出國報告(出國類別：其他)

參加「聯合國糧農組織(FAO)漁業委員會(COFI)魚產品貿易次委員會第14屆會議」報告

服務機關：行政院農業委員會漁業署
姓名職稱：吳維勳　研究員
派赴國家：挪威卑爾根
出國期間：103 年 2 月 23 日至 3 月 2 日
報告日期：103 年 4 月 30 日

參加「聯合國糧農組織(FAO)漁業委員會(COFI)魚產品貿易次委員會第 14 屆會議」報告

摘要

由於聯合國糧農組織(FAO)漁業委員會(COFI)爲全球漁業政策及管理之主導機構，此次其漁產品次委員會(FT)以漁產品貿易、生態標籤及水產品價值鏈等爲主軸於本(103)年 2 月 24 日至 28 日假挪威卑爾根 Radisson Blu Royal Hotel 開會研擬各項政策及建議，爲掌握水產品市場趨勢及聯合國糧農組織之相關訊息，奉派以國際漁業團體聯盟(ICFA)會員名義出席該會議。

本次會議主席由挪威籍 Ms Astrid Holtan 擔任，會議主要討論議題爲：1.FAO 水產品貿易相關活動 2.FAO 策略目標 3.水產品貿易與人類營養 4.水產品貿易近期發展情況 5.生態標籤計畫對漁業所產生的影響 6.可追溯性最佳實踐準則 7.漁獲文件制度 8.審議市場進入要求 9.小規模漁業及其對生計永續的貢獻 10.與 CITES 相關活動最新進展 11.監督對「FAO 負責任漁業行爲準則」第 11 條的落實工作。會議內容及紀錄內容摘要如下：

一、 依據大會秘書處說明之目前全球漁業概況如下：

2013 年全球漁業產量預計爲 1.6 億噸，其中水產養殖產量約爲 7,000 萬噸，漁撈部分約 9,020 萬噸。FAO 預測 2022 年產量將達到 1,81 億噸左右，所增加的產量主要來自養殖，增加約 35%，漁撈部分約只增加 5%。2013 年平均每人每年食魚量爲 19.7 公斤。水產品提供的人類蛋白質約占動物性蛋白質的 17%，佔全部蛋白質的 6.5%。2013 年全球的水產品國際貿易出口值約爲 1,322 億美元。最大出口國家爲中國，出口值約爲 198 億美元。挪威爲第二大出口國，接下來爲泰國及越南。歐盟爲世界最大進口單一市場，2013 年進口 260 億美元)，第二、三名爲美國、日本。魚價部分，如以 2002-2004 年爲基期 100，則魚價至 2011 年 3 月達到最高爲 157，接著往下降，至 2012-2013 年間魚價保持在 140 以上高位。生產的水產品中約 40%進入國際市場，包括區域性貿易。水產品貿易對發展中國家相當重要，有部分發展中國家水產品出口占其總出口值的 50%，而在區域性貿易中因貿易障礙而使得水產品貿易未發揮其潛能。

二、FAO 修訂五大策略目標，做爲 FAO 未來各項措施的評估指標，目標內容爲：

(一) 爲消除飢餓、糧食不足和營養不良做出貢獻。

(二) 以永續的方式能增加及促進農業、林業及漁業的產品供給及服務。

(三) 減少農村貧困。

(四) 能促使建立地方、國家及國際等各個等級更具包容性、更有效率的農業及糧食系統。

(五) 增強生計面對威脅和危機的回復力。另外有一項獨立目標爲目標 6.技術品質、知識及服務。

(六) 以及兩項跨領域的主題：性別及管理。

三、會議通過之會議紀錄內容摘要如下：

(一) 爲發展中國家開展能力建設，請 FAO 繼續提供技術援助，推動市場進入、

附加價值、捕撈後及食品安全工作。

(二) 注意到認證和生態標籤計畫日益增加的作用，可能帶來額外的負擔和費用。

(三) 支持 FAO 繼續與 WCO 合作改進 HS 制度使其更加精準，監測的魚種如鯊魚和鰩魚的詳細分類，以及在貿易數據中區分養殖和野生品種。

(四) 歡迎 FAO 建立新的策略目標。一些成員歡迎 FAO 爲支持糧食安全、減輕貧困及永續水產資源管理而提出的「全球藍色成長倡議」，及其與里約+20 承諾。

(五) 鼓勵 FAO 幫助成員國努力增加水產品消費，促進水產品消費應盡可能與地方習慣、當地可獲品種及所需營養相配合。

(六) 一些成員建議，傳遞與海產品消費相關的風險信息時，應始終平衡的提供其與健康有利的訊息。

(七) 需要加強對魚粉和魚油替代物的研究，以提供更多水產品給人消費，並通過減少魚獲後損失，改進副產品利用和保留雜魚以增加水產品供給。

(八) FAO 有必要繼續監測並分析國際水產品貿易及有關供應、需求、價格和消費領域的發展情況。幫助發展中國家和小規模漁業部門更公平參與區域和國際貿易。

(九) 進口國越來越嚴格的進口要求所帶來的挑戰，許多發展中國家仍然需要能力建設及技術援助才能符合需求。

(十) 應在 WTO 規則下建立一個透明、健全和協調一致的貿易體系。小規模漁業及養殖漁民在價值鏈的利益分配比例小。

(十一) 許多成員強調，任何單邊市場措施均須符合 WTO 規範。

(十二) 一些成員對所有漁業補貼表示關切，請 FAO 向 WTO 提供有關漁業補貼談判的專門技術知識。另外一些成員要求繼續漁業補貼以加強其能力建構和水產品貿易生產。

(十三) 次委會承認 FAO 海洋和內陸捕撈漁業水產品生態標籤準則在永續漁業管理方面的作用，一些成員指出需要繼續改進，一些成員表示對亞熱帶和熱帶沿海小規模漁業管理有益處。

(十四) 次委會關切生態標籤計畫可能形成貿易限制和造成成本上漲。需要深入研究生態標籤對漁業永續性和生產者經濟收益的影響。

(十五) 可追溯性最佳實踐準則方面，建議未來在此領域展開的工作應注重在水產品的合法性。許多成員建議秘書處召集一次專家磋商會議。

(十六) 漁獲文件計畫應用以下原則：(一)符合相關國際法的規定；(二)不對貿易設置不必要的障礙；(三)等同性；(四)將風險評估列入考量；(五)可靠、簡潔、明確、透明；(六)可能時採用電子形式。

(十七) 支持 FAO 繼續與 WHO 及處理水產品相關問題的食品安全標準委員會密切合作。以及支持 FAO 與 WHO 爲雙殼貝類衛生制定技術準則。

(十八) 次委會制定「糧食安全和消除貧困背景下保障可持續小規模漁業自願性準則」，預期於 2014 年 6 月份 COFI 委員會議期間得到批准後實施，以及實

施「國家糧食安全範圍內土地、漁業和森林權責責任制治理自願性準則」的重要性。

(十九) 許多成員指出 FAO、RFMO 和沿海國爲管理商業開發水生物種的適當機構，因此 CITES 不是漁業管理的替代品。另鼓勵 FAO 繼續努力爲列入 CITES 的物種，如粉鳳螺和鱘科等提供技術諮詢。以及支持 WCO 在 2017 年版 HS 制度分類中詳細制定鯊魚、鰩魚、魟魚的具體編碼。

(二十) 請各會員國查報對「FAO 負責任漁業行爲守則」第 11 條的落實工作問卷以提高問卷回收率。

結論與建議：

(一) 以上會議通過之紀錄內容將提報 COFI 於本(2014)年 6 月間在羅馬召開之會議，經討論通過後據以實施。

(二) 未來需持續關注 FAO 相關活動部分，建議爲有關生態標籤及可追溯性準則、2017HS 制度的編制、藍色增長、漁業補貼、相關水產品衛生準則制定、漁獲文件及市場進入以及納入 CITES 附錄等事項。

關鍵詞：聯合國糧農組織、漁業委員會、漁產品貿易次委員會、五大策略目標、可追溯性、漁業補貼。

參加「聯合國糧農組織(FAO)漁業委員會(COFI)魚產品貿易次委員會第 14 屆會議」報告

目次

參加「聯合國糧農組織(FAO)漁業委員會(COFI)魚產品貿易次委員會第 14 屆會議」報告

壹、目的

聯合國糧農組織（FAO）漁業委員會（COFI）魚產品貿易次委員會（FT）由 COFI 第 16 屆會議（1985 年）按照該組織總規則第 XXX 條第 10 款以及 COFI 議事規則第 VII 條設立。本次委員會之成員爲 FAO 所有成員國。非 FAO 成員但爲聯合國或其任何專門機構或國際原子能機構成員的國家可由 FAO 理事會接納爲次委員會成員。1986 年 10 月舉行第 1 屆 FAO COFI TI 會議。魚產品貿易次委員會之主要職責範圍：應爲魚和漁業產品國際貿易的技術和經濟方面，包括生產和消費的有關方面的磋商提供論壇。次委員會的工作包括：

一、 定期審查主要漁業產品市場的形勢及前景，包括影響它們的所有因素；

二、 根據特別研究，討論魚產品貿易的具體問題及可能的解決方法；

三、 討論促進國際魚及漁業產品貿易的適當措施，並爲加強發展中國家參與這一貿易，包括與貿易有關的服務提出建議；

四、 與糧農組織／世界衛生組織食品法典委員會一起爲促進國際品質標準和協調統一品質管制及檢驗程式和法規提出建議；

五、 爲經濟上可行的漁業產品開發進行磋商和提出建議，包括加工方法、產品升級以及發展中國家的最終產品生產。

貳、會議過程及結果

本次會議會場設於 Radisson Blu Royal Hotel，主席由挪威籍 Ms Astrid Holtan 擔任，會議主要討論議題爲：1.FAO 水產品貿易相關活動 2.FAO 策略目標 3.水產品貿易與人類營養 4.水產品貿易近期發展情況 5.生態標籤計畫對漁業所產生的影響 6.可追溯性最佳實踐準則 7.漁獲文件制度 8.審議市場進入要求 9.小規模漁業及其對生計永續的貢獻 10.與 CITES 相關活動最新進展 11.監督對「FAO 負責任漁業行爲準則」第 11 條的落實工作。會議內容及通過之紀錄內容摘要如下：

2 月 24 日

一、議程 1：會議開幕

上午 9:30 時開會，由挪威漁業部部長以主辦國立場致詞，本次會議主席由挪威籍 Ms Astrid Holtan 擔任，於主席宣布會議開始後由秘書處宣讀議程，於會員國無異議後即進行議程 4.糧農組織水產品貿易相關活動報告議題討論。

首先由秘書處說明本議程之討論內容，本議題的主要內容爲由於水產品貿易相當普遍，生產的水產品中約 40%進入國際市場，包括區域性貿易。水產品貿易對發展中國家相當重要，有部分發展中國家水產品出口占其總出口值的 50%，而在區域性貿易中因貿易障礙而使得水產品貿易未發揮其潛能。

FAO 爲因應 2014 年開始實施新的策略架構，對於糧食安全、資源管理及食品商品等相關問題上採取更加綜合的處理方式，因此 FAO 於 2012 至 2013 兩年中與其他國家或國際組織進行一連串的合作。其中與架構制度面有關的重要活動摘要如下：

(一) 2014 至 2015 兩年度內，FAO 將在「非洲發展新夥伴關係─糧農組織聯合養魚計畫(NFFP)」項下實施一個吳郭魚計畫，展開案例研究評估撒哈拉沙漠以南非洲地區吳郭魚養殖主要國家(如烏干達、肯尼亞、迦納及尼日利亞)和其他地區標竿國家(如中國、埃及及巴西)的經濟社會成效，並分析來自亞洲的進口給非洲當地市場帶來的競爭壓力。

(二) 2012 至 2013 兩年間與挪威漁業部、斯塔萬格大學及祕魯天主教大學合作發展出魚價指數，以便比較不同市場的魚價情形做爲漁業貿易推展的有效工具。

(三) 因應會員國要求 FAO 在生態環保認證及標籤給予援助，FAO 受邀參與「全球水產品永續性措施」的標準制定相關工作，以確保發展中國家的關切及利益能得到尊重。

(四) 2013 年底 FAO 應會員國對於可追溯性、生產可持續性及原產地相關的可追溯性要求，邀請企業方、標準制定方、認證方及零售商舉辦一次研討會。

(五) 2012 年 7 月 FAO 參加在達拉斯薩拉姆舉辦的國際漁業經濟貿易學會大會，其中舉辦了一次有關小型漁業價值鏈的特別會議。

(六) FAO 自 2011 起與國際多個機構合作出版「2020 年漁業展望」，並修改該系統於 2013 年出版「2030 年漁業展望：漁業及水產養殖業前景」對全球 2030 全球水產品供需情況做了預測，對未來糧食生產發展提出更多經濟觀點。

(七) FAO 預定於 2014 年 4 月與經合組織及世界銀行在巴黎召開一次有關政策連貫性會議，會議將涉及有關區域漁業管理組織、IUU 漁捕、枯竭漁業資源的治理及恢復等議題。

(八) 於非洲舉辦減少捕撈後損失的多項措施，該措施以非洲爲起點，將根據資金籌措情形將範圍擴大至亞洲(印度、緬甸、泰國、越南)及其他地區。

(九) FAO 與水產品訊息中心(FIN)及水產品市場訊息中心(GLOBEFISH)合作發展和分析國際水產品銷售及貿易方面的訊息。

(十) FAO 與聯合國統計司合作修訂「產品總分類(CPC)」及「環境經濟綜合核算系統(SEEA)」,2013 年 3 月聯合國統計司將「環境經濟綜合核算系統(SEEA)」的核心架構定爲監測自然資源可永續利用的情況的全球指標。

(十一) FAO 與世界海關組織(WCO)合作修訂「商品名稱及編碼協調制度(HS)」,2012 年版已於 2012 年 1 月 1 日生效,現正繼續修訂 2017 年版,該版將於 2017 年 1 月 1 日生效。該新版 HS 將針對糧食安全、改善資源管理需要監測的魚類及水產品物種或產品型態進行調整,特別是包括鯊魚、鰩魚、魟魚在內的瀕臨枯竭的物種。

接著開放由各會員國表示意見討論,由孟加拉針對此議題開始發言,大部分的國家發言內容主要肯定 FAO 秘書處此份文件內容,一些落後或開發中國家則說明其國內之困難情況,希望 FAO 或已開發國家給予支援,謹摘要幾個比較重要的發言國家內容:

(一) 紐西蘭對於前述 4.有關 2013 年底 FAO 邀請企業方、標準制定方、認證方及零售商舉辦的研討會,表示並未獲通知參與,請秘書處說明,該發言有幾個國家附和。對於 2030 全球水產品供需情況的預測,請秘書處說明預測內容。

(二) 美國關注前述 10.有關 HS 修訂對於軟骨魚類的管理,美國表示鯊魚已高度開發,國際漁業組織已對其進行管理,希望 FAO 對鯊魚進行管制,包括黑鯊(BLUE SHARK),並希望在 HS2017 年版修訂時,完成對鯊魚的管制。該發言得到加拿大及其他幾個國家的附和。

(三) 挪威希望 FAO 與 WCO 的合作能分辨養殖及野生水產品,並將國際漁業組織的管理基準納入該 HS 分類基準,以打擊 IUU 漁捕活動,請 FAO 應對促進合作提出方法。有關將漁撈與養殖水產品分開的發言得到印尼及其他幾個國家的附和。

(四) 中國發言強調打擊 IUU 漁捕活動的議題應重視,另對於已開發國家有良好的食品安全規範希望能提供合作。

(五) 泰國發言表示重視水產品認證的問題,其國內已有相關的認證計畫,希望 FAO 協助發展中國家處理該項問題,以消除貿易障礙。

(六) 另外其他幾個國家如阿根廷、越南、摩洛哥希望 FAO 以基準制定者的角色介入指導國際漁業組織的政策決定,而不是去接受國際漁業組織的決定。

(七) 觀察員發言部分,ICFA 提出 3 點說明,1.強調生態標籤制度的完成需各國合作,因此 FAO 的參與爲不可或缺。2.野生水產品對國際糧食安全保障相當重要,應管理及利用並進。3.新版 HS 對幾個主要鯊魚的管理有需要,但產品的判別有困難。

最後主席表示魚價指數、訊息網路中心的完成感謝與 WCO 及與 WTO 合作的國家。另涉及鯊魚捕撈的標準以納入 CITES 的名單，請各會員國落實 CITES 規定。並請秘書處回答各國發言，秘書處表示：

(一)對於鯊魚品種認定及 HS 有關分辨養殖或野生的修訂問題，將交與主辦同仁與相關單位加強聯繫。

(二)有關貿易障礙的問題會在往後相關議題內再討論。

(三)有關 2013 年底的研討會爲非正式但很有成果的會議，請各國支持。

(四)IUU 漁捕問題爲各國重視的議題，將繼續討論。

(五)FAO 改革進程中各策略目標(Strategic Objectives)的角色。首先由秘書處說明會議資料所列的 FAO 五大策略目標，將做爲 FAO 未來各項措施的評估指標，目標內容爲：

1. 爲消除飢餓、糧食不足和營養不良做出貢獻。
2. 以永續的方式能增加及促進農業、林業及漁業的產品供給及服務。
3. 減少農村貧困。
4. 能促使建立地方、國家及國際等各個等級更具包容性、更有效率的農業及糧食系統。
5. 增強生計面對威脅和危機的回復力。
6. 另外有一項獨立目標爲目標：技術品質、知識及服務。以及兩項跨領域的主題：性別及管理。接著主席即請各會員國表示意見。

智利首先發言表示請秘書室說明(最好以文件說明)制訂該目表的背景，以便更深確的了解如何將目標變成事實。

加拿大表示支持新的策略目標，但應將活動、措施與目標連結。

紐西蘭表示同意加拿大應將活動、措施與目標連結的建議，另外應該建立完成的效率評估參數，尤其漁業部門的特殊性，與農業其他部門不同，針對漁業部門有特別的行動計畫及訂定參數。

美國表示支持要有策略目表，並建議支持藍色增長目標，下階段須落實目標至各個計劃及活動，同時更考慮各種漁業的不同特性，如養殖與漁撈等依據不同的特性，分別將過去的計畫與目標連接，並展望未來的工作，同時同意建立參數指標以考評績效。

日本表示支持策略目標，並表示 FAO 對漁業的關注不足，應針對漁撈及養殖

有特定的計畫。

其他國家發言大致支持該策略目標，最後秘書處說明，五大目標爲 FAO 的改革事項，且五大目標沒有順序，第 6 目標及兩項跨領域主題因爲爲跨領域事項，事實上比五大目標更爲宏觀，謝謝會員國的支持，主席接著結束本議題。

二、議題 6：水產品貿易與人類營養

秘書處引言說明漁業和水產養殖在營養、糧食安全和生計的貢獻，尤其水產品對於提供人蛋白質來源的重要性。目前大約有 5 千 6 百萬人直接從事漁業，漁業和水產養殖部門維持著大約 6.6 億至 8.8 億人口的生計，約占全球總人口的 12%。約漁業和水產養殖總產量的 40%進入國際市場，年出口額約 1,300 億美元，水產品的貿易是許多國家的重要收入來源。秘書處另外說明水產品的營養性爲人類不可或缺。接著由各會員國發言。

各會員國主要發言內容可歸納爲以下幾類：

(一) 肯定水產品對人類營養提供的重要性，但宣導不足，導致部分地區消費不足，影響健康，請 FAO 應加強宣導。

(二) 由於沿岸小規模漁業對於當地糧食安全有重要貢獻，FAO 應支持沿岸小規模漁業的發展。

(三) 部分落後國家生產的水產品大部分出口，導致當地落後地區民眾無法取得足夠的水產品消費，以致營養不良，請 FAO 重視此問題，應減少落後地區水產品的出口。

(四) 漁獲後損失的問題嚴重，請 FAO 加強研究及支持，以降低相關國家的漁獲後損失。

另外日本發言表示水產品消費的利益大於風險，FAO 應強調消費利益不應強調風險，在傳遞消費風險時仍應強調消費利益，另外海藻亦應納入計畫的水產品範圍。

中國發言表示，魚爲優質糧食的一種，在糧食安全與就業方面有貢獻，尤其對於發展中國家更爲重要，但發展中國家漁業爲弱勢產業，應進行補貼，但 WTO 就漁業補貼的議題各國意見差異大難以達成協議，因此請 FAO 發揮功能解決此問題。

日本及中國發言沒有其他國家附和。

主席因時間關係於下午 5 時結束此議題，完成 24 日下午的議程。

2 月 25 日

上午 9:00 時開始。依據原議程進度，議程 7 應於 24 日完成討論，但因前面議程拖延，該議程改於 25 日上午討論。

三、議程 7.水產品貿易近期發展情況

首先由秘書處引言簡介會議資料，秘書處說明 2013 年全球漁業產量將創新高，預計爲 1.6 億噸，其中水產養殖產量約爲 7,000 萬噸，漁撈部分約 9,020 萬噸。依據 FAO 預測 2022 年產量將達到 1,81 億噸左右，所增加的產量主要來自養殖，增加約 35%，漁撈部分約只增加 5%。2013 年平均每人每年食魚量爲 19.7 公斤。水產品提供的人類蛋白質約占動物性蛋白質的 17%，佔全部蛋白質的 6.5%。

貿易部分，2013 年全球的水產品國際貿易出口值約爲 1,322 億美元。最大出口國家爲中國，出口值約爲 198 億美元。挪威爲第二大出口國，接下來爲泰國及越南。歐盟爲世界最大進口單一市場，2013 年進口 260 億美元)，第二、三名爲美國、日本。

魚價部分，如以 2002-2004 年爲基期 100，則魚價至 2011 年 3 月達到最高爲 157，接著往下降，至 2012-2013 年間魚價保持在 140 以上高位。

FAO 於 2009~2012 年對國際水產貿易進行了一項全面性的價值鏈分析，名稱爲「價值鏈動態、小型漁業與糧食安全：國際水產品貿易政策建議」，研究對象包括孟加拉、柬埔寨、迦納、宏都拉斯、肯尼亞、馬爾地夫、祕魯、泰國和烏干達等九個發展中國家，同時包括加拿大、冰島、日本、挪威和西班牙等五個已開發國家。案例研究結果顯示，漁民或水產養殖業者獲得的產品利益分配最少，加工商和零售商獲得的利益最多，原因爲其市場結構比較集中，購買力較強，同時發展中國家水產品供應商向已開發國家提供其寶貴的自然資源水產品原材料，但從中獲得的利益分配有限，也就是主要的利益分配爲已開發國家的中間商及零售商。

接著由各會員國進行討論。各會員國針對本議題的討論方式爲先說明自己國內的情形，再說明問題所在。

歐盟首先發言，其表示歐盟有共同漁業及市場政策，以分享成員國更多價值鏈的訊息，歐盟南部國家消費以生鮮水產品爲主，北部以冷凍產品爲主，挪威爲歐盟消費鮭魚的主要提供國，中國則爲提供歐盟野生加工水產品主要國家。歐盟關切 FAO 2011~2012 價值鏈的分析，因此歐盟也有相關措施提供給開發中國家補助。歐盟承諾繼續促進漁業的發展，並繼續支持 FAO 的工作，請 FAO 與相關業者繼續溝通並進行研究，以便有效管理該工作。

挪威發言表示，水產品出口對開發中國家很重要，請 FAO 繼續展開相關工作，以便協助開發中國家。另會議資料 32、33 段提到 2005 年以來魚粉、魚油產量持續下降的情形，挪威的數據也有同樣情形，若此趨勢繼續，情況將更差，請 FAO 再深入研究。

冰島發言表示其國家面臨北大西洋及北冰洋，兩區的漁民對於溪遵行的行爲守則意見有差異。而冰島爲事件主要水產品出口國之一，進口國單方面市場措施

對出口國不公平，應以更透明方式，以符合 WTO 的規範，並請秘書處將此意見納入記錄。

阿根廷接著發言附和冰島意見，表示會議資料多處顯示水產品出口面臨貿易障礙，FAO 應關注此事項並展現更大的功能減少貿易障礙。而會議資料第 38 段有關影響國際貿易的水產品貿易問題中，沒有提到漁業補貼對水產品貿易的影響，請補充。

之後美國、紐西蘭發言支持冰島意見，但美國另關注 FAO 與 OECD 的合作，而紐西蘭則關注已開發國家對其漁場開放的要求。

之後其他國家的發言則大部分支持冰島及紐西蘭的意見，反對市場進口國採行單方面市場措施，以及希望對沿岸小規模漁業給予市場進入特別待遇及輔導其進入市場及價值鏈。

中國發言表示三點意見，1.中國 2012 年水產品貿易值 271 億美元，其中出口 189 億美元、進口 82 億美元。2.其國內對於水產品貿易面臨的問題爲(i)國際市場進口需求下降(ii)國內人工成本增加，因此預計 2014 年中國水產品出口量將小幅下降，但出口值因美元貶值仍將小幅上升。3.面臨人工成本增加及材料價格上漲等困難，中國政府將採行精深水產品加工，促進轉型，提供水產品附加價值等策略。

日本發言提到漁業補貼的問題，表示補貼應該區分好壞，應禁止導致貿易扭曲的補貼，另外補貼將導致過度開發，在 WTO 已注意到此問題，FAO 應注意此問題，應取消會增加捕撈活動的補貼，但同意改善沿岸小規模漁業的補貼。日本同意反對單邊措施，但 ICCAT 等多邊組織的措施與單邊措施不同，應不同對待。

阿根廷也針對補貼問題表示，WTO 的 DOHA 回合談判還沒結束，現在還可以談漁業補貼的問題，請 FAO 進行必要的干預。

之間其他國家的發言主要針對其國內特殊情形，請求 FAO 協助。歐盟最後在發言表示支持日本有關補貼的意見。

之後主席請秘書處總結，秘書處表示，各會員國已說明各國的情形以及討論的問題，秘書處總結下列幾點：

1. 爲公平貿易，國際市場要保證透明，另外提到公平待遇的問題及單方面市場措施的問題。

2. 有關小規模漁業能力建構的問題秘書處已了解。

3. 會議資料 38~42 段不夠全面性的問題，留供秘書處改進。

4. 漁業補貼的問題將再行討論。

5. 秘書處將再處理數據釐清的問題。

主席即結束此議題，並結束上午的議程進入下個議題。

四、議程 8.生態標籤計畫對漁業所產生的影響報告

秘書處引言報告表示，由於漁產品貿易分委員會第十三屆會議提交一份草案，評估官方和私營生態標籤計畫與「FAO 海洋和內陸捕撈漁業水產品生態標籤準則」的一致性。COFI FT 最後認爲應就各種生態標籤計畫對漁業管理和經濟收益的影響進行討論。因此在獨立顧問的協助下調查了官方與私營標籤的採用對漁產品產生的影響，亦即採用標籤是否有價格的利益。

FAO 因此調查 25 生態標籤，調查結果有兩項標籤申明係利用 FAO 的準則來制定其基準，另有兩項說明了不利用 FAO 準則的理由，其理由爲 1.因 FAO 準則沒有爲基準制定標準的明確目標，2.不明確或沒有提出績效措施，會有各種不同解讀，3.所設內容必須廣泛才能符合成員國各種不同作業條件。

生態標籤對漁業收益情形，調查結果顯示有些有溢價效果，有些沒有，對這些產品而言生態標籤可能的效益爲市場進入，而非溢價效果。

另 FAO 於 2013 年 12 月項技術委員會 TC234 年會提交一份關於制定生態標籤標準的提案，該提案旨在制定國際標準化組織可持續海洋漁業產品認證最低要求，該提案所涉主題包括環境、經濟和社會方面及產品品質。

FAO 與 WTO 的聯繫方面，WTO 及環境委員會請 FAO 在 2013 年 6 月該委員會會議上介紹自願認證計畫情況及其對於國際海產品的影響。該委員會對於普遍採用海產品生態標籤表示關切。

隨著生態標籤數量的增長可能影響市場進入，這可能影響到發展中國家和小規模漁民。

於秘書處報告後主席請各會員國發言。

歐盟首先發言表示支持 FAO 有關生態標籤的工作，有最低的標準可以落實未來的標準製作。

阿根廷表示 FAO 應對私營標籤進行統一的計畫，私營標籤須符合 WTO 標準以避免造成貿易障礙。並且鼓勵 FAO 與 WTO 合作分享經驗。

中國發言表示依據 FAO 的研究，全球漁業資源 70%已達飽和狀態，因此提出生態標籤的作法，以便對資源做有效的管理，但有些國家實施此制度並不成熟，所以應考慮生態標籤對發展中國家的影響，避免造成市場進入障礙，建議 FAO 先進行小規模試驗，以找出問題改進，才能發展出良好的生態標籤制度。

其他國家的發言主要內容爲：

(一)生態標籤的實施不能造成市場進入的障礙，並應考慮使用成本。

(二)支持生態標籤及準則以打擊 IUU 漁捕活動。

(三)生態標籤應有科學依據，其實施不能影響小規模漁業的發展及市場進入。

(四)支持 FAO 對生態標籤進行審查，並制定審查機制。

(五)請 FAO 與其他組織合作，統一或協調統一準則，並應考慮到開發中國家的困難。

最後由秘書處總結及說明下一步驟的方法：

1. 大家希望 FAO 繼續探討此議題，特別是與其他組織合作探討，FAO 會繼續處理，進一步減少生態標籤的負面影響，研究管理體系，並特別考量熱帶魚類的特殊性。

2. 有些生態標籤沒有符合 FAO 準則，係因爲生態標籤目前無須經 FAO 批准，特此說明。

3. 將代表會員國利益、小規模漁業及發展中國家的利益說話。

五、議程 9.1 可追溯性最佳實踐準則

由於第 13 屆 COFI FT 會議對由 FAO 負責起草的可追溯性最佳實踐準則提出指導意見：委員會強調這項工作應包括對最佳實踐和現有標準進行彙編及分析，以實現可追溯性的不同目的，且以下原則應爲分析工作提供架構：(1)不會對貿易造成不必要的障礙；(2)等效性；(3)以風險爲基礎；(4)可靠、簡便、清晰、透明。所以秘書處聘請顧問編寫一份「現行可追溯性實踐方法綜述與分析」文件 (COFI/FT/XIV/2014/inf.6) 提交次委員會進行討論。

主席請會員國表示意見後由阿根廷首先發言，阿根廷表示第 13 屆 COFI FT 會議提出的指導意見係要求秘書處對可溯性最佳實踐的可行性和現有標準進行彙編及分析，並無同意秘書處於 14 屆提交此草案，並以提交之草案作爲討論基礎。而表示秘書處並不符合職權範圍。

