

出國報告（出國類別：其他）

海峽兩岸 CITES 物種貿易管理討論會

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出席海峽兩岸 CITES 物種貿易管理討論會報告

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摘要

近十幾年來，國際貿易的操作方式有著非常重大而快速的轉變，各種物資的交易型態，從傳統的直接貿易逐漸轉型為轉口貿易，或間接型態的三角貿易。目前中國大陸已成為全球重要的產品供應地、製造地與消費地，無論兩岸間的直接貿易，或台灣接單而從大陸出口供貨貿易，已成為非常重要的貿易模式。然因兩岸之特殊關係，政治的長期隔閡，相關貿易無論在法律上、管理上或制度上，確實有必要進一步交流、溝通與瞭解，透過正式討論會與非正式的會商方式，以建立彼此互信基礎，並建構有效的合作機制。

透過 TRAFFIC Taipei 的協助安排，進行海峽兩岸間政府野生動植物貿易與行政管理部門人員首次的交流與會商。透過計畫之進行，來自於行政院農業委員會林務局、漁業署，經濟部國際貿易局、衛生署中醫藥委員會、警政署森林暨自然保育警察隊共 7 名代表於 2009 年 11 月 3-7 日赴北京，會見中國大陸林業局瀕危物種管理辦公室孟獻林副主任與周志華處長，進行相關議題之會談，有效建立兩岸 CITES 貿易管理機關的互動管道，以增加對兩岸 CITES 貿易管理規範之理解，促使兩岸 CITES 貨品貿易的順利進行，降低民眾違法與財產的損失的機會。

瀕臨絕種野生動植物國際貿易公約（Convention on International Trade in Endangered Species of Wild Fauna and Flora, CITES）自 1973 年簽署、1975 年生效以來，目前業有 175 個締約國，為目前國際間最重要的保育與野生動植物貿易的公約組織。CITES 為目前唯一有制裁力量的國際保育公約；CITES 可利用秘書處發函各締約國的方式，通知各締約國，因為某國對 CITES 執行不力，請暫時停止承認與核發出口至該國的許可證，形成貿易制裁力量。

中國大陸自 1981 年起，成為 CITES 的締約國，積極的制訂各種法規以施行 CITES 的各項規定。包括 1984 年頒佈的《森林法》、1988 年頒佈的《野生動物保護法》、1992 年頒佈的《陸生野生動物保護實施條例》、1996 年頒佈的《陸生野生植物保護條例》、2006 年頒佈的《瀕危野生動物進出口管理條例》等國內法。中國大陸同時也依據許多人民大會決定之規定、國務院通令、高等法院命令、行政規定等管理 CITES 附錄物種及其他野生動植物的進出口、保護和利用。其 CITES 管理機構（Management Authority）為國家林業局之下的「瀕危物種管理辦公室」，目前共有 22 個辦事處（2 個尚未設立）主要分佈在邊界省分，每個辦事處有工作人員 3-7 人。瀕危物種管理辦公室依據《瀕危野生動物進出口管理條例》

管理 CITES 物種的進出口，包括許可證核發程序、條件、罰則等。

會議中中國大陸對於四種太平洋紅珊瑚物種列入 CITES 附錄 III 進行說明，該提案起源於 2004 年第 13 屆大會時，美國的紅珊瑚提案，雖然當時此附錄物種提案最後並未通過，但中國（漁業局）早於 1988 年即將紅珊瑚屬列入國家一級保護物種，嚴格管理紅珊瑚之開採；爲了進行有效的資源管理而將其列入 CITES 附錄 III 物種中。目前在實際執行層面所面臨的鑑定等問題，以及進出口的文件審核需從「省」提報至「中央」，因此需要較久的作業時間。至於 2010 年第 15 屆大會，中國大陸對於美國將紅珊瑚列入附錄 II 物種之提案立場，將需與漁業局進行討論後方能決定。

孟憲林同時提出希望與台灣就 CITES 貿易合作的四項具體項目，1) 瞭解台灣的貿易規範，以便處理某些急件，以及許多大宗貿易，2) 希望台灣能將每年 CITES 貿易資料依據 CITES 的規格，提供給中國大陸，在剔除雙方貿易記錄後，一併提交給 CITES 秘書處，3) 對於 CITES 大會在附錄物種提案上，如紅珊瑚、黑鮪魚，台灣可提供相關意見，做爲大陸內部討論與 CITES 大會上發言的參考，4) 希望未來雙方以非政府組織（NGO）爲平台，每年至少互訪一次，各自準備資金，並且從雙方高層互訪開始。

爲實地瞭解野生動植物貿易在中國大陸的狀況，代表團前往幾個代表性的野生動物市場進行實地參訪。其中之一爲安國市位於河北省，爲中國大陸重要的中藥材集散市場，經營 3000 多個品種，中藥材日吞吐量有 400 多公噸，爲中國大陸規模最大、品種最齊全的中藥材專業市場。此交易大廳規模廣大，一樓以植物性藥材爲主，二樓以動物性藥材，及一些人參爲主，可見爲數眾多的龜板，以陸龜板及鱉甲爲主；另有許多在台灣不容易看見的昆蟲類藥材。安國市同時也是許多中藥材的栽培基地，當地種植作物多爲耐寒品種。以糧食作物與多年生藥材輪種，對於該種植何種中藥材並無一個協調機構，經常是農民間或與藥材商間的私下協商，也因此藥材的種植面積與產量並無全面性的規劃，劇烈的價格波動時有所聞。

「中國國際珠寶展」於 2009 年 11 月 5-9 日假「北京中國國際展覽中心」展出。台灣的業者位於第 2 層的一個集中區塊，僅有 10 家台灣業者得以珊瑚製品參與珠寶展。據業者表示，中國大陸政府內對於珊瑚製品管理的態度也不一致。絕大多數展示的珊瑚製品多來自於台灣原產的珊瑚，且在台灣加工爲成品。原產

於義大利的地中海珊瑚（*Corallium rubrum*）製品非常的稀少，僅出現於一家業者的櫃位。另外，由於中國大陸農業部漁業局於 2008 年 7 月 15 日頒佈「關於加強紅珊瑚保護管理工作的通知」，在中國大陸販售紅珊瑚製品的商家需申請販售執照。

WWF（World Wild Fund，世界自然基金會）全球最大的保育非政府組織（NGO）致力於物種棲息地管理與一般民眾的教育宣導工作；TRAFFIC（國際野生生物貿易研究組織）為 IUNC（The World Conservation Union，國際保育聯盟）與 WWF 所屬的野生生物貿易監測組織。TRAFFIC 與 WWF 在北京皆設有辦公室，在中國大陸進行關於物種棲息地管理發展與野生動植物貿易研究與管理協助的工作。中國大陸政府，特別是國家林業局的不同部門，與該兩個國際組織有不同工作項目的合作，包括發展全國標準化的棲地監測與巡護技術，與鄰近國家共同履行 CITES，多項保育與野生生物貿易研究，教育訓練與宣導等。

建議：

- 台灣各 CITES 執行機關如農委會、貿易局應有足夠的決策者與業務執行人參與每屆的 CITES 締約國大會，才能持續人員的培育、有效的掌握所有討論與議題，並在必要的時候發言以保障台灣在 CITES 貿易上的權利。
- 為能防止台灣的商品與廠商因未遵守永續利用與管理的國際規範而受到傷害，台灣應儘早在法律、管理流程、溝通宣導上因應。加強瞭解中國大陸及其他國家對於 CITES 以及其他野生資源的採摘、撈捕、加工製造、貿易等整個野生資源生產供應流程的管理外，也應積極進行研究與宣導，瞭解台灣與中國大陸在全球 CITES 與野生生物資源貿易的互動連結，及應遵守之國際規範。
- 台灣應加強 CITES、海洋與林木物種產品貿易的管理與研究，首先應將野生動植物資料庫的建立、整理與分析列為優先重點項目，包括貿易局、林務局、漁業署、森林警察隊、關稅局等應盡進行相關資料的蒐集並且電子化，同時應將資料轉成容易分享相容的檔案格式，如 EXCEL 等。資料的內容應包括合法貿易與非法貿易，以及進出口與國內貿易的資料，且應盡快的達到以個別「物種」或「屬」為單位的資料收集與分析。

壹、前言

近十幾年來，國際貿易的操作方式有著非常重大而快速的轉變，各種物資的交易型態，從傳統的直接貿易逐漸轉型為轉口貿易，或間接型態的三角貿易。目前中國大陸已成為全球重要的產品供應地、製造地與消費地，無論兩岸間的直接貿易，或台灣接單而從大陸出口供貨貿易，已成為非常重要的貿易模式。然因兩岸之特殊關係，政治的長期隔閡，相關貿易無論在法律上、管理上或制度上，確實有必要進一步交流、溝通與瞭解，透過正式討論會與非正式的會商方式，以建立彼此互信基礎，並建構有效的合作機制。

