or wholesalers for species identification by using the scientific name of the fish involved.

(b) Show the proper common names to consumers on food labels, signs and/or menus, and provide also the scientific names if practicable.

For *Ruvettus pretiosus* and *Lepidocybium flavobrunneum*, the common name should be "oilfish" in English and "蠟油魚" in Chinese, and no other names should be used. For "cod", only fish belonging to the order Gadiformes should use common names containing the word "cod" or "鱈"; except for *Anoplopoma fimbria*, *Dissostichus eleginoides* and *Dissostichus mawsoni*, for which the existing common names containing the word "cod" or "鱈" may continue to be used provided that conditions set out in Part IV of the Guidelines are fulfilled.

(c) Provide supplementary information to consumers as necessary.

For "oilfish", preparation and cooking methods and the potential risk related to the consumption of "oilfish" should be provided to consumers. The following are some suggested wordings adopted by the fish trade in overseas countries for reference:

<u>Warning statement</u>

i) This fish can cause digestive discomfort to some individuals.

ii) If you are pregnant, have bowel problem or malabsorption, you are advised not to consume this fish.

iii) If you are eating this fish for the first time, consume only a small portion.

iv) If you experience gastrointestinal symptoms after eating this fish, do not consume the fish in future. Seek medical advice if symptoms persist.

Preparation/cooking methods

i) Prepare and cook this fish in ways that most of the fat could be separated from the fish.

ii) Discard the cooking liquid, do not use it to make sauces or prepare other dishes.

4. General Advice:

(a) Browse the following websites to obtain relevant information on the classification of fishery products:

i) "FAO ASFIS List of Species for Fishery Statistics Purposes" via the webpage of the Agriculture, Fisheries and Conservation Department: http://www.hk-fish.net/eng/links/links.htm

ii) FishBase: http://www.fishbase.org

(b) Patronise fish and fish products from reliable sources. Do not buy fish from improper channels.

(c) Carefully check the incoming materials including the labels, e.g. to ensure "oilfish" or related fish species are not sold as "cod" to you.

VI. Review of the Guidelines

On fish which may contain wax ester, the Guidelines cover mainly the two species of *Ruvettus pretiosus* and *Lepidocybium flavobrunneum*, as they are currently the only types of fish that are available in the local market and may cause oily diarrhoea, according to information from the trade and experts. If any other species causing similar problems are found in future, the Guidelines will also be applicable.

Given the huge variety of fish species available in the market and the problem in the use of common names, which is not unique to Hong Kong, the Guidelines put forward recommendations related to "oilfish" and "cod" as a first step, in view of the potential adverse health effects "oilfish" may cause. The Government will continue to monitor the situation, and the Guidelines will be reviewed in consultation with the fish trade and other relevant parties as appropriate.

Working Group on Naming of Codfish/Oilfish
Centre for Food Safety
Food and Environmental Hygiene Department
July 2007

附件／**Annex 1**

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備註/ Note:
特別鳴謝向工作小組提供專家意見的 Yvonne SADOVY 博士 (香港大學生態學及生物多樣性學系)
Special thanks are made to Dr Yvonne SADOVY of the Department of Ecology & Biodiversity, The University of Hong Kong, for her expert advice to the Working Group

蛇鰆科魚類／**Fish Species under Family Gempylidae**[i]

學名／Scientific Name	俗名／Common Name
Diplospinus multistriatus	Striped escolar
Epinnula magistralis	Domine
Gempylus serpens	Snake mackerel
Lepidocybium flavobrunneum	Escolar
Nealotus tripes	Black snake mackerel
Neoepinnula americana	American sackfish
Neoepinnula orientalis	Sackfish
Nesiarchus nasutus	Black gemfish
Paradiplospinus antarcticus	Antarctic escolar
Paradiplospinus gracilis	Slender escolar
Promethichthys prometheus	Roudi escolar
Rexea alisae	---
Rexea antefurcata	Long-finned escolar
Rexea bengalensis	Bengal escolar
Rexea brevilineata	Short-lined escolar
Rexea nakamurai	Nakamura's escolar
Rexea prometheoides	Royal escolar
Rexea solandri	Silver gemfish

Rexichthys johnpaxtoni	Paxton's escolar
Ruvettus pretiosus	Oilfish
Thyrsites atun	Snoek
Thyrsitoides marleyi	Black snoek
Thyrsitops lepidopoides	White snake mackerel
Tongaichthys robustus	Tonga escolar

i 資料來源：糧農組織及 FishBase
Sources: FAO Aquatic Sciences and Fisheries Information System Species List; FishBase

鱈形目魚類／**Fish Species under Order Gadiformes**[ii]