之後雖然加拿大及美國表示支持秘書處提交的草案進行討論，並提供對草案內容的修正觀點，但接著智利、烏拉圭、巴西、泰國等幾個發展中國家附和阿根廷的意見，並建議先將該草案提交專家磋商後再行討論，日本表示同意先進行專家磋商，並願意提供經費支持此項工作。因此最後本草案未進入實質討論，主席裁示討論下個議案。

六、議程 9.2 漁獲文件制度

由於聯合國第 68 屆大會於 2013 年 12 月 9 日通過一份永續漁業文件第 67、68 段文字，請 FAO 盡快完成有關漁獲文件制度的最佳實踐準則及可能的格式，因此修改原議程，納入本議程，沒有提供會議文件，請各會員國就所需表示意見。

首先由挪威發言表示，漁獲文件爲良好的漁業資源管理方法，漁獲文件不應對港口國造成負擔，應建立單一文件，由於聯合國決議要有可能格式，挪威支持最佳可追溯性文件，而不是準則的替代文件，挪威建議文件應：1.不能造成障礙 2.具有有效性、可靠性、透明性 3.以電子文件方式展現，另外挪威表示可題供預算外資金以進行專家磋商。

歐盟建議先進行技術磋商，同意挪威的意見且文件要有簡潔的內容。孟加拉支持文件應經認證以打擊 IUU 漁捕活動，建議經由顧問分析作爲磋商的基礎。

2 月 26 日

七、續 25 日未完成的議程：9.2 請會員國繼續發言。

印尼首先發言表示支持漁獲紀錄制度，請 FAO 依據其他漁業組織之格式與 WTO 協商展開工作，但需考慮部分成員國非 WTO 會員的問題。

斯里蘭卡表示其國內有 3,000 多艘船長未滿 3 米的小船捕撈鮪魚，將在 2014 年底投入 8,000 萬歐元辦理漁船監測計畫以打擊 IUU 漁捕，請 FAO 提供協助其對漁業文件建構的能力。

紐西蘭表示漁業文件應統一，不要有太多文件，支持聯大的決議，支持挪威的意見，並支持進行專家磋商。

美國表示漁獲文件制度爲打擊 IUU 的手段之一，還有其他打擊 IUU 的手段，因此不應該太複雜而影響到貿易，並支持專家磋商。

阿根廷表示應釐清各漁業管理組織的責任。

冰島表示支持美國發言，有關海域管理應尊重區域組織的意見，因爲 2014 年工作已排定，建議專家磋商於 2015 年初舉辦。

之後其他的國家包括日本發言內容均支持挪威的意見，因此主席裁示，各會員國均同意挪威的意見，最後由秘書處總結表示，同意辦理專家磋商及差距分析，FAO 將先辦理差距分析再進行專家磋商，但文件不能造成貿易障礙，不是基準，係基於查核需要時提供，本議題將於 6 月份會議上繼續討論。而結束本議程。

八、議程 10.審議市場進入要求

秘書處說明，由於 FT 次委會第 13 屆會議審查國際漁業市場進入方面的最新進展時強調，FAO 應向發展中國家的小規模漁業和水產養殖業提供技術援助，以改善其產品市場進入，因 FT 請 FAO 確保璇船有關水產品安全問題的科學資訊，推廣食典準則，讓消費者有能力做出知情的決定。

COFI 第 13 屆會議通過 FT 的建議，所以秘書處提出本份文件，文件主要內容爲 1.報告有關消費者保護、標籤及認證的市場進入要求的最新進展 2.介紹 FAO

在該領域的活動 3.就如何加強 FAO 在該領域的工作向 FT 次委會請求指導。因有以上的緣由，因此文件內容與標題不是很符合。

摘要文件所列 FAO 在有關水產品安全與品質的最新情況有，越南發生人工養殖對蝦早死病，一些國家查覺到風險，禁止越南對蝦進口，但研究顯示冷凍帶有病株的蝦體不會傳播疾病，FAO 於 2013 發布一份漁業和水產養殖報告，就商品蝦及活蝦貿易相關事項提供了詳細指導。

2013 年 1 月食品法典委員會在羅馬舉辦第 36 屆會議中提到，由於某些情況致食典某些藥物尚未訂定食品添加劑或化學品最高限量，及藥無殘留最低容許標準，而各國因標準不一造成市場進入障礙，所以動物用藥殘留法典委員會成立一個電子工作組，負責創建各國對最大殘留限量要求的資料庫以幫助各國。

2012 年 13 個雙殼貝類主要進出口國舉行了一次研討會，與會者請 FAO/WHO 注意，由於食典委未就各國該如何啓動新的貝類水產品衛生計畫提供詳細說明，因此主要進口國各自通過衛生計畫，導致出口國需適應多套不同監測計畫，因此與會者建議建立一個國際專家工作組，依據 CODEX 制定科學技術指導，該請求已提交水產品法典委員會，但研討會還希望 FT 次委會提供支持，請求 FAO/WHO 展開此活動。

秘書處說明後，主席請各會員國發言：

由阿根廷首先發言表示，該國關切有關私營認證計畫的問題，由於關係到市場進入的認證要求，如生態標籤、食品安全、貿易等均與私營標準有關，阿國同意文件第 8 段所列應統一非監管性的要求，以便改善市場進入。另最佳實踐準則應只指官方標準，不應包括私營準則，並應遵守國際組織的規範。另文件第 11 段將私營部門的標準與官方標準對等化，阿國無法同意。另外如何與國際漁業組織合作，該文件內沒有納入。

巴西表示，應檢視私營部門的標準，該等標準可能造成貿易障礙，另外進口國有些標準過時，造成貿易障礙影響開發中國家權益，開發中國家無法了解已開發國家有關訂定標準的方法，請 FAO 檢視並公布於 FAO 網頁，已協助開發中國家了解。

加拿大表示，支持 FAO 與其他標準制定組織合作。支持 FAO 與 WHO 合作制定指南。請 FAO 考慮生蠔及其貝類因沒有這些標準而影響貿易的問題。

中國表示，中國以前因達不到進口國的標準故認爲該等標準爲貿易障礙，但了解已開發國家的需求後，改進提升國內生產環境以達到進國口的要求。經幾年的努力，國人也認同標準的需求，同時提升了國內的標準。但提昇標準需付出代價，如檢測設備的設置、維護及人力培訓等成本。但經過幾年的實施後仍發現，已開發國家的有些標準超過需要，或沒有科學根據，爲真正的技術障礙。另外有

些情況顯示經減價後沒有達到標準的產品仍被進口商接受，可見有些標準係爲壓價的另一手段。標準制定的透明度不足致雙方發生誤會，導致標準無法實施，所以充分溝通爲標準制定所必須，此點爲 FAO 可以發揮的空間，所以請 FAO 提供此指南及指導性文件，供標準制定的參考，也有助開發中國家的了解。

歐盟發言支持加拿大有關制定雙殼貝食典標準的意見，同時也建議舉辦一個雙殼貝類的研討會，請 FAO 與 WTO 的 SPS 委員會合作。另外對於監管性及非監管性措施都要具可執行性，請 FAO 制定一個可執行性的國際性文書。

印尼表示，因發展中國家可能有以下的問題 1.技術方面的規定 2.食品安全規定 3.生產成本 4.市場進入的影響 5.進出口對於經濟的影響 6.小規模漁業如何遵守規定，因此請 FAO 能組成專家團制定一個能適用的標準。

日本表示，食品安全涉及人類健康，謹慎爲必要的，但必須基於科學基準，CODEX 爲良好的精準，FAO 應協調 CODEX 處理此議題。

其他國家發言大致也同意請 FAO 制定統一標準，因此秘書處總結：

(一) 成員國支持 FAO 在 CODEX 的工作。

(二) 成員國支持 FAO 制定統一的標準。

(三) 私營基準 CODEX 也在討論，將協調私營部門參考 CODEX 標準一致化。

(四) 橫向機構溝通的重要性 FAO 也在運作，將提供重要訊息。

主席即結束此議程，進入下一議程。

九、議程 11.小規模漁業及其對生計永續的貢獻

秘書處說明，由於 FT 次委會第十三屆會議鼓勵 FAO 在工作計畫種進一步明確對小規模漁業重視，並將其作爲 FT 次委會下一屆會議的單獨一項議題，所以秘書處提共本文件。

由於小規模漁業全面統計數據有限，其貢獻很難量化，但經過 FAO/WB/世界漁業中心 2012 研究估計全球捕撈業總產量的 40%來自小規模漁業。同一資料顯示以商業化捕撈漁業爲生的全職、兼職勞動力中，97%來自開發中國家，而且其中 90%從事小規模漁業，小規模漁業勞動力中 47%爲婦女。

另外對於小規模漁業在價值鏈中分配的利益不公平、小規模漁業的脆弱性、從業婦女被不公平對待、童工問題及減少捕撈後損失等問題均應受到重視。

接著主席請各會員國發言：

首先由挪威發言表示，支持 FAO 發展準則協助小規模漁業。FAO 應協助各國立法幫助小規模漁業，協助小規模漁業符合生態標籤以獲得更好的價格，有很

多活動排除婦女應予以改善。

智利表示，智利的小規模漁業缺乏資源，智利政府正努力改善其情況，給予融資，改善設備，輔導參與價值鏈，協助其市場進入以提高其收入。

烏拉圭表示，以加強輔導小規模漁業，辦理研討會，組織管理階層，政府協助改善社區環境，提高及捕撈漁獲物價格。

布里納法索表示，捕撈活動爲內陸湖泊，漁業人口約 5 萬人，3 萬人爲捕撈，2 萬人從事加工，4/5 水產品進口，因捕獲後損失大無法與進口產品競爭，正制訂法令加強國內生產，但受進口水產品的影響還是很大。

茅利塔尼亞表示，不是傳統海洋國家，進南開始發展，每年生產 160 噸水產品，60%產量來自小規模漁業，產值 2 億多美元，就業人口約 4 萬人包括婦女，需輔助技術改善，正與日本合作，並避免與工業間的衝突。

冰島表示，冰島所有漁船船長均 15 米以上，但依冰島來講仍有小規模漁業，其情形與其他國家不同，故 FAO 應強調發展中國家的小規模漁業。

2 月 26 日下午

莫三比克表示，2,700 多公里的海岸線，20 萬 8,000 多小規模漁業漁民，其產品爲提供當地主要蛋白質來源，但收入很少，如輔導期進入市場或加工即可增加其收入，但缺乏技術及運輸的問題，須建立基礎設施及運輸設備。

日本表示，支持小規模漁業準則，支持將召開的會議，各會員國發言提到小規模漁業的重要，也提到小規模漁業分配的利益小，請 FAO 做價值鏈的調查，另特別針對小規模漁業的生態標籤也可以在此會議上討論。

中國表示，小規模漁業的定義不清，請 FAO 釐清，中國的小規模漁業設備差，在沿海作業相當危險，中國政府的作法爲由政府買斷其漁船，讓其轉行到加工廠，政府給雇用的工廠安置費，以鼓勵雇用，小規模漁業漁民於轉行後生活安定，子女的教育也改善，因此小規模漁業逐年減少，可以與 FAO 分享經驗及協助。

坦桑尼亞表示，小規模漁業的定義不應該全球一致，坦國的小規模漁業很小，但 99%的水產品都是小規模漁業提供，因各國發展程度不同所以定義無法一致，文件提到的各項困難爲事實，如何落實，請 FAO 及國際社會給予援助。另外由於漁業補貼的問題，導致小規模漁業的競爭力喪失。

泰國表示，鼓勵 FAO COFI 批准準則，並將準則變成行動。應輔導漁民間互助，以改善其生計，藉此不斷提升其規模以進入國際市場，並協助其不要受到市場進入障礙。

其他國家發言內容大致上大同小異，爲說明其國內小規模漁業的情形及重要

性，以及輔導其改善等經驗分享或請求協助等，不再詳列。

秘書處總結爲：

(一)次委會支持 FAO 的決定，依據糧食安全及準則，次委會鼓勵各會員國分享經驗。

(二)FAO 今後工作重點爲改善小規模漁業環境，工作條件，保護婦女及童工。

(三)鼓勵其參與決策並加強培訓以提高其生產規模，增加其收益。

(四)協助小規模漁業進入市場並輔導其發展。

主席即結束此議程，進入下一議程。

十、議程 12. 「瀕臨絕種野生動植物國際貿易公約」相關活動最新進展

本案係由 CITES 秘書長進行說明，主要的活動內容爲：

(一)FAO 2012 年編制一份有關北大西洋各類鯊魚和鰩魚的目錄和袖珍參考指南；一份印度洋深海鯊魚識別指南也幾乎編制完畢。另外正在日本資助下編制一份全球鯊魚指南(大約 40 種鯊魚的背鰭、胸鰭及尾鰭)，該指南將附帶一個圖像識別軟體，便於非漁業專家可靠的識別完整的鯊魚鰭。該指南預定於 2014 年底編製完成。

(二)FAO 依據與 CITES 簽訂的 MOU 於 2012 年 12 月 3 至 8 日在羅馬召開第四次會議，對於修正附錄 1 及附錄 2 的相關提案進行科學技術審查。審查結果摘要列於文件 COFI:FT/XIV/2014/inf.7。並向 CITES 提交 7 份提案，建議：

1. 附錄 II 增列遠洋白鰭鯊

2. 附錄 II 增列路氏雙髻鯊

3. 附錄 II 增列鼠鯊

4. 小齒鋸鰩從附錄 II 轉移至附錄 I

5. 附錄 II 增列蝠鱝

6. 附錄 II 增列眉毛魟

7. 附錄 II 增列珍珠魟及梅花帝王魟。

CITES 締約方第十六次大會通過其中的五項，因此自 2014 年 9 月以下物種將列入 CITES 附錄：遠洋白鰭鯊、路氏雙髻鯊、錘頭雙髻鯊、無溝雙髻鯊、大西洋鯖鯊、淡水鋸鰩、蝠鱝。

接著主席請各會員國發言：

納米比亞首先發言表示，將加強漁民訓練以辨別鯊及其產品，但應有夥伴支持，有關訓練漁民今年 9 月將召開會議，請提供基金。

日本表示，商業性開發野生物種已受到相當的監督，2012 年專家磋商決議，FAO 應支助研究漁業管理及海洋物種開發及國際貿易的問題，但沒有被執行，可能原因爲專家組成不適當，請 FAO 秘書處審查專家組成是否適當及審查程序是否透明，審查結果應向次委會報告，以便成員國了解。CITES 附錄文件不是 COFI 對現有漁業管理的補充。

挪威表示，專家磋商應由 FAO 一般經費支助，不是預算外捐助經費。支持召開講習班，透由 CITES 提出清單。

歐盟表示，支持 FAO 與 CITES 合作，確定保育鯊魚清單及漁業對象。歐盟覺得現在不需採取任何措施。FAO 與 CITES 合作應有一般預算。

中國表示：1.漁業問題應在 FAO 及 RFMO 架構下解決，CITES 不是適當的解決工具。2.水產物種引入附錄內應徵求 FAO 及 RFMO 的意見再納入。3.應由 FAO 與 RFMO 架構下解決公海漁業的問題。4.與漁業國積極交流以解決問題。

摩洛哥、冰島均表示支持中國的發言。

美國表示，支持 FAO 與 CITES 合作，未來合作方向在經驗分享及工具開發，對於附錄如能落實執行，也能讓所有國家受益。研討組、講習組的準備應對其職權範圍確定，以保證其透明性、過程的適當並用在適當的地方。支持歐盟在預算的意見。

烏拉圭表示，採取做法要有效，漁業管理要更有效，附錄 II 涉及出口管理，出口認證成本高，要有效管理不是一直增加物種。目前因執行效果沒有很好，才導致環保組織一直要求增加物種。

宏都拉斯表示，2011 年開始設立海洋保護區，每年公告商業捕撈事項並規範到鯊魚鰭，但因爲小規模漁民沒有足夠的資源進行檢查監督。文件的建議物種已採取措施，不知 FAO 是否以解決小規模漁業管理的問題。宏國已有法令，就請 FAO 指導我國能做甚麼工作，目前非法捕撈還是很嚴重，但很難在中美洲地區查處。

巴西表示，CITES 通過的清單應只在 CITES 內進行，不宜納入 FAO 文件。

韓國表示，支持 FAO 與 CITES 的物種，以保證漁業資源的永續，但應與 RFMO 合作，部分支持中國的意見，並支持日本有關審查名單應透明的意見。

加拿大表示，CITES 應與 RFMO 合作，關於鯊魚希望有更多的資訊，感謝秘書處提供的文件。

紐西蘭表示，支持兩組織的合作，兩組織的成員國相當，請先在各國國內解決分歧。

俄羅斯表示，爲永續利用 FAO 應與 RFMO 加強合作。

印尼表示，完全支持 CITES 的決定，印尼承諾保護鯊魚，印尼也有保護沙魚的行動，請提供準則及其他協助。

墨西哥表示，支持 FAO 採取的活動及與 CITES 的 MOU，如果涉及執行方法、措施，則可經由 FAO 的協助與 CITES 建立共同新的委員會。

由於時間關係，主席裁示 27 日上午再繼續討論。

十一、議程 12. 「瀕臨絕種野生動植物國際貿易公約」相關活動最新進展

2 月 27 日

日本首先發言表示，有關鯊魚的保育應由 CITES 發起，而不應由 FAO 發起，使用 FAO 相關經費於該方面的工作，應慎重審視。有關與 CITES 如何合作的部分，應於下次會議再討論。

ICFA 表示，將相關物種列入附錄內應審慎處理，只有 3 個月還沒有充分的討論即納入附錄，應考量開發中國家能力不足的問題。

秘書處總結表示，FT 成員國表示支持 FAO 與 CITES 的合作。另成員國表示鯊魚的活動不是限制性的作法。應用經常預算辦理並應加強專家磋商及提供意見。有關培訓班部分，成員國意見尚不一致。另外 CITES 不應替代國家的養護功能，建議 FAO 對附錄上的水產物種管理提出意見，並應考慮 WTO 的規範。

十二、議程 13.監督對「FAO 負責任漁業行爲守則」第 11 條的落實工作

秘書處報告表示，FT 次委會第 12 屆會議通過以向 FAO 成員國分發問卷的方式監督「FAO 負責任漁業行爲守則」第 11 條”捕撈處置和貿易”的落實情況。秘書處編制一份問卷經 FT 次委會第 13 屆會議通過，經向成員國發放後僅收到 15 個成員和歐盟以其 27 個成員國名義回復的問卷，回收率 22%。經簡化問卷後共有 116 成員國回復，回復率 60%。秘書處請 FT 次委會決定是否繼續使用簡化電子問卷，或編制一份網路線上問卷(FAO 成員國每兩年完成一次)，放於 COFI 最近啓用的綜合問卷網路平台上，共成員國填列。

主席請成員國發言後由埃及首先發言表示，歐盟有關進口的要求以超出國際標準的要求，因此支持 FAO 統一標準的工作。如何落實 11 條的規定，有關漁獲後損失的減少等部分，請 FAO 做出努力。請 FAO 在簡化問卷，同意文件第 8 段內容的修改。

紐西蘭表示，網站上的問卷是否符合 11 條的規定請審視。建議一個國家只有

一份問卷，不要分領域填覆。

巴西表示，11 條工作的落實相當重要，支持問卷。

孟加拉表示，COFI 已有總體問卷，是否需要分委問卷專門討論水產品貿易。COFI 已有網路問卷，並已填覆，支持 COFI 的問卷。

美國表示，非常高興問卷回收率提高，因漁撈與養殖不同，支持分開問卷。

阿根廷表示，阿國生產的水產品 90%出口，支持繼續採用一個單獨分離的表格即 FT 貿易部分的問卷。

挪威表示，建議秘書處修正部分在問卷中增加附件，不要修改問卷內容。支持第 8 段的微調。

冰島表示，同意阿根廷的意見，應單列貿易部分的意見。

摩洛哥表示，歡迎回復率提高，問卷的目的爲找出差距、困難點，應分析回復的問卷，提供指南，指導改進以滿足各會員國的需求。

墨西哥表示，支持負責任漁業，第 11 條主要目的爲打擊 IUU 漁捕，請各會員國採用作爲打擊 IUU 的標準。

加拿大表示，感謝秘書處，希望採用電子文件，不要再修改內容，鼓勵會員國答覆問卷。

俄羅斯表示，歡迎問卷回復率提高，現在要做的爲詳細分析，以便了解各國的困難。

孟加拉表示，因各會員國與會人員每次不一定同一個人，請將電子問卷 MAIL 給常設單位轉交，以免 MAIL 遺失。

印尼表示，鼓勵 FAO 給綜合的問卷。

肯亞表示，支持問卷及修改，支持孟加拉的意見，並應 MAIL 給技術官員。

秘書處總結以，次委會承認並歡迎答覆率的提高，並同意問卷有助漁業管理。未來應加強有關分析，將水產品貿易列爲 COFI 問卷的一部分，未來應有單一的問卷以簡化工作，但目前仍需分開問卷以提高答覆率。

主席即結束本議程，進行下一個議程。

十三、議程 14.觀察員發言

主席請在座觀察員發言，首先 IWMC 表示，認證體系議題已經做了很長的討論，但還沒有結論，請 FAO 在各國設置認證機構，以保證產品能進入市場。在 CITES 附錄部分 FAO 做了很多努力，但無法確保納入物種的保育，因爲部分國家沒有執

行的能力。FAO 的目標爲生產食物，而環保的目的爲物種保護，如何落實 FAO 的目標，必須調和之間的矛盾。

WB(世界銀行)發言重新簡要說明其研究並出版的 2030 年水產品的預測情況的內容。

OECD 表示，參與 FAO 的討論很重要，該組織於 4 月間有與 FAO 的會議，討論有關 OECD 漁業的問題，4 月間也會有藍色增長的出版品發表。餘因沒有其他觀察員發言，主席結束本議程，進入下一議程。

十四、議程 15.其他事項：無。

十五、議程 16.第十五屆 FT 會議日期和地點

摩洛哥表示，由於 1998 年以來 FT 會議沒有在非洲國家及穆斯林國家召開過，因此摩洛哥願意舉辦下屆次委會議(按:摩洛哥亦爲下屆會議主席)，日期及地點將於會後與秘書處討論後納入會議報告。主席詢問會場無異議通過後，結束本議程。

2 月 28 日

十六、議程 17.通過會議紀錄。

28 日下午 2 時開始進行逐段檢視會議紀錄雖有小部分的文字修正，但大致上以會議上提供經起草委員會擬定的文件通過。而通過之條文內容與先前陳報之會議內容大致相當，謹將各議題與本署較相關之條文部分摘要如下：

(一)糧農組織水產品貿易相關活動報告議題討論：

爲發展中國家開展能力建設，請 FAO 繼續提供技術援助，推動市場進入、附加價值、捕撈後及食品安全工作。

一些成員國注意到認證和生態標籤計劃日益增加的作用，可能帶來額外的負擔和費用，特別對於發展中國家小規模生產者。

支持 FAO 繼續與 WCO 合作改進 HS 制度，爲環境目的改進更加精準，監測的魚種如鯊魚和鰩魚的詳細分類，以及在貿易數據中區分養殖和野生品種。

(二)FAO 改革進程中各策略目標(Strategic Objectives)的角色：

次委會歡迎 FAO 建立新的策略目標。一些成員歡迎 FAO 爲支持糧食安全、減輕貧困及永續水產資源管理而提出的「全球藍色增長倡議」，及其與里約+20 承諾和其他全球措施的聯繫。

(三)水產品貿易與人類營養：

鼓勵 FAO 幫助成員國努力增加水產品消費，促進水產品消費應盡可能與地方習慣、當地可獲品種及所需營養相配合。

一些成員建議，傳遞與海產品消費相關的風險信息時，應始終平衡的提供其與健康有利的訊息。

需要加強對魚粉和魚油替代物的研究，以提供更多水產品給人消費，並通過減少魚獲後損失，改進副產品利用和保留雜魚以增加水產品供給。

(四)水產品貿易近期發展情況：

FAO 有必要繼續監測並分析國際水產品貿易及有關供應、需求、價格和消費領域的發展情況。幫助發展中國家和小規模漁業部門更公平參與區域和國際貿易。

進口國越來越嚴格的進口要求所帶來的挑戰，許多發展中國家仍然需要能力建設及技術援助才能符合需求。

應在 WTO 規則下建立一個透明、健全和協調一致的貿易體系。小規模漁業及養殖漁民在價值鏈的利益分配比例小。

許多成員強調，任何單邊市場措施均須符合 WTO 規範，加強國家間磋商將有益於國際貿易。

一些成員對所有漁業補貼表示關切，請 FAO 向 WTO 提供有關漁業補貼談判的專門技術知識。另外一些成員要求繼續漁業補貼以加強其能力建構和水產品貿易生產。

(五)生態標籤計畫對漁業所產生的影響報告：

次委會承認 FAO 海洋和內陸捕撈漁業水產品生態標籤準則在永續漁業管理方面的作用，一些成員指出需要繼續改進，一些成員表示對亞熱帶和熱帶沿海小規模漁業管理有益處。

次委會關切生態標籤計畫可能形成貿易限制和造成成本上漲。需要深入研究生態標籤對漁業永續性和生產者經濟收益的影響。

(六)可追溯性最佳實踐準則：

一些成員建議，未來在此領域展開的工作應注重在水產品的合法性。許多成員建議秘書處召開一次專家磋商會議。

(七)漁獲文件制度：

漁獲文件計畫應用以下原則：1.符合相關國際法的規定；2.不對貿易設置不必要的障礙；3.等同性；4.將風險評估列入考量；5.可靠、簡潔、明確、透明；

6.可能時採用電子形式。

(八)審議市場進入要求：

支持 FAO 繼續與 WHO 及處理水產品相關問題的各法典委員會密切合作。

支持 FAO 與 WHO 爲雙殼貝類衛生制定技術準則。

(九)小規模漁業及其對生計永續的貢獻：

次委會制定「糧食安全和消除貧困背景下保障可持續小規模漁業自願性準則」預期於 2014 年 6 月份 COFI 委員會議期間得到批准後實施，以及實施「國家糧食安全範圍內土地、漁業和森林權責責任制治理自願性準則」的重要性。

(十)「瀕臨絕種野生動植物國際貿易公約」相關活動最新進展議程：

許多成員指出 FAO、RFMO 和沿海國爲管理商業開發水生物種的適當機構，因此 CITES 不是漁業管理的替代品。

鼓勵 FAO 繼續努力爲列入 CITES 的物種，如粉鳳螺和鱘科等提供技術諮詢。

支持 WCO 在 2017 年版 HS 制度分類中詳細制定鯊魚、鰩魚、魟魚的具體編碼。

(十一)監督對「FAO 負責任漁業行爲守則」第 11 條的落實工作：

全部條文均以處理問卷回收問題。

由於成員國對於起草委員所草擬之會議紀錄並無太多意見，在迅速通過紀錄後結束本次會議。

參、心得與建議：

一、 有關全球漁業現況部分，依據 FAO 資料顯示 2013 年全球漁業產量將創新高，預計爲 1.6 億噸，其中水產養殖產量約爲 7,000 萬噸，漁撈部分約 9,020 萬噸。FAO 預測 2022 年產量將達到 1,81 億噸左右，所增加的產量主要來自養殖，增加約 35%，漁撈部分約只增加 5%。2013 年平均每人每年食魚量爲 19.7 公斤。水產品提供的人類蛋白質約占動物性蛋白質的 17%，佔全部蛋白質的 6.5%。貿易部分，2013 年全球的水產品國際貿易出口值約爲 1,322 億美元。最大出口國家爲中國，出口值約爲 198 億美元。挪威爲第二大出口國，接下來爲泰國及越南。歐盟爲世界最大進口單一市場，2013 年進口 260 億美元)，第二、三名爲美國、日本。魚價部分，如以 2002-2004 年爲基期 100，則魚價至 2011 年 3 月達到最高爲 157，接著往下降，至 2012-2013 年間魚價保持在 140 以上高位。生產的水產品中約 40%進入國際市場，包括區域性貿易。水產品貿易對發展中國家相當重要，有部分發展中國家水產品出口占其總出口值的 50%，而在區域性貿易中因貿易障礙而使得水產品貿易未發揮其潛能。依據 FAO 資料 2013 年平均每人每年食魚量爲 19.7 公斤以上，與我國人平均每人每年食魚量 40 公斤以上相較，顯示未來隨著國際經濟水準增長，國際水產品消費上有很大的空間，以上數據將作爲參考。

二、 另依據 FAO 出版之「2020 年漁業展望」，及 2013 年出版之「2030 年漁業展望：漁業及水產養殖業前景」對全球 2030 全球水產品供需情況做了預測，2013 年全球漁業產量預計爲 1.6 億噸，其中水產養殖產量約爲 7,000 萬噸，漁撈部分約 9,020 萬噸。FAO 預測 2022 年產量將達到 1,81 億噸左右，所增加的產量主要來自養殖，增加約 35%，漁撈部分約只增加 5%。對未來糧食生產發展提出更多經濟觀點，所示數據顯示養殖漁業爲未來水產品增產之主要產業，可提供研擬我國漁業發展政策之參考。

三、 FAO 的主要目標爲糧食生產、減少貧困，所擬定的五大策略目標及一項獨立目標、以及兩項跨領域的主題：性別及管理。均係以該主要目標爲中心，但如何調和環保與糧食生產間的矛盾，亦爲 FAO 主要的工作。參加此次會議對於了解國際漁業活動內容及國際關注漁業的重點切有需要。

四、 未來須持續關注 FAO 相關活動部分，建議爲有關生態標籤及可追溯性準則、2017HS 制度的編制、藍色增長、漁業補貼、相關水產品衛生準則制定、漁獲文件及市場進入以及納入 CITES 附錄等事項。

肆、附件：會議文件

一、 會議議程和安排（COFI:FT/XIV/2014/Rev.1）

二、 糧農組織與貿易相關活動的情況報告（COFI:FT/XIV/2014/2）

三、 魚產品貿易與人類營養報告（COFI:FT/XIV/2014/4）

四、 魚產品貿易近期發展情況（COFI:FT/XIV/2014/5）

五、 漁業生態標籤之影響（COFI:FT/XIV/2014/6）

六、 可追溯性最佳實踐準則（COFI:FT/XIV/2014/7）

七、 審議市場進入要求（COFI:FT/XIV/2014/8）

八、 小規模漁業與國際貿易及永續生計關係報告（COFI:FT/XIV/2014/9）

九、 《瀕危野生動植物種國際貿易公約》相關活動的最新情況（COFI:FT/XIV/2014/10）

十、 監督對《糧農組織負責任漁業行爲守則》第 11 條的落實工作（COFI:FT/XIV/2014/11）

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December 2013

منظمة الأغذية والزراعة للأمم المتحدة | 联合国粮食及农业组织 | Food and Agriculture Organization of the United Nations | Organisation des Nations Unies pour l'alimentation et l'agriculture | Продовольственная и сельскохозяйственная организация Объединенных Наций | Organización de las Naciones Unidas para la Alimentación y la Agricultura

COMMITTEE ON FISHERIES

SUB-COMMITTEE ON FISH TRADE

Fourteenth Session

Bergen, Norway, 24–28 February 2014

PROVISIONAL AGENDA AND TIMETABLE

Monday, 24 February 2014

Morning 08.00 hours

Registration

Morning 09.30 hours

1.	Opening of the Session	
2.	Election of the Chairperson and Vice-Chairpersons and designation of the Drafting Committee	*for decision*
3.	Adoption of the Agenda and arrangements for the Session	*for decision* COFI:FT/XIV/2014/1
4.	Report on fish trade-related activities in FAO (*SO1, SO2, SO3, SO4, SO5)	*for information* COFI:FT/XIV/2014/2
5.	Role of Strategic Objectives (SO) within the FAO reform process (SO1, SO2, SO3, SO4, SO5)	*for information* COFI:FT/XIV/2014/3

Afternoon 14.00 hours

6.	Fish trade and human nutrition (SO1, SO4)	*for information and decision* COFI:FT/XIV/2014/4
7.	Recent developments in fish trade (SO4)	*for information* and decision COFI:FT/XIV/2014/5

* **Please see page 2 for description of the SOs.**

Tuesday, 25 February 2014

Morning 09.00 hours

8.	Report on the effects of ecolabelling schemes on fisheries (SO2, SO4)	*for information and decision* COFI:FT/XIV/2014/6
9.	i) Best practice guidelines on traceability (SO2, SO4) ii) UN fisheries resolution on sustainable fisheries: catch documentation schemes (SO2, SO4)	*for information and decision* COFI:FT/XIV/2014/7 COFI:FT/XIV/2014/7 Sup.1

Afternoon 14.00 hours

10.	Review of market access requirements (SO3, SO4)	*for information and decision* COFI:FT/XIV/2014/8

Wednesday, 26 February 2014

Morning 09.00 hours

11.	The small-scale sector and its contribution to sustainable livelihoods (SO1, SO2, SO3, SO4)	*for information and decision* COFI:FT/XIV/2014/9

Afternoon 14.00 hours

12.	Update on CITES related activities (SO2, SO4)	*for information and decision* COFI:FT/XIV/2014/10

Thursday, 27 February 2014

Morning 09.00 hours

13.	Monitoring implementation of article 11 of the Code of Conduct for Responsible Fisheries (CCRF) (SO2, SO4)	*for information and decision* COFI:FT/XIV/2014/11
14.	Statements by observers	*for information*
15.	Any other matters	
16.	Date and place of the Fifteenth Session	*for decision*

Friday, 28 February 2014

Morning

Free

Afternoon 14.00 hours

17. Adoption of the Report

STRATEGIC OBJECTIVES

SO1: Contribute to the eradication of hunger, food insecurity and malnutrition.
SO2: Increase and improve provision of goods and services from agriculture, forestry and fisheries in a sustainable manner.
SO3: Reduce rural poverty.
SO4: Enable more inclusive and efficient agricultural and food systems at local, national and international levels.
SO5: Increase the resilience of livelihoods to threats and crises.

