

出國報告（出國類別：開會）

出席「2023亞洲地區CITES海馬利用  
工作坊」出國報告

服務機關：海洋委員會海洋保育署

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出國期間：112年3月14日至3月17日

報告日期：112年6月17日



## 摘要

本次工作坊於 112 年 3 月 14 日至 17 日在菲律賓宿霧辦理，由國際自然保育聯盟 (IUCN) 海龍科專家小組 (SPS SG) 的海馬計畫 (Project Seahorse) 團隊與菲律賓漁業暨水資源局 (BFAR)、國家漁業研究暨發展研究所 (NFRDI) 及倫敦動物學會-菲律賓分部 (ZSL-PH) 共同主辦，主要為討論亞洲地區海馬貿易管制執行現況與困境，本署由海馬計畫 (Project Seahores) 主持人英屬哥倫比亞大學 Sarah Foster 博士邀請參與。

目前所有種類的海馬 (*Hippocampus* spp.) 已於 2002 年列入瀕臨絕種野生動植物國際貿易公約 (CITES) 附錄 II 進行貿易管制，但有研究指出全球仍有高比例的非法乾貨貿易，恐對海馬野生族群造成危害。故本次工作坊重點關注於海馬貿易的無危害評估 (Non-Detriment Findings, NDFs)、族群監測 (Monitoring)、合法獲取評估 (Legal Acquisition Findings, LAFs) 及執法 (Enforcement) 等。

與會人員包含主辦單位、華盛頓公約 (CITES) 秘書處、聯合國糧農組織 (FAO)、國際野生生物貿易研究組織 (TRAFFIC)、東南亞漁業發展中心 (SEAFDEC) 及 IUCN 海龍科專家小組 (SPS SG) 等，以及來自印度、印尼、馬來西亞、菲律賓、泰國、越南、新加坡、香港及臺灣等專家學者與政府單位人員，我國由國立臺灣海洋大學郭庭君助理教授及本署陳玉婷技士與會，共計 45 人。

本次工作坊目的在於引導各國檢視現有政策，提出可能進行改善的方向及規劃，建議各國除持續強化族群監測外，主要可藉由更詳實的國內供應鏈及進出口紀錄，以及跨單位的合作及資訊流通，加強對國際貿易及國內市場流通情形的掌握。本署將持續與國貿局及海關等相關單位進行交流合作，並持續關注國際資訊及相關技術，適時參與國際會議及相關工作坊等，與國際接軌持續推動瀕危野生動植物種保育及貿易管理。



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## 壹、目的

本次工作坊於 112 年 3 月 14 日至 17 日在菲律賓宿霧辦理，由國際自然保育聯盟 (IUCN) 海龍科專家小組 (SPS SG) 的海馬計畫 (Project Seahorse) 團隊與菲律賓漁業暨水資源局 (BFAR)、國家漁業研究暨發展研究所 (NFRDI) 及倫敦動物學會-菲律賓分部 (ZSL-PH) 共同主辦，主要為討論亞洲地區海馬貿易管制執行現況與困境，本署由海馬計畫 (Project Seahores) 主持人英屬哥倫比亞大學 Sarah Foster 博士邀請參與。

目前所有種類的海馬 (*Hippocampus* spp.) 已於 2002 年列入瀕臨絕種野生動植物國際貿易公約 (CITES) 附錄 II 進行貿易管制，但有研究指出全球仍有高比例的非法乾貨貿易，恐對海馬野生族群造成危害。故本次工作坊重點關注於海馬貿易的無危害評估 (Non-Detriment Findings, NDFs)、族群監測 (Monitoring)、合法獲取評估 (Legal Acquisition Findings, LAFs) 及執法 (Enforcement) 等，相關成果將提交 CITES 動物委員會第 32 次會議 (AC32)。

與會人員包含主辦單位、華盛頓公約 (CITES) 秘書處、聯合國糧農組織 (FAO)、國際野生生物貿易研究組織 (TRAFFIC)、東南亞漁業發展中心 (SEAFDEC) 及 IUCN 海龍科專家小組 (SPS SG) 等，以及來自印度、印尼、馬來西亞、菲律賓、泰國、越南、新加坡、香港及臺灣等專家學者與政府單位人員，共計 45 人。為進一步瞭解亞洲地區海馬貿易相關資訊、監管及執法措施與工具等，並與各國專家學者及政府單位等進行交流，我國由國立臺灣海洋大學郭庭君助理教授及本署陳玉婷技士與會，期有助於我國海馬保育策略及貿易監管措施之訂定與調整。

## 貳、過程

### 一、3月14日

#### (一) 開幕致詞

由海馬計畫 (Project Seahorse) 負責人 Sarah J. Foster 博士歡迎各位與會者的到來，並介紹本次工作坊的共同主辦單位：菲律賓漁業暨水資源局 (BFAR)、菲律賓國家漁業研究暨發展研究所 (NFRDI)、倫敦動物學會-菲律賓分部 (ZSL-PH)，以及 CITES 秘書處、聯合國糧農組織 (FAO)、國際野生生物貿易研究組織 (TRAFFIC)、東南亞漁業發展中心 (SEAFDEC) 及 IUCN 海龍科專家小組 (SPS SG) 等代表，接著簡介本次工作坊目的及目前海馬貿易所遭遇的困境。

研究顯示雖然海馬已於 2002 年列入 CITES 附錄 II，但仍持續存在令人擔憂的高比例非法貿易，必須加以管理以確保貿易為永續、合法且可溯源的。根據乾貨貿易主要來源國的漁民訊息，儘管捕魚作業的努力量增加，但捕獲的海馬量仍持續下降，顯示目前乾貨的出口量已對野生族群造成危害。如同 CITES 秘書處在第 74 次常務委員會會議第 70.1 號文件 (SC74 Doc 70.1) 的總結，締約方可藉由加大力度以解決非法貿易問題，或透過預防措施來確保所交易的海馬來源為永續的且符合 CITES 附錄 II 相關規定。工作坊將請締約方評估選擇以何種方式進行，並提供支持以協助其落實 CITES 相關規定。

#### (二) 評估 CITES 執行的框架：

由海馬計畫 (Project Seahorse) 聯合創始人 Amanda Vincent 博士介紹本次工作坊討論的框架，包含無危害評估 (NDFs)、族群監測 (monitoring)、合法獲取評估 (LAFs) 及執法 (enforcement) 等 4 大主題，每個主題皆分為以下 4 個層面：



#### Level 1 技術層面 (technical outputs) :

籌措資金、發展並推廣識別工具、產出框架及指引、提供技術諮詢、整合數據、辦理能力建構會議等。

#### Level 2 政策層面 (policy outcomes) :

根據技術層面的發展成果，推動立法或調整政策及管理流程，以更落實執行 CITES 相關規定。

#### Level 3 執行層面 (field outcomes) :

政策及管理流程的實際推行，包含保護區的執法、落實進出口配額、扣押非法貨物、對於違規行為給予適當的處罰、主動的進出口訊息監測等。

#### Level 4 對族群的影響 (population impacts) :

若政策方向正確且執行得當，將影響該物種的野外族群；當族群變化為正成長時，顯示 CITES 的實行方式可能是有效的；當族群變化為負成長時，顯示 CITES 的實行方式需要改進，或有其他威脅正在抵消 CITES 實行的好處。

### (三) 無危害評估 (NDFs) 簡介及簡化流程

由海馬計畫 (Project Seahorse) 負責人 Sarah J. Foster 博士介紹無危害評估 (NDFs) 的宗旨及簡化的評估流程。無危害評估 (NDFs) 通常由 CITES 相關科學機構評估野生族群是否受到危害及所面臨的壓力等，在族群量小或面臨壓力大時，即使是很少的出口量也可能造成問題，有些現有資訊較少的出口國家，未能提出完善的無危害評估 (NDFs)，基於適應性管理原則 (adaptive management)，提供較簡化的評估指引，主要包含 1) 該物種的分布地點、2) 所面臨的壓力、3) 管理這些壓力所採取的措施、4) 管理措施的執行狀況 5) 該物種族群的變化趨勢等 5 個問題。

#### (四) 分組討論：

將類似進出口、地理位置或語言文化相近的國家進行分組，嘗試使用簡化的無危害評估（NDFs），總結各國的反應回饋：1) 無危害評估（NDFs）需要多個部門的合作才能掌握；2) 目前許多國家較缺乏進行調查分析的人力及資源，無法同時投入多種的 CITES 附錄物種；3) 要回答上述無危害評估（NDFs）的 5 個問題需要持續的監測；4) 如果完全禁止捕撈可能更難以獲得資訊，因為許多海馬的資訊來自漁民；5) 建議出口國能與進口國分享其無危害評估（NDFs）流程，以作為再出口（re-export）核准的參考；6) 若認為評估後顯示對族群造成危害全然是負面的，可能就不會想進行無危害評估（NDFs），實際上著手進行評估是瞭解族群狀況及威脅影響的第一步；7) 針對無危害評估（NDFs）的 5 個問題，目前應該還缺少評估不同壓力對該物種的影響程度，有此方面的評估才能做出管理上重要性的排序。

## 二、3 月 15 日

### (一) 族群監測（monitoring）：

由海馬計畫（Project Seahorse）負責人 Sarah J. Foster 博士主講，藉由族群監測可得知該物種是否需要保護或管理，以及管理方式的成效，是 Level 4 對族群的影響（population impacts）的唯一評估方式，並可作為基於適應性管理（adaptive management）措施的參考，無論該物種是否會出口都應該進行調查，監測內容應包含族群豐度、變化趨勢、個體大小及性別比例等。

族群監測主要分為貿易、漁業、非漁業等 3 種調查方式：1) 貿易監測必須包含國外及國內市場，其中第一線買家的資訊十分重要，但獲取的管道及可信度必須進行評估；2) 非漁業調查部分主要依靠公民科學，目前 iSeahorse 線上回報平台已累積近 1 萬筆目擊資料，是一種可以長時間記錄多個地區資料的有用工具，並可促進公民參與；3) 漁業調查部分又分為港口及登船調查，港口調查可快速蒐集不同漁船、漁具漁法及漁獲種類的資料，必須考量漁船努力量，是一種最可計劃性的調查方式，

登船調查可更精確地取得點位資料，可信度也較高，但較花費人力及經費，效率較差。建議盡可能頻繁的進行族群監測，除能掌握其族群現況外，也有助於瞭解該物種的生活史及生物特性。