科／Family	學名／Scientific Name	俗名／Common Name
Bregmacerotidae	*Bregmaceros arabicus*	---
Bregmacerotidae	*Bregmaceros atlanticus*	Antenna codlet
Bregmacerotidae	*Bregmaceros bathymaster*	Codlet
Bregmacerotidae	*Bregmaceros cantori*	---
Bregmacerotidae	*Bregmaceros japonicus*	Japanese codlet
Bregmacerotidae	*Bregmaceros lanceolatus*	---
Bregmacerotidae	*Bregmaceros mcclellandi*	Unicorn cod
Bregmacerotidae	*Bregmaceros nectabanus*	Smallscale codlet
Bregmacerotidae	*Bregmaceros neonectabanus*	---
Bregmacerotidae	*Bregmaceros pescadorus*	---
Bregmacerotidae	*Bregmaceros rarisquamosus*	Big-eye unicorn-cod
Euclichthyidae	*Euclichthys polynemus*	Eucla cod
Gadidae	*Arctogadus borisovi*	East Siberian cod
Gadidae	*Arctogadus glacialis*	Artic cod
Gadidae	*Boreogadus saida*	Polar cod
Gadidae	*Brosme brosme*	Tusk(=Cusk)
Gadidae	*Ciliata mustela*	Fivebeard rockling
Gadidae	*Ciliata septentrionalis*	Northern rockling
Gadidae	*Ciliata tchangi*	---
Gadidae	*Eleginus gracilis*	Saffron cod
Gadidae	*Eleginus navaga*	Navaga(=Wachna cod)
Gadidae	*Gadiculus argenteus*	Silvery cod

Gadidae	*Gadiculus argenteus thori*	Silvery pout
Gadidae	*Gadus macrocephalus*	Pacific cod
Gadidae	*Gadus morhua*	Atlantic cod
Gadidae	*Gadus ogac*	Greenland cod
Gadidae	*Gaidropsarus argentatus*	Arctic rockling
Gadidae	*Gaidropsarus biscayensis*	Mediterranean bigeye rockling
Gadidae	*Gaidropsarus capensis*	Cape rockling
Gadidae	*Gaidropsarus ensis*	Threadfin rockling
Gadidae	*Gaidropsarus granti*	Azores rockling
Gadidae	*Gaidropsarus guttatus*	---
Gadidae	*Gaidropsarus insularum*	Comb rockling
Gadidae	*Gaidropsarus macrophthalmus*	Bigeye rockling
Gadidae	*Gaidropsarus mediterraneus*	Shore rockling
Gadidae	*Gaidropsarus novaezealandiae*	New Zealand ling
Gadidae	*Gaidropsarus pacificus*	---
Gadidae	*Gaidropsarus parini*	---
Gadidae	*Gaidropsarus vulgaris*	Three-bearded rockling
Gadidae	*Lota lota*	Burbot
Gadidae	*Melanogrammus aeglefinus*	Haddock
Gadidae	*Merlangius merlangus*	Whiting
Gadidae	*Microgadus proximus*	Pacific tomcod
Gadidae	*Microgadus tomcod*	Atlantic tomcod
Gadidae	*Micromesistius australis*	Southern blue whiting
Gadidae	*Micromesistius poutassou*	Blue whiting(=Poutassou)
Gadidae	*Molva dypterygia*	Blue ling
Gadidae	*Molva macrophthalma*	Spanish ling

Gadidae	*Molva molva*	Ling
Gadidae	*Phycis blennoides*	Greater forkbeard
Gadidae	*Phycis chesteri*	Longfin hake
Gadidae	*Phycis phycis*	Forkbeard
Gadidae	*Pollachius pollachius*	Pollack
Gadidae	*Pollachius virens*	Saithe(=Pollock)
Gadidae	*Raniceps raninus*	Tadpole fish
Gadidae	*Theragra chalcogramma*	Alaska Pollock (=Walleye poll.)
Gadidae	*Theragra finnmarchica*	Norwegian Pollock
Gadidae	*Trisopterus esmarkii*	Norway pout
Gadidae	*Trisopterus luscus*	Pouting(=Bib)
Gadidae	*Trisopterus minutus*	Poor cod
Gadidae	*Urophycis brasiliensis*	Brazilian codling
Gadidae	*Urophycis chuss*	Red hake
Gadidae	*Urophycis cirrata*	Gulf hake
Gadidae	*Urophycis earllii*	Carolina hake
Gadidae	*Urophycis floridana*	Southern codling
Gadidae	*Urophycis regia*	Spotted codling
Gadidae	*Urophycis tenuis*	White hake
Lotidae	*Enchelyopus cimbrius*	Fourbeard rockling
Macrouridae	*Albatrossia pectoralis*	Giant grenadier
Macrouridae	*Asthenomacrurus fragilis*	Fragile grenadier
Macrouridae	*Asthenomacrurus victoris*	---
Macrouridae	*Bathygadus antrodes*	---
Macrouridae	*Bathygadus bowersi*	---
Macrouridae	*Bathygadus cottoides*	Codheaded rattail
Macrouridae	*Bathygadus favosus*	---