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منظمة الأغذية والزراعة للأمم المتحدة | 联合国粮食及农业组织 | Food and Agriculture Organization of the United Nations | Organisation des Nations Unies pour l'alimentation et l'agriculture | Продовольственная и сельскохозяйственная организация Объединенных Наций | Organización de las Naciones Unidas para la Alimentación y la Agricultura

COMMITTEE ON FISHERIES

SUB-COMMITTEE ON FISH TRADE

Fourteenth Session

Bergen, Norway, 24–28 February 2014

REPORT ON FISH TRADE RELATED ACTIVITIES IN FAO

Executive Summary

This paper presents a short overview of selected activities carried out by FAO of relevance to international fish trade. The majority of activities are carried out by the FAO Fisheries and Aquaculture Department (FI) on its own, or in cooperation with other FAO units, such as the Legal and Ethics Office (LEG), the Economic and Social Development Department (ES) and with other relevant institutions.

Suggested action by the Sub-Committee:

- Comment on FAO's trade-related activities;
- Provide information on relevant national, regional and inter-regional experience;
- Provide guidance for FAO's further work on trade-related activities, in particular on capacity-building for developing countries and for the small-scale sector; and
- Note the progress achieved in the revision process of the *Harmonized System (*HS*)* classification and the collaboration with the World Customs Organization *(*WCO*)*, and *p*rovide guidance for further work of FAO in areas of relevance for fishery statistics.

INTRODUCTION

1. The fisheries sector's contribution to local and regional food security through direct human consumption is well recognized as is its role in providing nutritional benefits essential to human health and development[1].

2. However, less attention has traditionally been given to the important role that fish trade plays as a driver of economic activity, in generating employment and as a source of foreign exchange. In this respect, the globalization of the sector, the growth of modern aquaculture and the development of sophisticated global supply chains have created more awareness of the sector and contributed to a new understanding of the crucial function that trade plays in allowing access to product and in creating value. FAO recognizes trade's fundamental role by aiming to foster international trade in food commodities, including fish.

3. Fish and fishery products are widely traded with close to 40 percent entering international markets, a much higher share than for other food commodities. Access to international markets plays a fundamental role for producers and exporters, not the least for developing countries, which represent 50 percent in value of all exports. International trade includes regional trade, which in many parts of the world is constrained by a number of obstacles and barriers, often of a regulatory nature. In these regions, regional trade remains far below its potential.

4. International value-chains for fish and fishery products act as conduits for physical product but also as transmission vehicles for price and cost changes, for evolving consumer needs and values, and for new equilibrium in supply and demand. Therefore, it should not come as a surprise that international markets have a strong impact on domestic and regional markets, including for non-traded products.

FAO'S ACTIVITIES RELATED TO INTERNATIONAL FISH TRADE

5. FAO's trade-related activities of relevance to fisheries are primarily carried out in FI. The LEG undertakes work on international instruments and on national legislation. Food safety issues are coordinated by the Food Safety and Quality Unit within the Agriculture and Consumer protection Department with FI being responsible for specific fisheries issues. The Codex Alimentarius Commission Secretariat is located within FAO with FI responsible for all matters pertaining to fish and fishery products and serving as the secretariat for the Codex Fish and Fishery Products Committee (CCFFP). ES provides analysis and capacity building activities on food commodity trade, with the provision of specific inputs on fisheries issues by FI. An example of the cooperation between the FI and ES Departments is the publication of the twice yearly FAO Food Outlook: Global Market Analysis.

6. With the implementation of the new FAO Strategic Framework[2] from 2014 onwards, FAO aims to implement more integrated approaches in dealing with food security, resource management and food commodity problems. For fisheries issues this provides challenges as well as opportunities. Specifically for fish trade, a desirable outcome would be increased visibility within FAO's work and greater impact through more integrated and inclusive approaches in areas such as nutrition, food security, water management, coastal management, livelihoods and international food systems.

7. The rapid growth of aquaculture in supply and trade has led to an increased focus of FAO's work in this area. During the 2012–2013 biennium, FAO's activities in aquaculture and trade became more integrated. Trade and marketing aspects were given a more visible role in aquaculture development and policy considerations. Likewise, the cooperation between the two sub-committees of the Committee on Fisheries (COFI) – the Sub-Committee on Fish Trade (COFI:FT) and the Sub-Committee on Aquaculture (COFI:AQ) – and their Secretariats has been strengthened.

[1] Please see COFI:FT/XIV/2014/4 for information on the work of FAO in human nutrition.
[2] Please see COFI:FT/XIV/2014/3 for information on the Strategy Objectives.

8. During the biennium 2014–2015, FAO will undertake a tilapia project within the New Partnership for Africa's Development (NEPAD) - FAO Fish Programme (NFFP) with case studies assessing the socio-economic performance of major tilapia farming countries in sub-Saharan Africa (e.g. Uganda, Kenya, Ghana and Nigeria) and in benchmark countries in other regions (e.g. China, Egypt and Brazil). The project will assess the current status and future prospect of tilapia trade in Africa. It will also investigate the competitive pressure caused by imports from Asia to African local markets with an analysis of respective cost factors.

9. For some time FAO has assessed the species composition of countries' aquaculture production and its relation to countries' specialization patterns in international trade. Specialization indicators have been developed (market shares, concentration ratios, revealed comparative advantage indices, etc.) to be used as standardized tools to help assess and monitor the patterns of trade and to provide guidance to aquaculture development from global, regional as well as country perspectives.

10. FAO's work on the development of fish price indices continued throughout 2012–2013 in cooperation with several partners, including the Norwegian Seafood Council, the University of Stavanger and the Pontificia Universidad Católica del Perú. The index is based on traded import values in key markets. Its coverage and representativeness is being expanded to include several developing country markets and additional commodities. The European Commission, the Imperial College, Universidad de Cantabria and the Norwegian University of Life Sciences also provided valuable inputs to this work. The FAO Fish Price Index is regularly published in the quarterly GLOBEFISH Highlights and the biannual FAO Food Outlook. During 2013, the Fish Price Index received coverage by some of the world's leading economic and financial media (Financial Times, BBC World News, the Economist, etc.).The FAO Fish Price Index has proven to be a valuable communication tool in reaching broader audiences on fish trade developments.

11. During the 2012–2013 biennium, FAO continued its activities of capacity-building on international fish trade and food safety issues for developing and transition countries, in particular as they relate to the World Trade Organization (WTO) framework of global trade rules and the WTO negotiations of the Doha Development Agenda. For example, in October 2013, the jointly organized FAO and Eurofish regional workshop on *"the WTO and fisheries"* was held in St. Petersburg, Russian Federation, hosted by the State Institute on Lake and River Fisheries. This regional workshop was the fifth FAO regional workshop for the Eastern and Central European region. It provided training and capacity building for FAO Members on the WTO agreements, accession, and current negotiations in the fisheries and aquaculture sectors, as well as on their relevance for international fish trade. This type of workshop is in response to requests for capacity building on WTO issues and workshops have been successfully organized in Africa, Latin America, Near East, Asia and East and Central Europe since 2002, in close collaboration with the FISH INFONetwork (FIN) and other regional and local stakeholders.

12. The increased utilization of certification and labels for ecological or environmental purposes has resulted in a growing number of requests for assistance. This is in addition to the work mandated by the COFI:FT and COFI on the topic. In particular, the rising interest in national schemes has resulted in a number of requests for information on the FAO certification guidelines and on how national schemes can be designed to encompass the principles and requirements within these guidelines. FAO has also been invited to contribute to the work of the Global Seafood Sustainability Initiative on standards in order to ensure that developing country concerns and interests are respected[3].

13. Traceability has become an issue of major concern for producers, exporters and importing countries alike. This includes traceability both for the purpose of fulfilling quality and safety requirements as well as those related to the sustainability of production and of origin. FI has received a number of requests for assistance related to the development of catch documentation schemes.

[3] Please see COFI:FT/XIV/2014/6 for information on the work of FAO on ecolabels.

14. The growing role of market-based standards has led to requests from industry stakeholders for FAO advice on harmonization and equivalency. This resulted in the organization of a workshop in late 2013 in Rome with participation from industry, standard owners and certifiers as well as retailers.

15. During the biennium, Memorandums of Understanding (MoU) have been signed with industry associations such as the Global Sustainable Salmon Initiative, Cámara Ecuatoriana de Industriales y Procesadores Atuneros (CEIPA) and Asociación Nacional de Fabricantes de Conservas de Pescados y Mariscos (ANFACO). MoUs are non-committal, but provide frameworks for cooperation on relevant issues with a focus on capacity-building initiatives. For FI, engagement with the private sector is of growing importance in order to safeguard the interests of developing country producers when voluntary standards are being developed. Such cooperation is part of the new FAO Strategy for Partnerships with the private sector, approved in 2013.

16. In 2012 and 2013, FAO participated in several industry focused conferences. These included CONXEMAR in Vigo, Spain and the North Atlantic Seafood Forum (NASF) in Oslo and Bergen, Norway. In these events, the Assistant Director-General of FI delivered the opening address with FI staff providing a number of presentations on relevant issues. In addition, FAO took the technical responsibility for special sessions. Thanks to extra-budgetary funding, FAO was able to facilitate participation from a number of developing countries.

17. During the biennium FAO hosted informal meetings of a number of industry associations at its headquarters in Rome. Such meetings provide excellent opportunities to highlight the various issues FAO is working on with direct relevance to the sector and to receive feedback from industry stakeholders.

18. FAO continued to foster alliances with other organizations working on issues of relevance to international fish trade, in particular in its capacity-building activities. This includes closer cooperation with academia on trade and marketing related issues, and through international networks of technologists, fish inspectors, fisheries and trade economists, as well as with fisheries industry associations. In July 2012, FAO participated in the conference of the International Institute for Fisheries Economics and Trade (IIFET) in Dar es Salaam, organizing a special session on small-scale fisheries value chains with facilitated participation from developing country stakeholders. A similar participation is planned for IIFET 2014 with the organization of a special FAO session on market access.

19. The 2013 World Seafood Congress was held in Saint John's, Canada with FAO as co-organizer together with a number of other relevant organizations and agencies, including United Nations Industrial Development Organization (UNIDO). As during previous sessions, FAO was responsible for the technical programme, the identification and facilitation of developing country participation. The World Seafood Congress focused on food safety and quality issues and is extremely useful in sharing regional and international experience.

20. Several advanced level courses were organized with the International Centre for Advanced Mediterranean Agronomic Studies (CIHEAM) through the Mediterranean Agronomic Institute of Zaragoza (IAMZ) and with support from the Spanish Ministry of Agriculture, Food and Environment (MAAMA). In 2013, FAO was the joint organizer of a course on fisheries marketing and trade at the Universidad Internacional de Menendez Pelayo (UIMP) in Santander, Spain, in cooperation with MAAMA and the Fundación Alfonso Martín Escudero. In these conferences and courses, FAO provided technical inputs and facilitated the participation of developing countries, while the major support was received from national, regional and local institutions. This type of cooperation is beneficial for all parties, but subject to availability of external funding.

21. In the international debate on fisheries issues and trade, there is increasing emphasis on the impact on nutrition. In this respect, the publication and wide dissemination of the report of the FAO-World Health Organization (WHO) expert consultation in 2010 on the risks and benefits from fish consumption[4] has provided important inputs to this debate.

[4] FAO Fisheries and Aquaculture Report No. 978.

22. During the last few years, FI has enhanced its work on fisheries outlook models, also through improved collaboration with other international organizations. In June 2013, the Organisation for Economic Co-operation and Development (OECD)-FAO Agricultural Outlook 2013–2022 was published, covering medium term perspectives on supply and demand for selected agricultural commodities, including capture fisheries, aquaculture and aquafeeds. This was the third consecutive year in which the modelling of future demand and supply for fish and fishery products has been included in the overall OECD-FAO agricultural projections and is a result of the excellent cooperation between OECD and FAO, and between FAO's FI and ES departments. FI was present at the launch of the 2013 publication in Beijing with the participation of the FAO Director-General and the OECD Secretary-General.

23. The overall OECD-FAO model still treats fish and fishery products as a separate sector, but the results are integrated in the global projections. The aim is to arrive at a fully integrated and dynamic model. The results are important, not only for the fisheries sector overall, but also for the linkages and interdependencies with the other food sectors, in particular for feed and terrestrial animal production.

24. Since 2011, FAO has been collaborating with the International Food Policy Research Institute (IFPRI), the World Bank (WB) and the University of Arkansas at Pine Bluff for the revision of the IFPRI/World Fish Center (WFC) publication "*Fish to 2020*" (Delgado, *et al*.; 2003) [5] and of its modelling system. The aim was to obtain an updated global, forward-looking perspective until 2030, with a major focus on aquaculture. Work has been finalized in late 2013, with the release of the publication "*Fish to 2030: prospects for fisheries and aquaculture*".

25. The publication "*Fish to 2030*" represents both an update of the earlier "*Fish to 2020*" study as well as an important move forward in the integration of fisheries into quantitatively-based projections for the rest of the agricultural sector. The publication provides projections of global fish supply and demand into 2030 through the newly improved IFPRI's IMPACT model, which simulates outcomes of interactions across countries and regions. Projections are produced under different assumptions about factors considered as drivers of the global fish markets.

26. FAO has also started a project on the economic analysis and projection of future supply and demand for food with analyses up to 2030. This study will include new scenarios, providing more economic perspectives to the future development of food production. The project is divided into two parts; the main drivers of future demand and the main drivers of future supply.

27. In the field of statistics, the activity "Value of African Fisheries" is carried out by FI in collaboration with the Regional Fisheries Committee for the Gulf of Guinea (*COREP*), the Fisheries Committee for the West Central Gulf of Guinea *(FCWC)* and the Southwest Indian Ocean Fisheries Commission (SWIOFC) in the framework of the NEPAD-FAO Fisheries Programme (NFFP) funded by the Swedish International Development Cooperation Agency (Sida). The study focused on estimating, through data provided by national experts and extrapolations, the contribution of fisheries to national and agriculture gross domestic products (GDP), and the employment generated by the fishery sector. Results have been validated by Africa's main regional fisheries bodies (RFB) and Regional Economic Communities (REC) in mid-October 2013 and presentation of the results is planned to take place at the 2nd Conference of African Ministers of Fisheries and Aquaculture (CAMFA II) at end of February 2014.

28. FAO is also collaborating with OECD, the OECD Development Assistance Committee (DAC) and WB in organizing a joint session on Policy Coherence for Development to take place on 10–11 April 2014 in Paris. The session will cover, *inter alia*, issues with regard to Regional Fisheries Management Organisations (RFMOs), illegal, unreported and unregulated (IUU) fishing, aquaculture, governance and rebuilding efforts for depleted fisheries.

[5] Delgado, C.L., Wada, N., Rosegrant, M.W., Meijer, S. & Mahfuzuddin, A. 2003. *Fish to 2020. Supply and Demand in Changing Global Market*. 226 p. (available at http://www.ifpri.org/sites/default/files/pubs/pubs/books/fish2020/oc44.pdf

29. In early 2014, a joint workshop with the China Society of Fisheries and INFOYU has been scheduled in China to focus on the determination of relevant parameters for China to be included in the fish model for the OECD-FAO projections 2014–2023. Key Chinese government representatives, academics and industry representatives have been invited to take part in the workshop. Given China's prominent role in fishery production and trade, this cooperation will continue.

WORK BY FI IN POST-HARVEST LOSS REDUCTION

30. FI provides support to ongoing programmes and projects to mainstream fish loss reduction. This includes systematic assessments to arrive at a thorough understanding of the context of losses and identification of feasible and sustainable strategies. Some issues featured from these activities, such as the magnitude of quality and market related losses, the relationship between weak law enforcement and post-harvest losses, the gender dimensions in post-harvest fish losses dynamics, etc., are highlighted in *The State of World Fisheries and Aquaculture* (SOFIA) and the COFI:FT paper on small-scale fisheries[6].

31. To overcome a key trade barrier for small and medium scale fisheries units that supply smoked and dried fish products to domestic and export markets, an improved dual function fish processing technique, the FTT or Thiaroye Technique, has been designed. It builds on the strengths of the well-known Chorkor kiln and other existing ovens while addressing their weaknesses regarding the products' compliance to regulations on polycyclic aromatic hydrocarbons (PAHs). The dissemination of this technique should be supported in the coming biennium.

32. Building on the output of the regional post-harvest fish loss assessment programme in sub-Saharan Africa (2006–2008), FI contributes to the FAO Global Initiative on Food Losses and Waste Reduction, especially on the current process of establishing a consensual definition of "loss" and "waste" and the development of a sound methodology for measuring losses and benchmarking the reduction interventions. Initiatives encompassing several food commodities are under way, starting in Africa and to be expanded to Asia (India, Myanmar, Thailand, Viet Nam) and beyond, depending on funds to be mobilized through Save Food partnerships http://www.fao.org/save-food/en/.

FAO AND PROJECTS

33. With the decentralization of FAO, national and regional projects are now funded by the decentralized offices, whereas global and multi-regional projects are handled by FAO Headquarters. For regional and national projects, FAO Headquarters continues to be involved in the design as appropriate. However, funding and implementation depend on the priorities set by member countries in the region.

34. The majority of FAO projects are carried out through the Technical Cooperation Programme (TCP), wherein FAO provides technical assistance to its Members. Between seven and ten percent of FAO projects are funded by the Regular Programme budget. The remainder are funded by extra budgetary resources (Donor Funded Technical Cooperation), including, among others, Government Cooperative Programme (GCP), Unilateral Trust Fund (UTF), UN Joint Programme (UNJP), Special Programme for Food Security (SPFS) and other Trust Funds (TF).

35. Gender issues are receiving increased attention in FAO projects, both in dedicated activities and as an integrated part of a project. Gender has been included as a cross-cutting Strategic Objective in the new FAO Strategic Framework from 2014.

36. With the emphasis on decentralization within FAO, the network of regional and sub-regional fisheries officers has been strengthened considerably. This increases the potential impact of FAO's programmes and activities in the field and brings FAO physically closer to member country administrations and priorities. It also raises the need for improved communication between FAO Headquarters and FAO staff in regional, sub-regional and FAO country offices. This is particularly important for fisheries, considering the limited availability of FAO fisheries staff in any regional or

[6] Please see COFI:FT/XIV/2014/9 for information on small-scale fisheries.

sub-regional office and with post-harvest fisheries being only one of many important and relevant fisheries responsibilities. The growing emphasis on fish trade in the international arena and in national policies, has facilitated the work of FI on highlighting the importance of trade and markets and the many benefits derived therefrom.

37. In the FAO planning and priority setting process, the FAO regional conferences now have taken on an important role. As most conferences will concentrate on issues related to agriculture, it is important to recall that the setting of regional priorities, including for fisheries, could prove important for regional cooperation and project implementation, facilitating the effective use of scarce resources. The attempt to ensure inclusion of fisheries issues within regional priorities has met with some success but needs to be further strengthened in the future.

THE FISH INFONETWORK (FIN) AND GLOBEFISH[7]

38. The FIN is a regional service provider focusing on the fisheries and aquaculture post-harvest sector. In addition to dissemination of relevant information, the FIN undertakes project work, trade-related capacity-building, improving industry competitiveness in international markets and the organization of national, regional and international workshops and conferences. FAO is mandated to coordinate and strengthen the FIN members' capacity to deliver market information and technical services, with FAO providing technical assistance and support to joint activities.

39. These regional services originally started out as FAO projects, but have all developed into intergovernmental organizations with their own member countries, governing structures and financial arrangements. Although formally independent from FAO, there is close cooperation between FAO and FIN members, including joint organization of commodity conferences, technical projects, capacity building activities and in the production of trade and market related publications.

40. GLOBEFISH is an integral part of the FIN and performs a coordinating role in the network activities. GLOBEFISH is located in FI and is jointly financed by FAO and GLOBEFISH Partners, which include national government administrations and specialized agencies dealing with fish marketing and trade. GLOBEFISH is responsible for information dissemination and analysis on international fish marketing and trade, and produces a number of publications on trend analysis (GLOBEFISH Highlights), price information (European Fish Price Report), data time series (Commodity Updates) and market studies (GLOBEFISH Research Programme). GLOBEFISH interacts with Partners in a number of ways including through annual Partner meetings and through internships and participation in the visiting scientist programme in Rome. During 2012 and 2013, Partners reiterated the importance of focusing on market access in GLOBEFISH activities and welcomed the efforts to achieve a higher degree of integration of fisheries issues into the wider food agenda.

41. The activities of the FIN and GLOBEFISH provide a complementary platform for FAO to interact with value-chain stakeholders, in particular industry associations in developing countries. Over the years, the activities of FIN and GLOBEFISH have strived to adapt to changing client needs as well as to changes in the sector itself. FAO is grateful for the support provided to GLOBEFISH.

LEGAL AND ETHICS OFFICE (LEG)

42. The Development Law Branch (LEGN) of LEG is engaged in a number of issues of relevance to fish trade. LEGN supports the development of international instruments that entail market related measures to *inter alia* improve the sustainability of fisheries operations, and to address IUU fishing. LEGN furthermore provides technical assistance to FAO Members to facilitate the implementation of requirements deriving from international instruments in national legislation through national and regional legislative projects.

43. A number of these projects aim at the implementation of standards developed in the context of the WTO Agreement on the Application of Sanitary and Phytosanitary Measures (SPS) and the

[7] www.globefish.org

Agreement on Technical Barriers to Trade (TBT), in particular the standards developed by the OIE in relation to aquatic animal health and those developed by the Codex Alimentarius Commission in relation to food safety. For example, LEGN is currently involved in projects in Suriname and in a number of countries in the Western Balkans that facilitate the implementation of international standards on aquatic animal health in national legislation. Through the activities of LEGN in the field of fish trade, FAO Members benefit from legal support in developing appropriate legal frameworks for sustainable fisheries and for ensuring market access in line with WTO Agreements, as well as other bilateral and multilateral agreements.

FAO COLLABORATION WITH THE UNITED NATIONS STATISTICS DIVISION (UNSD)

44. The United Nations Statistics Division (UNSD) and FAO actively collaborate in sharing trade statistics, including in the work of the annual meeting of the Task Force on International Merchandise Trade Statistics. In addition, FAO is also working in collaboration with UNSD on the revision of the Central Product Classification (CPC) and of the System of Environmental Economic Accounts (SEEA).

45. The CPC provides a framework for the international comparison of commodity statistics. In March 2013 the UN Statistical Commission (UNCSC) accepted the modifications proposed by FAO to improve the breakdown for fish and fishery products in CPC. The aim of the revision was to reflect the implemented revision of the HS classification (HS 2012) and to separate primary commodities by wild and farmed origin.

46. SEEA is the statistical framework providing internationally agreed concepts, definitions, classifications, accounting rules and standard tables for producing internationally comparable statistics on the sustainability of the use of natural resources in relation to economic activities, including fishery and aquaculture. The SEEA framework follows an accounting structure similar to the System of National Accounts (SNA).

47. In March 2013, UNSC adopted the SEEA Central Framework as the global standard to monitor sustainable use of natural resources. FAO has actively participated in the revision process to ensure overall concepts utilized in asset account of aquatic biological resources were developed in a coherent way with those established through the United Nations Convention on the Law of the Sea (UNCLOS), FAO Code of Conduct for Responsible Fisheries (CCRF) and other fishery and aquaculture related instruments. Land use classification of SEEA was also modified to incorporate the utilization of water bodies, including coastal marine waters. FAO is currently in the process of developing implementation guidelines of SEEA in the fishery and aquaculture context as well as on the use of SEEA case scenarios data to support sustainable management of fishery and aquaculture sectors. FAO is also planning to compile SEEA for fishery and aquaculture using the existing data to obtain globally comparable indicators of sustainability of aquatic biological resources use.

48. Another area of collaboration with UNSD is the "Global Strategy of Improving Agricultural and Rural Statistics"[8], adopted by the UNSC in 2010. This strategy aims to enhance integration between agricultural and rural statistics (including fishery and aquaculture statistics), with national statistical systems. For fisheries statistics, these integrations are expected to provide a framework for improved knowledge of the sector, including socio-economic aspects and small-scale operations. To apply the global strategy to fisheries, FAO is promoting:

- separation of 'fishery and aquaculture' from 'agriculture' in the question of employment in population census;
- active utilization of aquaculture and capture fisheries modules in agriculture census; and
- enhanced use of administrative information (e.g. licenses), GPS and satellite imageries with the intention to collect frame survey information, specifically of small holders and operators, to be used in the design of an effective sampling scheme.

[8] More information is available at http://www.ibge.gov.br/home/estatistica/indicadores/prpa/segundo_texto.pdf

FAO'S WORK ON CUSTOMS CODES FOR FISH AND FISHERY PRODUCTS AND WITH WCO

49. The Harmonized Commodity Description and Coding System, commonly referred to as HS, is used as a basis for the collection of customs duties and international trade statistics by more than 200 countries. This classification has been developed, introduced and maintained by the WCO. Since its introduction and general adoption in 1988, the HS classification has undergone regular reviews with the last version, HS 2012, entering into force on 1 January 2012 for all Contracting Parties to the Harmonized System Convention.

50. The HS 2012 version reflects the FAO joint proposal to WCO for the revision of the codes related to agriculture, forestry and fishery products. The FAO modifications for HS codes of fish and fishery products have attempted to improve the quality of fish trade coverage through an improved specification for species and product forms. The HS versions prior to HS 2012 presented an insufficient coverage in the classification of fishery species originating in developing countries. This deficiency was also reported to FAO by several countries and in 2003, the twenty-fifth session of COFI instructed FAO to work towards an improvement of the HS classification for fish and fishery products. This request was re-emphasized by the ninth, tenth and eleventh sessions of COFI:FT.

51. In order to further improve the HS classification for better monitoring trade in fish and fishery products, FAO is continuing its cooperation with WCO for HS 2017, with a new proposal submitted to WCO in March 2012. Most of the proposal was considered as technically accepted by the Harmonized System Committee in September 2013 and will be examined by the WCO Council for final approval in June 2014. If adopted, the HS 2017 will be released in January 2017.

52. The proposal included amendments related to fish and fishery products for species and/or product forms that need to be monitored for food security purposes and/or for better management of resources, in particular for endangered species, including sharks, skates and rays. In developing the proposal, FAO also took into account the suggested amendments for HS 2017 received during the thirteenth session of FAO COFI-FT. However, not all these proposals could be included as they were either too detailed for the scope of the HS or were restricted by the lack of available codes.

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منظمة الأغذية والزراعة للأمم المتحدة | 联合国粮食及农业组织 | Food and Agriculture Organization of the United Nations | Organisation des Nations Unies pour l'alimentation et l'agriculture | Продовольственная и сельскохозяйственная организация Объединенных Наций | Organización de las Naciones Unidas para la Alimentación y la Agricultura

COMMITTEE ON FISHERIES

SUB-COMMITTEE ON FISH TRADE

Fourteenth Session

Bergen, Norway, 24–28 February 2014

FISH TRADE AND HUMAN NUTRITION

Executive Summary

The paper reviews the role fish plays in human nutrition and looks at the impact fish trade might have on food security and nutrition. Fish is recognized as an excellent source of protein but also plays a particular role in providing essential fatty acids and micronutrients deficient in many diets.

International trade has allowed developing countries to export high value fish and in many cases allowed them to purchase a larger quantity of low value but highly nutritious fish or other foods. Trade has also opened up markets for fish products considered waste in one market but a valuable product in another market.