國際間野生動植物的貿易管理模式主要遵照瀕臨絕種野生動植物國際貿易公約（Convention on International Trade in Endangered Species of Wild Fauna and Flora, CITES），另稱華盛頓公約。該公約自 1973 年簽署、1975 年生效以來，目前業有 175 個締約國，為目前國際間最重要的保育與野生動植物貿易的公約組織。CITES 為目前唯一有制裁力量的國際保育公約；CITES 可利用秘書處發函各締約國的方式，通知各締約國，因為某國對 CITES 執行不力請暫時停止承認與核發出口至該國的許可證，形成貿易制裁力量。台灣因國際地位處境被孤立，無法成為締約國，惟相關國際貿易行為，卻仍須依照其規範方能合法進行。而中國大陸不僅為締約國，亦是目前國際間最大的野生動植物貿易國家之一，兩岸間之貿易亦日益頻繁，因此雙方主管事務機關實有必要進行適當的交流，就兩岸 CITES 貿易的管理進行瞭解與討論，建立兩岸 CITES 貿易管理機關的互動與合作管道，增加兩岸 CITES 貨品貿易的順利進行，並且增加民眾對於兩岸 CITES 貿易管理規範之理解，降低民眾違法與財產的損失的機會。此外，兩岸共同打擊非法野生動植物貿易，可有效降低國際間非法野生物貿易的猖獗。

貳、目的

本計畫主要目的係籌辦海峽兩岸 CITES 物種貿易管理討論會，協助兩岸建立所需要的 CITES 貿易管理合作機制；以確保並促進合法貿易順利進行，同時並能有效打擊非法野生動植物貿易的猖獗。

為達成上開目的，特委請具多年 CITES 及相關協調經驗的 TRAFFIC TAIPEI（台北野生物貿易研究委員會），辦理本討論會及協調聯繫兩岸之溝通工作。TRAFFIC 為一國際非政府組織，致力於野生物資源的永續利用。自 1976 年成立以來，與 CITES 秘書處密切合作協助各國政府有效的執行 CITES 規範。TRAFFIC

同時協助歐盟、東協及南亞等聯盟建立野生物貿易管理聯合小組；多年來也協助中國與其周邊各國的野生物貿易管理會談，並建立有效的合作機制。

本計畫為海峽兩岸間政府野生動植物貿易與行政管理部門人員首次的交流與會商，透過計畫之進行，將有效建立兩岸 CITES 貿易管理機關的互動管道，增加兩岸 CITES 貨品貿易的順利進行。並且增加民眾對於兩岸 CITES 貿易管理規範之理解，降低民眾違法與財產的損失的機會。

參、過程

一、會議內容與討論議題

「海峽兩岸 CITES 物種貿易管理討論會」於 2009 年 11 月，假北京翠明莊賓館 2 樓會議廳舉辦。台灣代表團單位成員 8 人，由行政院農業委員會林務局保育組管立豪組長領隊，其餘成員為林務局保育科林國彰科長、經濟部國際貿易局黃澗萱科長、趙筠秘書、衛生署中醫藥委員會陳文弘技正、警政署森林暨自然保育警察隊阮錦奇隊長、行政院農業委員會漁業署漁政組洪國堯技正，以及台北野生物貿易研究委員會吳郁琪計畫主任。中國大陸則由林業局瀕危物種進出口管理辦公室孟憲林副主任，與該辦公室所屬之公約事務處周志華處長為代表。孟憲林負責整體中國大陸履行 CITES 公約的所有工作，而周志華負責 CITES、國際及港澳台之事務與談判。

討論會開始由雙方代表就相關的主要業務做自我介紹，接著由林國彰科長代表台灣方面介紹台灣在執行 CITES 與其他野生物貿易管理之相關法規、進出口證照之核發與管理流程、以及執法部門的架構與工作。

中國大陸由孟憲林代表說明其進出口管理法規，及中國大陸在 CITES 附錄物種貿易進出口管理的相關機關，及互相隸屬或合作的關係。孟憲林表示，中國大陸對於野生物的管理始於 1970-1980 年代，尤其是自 1981 年起，成為 CITES 的締約國，積極的制訂各種法規以施行 CITES 的各項規定。包括 1984 年頒佈的《森林法》、1988 年頒佈的《野生動物保護法》、1992 年頒佈的《陸生野生動物保護實施條例》、1996 年頒佈的《陸生野生植物保護條例》、2006 年頒佈的《瀕危野生物進出口管理條例》等國內法。中國大陸除依據上訴法律外，同時也依據許多人民大會決定之規定、國務院通令、高等法院命令、行政規定等管理 CITES 附錄物種及其他野生動植物的進出口、保護和利用。其 CITES 管理機構

(Management Authority) 為國家林業局之下的「瀕危物種管理辦公室」，目前共有 22 個辦事處（2 個尚未設立）主要分佈在邊界省分，每個辦事處有工作人員 3-7 人。瀕危物種管理辦公室依據《瀕危野生動物進出口管理條例》管理 CITES 物種的進出口，包括許可證核發程序、條件、罰則等；之前此 22 辦事處也有負責 CITES 進出口證的核發業務，但此業務目前已收回至中央辦公室。中國大陸其他與 CITES 貿易管理相關的機構包括：國家漁業局、工商行政管理局、公安部、森林公安（約 58,000 人）、森林武警（約 28,000 人，處理包括反盜獵與森林火災之業務），防檢疫單位與海關部署於各口岸執行相關業務，邊防部隊則主要部署於西南邊界處。中國大陸執行 CITES 貿易管理的科學機構為中國科學院，約有 10 餘位科學家。有鑑於中國野生資源眾多，例如中國超過 1700 種的蘭科植物，因此，另外與多個科學研究單位、大學等合作執行關於物種鑑定的工作。孟憲林同時說明，關於 CITES 的施行，中國大陸仍有許多議題需要注意，包括 CITES 豁免之管理、附錄 II 物種的人工繁殖、林木產品貿易資料管理的提升等。

自 2000 年起，中國大陸每年與香港、澳門舉辦 CITES 年度會議，通常 4 天的議程中包含訓練研習會以及參訪進出口口岸等。中國大陸與香港、澳門間也制訂某些 CITES 物種產品（如蘭花）在年節時個人物品或禮品的快速通關制度。香港與澳門於每年 10 月前，將前一年之 CITES 貿易記錄依 CITES 之規格整理後，匯報給瀕危物種管理辦公室；在剔除大陸與香港間的貿易後，提交給 CITES 秘書處。

2006 年起，有鑑於海南博鰲亞洲論壇與台灣的會談，中國大陸確定與台灣貿易制度簡化之共識，其中 2006 年公布之新 20 條中之第 15、16 條關於管理 CITES 與其他野生動物貿易證照，即是根據國家林業部所建議制訂的。中國大陸與台灣之間有許多 CITES 相關議題，如：包含野生動物製品的歷史文物、蘭花、觀賞用植物、中藥材、木製家具、鯊魚翅、紅珊瑚、黑鮪魚等，應可考慮如何加強管理非法貿易，處理「遵約（遵守 CITES 公約）」的議題（包含海洋物種、「從海上引入」等），便利合法貿易的進行。CITES 公約有朝管理向海洋與木材物種貿易的趨勢，如：紅珊瑚、鮪魚等，這些議題也同時是兩岸貿易的重要項目，兩岸間急需一個定期交流的機制，討論處理有關 CITES 貿易的技術問題。

在台灣代表團的提問下，周志華另外對於中國將四個太平洋的紅珊瑚屬物種（*Corallium elatis*、*C. japonicum*、*C. konjoi*、*C. secundum*）列入 CITES 附錄 III 進行說明。此 CITES 附錄 III 之提案起源於 2004 年第 13 屆大會時，美國的紅珊

瑚提案，雖然當時此附錄物種提案最後並未通過，但中國（漁業局）早於 1988 年即將紅珊瑚屬列入國家一級保護物種，嚴格管理紅珊瑚之開採；為了進行有效的資源管理而將其列入 CITES 附錄 III 物種中。目前在實際執行層面所面臨的鑑定等問題，以及進出口的文件審核需從「省」提報至「中央」，因此需要較久的作業時間。至於 2010 年第 15 屆大會，中國大陸對於美國將紅珊瑚列入附錄 II 物種之提案立場，將需與漁業局進行討論後方能決定。

周志華同時提出目前許多國家漁業部門對於 CITES 介入海洋物種貿易管理的看法，許多國家認為海洋物種所受到的威脅並非來自於貿易，而是來自於氣候的變遷與棲息地的問題，認為此問題不應由管理貿易的國際公約來管理。



孟憲林說明目前中國瀕危物種管理辦公室對於其他國家向其詢問台灣核發的 CITES 出口許可證（或再出口證明書）真偽之作法為，要求直接接洽台灣的 CITES 管理機構（貿易局），尋求確認。

孟憲林同時提出希望與台灣就 CITES 貿易合作的四項具體項目，1) 瞭解台灣的貿易規範，以便處理某些急件，以及許多大宗貿易，2) 希望台灣能將每年 CITES 貿易資料依據 CITES 的規格，提供給中國大陸，在剔除雙方貿易記錄後，一併提交給 CITES 秘書處，3) 對於 CITES 大會在附錄物種提案上，如紅珊瑚、黑鮪魚，台灣可提供相關意見，做為大陸內部討論與 CITES 大會上發言的參考，4) 希望未來雙方以非政府組織（NGO）為平台，每年至少互訪一次，各自準備資金，並且從雙方高層互訪開始。

台灣代表團回應中國大陸的提議：台灣已在 1980 年代與中國大陸的林業局就兩岸間的 CITES 貿易文件格式達成共識。兩岸間若有許可證確認問題，目前是透過經濟部位於香港的辦公室處理。CITES 年度貿易資料尚在整理當中，報告

規格的轉換也需處理，至於如何將資料呈報給 CITES 秘書處，將需另外討論。台灣同時也希望與大陸建立定期的交流機制，希望 2010 年 CITES 第 15 屆大會忙完後，能盡快促成中國大陸方面訪問台灣，進行 CITES 業務的交流。