Macrouridae	*Bathygadus furvescens*	---
Macrouridae	*Bathygadus garretti*	---
Macrouridae	*Bathygadus macrops*	Bullseye grenadier
Macrouridae	*Bathygadus melanobranchus*	Vaillant's grenadier
Macrouridae	*Bathygadus nipponicus*	---
Macrouridae	*Bathygadus spongiceps*	---
Macrouridae	*Bathygadus sulcatus*	---
Macrouridae	*Caelorinchus acanthiger*	Surgeon grenadier
Macrouridae	*Caelorinchus aconcagua*	Aconcagua grenadier
Macrouridae	*Caelorinchus acutirostris*	---
Macrouridae	*Caelorinchus anatirostris*	Duckbill grenadier
Macrouridae	*Caelorinchus anisacanthus*	---
Macrouridae	*Caelorinchus aratrum*	---
Macrouridae	*Caelorinchus argentatus*	Silver whiptail
Macrouridae	*Caelorinchus argus*	Eyespot grenadier
Macrouridae	*Caelorinchus aspercephalus*	Rough-head whiptail
Macrouridae	*Caelorinchus asteroides*	---
Macrouridae	*Caelorinchus australis*	Javelin
Macrouridae	*Caelorinchus biclinozonalis*	Two-barred whiptail
Macrouridae	*Caelorinchus bollonsi*	Bollons' rattail
Macrouridae	*Caelorinchus braueri*	Shovelnose grenadier
Macrouridae	*Caelorinchus caelorhincus*	Hollowsnout grenadier
Macrouridae	*Caelorinchus carminatus*	Longnose grenadier
Macrouridae	*Caelorinchus geronimo*	Hollowsnout grenadier
Macrouridae	*Caelorinchus polli*	Hollowsnout grenadier
Macrouridae	*Caelorinchus canus*	Clearsnout grenadier

Macrouridae	*Caelorinchus caribbaeus*	Blackfin grenadier
Macrouridae	*Caelorinchus carinifer*	---
Macrouridae	*Caelorinchus caudani*	---
Macrouridae	*Caelorinchus celaenostoma*	Black lip rattail
Macrouridae	*Caelorinchus chilensis*	Chilean grenadier
Macrouridae	*Caelorinchus cingulatus*	---
Macrouridae	*Caelorinchus commutabilis*	---
Macrouridae	*Caelorinchus cookianus*	Cook's rattail
Macrouridae	*Caelorinchus denticulatus*	Filesnout grenadier
Macrouridae	*Caelorinchus dorsalis*	---
Macrouridae	*Caelorinchus doryssus*	---
Macrouridae	*Caelorinchus fasciatus*	Banded whiptail
Macrouridae	*Caelorinchus flabellispinis*	---
Macrouridae	*Caelorinchus formosanus*	Formosa grenadier
Macrouridae	*Caelorinchus gilberti*	---
Macrouridae	*Caelorinchus gladius*	---
Macrouridae	*Caelorinchus hexafasciatus*	Six-band grenadier
Macrouridae	*Caelorinchus horribilis*	Horrible rattail
Macrouridae	*Caelorinchus hubbsi*	---
Macrouridae	*Caelorinchus immaculatus*	---
Macrouridae	*Caelorinchus infuscus*	Dusky rattail
Macrouridae	*Caelorinchus innotabilis*	Notable whiptail
Macrouridae	*Caelorinchus japonicus*	Japanese grenadier
Macrouridae	*Caelorinchus jordani*	---
Macrouridae	*Caelorinchus kaiyomaru*	Campbell whiptail
Macrouridae	*Caelorinchus kamoharai*	Kamohara grenadier
Macrouridae	*Caelorinchus karrerae*	Karrer's whiptail

Macrouridae	*Caelorinchus kermadecus*	Kermadec rattail
Macrouridae	*Caelorinchus kishinouyei*	Mugura grenadier
Macrouridae	*Caelorinchus labiatus*	Spearsnouted grenadier
Macrouridae	*Caelorinchus longicephalus*	Longhead grenadier
Macrouridae	*Caelorinchus longissimus*	---
Macrouridae	*Caelorinchus macrochir*	Longarm grenadier
Macrouridae	*Caelorinchus macrolepis*	---
Macrouridae	*Caelorinchus macrorhynchus*	---
Macrouridae	*Caelorinchus maculatus*	---
Macrouridae	*Caelorinchus marinii*	Marini's grenadier
Macrouridae	*Caelorinchus matamua*	Mahia whiptail
Macrouridae	*Caelorinchus matsubarai*	---
Macrouridae	*Caelorinchus maurofasciatus*	Dark banded rattail
Macrouridae	*Caelorinchus melanosagmatus*	---
Macrouridae	*Caelorinchus mirus*	Gargoyle fish
Macrouridae	*Caelorinchus multifasciatus*	---
Macrouridae	*Caelorinchus multispinulosus*	Spearnose grenadier
Macrouridae	*Caelorinchus mycterismus*	Upturned snout rattail
Macrouridae	*Caelorinchus mystax*	Patterned rattail
Macrouridae	*Caelorinchus nazcaensis*	---
Macrouridae	*Caelorinchus notatus*	---
Macrouridae	*Caelorinchus occa*	Swordsnout grenadier
Macrouridae	*Caelorinchus oliverianus*	Hawknose grenadier
Macrouridae	*Caelorinchus parallelus*	Spiny grenadier
Macrouridae	*Caelorinchus parvifasciatus*	Small banded rattail
Macrouridae	*Caelorinchus platorhynchus*	---
Macrouridae	*Caelorinchus productus*	Unicorn grenadier