Suggested action by the Sub-Committee:

- Guide and advise the Secretariat on how to improve FAO's assistance to member countries for increasing the role of fish in improving nutrition and food security;
- Propose concrete actions on how FAO could assist member countries in improving trade of sustainably managed fish resources as a tool in combating malnutrition and hunger;
- Advise the Secretariat on improving collection and use of data on trade, nutrient composition and contaminants of important fish resources;
- Advise the Secretariat on the need to look further at the impact that the trade of fish could have in improving the yield of fish for human consumption and reduce post-harvest losses.

INTRODUCTION

1. Fisheries and aquaculture play an important role in nutrition, food security and livelihoods. Consumption of fish provides protein and a range of other nutrients, particularly essential fats, minerals and vitamins. Eating fish is part of the cultural tradition of many people, and in some populations fish and fishery products represent a major source of food and essential nutrients. With a growing world population, the demand for fish and fish products is expected to increase whether the per capita consumption remains at the present world average level of 19 kg/year or increases.

2. Employment in fisheries and aquaculture has grown faster than employment in traditional agriculture and faster than population growth. About 56 million people are directly engaged in the fisheries sector. In addition many people are employed in important secondary sectors such as handling, processing and distribution, where women represent half of those involved. Including the families of these workers, fisheries and aquaculture support the livelihoods of some 660 to 880 million people, or 12 percent of the world's population[1].

3. Fisheries represent one of the most traded food commodities, with a share of about 40 percent of total fishery and aquaculture production entering international trade and a yearly export value of more than USD 130 billion. Trade of fish and fishery products provides an important source of income for many countries, particularly developing countries, which have a share of more than 50 percent in value and 60 percent in quantity (live weight) of all exported fish and fishery products.

4. Studies have shown that a significant share of fish exported by some developing countries (e.g. Nigeria, Egypt) consists of species of high economic value, generating an income that enables the exporting country to purchase a larger quantity of cheaper but highly nutritious fish. Lower value fish imported often consist of small size low cost pelagic fish (e.g. herring, mackerel), with high levels of essential fatty acids in many cases they also represent an exceptional source of micronutrients when eaten whole with heads and bones. From a nutritional point of view these are high value fish species.

THE ROLE OF FISH IN NUTRITION

5. Fish accounts for about 17 percent of the global population's intake of animal protein. This share, however, can exceed 50 percent in some countries. In West African coastal countries, where fish has been a central element in local diets for many centuries, the proportion of dietary proteins that comes from fish is very high; for example, 43 percent in Senegal, 72 percent in Sierra Leone and 55 percent in Gambia and Ghana, respectively. The same picture is seen for some Asian countries and Small Island States, where the contribution from fish as a source of protein is also significant; for example, 70 percent in Maldives, 60 percent in Cambodia, 57 percent in Bangladesh, 54 percent in Indonesia and 55 percent in Sri Lanka.

6. Foods from the aquatic environment have a particular role as a source of the long-chain omega-3 fatty acids, eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA), which are major building stones of our neural system. These are important for optimal brain and neurodevelopment in children. Alternative sources of omega-3 fatty acids are found in many vegetable oils, but this is in the form of alpha-linolenic acid (ALA), which needs to be converted into DHA. However, in our bodies the conversion from ALA into EPA and DHA is in most cases inefficient, making it difficult to rely only on vegetable oil during the most critical periods of our lives: namely, during pregnancy and the first two years of life (the 1000 day window).

7. Experts agree that consumption of fish, particularly oily fish, is essential for optimal development of the brain and neural system of children, as omega-3 fatty acids in the form of DHA rather than ALA are needed to secure optimal brain development. A recent FAO/WHO expert

[1] FAO. 2012. The state of world fisheries and aquaculture 2012, Rome, FAO. 209 pp. Available at http://www.fao.org/docrep/016/i2727e/i2727e.pdf

consultation concluded that fish in the diet lowers the risk of women giving birth to children with suboptimal development of the brain and neural system compared with women not eating fish[2].

8. Fish consumption is also known to have health benefits for adults. Strong evidence underlines how consumption of fish, and in particular oily fish, lowers the risk of coronary heart disease (CHD) mortality. It is estimated that fish consumption reduces the risk of dying of coronary heart diseases by up to 36 percent resulting from the long-chain omega-3 fatty acids mainly found in fish and fishery products. CHDs are a global health problem affecting all populations. A daily intake of 250 mg EPA+DHA per adult gives optimal protection against CHD[3]. For optimal brain development in children, the daily requirement is only 150 mg per day.

9. Evidence on the role DHA has in preventing mental illnesses is also becoming more and more convincing. This is particularly important as brain disorders are increasing dramatically, and in the developed part of the world the cost related to mental disorders is now greater than the cost related to CHD and cancer combined.

10. Although the importance of including fish in a healthy diet is related to its unique nutritional value, increasing evidence shows the beneficial role of fish in our diets by replacing less healthy foods. Wild and responsibly farmed fish are a healthy and good alternative to meat products.

11. Even though fish consumption reduces the risk of diseases related to obesity such as cardiovascular diseases and diabetes, the role fish consumption plays in reducing obesity, per se, is also studied. Fisheries products are known to be easily digestible, ensuring that a high percentage of the nutrients are actually benefiting the consumer and not wasted. Studies have shown that the digestive system absorbs a higher percentage of EPA and DHA (omega-3 fats) if consumed as part of the fish[4], but that fish oil supplements might be a good alternative for people who do not regularly consume fish.

FISH: A SOURCE OF MICRONUTRIENTS

12. Fish and fishery products have traditionally been regarded as a good source of protein, but more and more emphasis is now being placed on their role in providing long chain omega-3 fatty acids and also on being a rich source of vitamins and minerals deficient in many local diets[5, 6]. Micronutrient deficiencies are affecting hundreds of millions of people, particularly women and children in the developing world. More than 250 million children worldwide are at risk of vitamin A deficiency, 200 million people have goiter, and 20 million are mentally retarded as a result of iodine deficiency, 2 billion people (over 30 percent of the world's population) are iron deficient affecting particularly women in the developing world, and 800 000 child deaths per year are attributable to zinc deficiency. Rural diets in many countries may not be particularly diverse, depending on a large proportion of rice or maize. Thus it is vital to have optional food based sources that can provide all essential nutrients in such diets.

13. More and more attention is given to fisheries products as a source of micronutrients such as vitamins and minerals. In particular, this is true for small sized species consumed whole with heads

[2] FAO. 2011. The state of world fisheries and aquaculture 2010, Rome, FAO. 218 pp. Available at http://www.fao.org/docrep/013/i1820e/i1820e.pdf

[3] Mozaffarian, D. & Rimm, E.B. 2006. Fish intake, contaminants, and human health: evaluating the risks and the benefits. *JAMA*, 296: 1885–99.

[4] Sala-Vila, A., Harris, W.S., Cofán, M., Pérez-Heras, A.M., Pintó, X., Lamuela-Raventós, R.M., Covas, M.I., Estruch, R. & Ros, E., 2011. Determinants of the omega-3 index in a Mediterranean population at increased risk for CHD. *Br J Nutr*, 106: 425–31.

[5] Toppe, J., Bondad-Reantaso, M.G., Hasan, M.R., Josupeit, H., Subasinghe, R.P., Halwart, M. & James, D. 2012. Aquatic biodiversity for sustainable diets: the role of aquatic foods in food and nutrition security. *In*: Burlingame, B. & S. Dernini, eds. *Sustainable diets and biodiversity*, pp. 94–101. Rome, FAO and Bioversity International. 309 pp.

[6] Weichselbaum, E., Coe, S., Buttriss, J. & Stanner, S. 2013. Fish in the diet: a review. *Nutrition Bulletin*, 38: 128–177.

and bones, which are excellent sources of many essential minerals such as iodine, selenium, zinc, iron, calcium, phosphorus, potassium, vitamins A and D, and several B vitamins. Seafood is almost the only natural source of iodine. Iron and zinc are found in significant amounts, particularly in fish species eaten with bones, such as small indigenous fish species. For example, only 20 g of Chanwa pileng (*Esomus longimanus*) from Cambodia contains the daily recommended allowance of iron and zinc for a child. Mola (*Amblypharyngodon mola*), a small indigenous fish species from Bangladesh, is reported to have a vitamin A level of > 2 500 µg RAE in 100 g of fish; 140 g of this fish will be enough to cover a child's weekly requirement for vitamin A.

14. In many cultures small indigenous fish species are consumed at local level. In some Asian countries for example, rice fields have not only been important for supplying rice, but have been an important source of small fish for providing highly needed protein and micronutrients in their diets. The importance of small fish in traditional diets has been increasingly highlighted because of their contribution to micronutrients as they are eaten whole and nutrient dense parts (e.g. heads, bones and liver) are not thrown away[7,8].

IMPACT OF TRADE ON NUTRITION

15. The increasing demand and trade of fish at the global level has triggered more farming of fish, in most cases limited to a few high value species such as shrimp and salmon as well as more affordable species such as carp, tilapia and pangasius. In some low income countries monoculture of fish has increasingly replaced traditionally consumed small fish species with their unique nutritional composition. However, polyculture of carp and small indigenous fish species is an example of how aquaculture could add, rather than replace, fish to vulnerable local diets.

16. In some cases small indigenous fish species, such as Mola in Bangladesh, is increasingly being traded. The growing knowledge on the exceptional nutritional quality has led to an increased demand and higher market price for Mola. In Africa, small lake sardines such as Dagaa/Mola (*Rastrineobola argentea*) from Lake Victoria and similar species, such as Kapenta (*Limnothrissa miodon* and *Stolothrissa tanganicae*) in southern Africa, are an important source of micronutrients in traditional diets as they are consumed whole. Significant volumes of Dagaa, for example, are being traded to areas outside their region of capture, providing nutritious food to people in neighbouring countries. At the same time, these small indigenous fish are also being traded more and more as a valuable feed ingredient as a result of a well-paying market.

17. Increased trade of fisheries products has increased the need for fish to be processed, enabling the export of the higher valued parts of the fish and leaving less valued by-products such as heads, viscera and back-bones for local markets. By-products represent between 30 and 70 percent of the fish after being processed at industrial level. In most cases these by-products are further processed into fishmeal and fish oil, primarily for feed purposes, and therefore indirectly contributing to food security. At present, more than 30 percent of the raw material for producing fishmeal and fish oil is based on by-products and waste rather than whole fish. This percentage is growing and increasingly replacing the small pelagic species historically used for this purpose[9]. Fishmeal and fish oil are internationally traded products, an important source of revenue for some countries, and a very important feed ingredient for the aquaculture sector, the fastest growing food production system in the world.

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[7] Halwart, M. 2013. Valuing aquatic biodiversity in agricultural landscapes. *In*: Fanzo, J., Hunter, D., Borelli, T., Mattei, F. eds. *Diversifying food and diets: using agricultural biodiversity to improve nutrition and food security*, pp. 88–108. Routledge.

[8] Thilsted, S.H. 2012. The potential of nutrient-rich small fish species in aquaculture to improve human nutrition and health. *In*: Subasinghe, R.P., Arthur, J.R., Bartley, D.M., De Silva, S.S., Halwart, M., Hishamunda, N., Mohan, C.V. & Sorgeloos, P., eds. *Farming the waters for people and food*. *Proceedings of the Global Conference on Aquaculture 2010, Phuket, Thailand. 22–25 September 2010*, pp. 57–73. Rome, FAO and Bangkok, NACA. 896 pp.

[9] IFFO. 2013. Fishery discards and by-products: increasing raw material supply for fishmeal and fish. http://www.iffo.net/downloads/Fishery%20discards%2008%2002%202013%20web%20version.pdf

18. As more fish is being processed on an industrial scale before being sold, more of the waste, or rather, by-products can potentially be processed into valuable products for direct human consumption. Although most of these by-products are not utilized at present for human consumption, international trade has opened up new markets for fish products traditionally not consumed in their country of origin. For example, there is a growing demand for fish heads in some Asian and African markets, a product not considered as food in other regions. For years, Nile perch caught in Lake Victoria has been locally processed, and high valued fresh fillets exported out of the region. By-products such as back-bones and frames have become a popular product on the local market, are now important products traded at local and regional level, and are an important source of nutrients in local diets.

19. From a nutritional point of view by-products in many cases can be of higher value than the main product, particularly in terms of essential fatty acids and micronutrients such as minerals and vitamins. The increasing global demand for fish oil as a nutritional supplement has also made it profitable to extract highly valued fish oil from by-products such as tuna heads. Mineral supplements can be made out of fish bones, although this is not yet widely done. A recent pilot production of a fish bone-based mineral product showed high levels of most essential minerals, particularly zinc, iron and calcium. The product was tested in traditional school feeding meals and was highly appreciated by the school children[10] .

NEXT STEPS

20. Increasing consumption of fisheries products could in many cases be an excellent food-based approach to combat malnutrition and, in particular, micronutrient deficiencies in developing countries. Promoting increased consumption of fish products could be a good approach in reducing levels of malnutrition in many vulnerable areas. In addition to improving incomes, fish trade could contribute to the distribution of healthy and affordable fish products. Low value fish are often processed into products not intended for human consumption, but could also in some cases become healthy and affordable alternatives of food.

21. Data and information on fish production and consumption, as well as on their nutritional value, are limited in most developing countries. In order to fully understand the role that fish and fisheries products can play in providing nutrients deficient in many diets, there is a need to generate more knowledge on the nutrient composition of local fish species where this is lacking.

22. The increasing focus on the benefits of fish consumption has had a corresponding and increasing concern for fishery products as a source of contaminants. Consumption of fish, as for any other food, may lead to ingestion of harmful agents. Levels of a few contaminants in some cases can be higher than the maximum permitted levels in fish. These contaminants can also cause obstacles to trade, but local data and knowledge on contaminants in fish could help countries to avoid exporting fish that might be rejected by importing countries. Any foods we eat have benefits and risks associated with their consumption, but very few foods provide benefits to the same levels as fish products.

23. In 2010, FAO and the World Health Organization (WHO) held an expert consultation on the health risks and benefits of fish consumption, and the conclusion was quite clear that the benefits of eating fish outweigh the risks, even if consumed more than several times a week for all species studied. It was concluded that the consumption of any amount of fish has a positive impact on health. In particular, pregnant women and nursing mothers should ensure they eat enough fish[11]. In the case of a need to communicate potential risks of fish consumption, FAO Members are advised that this should be well planned to ensure consumers are not confused and scared from eating fish in general.

[10] Glover-Amengor, M., Ottah Atikpo, M.A., Abbey, L.D., Hagan L., Ayin J. & Toppe, J. 2012. Proximate composition and consumer acceptability of three underutilised fish species and tuna frames. *World Rural Observ*., 4(2): 65–70. Online: http://www.sciencepub.net/rural

[11] FAO/WHO. 2011. Joint FAO/WHO expert consultation on the risks and benefits of fish consumption. Rome, FAO and Geneva, WHO. 50 pp. Available at www.fao.org/docrep/014/ba0136e/ba0136e00.pdf

24. In November 2014 the Second International Conference on Nutrition (ICN-2) will be held in Rome[12]. It will be a high-level Ministerial Conference which will propose a flexible policy framework to address today's major nutrition challenges and identify priorities for enhanced international cooperation on nutrition. A separate paper on the role of fish in nutrition is being prepared for the upcoming ICN-2. Existing knowledge on the role aquaculture and fisheries could play in combating malnutrition should be highlighted more than ever, both as a provider of essential nutrients and as an income generating activity.

[12] http://www.fao.org/food/nutritional-policies-strategies/icn2/en/

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COMMITTEE ON FISHERIES

SUB-COMMITTEE ON FISH TRADE

Fourteenth Session

Bergen, Norway, 24–28 February 2014

RECENT DEVELOPMENTS IN FISH TRADE

Executive Summary

The purpose of this paper is to inform the Sub-Committee of major facts and developments regarding international trade in fish and fishery products that have occurred since the thirteenth session in February 2012. The document contains a brief overview of world fishery production, consumption, trade and price development. It also includes a summary of the current trade situation of major fishery commodities and issues of relevance throughout the value-chain. The activities of FAO and other international organizations in the field of world fish trade are described. The document also addresses some emerging issues perceived to be of importance for the various stakeholders in the value-chain for internationally traded fish and fishery products, in particular those related to developing countries.

Suggested action by the Sub-Committee:

- Share information on trade developments and relevant experience;
- Provide guidance for future FAO work in the area of international trade in fishery products, particularly with regard to enabling developing countries and small-scale operators to participate more effectively in fish trade; and
- Comment upon FAO's dialogue with stakeholders throughout the value-chain and on the collaboration between FAO and relevant organizations with respect to fisheries trade issues.

INTRODUCTION

1. Driven by further expansion of aquaculture, global fishery production[1] (capture and aquaculture) is expected to set a new record in 2013, at 160 million tonnes. This rise will lead to a 2.7 percent growth in per capita apparent fish consumption, reflecting the increased availability of farmed products, which are in the process of overtaking capture fisheries as the main source of fish food supply, but also the growing volumes of wild species going to direct human consumption.

2. With sustained growth in fish production and improved distribution channels, world fish trade has continued to increase, in both values and quantities, even if at a slower growth rate with respect to that experienced in 2010–2011/early 2012. Preliminary data for 2013 indicate exports to set a new record, reaching USD 132 billion. The following sections provide a review of the most relevant events since the thirteenth session of the Sub-Committee on Fish Trade (COFI:FT).

PRODUCTION

3. Total world fishery production showed new growth in the 2010–2011 period, rising from 148 million tonnes in 2010 to 156 million tonnes in 2011. Preliminary data for 2012 indicate only a slight increase, to 157 million tonnes, thanks to the rise in aquaculture production overcoming the three percent decline in capture fisheries. Estimates for 2013 point to a moderate growth (two percent) with respect to 2012, reaching 160 million tonnes. In the last biennium, China confirmed its role as the principal producer, with 54 million tonnes produced in 2011, of which about 39 million tonnes was from aquaculture. Preliminary data for 2012 indicate a further increase of Chinese production to 57 million tonnes. Developing countries continued to be the predominant producers, with a share of 82 percent of world fishery and 94 percent of world aquaculture production (2011). Eighty-eight percent of the world's aquaculture production took place in Asia.

4. Compared with production of a decade ago, the 2012 figure represents an expansion of more than 29 million tonnes. This is entirely due to increases in aquaculture production, which has grown at an average of 6.1 percent per year in the period 2002–2012. Preliminary data for 2012 indicate total aquaculture production at 66 million tonnes and projections for 2013 point towards a growth reaching about 70 million tonnes or 44 percent of total fishery output. Notwithstanding this sustained increase, the average annual growth rate of aquaculture production has decelerated during the last two years, also as a result of reduced production, in particular of shrimp, caused by disease problems.

5. Subsequent to the five percent increase experienced in 2011 (reaching 93.5 million tonnes), capture fisheries declined by more than three percent in 2012 because of lower landing of anchoveta in South America. These reduced catches also triggered a decline in fishmeal and fish oil production with subsequent strong price increases. Estimates for 2013 point to a moderate decline of capture fisheries to 90.2 million tonnes, in line with the patterns seen over the last two decades, with total output oscillating within a range of 85 and 95 million tonnes.

6. The above trends are projected to continue in the next decade. According to the results of the FAO fish model, included in the OECD-FAO Agricultural Outlook 2013–2022 publication, world fisheries production is expected to reach about 181 million tonnes by 2022, representing an 18 percent growth compared with the 2010–2012 base period used by the model. Most of the production gains will come from aquaculture, which is projected to increase by 35 percent over the Outlook period, while capture fisheries should grow by about five percent, mainly because of the recovery of some stocks.

CONSUMPTION

7. World apparent per capita fish consumption has risen steadily over the past decades, reaching an average of 17.3 kg during the 2001–2010[2] period. Figures for 2011 and 2012 show new increases to

[1] Statistics on fishery production, trade and consumption quoted in the entire document exclude whales, seals, other aquatic mammals and aquatic plants.
[2] 2010 represents the latest year available for exhaustive FAO fish apparent consumption statistics.

18.9 kg and 19.2 kg, respectively. Estimates for 2013 point towards new advances to reach 19.7 kg, with major growth in emerging economies. With capture fisheries quite stable, its contribution towards per capita consumption is diminishing. In 2013, farmed fishery products are estimated to have reached 49 percent of the total fish supply for human consumption.

8. Fish and fishery products play a crucial role in nutrition, being a source of nutrients of fundamental importance not readily found in other foods. Furthermore, fish accounts for about 17 percent of the world population's intake of animal protein and 6.5 percent of all protein consumed. Globally, fish provides about 3 billion people with almost 20 percent of their intake of animal protein, and 4.3 billion people with about 15 percent of such proteins. Despite the relatively lower levels of fish consumption in developing countries with respect to developed countries (17.8 kg versus 23.3 kg in 2010), the share of their animal protein intake contributed by fish is significantly higher. In 2010, this share was about 28.6 percent for least developed countries, 19.7 percent for other developing countries, 25.9 percent for Low-Income Food-Deficit Countries (LIFDCs) and only 11.6 percent for developed countries.

9. The long-term challenge for policy makers is to sustain this consumption growth, not only to maintain the present level of fish intake per capita, but ideally to increase it. In general, globalization, urbanization, trade and advances in technology and distribution channels for food have the potential to increase the availability of fish to most of the world's consumers. However, availability alone is not the only factor to boost fish consumption. It is evident that socio-economic and cultural factors also strongly influence the level of fish consumption among countries and within countries in terms of quantity and variety consumed.

TRADE

10. Fishery trade has considerably expanded during the last few decades, as the fisheries sector operates in an increasingly globalized environment. Fish can be produced in one country, processed in a second and consumed in a third. After a period of strong increase in 2011 (16 percent compared with 2010) and early 2012, international trade of fish and fishery products has continued to expand, but at a lower growth rate. In 2012, fishery exports reached USD 129.3 billion, with a modest increase over 2011 (one percent), but representing the highest level ever reported. Preliminary estimates for 2013 point to a further record at about USD 132.2 billion.

11. The sluggish growth rates experienced by trade in 2012–2013 were mainly the result of the downward pressure experienced by international prices of selected fish and fishery products for human consumption, in particular of farmed species, caused by reduced demand in many key markets. Demand was particularly uncertain in many developed countries, the main importers of fish for human consumption. Therefore, exporters were encouraged to develop new markets in a number of emerging economies still presenting healthy demand.

12. During 2011 and 2012, the proportion of world fishery production entering international trade remained fairly stable, at around 37 percent (live-weight equivalent). Notwithstanding a growing share of international fishery trade consists of farmed products, aquaculture continues to play a key role in food security. A significant portion of its production consists of low-value freshwater species, mainly destined for domestic consumption. Growing interest from local consumers has also underpinned aquaculture development in many regions in Asia and increasingly in Africa and South and Central America.

13. Despite the renewed economic instability experienced in 2012 and 2013 in many of the world's leading economies, the long-term trend for fish trade remains positive. However, the short-term outlook for 2014 is still uncertain, as the underlying positive trend in fish consumption and demand in most developing countries has to be balanced by feeble consumer interest in the traditional import markets of the United States of America, the European Union (Member Organization) (hereafter referred to as EU), and Japan.

14. In the period 2011–2012, developing countries confirmed their fundamental role as suppliers to world markets, with about 53 percent of the value and more than 60 percent of the quantity (live

weight) of total fishery exports. For many developing nations, fish trade represents a significant source of foreign currency earnings in addition to the sector's important role in income generation, employment, food security and nutrition. Their fishery net-export revenues (exports minus imports) reached USD 35.5 billion in 2012, higher than other agricultural commodities, such as meat, tobacco, rice and sugar. In 2012, LIFDCs accounted for eight percent of total exports in value terms, with their fishery net-exports reaching USD 5.9 billion.

15. Developed countries are the predominant importers, with 73 percent of the world imports of USD 131.8 billion (2012), a decline of two percent from the previous biennium. In quantity (live weight), their share is significantly less at 55 percent, reflecting the higher unit value of products imported by developed countries. During the last few years, developing countries have increased fishery imports to supply their processing sectors and to meet rising domestic consumption.

16. China is by far the largest exporter of fish and fishery products at USD 18.2 billion (2012), but its imports are also growing, reaching USD 7.4 billion in the same year. Since 2011, China has become the world's third largest importing country, after the United States of America and Japan. The increase in China's imports is partly a result of outsourcing. Chinese processors import raw material from all major regions, including South and North America and Europe, for re-processing and re-export. It also reflects China's growing domestic consumption of species not available from local sources. Forecasts for China's fish exports in 2013 show further growth to USD 19.8 billion.

17. Norway, the second major exporter, has a diverse product mix, ranging from farmed salmonids to small pelagic species and traditional whitefish products. The comeback of the Arctic cod has also allowed the country to expand its markets for fresh cod products. Thailand and Viet Nam are the third and fourth largest world exporters. In 2013, Thailand experienced a decline of its exports (about 12 percent), resulting from reduced production of farmed shrimp, caused by disease problems. In both countries, the processing industry contributes significantly to the domestic economy through job creation and trade. Thailand is a processing centre of excellence largely dependent on imported raw material. In contrast, Viet Nam has a growing domestic resource base and imports only limited, albeit growing, volumes of raw material.

18. The EU is, by far, the largest single market for imported fish and fishery products. In 2012, imports (EU-27) reached USD 47.1 billion, down four percent from 2011, and representing 36 percent of total world imports. However, official statistics also include trade among EU partners. If intraregional trade is excluded, the EU fishery imports were worth USD 24.9 billion in 2012. This still makes the EU the largest market in the world, with about 26 percent of world imports. Forecasts for 2013 show a six percent growth to about USD 50 billion (USD 26 billion if intra-EU trade is excluded). The EU's dependency on imports for fish consumption is growing. This is a result of the positive underlying trend in consumption, but is also evidence of the constraints within the EU on further expansion of supply.

19. The United States of America and Japan are the largest single importers of fish and fishery products and, like the EU, are highly dependent on imports for fish consumption (at about 60 percent and 54 percent, respectively, of total fish supply). Japan, traditionally the largest single importer of fish, was overtaken by the United States of America in 2011, but again became the main importer in 2012 at USD 18.0 billion. In 2013 its imports significantly declined by about 15 percent, also owing to a weaker currency, which made imports more expensive. In 2012, the fishery imports of the United States of America reached USD 17.6 billion and preliminary estimates for 2013 indicate a slight decline to USD 17.5 billion.

20. In addition to the three major importing markets, a number of emerging countries have become of growing importance to the world's exporters. Prominent among these markets are Brazil, Mexico, Russia, Egypt, Asia and the Middle East in general. In Asia, Africa and South and Central America, regional flows continue to be of importance, although, in many instances, this trade is not adequately reflected in official statistics. Improved domestic distribution systems for fish and fishery products as well as growing aquaculture production have played a role in increasing regional trade. Domestic markets, in particular in Asia, but also in Central and South America, have remained strong during the 2011–2012 period, providing welcome outlets for domestic and regional producers. Eastern

and central Europe have also seen growing imports in response to increasing purchasing power among consumers.

PRICES

21. Fish prices, as for other products, are influenced by demand and supply factors. At the same time, the very heterogeneous nature of the fishery sector, with hundreds of species and thousands of products entering international trade, makes it challenging to estimate price developments for the sector as a whole. During 2012–2013, FAO continued its work on the construction of a fish price index to better illustrate both relative and absolute price movements. The index is being developed in cooperation with the University of Stavanger and with data support from the Norwegian Seafood Council. The index is regularly published in the biannual FAO Food Outlook[3] as well as in the GLOBEFISH Highlights quarterly publications.

22. With a base year of 2002–2004 = 100, the aggregate FAO Fish Price Index increased markedly from 90 in early 2002 to peak at 157 in March 2011, although with strong within-year oscillation. After that high point, the index declined slightly, but overall remained high at above 140 in 2012–2013. In addition to the aggregate index, separate indices have been developed for the most important commodities, as well as for wild and farmed categories of species.

23. One interesting aspect highlighted by the FAO Fish Price Index is the divergence in price trends for capture and aquaculture products. The main causes for this appear to be on the supply side and in the respective cost structures: higher energy prices on fishing vessel operations than on farmed ones and supply lower than demand for certain species. Aquaculture has benefited to a greater degree from cost reductions through productivity gains and economies of scale, but it has recently been experiencing higher costs, in particular for feeds, which affected production of carnivorous species in particular. Aquaculture production also responds to price changes with a time lag, given the stocking and production cycle for most species. Until late 2012, prices for species from capture fisheries increased more than those for farmed species, reaching 164 versus 123 in December 2012. However, during 2013, the gap narrowed, reaching 144 versus 140 in July 2013.

MAIN COMMODITIES

24. Shrimp continued to be the largest single commodity in value terms, accounting for 15 percent of the total value of internationally traded fishery products. Shrimp is mainly produced in developing countries, and much of this production finds its way into international trade. However, growing demand in these countries, as economic conditions improve, is leading to lower exports and increased domestic consumption.

25. Farmed shrimp production volumes decreased in 2012 and during the first half of 2013, mainly as a result of disease problems. This reduced supply, associated with poor production forecasts for the rest of 2013, has pushed shrimp prices higher worldwide. Buyers were influencing market prices with sustained demand, as for example in the United States of America and in China. In contrast, several European countries and Japan have experienced lower imports. The Japanese market, totally dependent on imported supplies of shrimp, is also suffering because of a weaker yen and increased landing costs.

26. Salmon's share in world trade has increased strongly over the last decades to the present 14 percent thanks to the expansion of salmon and trout aquaculture production in northern Europe and in North and South America. Prices of farmed salmon fell drastically in the second half of 2011 and took several months before stabilizing. The recovery began in late 2012 and since then, the salmon market has witnessed a positive price trajectory, lifting export revenues to record levels, particularly for Norwegian producers supplying EU markets. In third quarter of 2013, this price trend has been reversed as a result of some evidence of weakening demand, as higher costs of raw material filtered down the value chain. However, it appears that the market balance should be sufficiently tight to halt

[3] http://www.fao.org/GIEWS/ENGLISH/fo/index.htm

the decline. In Chile, the second major producer and exporter, the salmon industry is undergoing an important transformation process that seeks to overcome the current financial crisis and to address higher production costs resulting from stricter production regulations.

27. Groundfish species, such as cod, hake, saithe and pollock, continue to make up about 10 percent of world fish exports. The market for groundfish products seems widely diversified and is behaving quite differently these days from the norms of the past. Overall groundfish supply was higher in 2012 and the first half of 2013, thanks to the recovery of a number of stocks. However, there were differences according to species, with, for example, abundant supply of Arctic cod and a shortage of saithe and haddock. In general, prices of groundfish have firmed in 2011–13. Cod remained the most expensive groundfish, experiencing increasing prices even in a situation of good supply. Yet, owing to ample supply, cod prices are expected to decline during 2014, at least for the more traditional products, such as frozen fillets and blocks, and clipfish and stockfish.