## (二)合法獲取評估 (LAFs)：

由海馬計畫 (Project Seahorse) 負責人 Sarah J. Foster 博士主講，海馬列入 CITES 附錄 II 後雖然仍可進行國際貿易，但核准出口至少必須符合 3 個條件：1) 出口必須以不危及野生族群為前提，2) 捕獲地點及方式等必須符合所有的相關法規，3) 運輸過程中必須符合動物福利。第 1 個條件主要建立於對該物種的無危害評估 (NDFs)，由科學機關 (Scientific Authority, SA) 提供證明；第 2 個條件即為合法獲取評估 (LAFs)，由管理機關 (Management Authority, MA) 進行調查及審核。

各國出口海馬時必須取得管理機關 (MA) 核發的 CITES 出口核准證明，進口國的管理機關 (MA) 則應針對資料來源的準確性及可信度進行審查，並持續關注國內外資訊以適時調整相關規定，主要分為以下 5 個重點：

1. **是否應對該物種進行合法獲取評估 (LAFs)：**海馬為 CITES 附錄 II 物種，故所有形式的出口都必須進行評估。
2. **評估非法獲取的風險：**例如乾海馬的出口總值較高，有較高的非法獲取風險，許多重要出口國的乾海馬為野生捕獲，包含目標捕抓及非目標的混獲，管理機關 (MA) 對貿易特性的瞭解有助於評估來源的合法性。
3. **確保捕獲來源及方式符合該國法規：**例如來源地是否為保護區或禁漁區、捕獲季節是否為禁漁期、漁具漁法是否符合當地法規等，可參考海馬計畫 (Project Seahorse) 提供的檢核表。
4. **審查資料的完整性及可信度：**資料的完整性主要來自於可溯源的供應鏈，由出口國提供，進口國管理機關 (MA) 可針對該物種分布區域及供應鏈完整性等進行審查，必要時可諮詢科學機關 (SA) 及專家學者。

5. **留存完整的書面紀錄**：有利於後續追蹤各物種及各國進出口的變化與趨勢，並可作為每次進行合法獲取評估（LAFs）及相關規定調整時的參考。

### 三、3月16日

#### (一) 實地考察

搭船前往薄荷島（省）的 Jandayan 島進行實地考察（單程約 2 小時），參訪位於 Handumon 海洋保護區內的 Kanagmaluhan 社區。Handumon 海洋保護區於 1995 年由海馬計畫（Project Seahorse）聯合創始人 Amanda Vincent 博士推動成立，為海馬計畫（Project Seahorse）在菲律賓推動的第 1 個保護區，面積約 50 公頃，Kanagmaluhan 社區原本是一個以買賣海馬為主要經濟來源的貧窮漁村，主要海馬獲取方式依靠有經驗的漁民潛水採捕；Amanda Vincent 博士藉由 iSeahorse 數據資料庫發現該處為海馬熱點，在交流過程中建立起居民成立保護區的興趣及共識，協助成立村委員會選舉幹部，以及合作社及社區服務隊等人民組織，並成立以當地居民為主的保護區管理委員會，進一步合作生物評估及社區規劃等工作，目前以發展海藻養殖及相關產業為主。

Kanagmaluhan 社區的成功案例讓其他社區對成立保護區產生興趣，尤其在海馬列入 CITES 附錄 II 後，菲律賓政府已禁止海馬的國際貿易。海馬計畫（Project Seahorse）目前已在菲律賓中部推動成立了 35 個海洋保護區，每個保護區皆依當地情況擬定管理計畫，多數分為禁漁區及允許有條件性捕魚的緩衝區，並根據當地其他資源發展相關產業，另成立管理委員會進行相關調查評估及生物多樣性維護工作。

## 四、3月17日

### (一) 執法 (enforcement) :

由海馬計畫 (Project Seahorse) 負責人 Sarah J. Foster 博士主講，有關非法野生動物貿易 (Illegal Wildlife Trade, IWT) 研究數據來源，包含貿易紀錄回顧及扣押案件分析。貿易紀錄可得知各物種在各國的合法進出口資訊；查扣案件數據則可用於 1) 估計特定期間內非法野生動物貿易的途徑、最低總量及總值 (仍有部分未查獲之案件)，2) 瞭解該物種之原產國、出口國、轉口國及進口國等相關特性；締約方應向 CITES 秘書處回報各物種的非法貿易查扣量，可作為不公開數據供參考。

根據統計，查扣案件數最多的與行李夾帶有關，主要途徑為空運；而查扣量最大的為貨物運輸，主要途徑為海運；此外海馬常與其他野生動物產品一起被查獲，例如其他水產品、陸/海龜、鱷魚、象牙及穿山甲製品等，另因所有種類的海馬皆為 CITES 附錄 II 物種，故許多查扣案件未記錄海馬種類，但物種紀錄為瞭解各種海馬貿易途徑的重要資訊，例如曾有從秘魯進口至越南的海馬被查獲為西非物種。

多數的非法貿易案件皆於進口或轉口時被查獲，但對於來源國的資訊十分稀少，建議出口國於海關審查應蒐集更多資訊，訓練海關人員物種辨識技術、提高警覺性及強化橫向溝通 (與漁民、中盤商、消費者、政策制定者、執法及司法機關等)，此外可利用 DNA 取證及環境 DNA (eDNA) 等新技術。

### (二) 非法野生動物貿易 (Illegal Wildlife Trade, IWT) :

由聯合國毒品暨犯罪問題辦公室 (United Nations Office on Drugs and Crime, UNODC) 線上主講，主要定義影響環境的犯罪 (CAE)、UNODC 對 CAE 所採取的行動、非法野生動物貿易 (IWT) 執法步驟及風險控制流程。

#### 1. 何謂影響環境的犯罪 (Crimes that Affect the Environment, CAE) :

其犯罪行為可能導致棲地及生物多樣性喪失而加劇氣候變遷、消耗自然資源而影

響物種存續、造成人畜共通疾病的流行影響大眾健康等，此外非法經濟會助長有組織的犯罪並弱化法律規範。

## 2. UNODC 對 CAE 所採取的行動：

UNODC 主要藉由推動跨單位合作、提供技術及設備的支持、辦理培訓課程、工作坊及會議等方式，協助各國強化監測管理。例如由越南與中國海關共同發起的湄公河巨龍行動 (Operation Mekong Dragon) 於 2018 年 9 月啟動，並得到 UNODC 及世界海關組織亞太地區情報聯絡辦公室 (WCO RILO A/P) 的技術支持，在藥品、野生動植物非法貿易等取得相當的成效；另 UNODC 亦推動 Wildlife Inter-Regional Enforcement (WIRE) 會議，參與對象包含警察、檢察官、海關、野生動物主管機關，主要在亞洲及非洲地區舉辦。

## 3. 非法野生動物貿易 (IWT) 執法步驟：

- 1) 資訊取得 (acquisition)：根據過往案例推論可能的犯罪方式，並針對線人或同行的情報進行犯罪攔截。
- 2) 資訊蒐集 (document)：貨物來源、相關人員證詞、嫌疑人或公司財務概況、出入境及船隻維護紀錄等證據蒐集。
- 3) 資訊驗證 (verification)：是否為第一手消息？獲取資訊的監管鏈？資訊是否詳實記錄、保存及驗證？是否包含曝光資訊者、嫌疑人、犯罪時間及地點的原始數據？是否有其他相關訊息或與其他訊息有關聯？

## 4. 風險控制流程

列出風險指標並描述概況 (以乾製海馬為例)，包含來源國 (例如已禁止海馬出口的菲律賓及泰國)、轉口國 (例如香港及新加坡)、進口國 (例如中國、香港及臺灣)、運輸方式 (海陸空運)、出口/轉口/進口路徑、入境地點、嫌疑人/產業 (中藥行)、藏匿方式 (行李) 及混充型式 (乾製水產品) 等，並根據上述

風險指標，對特定運輸工具、貨物及乘客等進行檢查。

### (三) 閉幕致詞

由海馬計畫 (Project Seahorse) 負責人 Sarah J. Foster 博士及聯合創始人 Amanda Vincent 博士總結本次工作坊重點：

1. 本次工作坊目的在於引導各國檢視現有政策，瞭解自己在能力及經濟上的限制，並提出可能進行改善的方向及規劃。
2. 改善的方向可能為由上而下，或由下而上，但皆考量整個國家體系，包含主管機關、海關人員、立法及執法者、地方機關、民間組織、漁民及當地居民等，否則可能造成氣球效應 (Balloon analogy, 將強力執法比喻為擠壓氣球，被擠壓的空氣不會消失，而是移動到阻力較小的區域)。
3. 新技術研發有助於落實 CITES 相關規定，例如 AI 物種辨識、近親標記重新捕獲法 (close-kin mark-recapture, CKMR)，近親標記重新捕獲改良自傳統標記重新捕獲法，透過被標記的樣本集中識別近親個體，來推估族群數量，相較於傳統方法，可減少估算族群數所需的標記樣本數。
4. 無危害評估 (NDFs) 的認定重點在於是否造成族群量顯著下降，而非評估族群總量，但「顯著下降」目前並無一致的定義，可考慮訂定資源永續的警戒值為替代方案。
5. 漁業混獲 (尤其是拖網) 為野生海馬的主要威脅之一，數據來源及非法行為的掌控，都仰賴與漁民良好的溝通，第一線漁民、貿易商及買家資訊為供應鏈中重要的一環，加上多數國家並未掌握進口後的供應鏈，是目前無危害評估 (NDFs) 及合法獲取評估 (LAFs) 的重大瓶頸之一。
6. 目前非法、未通報及無管制的捕魚 (IUU) 常與國際犯罪組織有所關連，但 UNODC 較關注違反聯合國公約的犯罪行為，多數 IUU 較難以蒐集足夠證據而被定罪。

7. 目前各國問題多為難以即時掌握族群現況及供應鏈，進出口多採信任制，貿易商如取得進出口許可即放行。此外因所有種類海馬皆為 CITES 附錄 II 物種，故部分資料未記錄種類，但物種紀錄為瞭解各種海馬貿易途徑的重要資訊，例如曾有從秘魯進口至越南的海馬被查獲為西非物種。
8. 由聯合國世界保護監測中心（UNEP-WCMC）及 CITES 秘書處共同建置的「Species+」網站，可查詢各種海馬分布地區及禁止出口國家，惟目前僅列出原產於該國物種之禁止訊息，故非法貿易仍可能透過不同國家轉口流通。
9. 各國除持續強化族群監測外，主要可藉由更詳實的國內供應鏈及進出口紀錄，以及跨單位的合作及資訊流通，例如物種辨識技術、進出口及查扣案件資訊等，加強對國際貿易及國內市場流通情形的掌握。