Macrouridae	*Caelorinchus quadricristatus*	---
Macrouridae	*Caelorinchus quincunciatus*	---
Macrouridae	*Caelorinchus radcliffei*	---
Macrouridae	*Caelorinchus scaphopsis*	Shoulderspot grenadier
Macrouridae	*Caelorinchus sexradiatus*	---
Macrouridae	*Caelorinchus simorhynchus*	---
Macrouridae	*Caelorinchus smithi*	---
Macrouridae	*Caelorinchus spathulata*	Spatulate rattail
Macrouridae	*Caelorinchus spilonotus*	---
Macrouridae	*Caelorinchus supernasutus*	Supanose rattail
Macrouridae	*Caelorinchus thompsoni*	---
Macrouridae	*Caelorinchus tokiensis*	---
Macrouridae	*Caelorinchus trachycarus*	---
Macrouridae	*Caelorinchus triocellatus*	---
Macrouridae	*Caelorinchus trunovi*	---
Macrouridae	*Caelorinchus velifer*	---
Macrouridae	*Caelorinchus ventrilux*	Firebelly grenadier
Macrouridae	*Caelorinchus weberi*	---
Macrouridae	*Cetonurus crassiceps*	Globosehead rattail
Macrouridae	*Cetonurus globiceps*	Globehead grenadier
Macrouridae	*Coryphaenoides acrolepis*	Pacific grenadier
Macrouridae	*Coryphaenoides altipinnis*	---
Macrouridae	*Coryphaenoides anguliceps*	Loosescale grenadier
Macrouridae	*Coryphaenoides ariommus*	Humboldt grenadier
Macrouridae	*Coryphaenoides armatus*	Abyssal grenadier
Macrouridae	*Coryphaenoides asper*	---
Macrouridae	*Coryphaenoides asprellus*	---

Macrouridae	*Coryphaenoides boops*	Shortsnout grenadier
Macrouridae	*Coryphaenoides brevibarbis*	---
Macrouridae	*Coryphaenoides bucephalus*	Narrowsnout grenadier
Macrouridae	*Coryphaenoides bulbiceps*	Large-eye grenadier
Macrouridae	*Coryphaenoides camurus*	---
Macrouridae	*Coryphaenoides capito*	Bighead grenadier
Macrouridae	*Coryphaenoides carapinus*	Carapine grenadier
Macrouridae	*Coryphaenoides carminifer*	Carmine grenadier
Macrouridae	*Coryphaenoides castaneus*	---
Macrouridae	*Coryphaenoides cinereus*	Popeye grenadier
Macrouridae	*Coryphaenoides delsolari*	Trident grenadier
Macrouridae	*Coryphaenoides dubius*	---
Macrouridae	*Coryphaenoides fernandezianus*	---
Macrouridae	*Coryphaenoides ferrieri*	---
Macrouridae	*Coryphaenoides filamentosus*	---
Macrouridae	*Coryphaenoides filicauda*	---
Macrouridae	*Coryphaenoides filifer*	Filamented rattail
Macrouridae	*Coryphaenoides grahami*	---
Macrouridae	*Coryphaenoides guentheri*	Guenther's grenadier
Macrouridae	*Coryphaenoides hextii*	---
Macrouridae	*Coryphaenoides hoskynii*	---
Macrouridae	*Coryphaenoides lecointei*	---
Macrouridae	*Coryphaenoides leptolepis*	Ghostly grenadier
Macrouridae	*Coryphaenoides liocephalus*	Bearded rattail
Macrouridae	*Coryphaenoides longicirrhus*	---
Macrouridae	*Coryphaenoides longifilis*	Longfin grenadier
Macrouridae	*Coryphaenoides macrolophus*	---