28. In the past, world whitefish markets were dominated by traditional groundfish species, but with the advent of aquaculture this has changed remarkably. Farmed whitefish species, in particular less expensive alternatives such as tilapia and pangasius, have gained inroads into traditional groundfish markets and are permitting the sector to expand substantially and to reach new consumer groups. Pangasius is now exported to the EU, United States of America, Japan, Russia, Egypt, the Middle East and South America as well as Africa. However, pangasius supply in 2013 is likely to be smaller than 2012, because of reduced output in the main export country, Viet Nam. Steady demand from across the globe is expected to drive production development of pangasius in other producing countries, particularly in Asia.

29. Tilapia continues to be popular in the United States of America, with Asian (frozen) and Central American (fresh) countries as main suppliers. Demand in Europe for this species continues to be limited and active marketing and promotional activities are needed to gain visibility in this market. Tilapia production is expanding in Asia, South America and Africa with new supply targeting domestic and regional consumers rather than international markets. It is also important to mention that African producers are now seeing tilapia's potential for domestic consumption as well as for export.

30. The share of tuna in total fish exports is around nine percent. With some variations, overall tuna landings have been lower in 2013 than 2012, with prices reaching high levels. Japan, the largest sashimi tuna market, has become less active with lower imports in the January-June 2013 period. Demand for fresh/chilled sashimi remained high in the United States of America, which is now the second largest market for non-canned tuna products. The canned tuna market fared better, with improved imports by the United States of America and the EU and with prices remaining on a high plateau. Canned tuna demand has also improved in non-conventional markets, in particular in Asia.

31. The share of cephalopods in world fish trade is around three percent. During 2013, main markets, in particular Japan and the EU, remained strong, in spite of difficult economic situations and the high prices of these species. In January-June 2013, octopus supplies were more abundant with respect to 2012, particularly from Morocco. Squid production also improved somewhat in the same period, while cuttlefish supplies were a little tighter. Cephalopod prices remained relatively high and are expected to continue. There is growing interest in jumbo flying squid (Dosidicus gigas) in South America, with exports from Peru to over 50 countries.

32. The production of fishmeal has declined gradually since 2005, while overall demand continued to grow, pushing prices to historic highs. This rising trend for fishmeal prices continued through the second quarter of 2013, with an overall increase of approximately 43 percent between mid-2008 and mid-2013. As soymeal prices remained relatively stable during the same period, the growing price differential provides incentives for terrestrial farmers to substitute fishmeal with less expensive feed alternatives.

33. Fish oil production is also decreasing, mainly as a result of lower production in Latin America, and more stringent quotas on raw materials, contributing to price pressure and increased volatility. Fish oil prices continued to rise steadily, reaching new highs in mid-2013. Growing demand for aquaculture products is increasing the requirement for fish oil and, hence, its price, as fish oil is an

important ingredient in feeds for selected carnivorous fish species. Demand for fish oil as a human nutritional supplement also continues to grow.

VALUE-CHAIN DEVELOPMENTS

34. A value-chain can contain numerous stakeholders, depending on the number of handling, processing and distribution links between the primary producer and the consumer. The stakeholders are affected by several factors of varying degrees depending on their position in the value-chain, their contractual relationship and the relative strength of negotiation in their relationship with suppliers and clients. Some issues are of a transitory nature with an immediate market effect, while others are of a long-term nature in which the real impact may only be hypothesised.

35. From 2009 to 2012, FAO conducted a comprehensive value chain analysis of international fish trade with an impact assessment for the small-scale fisheries and aquaculture sectors. The project, funded by NORAD, was entitled "Value chain dynamics, the small-scale sector and food security; policy recommendations for international fish trade"[4]. The project involved case studies focusing on nine developing countries: Bangladesh, Cambodia, Ghana, Honduras, Kenya, the Maldives, Peru, Thailand and Uganda. Five developed countries were also included in the project: Canada, Iceland, Japan, Norway and Spain.

36. Relative to other actors in the value-chain, case studies concluded that the fishers or fish farmers were receiving the least distributional benefits for their products, with the processors and retailers receiving the most, as a result of their more concentrated market structure and stronger buying power. Most fish suppliers in developing countries were found to be supplying raw material to developed countries, and thus were receiving limited distributional benefits from their valuable natural resources.

37. The case studies recognized that increased support for the primary nodes of the value chain from governments, non-governmental organizations (NGOs) and international bodies was needed. It was proposed that this support should be targeted into four main areas, including technical training, improvement of infrastructure, access to financing, and research and development.

ISSUES OF RELEVANCE TO INTERNATIONAL TRADE

38. Some of the major issues concerning international trade in fishery products in the past biennium and that continue to impact international trade, are[5]:

- The relationship between fisheries management design, allocation of rights and the economic sustainability of the sector;
- The role of the small-scale sector in fish production and trade;
- The impact on the domestic fisheries sector from a surge in imports of farmed products;
- The significant increase of ecolabels and their possible effect on market access for developing countries[6];
- The requirement for new traceability systems;
- The economic crises and the risk of increased import barriers and tariffs;
- The volatility of commodity prices in general and the impact on producers as well as on consumers;
- Prices and distribution of margins and benefits throughout the fisheries value-chain;
- The need for competitiveness of fish and fishery products versus other food products;
- The more stringent rules for quality and safety of food products, including for imported products, in several countries; and
- Perceived and real risks and benefits from fish consumption.

[4] http://www.fao.org/valuechaininsmallscalefisheries/en/

[5] Please see document COFI:FT/XIV/2014/8 for information on market access issues related to quality and safety.

[6] Please see document COFI:FT/XIV/2014/6 for information on the work of FAO on ecolabels.

39. Exports of developing countries have significantly increased in the last few decades also thanks to the lowering of tariffs, in particular for non-value added products. This trend follows the expanding membership of the World Trade Organization (WTO), the entry into force of a number of bilateral trade agreements and rising disposable incomes in emerging economies. However, notwithstanding these positive numbers, there are several factors that have an impact on the performance of developing countries in accessing international markets.

40. These issues include problems linked to the internal structures in some countries. Despite technical advances and innovations, many countries, especially those with less-developed economies, still lack adequate infrastructure and service, which can affect the quality of fishery products, contributing to their loss or difficulty in marketing. Some developing countries might have inadequate regulatory framework and institutional capacity for sustainable governance of the fishery sector. Sustainable resource management practices are essential for sustainable international trade, progress in reduction of discards at landings and of waste along the full value chain. Developing countries can also be excluded from regional development policies because of a lack of institutional capacity.

41. In exporting, developing countries might be faced with tariff and non-tariff barriers to trade. The effect of non-tariff barriers (NTBs) on trade and economic welfare is difficult to evaluate. NTBs may affect trade through the application of required product standards, control on sanitary and phytosanitary measures, procedures for import licensing and rules of origin, conformity assessment and others. Trade in developing countries can also be influenced by the specific ways in which customs classifications, valuation and clearance procedures are handled, including lengthy or duplicative certification procedures. High customs fees may also negatively affect trade.

42. Other impacts on trade in developing countries might be linked to technical barriers to trade (TBTs), which refer to technical regulations and standards that set out specific characteristics of a product. The WTO Agreement on TBTs contains rules expressly aimed at preventing these measures from becoming unnecessary barriers, but they still exist and create difficulties for traders. These measures also include the technical procedures for confirming that products comply with the requirements stipulated in regulations and standards that apply to both domestically produced products and imports.

ACTIVITIES BY THE WTO WITH REGARD TO FISHERY PRODUCTS

43. The negotiations of the WTO Doha Development Agenda (DDA) were initiated in 2001 and carried on throughout 2010 and part of 2011, before stalling on most issues, including those related to fisheries. The two major issues of relevance to the fisheries sector in the DDA continue to be 1) fisheries subsidies, discussed in the Subgroup on fisheries subsidies negotiations within the Negotiating Group on Rules; and 2) industrialized market access negotiations, discussed in the Negotiating Group on Non-Agricultural Market Access. There has been no active work on these issues since April 2011, pending progress in other areas of the round.

44. Following the accession of China in 2001, Viet Nam in 2007 and Russia in 2012, all major fish producing, importing and exporting countries have become WTO members. There are a total of 159 WTO members at the time of drafting this paper. Membership of the organization is a pre-requisite for having access to its Dispute Settlement Mechanism.

45. Global Reviews represent another area of relevance for fisheries. They monitor the Aid for Trade initiative, with the objective to make aid for trade more operational. The fourth Global Review of July 2013 noted, inter alia, that committed aid from donor countries to Building Productive Capacity in the fisheries sector in developing countries increased from USD 308 million in 2005 to USD 425 million in 2011.

FAO COOPERATION WITH OTHER ORGANIZATIONS

46. During the biennium, FAO has enhanced its collaboration with the private sector and has continued to have an excellent relationship of cooperation with other international organizations,

including WTO, the Organisation for Economic Co-operation and Development (OECD) and the World Bank (WB), with mutual provision of technical expertise when requested.

47. The cooperation between FAO and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) has continued on a regular basis, in part thanks to extra-budgetary funding. FAO has supported CITES through a number of activities and on legal issues[7].

[7] Please see document COFI:FT/XIV/2014/10 for information on the cooperation between FAO and CITES.

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COMMITTEE ON FISHERIES

SUB-COMMITTEE ON FISH TRADE

Fourteenth Session

Bergen, Norway, 24–28 February 2014

REPORT ON THE EFFECTS OF ECOLABELLING SCHEMES ON FISHERIES

Executive Summary

This paper describes the findings of a consultancy paper on the economic impact of private ecolabels on returns to the fisheries sector. The paper also reports evidence on the utilization of the FAO draft Evaluation Guidelines as a benchmarking tool for comparing private ecolabelling schemes with the FAO Certification Guidelines for marine capture fisheries.

Suggested action by the Sub-Committee:

- Discuss findings on the recent use of the FAO draft evaluation framework; share any case studies, statistical information or country evidence of ecolabel impacts on governance and sustainable fisheries management;
- Advise FAO on future work on the draft evaluation framework for marine and inland capture fisheries; and
- Endorse ongoing activities of the FAO Fisheries and Aquaculture Department (FI) that monitor and analyse the impact of ecolabels, as well as supporting global private sector initiatives to benchmark voluntary ecolabels.

INTRODUCTION

1. A draft evaluation framework[1] to assess the conformity of public and private ecolabelling schemes with the *FAO Guidelines for the Ecolabelling of Fish and Fishery Products from Marine and Inland Capture Fisheries* (FAO Guideliness) was presented to the thirteenth session of the Sub-Committee on Fish Trade (COFI:FT). A discussion followed in which some Members recommended the adoption of the draft evaluation framework proposed by the Expert Consultation, noting that the evaluation framework could be subject to further revision once more experience had been gained in its implementation, while other Members felt that the draft evaluation framework was not ready for adoption and would benefit from a pilot program to tests its applicability (Para. 31, Final Report).

2. COFI:FT agreed that, at this stage, it was not necessary to convene a further expert consultation or a technical consultation to move forward on work on the evaluation framework (Para 32, Final Report), and that it would be useful to address the effect of various ecolabelling schemes on fisheries management and economic returns (Para 35, Final Report).

3. It was noted at the thirtieth session of the Committee on Fisheries (COFI) that the draft evaluation framework is publicly available. COFI called for swift progress towards the evaluation of ecolabelling and certification in the light of the FAO Guidelines.

4. Being aware that the draft evaluation framework is in the public domain, the Secretariat, with the assistance of an independent consultant, sought evidence of the usage of the draft evaluation framework as a benchmarking tool for voluntary public and private ecolabelling schemes. The consultant investigated evidence of any economic impacts on the fisheries sector from adoption of public and private ecolabels, namely price premiums received for certified fish or special market access for certified fish versus non-certified fish. The key findings are summarized below.

EVIDENCE ON UTILIZATION OF THE FAO DRAFT EVALUATION FRAMEWORK

5. FAO investigated evidence of benchmarking for 25 ecolabels, retail labels, and consumer guides for fish and fisheries products. A complete paper is provided as COFI:FT/XIV/2014/Inf.9, including an extensive list of references and website addresses. The following is the list of schemes that were reviewed: Blue Ocean Institute, EcoFish, Environmental Defense, Fair-Fish, FishOnLine, FishSource, Forest and Bird Society of New Zealand, Friend of the Sea, Global Trust, INCOFISH, Krav (Sweden), Leibniz Institute of Marine Sciences, Marine Ecolabel Japan (MEL), Marine Stewardship Council (MSC), Monterey Bay Aquarium Seafood Watch, Naturland Wildfish, Norge Seafood, Seafood Choices Alliance, the Australian Department of Environment guidelines for the ecological sustainable management of fisheries, Marine Aquarium Council to certify fisheries for the aquarium trade, The Responsible Fishing Scheme (SEAFISH), Unilever: Fishing for the Future, WalMart and Young's Seafood Fish for Life.

6. Five benchmarking exercises were publicly available. Two of these ecolabel schemes claim to use the FAO Guidelines for their benchmarking. The other two ecolabel schemes cited several reasons for not using the FAO Guidelines, namely that they:

- do not have associated targets for the benchmarking criteria;
- lack clarity or suggested measures of performance;
- can lead to different interpretations and thus claims of 'in compliance' with the FAO Guidelines which cannot be verified or refuted; and
- are necessarily broad to fit the many different operating conditions of the member countries.

7. The fifth benchmarking exercise is currently in development, namely the Global Seafood Sustainability Initiative (GSSI). This benchmarking exercise is utilizing both the FAO Guidelines and

[1] Expert Consultation to Develop an FAO Evaluation Framework to Assess the Conformity of Public and Private Ecolabelling Schemes with the FAO Guidelines for the Ecolabelling of Fish and Fishery Products from Marine and Capture Fisheries, Rome, 24–26 November 2010.

the FAO draft evaluation frameworks for marine capture fisheries and aquaculture as minimum criteria for developing a global benchmarking tool. In addition, the private standard setting body, the International Organization for Standardization (ISO), is considering a recent proposal submitted to the ISO Technical Committee on Fisheries and Aquaculture (T/C 234) to develop a seafood ecolabel standard that utilizes the FAO Guidelines on marine capture fisheries as a reference. Recent developments under the GSSI and ISO are discussed in more detail later in this paper.

EVIDENCE OF ECONOMIC IMPACT FROM ECOLABELLING ON RETURNS TO THE FISHERIES SECTOR

8. Producers incur costs to obtain seafood ecolabel certification, and these costs can vary significantly depending on the criteria of the certification scheme. Under normal market conditions, it would be expected that a certified producer could receive price premiums to offset the higher costs of certification. However, it is not necessarily true that labelled seafood products command a price premium over identical unlabelled products that reach the final consumer. Although the emergence of ecolabels in the environmentally conscientious markets of the major seafood importing countries suggests that this is a consumer-driven phenomenon, evidence points to the demand for ecolabels originating more as a business branding practice along the seafood value chain.

9. FAO reviewed evidence of economic incentives for ecolabelled seafood products compared with similar seafood products without ecolabels. A limited number of studies illustrate price premiums for ecolabelled seafood products. The complete findings are available as COFI:FT/XIV/2014/Inf.9. A few studies were found that illustrated an economic price-premium between 10–15 percent obtained at the retail level for ecolabelled versus non-labelled seafood products in the same markets. For example, two studies conducted in the United Kingdom of Great Britain and Northern Ireland evaluated price premiums at the retail level for products with the MSC label[2]. MSC-ecolabelled pollock received a 14 percent price premium over unlabelled pollock in the same market in 2011. A follow-up study examined prices for MSC-ecolabelled haddock, finding a 14 percent price premium at the retail level[3].

10. Ad hoc evidence suggests that some price premiums are being received for ecolabelled products at the retail level in the main seafood import markets. However, it is more likely that the benefit to producers for ecolabelling their seafood products is improved market access and not price premiums. As seafood supply chains are becoming more integrated, with business contracts largely determining the link between seafood producers/processors and global retailers, the use of voluntary ecolabels has grown to be an important driver in international seafood markets. This trend has implications for small-scale producers/processors if they are not able to afford ecolabel certification. This trend may also have implications for developing countries, which currently supply the majority of internationally traded seafood products if they lose access to traditional import markets.

11. Members and observers are invited to share case studies or statistical information to the Secretariat to facilitate measurement and analysis of the impact of voluntary ecolabels on price premiums, governance and/or fisheries management in their countries or regions.

OTHER DEVELOPMENTS

12. ***Global Seafood Sustainability Initiative (GSSI).*** The GSSI mission is to deliver a common, consistent and global benchmarking tool for seafood certification and labelling programs. The GSSI stakeholders include approximately 30 private companies, a national government, academics and non-governmental organizations (NGOs). This consortium is interested in raising consumer confidence in the seafood supply chain, promoting sustainable fisheries practices, and encouraging improvement in seafood certification schemes. International standards exist for checking accreditation

[2] Roheim, C., Asche, F. & Santos, J.I. 2011. *The Elusive Price Premium for Ecolabelled Products: Evidence From Seafood in the UK Market. Journal of Agricultural Economics*, 62(3): 655–68.
[3] Sogn-Grundvåg, G., Larsen, T.A. & Young, J.A. 2013. *The Value Of Line-Caught And Other Attributes: An Exploration Of Price Premiums For Chilled Fish In UK Supermarkets*. Marine Policy, 38: 41–4.

bodies and certification bodies; however, there seems to be a gap in standards for checking the certification schemes themselves, and this is the niche that the GSSI proposes to fill.

13. The GSSI benchmarking tool uses as minimum criteria the FAO Guidelines for capture fisheries and aquaculture, as well as the draft evaluation frameworks for capture fisheries[4] and the evaluation framework for aquaculture[5]. Additional resources include ISO and International Social and Environmental Accreditation and Labelling Alliance (ISEAL) standards. The GSSI, which was launched in February 2013, plans to develop its benchmarking tool by 2015. GSSI aims to establish a global platform for future discussions, similar to the model of the Global Food Safety Initiative (GFSI), which has been operational for ten years.

14. FAO participates in the GSSI expert working groups: namely, on process, fisheries, and aquaculture. FAO participation in the GSSI initiative has encouraged the inclusion of stakeholders from all geographical regions, as well as addressing the special needs of small-scale producers. There are synergies to be gained through cooperation of all the major stakeholders, including FAO, in the development of the GSSI tool.

15. The proposed GSSI framework includes four main "Catalogue of Requirements": namely, Standards Contents, Governance Systems, Implementation Systems and Impacts. In addition, the GSSI benchmarking tool is expected to address some of the acknowledged shortcomings of the FAO Guidelines for capture fisheries, such as the chain of custody and governance, by including additional criteria.

16. ***International Organization for Standardization (ISO).*** A proposal was submitted to the annual meeting of the T/C 234[6] for development of an ecolabel standard. The proposal is for the development of ISO minimum requirements for the certification of products from sustainable marine fisheries. The proposal does not apply to aquaculture or seaweed products. Topics covered under the proposal include environmental, economic and social aspects, and quality of the products. Each topic is defined by a list of criteria.

17. FAO participates in ISO annual meetings, providing updates on FAO work related to the T/C 234. As the newly proposed work order to develop an ISO ecolabel standard was submitted to the annual meeting in Kochi, India, October 2013, the results of this exercise were not available at the time this paper was prepared. The voting on the ecolabel standard proposal will be completed in February 2014, prior to COFI:FT. Thus, the Secretariat will be able to report on the results of the vote.

18. ***World Trade Organization (WTO).*** The Trade and Environment Committee (CTE) of the WTO was tasked with investigating voluntary environmental labelling schemes (ecolabels) by the Doha Declaration[7]. Ecolabels[8] are a vehicle for conveying environmental information to the consumer, which is not evident from the product itself; namely, that the seafood was produced in an environmentally sustainable way compared with "like" seafood products that were not sustainably produced. The Doha Declaration noted that ecolabels could be misused and that the ecolabelling schemes, whether developed by governments, industry or NGOs, should not create unnecessary barriers or disguised restrictions on international trade. The CTE invited FAO to provide information on voluntary certification schemes and their implication for international seafood trade at their

[4] The FAO draft evaluation framework for capture fisheries was presented to, but not approved by, the twelfth session of COFI:FT, 2012.
[5] "Technical guidelines on aquaculture certification" were approved by the twenty-ninth session of COFI, 2011. The FAO Evaluation Framework for Aquaculture was developed by an expert consultation in Rome in December 2012. The draft evaluation framework for aquaculture was presented to and approved by (with noted reservations by a few countries) the seventh session of the COFI Sub-Committee on Aquaculture in October 2013.
[6] "Minimum Requirements for the Certification of Products from Sustainable Marine Fishery", Food Industry and Health Care Department, France. Proposal for new work item submitted to the ISO/TC 234 annual meeting, Kochi, India, 29 October 2013.
[7] Paragraph 32(iii), WTO Doha Declaration, 2001.
[8] WTO "Labelling" http://www.wto.org/english/tratop_e/envir_e/labelling_e.htm

meeting in June 2013. The CTE expressed concerns about the prevalence of seafood ecolabels and thanked FAO for sharing its work in this area. Voluntary environmental standards, which are not required by governments, do not fall directly within the multilateral rules-based trade regime of the WTO. However, as the Agreement on Technical Barriers to Trade (TBT) handles product standards and labelling, seafood ecolabels automatically fall under the TBT's "Code of Good Practice for the Preparation, Adoption and Application of Standards". Thus, private standardizing bodies are "invited" to follow the TBT Code. Finally, some WTO members have called for a separate agreement on fisheries, similar to the Agreement on Agriculture, that would include the environmental aspects of the fisheries sector. However, negotiations on a separate fisheries sector agreement have not progressed under the Doha round.

19. Market access issues are likely to increase with the growing number of voluntary ecolabels. Ecolabels are becoming a required part of business transactions between major producers and global purchasers, such as brand owners, supermarket chains and other seafood retailers. The development of ecolabels as a prerequisite for obtaining supply contracts in the major import markets may have consequences on market access for products from uncertified fisheries, whether they are sustainably managed or not. Impacts would most likely affect developing countries and small-scale fishers who may not be able to afford ecolabel certification or who do not operate within a capture fishery that is otherwise documented as sustainably managed.

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COMMITTEE ON FISHERIES

SUB-COMMITTEE ON FISH TRADE

Fourteenth Session

Bergen, Norway, 24–28 February 2014

BEST PRACTICE GUIDELINES ON TRACEABILITY

Executive Summary

This paper presents a report on current traceability systems, analysis of common traceability practices, and a first draft of best practice guidelines for traceability resulting from an FAO consultancy, as requested by the thirteenth session of the Sub-Committee on Fish Trade (COFI:FT).

Suggested action by the Sub-Committee:

- Provide comments on the findings of the consultant's report, namely the review of common practices in seafood traceability, analysis of the different traceability systems, and the first draft of best practice guidelines for traceability.
- Provide guidance on how the Secretariat should proceed with work on developing best practice guidelines for traceability.

INTRODUCTION

1. The thirtieth session of the Committee on Fisheries (COFI) provided guidance on the content of draft best practice guidelines to be developed by FAO. *"The Committee emphasized that this work should include the compilation and analysis of best practices and existing standards for different purposes of traceability, including a thorough analysis. The Committee emphasized that this work should include a gap analysis and stressed that the following principles should provide the framework of the analysis: (a) not create unnecessary barriers to trade, (b) equivalence, (c) risk based, and (d) reliable, simple, clear and transparent."*[1].

BACKGROUND

2. Traceability systems have the potential to impact international trade in seafood products, and the existence of those systems is in compliance with the multi-lateral rules-based trading system of the World Trade Organization (WTO), namely the WTO Sanitary and Phytosanitary Agreement (SPS) and the Technical Barriers to Trade (TBT) Agreement. However, better global harmonization of current traceability practices could improve transparency, simplicity and coherence of traceability regulations and standards, thus reducing the likelihood that legitimate traceability measures would create unnecessary barriers to trade.

3. Discussion during the tenth session of COFI:FT gave rise to the statement that: "*Not all traceability systems are equivalent and/or interchangeable. Nor can they necessarily be consolidated. Different purposes and systems also trigger different expectations in producers and consumers that do not always correspond to the traceability system in use (regulatory, contractual or voluntary). This partially explains the current uncertainty related to "traceability" requirements and to the possible implications of traceability regulations"* (FAO, 2006)[2].

4. Traceability systems are well-established tools for verifying the integrity of the product supply chain and for remedying failures when the supply chain's integrity is broken. Extensive regulatory frameworks and mandatory requirements for traceability currently exist to make sure of food safety in the major fish importing markets of the world. Voluntary certification schemes, such as ecolabels, have also emerged, requiring assurance that the ecolabelled product has been sourced from sustainably managed resources and traceability is required to ensure the integrity of chain of custody. There is an ongoing debate about the impact of traceability on ecolabelling schemes: whether they unnecessarily increase traceability requirements or duplicate existing systems, as well as concerns about possibly limiting market access for non-certified products.

5. Traceability systems have broadened over time, in order to include new criteria and emerging issues such as labour conditions, ways of sourcing raw material, distance the product has travelled, responsible use of primary resources, environmentally sound practices and production of food products according to evolving consumer requirements (e.g. organic, fair trade). In addition, new traceability technology is continually under development to improve the accuracy of traceability data and reduce the time required to collect or transmit the information. While not all of these issues can or should be dealt with under traceability best practices guidelines, analysis of existing schemes and common practices will improve the understanding of the different requirements of seafood traceability and possibly identify common frameworks that can be used to harmonize seafood traceability.

6. More recently, interest in traceability schemes has revolved around efforts to combat illegal, unreported and unregulated (IUU) fishing activities, which threaten sustainable resource management and are especially difficult to control in Areas Beyond National Jurisdictions (ABNJ). For example, Regional Fisheries Management Organizations (RFMOs) have worked independently to implement documentation systems that enable contracting parties and cooperating states to verify that fish products have been caught in compliance with the requirements of inter-governmental agreements, and therefore can be legally traded in international markets.

[1] Paragraph 30, Final Report of the thirtieth session of COFI, Rome, 2012.
[2] Traceability. Tenth session of COFI:FT, Santiago de Compostela, 2006.

REVIEW AND ANALYSIS OF TRACEABILITY PRACTICES

7. In order to address the issues outlined in paragraph 1, FAO contracted a consultant to prepare a paper, which is, entitled *"Review and Analysis of Current Traceability Practices,"* and is available as COFI/FT/XIV/2014/Inf.6. This report provides an overview of current seafood traceability practices and then compares these traceability systems to identify similarities and gaps that could lead to best practices. The following is a list of the standards and regulations that were reviewed: Codex Alimentarius; Office International des Epizooties (OIE); RFMO catch/trade documentation schemes; European Union (EU) regulations on food safety; EU regulations on Illegal, Unreported and Unregulated fishing (IUU); United States of America various Acts; Japan various Standards and Acts; International Standard Organization (ISO); Global traceability standards (GS1); Traceability of Fish Products (Tracefish); Trace Register; China Trace; MSC environmental standard for sustainable fishing; National Marine Fisheries Service Dolphin Safe Certification (NMFS); AIPCE-CEP Expectations of Seafood Environmental Standards; Word Wildlife Fund (WWF) Smart Fishing Initiative (SFI); GLOBAL Good Agricultural Practice (GAP); Global Aquaculture Alliance (GAA) Best Aquaculture Practices (BAP); Global Food Safety Initiative (GFSI); British Retail Consortium (BRC); and International Featured Standard (IFS).

8. As illustrated in the previous paragraph, there is an abundance of international standards and guidelines, regulations, voluntary standards and sustainable seafood certification schemes that require traceability and that are applicable to fishery products. Aspects of traceability in these schemes were briefly described and already presented to the eleventh and twelfth sessions of COFI:FT. As these items are not all directly comparable or equivalent, they were organized under three main headings: International standards and guidelines, Regulatory standards, and Industry and NGO non-regulatory standards (table 3, COFI:FT/XIV/2014/Inf.6). A comparison was made of the coverage of traceability among the various standards and regulations under each heading using the well-established traceability principles:

- Unique identification: any unit and any actor in the supply chain that modifies the product or may have an impact on the product shall be uniquely identified;
- Data capture and management: quality data have to be captured and recorded along the supply chain; and
- Data communication: the information between various actors in the supply chain has to be exchanged in a standardized format.

9. Regarding the development of FAO best practices guidelines, the Secretariat presented three proposals to the thirteenth session of COFI:FT. At that time, COFI:FT expressed preference for option 2, "*the FAO Secretariat will develop a first draft of the best practice guidelines for traceability and submit them to the next session of COFI:FT for further guidance"*[3]. Thus, FAO prepared the *First Draft Best Practices Guidelines for Traceability* (attached as an Annex). This was accomplished by using the information collated from a review of common frameworks with respect to implementation of seafood traceability, combined with an analysis of the schemes.

10. The Secretariat invites members to provide comments on these draft guidelines. The Secretariat further invites suggestions from members on how to proceed with this area of work. One possibility is for FAO to convene an expert consultation, which would benefit from international experts on traceability from all geographical regions, as well as representatives of the various stakeholders along the seafood supply chain. However, funding for an expert consultation would need to be identified from extra-budgetary sources.

[3] Traceability Best Practice Guidelines, COFI:FT/XIII/2012/5.

ANNEX

FIRST DRAFT BEST PRACTICE GUIDELINES FOR TRACEABILITY

11. The application of traceability shall be seen and understood as a contribution to the common responsibility of all food business operators to ensure and document that all food placed on the market is compliant with the safety or quality requirements agreed with the customers. Traceability shall also be seen and understood as a system to determine the source of any fishery product. The following sections provide some best practices of traceability.

12. This document presents the current requirements on traceability from the main regulatory and non-regulatory standards applicable to fishery products. Although there are different drivers for food traceability e.g. food safety, sustainable fisheries, ecolabelling to combat illegal, unreported and unregulated (IUU) fishing, the analysis of these requirements has revealed some common principles:

- Unique identification;
- Data capture and management; and
- Data communication

13. These principles have been used to compare the various standards. The result of this comparison shows that traceability is usually a tool to support the standards and demonstrate the product compliance with the requirements.

14. The draft best practices provide general recommendations to establish a traceability system based on the same common principles. These recommendations may assist the operators in the creation of reliable, simple, clear and transparent traceability systems.

A. Unique identification

Lot definition

15. The lot size is defined depending on the practical situation and may vary from one product to another. Some criteria in the definition of the lot may be linked to risk analysis related to a particular product:

- Food Safety: A “lot” may identify a group of products that is often from the same origin and that underwent the same treatment;
- Economical: the smaller the lot size, the more economical it is to destroy non-conforming products in case of withdrawal.