至於木製家具貿易方面，需瞭解目前資料彙整的管理方式後，才能進行分析與管理的規劃。在海洋漁產品方面，漁業署希望以「永續利用」，而非「保護」為規劃管理的方向。對於紅珊瑚，台灣在 2009 年時，開啓一新的紅珊瑚漁撈管理，限定撈捕區域、撈捕天數、撈捕量、出口量，並且有 VMS、撈捕日誌、觀察員的監督機制。

二、中國大陸野生動物貿易研究委員會 (TRAFFIC) 與世界自然基金會 (WWF) 與北京辦公室重點工作簡介

WWF (World Wild Fund, 世界自然基金會) 全球最大的保育非政府組織 (NGO), 成立於 1961 年, 致力於物種棲息地管理與一般民眾的教育宣導工作; TRAFFIC (國際野生動物貿易研究組織, 成立於 1976 年) 為 IUNC (The World Conservation Union, 國際保育聯盟, 成立於 1945 年) 與 WWF 所屬的野生動物貿易監測組織。

為瞭解中國大陸保育工作的進展與困境, 本次行程也安排 WWF 與 TRAFFIC 在北京辦公室就其重點工作進行介紹。WWF 由物種部門的長有德先生就其在四川大貓熊及長白山東北虎的保育現況與問題進行介紹。

長有德表示, 大貓熊主要分佈於中國的四川、陝西, 此地區因為經濟發展而進行的大規模的森林砍伐、土地轉用, 其中以開路、建壩、以及毫無節制的遊客, 對大貓熊棲息地造成嚴重的污染、切割, 再加上氣候變遷, 大貓熊的野外族群生存受到很大的影響。大約 1300 隻的野生大貓熊分佈於 13 個不相連結的零碎棲地, 使得每一棲息地的大貓熊族群數量僅有 100 隻左右; 過小的分割族群使得基因多樣性受到威脅, 影響物種族群的永續生存。

WWF 在大貓熊的重要棲息地進行測試性的大貓熊個體與棲息地的監測與巡護, 並且進行監測與巡護項目的評估; 之後再發展成全國一致性的大貓熊監測與巡護評估技術, 最後由中國的國家林業局野生動植物保護司於 2008 年出版「全國大貓熊及其棲息地監測技術規程」。WWF 的監測結果同時發現, 『開路』造成 30% 大貓熊棲息地的損失, 而大貓熊族群則減少 10%。監測結果也標示出大貓熊

族群的分佈狀況，也將棲息地的重要性分及列出，以便未來保育工作的進行。

另外，WWF 在長白山的東北虎研究工作發現，由於棲息地減少破碎、獵物減少、盜獵、人虎衝突等問題，使得長白山區中國境內的東北虎數量非常少，僅有 18-24 隻，在俄羅斯境內的東北虎約有 430-500 隻。由於中國大陸政府的支持，WWF 與其他 NGO 將展開大規模的東北虎保育計畫，希望 2020 年時 1)長白山地區東北虎的族群量與分佈範圍能回復至之前的 20%，2) 政府單位能將老虎保育工作列為優先，3)老虎與其產製品貿易能消除。為了達成這些目標，WWF 在長



白山區中國境內進行東北虎與其棲息地普查，標出會影響保育工作的公路系統與聚落分佈，以及老虎棲息地間應有的生態廊道。最後將此區域分成 9 個保育優先區域，其中 4 個佔整個區域的 82%，將可提供 85-100 隻東北虎生存所需。

除了大型計畫外，WWF 同時也進行非明星物種的小型計畫，有 100 個項目，涵蓋 24 個省，65 個物種，包括哺乳類、鳥類、兩棲爬蟲類、魚類、昆蟲、植物。

TRAFFIC 在北京亦設有一個辦公室，由辦公室代表徐宏發教授（上海華東師範大學生物系），簡介中國大陸野生動植物貿易的現況和 TRAFFIC 的工作重點。徐宏發表示由於中國經濟起飛，以及華人對於利用野生物仍然未達永續利用的方式，因此 TRAFFIC 有 85%的工作項目都涉及到中國人與華人的市場。華人由於文化歷史的因素，在中醫藥、滋補品，象牙、珊瑚或玳瑁等雕刻品的使用一直持續不斷，另外對於木材與海洋漁產品的需求也越來越大。

目前 TRAFFIC 在中國大陸的主要工作包括：提供資訊與執法人員的培訓，以達及野生物的非非法或非永續貿易。同時也透過宣導，減少消費者利用瀕危動植物做為藥材與滋補品；支持野生動植物的永續利用，並增加林木與漁產品貿易的

透明度。TRAFFIC 中國辦公室也協助跨邊境的執法合作，其重點在於野生物貿易市場的研究、推動中國大陸與鄰近國家或非洲國家共同履行 CITES 公約、推動執法部門制訂必要的政策、共同執法能力的培訓等。

三、參訪河北省安國市 - 東方藥城、中藥文化博物館

安國市位於河北省，在北京南面 200 公里，位於北京、天津、石家莊的三角中心地帶。為中國大陸重要的中藥材集散市場，古稱「祈州」，藥業歷史起於宋朝，約有千年。「東方藥城 - 中心交易大廳」建於 1993 年，占地 33 公頃，建築面積有 60 萬平方公尺，市場經營品種 3000 多個，中藥材日吞吐量有 400 多公噸，為中國大陸規模最大、品種最齊全的中藥材專業市場。



此中心交易大廳規模廣大，共有 2 層樓，販售的全為未經炮製，如乾燥、切片等粗加工過的生藥材。擺放藥材的櫃子以「非」字型排列，藥材多以麻布袋成裝，無遮掩置於櫃子中。一樓以植物性藥材為主，二樓以動物性藥材，以及一些人參為主，在最裡面處有一攤位販售多種動物的角及其製品。動物性藥材中可見為數眾多的龜板，以陸龜板及鱉甲為主；也有一攤售有玳瑁板片。在中心交易大廳後側也有許多藥材商店，也有少數幾家售有整隻的玳瑁或綠蠵龜標本。交易中心同時可見許多不知名的昆蟲類藥材，如蜈蚣、蠍子、螞蟻，另外還有刺蝟皮乾等多種台灣幾乎不見的藥材。

「中藥文化博物館」建於 2006 年，展館面積 1500 平方公尺，展出實物 500 多件，圖片 300 多張，以系統性的歷史資料和文物展現中國大陸中醫藥史，和安國藥業發展過程。「中藥文化博物館」資料相當完整，展出方式也能展現藥都的特色與歷史，但由於安國非屬重點發展城市，而且開館不久，參觀博物館的人並不多，可以提供給參訪者的資料也僅有一式折頁。博物館同時也展出中國大陸生產的重要產品包括小包裝生藥材、中成藥、和提取物。



安國市位於土壤肥沃的華北平原，同時也是許多中藥材的栽培基地。雖然時值寒冬，且代表團到達前才剛下過大雪，但為能親身體會中草藥種植園的概況，仍由在當地經營中草藥製作廠的台商帶領，驅車前往霍莊村中草藥材科技示範基地參訪。參訪中發現該示範基地面積廣大，由於華北平原土壤肥沃地區，但冬天寒冷且會積雪，因此當地種植作物多為耐寒品種。另外，田地多為糧食作物與多年生藥材輪種，如耐寒小麥、玉米等。當地對於該種植何種中藥材並無一個協調機構，經常是農民間或與藥材商間的私下協商，也因此藥材的種植面積與產量並無全面性的規劃，劇烈的價格波動時有所聞。但也有藥材在安國種植 2 年後，移植到其他地區繼續種植 1 年後，才得以上市，顯現中國大陸之中藥材種植產業鏈化的跡象。



依據國際貿易局進出口統計資料顯示，台灣於 2005-2007 年間，每年在貨品稅則編號為 1211 項目的平均進口量為 38,383 公噸，其中 86.4% (33,165 公噸) 來自中國大陸 (表 2)。包括多樣的 CITES 附錄或相關物種，如：各類人參、沉香、天麻、老木香、胡黃蓮等。

表 2. 2005-2007 三年間，台灣重要的藥材供應國 (只針對貨品稅則編號為 1211 開頭的中藥材商品統計結果)。

2005-2007 台灣重要藥材供應國		
藥材供應國	年平均進口量 (公斤)	佔總進口量的百分比
中國大陸	33,164,557	86.4%
印度	3,039,289	7.9%
印尼	1,187,370	3.1%
泰國	145,856	0.4%
巴基斯坦	140,091	0.4%
加拿大	104,257	0.3%
美國	94,462	0.2%
越南	79,503	0.2%
伊朗	68,202	0.2%
澳大利亞	57,462	0.1%
年平均總進口量	38,383,340	100%

資料來源: 經濟部國際貿易局

依據聯合國 UNcomtrade 2008 年的資料顯示, 商品稅則號碼為 HS1211(Plants and parts of plants (including seeds and fruits), of a kind used primarily in perfumery, in pharmacy or for insecticidal, fungicidal or similar purposes, fresh or dried, whether or not cut, crushed or powdered) 的所有商品全球進口值為 1,654,482,384 美元。據經濟部國際貿易局 2008 年資料顯示, 台灣進口所有的 1211 貨品總重約 31,483 公噸, 為全球第 4 大進口國, 次於美國、香港、德國, 較日本與法國多。中國大陸不僅為台灣最大的中草藥供應國, 也是全球最大的 HS1211 商品出口國, 2008 年的出口量為 188,249 公噸, 其出口值為 449,993,903 美元, 占全球出口值的 30.8% (UN comtrade)。