Macrouridae	*Coryphaenoides marginatus*	Amami grenadier
Macrouridae	*Coryphaenoides marshalli*	---
Macrouridae	*Coryphaenoides mcmillani*	---
Macrouridae	*Coryphaenoides mediterraneus*	Mediterranean grenadier
Macrouridae	*Coryphaenoides mexicanus*	Mexican grenadier
Macrouridae	*Coryphaenoides microps*	---
Macrouridae	*Coryphaenoides murrayi*	Abyssal rattail
Macrouridae	*Coryphaenoides myersi*	Myers' grenadier
Macrouridae	*Coryphaenoides nasutus*	Largenose grenadier
Macrouridae	*Coryphaenoides oreinos*	---
Macrouridae	*Coryphaenoides paramarshalli*	---
Macrouridae	*Coryphaenoides profundicolus*	Deepwater grenadier
Macrouridae	*Coryphaenoides rudis*	Rudis rattail
Macrouridae	*Coryphaenoides rupestris*	Roundnose grenadier
Macrouridae	*Coryphaenoides semiscaber*	---
Macrouridae	*Coryphaenoides serrulatus*	Serrulate whiptail
Macrouridae	*Coryphaenoides spinulosus*	---
Macrouridae	*Coryphaenoides striaturus*	---
Macrouridae	*Coryphaenoides subserrulatus*	Longrayed whiptail
Macrouridae	*Coryphaenoides thelestomus*	Roughlip grenadier
Macrouridae	*Coryphaenoides tydemani*	---
Macrouridae	*Coryphaenoides woodmasoni*	---
Macrouridae	*Coryphaenoides yaquinae*	---
Macrouridae	*Coryphaenoides zaniophorus*	Thickbeard grenadier
Macrouridae	*Cynomacrurus piriei*	Dogtooth grenadier
Macrouridae	*Echinomacrurus mollis*	---

Macrouridae	*Echinomacrurus occidentalis*	---
Macrouridae	*Gadomus aoteanus*	Filamentous rattail
Macrouridae	*Gadomus arcuatus*	Doublethread grenadier
Macrouridae	*Gadomus capensis*	---
Macrouridae	*Gadomus colletti*	---
Macrouridae	*Gadomus denticulatus*	---
Macrouridae	*Gadomus dispar*	---
Macrouridae	*Gadomus introniger*	---
Macrouridae	*Gadomus longifilis*	Treadfin grenadier
Macrouridae	*Gadomus magnifilis*	---
Macrouridae	*Gadomus multifilis*	---
Macrouridae	*Haplomacrourus nudirostris*	Naked snout rattail
Macrouridae	*Hymenocephalus antraeus*	---
Macrouridae	*Hymenocephalus barbatulus*	---
Macrouridae	*Hymenocephalus billsamorum*	---
Macrouridae	*Hymenocephalus gracilis*	Graceful grenadier
Macrouridae	*Hymenocephalus hachijoensis*	---
Macrouridae	*Hymenocephalus heterolepis*	---
Macrouridae	*Hymenocephalus italicus*	Glasshead grenadier
Macrouridae	*Hymenocephalus kuronumai*	---
Macrouridae	*Hymenocephalus lethonemus*	---
Macrouridae	*Hymenocephalus longibarbis*	---
Macrouridae	*Hymenocephalus longiceps*	---
Macrouridae	*Hymenocephalus longipes*	---
Macrouridae	*Hymenocephalus neglectissimus*	---
Macrouridae	*Hymenocephalus papyraceus*	---
Macrouridae	*Hymenocephalus semipellucidus*	---

Macrouridae	*Hymenocephalus striatissimus striatissimus*	---
Macrouridae	*Hymenocephalus striatissimus torvus*	---
Macrouridae	*Hymenocephalus striatulus*	---
Macrouridae	*Hymenocephalus tenuis*	Slender grenadier fish
Macrouridae	*Hyomacrurus hyostomus*	---
Macrouridae	*Idiolophorhynchus andriashevi*	Pineapple rattail
Macrouridae	*Kumba calvifrons*	---
Macrouridae	*Kumba dentoni*	---
Macrouridae	*Kumba gymnorhynchus*	---
Macrouridae	*Kumba hebetate*	---
Macrouridae	*Kumba japonica*	---
Macrouridae	*Kumba maculisquama*	---
Macrouridae	*Kumba punctulata*	---
Macrouridae	*Kuronezumia bubonis*	Bulbous rattail
Macrouridae	*Kuronezumia dara*	---
Macrouridae	*Kuronezumia leonis*	---
Macrouridae	*Kuronezumia macronema*	---
Macrouridae	*Kuronezumia pallida*	---
Macrouridae	*Lepidorhynchus denticulatus*	Thorntooth grenadier
Macrouridae	*Macrouroides inflaticeps*	---
Macrouridae	*Macrourus berglax*	Roughhead grenadier
Macrouridae	*Macrourus carinatus*	Ridge scaled rattail
Macrouridae	*Macrourus holotrachys*	Bigeye grenadier
Macrouridae	*Macrourus whitsoni*	Whitson's grenadier
Macrouridae	*Malacocephalus laevis*	Softhead grenadier
Macrouridae	*Malacocephalus luzonensis*	---