16. The lot identification format shall be clearly defined and accompany the product at all times e.g. on the label in the case of pre-packaged food, or on the packaging, on the container, or the accompanying documents in other cases.

Who is involved in ensuring traceability of fishery products?

17. The identification of the operators in the system should be unique and meaningful. Possible integration of existing geographic information systems (GIS) into registration or licensing procedures may be envisaged to facilitate technological developments.

i. Fishermen and operators

18. The fish that a vessel may land might include a mixture of catch from many fishing vessels. Each actor in the supply chain shall keep in the logbook the information that relates to the catch area and the assurance of quality and food safety of the product as long as it is on the vessel, as well as after being transferred to the middleman or processing industry.

19. If the information is to be used for ecolabelling schemes, then quantity, gear used and catch area would become important.

20. The method and time of cooling is recorded in the logbook with reference to a unique lot number, which could be for example the date+container no./hatch no. This unique lot number shall follow the fish physically when it is transferred from the vessel. Thus, it would be recorded or kept on file by the next operator in the value chain.

21. The buyer of the fish may have very specific requirements of the technical details of the records, but as a minimum the identification of the vessels (e.g. registration number), the FAO catch area, and the date(s) of catching shall always be kept on file and provided together with the fish and information about the buyer (e.g. the middle man) shall be kept on file related to the vessel.

ii. Fish farmers and their operators

22. The fish farmers shall be required to keep information in farm logbooks or other records at least about nature and origin of all ingoing materials, in particular fish larvae/seed, feed, veterinary medicines and different chemicals used, for example, for pond preparation and water treatment.

23. The farmer shall also be required to document in logbooks or other records all activities that may have an impact on food safety – this means periodical records of pond preparation, daily records of the type of feed administered to each pond, records of details of use of any medicines in each pond i.e. date, type, method of administering and the number of days during which the fish is not allowed to be harvested for placing on the market (withdrawal period).

24. When the fish is harvested, it shall be required as a minimum that the farm shall keep a record of the date of harvesting by pond/cage number and this information together with the farm registration number shall be transferred together with the fish to the buyer.

iii. Middlemen

25. Middlemen, auction halls, carrier vessels, etc. responsible for forwarding raw materials or prepared products further along the supply chain as a minimum shall be required to keep records on who supplied which kind of fish species and to whom the species was sold.

26. Optimally the middleman/auction should maintain the identification (vessel names, farm names, lot numbers, pond information, etc.) with each lot that is received and further distributed. However, this is not always possible (e.g. from many small-scale fishing vessels or farmers) and in such cases, the middleman shall keep in his file information about what was mixed and how the new mixed lot is now identified. In case of fish from extensive farming, for example, it may be a code including information about the harvest area, harvest date, size and quality of the raw materials.

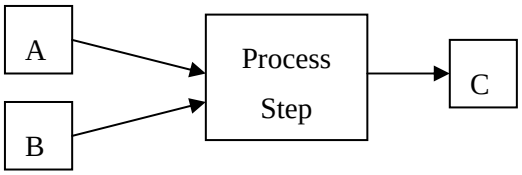
27. If the middlemen, auction halls, carrier vessels, etc. carry out any preparations or storage that may influence the quality of the product, they shall be required to keep records on the nature of such activities for each of the codes they provide to their customers.

iv. Fish Processors

28. Operators responsible for processing and sale of fishery products as a minimum shall be required to keep records on who supplied which kind of fish species, which products were produced from which raw materials and to whom the resulting products were sold.

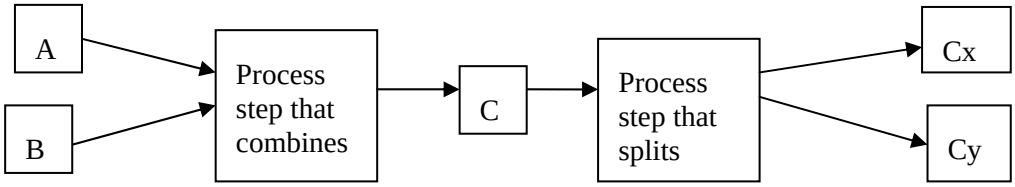
29. If the processing establishment produces products that were handled prior to entering the establishment and that have influenced quality, then the establishment may want to receive detailed information about these handling parameters. For example, if the product is fresh tuna, it is important to receive specific information about the cooling conditions of the raw materials (time and temperature) because this will have an impact on the product quality and storage life of the product.

30. Most processing establishments receive raw material every day from several suppliers or they receive from the same supplier different lots of raw material that they may want to mix in the final products. In such cases it is important to keep records on what is mixed at which step, and that a new unique lot number is given to the mix.



2 Lot numbers New production lot/code

31. Many processing establishments also split batches of raw materials during the processing, for example as a result of size grading or because of process steps being carried out in smaller batches, e.g. sterilization of cans in which each cook in a retort may be considered a batch. In such cases it is important to establish new codes so the "sub-lots" are linked with the "mother lot"



2 Lot Numbers New Production New Production

32. Different establishments may apply different systems of combining and splitting lots and production codes depending on the type of products, the food safety hazards linked with them and eventually specific customer requirements.

33. The minimum information regarding traceability, which a fish processing establishment shall provide with the product, is the information about the FAO catch area (if wild caught fish), the type of fish species, the date of production and the information about place of processing and packaging, which all shall be on the label of the product. If the fish originates from aquaculture, this should be informed on the label instead of the FAO catch area together with the country of production. The information provided on the label shall also be transferred with related sales documents e.g. invoices and health certificates and these documents may then contain further information about the history of the product if so required by the buyer or by law. The sales documents or other records shall be filed as documentation on who received the fishery products for further distribution to the market.

B. Data capture and management

i: Where and when traceability is required for fisheries products?

34. Regulations and international standards typically require that all operators shall be able to trace "one step" before and "one step after" their own operation. This means that each operator shall keep documentation on all inputs used for the formulation of the product and on the distribution of the final product from that operation. If each operator in the supply chain can identify one step before and one step after, then it is possible to trace a product in the full value chain, if it is necessary.

35. In the fisheries sector traceability starts with the fishing vessel or the aquaculture farm. These operators shall identify all lots and the inputs/processes taken to produce them. Of most importance

shall be the inputs and processes that may influence the safety of the product, for example the cooling process of tuna or the use of feed and medicines on the farm.

36. Another element in wild caught fish is traceability to the catch area, which is required by law if the product is to be sold on the EU market. The label on the final product shall have information at least about the FAO area where the fish was caught. This information, therefore, shall follow the raw material/products in any transfer so the operator responsible for the label of the final product can identify the source.

ii. Traceability solutions: from paper based to IT based

37. The choice of the traceability solution will vary depending on the level of requirements: the more extended are the requirements, the more traceability is needed and therefore the more technology may be needed. The traceability solution will provide the precision (degree of assurance) with which the tracing system can "pin-point" the product movement or product characteristics.

38. The amount of verification that is required to build confidence in the traceability system will differ depending on the solution, i.e. a computerized system may be verified less often than a paper based system.

39. The data from the production necessary for traceability have to be defined based on the traceability requirements, e.g. food safety, IUU, ecolabelling. The simple approach usually used is to record three main types of data - input/process/output - to make implementation efficient for users in the supply chain.

40. Establishing traceability in compliance with the minimum requirements in legislation can be done by the individual operator by simple means such as manual record keeping, application of identification labels on all batches and sub-batches and maintaining of the document in a system of files for easy retrieval, if necessary.

41. If traceability is established by simple paper records at the individual operator level, the system may be solid and safe enough, but it may take quite a long time to search through the documents if a particular case has to be investigated by reviewing the related documents. Robustness of the system refers to the reliability of the information that will be received when tracing back – how big is the risk that the right information is available and how big is the risk that an error occurred at some point in the chain so that the information does not relate to the problem under investigation? The relative importance of the two situations shall be considered when designing the system.

42. Traceability can be established by the individual operators or by groups of uniform operators or by operators in a whole value chain. It may be established by more sophisticated systems involving electronic records, identification by international barcodes, etc.

43. The abovementioned elements should be considered and agreed on prior to designing the system.

C. Data communication

i: Things to consider when exchanging information in the fisheries sector

44. Primary producers:

- Establish records on place and conditions of catching (common name of the fish) or farming, and lot number (indicate mixing of catch of a particular fish species on different dates);
- Link the information on these records with identification labels or marks on the fish when they are moved from the operator to the next step in the value chain;
- Transfer the information on the records to the buyer of the raw materials as required and always keep the information on file for an agreed upon period.

45. Processing establishments:

- Obtain and keep details of raw materials and ingredients from the suppliers;
- Identify individual lots by product coding throughout the time period they are within the operator's control;
- Maintain lot separation throughout distribution, processing and storage;
- Link batch codes to production records (e.g. in thawing, cooking, freezing, etc.).

46. The details of the information that the individual operator wants, namely to: i) receive and keep from the supplier; ii) generate and keep in own operation; and iii) provide to the next step in the value chain. This information depends on the individual operation and shall typically be determined by the answer of some key questions, such as:

1) What risks pertaining to the products should be considered (i.e. the source of potential hazards/food safety risks), and what is the risk of non-compliant fish becoming mixed with compliant fish?
2) Which data are important for the customer (traceability breadth)?
3) How far back is it necessary or desirable to be able to trace? (traceability depth);
4) How fast does back tracing need to be?
5) How robust should the system be?

ii. Traceability for labelling purpose

47. Traceability is necessary to allow specific labelling to be accurate and must be supported by information on the products and the production chain. Traceability is necessary also because in the event of a food safety issue, it reduces impact and risk for the food sector and consumer safety. It also reduces costs in event of a withdrawal.

48. The information on the origin of the products is provided through the ‘one step back’ for all suppliers from whom ingredients are sourced and ‘one step forward’ information for all customers to whom their products are sold.

49. Traceability information needed for labelling purposes would simplify the process of product recall.

D. Traceability system for small scale fisheries

50. Within the context of small-scale fisheries operators, the most effective system can be chosen from some of the following:

- Documents based system;
- Enhanced document system (with data base for the reporting of production and faster product recall if needed);
- Total inter-operators computerized system for the supply chain.

51. Once the system is designed, the implementation in practice is about being able to work in a systematic way. Staff members shall be trained to understand that the registration they undertake is a part of the traceability of the products, and that ultimately this is linked with both the legal and commercial requirements of the product that is bought and consumed by the final consumer.

52. The way in which record keeping is organized is of major importance. It shall be organized in a way that it is practical and realistic for the operators to carry out without risk of errors and to prevent the records from being destroyed by water, weather or other harsh physical conditions.

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COMMITTEE ON FISHERIES

SUB-COMMITTEE ON FISH TRADE

Fourteenth Session

Bergen, Norway, 24–28 February 2014

REVIEW OF MARKET ACCESS REQUIREMENTS

Executive Summary

The paper reviews the recent developments in market access requirements related to consumer protection, animal health and related certifications, FAO's work in relation to scientific advice to the Codex Alimentarius Commission and support to member countries to implement the Codex standards, and FAO's work in relation to harmonization of non-regulatory certification requirements related to food safety.

Suggested action by the Sub-Committee:

1) Comment on FAO's work in reference to scientific support to Codex in the standard setting process;
2) Provide guidance on future work of FAO in relation to:
   - FAO/WHO jointly developing guidelines for the implementation of the Codex Codes of practice with respect to bivalve molluscs, requested by 13 countries representing the major markets for bivalve molluscs;
   - Technical assistance to member countries to implement standards, guidelines and good practices in aquaculture, traceability and fish handling and processing to improve market access; and
   - Dissemination of information related to standards, guidelines, certification and harmonization of certification requirements.
3) Recommend future areas of work, with particular attention to small-scale fisheries and aquaculture.

INTRODUCTION

1. During its thirteenth session, the Sub-Committee on Fish Trade[1] (COFI:FT) reviewed developments and issues in international fish market access, particularly those relevant to fish and seafood safety, quality, traceability, certification, trade standards and market access. COFI:FT expressed support for FAO's work in providing scientific support for Codex standard setting activities and for its technical assistance to developing countries in capacity building to implement the Codex Codes of practice and standards. Further, COFI:FT emphasized that FAO should provide technical assistance to small-scale fisheries and aquaculture in developing countries to improve market access. COFI:FT requested that FAO ensures the dissemination of scientific information on food safety issues associated with fish and fishery products and Codex Guidelines to enable consumers to make informed decisions.

2. The thirtieth session of the Committee on Fisheries (COFI)[2] endorsed the COFI:FT recommendations and underlined the importance of FAO's capacity building activities on market access and value addition, in particular for small-scale producers and processors in developing countries.

3. The objectives of this paper are to: i) report on recent developments in market access requirements related to consumer protection, labelling and certification; ii) describe FAO activities in this field; and iii) seek the guidance of the Sub-Committee on how to strengthen FAO's work in this area. This agenda item addresses market access issues primarily related to food safety and animal health, while two other agenda items will discuss eco-labels and traceability related to combating illegal, unreported and unregulated (IUU) fishing.

RECENT DEVELOPMENTS IN FISH SAFETY AND QUALITY

4. Fish safety and quality remain the focus of regulatory requirements in international fish trade. Though seafood is generally regarded as a safe food, during the last couple of years there have been a few food safety problems, including large market recalls, reinforcing the need to strengthen food safety management along the entire supply chain. There have been a few instances of import bans as a result of perceived risks (e.g. import bans for shrimp from countries affected by early mortality syndrome (EMS)) that are not based on scientific or epidemiological evidence. The causative agent of EMS has been identified as a special strain of a bacterium that is commonly found in coastal and estuarine waters. This strain lacks the genetic potential required to cause human disease and, therefore, there are no food safety concerns associated with affected shrimp. In experimental studies, disease transmission has not been possible with frozen infected shrimp, therefore, the risk of disease transmission through imported commodity shrimp is extremely low. FAO has been working closely with EMS affected countries and academic institutions involved in identifying the causative agent. FAO has also issued a press release on this topic to disseminate information related to food safety and international trade[3]. More detailed guidance on issues related to trade in commodity shrimp as well as live shrimp has been published in a FAO Fisheries and Aquaculture Report[4].

5. While the European Union (Member Organization) (hereafter referred to as EU), the United States of America and Japan continue to be major importers of seafood (together accounting for 64 percent of global seafood trade), the importance of China (6 percent) and the Russian Federation (2 percent) as importers is growing. Each of these major markets has their own regulatory requirements, and these are being constantly updated to respond to both scientific developments as well as market related issues. In addition to meeting these regulatory requirements, non-regulatory requirements related to issues such as sustainability and the environment are becoming increasingly important for

[1] See COFI:FT/XIV/2014/Inf.4.
[2] FAO. 2012. *Report of the thirtieth session of the Committee on Fisheries*. Rome, Italy.
[3] http://www.fao.org/news/story/en/item/175416/icode/
[4] FAO. 2013. *Report of the FAO/MARD Technical Workshop on Early Mortality Syndrome (EMS) or Acute Hepatopancreatic Necrosis Syndrome (AHPNS) of cultured shrimp (under TCP/VIE/3304).* FAO Fisheries and Aquaculture Report 1053. FAO, Rome. http://www.fao.org/docrep/018/i3422e/i3422e.pdf

market access. Certification by the national competent authority is important in most major markets with respect to regulatory requirements and, in addition, evidence for having met non-regulatory requirements in the form of various private certifications are often required for export. Developing countries, which supply over half of global fish exports, are facing a challenge in meeting the varying regulatory and non-regulatory market access requirements in different importing countries.

6. Codex standards, guidelines and the codes of practice provide the internationally agreed framework for regulatory requirements related to food safety and quality. The Codex Alimentarius Commission celebrated its 50th Anniversary during its 36th session in Rome (1–5 July 2013). The Codex Codes of practice and guidelines provide broad guidance at operational level at all stages of the supply chain. Codex also has a number of product standards, maximum limits for various food additives and chemicals and maximum residue limits (MRLs) for pesticides and residues of veterinary drugs. However, developing these internationally agreed documents takes time, and a study of the causes of rejections in international markets indicates that some of them are due to criteria for which Codex standards do not exist, for example, residues of veterinary drugs in aquaculture products. FAO is emphasizing the importance of the application of good aquaculture practices and the responsible use of approved veterinary medicines. In international fish trade, the number of rejections resulting from residues of banned antibiotics has declined considerably. MRLs for approved veterinary drugs are not harmonized in different importing countries because Codex MRLs exist for only one drug. The need for MRLs for other approved drugs has been recognized in the Codex system. The Codex Committee on Residues of Veterinary Drugs currently has an electronic working group that is compiling a database on countries' needs for MRLs, and this could help countries to prioritize the Codex work on MRLs for the approved drugs.

7. Bivalve molluscs are important commodities in international trade. Bivalve safety management requires special attention, and there are several examples of trade standard compliance failures and rejections in international markets. As a result of shortcomings in the sanitary controls of bivalve molluscs, several countries producing large volumes of bivalves are unable to access international markets. The Codex Code of practice for fish and fishery products has a section on live and raw bivalve molluscs, and this provides general guidance to countries on the implementation of sanitary and biotoxin controls at the national level. However, the participants of an international workshop held in 2012, involving 13 countries including major producers and importers of bivalve molluscs, brought to the attention of FAO/World Health Organization (WHO) that the Codex guidelines, while providing an important framework, do not provide sufficient detail for any country to start a new shellfish sanitation programme. This has led to major importing countries adopting their own sanitary programmes and then, when these programmes differ, exporting countries are obliged to implement two different monitoring programmes to satisfy the import requirements. Thus, workshop participants submitted a request, through the EU reference laboratory for monitoring bivalves, to FAO/WHO to setup an international expert working group to elaborate scientific and technical guidance based on the Codex Codes of practice. This request is being brought to the attention of the Codex Committee of Fish and Fishery products for their support. Furthermore, because this is an issue impacting bivalve trade, the support of this Sub-Committee is also sought for FAO/WHO to undertake this activity.

8. Harmonization of non-regulatory requirements by different markets would go a long way towards improving market access. Though many of these are business to business requirements, they involve costs that might affect small and medium scale producers and processors and also add costs to consumers in importing countries. Though food safety aspects are well covered in regulatory requirements, many importers demand private certifications related to food safety and quality, such as the standards of the British Retail Consortium (BRC), International Featured Standards (IFS), Safe Quality Food Institute (SQF), Food Safety System Certification (FSSC) 22000 and others. In some cases, the products may be placed onto the markets with logos accompanying such certifications. Recognizing equivalence of Sanitary and Phytosanitary (SPS) requirements would be in line with Article 4 of the WTO SPS agreement. The Global Food Safety Initiative (GFSI), through their benchmarking process, has recognized these schemes and, therefore, the schemes could be considered equivalent. However, this equivalence has not yet been recognized by many importers, and thus

processing establishments in developing countries are obliged to have multiple certificates. Fish processed in the same establishment will be certified to different private standards depending on the importing country requirement. Therefore, more effort is needed to ensure that the results of benchmarking provide benefits to the producers, processors and consumers who could benefit from cost reductions.

FAO ACTIVITIES

9. The FAO Fisheries and Aquaculture Department has continued its scientific and technical support to FAO's normative work by:

- Providing advice to the 32nd session of the Codex Committee on Fish and Fishery Products (CCFFP). The 32nd session made progress on several sections of the Code of practice for fish and fishery products and standards, including the final endorsement for some sections[5];
- Providing advice to the 43rd session of the Codex Committee on Food Hygiene (CCFH), which endorsed the hygiene provisions of some of the draft standards related to fishery products[6];
- Providing advice to the electronic working groups of other committees that deal with fisheries issues e.g. Codex Committee on Food Labelling (working on organic aquaculture), Codex Committee on Fats and Oils (working on fish oil), Codex Committee on Residues of Veterinary Drugs (sampling aquatic animals for testing for residues of veterinary drugs);
- Continuing work on the development of risk analysis tools for use by national governments based on FAO/WHO risk assessment for *Vibrio* spp. in seafoods and conducting regional training on the methodology for detection and enumeration of *Vibrio* spp. in seafoods;
- Organizing an expert consultation on the public health risks of histamine and other biogenic amines from fish and fishery products and developing a web-based tool for development and analysis of sampling plans for histamine in fish;
- Publishing Fisheries and Aquaculture Technical Paper 574 "*Assessment and management of seafood safety and quality: Current practices and emerging issues*". This is the updated version of the previous FTP 444 that was widely used by fish inspection services in many developing countries; and
- Publishing the report of the FAO/MARD Technical Workshop on early mortality syndrome (EMS) or acute hepatopancreatic necrosis syndrome (AHPNS) of cultured shrimp. This publication has recommendations related to food safety and international fish trade.

10. FAO continued its capacity building activities in developing countries in:

- Implementing Codex guidelines, Codes of practice and standards, assessment and management of national seafood safety and quality regimes to meet major market requirements and comply with SPS and technical barriers to trade (TBT) requirements, traceability and certification programmes;
- Implementing programmes to reduce post-harvest losses and value addition for different fisheries commodities, particularly those coming from small-scale fish farmers and fishers, to improve market access;
- Developing and disseminating a database on value-added products in international markets and the labelling requirements for these products;
- Supporting the design and evaluation of the FAO-Thiaroye fish processing oven to improve the quality of smoked fish and minimize the levels of polycyclic aromatic hydrocarbons. This processing oven is gaining popularity in many countries in Africa;
- Supporting the regional network of fish inspectors, such as the African Network for Fish Technology and Safety (ANFTS) and the Pan-American Network on fish technology, inspection and quality control;

[5] http://www.codexalimentarius.org/download/report/784/REP13_FFPe.pdf
[6] http://www.codexalimentarius.org/download/report/787/REP13_FHe.pdf

- Organizing training to disseminate market access requirements, lessons to be learnt from trade standard compliance failures in fisheries and aquaculture products and harmonization of certification requirements;
- Implementing regional training programmes that help member countries to handle SPS and TBT issues in the WTO;
- Jointly with UNIDO and the International Association of Fish Inspectors (IAFI), co-organizing the biannual World Seafood Congress that brings together regulators from major importing countries, fisheries and aquaculture certifying bodies, representatives of the fish processing industry and fish inspection and certification services from fish exporting countries; and
- Supporting the biannual International Conference on Molluscan Shellfish Safety (ICMSS). This Conference is a good forum for updating those involved in national fish inspection and certification agencies with scientific developments in the area of sanitary control and biotoxin management.

11. FAO is also working with private standard setting bodies, benchmarking agencies and importer associations to contribute to harmonization of the certification requirements.

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COMMITTEE ON FISHERIES

SUB-COMMITTEE ON FISH TRADE

Fourteenth Session

Bergen, Norway, 24–28 February 2014

THE SMALL-SCALE FISHERIES SECTOR IN RELATION TO INTERNATIONAL TRADE AND SUSTAINABLE LIVELIHOODS

Executive Summary

The purpose of this document is to provide the Sub-Committee with an overview of the key challenges the small-scale fisheries sector is facing in terms of balancing international trade and sustainable livelihoods. The document also presents potential pathways for addressing these challenges.

Suggested action by the Sub-Committee:

- Provide guidance for the implementation of the voluntary guidelines for securing sustainable small-scale fisheries in the context of food security and poverty eradication, in particular with regard to the sections dealing with value chains, post-harvest and trade and with social development, employment and decent work;
- Support efforts to strengthen tenure in small-scale fisheries, including support for the "*Tenure and Fishing Rights 2015*" conference; and
- Provide guidance for future work by FAO in the area of small-scale fisheries trade and livelihoods issues, including a decision on updating the Hidden Harvest study and/or to further investigate possibilities on how to collect sub-sector disaggregated data.

INTRODUCTION

1. The thirteenth Session of the Sub-Committee on Fish Trade (COFI:FT) encouraged FAO to make the focus on the small-scale sector more explicit in its work programme, and to include the sector as a separate agenda item at the next session of COFI:FT. The purpose of this document is to inform the Sub-Committee about the role of the small-scale fisheries in international trade and to present key challenges the sector has to address to better balance benefits from international trade with sustainable livelihoods. The paper concludes with an outline of potential pathways and suggested actions to achieve this balance for consideration by the Sub-Committee.

2. The small-scale sector plays a considerable role in capture and aquaculture fisheries production as well as in trade, employment and nutrition. However, its contribution is difficult to quantify due to the limited availability of comprehensive statistics. Global fisheries production and trade data do not distinguish between small-scale or industrial fisheries origins. One reason for this is the diverse nature of small-scale fisheries in different contexts, which makes global reporting more challenging. Small-scale fisheries operators are engaged in subsistence activities, commercial fishing, processing and marketing.

3. Based on a number of representative national case studies, an FAO/World Bank/World Fish Centre study (2012)[1] estimates that nearly 40 percent of the global capture fisheries production originates from small-scale fisheries in developing countries.

4. According to the same source, 97 percent of all full- and part-time workers engaged in commercial capture fisheries for their livelihoods live in developing countries. Among these, 90 percent work in small-scale fisheries. The study also stresses that 47 percent of the small-scale fisheries workforce are women, involved in, but not exclusively, post-harvest activities. Their participation in productive activities leads to improved household well-being as a significant share of the income is spent on food and their children's education.

5. In aquaculture, the role played by the small-scale sector is also remarkable. In particular, in several Asian countries, the bulk of inland and costal aquaculture producers consist of family-based farms or small cooperatives.

6. It is noteworthy that a significant share of the total fisheries production destined for direct human consumption originates from small-scale fisheries operations. Fish and fishery products make a particularly important contribution to the diets in developing countries, playing a major role in their food and nutrition security. At present, these products contribute about 12 percent of the total animal protein intake in developed countries while they account for 27 percent in least developed countries and for 19 percent in other developing countries.

7. Notwithstanding the fact that products from small-scale fisheries are particularly important for domestic markets, they are increasingly being traded. In general, developing countries now account for more than 50 percent of the global fisheries export value and for more than 60 percent in terms of quantity (live weight). The fishery net export revenues (i.e. the total value of fish exports less the total value of fish imports) of developing countries exceed those of other food commodities combined. Currently, developing country fisheries exports are dominated by high-value species directed to developed countries markets. Fast urbanization and emerging middle classes in developing countries, which make regional markets more attractive, could change or complement the current trade patterns in the near future, especially when currency exchange rates are not attractive.

8. Small-scale fisheries therefore play an undeniably important role in international trade while also having important livelihoods functions in terms of direct and indirect income generation, food security and nutrition and poverty reduction. At the same time, the benefits from international trade do

[1] FAO/World Bank/World Fish Centre/ARD. 2012. *HIDDEN HARVEST. The Global Contribution of Capture Fisheries* (available at http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2012/05/18/000427087_20120518142913/Rendered/PDF/664690ESW0P1210120HiddenHarvest0web.pdf)

not necessarily trickle down to small-scale fishing communities, which frequently remain among the most vulnerable and marginalized groups in developing countries.

9. From 2009 to 2012, FAO conducted a comprehensive value chain analysis of international fish trade with an impact assessment for the small-scale fisheries and aquaculture sector. This Norwegian Agency for Development Cooperation NORAD funded project was entitled *"Value chain dynamics, the small-scale sector and food security; policy recommendations for international fish trade"*[2]. It involved case studies focusing on nine developing countries (Bangladesh, Cambodia, Ghana, Honduras, Kenya, the Maldives, Peru, Thailand and Uganda). Relative to other actors in the value-chain, the project found that small-scale fishers and fish farmers are receiving the least economic benefits for their products. Most fish suppliers in developing countries were acting as raw material suppliers to developed countries, demonstrating they were earning limited profits from their valuable natural resources. Processors and retail markets were found to be receiving more of the distributional benefits due to their more concentrated structure and stronger bargaining power.

10. A FAO/Norway study[3] examined the impact of international fish trade on food security both at the global level and through 11 national case studies in Nicaragua, Brazil, Chile, Senegal, Ghana, Namibia, Kenya, Sri Lanka, Thailand, the Philippines and Fiji. The evidence drawn from this study indicates that, globally, in eight of the 11 countries international trade has had a positive impact on food security. This assessment was based on outcomes related to national impacts, impacts on fish workers, consumer and resources. International fish trade, however, was determined to have a negative impact on the fish resources for the 11 countries studied, highlighting the urgent need for more effective management regimes, Consequently, the study cautions that sustainable resource management practices are a necessary condition for sustainable international trade and that fish export promotion needs to be coupled with a sustainable resource management policy. The study also highlights the need for free and transparent trade and market policies to ensure that the benefits from international fish trade are equitably enjoyed by all segments of society. The study underscores the FAO's *Code of Conduct for Responsible Fisheries* recommendation that states consult with all stakeholders, industry, as well as consumer and environmental groups, in the development of laws and regulations related to fish trade[4].

11. A recent Department for International Development (DFID) commissioned review[5] of research on the potential role of fisheries and aquaculture in development concluded that the interactions between international fish trade and food security remain ambiguous. Some studies argue that export revenues from fisheries trade contribute to improved food security while others emphasize the negative impacts of decreases in local availability of fisheries products for domestic consumption. What emerges from the DFID review is an overall lack of evidence and appropriately disaggregated data to adequately support any of these views at a larger scale. It needs to be acknowledged that most studies are likely to have valid elements, depending on the local context and the period of time under consideration.

12. The following section provides an overview of a number of key challenges small-scale fisheries are facing in relation to international trade and sustainable livelihoods. The concluding sections identify potential pathways and actions to address these challenges.

[2] http://www.fao.org/valuechaininsmallscalefisheries/en/
[3] Kurien, J. 2005. *Responsible fish trade and food security.* FAO Fisheries Technical Paper. No. 456. Rome, FAO. 102p.
[4] Royal Swedish Academy of Agriculture and Forestry (KSLA). 2009. *Fisheries, sustainability and development*.
[5] MRAG/IDS/University of Sterling. 2013. *Fisheries and aquaculture and their potential roles in development: an assessment of the current evidence* (available at http://r4d.dfid.gov.uk/pdf/outputs/fisheries/61091-Fisheries_and_Aqua_Evidence_Review.pdf)

KEY CHALLENGES FOR SMALL-SCALE FISHERIES IN RELATION TO INTERNATIONAL TRADE AND SUSTAINABLE LIVELIHOODS

13. A number of resources and assets are critical for small-scale fisheries communities' livelihood security and for their international trade development opportunities. These include not only the availability of natural resources, appropriate technology and infrastructure, technical and functional skills, production and trade related knowledge, and domestic and international markets, but also health, education and financial services. The vulnerability of small-scale fisheries communities depends on factors that influence their actual access to such resources and assets. These factors can be external, such as trends in globalized fisheries trade systems or shocks (e.g. soaring food prices and growing price volatility in world commodity markets), but they also depend on the social, institutional and political environment within which the small-scale fisheries communities operate, as well as on their own level of organization.