據當地中藥材台商表示, 中國大陸已推動中成藥 GMP 制度, 且正在推動飲片的 GMP 制度, 但因造成許多小型飲片場的生計困難, 所以目前以鬆綁一些常見飲片藥材的 GMP 管理。另外, 中國大陸對於藥材出口並未訂定出口國檢驗管理制度, 完全依賴進口國的檢驗制度與項目進行檢驗。目前與中國大陸有大量中藥材貿易的美國、德國、日本與韓國都已制訂中藥材進口檢驗項目與制度, 因此出口至這些國家的中藥材在出口前都已經過抽驗, 運抵進口國時也會再經過一次的抽驗, 確保農藥、肥料、重金屬等的殘留符合標準。

四、參訪潘家園藝品市場

潘家園藝品市場位於北京朝陽區東三環南路，為一個 4 層樓的賣場大樓。樓內有許多的大小不同的零售店進駐，販售各式的藝品，以偏向古玩類的居多，同時包括現生象牙、猛瑪象牙、珊瑚雕刻品，以及毛皮狩獵品。大樓內的零售店管理應屬良好，由於中國大陸對於現生象牙、以及珊瑚製品的管理有證照的管理限制，大樓內販售此類商品的店家都有展示應有的證照。



中國大陸於 2007 年時於第 55 屆 CITES 常設委員會爭取到非洲南部 4 國庫存象牙的拍賣權，且因此而標售到 62 公噸象牙，並於 2009 年進口至中國。在此之前，中國大陸為獲得 CITES 常設委員會的同意，積極改善其國內象牙市場的管理與執法，僅有合格有執照的店家方能販售現生象牙雕製品，且每一件可合法販售的牙雕品皆有一個附有照片的身份證。

與現生象牙製品不同的市場管理是，在中國大陸販售紅珊瑚僅商家需要有合格的販售執照，個別的紅珊瑚製品不需要身份證。

五、參訪中國國際珠寶展

「中國國際珠寶展」於 2009 年 11 月 5-9 日假「北京中國國際展覽中心」展出。此為臨出發前才掌握的資訊，有鑑於此次珠寶展有多家台灣珊瑚業者參與展出，而寶石珊瑚的主要來源的 4 個太平洋產珊瑚科物種（*Corallium elatisu*, *C. japonicum*, *C. konjoi*, *C. secum dum*）已由中國大陸於 2008 年 7 月將之列為 CITES 附錄 III 物種，代表團認為有必要前往瞭解概況。具現場瞭解，展場共計 3 個樓層，約有 15 國，近 600 家廠商參展。台灣的業者位於第 2 層的一個集中區塊，經與現場參與展出的台灣業者溝通發現，此次僅有 10 家台灣業者得以珊瑚製品參與珠寶展。據業者表示，此次珠寶展的主管單位對於珊瑚製品的展出較前兩年有不同的態度，除了認為珊瑚屬於敏感的產品，中國大陸政府內對於珊瑚製品管理的態度也不一致。珠寶展籌備期間，曾一度傳出希望將珊瑚產品排除在外，經過業者的爭取，最後限定允許 10 家珊瑚業者參與此次珠寶展。此珠寶展為一個

可以在現場販售產品的商展，參展的 10 家業者攜帶足量的珊瑚飾品於其櫃位櫥窗中展示販售，現場也可見到交易狀況。



除台灣廠商外，香港與中國大陸也有零星的業者展售紅珊瑚製品，經過詢問業者，絕大多數展示的珊瑚製品多來自於台灣原產的珊瑚，且在台灣加工為成品。原產於義大利的地中海珊瑚（*Corallium rubrum*）製品非常的稀少，僅出現於一家業者的櫃位。

CITES 第 14 屆大會時（2007 年 6 月 1-17 日），美國提案將整個 *Corallium* 屬列入 CITES 附錄 II，雖然在分組討論中曾一度獲得 2/3 有效票數的支持（中國大陸投票反對），但在後來的大會（Plenary meeting）中獲得翻案後，匿名投票否決。之後中國大陸於 2008 年 7 月 1 日將 4 個太平洋產的 *Corallium* 物種列於 CITES 附錄 III 後，其農業部漁業局於 2008 年 7 月 15 日頒佈「關於加強紅珊瑚保護管理工作的通知」，加強管理紅珊瑚的撈捕、進出口、買賣、展覽等（附件 14）。

被中國列入 CITES 附錄 III 的 4 個 *Corallium* 物種，其出口須適當的 CITES 文件，若其原產於中國，則需中國瀕危物種管理辦公室（CNMA）核發的『CITES 出口許可證』方能合法出口。而原產於台灣此 4 個 *Corallium* 物種的出口，需要由經濟部國際貿易局核發的 CITES 來源證明。日本由於是 CITES 的正式締約國，因此享有『保留權（reserve）』，保留施行某依 CITES 規定的權力。日本因此執行對於中國將 *Corallium* 的個太平洋物種列入附錄 III 的權力，也就是暫時不承認此 4 個物種為 CITES 物種。所以對於產於日本的 4 個 *Corallium* 附錄 III 物種的出口並不核發出口許可證，僅核發撈捕證明（功能上等同「產地證明」）。



另外，由於中國大陸農業部漁業局於 2008 年 7 月 15 日頒佈「關於加強紅珊瑚保護管理工作的通知」，在中國大陸販售紅珊瑚製品的商家需申請販售執照。與現生象牙製品規定不同的是，紅珊瑚製品僅有商家需要有執照，不需要每一件商品的身份證。與在潘家園見到的珊瑚販售執照不同的是，在珠寶展未見到紅珊瑚參展攤位直接懸掛應有的執照，僅有一家在其背景牆上訴說其具有合法經營資格。

肆、心得與建議

依據 CITES 的建議，每個國家最好能派至少兩位代表參加 CITES 締約國大會，以便能同時參加 Committee I 與 Committee II 兩個分組會議，掌握所有討論與議題，方能確實執行 CITES 的規範。中國大陸每次參與 CITES 締約國大會之代表團約為 20 人，包括：3 人來自香港、2 人來自澳門，5 人來自瀕危物種管理辦公室；另外還有來自漁業局、中國科學院、外交部等代表。台灣雖非 CITES 締約國，但為了能持續合法進行 CITES 貿易，台灣選擇落實 CITES 的規範，以符合 CITES 對於可合法進行 CITES 物種貿易的非締約國要求，台灣同時以 NGO 的名義參與每次的締約國大會。除了學者專家外，台灣各 CITES 執行機關如農委會、國貿局，應有足夠的決策者與業務執行人能同時參與每屆的 CITES 締約國大會，才能持續人員的培養、有效的掌握所有討論與議題，並在必要的時候發言以保障台灣在 CITES 貿易上的權力；同時確保 CITES 在台灣確實的執行。

中國大陸的經濟實力不斷增加，對於野生動植物資源的消費也不斷增加，在其國內資源不足以應付的情況下，向其他東南亞、南亞等鄰國，甚至非洲、中南美洲等國搜取資源的情形也發生於野生動物資源上。另外，中國也是一些野生資源的產地與加工國，如植物藥材、海洋漁產品等；這些產品或半成品在中國生產、加工後輸出或再輸出至日本、歐洲、北美等消費國。由於許多野生物資源遭到的過度利用，包括歐盟與北美在內的許多國家，已逐步開始利用法律規範，確保永續利用的落實。例如：歐盟已於 2009 年 1 月 1 日施行「排除 IUU (illegal、unreported、unregulated) 海洋漁產品」的規範，在 1 年的宣導期後，將於 2010 年 1 月 1 日開始執行；將要求所有欲輸出至歐盟的海洋漁產品需有撈捕許可等文件以清楚證明此產品沒有違反 IUU (非法、無紀錄、無管理) 的規範。此規範將不只影響將海洋水產品直接出口至歐盟的貿易，做為世界工廠的中國，從包括台灣在內的許多國家進口大量的漁獲進行加工後輸出至歐盟，這些進口至中國的漁

獲若沒有清楚的非 IUU 漁獲證明，將在後續「再出口」至歐盟時出現困難，最終將被摒除於歐盟市場之外。同樣的情況也將會發生於林木產品上。在考量逐漸增加的消費與國力，各國對於中國在使用野生物資源的管理上，也逐漸提高其要求。例如象牙與珊瑚製品的證照管理，中藥材資源與中成藥標示管理等。為能防止台灣的商品與廠商因未遵守永續利用與管理的國際規範而受到傷害，台灣應儘早在法律、管理流程、溝通宣導上因應。加強瞭解中國大陸及其他國家對於 CITES 以及其他野生資源的採摘、撈捕、加工製造、貿易等整個野生資源生產供應流程的管理外，也應積極進行研究與宣導，瞭解台灣與中國大陸在全球 CITES 與野生物資源貿易的互動連結，及應遵守之國際規範。

台灣應加強 CITES、海洋與林木物種產品貿易的管理與研究，首先應將野生動植物資料庫的建立、整理與分析列為優先重點項目，包括貿易局、林務局、漁業署、森林警察隊、關稅局等應盡快編列足夠的經費進行相關資料的蒐集並且電子化，同時應將資料轉成容易分享相容的檔案格式，如 EXCEL 等。資料的內容應包括合法貿易與非法貿易，以及進出口與國內貿易的資料，且應盡快的達到以個別「物種」或「屬」為單位的資料收集與分析。這些資料除了如有必要可以提供給貿易相對國或國際公約作為證明或比對外，更重要的是做為國內政策與法律制訂，或執法行動的參考。尤其是在組織犯罪逐漸將其觸角深入野生物種貿易的領域時，足夠的歷史資料才可能掌握非法貿易的趨勢，將有限的管理與執法資源做最有效的運用，以打擊非法，保障合法貿易。