Macrouridae	*Malacocephalus nipponensis*	---
Macrouridae	*Malacocephalus occidentalis*	Western softhead grenadier
Macrouridae	*Malacocephalus okamurai*	---
Macrouridae	*Mataeocephalus acipenserinus*	Sturgeon grenadier
Macrouridae	*Mataeocephalus adustus*	---
Macrouridae	*Mataeocephalus microstomus*	---
Macrouridae	*Mataeocephalus nigrescens*	---
Macrouridae	*Mataeocephalus tenuicauda*	Slendertail grenadier
Macrouridae	*Mesobius antipodum*	Bathypelagic rattail
Macrouridae	*Mesobius berryi*	Berry's grenadier
Macrouridae	*Nezumia aequalis*	Common Atlantic grenadier
Macrouridae	*Nezumia atlantica*	Western Atlantic grenadier
Macrouridae	*Nezumia bairdi*	Marlin-spike grenadier
Macrouridae	*Nezumia brevibarbata*	Shortbeard grenadier
Macrouridae	*Nezumia burragei*	---
Macrouridae	*Nezumia condylura*	Japanese pugnose grenadier
Macrouridae	*Nezumia convergens*	Peruvian grenadier
Macrouridae	*Nezumia Cyrano*	---
Macrouridae	*Nezumia duodecim*	Twelve-rayed grenadier
Macrouridae	*Nezumia holocentra*	---
Macrouridae	*Nezumia infranudis*	---
Macrouridae	*Nezumia kamoharai*	---
Macrouridae	*Nezumia latirostrata*	Broadsnout grenadier
Macrouridae	*Nezumia liolepis*	Smooth grenadier
Macrouridae	*Nezumia longebarbata*	Bluntnose grenadier
Macrouridae	*Nezumia loricata*	Parrot grenadier

Macrouridae	*Nezumia micronychodon*	Smalltooth grenadier
Macrouridae	*Nezumia milleri*	Miller's grenadier
Macrouridae	*Nezumia namatahi*	Squashed face rattail
Macrouridae	*Nezumia obliquata*	---
Macrouridae	*Nezumia orbitalis*	Spectacled grenadier
Macrouridae	*Nezumia parini*	Parin's grenadier
Macrouridae	*Nezumia polylepis*	---
Macrouridae	*Nezumia propinqua*	Aloha grenadier
Macrouridae	*Nezumia proxima*	Short-tail grenadier
Macrouridae	*Nezumia pudens*	Atacama grenadier
Macrouridae	*Nezumia pulchella*	Thumb grenadier
Macrouridae	*Nezumia sclerorhynchus*	Roughtip grenadier
Macrouridae	*Nezumia semiquincunciata*	---
Macrouridae	*Nezumia spinosa*	---
Macrouridae	*Nezumia stelgidolepis*	California grenadier
Macrouridae	*Nezumia suilla*	---
Macrouridae	*Nezumia tinro*	---
Macrouridae	*Nezumia tomiyamai*	---
Macrouridae	*Nezumia umbracincta*	---
Macrouridae	*Nezumia ventralis*	---
Macrouridae	*Odontomacrurus murrayi*	Roundhead grenadier
Macrouridae	*Pseudocetonurus septifer*	---
Macrouridae	*Pseudonezumia cetonuropsis*	---
Macrouridae	*Pseudonezumia flagellicauda*	---
Macrouridae	*Pseudonezumia japonica*	---
Macrouridae	*Sphagemacrurus gibber*	---
Macrouridae	*Sphagemacrurus grenadae*	Pugnose grenadier

Macrouridae	*Sphagemacrurus hirundo*	Swallow grenadier
Macrouridae	*Sphagemacrurus pumiliceps*	---
Macrouridae	*Sphagemacrurus richardi*	---
Macrouridae	*Squalogadus modificatus*	---
Macrouridae	*Trachonurus gagates*	---
Macrouridae	*Trachonurus robinsi*	---
Macrouridae	*Trachonurus sentipellis*	---
Macrouridae	*Trachonurus sulcatus*	Bristly grenadier
Macrouridae	*Trachonurus villosus*	---
Macrouridae	*Trachyrincus helolepis*	Armourhead grenadier
Macrouridae	*Trachyrincus longirostris*	Slender unicorn rattail
Macrouridae	*Trachyrincus murrayi*	Roughnose grenadier
Macrouridae	*Trachyrincus scabrus*	Roughsnout grenadier
Macrouridae	*Trachyrincus villegai*	Grey grenadier
Macrouridae	*Ventrifossa africana*	---
Macrouridae	*Ventrifossa atherodon*	Arrowtooth grenadier
Macrouridae	*Ventrifossa ctenomelas*	Hawaiian grenadier
Macrouridae	*Ventrifossa divergens*	Plainfin grenadier
Macrouridae	*Ventrifossa fusca*	---
Macrouridae	*Ventrifossa garmani*	Sagami grenadier
Macrouridae	*Ventrifossa johnboborum*	---
Macrouridae	*Ventrifossa longibarbata*	---
Macrouridae	*Ventrifossa lucifer*	---
Macrouridae	*Ventrifossa macrodon*	---
Macrouridae	*Ventrifossa macropogon*	Longbeard grenadier
Macrouridae	*Ventrifossa macroptera*	Palau grenadier
Macrouridae	*Ventrifossa misakia*	Misaki grenadier