## 參、心得及建議

本次工作坊目的在於引導各國檢視現有政策，提出可能進行改善的方向及規劃，建議各國除持續強化族群監測外，可藉由更詳實的國內供應鏈及進出口紀錄，以及跨單位的合作及資訊流通，加強對國際貿易及國內市場流通情形的掌握，並利用「Species+」網站查詢海馬分布地區及禁止出口國家，作為核准進出口之依據。

我國海洋野生動物國際貿易審核及輸出入程序，涉及經濟部國際貿易局、海關及本署業務，本署主管「海洋野生動物活體及產製品輸出入審核要點」，國際貿易資料則主要建立於國貿局及海關進出口統計，但活海馬目前並無專屬 CCC 貨品編號。本署將持續針對物種資源進行調查及評估，並強化與國貿局及海關之溝通，商請國貿局增加活海馬專屬 CCC 貨品編號，以加強對海馬進出口資料之掌握。

我國乾製海馬主要來源為國外進口及漁業混獲，並於國內傳統藥材市場間流通，活海馬主要為少量人工繁殖供出口貿易，本署目前為配合國貿局並聘請專家學者進行繁殖場查證，以瞭解該場是否具繁殖技術、場域及提供繁殖紀錄，並估算年產量供國貿局核准出口配額之參考。本署將持續與國貿局及海關等相關單位進行交流合作，並持續關注國際資訊及相關技術，適時參與國際會議及相關工作坊等，與國際接軌持續推動瀕危野生動植物種保育及貿易管理。



## 肆、附錄

### 附錄一、與會相片



與會人員會場內合影（主辦單位提供）



分組討論結果分享



薄荷島（省）Jandayan 島實地考察



Handumon 海洋保護區內的 Kanagmaluhan 社區服務隊



分享我國貿易管理現況及未來規劃



與會人員會場外合影（主辦單位提供）



CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES  
OF WILD FAUNA AND FLORA<sup>A</sup>



Thirty-second meeting of the Animals Committee  
Geneva (Switzerland), 19 – 23 June 2023

Species conservation and trade

Seahorses (*Hippocampus* spp.)

IMPLEMENTING CITES FOR SEAHORSES - ASIA REGION WORKSHOP

1. This document has been submitted by the Philippines and the United States of America.\*
2. CITES Parties, the Animals Committee and the Secretariat are invited to review the recommendations that emerged from a recent Asia region workshop on implementing CITES Appendix II listing for seahorses, as many are of broad utility and applicability for NDFs, monitoring, LAFs and enforcement of diverse taxa. The workshop report is attached as an Annex to this document.
3. The meeting was held in Cebu, Philippines from 14-17 March 2023 and generated great interest and engagement by government representatives and other experts from China (Hong Kong SAR of China and Taiwan Province of China), India, Indonesia, Malaysia, Philippines, Singapore, Thailand, Viet Nam. The highly interactive workshop was characterized by lively exchanges, notable openness, and remarkable synergies among participants. As a result, the gathering generated numerous recommendations along with much enhanced engagement with the seahorse Appendix II listing in particular and marine fish listings in general.
4. This meeting was co-organized by Project Seahorse (host of the IUCN SSC Seahorse, Pipefish and Seadragon Specialist Group), ZSL Philippines, the Philippines Department of Agriculture (DA)-Bureau of Fisheries and Aquatic Resources and the DA-National Fisheries Research and Development Institute. The workshop was conceived - and funding obtained/invitations sent - under CITES Decision 18.229 c (ii), but was delayed until after CoP19 due to the Covid-19 pandemic. Funding was provided by the United States from NOAA's National Marine Fisheries Service. The results of this workshop are now reported to the Animals Committee (at AC32), in support of newly adopted CITES Decision 19.231.
5. Forty-five people attended the four-day workshop, including representatives of CITES and fisheries Authorities from jurisdictions that were historically important net exporters or net importers along with technical experts from participating jurisdictions and representatives from intergovernmental and nongovernmental agencies: FAO, IUCN, UNODC, SEAFDEC and TRAFFIC.
6. After opening comments, Project Seahorse presented a new framework for analysing CITES implementation of Appendix II listings for marine fishes,<sup>1</sup> with the intention that it would guide workshop deliberations. To meet their obligations to CITES, Parties need to implement an Appendix II listing on all four Levels: Technical outputs (Level 1); Policy outcomes (Level 2); Field outcomes (Level 3); and Population impacts (Level 4).

\* *The geographical designations employed in this document do not imply the expression of any opinion whatsoever on the part of the CITES Secretariat (or the United Nations Environment Programme) concerning the legal status of any country, territory, or area, or concerning the delimitation of its frontiers or boundaries. The responsibility for the contents of the document rests exclusively with its author.*

<sup>1</sup> Vincent, A.C.J., S.J. Foster, S.J. Fowler., S. Lieberman and Y.J. Sadovy de Mitcheson. 2022. *Implementing CITES Appendix II listings for marine fishes: a novel framework and a constructive analysis*. Fisheries Centre Research Reports 30 (3), 189 pp. <https://projectseahorse.org/resource/framework-implementing-cites-for-marine-fishes/> - Executive summary available as CoP19 Inf. 90 (<https://cites.org/sites/default/files/documents/E-CoP19-Inf-90.pdf>)

Project Seahorse also reported on its investigation into the dried seahorse trade in Asia, carried out in response to Decision 18.229 c (i).<sup>2</sup>

7. The workshop was directed at supporting Parties to create situational analyses that could serve as overviews of progress and action plans for the future, as encouraged under Decision 19.299. Working in Party groups (thus fostering linguistic and cultural comfort), participants allocated one half day to each of four responsibilities: making NDFs, monitoring, making LAFs, and enforcement. For each theme, Project Seahorse offered new tools and guidance: (i) proposals for a simpler means of making NDFs; (ii) guidance and track sheets on monitoring; and (iii) suggestions on how the CITES *Rapid guide for the making of legal acquisition findings*<sup>3</sup> could be applied to seahorses with a draft matrix for evaluation. As well, UNODC (iv) provided input on opportunities for enhanced enforcement.
8. In addition to the meeting room discussions, participants took a full day field trip to Handumon, a fishing village in the province of Bohol, two hours boat ride away. Participants met with fishers, a trader and village leaders to discuss the area's long history of seahorse extraction and trade, and to explore their ideas for fishing seahorses sustainably. The field trip created an important opportunity for participants to bond over a shared experience, forging ties that further enhanced the positive tone of the meeting.
9. The workshop delivered three sets of outputs, emerging from participant discussion, reflection and feedback. First, participants offered a great deal of valuable comment and input about the new tools and guidance drafted by Project Seahorse (see workshop report in the Annex). Second, they built off that input to make a suite of thoughtful recommendations for Parties, the AC, SC and the Secretariat, many with broad implications for Appendix II listings in general (see workshop report in the Annex). Third, they used the situational analysis to lay the foundations for action plans with both short- and long-term initiatives (see workshop report in the Annex). In return, Project Seahorse undertook to revise the new tools and guidance, which will help Parties meet some of the recommendations, and was able to clarify some misconceptions from Parties.
10. The value of these highly encouraging workshop outputs (Level 1) will depend on their translation into policy outcomes within CITES and by Parties (Level 2) that translate good intentions into adaptive management strategies that allow for biologically sustainable trade of seahorses (Level 3). Participants are encouraged to share their analyses with their Party's agencies and departments, with other participants at the workshop, and with the larger CITES community and then to measure outcomes and monitor wild populations. Findings from the workshop will be fed into the NDF experts working group on marine and aquatic species.

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<sup>2</sup> SC74 Doc. 70.1: <https://cites.org/sites/default/files/eng/com/sc/74/E-SC74-70-01.pdf>

<sup>3</sup> CoP19 Doc. 19 Addendum: [https://cites.org/sites/default/files/documents/E-CoP19-40-Add\\_3.pdf](https://cites.org/sites/default/files/documents/E-CoP19-40-Add_3.pdf)





AC32 Doc. 38.2  
Annex

### Implementing CITES for seahorses – Asia region workshop

March 14-17, 2023  
Bluewater Maribago Beach Resort  
Mactan Island, Lapu-lapu City, Cebu, Philippines

#### **Hosted by:**

Project Seahorse (PS)  
IUCN SSC Seahorse, Pipefish and Seadragon Specialist Group (SPS SG)  
Zoological Society of London-Philippines (ZSL-PH)

#### **Co-hosted by the Philippines government:**

Department of Agriculture - Bureau of Fisheries and Aquatic Resources (DA-BFAR)  
DA - National Fisheries Research and Development Institute (DA-NFRDI)

#### **Preamble**

All seahorses are listed in CITES Appendix II, which means international trade can continue but it must be managed to ensure it is sustainable, legal and traceable. However, research has revealed that the vast trade in dried seahorses – that largely provoked the Appendix II listing in 2002 – persists with worryingly high levels of illegal trade. Fishers in key source countries for the dried trade have reported continued declines of seahorse numbers despite increases in fishing effort, suggesting that current levels of dried exports are detrimental to wild populations. However, even while research has identified challenges, consultations with CITES Authorities and experts have revealed key opportunities for moving the dried trade toward sustainability and legality.

CITES Parties, at the 18<sup>th</sup> Conference of the Parties (CoP18, July 2019), adopted a Decision to “*organize an expert workshop to discuss the implementation and enforcement of CITES for trade in Hippocampus spp., including the recommendations and outcomes from the Review of Significant Trade process, and propose practical steps to address implementation and enforcement challenges*” [Decision 18.229 c(ii)]. In its role as technical advisor to CITES on seahorse issues, Project Seahorse secured funding to hold an expert workshop focused on Asia in support of this Decision. The CITES Secretariat has repeatedly worked with Project Seahorse, a joint venture of the University of British Columbia (UBC, Canada) and the Zoological Society of London (ZSL, UK), and host of the IUCN SSC Seahorse, Pipefish and Seadragon Specialist Group (SPS SG), on multiple occasions on the basis of its robust technical and scientific expertise. Indeed, Project Seahorse has been instrumental in CITES’ work with seahorses since 1999, and has provided important support to Parties towards implementing the Convention for seahorses.