14. The following paragraphs illustrate some interrelations between international trade and livelihoods, which deserve attention because of their contribution to either increasing the vulnerability of small-scale fisheries communities or strengthening their resilience and vitality, depending on how they are addressed.

GLOBALIZED FISHERIES VALUE CHAINS

15. Demand for fish is increasing as a result of growing world population, increasing global wealth and the request for healthier foods, among which fish is one of the most prominent. In response there is a trend towards vertically integrated and progressively globalized fisheries value chains to secure the timely supply of high value fisheries products from developing countries for major markets, which are still primarily in developed countries. These global chains benefit from improved information and communication technology as well as from more efficient global transport systems, which facilitate control over each chain segment even at a distance. This global integration reduces the bargaining power of often weakly or not organized small-scale fisheries operators, constraining their ability to generate profits that support long-term sustainable production from an integrated economic, social and environmental perspective.

16. Considering the first step in the fisheries value chain, managing for the optimal utilization of scarce natural resources is in fact one of the key challenges in fisheries, and even more so for small-scale fisheries in developing countries with often weak fisheries sector governance. Where fisheries access agreements are stipulated, the maximum sustainable yield of the resources to avoid overexploitation should be respected. These agreements can constitute a significant source of income for developing countries not able to fully exploit their resources with domestic fleets. However, it needs to be acknowledged that often small-scale fisheries fleets are expanding and increasing their ability to exploit a larger share of fisheries resources in Exclusive Economic Zones. Secure tenure rights, including access to fishery resources and to land for auxiliary activities such as processing and marketing as well as for housing and other livelihood support functions, are essential therefore for the sustainable development of small-scale fishing communities.

17. Looking at the higher end of the value chain, it becomes evident that integrated globalized food systems rely on science and technology to optimize production, processes and packaging. While some small-scale fishing communities have successfully connected with these global systems, others are lagging behind. In the international market, fishery products have to comply with international food safety and hygiene requirements. Small-scale fishing communities frequently suffer from relatively low levels of human capital because of limited access to education, vocational training and low endowments of physical capital (e.g. in the form of appropriate processing technologies). They struggle to meet these standards that are required for fish and fishery products in the most profitable markets, which could turn into *de facto* non-tariff barriers to trade.

18. Limited direct access to market information or the presence of information asymmetries may also preclude small-scale fisheries operators from taking full advantage of existing and emerging markets. Certification schemes like ecolabelling of fish and fishery products could provide, for example, potential new marketing opportunities, even though currently used primarily in developed

countries. However, small-scale fisheries would often struggle to comply with data intensive certification requirements and management systems, as well as with the high costs of many of the currently existing ecolabelling schemes. Some of these schemes acknowledge the specificities of the small-scale fisheries sector and make efforts to make their schemes more accessible. Equally, some consumer-driven movements striving to preserve traditional and local food production and consumption, specifically promote small-scale fisheries products and aim to inspire reflection on the status and management of fisheries resources.

EMPLOYMENT: DECENT WORK IN SMALL-SCALE FISHERIES

19. Fishing remains among the most dangerous of professional activities and the post-harvest sector may also expose its operators to multiple risks, including potential chronic health problems. The existing framework of international labour standards, aiming at the establishment of a minimum level of protection from inhuman labour practices, is not always properly implemented. In addition, the often informal character of small-scale fisheries makes it difficult to target the sector even when those standards are applied. Thus, another major challenge in small-scale fishing communities is the realization of decent work and employment conditions.

20. Women in small-scale fisheries can be particularly exposed to abuse. For example, there is evidence from some countries that female fish traders engage in transactional sex with fishers in exchange for the fish from which the women derive their income to support their families through processing or marketing[6]. The women involved in sex-for-fish are often financially more vulnerable widows, divorced or unmarried women. This behaviour also contributes to disproportionately high HIV/AIDS rates in fishing communities compared with other communities in some areas.[7] Women engaged in intra-regional trade are frequently abused by officials at border control points.

21. Another threat to decent work in small-scale fisheries is the presence of child labour. Child labour is hazardous to children, preventing their physical, mental, spiritual, moral or social development. Poverty, limited education and the lack of alternative livelihoods in small-scale fishing communities are major drivers of children's involvement in fisheries and post-harvest activities. While small-scale communities often live in vulnerable conditions, with no or little access to services such as education and with limited alternative livelihood options, involving children early on in fishing and post-harvest activities appears as a way to equip them with the necessary professional skills for their future. However, child labour hampers societal progress as it affects children's development and, hence, their productivity as adults. For players of global value chains who pay growing attention to corporate social responsibility, the respect of human rights - including the rights of the child and fundamental rights at work – becomes an important element in the choice of business partners. Within this framework FAO, in close collaboration with ILO, has developed *Guidance on Addressing Child Labour in Fisheries and Aquaculture*, in order to support governments, fisheries sector organizations, civil society organizations and other interested stakeholders in taking action.

PRESERVATION AND VALUE-ADDITION OF THE HARVEST FOR FOOD SECURITY AND NUTRITION

22. As stated in the introduction, fish is an important source of protein, in particular for developing countries. Fisheries products by definition are highly perishable and subject to high post-harvest losses. Insufficient knowledge of good fish handling practices, lacking or limited appropriate storage facilities and processing equipment in small-scale fishing communities increase the risk of these losses, which have important implications, both in terms of economic returns to the producer and in terms of nutritional value of the fishery products for the consumer.

23. Women play a major role in processing and local and intra-regional trade. Small-scale processors in developing countries usually produce dried, salted, smoked or fermented fish for trade in local, national and regional markets to overcome the limitations to fresh fish trade in the absence of a

[6] FAO. 2007. *The State of World Fisheries and Aquaculture 2006*. Rome. 162p.
[7] Source: http://ac.els-cdn.com/S0305750X08000223/1-s2.0-S0305750X08000223-main.pdf?_tid=936bf362-f5e4-11e2-b986-00000aacb35d&acdnat=1374837465_4f13634d90df89b7759e8858bd3bffd3

functioning cold chain. A comprehensive loss assessment is not available but enough evidence is provided by case studies to understand that the availability and quality of fisheries products could be greatly improved through better handling, processing, storage and transportation.

24. Some traditional processing techniques, like smoking, which may negatively affect the respiratory system of processors, can represent health hazards. The availability of new technologies that are more energy efficient and have reduced health risks, such as combined drying-smoking ovens as well as solar powered equipment, is increasing but they have not yet reached enough small-scale fishing communities. It is important to note that improved fish quality obtained through better technologies may increase the product price and make traditional products less accessible for domestic low-income consumers. Governments have a potential role to play to encourage access to alternative inexpensive proteins to ensure food security and nutrition for all.

PATHWAYS TO IMPROVE SMALL-SCALE FISHERIES CONTRIBUTION TO INTERNATIONAL TRADE AND SUSTAINABLE LIVELIHOODS

25. The previous section has shown the complexity of the relations between international trade and livelihoods of small-scale fishing communities. In order to support the small-scale fisheries sector to take full advantage of the benefit of international trade, including in terms of improved livelihoods, an integrated development approach at different levels is required. The following paragraphs suggest important elements to be considered when developing such an approach.

POLICY COHERENCE

26. The fundamental nature of many of the challenges faced by the small-scale fisheries sector is not new. However, despite the remaining flaws, the knowledge base to address these issues has grown and needs to be used for evidence-based action. There seems to be political momentum at the highest level to do so. For example, the outcome document of the Rio+20 conference[8], *The future we want*, states in paragraph 175 that the signatories (countries and civil society organizations (CSOs)) *'…commit to observe the need to ensure access to fisheries, and the importance of access to markets, by subsistence, small-scale and artisanal fishers and women fish workers, as well as indigenous peoples and their communities particularly in developing countries, especially small island developing States.*'

27. As stated previously, secure access and tenure is crucial for the responsible use of fisheries resources. The *Voluntary Guidelines for the Responsible Tenure of Land, Fisheries and Forestry in the Context of National Food Security*, which were adopted in 2012 by the Committee on World Food Security, are an important international instrument to allow small-scale fishers to claim and defend their access and use rights. In addition, based on a COFI mandate, FAO is currently facilitating the development of *Voluntary Guidelines for Securing Small-scale Fisheries in the Context of Food Security and Poverty Eradication* to complement the *Code of Conduct for Responsible Fisheries.* These guidelines, which are currently under negotiation, include a specific section dealing with value chains, post-harvest and trade as well as one on social development, employment and decent work. Within the framework of a human–rights based approach these guidelines support responsible governance of fisheries and sustainable social and economic development for the benefit of current and future generations. FAO is further supporting additional work on secure access and tenure with *Tenure and Fishing Rights 2015*[9], a global conference on rights-based approaches for fisheries. Such global developments provide important entry points for small-scale fisheries policy development or improvement, as well as for trade related issues.

28. The overall impact of international trade on small-scale fisheries livelihoods is yet to be fully understood and likely to vary, depending on scales and geographic context. Often, national policies having an impact on fish trade overlook the small-scale fisheries sector. For example, badly timed fish imports to fill domestic supply gaps can weaken the position of domestic small-scale fishers if they

[8] United Nations Conference on Sustainable Development (UNCSD), 20–22 June 2012, Brazil.
[9] Working title.

coincide with periods of glut or bumper seasons. As fish importers in some countries pay volume-based import taxes, it is likely that the interests of domestic small-scale fishers become less prominent in those situations. This is exacerbated by the fact that in some cases importers and cold store owners agree on prices that reduce the competitiveness of domestic products.

29. Broader poverty reduction strategies, trade policies, food security and nutrition policies, labour and employment policies and specific fisheries sector policies need to take these interactions into account and provide for appropriate coherent solutions.

IMPROVED INFORMATION

30. Coherent policy making improving the resilience of small-scale fishing communities and their ability to engage dynamically in and benefit in an equitable way from trade – be it at local, regional or international level – relies on the availability of information, data and analysis. More disaggregated data are needed to improve the visibility of the small-scale fisheries contribution to trade and to better understand the sector's needs to improve its performance. This understanding, including information on the reasons for unbalanced power relations along increasingly globalized value chains, would also help to provide better incentives for linking small-scale fisheries management and trade, with a view to achieve sustainable fisheries.

31. Overall, documented knowledge about value chains and markets in which small-scale fishers are involved is rather fragmented, but the complexities of relationships between the various actors are known[10]. These relationships are characterized by power imbalances and information asymmetry, including informal credit arrangements between fishers and traders, which limit the bargaining power of the former.

32. Small-scale fisheries operators themselves need to be empowered to drive the necessary change to make their contribution to international trade and improved livelihoods. Progress in information and communication technology could provide new opportunities for innovative engagement with other value chain members and the markets (e.g. SMS-based price information systems, electronic self-help platforms to exchange trade and product related information, information about demand in growing regional markets). Collective action, producer, trader and other interest organizations can play a role in promoting a more equitable benefit distribution along the value chain. A key objective of small-scale fishers' and fish workers' organizations is devising ways and means to get the best return for their members' products of labour.

COLLABORATION AND CAPACITY DEVELOPMENT

33. In order to participate in global value chains, small-scale fisheries operators need to become organized to improve their bargaining position and their visibility. Developing horizontal and vertical linkages may facilitate access to necessary services (e.g. education, finance, health) and knowledge (e.g. on reducing post-harvest losses and waste, improved processing technology, new markets), which broaden their basket of options for informed decision-making and innovation. These partnerships can include the private sector, new development actors (e.g. foundations and movements like Slow Food), research institutions, community organizations, chambers of commerce, marketing boards etc.

34. In order to be effective, small-scale fisheries producer or trader organizations need to be strengthened in terms of their ability to actually exercise the right to organize. Only then will they be able to facilitate and improve access to markets and related services, to negotiate better working conditions or benefit distribution along the value chain and to support product quality and safety improvements. However, capacity development efforts should focus not only on technical issues but also on the way decisions can be influenced and positions negotiated. Also, the role of hybrid forms of collective action and network arrangements is likely to become increasingly important to allow the small-scale fisheries sector to respond to emerging issues.

[10] For example: Gudmundsson, E., Asche, F. & Nielsen, M. 2006. Revenue distribution through the seafood value chain. FAO Fisheries Circular. No. 1019. Rome, FAO. 42p.

35. Small-scale fisheries operators in developing countries could benefit greatly from south-south and triangular cooperation to share experiences and transfer knowledge. At the same time, regional markets are likely to become more important and small-scale operators need to be equipped to take advantage of shifting trade and consumption patterns, which are likely to demand more fisheries products, including traditional low-value products, in urban and other regional markets. The NORAD funded project *A value chain analysis of international fish trade and food security with an impact assessment of the small-scale sector* found that in some cases domestic markets can be more lucrative for small-scale fisheries products than international markets. The main reason for this is the increasing purchasing power of domestic consumers leading to growing local demand and higher prices. In addition, savings on transportation and other export-related costs, further improve the attractiveness of local markets.

36. The development of regional trade may also benefit from institutional capacity development, for example in terms of negotiating regional trade agreements and free trade zones.

37. Women can be important drivers of change. The role of women in small-scale fisheries is not limited to processing and marketing. They are also often investors, boat owners, sources of credit, household managers and consumers who make important decisions on family nutrition. Experiences from agriculture show that investments in women result in more innovative economic activity and improved food security and nutrition at household level. Women therefore should not be overlooked in capacity development activities but rather be a specific target group.

38. In conclusion, it is important to acknowledge that enabling the small-scale sector to participate more effectively in international trade is one means to improve its condition and livelihoods. This needs to be integrated within a broader vision of economic growth, rural poverty reduction and natural resource management. As part of its revised strategic framework, FAO is envisaging to support countries in identifying appropriate action consistent with this more holistic vision.

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COMMITTEE ON FISHERIES

SUB-COMMITTEE ON FISH TRADE

Fourteenth Session

Bergen, Norway, 24–28 February 2014

UPDATE ON CITES RELATED ACTIVITIES

Executive Summary

This document provides an updated overview of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) related activities undertaken by the FAO Fisheries and Aquaculture Department (FI) since the report of the thirteenth session of the COFI Sub-Committee of Fish Trade (COFI:FT) in 2012. These include the outcome of the Fourth FAO Panel for CITES that evaluated proposals to amend CITES Appendices with commercially-exploited aquatic species, and the work conducted by FAO to improve capacity in the assessment and management of listed species.

Suggested action by the Sub-Committee:

- Provide guidance on setting thematic priorities for FI regarding its future work related to CITES within the framework of the existing Memorandum of Understanding (MoU).
- Comment on the conclusion of CITES regarding the application of criterion B and the introductory text of Annex 2a of Resolution Conf. 9.24 (Rev. CoP15) to commercially exploited aquatic species proposed for inclusion on Appendix II.
- Comment on the proposal of providing methodological guidance to the FAO Expert Advisory Panel with regard to its Terms of Reference (ToRs), in particular paragraph 5, second bullet *("comment, as appropriate, on technical aspects of the proposal in relation to biology, ecology, trade and management issues, as well as, to the extent possible, the likely effectiveness for conservation").*
- The Sub-Committee may again consider addressing the current scarcity of regular programme funds for the CITES-related activities by FAO and recommend a viable solution.

INTRODUCTION

1. CITES is an international agreement established with the objective to protect and conserve endangered species by ensuring that their survival is not threatened by international trade. Roughly 5 000 species of animals and 29 000 species of plants are subjected to protection by CITES against over-exploitation through international trade. Those species are listed in one of three Appendices, and international trade in these species is controlled according to the degree of protection they require.

2. The CITES Appendices currently include close to 100 commercially-exploited aquatic species of fish, molluscs and echinoderms, including the basking shark (*Cetorhinus maximus*), great white shark (*Carcharodon carcharias*), whale shark (*Rhincondon typus*), all species of sawfishes (*Pristidae*), sturgeons (*Acipenser brevirostrum* and *A. sturio*), European eel (*Anguilla anguilla*), Napoleon wrasse (*Cheilinus undulatus*), all species of seahorses (*Hippocampus spp*.), Caribbean queen conch (*Strombus gigas*), giant clams (*Tridacnidae*) and one species of sea cucumbers (*Isotichopus fuscus*). Moreover, at the last CITES Conference of the Parties (CoP16) held in Bangkok, Thailand, 3–14 March 2013, CITES Parties included five additional sharks and all manta rays in Appendix II. The associated legal measures with these new listings will come into effect in September 2014.

3. In 2006, an MoU[1] was signed between FI and CITES to formalize the intentions of the two organizations in strengthening the cooperation on common issues related to commercially-exploited aquatic species. The MoU has been considered an important achievement by many FAO Member Countries and Parties to CITES.

4. This report provides an updated overview of the CITES related activities undertaken by FI since the thirteenth session of COFI:FT in February 2012, including the outcome of the Fourth FAO Expert Advisory Panel for the Assessment of Proposals to Amend Appendices I and II of CITES Concerning Commercially-exploited Aquatic Species (FAO Panel for CITES) that evaluated seven proposals (for a total of nine species and one genus) to amend CITES Appendices with commercially-exploited aquatic species and the other work conducted under the work plan and the Trust Fund project on "CITES and commercially-exploited aquatic species, including the evaluation of listing proposals (Phase I and Phase II)"[2].

THE APPLICATION OF CITES CRITERIA TO COMMERCIALLY EXPLOITED AQUATIC SPECIES

5. In 2010, after some discussions between FAO and the CITES Secretariat over the correct interpretation of the CITES listing criteria for inclusion of commercially exploited aquatic species in CITES Appendix II, the CoP15 directed the CITES Animals Committee to *"... develop guidance on the application of criterion B and the introductory text of Annex 2 a of Resolution Conf. 9.24 (Rev. CoP15)[3] to commercially exploited aquatic species proposed for inclusion on Appendix II*". FAO was invited to present its views and therefore convened the *"FAO Workshop to review the application of CITES criterion Annex 2aB to commercially-exploited aquatic species"[4] and submitted the report to the CITES Animals Committee in July 2011."* FAO also contributed to the Criteria Working Group set up by the CITES Animals Committee, in particular to clarify basic fish stock assessment approaches including the precautionary approach used by the FAO Panel for CITES.

6. The guidance of the Animals Committee on the application of CITES criterion Annex 2aB is contained in CoP16 Doc. 71 (Rev. 1)[5] and remains rather inconclusive by allowing the co-existence of different interpretations of the CITES criterion 2aB for commercially-exploited aquatic species. In

[1] http://www.cites.org/eng/disc/sec/FAO-CITES-e.pdf
[2] Nearly all of the work over the last eight years by the Fisheries and Aquaculture Department on CITES-related issues has been possible because of funds provided by the Government of Japan through the Trust Fund project on CITES.
[3] http://www.cites.org/eng/res/all/09/E09-24R15.pdf
[4] http://www.fao.org/docrep/014/i2235e/i2235e00.pdf
[5] http://www.cites.org/eng/cop/16/doc/E-CoP16-71.pdf

particular it states that *"there are diverse approaches to the application of Annex 2a criterion B in Resolution Conf. 9.24 (Rev. CoP15). The Animals Committee finds that it is not possible to provide guidance preferring or favouring one approach over another. The Animals Committee recommends that Parties apply Annex 2a criterion B to draft or submit proposals to amend the CITES Appendices, explain their approach to that criterion, and how the taxon qualifies for inclusion in Appendix II"*. The CoP16 accepted this outcome and decided to not pursue the matter any further.

7. This result means that FAO can continue to apply the CITES biological listing criteria to commercially-exploited aquatic species in the manner that was established by its experts and adopted by its Members. However, it is a concern that the unresolved understanding by CITES with regard to the application of the biological listing criteria for commercially exploited aquatic species could potentially lead to a lack of clarity regarding the validity of the scientific advice provided by the FAO Panel for CITES.

"INTRODUCTION FROM THE SEA"

8. FAO participated in the CITES working group on "Introduction from the Sea" established in 2008 to revise Resolution Conf. 14.6. FAO continued to work after the CoP15 to address some questions related to high seas captures that were not yet resolved, in particular issues regarding chartering and the role of flag states and port states in the import/export process. The FAO Legal Department attended relevant working group meetings and provided technical input to the discussions. The proposed revisions of the working group to Resolution Conf. 14.6 are recorded in CoP16 Doc. 32 (Rev.1)[6], which was adopted by the CoP16 by majority vote. With this decision, the working group on "Introduction from the Sea" has concluded its work.

ASSISTANCE IN RELATION TO LISTED SPECIES

SHARKS

9. The recent listings of several sharks demonstrate that a large number of countries are concerned about the status and fisheries of vulnerable elasmobranchs. The FAO International Plan of Action for the Conservation and Management of Sharks (IPOA-Sharks 1999) was developed to address these concerns, and FAO Members expect to be regularly updated on the national and regional implementation of the IPOA Sharks and also expect that FAO assists in particular developing countries in improving the management and assessment of shark stocks in their waters.

10. The most recent FAO review of the implementation of the IPOA Sharks was finalized in 2012[7] and focused on the top 26 shark-fishing nations and entities as well as the ten most relevant Regional fisheries management organisations (RFMOs). It reviewed not only the existence of national or regional plans of action for sharks, but also summarized the main fishery management regimes (paying particular attention to any regulations related to sharks including scientific assessments and relevant research). In addition, the review looked at the quality of shark reporting to FAO by these nations and entities and whether they had adopted measures against illegal, unreported and unregulated (IUU) fishing. The draft IPOA Sharks implementation review was available to COFI in 2012, and a summary of the main results was presented during a side event at the CoP16.

11. Currently, FAO is undertaking an analysis of international shark trade data. This will be complemented by a qualitative analysis made available to FAO Members. In addition FAO is working for the improvement of the international trade statistics of sharks, skates and rays through the proposal of introducing specific codes for these species, by different product forms, in the 2017 edition of the Harmonized System (HS) classification maintained by the World Customs Organization (WCO). This classification is used as a basis for the collection of trade statistics by nearly all countries in the world.

[6] http://www.cites.org/eng/cop/16/doc/E-CoP16-32.pdf

[7] Fischer, *et al.* 2012. *Review of the Implementation of the International Plan of Action for the Conservation and Management of Sharks*. FAO Fisheries and Aquaculture Circular No. 1076. Rome, FAO. 120 pp. http://www.fao.org/docrep/017/i3036e/i3036e00.htm

For shark fins in cured form, the FAO proposal includes detail by species (i.e. hammerhead sharks, oceanic whitetip sharks, porbeagle shark and blue shark), some of which have been included in Appendix II of CITES. In this respect, CITES has expressed its appreciation to the FAO proposal through a supporting letter to WCO in November 2012.

12. Through the FishFinder Programme, FAO is making considerable efforts to help improve fishery and shark data by providing a range of shark identification tools. In 2012, it finalized a catalogue and pocket guides on North Atlantic sharks and batoids[8] and an identification guide for deep-sea sharks of the Indian Ocean is almost concluded. Moreover, a global shark fin guide (for dorsal, pectoral and caudal fins of about 40 species) is currently being created with financial support from the government of Japan. This guide will include an image recognition software tool to allow non-experts (e.g. customs officers and vessel or port inspectors) to reliably identify whole shark fins and should become available in late 2014.

SEA CUCUMBERS

13. In 2007, the CoP14 requested that the CITES Secretariat cooperate with FAO concerning the conservation and trade in sea cucumbers and support relevant capacity-building activities. For this purpose a CITES working group on sea cucumbers was established. FAO initiated a number of activities to develop sound sea cucumber management[9,10] and conservation measures, including the production of a global sea cucumber identification guide[11] and conducting capacity-building workshops for fishery managers[12,13] to familiarize them with potential regulatory measures and management actions in support of ecologically sustainable and socially accepted fisheries for these species. In 2013, the CoP16 agreed that the working group on sea cucumbers had fulfilled its mandate and it was discontinued.

QUEEN CONCH

14. Queen conch has been listed in CITES Appendix II since 1992, but continuous concerns about unsustainable levels of exploitations have kept this species under a Significant Trade Review process by CITES since 1995. Embargo restrictions currently apply to three Caribbean queen conch exporting countries.

15. Through WECAFC, FAO supported the first meeting of the CFMC/OSPESCA/WECAFC/ CRFM working group on queen conch in Panama in October 2012[14]. This meeting was attended by delegates from 23 countries and territories and produced the "Declaration of Panama City" which anticipated, among other things, the development of a regional plan for the management and conservation of queen conch. FAO and CITES were requested to cooperate with states on the improvement and standardization of trade data and statistics (through regionally agreed conversion factors) for queen conch and its derivatives such as pearls, shells and opercula. In this context attention is drawn to the FAO Fisheries and Aquaculture Circular No. 1042 from 2009 on *"Conversion factors for processed queen conch to nominal weight"*[15].

16. FAO will continue providing technical assistance to relevant countries to improve the management of queen conch, to help in adopting regionally agreed conversion factors, and to facilitate the establishment of an auditable "chain of custody" procedure so that catches of queen conch can be

[8] Ebert, D.A. & Stehmann, M.T.W. 2013. Sharks, batoids and chimaeras of the North Atlantic. FAO Species Catalogue for Fishery Purposes No. 7, Rome, FAO. 523pp.
[9] Purcell, S.W. Managing sea cucumber fisheries with an ecosystem approach. Edited/compiled by Lovatelli, A.; M. Vasconcellos and Y. Yimin. 2010. FAO Fisheries and Aquaculture Technical Paper; 520. Rome, FAO. 157p.
[10] FAO. 2010. Putting into practice an ecosystem approach to managing sea cucumber fisheries. Rome, FAO. 81 pp.
[11] Purcell, *et al*. Commercially important sea cucumbers of the world. FAO Species Catalogue for Fishery Purposes. No. 6. Rome, FAO. 2012. 150 pp. 30 colour plates. http://www.fao.org/docrep/017/i1918e/i1918e.pdf
[12] http://www.fao.org/docrep/015/i2658e/i2658e.pdf
[13] http://www.fao.org/docrep/018/i3223e/i3223e.pdf
[14] http://www.fao.org/docrep/017/i3193t/i3193t.pdf
[15] ftp://ftp.fao.org/docrep/fao/012/i0996b/i0996b00.pdf

traced back to their catch location and not just at their point of landing or point of export. FAO is also working for the improvement of trade statistics of Stromboid species through the insertion of specific codes in the FAO proposal for the revision of the above mentioned 2017 edition of the HS classification.

INTERNAL REVIEW OF STATUS OF TRENDS OF COMMERCIALLY-EXPLOITED AQUATIC SPECIES LISTED IN CITES APPENDIX I OR II

17. The FAO project on CITES is in the process of undertaking an internal review of current stock status and abundance trends of the commercially-exploited aquatic species listed under CITES. The review is based on accessible bibliographic information about species-specific recent bio-ecological and abundance data. Currently, this review is available for 10 elasmobranchs listed on CITES Appendices I and II. In the future, other species listed under CITES will also be reviewed.

18. This internal review is quite different from the work performed by the FAO Panel for CITES when evaluating proposals for listing commercially-exploited aquatic species under one of the CITES Appendices. Instead it is intended to provide, as far as possible, a summary of accessible recent scientific information on bio-ecological characteristics (including population dynamics), geographic distribution and abundance trends. The main objective of this activity is to provide updated basic information to regional and national fishery managers on the global status of the commercially-exploited aquatic species listed under CITES.

FAO PANEL FOR CITES

19. The fourth FAO Panel for CITES was convened in Rome from 3 to 8 December 2012 in accordance with the MoU between CITES and FAO, which specifies that FAO should carry out a scientific and technical review of all relevant proposals for amendment of Appendices I and II. The 2012 FAO Panel for CITES received funding from the Governments of Germany, Japan and New Zealand as well as from the FAO regular programme.

20. The preparation for the fourth FAO Panel for CITES followed FAO standard rules and procedures including the principle of equitable geographical representation and drawing from a roster of recognized experts consisting of scientific and technical specialists in commercially-exploited aquatic species.

21. The report of the 2012 FAO Panel for CITES was published as FAO Fisheries and Aquaculture Report No. 1032[16]. The summaries of the assessments for each species are available as COFI:FT/XIV/2014/Inf.7.

22. The ToRs of the FAO Panel for CITES stipulate that the Panel should: 1) *"assess each proposal from a scientific perspective in accordance with the CITES biological listing criteria, taking account of the recommendations on the criteria made to CITES by FAO;"* and 2) *"comment, as appropriate, on technical aspects of the proposal in relation to biology, ecology, trade and management issues, as well as, to the extent possible, the likely effectiveness for conservation"*.

23. The fourth FAO Panel for CITES consisted of a core group of 8 experts and 15 specialists on the species being considered, as well as on aspects of fisheries management and international trade relevant to those species. In addition, two invited observers attended the 2012 Panel, one from the CITES Secretariat and one from the Secretariat of the International Commission for the Conservation of Atlantic Tunas (ICCAT).

24. Following regular procedures, the 2012 FAO Panel for CITES applied the CITES biological listing criteria (Res. Conf. 9.24 [Rev. CoP15]) in accordance with FAO's initial advice to CITES on criteria suitable for commercially-exploited aquatic species.

[16] FAO. 2013. Report of the fourth FAO Expert Advisory Panel for the Assessment of Proposals to Amend Appendices I and II of CITES Concerning Commercially-exploited Aquatic Species, Rome, 3–8 December 2012. FAO Fisheries and Aquaculture Report No. R1032. Rome, FAO. 161 pp. http://www.fao.org/docrep/017/ap999e/ap999e.pdf

25. In 2012, COFI provided additional guidance regarding the ToRs of the Panel by requesting the FAO Panel for CITES *"to strengthen its consideration of technical issues related to fisheries management and international trade consistent with the Panel's Terms of Reference while underscoring the primary scientific role of the Panel"*. In response to this request, in preparing for the 2012 Panel, FAO paid particular attention to: (a) inviting more experts than in the past for comments on technical aspects of the proposal thus ensuring that half of the Panel was composed of experts on fisheries management, international fish trade and CITES implementation; (b) re-structuring the report of the FAO Panel for CITES to give more emphasis on comments on technical matters; and (c) contracting a fisheries socio-economist to substantively contribute to the draft report for the FAO Panel for CITES. However, the Panel noted that the technical aspects involved in the implementation of CITES listings are context-specific and need to be considered on a case-by-case basis. To improve knowledge on these technical aspects, the Panel recommended the implementation of more empirical studies on the impacts and factors influencing the successful implementation of CITES listings of commercially-exploited aquatic species.

26. The Panel welcomed the presentations by representatives of the proponents of the seven proposals at the beginning of its meeting. Both the presentations of the proposals and the opportunity to request clarification from the representatives of the proponents after initial Panel discussions greatly improved the information available to the Panel and its ability to make informed assessments of the proposals.