Macrouridae	*Ventrifossa mucocephalus*	Slimehead grenadier
Macrouridae	*Ventrifossa mystax*	---
Macrouridae	*Ventrifossa nasuta*	Conesnout grenadier
Macrouridae	*Ventrifossa nigrodorsalis*	Spinaker grenadier
Macrouridae	*Ventrifossa nigromaculata*	Blackspotted grenadier
Macrouridae	*Ventrifossa nigromarginata*	---
Macrouridae	*Ventrifossa obtusirostris*	---
Macrouridae	*Ventrifossa ori*	---
Macrouridae	*Ventrifossa petersoni*	Peterson's grenadier
Macrouridae	*Ventrifossa rhipidodorsalis*	---
Macrouridae	*Ventrifossa teres*	---
Melanonidae	*Melanonus gracilis*	Pelagic cod
Melanonidae	*Melanonus zugmayeri*	Arrowtail
Merlucciidae	*Lyconodes argenteus*	---
Merlucciidae	*Lyconus pinnatus*	---
Merlucciidae	*Macruronus brachycolus*	---
Merlucciidae	*Macruronus capensis*	Cape grenadier
Merlucciidae	*Macruronus magellanicus*	Patagonian grenadier
Merlucciidae	*Macruronus novaezelandiae*	Blue grenadier
Merlucciidae	*Merluccius albidus*	Offshore silver hake
Merlucciidae	*Merluccius angustimanus*	Panama hake
Merlucciidae	*Merluccius australis*	Southern hake
Merlucciidae	*Merluccius bilinearis*	Silver hake
Merlucciidae	*Merluccius capensis*	Shallow-water Cape hake
Merlucciidae	*Merluccius gayi gayi*	South Pacific hake
Merlucciidae	*Merluccius gayi peruanus*	Peruvian hake

Merlucciidae	*Merluccius hubbsi*	Argentine hake
Merlucciidae	*Merluccius merluccius*	European hake
Merlucciidae	*Merluccius paradoxus*	Deep-water Cape hake
Merlucciidae	*Merluccius patagonicus*	Patagonian hake
Merlucciidae	*Merluccius polli*	Benguela hake
Merlucciidae	*Merluccius productus*	North Pacific hake
Merlucciidae	*Merluccius senegalensis*	Senegalese hake
Merlucciidae	*Steindachneria argentea*	Luminous hake
Moridae	*Antimora microlepis*	Finescale mora
Moridae	*Antimora rostrata*	Blue antimora
Moridae	*Auchenoceros punctatus*	Ahuru
Moridae	*Austrophycis marginata*	Dwarf codling
Moridae	*Eeyorius hutchinsi*	Tasmanian codling
Moridae	*Eretmophorus kleinenbergi*	---
Moridae	*Gadella brocca*	---
Moridae	*Gadella edelmanni*	---
Moridae	*Gadella imberbis*	Beardless codling
Moridae	*Gadella maraldi*	Gadella
Moridae	*Gadella norops*	---
Moridae	*Gadella thysthlon*	---
Moridae	*Halargyreus johnsonii*	Slender codling
Moridae	*Laemonema barbatulum*	---
Moridae	*Laemonema compressicauda*	---
Moridae	*Laemonema filodorsale*	---
Moridae	*Laemonema globiceps*	Fat-headed cod
Moridae	*Laemonema goodebeanorum*	---
Moridae	*Laemonema gracillipes*	---

Moridae	*Laemonema kongi*	---
Moridae	*Laemonema latifrons*	---
Moridae	*Laemonema laureysi*	Guinean codling
Moridae	*Laemonema longipes*	Longfin codling
Moridae	*Laemonema macronema*	---
Moridae	*Laemonema melanurum*	---
Moridae	*Laemonema modesta*	---
Moridae	*Laemonema multiradiatum*	---
Moridae	*Laemonema nana*	---
Moridae	*Laemonema palauense*	---
Moridae	*Laemonema rhodochir*	---
Moridae	*Laemonema robustum*	---
Moridae	*Laemonema verecundum*	Bighead mora
Moridae	*Laemonema yarrellii*	---
Moridae	*Laemonema yuvto*	---
Moridae	*Lepidion capensis*	---
Moridae	*Lepidion ensiferus*	Patagonian codling
Moridae	*Lepidion eques*	North Atlantic codling
Moridae	*Lepidion guentheri*	---
Moridae	*Lepidion inosimae*	Morid cod
Moridae	*Lepidion lepidion*	Mediterranean codling
Moridae	*Lepidion microcephalus*	Small-headed cod
Moridae	*Lepidion natalensis*	---
Moridae	*Lepidion schmidti*	---
Moridae	*Lotella fernandeziana*	---
Moridae	*Lotella phycis*	Beardie
Moridae	*Lotella rhacina*	Rock cod