**The Asia region workshop on CITES implementation for seahorses focused on four key aspects of CITES implementation:** non-detriment findings, monitoring in support of adaptive management, legal acquisition findings and enforcement. As summarised by the CITES Secretariat in SC74 Doc 70.1, Parties can meet their obligations to seahorses under the Convention by either “a) increasing their efforts to address illegal trade or b) ensuring that the seahorses being traded are sourced sustainably and apply the CITES Appendix II listing following a precautionary approach.” The workshop engaged Parties and participants to explore and evaluate these options in support of implementing CITES for seahorses.

**This Cebu meeting was conceived - and funding obtained/invitations sent - when CITES Decision 18.229 c)(ii) was still valid.** Unfortunately, execution of the workshop was significantly delayed by the Covid-19 pandemic. CITES Parties, at the CoP19, decided not to carry over the unmet CoP18 Decision to have a workshop. Consequently, the Asia region workshop was not a formal workshop under the CITES framework. Nonetheless, it offered a wonderful opportunity for Asian CITES colleagues and experts to explore options and ideas for full implementation of the CITES Appendix II listing for seahorses, with many implications for other marine fishes.

The findings are being fed back to CITES in form of this workshop report to AC32, in support of newly adopted CITES Decisions 19.231 a) and b), which state: “The Animals Committee shall: a) in consultation with species experts, analyse and review the results of activities under Decisions 19.228 and 19.229, the report produced under Decision 18.229, paragraph c)(i), **and other relevant information**; b) develop recommendations to the Parties, the Secretariat, and relevant stakeholders, as appropriate, to ensure sustainable and legal international trade in seahorses.

## Participants

Forty-five individuals attended the four-day workshop. This included 16 representatives of CITES and fisheries Authorities from jurisdictions that were historically important dried seahorse net exporters (India, Indonesia, Malaysia, Philippines, Thailand and Viet Nam) or net importers (Singapore and China – Hong Kong SAR of China and Taiwan Province of China). Additional participants included 21 representatives from Food and Agriculture Organization of the United Nations (FAO), Southeast Asian Fisheries Development Center (SEAFDEC), TRAFFIC, regional members of the IUCN SSC SPS SG, technical experts from each of the participating jurisdictions, and 8 representatives from the organizing teams from Project Seahorse and ZSL-PH. Two representatives of the United Nations Office on Drugs and Crime (UNODC) joined the workshop virtually on the last morning.

## Program

The working program is attached as Annex A to this report. In summary, the schedule was as follows:

- March 14 (Tuesday): welcomes, setting the stage, and non-detriment findings (NDFs)
- March 15 (Wednesday): monitoring and legal acquisition findings (LAFs)
- March 16 (Thursday): field trip to Handumon village, Getafe, Bohol
- March 17 (Friday): enforcement, situational analyses, closing

***It was repeatedly stressed that while Parties are obliged under the Convention to ensure that export of species listed on CITES Appendix II are sustainable and legal, Parties have the sovereign right to meet obligations as they see fit. The guidance documents and ideas presented and explored at the workshop represent possible ways of approaching their responsibilities, offering tools to support their efforts, but are in no way prescriptive.***

The structure of this report mirrors the working program.

### 1. Welcomes and setting the stage

The workshop was initiated with opening comments from Dr. Sarah Foster, program leader at Project Seahorse, focal point for global trade for the IUCN SSC SPS SG, and workshop lead. She was followed by recorded messages from DA-BFAR (Atty. Demosthenes R. Escoto, Director) and the CITES Secretariat (Dr. Karen Gaynor, Scientific Support Officer for fauna), and in person messages from ZSL-PH (Glenn Labrado, Acting Country Director), FAO (Dr. Kim Friedman, Senior Fisheries Resources Officer), SEAFDEC (Ms. Pattaratjit Kaewnuratchadasorn, Senior Policy Officer, Secretariat), and TRAFFIC (Glenn Sant, Senior Advisor Fisheries and Trade). Prof. Amanda Vincent, as Director of Project Seahorse and Chair of IUCN SSC SPS SG, then provided a brief background of seahorse trade/CITES listings and set the stage/ground rules for the workshop.

### 2. Framework for assessing CITES implementation

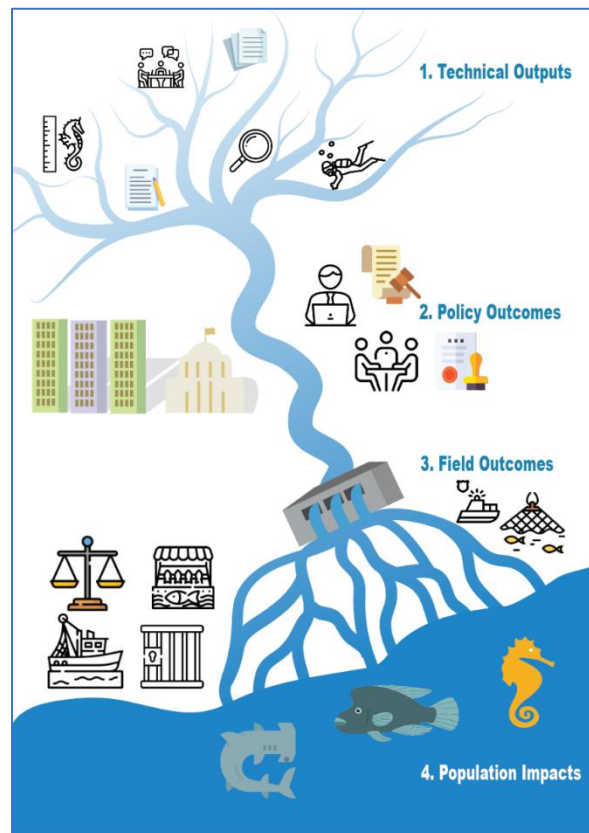
**The workshop begun with a presentation of a new framework for analysing CITES implementation of Appendix II listings for marine fishes,<sup>4</sup> with the intention that it would underpin workshop deliberations.** The framework is composed of four levels of progress towards full implementation of CITES Appendix II listings (Figure 1) and was presented to Parties at as CoP19 Inf. 90,<sup>5</sup> and in a CoP19 side event “Assessing implementation of CITES Appendix II listings for marine fishes”:

<sup>4</sup> Vincent, A.C.J., S.J. Foster, S.J. Fowler., S. Lieberman and Y.J. Sadovy de Mitcheson. 2022. Implementing CITES Appendix II listings for marine fishes: a novel framework and a constructive analysis. Fisheries Centre Research Reports 30 (3), 189 pp. <https://projectseahorse.org/resource/framework-implementing-cites-for-marine-fishes/>

<sup>5</sup> <https://cites.org/sites/default/files/documents/E-CoP19-Inf-90.pdf>

- **Level 1: Technical outputs** (tools and capacity building): non-government stakeholders and governments develop products, tools, and activities to support implementation of CITES obligations by governments;
- **Level 2: Policy outcomes** (governance changes): governments use technical outputs (Level 1 implementation) to adopt changes – in policies, rules, regulations, legislation, data deployment, and management protocols – with consequences that are measurable but not at the field or population levels;
- **Level 3: Field outcomes** (practical changes): governments act on Level 2 policy outcomes, often using Level 1 technical outputs, to make changes in practical activities on vessels and at docks, traders’ facilities, Customs sheds, courts, etc.;
- **Level 4: Population impacts** (biological changes): wild populations respond to field outcomes (Level 3 implementation) with lower mortalities, increasing numbers, better demographic balance or other biological improvements in their status.

**To meet their obligations to CITES, Parties usually need to implement an Appendix II listing on all four Levels.** A Party that (i) produces or accesses Level 1 technical outputs, and (ii) makes governance changes (policy outcomes) in Level 2 policy outcomes but (iii) fails to mobilise practical change (field outcomes) at Level 3 will be most unlikely to (iv) see the required biological changes (population impact) in Level 4. It is vital to understand that field outcomes involve direct interactions with fish, fishers, traders, and other actors in legal or illegal fisheries and trades; they cannot be effected only with meetings, computers and documents. In this theory of change framework, those Parties that implement listings at Levels 1, 2, and 3 should be able to detect biological changes (Level 4), as long as they are equipped to measure such change through monitoring. It is, of course, true that some Parties that implement listings at Levels 1, 2 and 3 may still struggle to see change at Level 4 because of pressures beyond those posed by over-exploitation and international trade. Again, though, Parties simply must act effectively at Level 3, field outcomes, to have a chance of seeing Level 4 population changes. This is true for all CITES Appendix II species.



**Figure 1.** A visual representation of a framework for assessing implementation

### 3. Implementing CITES for seahorses

After presenting the generalised framework, Project Seahorse summarised CITES implementation for seahorses across its four Levels. Project Seahorse also summarized research and evaluation activities since CoP18, as foundations for the workshop.

#### Seahorse case study

Seahorses are small and iconic, with many millions traded internationally each year for traditional medicine (dried), curios (dried) and ornamental display (live), and are the first and only fully marine fishes on Appendix II to have been through a Review of Significant Trade (RST) process.

The CITES Appendix II listing for seahorses may well have had a positive effect on the relatively few populations subject only to trade in **live** seahorses (which has switched to captive breeding in areas near the markets) but has done little or nothing beneficial for those subject to the enormous and dominant trade in **dried** seahorses (which persists at high levels, mostly illegally).

- Level 1 technical outputs: Collaboration with Parties and the Secretariat led to the production of crucial technical outputs: identification materials, NDF framework, interim means of making NDFs, monitoring guidelines, field studies and Party engagement in the form of briefings, workshops and discussions.
- Level 2 policy outcomes: The most common policy action has been in the form of export suspensions/bans, sometimes decided by a Party and sometimes recommended by CITES. Parties' have not prioritised engaging in management for sustainability and legality, such as making NDFs, developing and/or following through with national plans of action, or generating monitoring plans.
- Level 3 field outcomes: Parties have not effectively enforced the export suspensions (Level 3) and the dried trade that provoked the listings continues at very high levels, mostly through smuggling. In the instances where Parties did take policy action, they have struggled to translate those intentions into practical outcomes such as targeted enforcement of any fisheries rules (Level 3) and even more rarely tracked the effect of their interventions (Level 4).
- Level 4 population impacts: Fishers in key source countries for the dried trade in seahorses have reported continued declines of seahorse catch per unit effort, indicating that trade remains detrimental to wild populations. Parties need to tackle the challenge of indiscriminate capture of most seahorses in nonselective fisheries if they are to see population benefits to populations; the large supply of seahorses from nonselective gear may be driving the dried trade and not vice versa. Wild populations subject only to live trade may have benefited from trade transitions under CITES, as markets shifted towards cultured fish, but the dearth of population monitoring leaves that as a supposition only. Captive breeding does not necessarily benefit populations in the wild.