由於本次座談會係海峽兩岸第 1 次針對瀕危物種之進出口管理進行座談，大陸方面並未邀集其他相關單位共同參予座談，但在座談時已表示希望每年互訪交流，以進一步瞭解雙方之貿易及管理制，爰希望雙方可建立每年互訪交流之機制。

附件 1. 「海峽兩岸 CITES 物種貿易管理討論會」行程

日程	活動行程
2009/11/3	下午抵達北京(長榮航空 09:15 – 12:30), 入駐翠明莊, 拜會 TRAFFIC 北京辦公室
2009/11/4	參訪安國中草藥市場(北京附近最大中草藥集散市場) 早上 5 點出發
2009/11/5 9:00 – 12:00	<ul style="list-style-type: none"> ● 兩岸野生物種貿易討論 – 進出口現狀與管理制度 <ul style="list-style-type: none"> ➢ 紅珊瑚、象牙、海龜裝飾用製品 ➢ 爬蟲類、鳥類等寵物 ➢ 海參、鯊魚等水產品 ➢ 麝香、熊膽、羚羊角、甘松香、木香等動植物中藥材
2009/11/5 13:30 – 17:00	<ul style="list-style-type: none"> ● 兩岸野生物種貿易討論 – 進出口現狀與管理制度(續) ● 未來兩岸野生物貿易管理與溝通管道之建立
2009/11/6 9:00 – 12:00	<ul style="list-style-type: none"> ● 兩岸野生物種貿易討論 – 國內市場與管理制度 <ul style="list-style-type: none"> ➢ 紅珊瑚、象牙、海龜裝飾用製品 ➢ 爬蟲類、鳥類等寵物 ➢ 海參、鯊魚等水產品 ➢ 麝香、熊膽、羚羊角、甘松香、木香等動植物中藥材
2009/11/6 13:30 – 17:00	<ul style="list-style-type: none"> ● 兩岸野生物種貿易討論 – 國內市場與管理制度(續) ● 兩岸野生物種貿易討論 – 執法與執法人員訓練制度
2009/11/7 7:00 – 9:30	參訪北京潘家園藝品市場、花鳥市場
2009/11/7	回台北 11:45 到機場(長榮航空 13:45 – 16:55)

附件 2. 台灣與中國大陸 CITES 貿易之重點物種資訊

商品別	科學名	中文名	CITES Appendix	附錄 III 施行國	附錄 III 實施日期	備註
紅珊瑚	<i>Corallium elatius</i>	桃色珊瑚 (粉紅珊瑚)	III	中國大陸	2008/7/1	中國大陸禁止撈捕與出口，限定進口
	<i>Corallium japonicum</i>	赤色珊瑚 (深紅珊瑚)	III	中國大陸	2008/7/1	中國大陸禁止撈捕與出口，限定進口
	<i>Corallium kon(o)joi</i>	白珊瑚	III	中國大陸	2008/7/1	中國大陸禁止撈捕與出口，限定進口
	<i>Corallium secumdatum</i>	深水珊瑚、中途島珊瑚 (紅珊瑚)	III	中國大陸	2008/7/1	中國大陸禁止撈捕與出口，限定進口
象牙	<i>Elephas maximus</i>	亞洲象	I			
	<i>Loxodonta africana</i>	非洲象	II (波札那、納米比亞、南非和辛巴威之族群)			中國與日本以商店與貨品證件管理 國內貿易
			I (其他族群)			
海參	<i>Isostichopus fuscus</i>	刺參	III	厄瓜多	2003/10/16	厄瓜多有年度撈捕與出口量限制
鯊魚	<i>Cetorhinus maximus</i>	象鯊, 姥鯊	II			
	<i>Carcharodon carcharias</i>	大白鯊	II			台灣可能有違法進口之大白鯊魚翅
	<i>Rhincodon typus</i>	鯨鯊, 豆腐鯊	II			台灣已禁止撈捕、買賣
	<i>Pristidae spp.</i>	鉅鯨科所有種 (不含附錄 II 物種)	I			

	Pristis microdon	小齒鋸鰻	II				僅限此物種活體的國際貿易, 售予適任、合格並以保育為主要目的之水族館
熊膽	Ursus arctos	棕熊	I (不丹、中國、墨西哥和蒙古之族群) II (其他族群)				
	Ursus thibetanus	亞洲黑熊	I				中國大量養熊場尚未經 CITES 秘書處認可, 任何熊產品不能有商業性國際貿易。
麝香	Moschus spp.	麝鹿屬所有種	I (阿富汗、不丹、印度、緬甸、尼泊尔和巴基斯坦 之族群) II (其他族群)				中國大陸是否有合法的麝香貿易, 管制規範為何? 中國大陸是否為賽加羚羊的分佈國? 獵捕與貿易管制為何?
羚羊角	Saiga tatarica	大鼻羚	II				
	Saiga borealis	蒙古賽加羚羊	II				
龜板	Geoemyda spengleri	黑胸烏龜	III		中國大陸	2005/2/17	中國大陸是否有獵捕與出口量與商品型式的限制?
	Mauremys iversoni	艾氏山龜	III		中國大陸	2005/2/17	
	Mauremys megalcephala	大頭烏龜	III (Chinemys m.)		中國大陸	2005/2/17	
	Mauremys nigricans	黑頸烏龜	III (Chinemys n.)		中國大陸	2005/2/17	
	Mauremys pritchardi	皮氏山龜	III		中國大陸	2005/2/17	
	Mauremys reevesii	金龜	III (Chinemys r.)		中國大陸	2005/2/17	

	Mauremys sinensis	斑龜	III (Ocaida s.)	中國大陸	2005/2/17	
	Ocadia glyphistoma	廣西斑龜	III	中國大陸	2005/2/17	
	Ocadia philippeni	橙斑龜	III	中國大陸	2005/2/17	
	Sacalia bealei	眼斑龜	III	中國大陸	2005/2/17	
	Sacalia pseudocellata	擬眼斑龜	III	中國大陸	2005/2/17	
	Sacalia quadriocellata	四眼龜	III	中國大陸	2005/2/17	
	Palea steindachneri	山瑞鯢	III	中國大陸	2005/2/17	
	Pelodiscus axenaria	砂鯢	III	中國大陸	2005/2/17	
	Pelodiscus maackii	東北鯢	III	中國大陸	2005/2/17	
	Pelodiscus parviformis	小鯢	III	中國大陸	2005/2/17	
	Rafetus swinhoei	斑鯢	III	中國大陸	2005/2/17	
木香	Saussurea costus	顯脈鳳毛菊	I			雲南有人工栽培，但須向秘書處登記（或至少中國政府的背書）才能進行商業性國際貿易
甘松香	Nardostachys grandiflora #2	大葉甘松	II (#2: 全部及其衍生物，除了以下部分: a) 種子和花粉; 和 b) 具零售等級包裝之成品)			

Summary

TRAFFIC and WWF believe that inclusion of Porbeagle, Spiny Dogfish and sawfishes in the CITES Appendices will make a significant contribution to the conservation of these species through the management and regulation of international trade. Implementation of the recommendations of the Animals Committee will lend further support to the effectiveness of these and other shark listings and will ensure that CITES Parties are better informed about the impact of trade on other species of sharks.

It is now seven years since the IPOA-Sharks was adopted. TRAFFIC and WWF note with concern the disappointing progress in its implementation. It is clear that reliance on voluntary instruments, such as the IPOA, to improve conservation of shark species has failed and that there is need for a binding fisheries instrument that requires Parties to implement conservation and management measures for sharks. In the absence of such an agreement, CITES can play a useful complementary role in ensuring sustainability of trade in shark species, as well as sustainable shark populations.

Table 1: Top 20 shark catchers

1990		2003		2005	
Catcher	%	Catcher	%	Catcher	%
Taiwan	10.83	Indonesia	14.09	Indonesia	14.11
Indonesia	10.48	Taiwan	7.87	India	8.04
India	7.33	India	7.38	Taiwan	5.94
Mexico	6.42	Spain	7.19	Mexico	5.06
Pakistan	5.73	USA	4.13	Spain	4.92
USA	4.95	Pakistan	3.88	Argentina	4.81
Japan	4.59	Argentina	3.70	USA	3.88
Portugal	3.80	Mexico	3.60	Japan	3.40
France	3.76	Malaysia	3.26	Thailand	3.26
Brazil	3.53	Japan	2.91	Malaysia	3.25
UK	3.12	Thailand	2.89	Brazil	3.07
Philippines	2.64	France	2.63	Pakistan	2.96
Malaysia	2.48	Sri Lanka	2.49	France	2.76
Argentina	2.39	UK	2.29	New Zealand	2.33
Korea, Rep.of	2.25	New Zealand	2.15	Iran	2.26
Sri Lanka	2.18	Portugal	1.98	Portugal	1.99
Spain	2.03	Iran	1.86	Nigeria	1.80
Peru	1.75	Nigeria	1.77	Yemen	1.69
Norway	1.59	Brazil	1.47	Venezuela	1.46
Thailand	1.57	Korea	1.47	Australia	1.44

Table 2: Top 10 shark product exporters

1990		2003		2005	
Exporter	%	Exporter	%	Exporter	%
Norway	15.91	Taiwan	20.47	Taiwan	17.75
UK	11.88	Spain	13.36	Spain	12.79
Japan	10.80	Costa Rica	6.7	Japan	5.48
Canada	7.36	Chile	6.29	Panama	5.44
USA	7.19	UK	5.44	UK	5.00
Taiwan	6.11	Japan	4.98	Canada	4.50
Germany	5.96	Canada	4.85	Costa Rica	4.49
New Zealand	4.62	Panama	4.40	Ireland	4.12
Denmark	3.99	New Zealand	4.04	Chile	3.57
Chile	3.83	USA	4.04	Namibia	3.27

Table 3: Top 10 shark product importers

1990		2003		2005	
Importer	%	Importer	%	Importer	%
Italy	24.38	Spain	15.10	Spain	15.95
France	17.38	Rep. of Korea	14.53	Rep. of Korea	12.39
Germany	8.22	Hong Kong*	11.57	Hong Kong*	10.06
Denmark	8.20	Mexico	10.10	Italy	9.51
Hong Kong*	7.59	Italy	8.81	China	9.03
UK	6.14	China	7.96	Brazil	8.21
USA	5.83	Brazil	5.13	Mexico	7.02
Spain	4.57	France	4.34	France	3.01
Japan	4.29	UK	2.02	Singapore	2.54
Greece	3.46	Singapore	1.92	UK	2.31

Source for Tables 1–3: Lack, M. and Sant, G. (2006). *World Shark Catch, Production and Trade 1990–2003*. TRAFFIC Oceania and Australian Government Department of the Environment and Heritage.