Moridae	*Lotella schuetta*	Slender beardy
Moridae	*Lotella tosaensis*	---
Moridae	*Momonatira globosus*	Tadpole cod
Moridae	*Mora moro*	Common mora
Moridae	*Paralaemonema nudicephalum*	---
Moridae	*Paralaemonema nudirostre*	---
Moridae	*Paralaemonema squamirostre*	---
Moridae	*Physiculus capensis*	---
Moridae	*Physiculus dalwigki*	Black codling
Moridae	*Physiculus fulvus*	Hakeling
Moridae	*Physiculus helenaensis*	---
Moridae	*Physiculus hexacytus*	---
Moridae	*Physiculus huloti*	---
Moridae	*Physiculus japonica*	Japanese codling
Moridae	*Physiculus jordani*	---
Moridae	*Physiculus kaupi*	---
Moridae	*Physiculus longifilis*	---
Moridae	*Physiculus luminosus*	Luminesent cod
Moridae	*Physiculus marisrubri*	---
Moridae	*Physiculus natalensis*	---
Moridae	*Physiculus nematopus*	Charcoal mora
Moridae	*Physiculus nigrescens*	---
Moridae	*Physiculus nigripinnis*	---
Moridae	*Physiculus parini*	---
Moridae	*Physiculus peregrinus*	---
Moridae	*Physiculus rastrelliger*	Hundred fathom mora
Moridae	*Physiculus rhodopinnis*	---

Moridae	*Physiculus roseus*	---
Moridae	*Physiculus sazonovi*	---
Moridae	*Physiculus talarae*	Peruvian mora
Moridae	*Physiculus therosideros*	---
Moridae	*Physiculus yoshidae*	---
Moridae	*Pseudophycis bachus*	Red codling
Moridae	*Pseudophycis barbata*	Southern bastard codling
Moridae	*Pseudophycis breviuscula*	Northern bastard codling
Moridae	*Rhynchogadus hepaticus*	---
Moridae	*Salilota australis*	Tadpole codling
Moridae	*Svetovidovia lucullus*	---
Moridae	*Tripterophycis gilchristi*	Grenadier cod
Moridae	*Tripterophycis svetovidovi*	---
Muraenolepididae	*Muraenolepis marmoratus*	Marbled moray cod
Muraenolepididae	*Muraenolepis microcephalus*	Smallhead moray cod
Muraenolepididae	*Muraenolepis microps*	Smalleye moray cod
Muraenolepididae	*Muraenolepis orangiensis*	Patagonian moray cod

ii 資料來源：糧農組織及 FishBase
Sources: FAO Aquatic Sciences and Fisheries Information System Species List; FishBase

國際間在處理"油魚"方面的不同做法

Different International Practices in Handling "Oilfish"

國家／地區 **Country/Area**	做法 **Practice**
美國 United States	沒有禁售，建議業界避免進口及進行州內／跨州買賣。 No ban. The trade is recommended to avoid import and intrastate/interstate sale.
歐洲聯盟 European Union	沒有禁售，出售蛇鯖科魚製品時，須符合下列規定： (i) 只可透過已包裝形式在市場上出售； (ii) 必須加上適當標籤，向消費者提供有關配製／烹調方法的資料； (iii) 必須標示魚類含有可造成腸胃不適物質的風險；以及 (iv) 標籤必須附上學名及俗名。 No ban. The fishery products belonging to the Gempylidae family should be subject to marketing conditions: (i) may only be placed on the market in wrapped/packaged form; (ii) must be appropriately labelled to provide information to the consumer on preparation/cooking methods; (iii) must label the risk related to the presence of substances with adverse gastrointestinal effects; and (iv) the scientific name must accompany the common name on the label.

加拿大 Canada	沒有禁售，建議 (i) 選擇較小分量；以及 (ii) 採用能去掉部分魚油的方法(例如烤)配製，盡量減少潛在的健康影響。 No ban. Recommend (i) choosing smaller portion sizes; and (ii) preparing in such a way that some of the oil is removed (e.g. grilling) to minimise the potential health effects.
澳洲 (昆士蘭省政府) Australia (Queensland Government)	沒有禁售，強烈建議不要以油魚入饌。 No ban. Strongly recommend not to be used for catering purposes.
新西蘭 New Zealand	沒有禁售，建議業界不要提供連皮的油魚，供顧客食用，食肆應告知顧客有關的健康風險。 No ban. Not recommended to serve with the skin on in commercial settings. Food operators should advise their customers of the associated health risk.
新加坡 Singapore	沒有禁售，指令食物業界正確標示兩種魚類，並建議採用烤的方法烹調，以減少當中的油分。 No ban. Instruct food traders to correctly label the two fish species and suggest grilling to reduce some of their oil content.
日本 Japan	禁止售賣及進口。 Ban sale and import.
意大利 Italy	禁止售賣及進口。 Ban sale and import.