#### Research and evaluation since CoP18

Project Seahorse shared the findings of the report on seahorse trade produced in response to Decision 18.229(c)(i), to understand (i) shifts in international trade patterns since inclusion of seahorses in Appendix II and the RST, (ii) implementation challenges and (iii) possible solutions. The research consisted of two parts, focusing on the live and dried trades. The live trade study was global in scope, with specific examination of the EU, which included the UK at that time, and the United States. Results are publicly available as a research report,<sup>6</sup> a primary manuscript<sup>7</sup> and in SC74 Doc 70.1.<sup>8</sup>

The Project Seahorse presentation focused on the dried trade study, which focused on Asia and examined implementation of the CITES listing in (i) six jurisdictions that have long been net exporters of seahorses but have declared national bans or suspensions for such exports and (ii) four jurisdictions that have long been key importers for dried seahorses. The study assessed the state of CITES implementation: progress, challenges, and possible ways to meet the challenges. Reports from

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<sup>6</sup> <https://projectseahorse.org/resource/changes-in-the-international-trade-in-live-seahorses/>

<sup>7</sup> <https://projectseahorse.org/resource/cites-makes-a-measurable-difference-to-the-trade-in-live-marine-fishes-the-pioneering-case-of-seahorses/>

<sup>8</sup> SC74 Doc. 70.1: <https://cites.org/sites/default/files/eng/com/sc/74/E-SC74-70-01.pdf>

each jurisdiction were made available for the workshop. An integrated summary of those reports was reported in SC74 Doc 70.1.<sup>9</sup> The summary included 36 recommendations to advance CITES implementation for dried seahorses, the top 11 of which were highlighted as immediate priorities in the report to SC74.

#### 4. Situational analyses

The backbone of the workshop was the development – by government representatives, supported by technical experts – of a situational analysis that will help governments meet CITES Appendix II obligations for seahorses. This situational analysis was anchored in a PowerPoint template that tracked the four Levels of CITES implementation (see Section 2., above), with slight differences for net exporters and net importers. Participants grouped by jurisdiction to execute three steps:

1. Collaborate in assessing achievements, challenges, opportunities and concerns for implementation Levels 1, 2, and 3.
  - (a) Net exporters executed this analysis for the four themes of NDFs, monitoring, LAFs and enforcement.
  - (b) Net importers executed the analysis for the four themes of probing NDFs on export permits (should they ever so wish), record keeping (imports, re-exports, seizures), probing LAFs on export permits (should they ever so wish) and enforcement.
2. Summarise the assessment for each of the four themes in a table about current status and desired status in three years.
3. Identify possible action in the short term, in 2023/2024, for the entire implementation analysis.

The analyses were built over the course of the workshop, in increments that aligned with the discussion sessions. Throughout, participants were encouraged to build the analyses within their group by drawing from anticipation and planning (e.g., hypothetical scenarios such as “If we started to do this now...”), past implementation of seahorse listings, implementation experience for other marine species listings, possible fisheries management protocols, and experiences from other regions. On the last afternoon, one spokesperson from each jurisdiction presented the summary tables for the four themes and proposals for action in 2023/2024.

Participants are encouraged to share their analyses with their Party’s agencies and departments, with other participants at the workshop, and with the CITES community in response to CoP19 Decision 19.229.

#### Workshop discussion, suggestions and ideas

The next four sections summarise findings from focused half days spent on each of NDFs, monitoring, LAFs and enforcement. The first two days were spent in groups from one Party, allowing for linguistic and cultural comfort and certain shared approaches. Such groupings worked very well, creating new connections within each cluster and also giving participants the comfort from which to reach out across Party lines.

#### 5. NDFs

##### **Project Seahorse presentation: a history of seahorse NDFs and easier guidance**

Project Seahorse explained the history of making NDFs for seahorses, then introduced the draft of a new NDF framework for data and capacity limited situations.

The seahorse listing was adopted in 2002 with a then unusual 18-month delay in implementation (later echoed in the shark listings) to allow Parties time to develop means to make NDFs. Decision 12.54 offered the first interim and pragmatic guidance for making seahorse NDFs, calling for a single minimum size limit for all seahorses in trade.<sup>10</sup>

<sup>9</sup> <https://oceans.ubc.ca/research/publications/research-reports/>

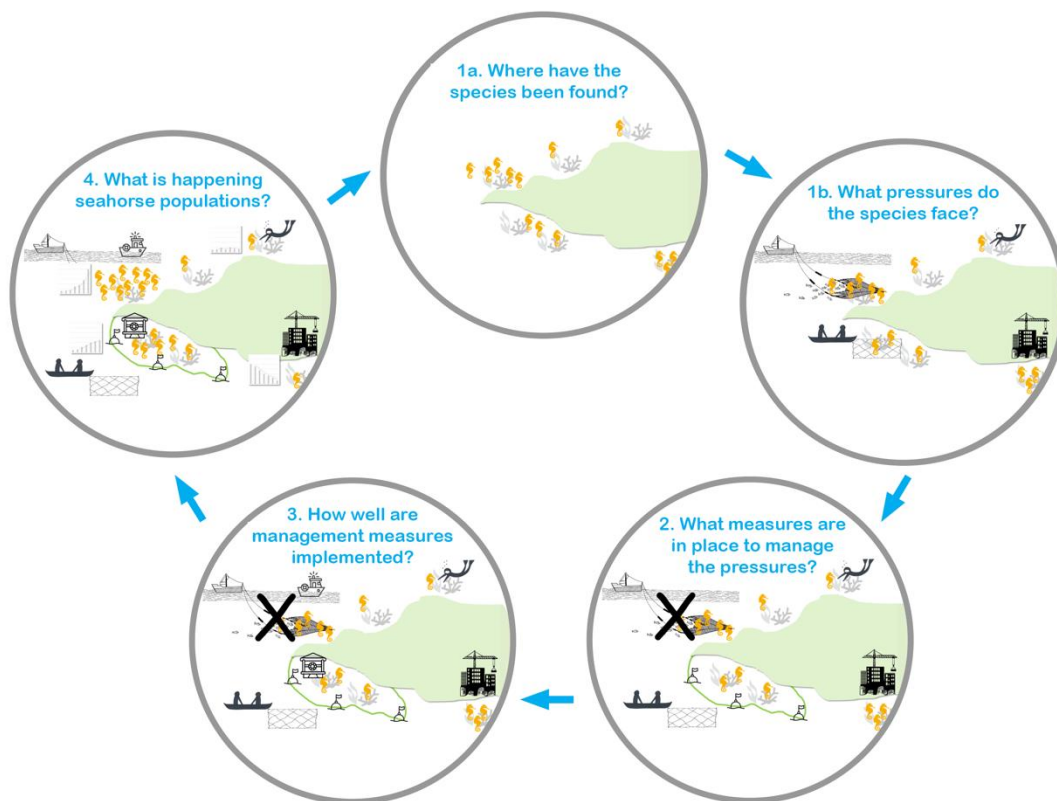
<sup>10</sup> <https://cites.org/sites/default/files/eng/notif/2004/033.pdf>

The RST then prompted Project Seahorse to develop the first NDF framework for seahorses (and for marine fishes) with CITES MAs and SAs in the Philippines, Thailand and Viet Nam.<sup>11</sup> Despite its methodical and measured approach, this first NDF framework has been little used, primarily because Parties feel they have inadequate information to meet its needs. Instead the RST for seahorses largely led to export suspensions, rather than NDFs.

Project Seahorse has been developing an easier approach to making NDFs for seahorses, applicable to many taxa, using an approach that maps answers to five questions in overlapping layers (5Q):

- (1a) where have the species been found?
- Then, for those areas,
- (1b) what pressures do the species face?
- (2) what measures are in place to manage the pressures?
- (3) how well are the management measures implemented?
- And, ultimately,
- (4) what is happening to seahorse populations?

The numbering in this easier NDF framework aligns with the framework for assessing CITES implementation (section 2), with questions 1a and b/Level 1 reflecting technical outputs, question 2/Level 2 reflecting policy change, question 3/Level 3 reflecting practical application of such policy and question 4/Level 4 focused on the trajectory of seahorse populations (5Q in Figure 2, Levels in Figure 1).



**Figure 2.** A 5Q framework for making easier NDFs for seahorses.

<sup>11</sup> <https://projectseahorse.org/resource/making-non-detriment-findings-for-seahorses-a-framework/>

Answering the first four questions allows for a rough inference of possible population trends – and the capacity to make interim NDFs – even while monitoring is being developed to answer the fifth. Answering “what is happening to the seahorse populations” will provide new or strengthened information with which to revisit the first four questions, in an adaptive management framework.

The easier NDF framework consisted of three sections: **I. Determine which species are being exported** (recognizing that NDFs should be made at the species level, but that it also offers challenges for Authorities); **II. Map answers to the five questions in overlapping layers** (considering each species separately, or all seahorses together if information is not available for individual species); and **III. Use the mapping exercise to infer risk to wild populations from proposed exports and evaluate options** (and inform a management or action plan for seahorses).

#### **Participant engagement and feedback: Probing the draft new NDF framework**

Participants tried out the easier NDF framework using large maps and acetate overlays. They were encouraged to map the answers to the five questions, using whatever information they could access, for one or more species. Given that all net exporters had trade suspensions for seahorses in place, none of the participating Parties were making NDFs for seahorses at the time of the workshop. However, the exercise created an opportunity to consider future NDFs should they legalize trade and to inform future management or conservation plans for seahorses.

#### **Workshop discussion: making NDFs for seahorses**

Working through the 5Q framework:

- The 5Q approach to NDFs (and Figure 2) is very helpful, especially when people are new to making NDFs, or in data poor situations.
- Working through this easier NDF evaluation together facilitated information and process exchange among CITES Management and Scientific Authorities (MAs/SAs) for the same Party, each with its own approaches to managing resources.
- It is important that the right people be in the room when doing this exercise, drawing on diverse expertise and backgrounds to capture the range of potentially useful information; Scientific Authorities can rarely complete the evaluation on their own.
- The 5Q approach provides a way to categorize information needed for an NDF, offers a means of identifying gaps in information needed for the NDFs, and helps highlight next steps.
- It would be good to include an easy pragmatic ranking system for the pressures – especially if this is used as a tool to guide next steps/planning.
- Although each Party will decide when risk evaluation leads to a negative NDF, discussion on common metrics/thresholds across Parties would be valuable.
- The less robust the information used to answer the 5Q, the more precaution should be taken when evaluating risk.
- Most jurisdictions found their existing work stopped at Q2, with no evaluation on Q3, whether management was being implemented; they had management measures in place but did not evaluate their utility.
- Authorities from net importing jurisdictions found that working through the new draft NDF framework improved their understanding of how exporting Parties make NDFs.
- Given that importing jurisdictions generally take export permits in good faith, without probing NDFs beyond possible species verification, it is unclear how they would approach assessing the authenticity/quality of the permits.