* data for Hong Kong are recorded separately from those for the remainder of China.

- 1 Sharks refer to all species of sharks, skates, rays and chimaeras (Class *Chondrichthyes*).
- 2 IUCN (2006). Shark Specialist Group Red List Summary Tables 2000–06 (May 2006). Viewed at www.flmnh.ufl.edu/fish/organizations/ssg/RLsummary2006.pdf, 24 May 2007.
- 3 FAO Fishstat Plus Capture Production Database, 1950–2005.
- 4 Lack, M. and Sant, G. (2006). *World Shark Catch, Production and Trade 1990–2003*. TRAFFIC Oceania and Australian Government Department of the Environment and Heritage.
- 5 FAO (2007). Progress in the implementation of the 1995 Code of Conduct for Responsible Fisheries, Related International Plans of Action and Strategy, COFI/2007/2.
- 6 FAO (2006). *Report of the FAO Expert Consultation on the Implementation of the FAO International Plan of Action for the Conservation and Management of Sharks, Rome 6–8 December 2005*. FAO Fisheries Report No. 798. FAO, Rome, Italy.
- 7 Lack, M. and Sant, G. (2006). *Confronting Shark Conservation Head On!* TRAFFIC International, Cambridge, UK.
- 8 The Animals Committee has currently identified Gulper sharks, *Centrophorus* spp., School/Tope shark, *Galeorhinus galeus*, Requiem sharks, Carcharinidae, guitarfishes or shovelnose rays and /or devil rays Mobulidae.
- 9 For example, Lack, M. (2006). *Conservation of Spiny Dogfish Squalus Acanthias: A role for CITES?* TRAFFIC International, Cambridge, UK.

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just outside the top 20 countries. This reduces the usefulness of the list as an indicator of the key catching countries. In order to minimize the impact of this inter-annual variability, and to more clearly identify those countries that consistently catch substantial quantities of shark, TRAFFIC has adopted a revised methodology. The average catch data by country over three statistically convenient time periods: 1980–1989; 1990–1999; and 2000–2007 have been analysed. The top 20 catching countries in 2007 alone are listed in Annex 1 for comparison with earlier analyses.

Catch by each country reporting shark catch data to FAO over the period 1980–2007 was averaged for each of the three time periods. The top 20 catchers, on average over each time period, were then identified. The results of the analysis for each of the three time periods are presented in Table 2. Across the three time periods, a total of 23 countries/territories were categorized as top 20 in one or more of the three time periods. Of those, 15 catching countries/territories (in bold) appear in the top 20 in each of the three time periods, and a further two (in italics) appear in the two most recent time periods. These 17 countries/territories are considered to represent the key shark catchers.

Using the average catch in the most recent period, 2000–2007, as representing the most current assessment of the relative standing of these 17 catchers, they are ranked as described in Table 3.

Table 2: Top 20 catching countries/territories, 1980–2007, by time period

Country/territory	In top 20?		
	1980–89	1990–99	2000–07
Argentina	YES	YES	YES
Brazil	YES	YES	YES
Canada	NO	NO	YES
France	YES	YES	YES
India	YES	YES	YES
Indonesia	YES	YES	YES
Iran, Islamic Rep. of	NO	NO	YES
Japan	YES	YES	YES
Korea, Rep. of	YES	YES	NO
Malaysia	YES	YES	YES
Mexico	YES	YES	YES
<i>New Zealand</i>	NO	YES	YES
Nigeria	YES	NO	YES
Pakistan	YES	YES	YES
Peru	YES	YES	NO
Philippines	YES	YES	NO
<i>Portugal</i>	NO	YES	YES
Spain	YES	YES	YES
Sri Lanka	YES	YES	YES
Taiwan	YES	YES	YES
Thailand	YES	YES	YES
Russian Federation	YES	NO	NO
UK	YES	YES	YES
USA	YES	YES	YES

CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES
OF WILD FAUNA AND FLORA



Twenty-fourth meeting of the Animals Committee
Geneva, (Switzerland), 20-24 April 2009

SUSTAINABLE USE AND MANAGEMENT OF SEA CUCUMBER FISHERIES

1. This document has been prepared by the Secretariat.
2. At its 14th meeting (the Hague, June 2007), the Conference of the Parties directed the Secretariat in Decisions 14.98 and 14.99 to:

Decision 14.98

bring to the attention of the Food and Agriculture Organization of the United Nations (FAO), and prior to the FAO Workshop on Sustainable Use and Management of Sea Cucumber Fisheries, the discussion paper on Biological and trade status of sea cucumbers in the families Holothuriidae and Stichopodidae in Annex 1 to document CoP14 Doc. 62, and the following recommendations by the Animals Committee to range States of these taxa and Parties that are engaged in trade in them:

- a) develop and implement national adaptive management plans for species of high conservation concern, such as those identified as of 'high concern' and 'concern in certain countries of its range' in Annex 3 of the discussion paper on Biological and trade status of sea cucumbers in the families Holothuriidae and Stichopodidae, including minimum harvest size and total allowable catch, and apply where appropriate a precautionary approach, such as restrictive fisheries measures;*
- b) develop regional management strategies to manage the resource;*
- c) develop a standardized approach for the collection and reporting of fisheries and trade data, including species collected, locations, habitat, weight, size and number of individuals;*
- d) encourage greater communications and cooperation between fisheries and CITES authorities at the national level for the management of and trade in specimens of these species;*
- e) increase significantly basic biological and ecological research and stock assessments, particularly for species of high conservation concern, such as those identified as of 'high concern' and 'concern in certain countries of its range' in the discussion paper referred to in paragraph a) above;*
- f) conduct socio-economic evaluations of the sea cucumber fisheries, especially in developing countries, to identify clearly their importance and role in the livelihoods of coastal fishing communities;*

- g) *enhance the enforcement capacity to reduce illegal fishing, transshipment and landings, as well as the capacity to implement the current Appendix-III listing;*
- h) *explore the potential of mariculture in promoting the sustainable use of the resource, with experience from China, and identify best practices;*
- i) *consider the merits of inclusion of their species of conservation concern in Appendix III, where appropriate;*
- j) *support the development of harmonized codes for reporting international trade in sea cucumber products; and*
- k) *develop and distribute identification guides that clearly distinguish sea cucumbers subject to international trade.*

Decision 14.99

promote cooperation with FAO concerning the conservation of and trade in sea cucumbers in the families Holothuriidae and Stichopodidae, inter alia by bringing the outcomes of the FAO Workshop on Sustainable Use and Management of Sea Cucumber Fisheries to the attention of the Parties and supporting relevant capacity-building activities.

3. The Secretariat contacted FAO in advance of the Workshop on Sustainable Use and Management of Sea Cucumber Fisheries, and asked it to include in its agenda the discussion paper and the relevant recommendations by the Animals Committee specified in paragraph 2 above.
4. On 8 December 2008, FAO brought to the attention of the Secretariat that the FAO Fisheries and Aquaculture Technical Paper No. 516 *Sea cucumbers: A global review of fisheries and trade* had been published. This publication is part of the outcomes of the FAO Technical Workshop which was held in Ecuador from 19 to 23 November 2007. The full report in PDF format is available on the FAO website (<http://www.fao.org/docrep/011/i0375e/i0375e00.htm>).
5. FAO also informed the Secretariat that they were finalizing the technical guidelines on *Sustainable management of sea cucumber fisheries*, which had also been prepared during the workshop, and were planning to publish them in the first quarter of 2009.
6. As directed in Decision 14.100, the Committee is invited to evaluate the outcomes of the FAO Workshop on Sustainable Use and Management of Sea Cucumber Fisheries and to recommend appropriate follow-up actions at the 15th meeting of the Conference of the Parties to support this initiative.