27. In relation to the proposals, the Panel noted that the quality of the data and information varied and emphasized that the presentation of reliable indices, quantitative wherever possible, is central to determining whether species meet criteria for inclusion in the Appendices. Even where information is difficult to quantify, all efforts should be made to present the information in a form that can be objectively assessed.

28. The fourth FAO Panel for CITES also noted that little information on the relative importance of international trade in driving exploitation was presented in some proposals. In part, this is often due to the lack of information on this subject, resulting from the lack of species level tariff codes for many species in trade. In 2009, the Panel had suggested that CITES Parties and FAO encourage the WCO to establish specific headings within the standardized tariff classification of the Harmonized System to record trade in sharks and their products at the species level. FAO is assisting in this process and has submitted the above mentioned proposal to the WCO for the inclusion of a large number of shark product codes.

29. The fourth FAO Panel for CITES considered the following seven proposals submitted to the CITES COP16[17]:

- **Proposal 42.** Proposal to include *Carcharhinus longimanus* (oceanic whitetip shark) in Appendix II in accordance with Article II paragraph 2(a). The proposal includes an annotation stating that "the entry into effect of the inclusion of *Carcharhinus longimanus* in CITES Appendix II will be delayed by 18 months to enable Parties to resolve the related technical and administrative issues".
- **Proposal 43.** Proposal to include *Sphyrna lewini* in Appendix II in accordance with Article II 2(a) and inclusion of *S. mokarran* and *S. zygaena* in Appendix II in accordance with Article II 2(b). The proposal includes an annotation stating that "the entry into effect of the inclusion of these species in CITES Appendix II will be delayed by 18 months to enable Parties to resolve the related technical and administrative issues".
- **Proposal 44.** Proposal to include *Lamna nasus* (Bonnaterre, 1788) in Appendix II in accordance with Article II 2(a). The proposal includes an annotation stating that "the entry into effect of the inclusion of *Lamna nasus* in CITES Appendix II will be delayed by 18 months to enable Parties to resolve related technical and administrative issues".
- **Proposal 45.** Proposal to transfer *Pristis microdon* from Appendix II to Appendix I of CITES in accordance with Article II, paragraph 1.

[17] The complete FAO report on proposed listings is distributed as COFI:FT/XIV/2014/Inf.7.

- **Proposal 46.** Proposal to include the genus *Manta* in Appendix II in accordance with Article II paragraph 2(a).
- **Proposal 47.** Proposal to include the Ceja River stingray *Paratrygon aiereba* in Appendix II in accordance with Article II paragraph 2(a). The proposal includes an annotation stating that "the entry into effect of the inclusion of *Paratrygon aiereba* in CITES Appendix II will be delayed by 18 months to enable Parties to resolve the related technical and administrative issues".
- **Proposal 48.** Proposal to include the freshwater stingrays *Potamotrygon motoro* and *P. schroederi* in Appendix II in accordance with Article II paragraph 2(a). The proposal includes an annotation stating that "the entry into effect of the inclusion of *Potamotrygon motoro* and *Potamotrygon schroederi* in CITES Appendix II will be delayed by 18 months to enable Parties to resolve the related technical and administrative issues".

30. The main advice of the FAO Panel for CITES is reported in COFI:FT/XIV/2014/Inf.7. The recommendations produced independently by the CITES Secretariat on the listing proposals concurred in six of the seven proposals with the FAO Panel advice. Disagreement was only for the genus *Manta* where the CITES Secretariat recommended the proposal be adopted by CITES Parties.

31. The CITES CoP16 adopted five of the seven proposals for inclusion of commercially-exploited aquatic species in Appendix I or II (which will enter into force in September 2014). Thus, for the following species CITES regulations of international trade will apply:

- *Carcharhinus longimanus* (oceanic whitetip shark) (Appendix II)
- *Sphyrna lewini* (scalloped hammerhead shark), *S. mokarran* (great hammerhead shark) and *S. zygaena* (smooth hammerhead shark) (Appendix II)
- *Lamna nasus* (porbeagle shark) (Appendix II)
- *Pristis microdon* (freshwater sawfish) (Appendix I)
- *Manta* spp. (manta rays)

FUTURE ACTIVITIES BY FAO

CONTINUATION OF CURRENT WORK

32. FAO intends to continue working on a number of activities described above, in particular those related to the IPOA Sharks and queen conch. FAO is also committed to attend relevant CITES meetings (e.g. Animals Committee and Standing Committee) over the next two years to: (1) present FAO data, activities and views on the conservation and management as well as on the international trade of commercially exploited aquatic species to CITES Parties; and (2) to report back to FAO about relevant issues and developments in CITES.

33. FAO is also prepared to support activities related to the conservation, management and trade of sturgeons (all species of the order *Acipenseriformes* are listed under CITES Appendices I or II[18]), in particular with regard to improving the identification of species and products in trade. According to CITES, international trade of caviar from wild sturgeon is below 20 tonnes per year since 2005 (in contrast to over 150 tonnes in the late 1990s), while caviar from aquaculture is steadily increasing and reached over 35 tonnes in 2010; this trend is even more pronounced for sturgeon meat[19]. A reliable identification of wild versus cultured sturgeons and their products in trade is therefore important to facilitate the international trade of sturgeon from aquaculture, and the CoP16 consequently asked for a review of identification techniques for sturgeon specimens in trade[20]. As a result of the collaboration of FAO with WCO, the coverage of the international trade statistics for caviar has been further improved through the insertion of a specific code on caviar, separated from caviar substitutes, in the new HS classification entered into force on 1st January 2012.

[18] *Acipenser brevirostrum* and *A. sturio* are listed under Appendix I, the other 28 species under Appendix II.
[19] http://www.cites.org/eng/cop/16/doc/E-CoP16-60-02.pdf
[20] http://www.cites.org/eng/dec/valid16/16_136-138.php

COLLABORATION WITH THE CITES SECRETARIAT IN THE IMPLEMENTATION OF THE NEW CITES LISTINGS OF SHARKS AND MANTA RAYS RECENTLY INCLUDED IN APPENDIX II

34. The MoU between CITES and FAO stipulates that *"the signatories will cooperate as appropriate to facilitate capacity building in developing countries and countries with economies in transition on issues relating to commercially-exploited aquatic species listed on the CITES Appendices"*. Therefore, FAO and CITES are currently collaborating to assist countries with the implementation of the recent listings of sharks and manta rays included in CITES Appendix II. As a first step FAO has started consultations with countries that are most impacted by these listings, in particular developing countries, to ascertain their most urgent requirements for assistance. Based on the information and the specific requests received from these countries, FAO will develop priority areas for its subsequent technical work in collaboration with CITES and relevant RFMOs.

ELABORATION OF GUIDELINES FOR COMMENTS ON TECHNICAL ASPECTS OF THE PROPOSALS

35. Over the past 15 years, FAO has developed comprehensive guidance on the application of the biological CITES listing criteria for the FAO Panel for CITES. However, similar guidance on methods and approaches to be used for the comments on technical aspects of a proposal does not exist. As a result of the interest by many COFI members to strengthen these comments and to ensure that the advice of the FAO Panel for CITES remains objective and fact-based, the development of a framework of recommended and scientifically sound approaches and instructions is recommended. This could be used by the Panel (and by proponents) for the review and evaluation of fisheries management and international trade data of commercially exploited aquatic species proposed to be listed under one of the CITES Appendices.

36. FAO proposes to convene a workshop with the aim of initially identifying the key fisheries management and international trade issues of relevance in the context of CITES listings of commercially-exploited aquatic species. This will be followed by a review of the impacts and factors influencing the successful implementation of CITES listings of commercially-exploited aquatic species, which would lead to the provision of guidance to the FAO Panel for CITES in relation to approaches and methods to be used. This activity will require additional extra-budgetary funds as it has not been anticipated in the context of the current FAO project on CITES, or in the FAO Regular Programme.

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COMMITTEE ON FISHERIES

SUB-COMMITTEE ON FISH TRADE

Fourteenth Session

Bergen, Norway, 24–28 February 2014

MONITORING IMPLEMENTATION OF ARTICLE 11 OF THE CODE OF CONDUCT FOR RESPONSIBLE FISHERIES (CCRF)

Executive Summary

This paper provides a summary of activities undertaken by FAO Members to support the implementation of Article 11, Post-harvest Practices and Trade, of the Code of Conduct for Responsible Fisheries (CCRF). The paper also highlights areas where implementation of Article 11 poses a challenge for FAO Members.

The information in this paper is collated and analysed on the basis of self-assessment questionnaires submitted by FAO Members between 21 May and 13 September 2013. The questionnaire used is a new spreadsheet-based questionnaire containing the same questions used for the previous questionnaire (for presentation to the thirteenth session of the COFI Sub-Committee on Fish Trade (COFI:FT)) but this has been simplified in order to improve the response rate.

The current response rate, representing 60 percent of FAO Members, compares very positively with the 22 percent response rate for the last session of COFI:FT.

Suggested action by the Sub-Committee:

- Provide guidance on how to support and broaden implementation of Article 11 of the CCRF;
- Recommend actions toward further improving the reporting process by FAO Members. In particular, decide whether to continue monitoring the implementation of Article 11 through the current simplified spreadsheet based questionnaire or to put the questionnaire online; and in case the implementation of Article 11 continues to be monitored through the simplified questionnaire, consider a few minor changes to the instructions.

INTRODUCTION

1. The twelfth session[1] of COFI:FT agreed to monitor the implementation of Article 11, Post-harvest Practices and Trade, of the CCRF through a questionnaire to be distributed to FAO Members. It also agreed that this trade-specific questionnaire should be biennial and alternate with the questionnaire monitoring the overall implementation of the CCRF.

2. A standard questionnaire was developed and dispatched, and the findings of this first survey regarding FAO Members' implementation of Article 11 of the CCRF were discussed at the thirteenth session[2] of COFI:FT. Responses were received from only 15 Members and from the European Union (Member Organization) (hereafter referred to as EU), responding in the name of the 27[3] member states, corresponding to 22 percent of FAO Members.

3. FAO Members encouraged the Secretariat to improve the response rate of the questionnaire. Some of the measures considered by the Secretariat were putting the questionnaire online and simplifying the spreadsheet-based questionnaire by removing macro-based features. At the time, the latter method was chosen because the Fisheries and Aquaculture Department was in the midst of a major initiative to put the full COFI CCRF questionnaire online. It was felt that the results from this initiative should be tested first and then a possible alignment of the separate questionnaires on aquaculture (for the COFI Sub-Committee on Aquaculture (COFI:AQ)) and on fish trade (for COFI:FT) with the main COFI questionnaire could be examined by the relevant committees.

4. The simplified questionnaire[4] facilitated improving the response rate from 22 percent to the current 60 percent of FAO Members.

QUALITY OF THE COMPILED QUESTIONNAIRES AND FURTHER IMPROVEMENTS

5. Responses were received from 88 Member Nations and from one Member Organization, the EU (submitting one questionnaire on behalf of its 28 member states[5]), for a total of 116 Member Nations, representing 60 percent of FAO Members. On average, in the questionnaires received, 93 percent of questions were answered, with the remaining 7 percent corresponding to empty cells or "not applicable" replies. Two questionnaires were received after the deadline and the related responses have not been included in this paper. The improved response rate and the completeness of the questionnaires, comments and data submitted constitute very positive feedback with regard to the new questionnaire and indicate a high level of interest and involvement by FAO Members. In addition, many Members provided what appears to be a very honest score, and this can be assessed by the consistency of the scoring among the different sections of the questionnaire and by the comments provided.

6. The response rate within the different regions (number of responding countries per region) follows: 100 percent for North America, 71 percent for Africa, 55 percent for Latin America and the Caribbean, 52 percent for Asia, 43 percent for Near East, 38 percent for Europe[6] and 25 percent for Southwest Pacific. Although the result of this monitoring exercise is very positive, the Secretariat believes the response rate could be further improved for the fifteenth session of COFI:FT.

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[1] Buenos Aires, Argentina, 26–30 April 2010.
[2] Hyderabad, India, 20–24 February 2012.
[3] By the time the thirteenth session of COFI:FT was held in February 2012, the EU member states were 27. On 1 July 2013, Croatia became the 28th EU member state.
[4] The questionnaire was dispatched by FAO in the six official languages of the Organization (Arabic, Chinese, English, French, Russian and Spanish) to all FAO Members, COFI and COFI:FT participants on 21 May 2013. In the period between 21 May 2013 and 13 September 2013, cumulative and individual follow-ups were sent to the FAO Representatives and to COFI and COFI:FT participants as well as Permanent Representatives and Regional offices. The closure date for acceptance was 13 September 2013.
[5] Responses received directly from EU member states were not taken into consideration in the analysis as the EU responded on their behalf.
[6] The responses from Europe include non-EU European countries and the EU itself, counted as one.

7. A decision needs to be made on whether to continue with the simplified electronic questionnaire or to develop an online questionnaire (to be completed by FAO Members every two years) on the same web-based platform as the general COFI questionnaire, which was launched recently[7].

8. If the questionnaire remains in the spreadsheet format, the following minor modifications to the instructions are proposed to improve clarity:

- Instructions, benchmarking system: Remove *"only one tick is allowed per question"*, as various questionnaires were received with only one question answered per section; and
- Question five: Rephrase "*identify emerging issues in the implementation of Article 11 of the Code"* as it was not clear to FAO Members how to respond with a yes/no answer to this question. The following phrase is suggested *"Identify whether or not the following topics are considered (yes or no) as emerging issues in the implementation of Code provisions on post-harvest Practices and Trade"*.

9. If, instead, the questionnaire is put online and is integrated into the main COFI questionnaire[8], the modality needs to be decided, i.e. whether it will be merged with the main COFI questionnaire, replacing the existing COFI general questions on Article 11, or included as an additional separate section. Also, given the different timing of COFI and COFI:FT, the section of the main questionnaire related to fish trade will have to be considered as a separate one, to be completed biennially by FAO Members before COFI:FT.

STRUCTURE OF THE QUESTIONNAIRE AND ANALYSIS OF THE DATA

10. The questionnaire monitoring the implementation of Article 11 was subdivided into six sections and included ten questions in total as specified below:

- Section I - *Responsible fish utilization* – Questions one and two;
- Section II - *Responsible international trade* – Question three;
- Section III - *Laws and regulations relating to fish trade* – Question four;
- Section IV - *Emerging issues in the implementation of Article 11* – Question five;
- Section V - *Current challenges* – Questions six to nine; and
- Section VI - *Additional comments* – Question ten.

11. The **first four questions** of the questionnaire (Sections I to III) asked FAO Members to report on the extent to which they had implemented measures related to responsible fish utilization, responsible international trade and laws and regulations related to fish trade, with possible responses ranging from 1 (not implemented, or just started) to 5 (almost all is done, or complete). Not applicable ("n/a") replies were also accepted when the question did not apply to the national or sub-national context.

12. The **fifth question** (Section IV) requested FAO Members to identify, through a yes/no answer plus some free text, emerging issues in the implementation of Article 11.

13. The **following five open-ended questions** (Section V and VI) asked FAO Members to identify current challenges related to the implementation of Article 11 of the CCRF with regard to safety and quality assurance systems, the post-harvest sector, international trade in fish and fishery products, laws and regulations, as well as to provide additional comments.

14. The results obtained from the questionnaire follow in the paragraphs below. As a result of the different response rates, comparison with the results of the previous questionnaire was not made at the

[7] The online responses by member countries will be analysed and discussed at the next COFI to be held from 9 to 13 June 2014, therefore, data on the response rate of this new on-line reporting tool are not yet available.
[8] COFI:AQ recently supported the establishment of a web-based platform for reporting on the implementation of the CCRF for provisions relevant to aquaculture and culture-based fisheries.

aggregate level. Comparison at country level would have been meaningful, but would have also undermined confidentiality requirements.

15. A statistical summary of FAO Members' responses to the first five questions is available as COFI:FT/XIV/2014/Inf.8. The responses have been broken down according to whether the Members[9] belong to the G77 or the OECD[10] groups. In addition, in order to enrich the analysis and highlight key emerging issues potentially requiring further support with respect to specific geographic areas, the responses were subdivided by region: Africa (including 39 percent of the total replies received), Asia (15 percent), Europe[11] (10 percent), Latin America and the Caribbean (20 percent), Near East (10 percent), North America (2 percent) and Southwest Pacific (4 percent).

RESPONSIBLE FISH UTILIZATION

16. This section was sub-divided into two components: 1) monitoring the implementation of measures related to safety and quality for fish and fishery products, and 2) monitoring the implementation of measures related to the post-harvest sector.

17. ***To what extent have measures related to safety and quality for fish and fishery products been implemented?*** Members across the board reported a good level of compliance with the implementation of measures related to the safety and quality for fish and fishery products. This is particularly the case for OECD group, which reported its highest level of implementation under this section. This indicates the existence of an enabling institutional and technical environment related to safety and quality assurance system. In the case of G77 countries, the responses were more nuanced with a lower level of implementation, especially for the following areas:

- Enforcement of a national environmental and/or residue monitoring plan;
- Setting, monitoring and enforcement of standards for safety and quality of products in the domestic markets; and
- Implementation of traceability requirements.

18. ***To what extent have measures been implemented in the post-harvest sector?*** This section showed the lowest overall level of implementation, both for G77 and OECD countries. As in the previous case, the reported level of implementation of measures in the post-harvest sector was higher for the OECD group than for the G77 group. The overall level of implementation of measures in the post-harvest sector was lower than for measures related to the safety and quality of fish and fishery products. This was particularly the case in relation to the implementation of measures taken to assess and reduce post-harvest losses and to monitor environmental impacts of post-harvest activities, where the Members reported that "some implementation had been done, but still largely insufficient". Interestingly, the G77 group reported a substantial level of adoption of measures to promote human consumption of fish, indicating that the nutritional value of fish and/or the promotion of a diversified diet are recognized and considered as a priority by governments.

RESPONSIBLE INTERNATIONAL TRADE

19. The OECD group reported a higher level of implementation of measures related to international trade compared with the G77 group. Both groups reported lower levels of implementation for the same areas:

- Measures are in place to verify that fish and fishery products originate from sustainable fisheries and aquaculture; and
- The impacts of trade in fish and fishery products (imports and exports) on food security and income are evaluated and monitored.

[9] In this paper, "Members" refers to FAO Members who responded to the questionnaire.
[10] The responses from the OECD group include the different non-EU OECD countries and the EU response, counted as one.
[11] The EU is counted as one.

LAWS AND REGULATIONS RELATING TO FISH TRADE

20. This section had the highest overall level of implementation by Members, in particular the G77 group. The only shortcomings relate to the countries' responses for the:

- Provision of changes to trade laws and regulations for sufficient transitional periods, derogations and other similar arrangements; and
- Notification of changes to trade laws and regulations, where applicable, to the World Trade Organization (WTO) interested States and other relevant international organizations.

EMERGING ISSUES IN THE IMPLEMENTATION OF ARTICLE 11 OF THE CCRF

21. This section was sub-divided into four components:

- ***Ecolabels and certification requirements****:* 63 percent of the Members reported that ecolabels and certification requirements were an emerging issue.
- ***IUU regulations****:* 79 percent of the Members reported that illegal, unreported and unregulated (IUU) regulations were an emerging issue.
- ***Traceability requirements****:* 66 percent of the Members reported that traceability requirements were an emerging issue.
- ***Other****:*
    - Other emerging issues reported by respondents included the need to have the respective governments' support to ensure compliance with the CCRF and to align internal policies with international market requirements;
    - The Members also reported some difficulties in implementing the CCRF because of the complicated coordination among all the different responsible ministries/authorities involved at national level;
    - Members noted that monitoring and tracking are not easy when implementing IUU regulations because of the lack of proper coast guards or fishing vessel monitoring systems. As a result of this, international trade from vulnerable fisheries was reported to still be affecting sustainable development of fisheries and responsible use of aquatic resources;
    - The need to have qualified human resources trained in sustainable fisheries management was highlighted by several Members, including the need to have the CCRF translated into local languages, in order to facilitate its dissemination and implementation;
    - Other emerging issues reported by respondents include the limited capacity to measure the environmental impact of fisheries and fishing activities (e.g. carbon footprint) and to calculate and mitigate the impact of climate change on fisheries, especially in relation to small-scale production;
    - The need and difficulty to establish and implement a traceability system for all the activities related to fisheries, especially for traditional fisheries, was also noted by several Members.
    - Requirements for organic fish farming were also reported as an unclear area.

CURRENT CHALLENGES

22. The remaining five questions were open-ended. A synopsis of the answers received is provided for each question.

Related to quality and safety assurance systems

23. In general, Members reported the lack of effective capacities, technical know-how, physical facilities, resources, infrastructures, compliant equipment, clear quality standards, control systems, reliable sampling schemes and accredited test laboratories to respect hygiene requirements and support the establishment of a safety and quality control and surveillance system of fish and fishery products, especially for small-scale fisheries.

24. Owing to the resistance of human habits to change, living standards of individual consumers and lack of awareness on quality and safety issues in general, the production and consumption of non-quality products was reported still to be considerable. In this regard, the responsibility of the different governments to educate and to insure the right of consumers to food safety has been highlighted.

25. In the absence of a clear national policy, safety and quality assurance standards seem challenged, in most cases by the ability and experience of single fishing companies and fish processors, to comply with the requirements given the available resources. Members reported outdated or non-existent policy/legislative/regulating frameworks, lack of institutional capacities, quality management programmes and appropriate plans to protect, support and guarantee safety of fish and fishery products and ensure environmental protection. In addition, food safety control is often handled by different government ministries/agencies, with duplication of roles and an unclear definition of responsibilities, complicating the management of the issue.

26. The evolving nature of the international food safety legislative requirements has financial implications for inspections, monitoring and surveillance and requires continuous training and refresher courses for inspectors. Members noted the cost of compliance with new safety and quality assurance requirements, highlighting the impact of this cost on the price of the products.

27. The challenge of implementing quality and safety assurance systems for products to be consumed in the domestic market was highlighted, especially in the small-scale fisheries sector. The higher cost of producing good quality products may make them too expensive for market segments with limited purchasing power.

28. An inconsistency between increasingly strict requirements for food safety from developed countries and the lack of management capacity in developing countries to adhere to international standards and access international markets was noted as a concern.

29. The lack of equivalency in food control and certification systems among international trading partners and the need to establish mutually recognized standards was reported.

30. The lack of national control systems, risk assessment techniques and surveillance plans for contaminants and diseases in fisheries and aquaculture and the lack of an integrated rapid alert system to identify potential hazards and apply the Hazard Analysis and Critical Control Points (HACCP) approach were also reported by FAO Members as issues that need to be addressed.

Related to the post-harvest sector

31. The main challenge for Members in the post-harvest sector, especially for small-scale fisheries, is to increase the value of the sector by reducing post-harvest losses, by increasing the production of value-added products, and by improving responses to domestic and international market demands.

32. Inadequate transport networks, poor infrastructure for landing, storage, distribution and commercialization, difficulties in accessing modern processing facilities, poorly equipped vessels, lack of food packaging materials from local manufacturers, absence of a proper cold-chain and ice industry, lack of drinking and/or clean water supplies and insufficient logistic support, including power interruptions, were identified as the main challenges in the post-harvest sector, as well as the major causes of enormous losses and reduced quality of products. The lack of financial resources and the high cost of energy for storage and processing operations were also reported.

33. Moreover, the insufficient capacity and knowledge of good practices for fish management, post-harvest handling, preservation methods (smoking, drying, salting) and added-value techniques, hygiene and sanitation, especially by small-scale operators, was highlighted, together with the use of inappropriate chemicals for fish preservation and processing and the lack of specialized personnel to train fish inspectors and advise fishers. Capacity building in fish processing and quality assurance were reported as a major need. The lack of information on market prices, standards and regulations was reported by some Members.

34. Numerous environmental concerns were reported resulting from the lack of monitoring systems and data necessary to measure the environmental impact of post-harvest activities.

35. Interest in promoting value-added production that adheres to internationally recognized standards, as reported by some Members, is faced with difficulties in positioning the related products in the markets. This is because the high cost and risk of fisheries production, together with higher import duties imposed on processed fish products, result in higher prices that make it too expensive.

36. The lack of national regulatory programmes for traceability, sanitary inspections and control systems before and after harvest, during transport, storage and processing and, in general, an inadequate attention to the post-harvest sector by public institutions in the areas of policy, budget, environmental protection, risk minimization, quality assurance, research in fish technology and extension services, were reported. The implementation of HACCP in fish processing and aquaculture units was reported as an issue by member countries.

37. A high level (ranging from 20 to 40 percent) of post-harvest losses was reported by some Members, while others highlighted difficulties in the qualitative and quantitative evaluation of post-harvest losses at the national level. The need to encourage those involved in fish processing, distribution and marketing to reduce losses and waste, to use by-catch and inputs (water/energy/wood) in an environmentally sound manner was highlighted. Another challenge reported for the post-harvest sector was the development of an efficient and sustainable aquaculture industry, as it would provide an alternative to capture fisheries.

38. Proliferation of private ecolabels was reported as a major problem, as each label has different criteria for qualifying products, some of which are contradictory. Accreditation of laboratories for quality/safety control was reported as a problem, thus the need to consider alternative models for certification (use of accredited third parties for example) was stressed. The necessity to implement catch certification schemes on species-by-species basis or product-by-product basis was also noted.

Related to international trade in fish and fisheries products

39. Several Members expressed concern with the increasing market constraints and tariff and non-tariff measures unilaterally imposed by importing countries. These include unclear standards and guidelines, stringent or non-transparent measures, frequent changes in the regulations and maximum limits allowed, costly and non-harmonized certification requirements; government subsidies and measures that are not in compliance with the principles contained in the WTO Sanitary and Phytosanitary (SPS) measures agreement, including the use of food safety standards that do not align with Codex Alimentarius or that are not based on risk assessments. In addition, some Members reported limited resources available to enable the relevant officers to attend international meetings or trade fairs/exhibitions, amplifying their marginalization.

40. Access to international markets, especially EU markets, was reported as a major issue, and measures imposed by importing countries are still perceived as discriminatory, distortive for the markets and limiting the consumer's freedom of choice.

41. Insufficient coordination among importing countries or international food standard bodies was reported by Members, resulting in the application of different and contradictory quality standards and/or regulations.

42. Most of the Members reported that it is their own responsibility to ensure that international and domestic trade in fish and fishery products accords with sound conservation and management practices. They also highlighted the need for a national policy in food safety, e.g. the establishment of a food safety Competent Authority. This agency would work with the relevant Ministries to ensure official control, surveillance and compliance monitoring with respect to fish and fishery products, safety and quality, traceability, ecolabelling, labour, IUU fishing, HACCP measures, SPS requirements along with sustainable exploitation and social responsibility schemes.

43. The promotion of international trade of fishery products is seen by some Members as an incentive to improve implementation of safety measures along the value chain for domestic production/consumption.

44. High levels of informal trade were cited as a challenge by many, including the consequent weak information or data on fish trade at national and regional levels.

Related to laws and regulations

45. In general, the lack of a legal framework at the national level, regulating the main issues related to safety and quality assurance, post-harvest and international trade, was reported. In some cases, difficulties in absorbing national laws into provincial or municipal regulations were highlighted. In other cases, the existence of an appropriate national law was reported, although it was not effectively implemented or properly enforced/updated in a timely manner in order to recognize changes in industry practice and new technologies. Concern with the lack of means and capacities and with the slowness in the decision making process was noted.

46. Members also reported concerns with the lack of coordination among governmental agencies and with jurisdictional overlaps and duplication of some regulations.

47. One of the most challenging issues highlighted by several Members was the lack of cooperation among states in the field of regulations and responsibility over fisheries control and fish activities to reduce IUU fishing. In general, a weak observance of laws by the stakeholders along the fisheries value chain was reported, and significant efforts still seem necessary to prevent illegal practices and commercial fraud (mislabelling, species substitution, etc.) on imports and exports of fishery products.

48. The need to engage the industry, competent authorities and consumers in the decision-making process was reported, so that consumers become aware of the key emerging issues and are willing to pay additional costs for safe, legal and environmentally sound products and practices. As a result, the industry could invest more and the competent authority would be in a better position to implement laws.

49. The need to simplify regulatory frameworks was highlighted by Members, together with the need to make laws and regulations more specific, streamlined, transparent, comprehensible, periodically reviewed and harmonized with international standards and any other relevant recognized provisions and requirements. Possibly, laws and regulations should also be translated into local languages, in order to facilitate their dissemination and application.

50. The need to protect at-risk species and to have national contingency and monitoring plans and good practice guidelines for producers and processors in the fisheries and aquaculture sector was highlighted by Members.

51. Concerns with lengthy processes for elaborating, drafting and promulgating laws were noted.

ADDITIONAL COMMENTS

52. Although some Member governments reported gradual improvements in their fisheries administrations, including research, aquaculture, law enforcement, licensing components and extension, more efforts and resources are still needed, especially in the following fields where FAO support is sought to:

- Establish fisheries training institutions in the countries and capacity building of staff on food safety, post-harvest practices and international trade requirements;
- Clearly formulate national quality and safety assurance systems in order to improve domestic consumption and to comply with international standards and guidelines;
- Set up clear national regulations and investment plans for the fisheries sector;
- Support research in fishing technology and fisheries management in order to promote greater sustainability of marine resources while safeguarding consumer health;
- Support the development of efficient market intelligence tools and information management systems for fisheries and aquaculture in order to have access to reliable and complete market data needed to understand the status of the sector, increase market transparency and efficiency, analyse market dynamics, and support business decisions and policy making;

- Support the adoption of the CCRF as a guide for policy development and implementation.

53. Members reported the need to have all countries, governmental and non-governmental organizations and all those involved in fisheries, cooperate in a responsible way in order to achieve maximum goals to protect consumers' health and preserve capture fisheries, fish farming and inland habitats.

CONCLUSION

54. The global responses to the questionnaire indicate a high level of participation by FAO Members as well as a good overall level of implementation of measures related to post-harvest practices and trade, although there are regional and intra-regional differences most likely related to the different development status of the sector.

55. The responses highlight concerns, ongoing efforts and difficulties in relation to a number of key emerging issues recognized and reported by Members of paramount importance for the development of the fisheries sector in the different countries.

56. In particular, ecolabel and certification requirements, IUU regulations and traceability requirements were highlighted as emerging issues, and the lowest level of implementation was reported for measures that:

- Support the implementation of traceability requirements;
- Assess and reduce post-harvest losses;
- Monitor and address the environmental impacts of post-harvest activities; and
- Evaluate and monitor the impacts of trade in fish and fishery products (imports and exports) on food security.

57. Production of this document was only possible thanks to FAO Members' generous efforts in providing such detailed comments to the questionnaire. This feedback is considered a key source of national information, which will allow the identification of relevant regional and global gaps and will be very useful in the planning and improvement of FAO’s activities.