Stakeholder communication:

- Ranking systems for pressures and risk helps to communicate the findings back to stakeholders.
- The evaluation needs to be explicable and defensible to stakeholders (fishers, traders, exporters etc.) as it is the basis on which Authorities are making decisions that affect peoples’ livelihoods.
- Authorities should consider working through the NDF framework even when they know the NDF will be negative. It helps in communicating the MAs decision to stakeholders. It also helps Authorities and stakeholders understand what is needed to move toward sustainable exports in the future, informing an action plan.

Choosing an approach to NDF:

- Making NDFs does not have to be a one size fits all situation. Authorities may use more sophisticated approaches in regions where they know more, but should be able to do a first pass of the easier 5Q approach in most places, even with limited data.

#### Geographic variations:

- Authorities should be careful in extrapolating data for one region to other regions within their jurisdiction, because answers to the 5Q varied geographically.
- Authorities do not need information specific to seahorses to evaluate pressures; they can infer pressures from fisheries information (maps of fishing effort), catch information for other species in same areas, etc.
- Some Parties would like to make NDFs on a regional basis, hoping to make positive NDFs in specific areas where management may be working, and thus to allow exports from those populations, fisheries and trades. How would RST address regional NDFs if they could not be made for the country as a whole?

#### Management options:

- NDFs will be more tractable to make where seahorses are targeted, allowing for management measures like quotas and minimum size lengths.
- It will be more challenging to make NDFs when seahorses are captured incidentally. For non-target fisheries, the main management will be excluding gears from seahorse areas, in line with the many existing national decrees for no take marine protected areas and on bottom trawl exclusion zones.
- Several Parties are culturing seahorses with an interest in allowing export for commercial trade. Setting annual quotas on wild broodstock collection is considered important to limit the impact of aquaculture on wild populations.
- Release of cultured seahorses into the wild was proposed as a management option but can be very problematic if not done according to best practices, often adding pressures on wild seahorse populations due to disease transmission, genetic threats and community disruptions.<sup>12</sup> Best practices, such as those set out by the IUCN,<sup>13</sup> require careful assessment, planning and monitoring, to levels that are seldom feasible or realistic.

#### Capacity issues:

- While SAs in attendance had experience in making NDFs, few had done it for marine species.
- Greater political will and more human resources are key ingredients in making NDFs more quickly and effectively.
- The 5Q approach draws on information held by diverse entities (e.g., NGOs), thus expanding the available human resources for NDF evaluations.
- For some jurisdictions, the limiting factor is government capacity – not information or tools – especially with the increasing number of marine species on the Appendices.
- Parties lack budget resources to cover all the threatened species (terrestrial and aquatic), and also to address habitat degradation.
- Authorities can partner with other government agencies and/or external stakeholders (academia, NGOs, etc.) to collect and analyse information, then collaborate on NDF assessments.
- Centralizing data sharing among relevant government agencies would support CITES implementation for listed species (i.e., a national database for CITES listed species).
- Authorities should seek synergies with their CITES responsibilities for marine species, using research programs and management measures to improve knowledge and action for several CITES taxa at once.
- National NDF workshops could help map the answers to the 5Q for several CITES listed taxa.
- One way forward may be risk assessments for multi-species fisheries (e.g., bottom trawling), instead of a species by species approach.
- Net importers would benefit from CITES capacity building because much of it currently focuses on net exporters.
- Species+ can be used to assist importers in examining permits – for example, in matching up named species and source country with species range.

#### **Recommendations emerging from workshop**

Parties are encouraged to:

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<sup>12</sup> <https://projectseahorse.org/resource/release-of-captive-bred-and-captive-held-syngnathids-into-the-wild/>

<sup>13</sup> <https://portals.iucn.org/library/efiles/documents/2013-009.pdf>



- Share means of making NDFs for any marine species with the Secretariat for posting on the CITES website<sup>14</sup> to assist other CITES Parties.
- Request the Animals Committee (AC) to provide guidance on the appropriateness of making positive NDFs for specific populations or regions in a country, when data are inadequate or management is too problematic to make positive NDFs in the rest of the country.
- Request the AC to consider a cost/benefit analysis of releasing captive-bred seahorses (and other species) for conservation of wild populations, and provide guidance on releases as a means of making NDFs.
- Promote synergistic approaches for meeting CITES obligations for the suite of marine species listed on Appendix II, mobilizing efforts by Parties, AC, CITES and the proposed NDF workshop.
- Request the AC and SC to clarify the role of importing Parties in probing the basis for (NDFs/LAFs) and authenticity of export permits.

Project Seahorse is encouraged to:

- Submit a revised version of the easier NDF framework, addressing participant feedback, to a future meeting of AC, and as one input into the NDF expert workshop being planned by CITES for late 2023.
- Feed results of discussion around NDFs into the marine working group for the NDF expert workshop being planned by CITES for late 2023.
- Cross check situational analyses against jurisdiction specific reports produced in support of Decision 18.229, paragraph c)(i), before finalising them for publication in April.
- Collaborate with TRAFFIC on adapting existing TRAFFIC tools to support implementing CITES for seahorses: i.e., M-Risk,<sup>15</sup> SharkTrace.<sup>16</sup>

## 6. Monitoring

### **Project Seahorse presentation: Monitoring guidelines for seahorses**

Project Seahorse emphasized that tracking populations over time is important to: 1) indicate need for conservation and management intervention, and 2) understand effectiveness of management. Monitoring is the only way to know if Parties have reached Level 4 implementation, and is an essential component of adaptive management. Monitoring wild populations is important whether Parties are allowing legal exports or not, to probe effectiveness of policy decisions.

Project Seahorse presented advice on monitoring seahorse populations in support of conservation and management, focused around three main approaches, in all of which Project Seahorse has expertise:

- Trade dependent – monitor domestic and international trade volumes, including illegal trade, often by asking questions of fishers, primary buyers, consolidators and/or exporters.
- Fisheries dependent<sup>17</sup> – monitor catches (ideally) or landings, at ports or onboard vessels, paying critical attention to changes in fishing effort.
- Fisheries independent<sup>18</sup> – underwater surveys of seahorse populations through snorkel or SCUBA, preferentially using timed swims for seahorses, rather than transects.

Project Seahorse noted that monitoring wild populations of seahorses *in situ* is notoriously difficult and not likely to be feasible for many Authorities. Instead, Project Seahorse suggested that (fisheries dependent) port surveys would be the most pragmatic approach to sampling seahorse populations.

In an allied initiative, Project Seahorse noted that it has collaborated with Viet Nam's Institute of Oceanography on a data sheet for tracking use of wild broodstock by seahorse aquaculture facilities.

### **Participant engagement and feedback: Trialing monitoring guidelines**

<sup>14</sup> <https://cites.org/eng/virtual-college/ndf>

<sup>15</sup> <https://onlinelibrary.wiley.com/doi/abs/10.1111/faf.12695>

<sup>16</sup> <https://www.traffic.org/sharktrace/>

<sup>17</sup> <https://projectseahorse.org/iseahorse/trends/landings/>

<sup>18</sup> <https://projectseahorse.org/iseahorse/trends/underwater/>

Participants worked to develop draft port monitoring plans for seahorses, considering how they would monitor landings and fishing effort repeatedly (developing a time series) at representative sites throughout their jurisdictions. Participants were encouraged to consider (1) where, when and how they would monitor and also (2) how the resulting data would be stored, analysed and used. They were also encouraged to consider whether monitoring seahorses would require a new initiative, or if seahorses could be added to existing monitoring efforts.

### **Workshop discussion: monitoring seahorse fisheries, trade and populations**

- Monitoring protocols need to include questions that drive reliable documentation of fisheries and trade effort.
- All monitoring plans need to be long term and have a geographic spread, with a recommended target of sampling of at least twice a year, every year, in as many ports as possible, covering all gears and species involved in the fisheries/trade.
- Captured seahorses are typically kept by the crew and not reported – therefore they can be missed in port sampling efforts.
- Port monitoring poses great challenges, especially as seahorses are often landed at many different sites (not necessarily official ports) along very long coastlines.
- Data collection by or from primary buyers (placing the burden of proof on them) may be the most pragmatic approach because they generally gather seahorses from many fishers, often across multiple communities.
- Rapid surveys of fisheries and trades allow for a sense of seahorse distribution/hotspots, where long term monitoring can be focused.
- Buyer surveys, if properly designed, would automatically provide information across time and space.
- Ideally Authorities would obtain data from diverse sources – e.g., from fishers to assess catch rates and from buyers to probe trade volumes – to improve understanding of seahorse populations and allow cross validation of data.
- Even if they monitor differently, all jurisdictions/agencies/external stakeholders should collect, at minimum, an agreed set of metrics so data can be combined/compared across jurisdictions and even regions. Monitoring advice for marine fishes and invertebrates from FAO and IUCN shared with Parties in CoP17 Inf. 65 can provide a useful starting point.<sup>19</sup>
- Given the challenges around species ID, it may be necessary for buyers to collect information on multiple species as “*Hippocampus* spp.”, in which case experts should sample species composition several times a year as an index of species-specific throughput by buyers.
- Existing fisheries monitoring plans reported by participants could be adapted to include specific attention to seahorses, removing their current categorization of “trash fish” or “miscellaneous fish”. If such monitoring must be at the genus level, pragmatically, then experts should sample species composition several times a year as an index.
- Agencies that conduct monitoring that involve seahorses need to share their findings across agencies and across jurisdictions, at a level that is manageable for available capacity.
- Participants recognized catch and/or trade bans pose a challenge – while data are needed to evaluate management options to move toward sustainable and legal trade, data are hard to collect while catch and/or trade are illegal – that may be reduced by inviting outside collaborators (academia, NGOs) to help gather information.
- Alternative methods for sampling populations in the wild, for example via eDNA, should be explored.
- Conversion factors for the various forms of seahorse trade should be compiled and made available to Parties (e.g., wet weight to dry weight; number of dried seahorses per kilogram; weight of an individual seahorse in powdered form).