Unregulated Trade in Turtle Shells for Chinese Traditional Medicine in East and Southeast Asia: The Case of Taiwan

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ABSTRACT. – Based on customs trade statistics from 1999 to 2008, a total of 1989 metric tons of shells of hard-shelled chelonians have been imported into Taiwan for consumption in the traditional Chinese medicine (TCM) market, with an average of 198.9 metric tons/y. The total amount of soft-shell turtle shells imported was 290 metric tons, averaging 29.0 metric tons/y. This volume indicates that millions of turtles and tortoises have been killed annually for the TCM market in Taiwan alone. The trade of turtle shells for TCM has existed in huge volumes for a long time, with no significant decrease in the market size through Convention on International Trade in Endangered Species of Wild Fauna and Flora listing of the main target species. Although the customs trade records were not species-specific, in the market survey conducted in 1996–2002, a total of 39 species of turtles and tortoises, mainly originating from China, Southeast and South Asia, were identified. Only 3 non-Asian species were found. The larger number and numerous species of origin in turtle-shell trade for the TCM market indicate blatant disregard by traders for law and authority of responsible agencies from both source and consumer countries. Observed levels of usage and trade of turtle shells appear to be highly unsustainable and may have a great impact on the chelonian fauna in source areas. For the sustainability of chelonian fauna in Asia, clear policies and close international cooperation for the regulation of turtle-shell trade are urgently needed.

KEY WORDS. – Reptilia; Testudines; Trionychidae; Geoemydidae; turtle; wildlife trade; turtle shell; Traditional Chinese Medicine; Taiwan; CITES

Turtles and tortoises have long been utilized in East and Southeast Asia for food, medicines, and pets, and China is the largest consumer country in the world (Gibbons et al. 2000; van Dijk et al. 2000; Moll and Moll 2004). The annual trade volume of live turtles in Asia have exceeded 13,000 metric tons (1 metric ton = 1000 kg), and a high proportion of them are believed to be collected from the wild (van Dijk et al. 2000). Due to burgeoning demand in the market following rapid economic growth, over one-half of freshwater turtle and tortoise species from Southeast and East Asia have been severely threatened by overexploitation for food and traditional medicines (Jenkins 1995; Klemens and Thorbjarnarson 1995; van Dijk et al. 2000). The issues of live turtle trade and farming industries have received more attention than other animal products and raw materials for sentimental reasons and due to data availability problems (e.g., Cheung and Dudgeon 2006; Gong et al. 2006; Shiao et al. 2006; Shi et al. 2007, 2008). Until now, little is known about the magnitude of turtle-shell trade for the TCM market, and it is difficult if not impossible to assess the impact of this trade on chelonian fauna.

Turtle shells (plastrons from hard-shelled species and carapaces from soft-shell species) have long been used as an ingredient for traditional Chinese medicines (TCM) in

many societies with Chinese cultural origins and affinities in East and Southeast Asia and other overseas Chinese communities around the world (van Dijk et al. 2000). Unfortunately, the trade in turtle shells has never been systematically monitored and few long-term data are available. Chen et al. (2000) have reported that > 136 metric tons of turtle shells were traded in the TCM market of Taiwan per year during 1992–1998. In Taiwan, the supply of turtle shells depends mainly on import from China and Southeast Asia (Yen 1992; Tsai and Chang 2001). Because the TCM market is a closed community and the domestic trade is poorly documented due to the limited oversight by the responsible agencies, we thus rely on the available data from the international trade statistics of customs reporting systems. Because almost all of the raw materials of turtle-shell products used in Taiwan's TCM market were imported from abroad, the data will provide a general overview of the market scale.

Chang (1997) reported that at least 20 nonmarine chelonian species have been found in the TCM market of Taiwan. The most common species were *Cuora amboinensis*, *Malayemys subtrijuga*, and *Siebenrockiella crassicolis*. Although > 25% of the species were Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)-listed, they represented < 1% of

the total trade volume (Tsai and Chang 2001; Lo et al. 2006). With widespread concerns for the conservation of turtles and tortoises in Asia (Gibbons et al. 2000; van Dijk et al. 2000), most of the target species, including most of the common species in the TCM market and all species from China, have been listed on CITES Appendix II or III (populations in China) in 2000–2005 to monitor and regulate the uncontrolled trade in East and Southeast Asia (*C. amboinensis* in 2000, *S. crassicollis* in 2003, *M. subtrijuga* and *Mauremys reevesii* in 2005). CITES was adopted in 1973 with the aim to ensure that international trade in specimens of wild fauna and flora does not threaten their survival through controls on and monitoring of the trade in species listed in its appendices. CITES listing has added restrictions on previously unregulated trade of most turtle and tortoise species in East and Southeast Asia. Thus, we predict that the trade volume of turtle shells in the TCM market should have decreased significantly if the CITES listing has worked effectively.

In this paper, we attempt to show an overall picture of trade volume and provide data on large-scale turtle-shell trade in Taiwan's TCM market. The species involved in the trade are identified. We also discuss the effectiveness of CITES listing for many target species on the international trade volume of turtle shells in East and Southeast Asian regions.

METHODS

The import data of turtle shells were obtained from the customs trade database created by the Directorate General of Customs, Ministry of Finance, Republic of China (Taiwan; <http://web.customs.gov.tw/statistic/statistic/mnhstatisticen.asp>). In the customs trade data, the Harmonized System (HS) is commonly used as the basis of customs tariffs and the analysis of international trade statistics. For most wildlife trade analysis, the HS code is for relatively broad taxa and may be misleading to a certain degree (Blundell and Mascia 2005; Thompson and Alam 2005; Gerson et al. 2008). However, in the case of turtle-shell trade, the customs trade data can provide an overall picture of the market. The turtle-shell products in the database were shown in good item description as “tortoise shell, terrapin plastron (including for Chinese drugs)” for hard-shelled species and “pieh chia k'o (Amydae carapax) (including for Chinese drugs)” for soft-shell species. This database is the only source of total quantitative data on the turtle-shell trade by month, importing country, weight in kg and value in New Taiwan Dollar (NTD); 1 NTD = 0.029 US dollars). Moreover, the raw materials of turtle-shell products for TCM, unlike other live animals or fresh meats, are duty-free goods items in tariff rate and relatively low-priced. The trade volume and monetary values recorded in the database should have been accurately declared.

The trade data of CITES-listed species were retrieved and confirmed from the United Nations Environment

Programme-World Conservation Monitoring Centre CITES trade database (<http://www.unep-wcmc.org/cirestrade/>). This database holds the official records of the international trade of CITES-listed species.

To identify the species of turtles and tortoises involved in the TCM market, a general survey was conducted from 1996 to 2002 (mainly by H.-C. Chang). Although partial species lists have been mentioned in previous studies, including 20 species (including 1 questionable species, *Manouria emys*) in Chang (1997) and 33 species (including 1 invalid species, *Cuora hainanensis*, and 1 questionable species, *Mauremys megaloccephala*) in Tsai and Chang (2001), we provide a more detailed and revised species list in this report.

A total of 14 importers, 12 manufacturers for “Gui Ban Jiao” (tortoise plastron jelly) and “Gui Lu Er Xian Jiao” (tortoise shell and deer-antler syrup), and 1 manufacturing company of traditional medicines were investigated and sampled. Because the TCM market is a closed community, it is impossible to collect detailed quantitative data from these stakeholders. The species composition was estimated roughly only for the common species observed. Because the price of turtle shells is usually judged by the appearance and quality of raw materials, we can identify the samples to species level (Fig. 1). When the species of plastron specimens could not be identified at first sight during market surveys, specimens were purchased and attempts were made to identify to the species level where possible.

RESULTS

Trade Volume and Monetary Value. — According to the customs trade statistics for 1999–2008, as much as 1,989,248 kg (1989 metric tons) of hard-shelled turtle shells have been imported into Taiwan from China and Southeast Asian countries, with an average of 198,925 kg (198.9 metric tons)/y over the period (Table 1). The total amount of soft-shell turtle shells imported was 290,419 kg (290 metric tons), averaging 29,042 kg (29.0 metric tons)/y (Table 2). A total of 7 countries were involved in the international trade; China and Indonesia were the main suppliers of hard-shelled turtle shells to the TCM market of Taiwan, contributing 39.2% and 33.7% of total trade volume, respectively. Cambodia also supplied 18.4% of the total trade volume. Soft-shell turtle shells were imported from 6 countries, and China alone accounted for 84.6% of the total trade volume.

Although turtle shells are relatively cheaper than live turtles in the market, the total monetary value was large, amounting to 143.54 million NTD (= 4.16 million USD). In monetary value, China was the most important source country, accounting for 46.8% of total amount, followed by 33.2% from Indonesia.

Long-term trends in turtle-shell trade are complex. We have not found significant reduction in the trade volume of turtle shells in the Taiwanese market after CITES listing of



Figure 1. Malayan snail-eating turtle (*Malayemys subtrijuga*) is one of the most common species traded in the traditional Chinese medicine market of Taiwan.

most target species from 2000 to 2005 (Fig. 2). Ironically, the annual average trade volume increased dramatically in 2002 (326,761 kg), then decreased gradually. Even though most of the common species traded in the TCM market have been listed on CITES II, the trade volume was still huge, reaching 183,745, 169,071, and 151,028 kg in 2006, 2007, and 2008, respectively. The number of exporting countries involved has decreased in the trade records. No trade records of turtle shells were found from South Asia, such as Bangladesh and Pakistan, in 1992–1998. In 2006–2008/2009, turtle shells were only imported from China, Indonesia, and Vietnam to Taiwan. The trends in monetary value and average price were highly variable (Fig. 3), with a peak in total monetary value in 2004. The average price both of hard-shelled and soft-shell species dropped greatly in 2002 and 2003, then increased in hard-shelled chelonians thereafter. It increased in 2004, then dropped gradually.

Surprisingly, we have not found any record of CITES-listed turtles or tortoises traded for medicinal purposes on the CITES trade database. Only 2360 live turtles and tortoises of 25 species from Indonesia, Malaysia, and Thailand have been reported in 1999–2007. The large-scale international trade of turtle-shell products was not overlooked by the monitoring system of CITES.