### **Recommendations emerging from workshop**

Parties are encouraged to:

- Share existing monitoring plans for dried seahorses with each other, including examples of what has been done, what has worked/not worked. Parties could request the Secretariat to create a depository for monitoring plans in support of adaptive management, similar to what it has created for sharing NDFs.
- Add seahorses to existing fisheries monitoring programs, making specific records for seahorses instead of including them under generic categories such as “trash fish”, “miscellaneous fish” or “fish NES”.

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<sup>19</sup> <https://cites.org/sites/default/files/eng/cop/17/InfDocs/E-CoP17-Inf-65.pdf>

- Create monitoring programs that include seahorses and other CITES species (e.g., sharks and rays, sea cucumbers, etc.) as fishers and buyers often catch/trade in multiple species.
- Collaborate with external partners (academia, NGOs, industry) in monitoring seahorse populations, especially where catch and/or trade are suspended/banned.
- Collaborate with dive groups, via iSeahorse.org, to obtain in-water data on seahorse distributions and populations.
- Find ways to analyse existing monitoring data and to disseminate their findings, perhaps through collaborations with external partners.
- Request the AC to collate advice on monitoring “invisible” species like seahorses (cryptic, low density).
- Request the AC to establish common metrics for monitoring seahorses (and other marine taxa) that all Parties could use, using CoP17 Inf. 65 as a starting point.<sup>19</sup>
- Request FAO to include seahorses and other CITES taxa (e.g., sea cucumbers and sharks) in their capacity building efforts for global assessments.

Project Seahorse is encouraged to:

- Work with Parties to develop monitoring protocol for primary buyers.
- Work with Parties and species experts to determine conversion factors for various forms of seahorse trade.
- Explore technological solutions for supporting seahorse species ID – e.g., iSharkFin,<sup>20</sup> Fin Finder.<sup>21</sup>

## 7. LAFs

### **Project Seahorse presentation: LAF support for seahorses**

Project Seahorse explained that an LAF is how the CITES Management Authorities (MAs) evaluate that seahorses being proposed for export were not obtained in violation of national laws. CITES has provided guidance on LAFs, in the form of Resolution Conf 18.7 adopted at CoP18, and in collaboration with FAO.<sup>22</sup> The most recent guidance for LAFs came in the form of the ‘**Rapid guide for the making of legal acquisition findings**,’ adopted at CoP19, and contained in CoP19 Doc. 40 Add. Annex;<sup>23</sup> hereafter ‘*Rapid Guide*’).

Project Seahorse introduced a first draft of a seahorse specific supplement to the ‘*Rapid Guide*’ focused on making LAFs for wild seahorses entering dried trade, the dominant form of export, and presented a draft matrix to support LAF assessments for seahorses. It was based on the most common laws and regulations relevant to wild seahorse exports, in support of Point 3 of the ‘*Rapid Guide*’, and on the most significant and feasible information needed to evaluate compliance with those laws and regulations, in support of Points 4 and 5 of the ‘*Rapid Guide*’.

### **Participant engagement and feedback: Probing the draft new LAF framework**

Participants worked through the draft matrix developed by Project Seahorse to support MAs in making LAFs for seahorses. They were asked to list the laws, regulations and management measures relevant to seahorse exports from their jurisdictions, and to consider information they would need to assess compliance with those laws/regulation/management measures. As with NDFs, none of the participating jurisdictions were issuing export permits/making LAFs for dried seahorses at the time of the workshop, again making this exercise hypothetical. Working through the matrix could, however, guide analysis of how Level 2 policy outcomes are being implemented as well as supporting any future plans to initiate legal exports of seahorses.

### **Workshop discussion: making LAFs for seahorses**

- In some cases, the Project Seahorse matrix supported Parties’ existing approaches, while in others it offered suggestions on how to expand such approaches to marine species.

<sup>20</sup> <https://cites.org/eng/node/17039>

<sup>21</sup> <https://apps.apple.com/us/app/fin-finder/id1624502516>

<sup>22</sup> <https://www.fao.org/documents/card/fr/c/cb1906en/>

<sup>23</sup> [https://cites.org/sites/default/files/documents/E-CoP19-40-Add\\_3.pdf](https://cites.org/sites/default/files/documents/E-CoP19-40-Add_3.pdf)

- The process of completing the matrix could be simplified, a point that Project Seahorse will address in revising the guidelines.
- All jurisdictions had laws/regulations that should be considered when making LAFs for seahorse exports, some of them seahorse specific (size limits, seasons), but most of them broader but applicable to seahorses (MPAs, spatial and/or temporal restrictions on certain fishing gears, etc.).
- MAs clearly need to work with fisheries authorities to establish LAF processes for marine species.
- Traceability is key to making LAFs for exports and for processing re-exports (and in guiding and improving NDFs), but it can be challenging for seahorses, especially for packaged or processed products. Traceability is needed to the extent that it allows for exclusion of illegal activity, so Parties only have to go as far back in the supply chain as is practicable and needed to prove legal acquisition.
- There is a need to balance reality of what information exporters can provide with what is needed for making LAFs.
- A system to registering/accredit seahorse collectors, buyers, traders, exporters was considered to support making LAFs.
- Net importers were unsure how they would approach assessing the authenticity/quality of the permits with respect to LAFs (as with NDFs).
- Net importers stressed the need to consider the implementation challenges posed by re-exports (to avoid laundering illegal imports), particularly for stockpiles, and encouraged development of traceability systems for dried seahorses that could help importers to ensure legal re-exports.

### **Recommendations emerging from workshop**

Parties are encouraged to:

- Discuss and share approaches for making LAFs with other Parties. Parties could ask the Secretariat to create a depository for LAFs, similar to that they have created for sharing NDFs.
- Request the AC to consider best practice approaches for dealing with seahorse stockpiles.
- Request the AC to review options for seahorse traceability systems.

Project Seahorse is encouraged to:

- Revise its guidance for making LAFs for seahorses, then submit the revised version a future AC meeting.

## **8. Enforcement**

### **Project Seahorse presentation: Seahorse IWT and risk analysis**

Project Seahorse highlighted the current massive illegal trade in seahorses, arising from challenges in enforcing the trade suspensions in place for exporting Parties that historically supplied 95% of exports. It then reviewed the illegal seahorse trade, including its new analysis of global seahorse seizures that had been reported in the media. A first draft of this analysis was made available to the Parties as CoP19 Inf. 96.<sup>24</sup> It confirms major trade routes, documents minimum volumes in illegal trade, and highlights patterns of trade that are useful in informing intelligence led enforcement efforts at points of export and import. The analysis will be submitted for publication in a primary journal, and to a future meeting of the CITES Standing Committee (SC).

### **UNODC presentation:**

The United Nations Office of Drugs and Crime (UNODC) joined the workshop via Zoom to present an overview of UNODC, its work on crimes against the environment (CAE), and its capacity building and support efforts. It made particular note of Operation Mekong Dragon and Wildlife Inter-Regional Enforcement (WIRE) Meetings. Operation Mekong Dragon is a comprehensive and coordinated action among Customs agencies in Asia and the Pacific. Initiated in 2018 by both China and Viet Nam Customs, it targets illicit cross border movement of drugs, wildlife, and timber products. WIRE creates an informal network among law enforcement authorities, intended to promote cooperation between African, Asian and Latin American countries. The 2022 WIRE included over 100 criminal justice sector professionals from the target regions.

<sup>24</sup> <https://cites.org/sites/default/files/documents/E-CoP19-Inf-96.pdf>

UNODC then introduced risk-based control procedures for addressing CAE, and reviewing indicators of risk that jurisdictions could consider in combatting IWT.

### **Participant engagement and feedback: laying a framework for enforcement**

Participants embarked on a thought exercise focused on risk indicators and smuggling profiles led by UNODC. They worked in groups of three jurisdictions (two net exporters and a net importer) to collate information on trafficking in dried seahorses, working with what they knew and/or were comfortable discussing given the sensitive nature of the subject matter. They paid particular attention to source countries, transit countries, destination countries, methods of shipment, transportation routes, entry points, cities/locations of interest, businesses of interest, method(s) of concealment and cover load(s).

### **Workshop discussion: enhancing enforcement for seahorses**

- Species are often not identified on permits or in seizures but such information can be useful in verifying permits and providing key information on trade routes.
- Net importer jurisdictions noted they need an easy way to determine which Parties have voluntarily ended exports, so they can guide enforcement authorities, traders, etc., and suggested this information be registered in Species+.
- Participants noted the importance of sharing IWT data (i) among relevant government agencies within a Party, for example, sharing seizure records between MAs and SAs and (ii) between importing and source Parties, for example informing exporting Parties about seizures at ports of import.
- Participants noted the challenges in implementing fishing laws with subsistence fishers, especially when penalties were very severe; authorities hesitate to charge violators and courts would not impose them.
- The challenges posed by moving seahorses by post and allowing personal exemptions need to be explored – as significant volumes of dried seahorses may be moved in such ways.
- Participants commented on the risk of laundering wild specimens as captive-bred, noting that a registry of approved breeding operations for Appendix II species would be of great value in supporting CITES Authorities when probing permits.
- When asked how species experts can contribute to enforcement, UNODC mentioned (i) the role of its scientific advisory committees in providing evidence-based policy information, (ii) the role of experts in identifying species and determining the value of the seizure in law enforcement and (iii) the role of experts in court cases.
- It would be helpful to explore the possibility of demand reduction/behavioural change in addressing seahorse IWT, even while recognising that much of the trade may be driven by nonselective fisheries rather than by demand per se.
- It would be useful to explore the role of genetic testing in obtaining geographic information on seahorse sourcing to support wildlife enforcement efforts.
- It would be useful to explore whether eDNA in air could be used to identify dried seahorses in suspected shipments/personal baggage etc.

### **Recommendations emerging from workshop**

Parties are encouraged to:

- Request the Secretariat to include information about voluntary trade suspensions on Species+, as a key resource Authorities consult when managing trade.
- Request the SC to explore how Parties are implementing personal exemption rules for seahorses (noting Resolution Conf. 13.7 (Rev. CoP17) which specifies four specimens per person).<sup>25</sup>
- Recognising that seahorses are often illegally traded with other CITES-listed species, request the SC to seek means of reducing IWT for multiple species simultaneously.
- Collaborate with experts to identify species of seahorses in any seizures, and make specimens available for research.

Project Seahorse is encouraged to:

- Create a template to support Parties to track and assess seahorse seizures.
- Prompt research on demand reduction/behavioural change in advancing CITES implementation for seahorses.

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<sup>25</sup> [https://cites.org/sites/default/files/document/E-Res-13-07-R17\\_0.pdf](https://cites.org/sites/default/files/document/E-Res-13-07-R17_0.pdf)

- Contribute to research exploring the use of genetic tools in combatting seahorse IWT.

## 9. Field trip

Workshop participants spent Day 3 (Thursday 16 March) travelling to a village that had been deeply involved in seahorse fishing and trading until the CITES Appendix II listing triggered an automatic ban on seahorse catch and sale under Philippines law. The day was designed to allow participants to explore the implications of a ban on seahorse trade and the possibilities of sustainable use under adaptive management. The trip was centred around rural Handumon village on Jandayan Island in Getafe municipality, Bohol province, where Project Seahorse and ZSL Philippines have been active in community-based conservation since 1993. Participants departed by outrigger boat at 7 am, returning at about 7 pm.

On their arrival at 10 am, participants were welcomed by village and municipal leaders and hosted by KANAGMALUHAN, the Handumon People’s Organization. They then divided into two groups and engaged in four activities: discussion with former seahorse fishers, meeting with a former seahorse trader, exchanges with the village council, and observing a meeting of the village savings association. In the first three activities, the workshop participants enquired about seahorse trade and marine conservation activities, that they might develop ideas for possibly re-opening trade with positive NDFs, while the fourth activity allowed the visitors to observe village capacity for organization and progress. The meetings were some distance apart in outdoor venues, allowing participants to explore the village and island.

Participants thoroughly engaged with the day’s activities, leaving with an enhanced understanding of local seahorse fishing and trade. In addition, highlights included the spectacular and truly delicious lunch, dinner and snacks prepared by villagers in an outdoor kitchen and offered up with warm hospitality. Workshop participants also had the chance to snorkel on a reef during the return trip to Mactan, Cebu. The diverse aspects of the trip blended into a tremendous opportunity for participants to bond over a shared experience, forging ties that should have long-term benefits for implementation of the Appendix II listing for seahorses, and beyond.

## 10. Overview of situational analyses

Over the four days of the workshop, participants, grouped by jurisdiction, developed thoughtful collective analyses of how the Appendix II listing for seahorses was being implemented in their jurisdiction, and of the potential for further activity within the next three years. These situational analyses could serve as the basis for action plans in the jurisdictions, with participants encouraged to share thoughts and ideas with key colleagues at home. They also allow Project Seahorse an insight into progress and opportunities.

Listening to nine presentations in quick sequence led to a number of general observations about the Appendix II listing for seahorses:

- Rapporteurs repeatedly noted that the experience of working through implementation steps and options for seahorses was of broad general relevance for many taxa listed on CITES Appendix II, often identifying novel learning and ideas that had emerged.
- Presentations were exciting in that they summarized steady progress already achieved and identified many options for next steps.
  - In particular, participants noted actions they might take in 2023 and 2024, such as completing NDF evaluations; enhancing their understanding of seahorse distribution and pressures through new research; enhancing data and information sharing among agencies and Parties; enhancing collaboration among government agencies, NGOs, academics, *inter alia*, with respect to seahorse conservation and management; and developing monitoring programs for seahorses.
- Participants were open in reporting their experiences and ideas, creating a climate of communication and consultation for governments and experts, including across jurisdictions.
- Even while recognising the many challenges of implementation, jurisdictions identified many options and pathways to progress once political will is generated.
- It was encouraging how often rapporteurs mentioned plans for collaboration across agencies and other organizations as one way to effect better implementation, and cited many possible avenues for improved communication with NDFs, monitoring, LAFs and enforcement.

- For most jurisdictions, listing has resulted in many technical outputs (Level 1) and a number of positive policy outcomes (Level 2) but very few field outcomes (Level 3) and no understanding of population impacts (Level 4).
- There was a tendency to misinterpret policy outcomes (Level 2), which are anchored in meetings and documents, as practical outcomes (Level 3), which require hands-on application through field management and practical changes that directly connect with the fish.
- All jurisdictions will need to make persistent effort to bridge from technical and policy work to population recovery, recognising, for example, that establishing an MPA is still Level 2 until it is durably respected (Level 3) to a standard that allows fish recovery (Level 4).
- Engagement with NDFs was reported and planned far more than corresponding work with monitoring, LAFs or enforcement.
- A number of presentations referred to the need to reconsider regulations on bottom trawling and their enforcement, to reduce pressure on wild populations.
- The release of cultured seahorses was mentioned as one component of implementation but can impose pressures on wild populations. Where it is done, it should follow best practices, such as those set out by the IUCN.<sup>26</sup>
- Rapporteurs noted that the challenges of monitoring wild populations or indices of their abundance may be diminished by exchanging ideas and plans among jurisdictions.
- Rapporteurs noted that new technologies (such as eDNA monitoring) may offer some possibilities for overcoming considerable challenges of monitoring seahorse population health.
- When it came to enforcement, one challenge is to ensure that penalties for violations were proportionate, such that they would actually be imposed and serve as effective deterrents.
- Importers noted the need to consider what more could be done to help secure good implementation of the Appendix II listing, by addressing validity of export permits (ideally helped by central documentation of trade suspensions) and by helping to prevent smuggling.
- Project Seahorse heard the concerns about enforcement challenges posed by the small size of individual dried seahorses but noted that they are larger than pangolin scales, which are a clear concern of CITES Authorities.
- In light of the many options for action emerging from the presentations, Project Seahorse reminded government participants that both Project Seahorse and the entire IUCN SSC SPS SG are eager to help, as resources allow.

#### **11. Validating recommendations to support CITES implementation for seahorses shared at SC74**

The discussions and situational analyses emerging from this workshop supported the findings of the dried trade study reported to Parties at SC74.<sup>8</sup> Further, the recommendations emerging from this workshop echoed 19 of the 36 recommendations presented to SC74 – namely recommendations 2, 3, 4, 5, 8, 10, 11, 12, 15, 16, 17, 19, 20, 23, 25, 26, 27, 31 and 35.

#### **12. Acknowledgements**

Project Seahorse would like to thank:

- The Principality of Monaco and the National Ocean and Atmospheric Administration of the USA who have been vital and tremendous supporters of advancing CITES for seahorses.
- Our generous and engaged co-hosts from the Philippines government – the Bureau of Fisheries and Aquatic Resources (DA-BFAR) and the National Fisheries Research and Development Institute (DA-NFRDI).
- All participants who gave the gift of their time to attend the workshop including: the species experts and the government representatives from India, Indonesia, Malaysia, Philippines, Thailand, Viet Nam, Singapore and from China, Hong Kong SAR and Taiwan Province of China; representatives from TRAFFIC, SEAFDEC, FAO, UNODC.
- Our co-organizing partner, ZSL Philippines – in particular Glenn Labrado, Myrtle Arias, Charity (Chai) Apale and Mary (Nesa) Medina.
- Rosemarie (Mia) Apurado and the generous people of Handumon and the Getafe municipality for hosting the field trip.

<sup>26</sup> <https://portals.iucn.org/library/efiles/documents/2013-009.pdf>

## Annex A – Working program

### **March 13**

Participants arrive throughout the day

Buffet dinner on beach front 5:00-9:00 pm

### **March 14: Welcome, setting the stage, NDFs**

<b>Timing</b>	<b>Item</b>
6:00-8:30	Breakfast
8:30-8:50	Welcome from co-hosts: BFAR, NFRDI and ZSL-PH
8:50-9:05	CITES Secretariat
9:05-9:15	FAO
9:15-9:25	TRAFFIC
9:25-9:35	SEAFDEC
9:35-10:00	PS & IUCN SSC SPS SG: Setting the scene for a successful workshop
10:00-10:15	Break
10:15-10:30	Framework for assessing CITES implementation
10:30-10:45	Seahorse case study
10:45-11:00	Introduce situational analyses
11:00-12:30	Situational analysis – begin to develop presentation
12:30-1:30	Lunch
1:30-1:45	Seahorse NDF guidance – a history
1:45-2:00	Seahorse NDF guidance – making it easier
2:00-3:30	Trying out the easier guidance
3:30-4:00	Break
4:00-5:00	Discussion – Opportunities and challenges in making NDFs for seahorses
5:00-6:00	Advancing situational analysis – NDFs
7:00-8:00	Dinner
8:00-9:30	Social gathering at hotel (specific location to be announced)

### **March 15: Monitoring and LAFs**

<b>Timing</b>	<b>Item</b>
6:00-8:30	Breakfast
8:30-9:00	Reflections from Day 1
9:00-9:30	Monitoring seahorse fisheries and trades – existing guidance
9:30-10:30	Drafting monitoring plans
10:30-11:00	Break
11:00-11:30	Discussion – monitoring seahorse fisheries and trades
11:30-12:30	Advancing situational analysis – monitoring
12:30-1:30	Lunch
1:30-2:00	Making LAFs – CITES guidance
2:00-2:30	Making LAFs – seahorse guidance
2:30-3:30	Making LAFs – national guidance
3:30-4:00	Break
4:00-5:00	Discussion – making LAFs for seahorses
5:00-6:00	Advancing situational analysis – LAFs
7:00-8:00	Dinner
8:00-9:30	Social gathering at hotel (specific location to be announced)



**March 16: Field trip to Handumon, Bohol**

Timing	Item
6:00-7:00	Breakfast
7:00-9:30	Travel to Handumon by fast boat / Boat departs from hotel
9:30-10:00	Snacks
10:00-12:00	Activities
12:00-1:30	Lunch
1:30-3:30	Activities
3:30	Boat departs Handumon
5:00-7:00	Snorkelling and picnic dinner (we will stop on the way back to hotel)
7:30	Boat returns to hotel

**March 17: Enforcement, presenting situational analyses and wrap up**

Timing	Item
6:00-8:30	Breakfast
8:30-9:00	Reflections on Day 2 and field trip
9:00-9:15	Seahorse IWT – overview and intro to mornings activities
9:15-10:00	Wildlife enforcement briefing / Introduction to break out group exercise
10:00-11:00	Break out groups – enforcement (coffee and food as needed)
11:00-11:45	Discussion – Enforcement
11:45-12:30	Advancing situational analysis – enforcement
12:30-1:30	Lunch
1:30-3:30	Presenting situational analyses
3:30-4:00	Break
4:00-4:45	Discussion – situational analyses
4:45-5:30	Where do we go from here? Next steps in implementing CITES for seahorses
5:30-6:00	Closing comments from ZSL, NFRDI & BFAR
7:00-8:00	Dinner
8:00-11:00	KARAOKE!

**March 18**

Breakfast buffet 6:30-10:00 am

Participants depart throughout the day