Species Composition. — In the domestic market survey conducted in 1996–2002, a total of 39 chelonian species, 37 hard-shelled and 2 soft-shell, were identified in Taiwan's TCM market (Table 3), including many endangered and CITES-listed species. Among them, 87.2% (34 species) had been listed on CITES Appendices by 2005. In comparison with the previous studies, we identified 6 additional species and revised 1 species. Similar to the previous results, *Cuora amboinensis*, *Malayemys subtrijuga*, and *Siebenrockiella crassicollis* were the most commonly found species; they constituted over 75% of the market. *Mauremys reevesii* was the most

Table 1. The trade records of shells from hard-shelled turtles and tortoises (in weight: kg) imported into Taiwan from different countries in 1999–2008.

Year	Cambodia	China	Indonesia	Malaysia	Singapore	Thailand	Vietnam	Total
1999	22,798	83,993	41,769	—	2630	200	—	151,390
2000	35,971	49,335	62,096	12,600	—	—	—	160,002
2001	31,538	52,466	27,395	12,387	—	—	4589	144,600
2002	77,577	136,522	60,609	27,100	3292	1080	19,665	326,761
2003	107,851	67,820	57,184	7332	—	5163	13,176	258,526
2004	61,616	20,541	113,734	7735	—	830	20,581	224,121
2005	28,140	67,073	119,908	294	—	—	20,814	220,004
2006	—	98,334	81,694	—	—	—	3717	183,745
2007	—	91,415	73,156	—	—	—	4500	169,071
2008	—	111,910	33,226	—	—	—	5892	151,028
Total	365,491	779,409	670,771	67,448	5922	7273	92,934	1,989,248

Table 2. The trade records of shells from soft-shell turtles (in weight: kg) imported into Taiwan from different countries in 1999–2008.

Year	Cambodia	China	Indonesia	Malaysia	Singapore	Total
1999	—	13,929	1174	—	628	15,731
2000	132	9484	10,248	5070	—	24,934
2001	240	6228	1359	—	—	7827
2002	—	16,651	2984	—	—	19,635
2003	—	24,304	2337	—	—	26,641
2004	861	19,971	2910	—	—	23,742
2005	—	58,688	16,036	—	—	74,724
2006	—	40,380	80	—	—	40,460
2007	—	30,552	—	—	—	30,552
2008	—	25,623	550	—	—	26,173
Total	1233	245,810	37,678	5070	628	290,419

valuable species in the TCM market, and it accounted for 10%–15% of the market. The large-sized *Orlitia borneensis* were observed only from 2 traders, and they were used as ingredients of Gui Lu Er Xian Jiao. This species accounted for about 1%–3% of the total volume in weight. Meanwhile, judging from the natural distribution range, 8 species were recorded exclusively from South Asia, indicating that extensive trans-shipment may have occurred in the TCM trade. Only 3 non-Asian species were identified (i.e., *Trachemys scripta elegans* from North America, *Stigmochelys pardalis* from Africa, and *Asstrochelys radiata* from Madagascar).

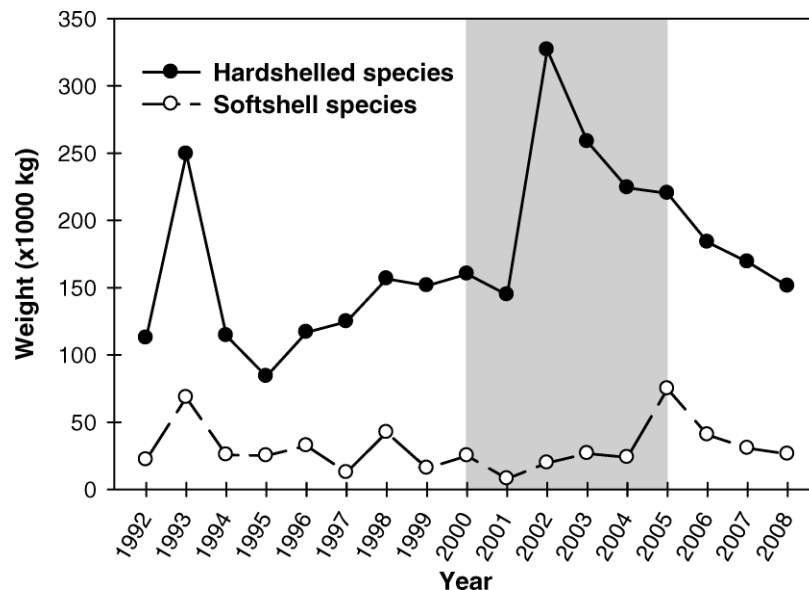
In the soft-shell turtle shells, only 2 species were identified, *Pelodiscus sinensis*, mainly imported from China, and *Amyda cartilaginea* from Southeast Asia.

DISCUSSION

Traditionally, turtle shells have been used as a common ingredient in TCM prescriptions. It is well-known that turtle shell is used for the production of guilinggao (turtle jelly), a glue-like residue produced by

long-term boiling of turtle shells and some other herbal ingredients. According to traditional medicinal texts, the raw materials of hard-shelled turtles and soft-shells come chiefly from China, and mainly from *M. reevesii* and *P. sinensis* (Yen 1992). It is believed that plastron of *M. reevesii* is more effective than other counterparts. It is widely accepted that turtle shells have broad pharmaceutical effects. In Taiwan, turtle shells were used in the formula of “Gui Lu Er Xian Jiao” and “Gui Ban Jiao”. Gui Lu Er Xian Jiao is a semifluid extract of turtle plastron and deer-antler jelly, usually mixed with some herbal ingredients such as ginseng and *Lycium* berries (Goji). Gui Ban Jiao is a glue-like jelly, extracted from turtle shells by long-term boiling.

Turtle shells are usually regarded as byproducts from the consumption of turtle meat (Tsai and Chang 2001), but the specific collection of turtle plastron has been reported (Jenkins 1995). In the customs trade data of Taiwan, limited amounts of frozen turtle meat and dried turtle offal have been imported from Hong Kong and Indonesia, indicating that turtles and tortoises may have been traded in other forms. The high demand for turtle shells in the

**Figure 2.** The trade volume trends of shells of hard-shelled chelonians and soft-shell turtles (in metric tons/1000 kg) during 1992–2008.

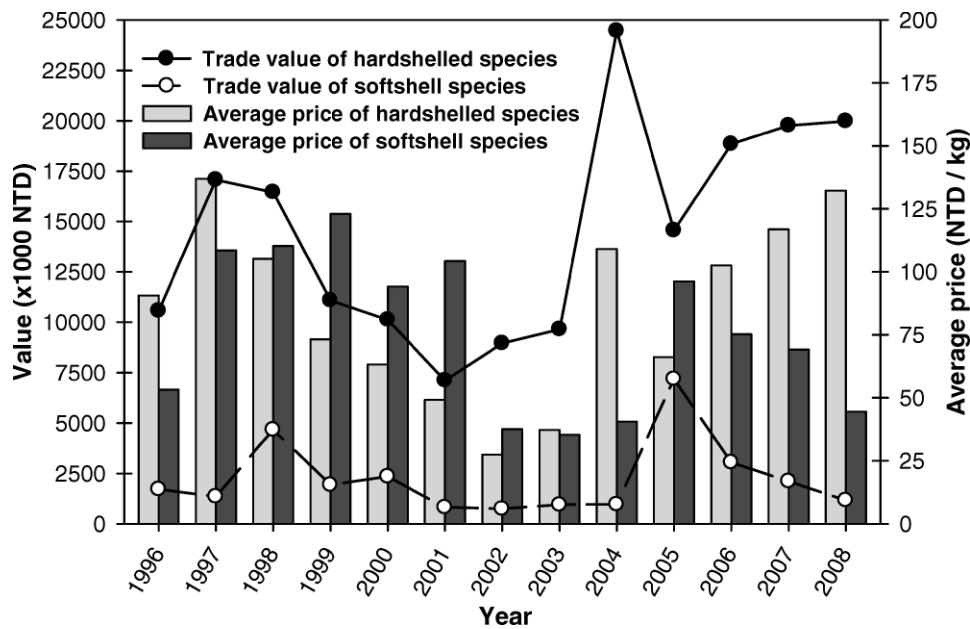


Figure 3. The trends of total yearly monetary value and averaged price of shells of hard-shelled chelonians and soft-shell turtles (in NTD) during 1996–2008.

TCM market may have greatly exceeded the supply as byproducts, especial for hard-shelled species. The shells of *P. sinensis* were usually used as a byproduct in restaurants and mainly originated from turtle farms. In the TCM market, shells were traded in whole piece of plastron in hard-shelled turtles, and unlikely to be the byproduct of turtle meat (usually consumed as turtle soup in Asia). A great proportion of turtle shells may have been obtained from wild-caught individuals for TCM purposes. In China, numerous species, including *M. reevesii* and *P. sinensis*, have been farmed extensively (Shi et al. 2008). Some of the turtle shells used in the TCM market may come from farms (obtained from dead individuals), or they may be byproducts of meat consumption in species such as *Trachemys scripta elegans*, *M. reevesii*, and *P. sinensis*. Some high-priced or non-Asian species found in the TCM market, such as *Cuora trifasciata*, *Stigmochelys pardalis*, and *Astrochelys radiata*, may also be a byproduct of dead individuals from turtle farms.

The average amount of hard-shelled turtle shells imported into Taiwan alone exceeded 198 metric tons/y in 1999–2008; the trade volume has increased greatly compared to the 136 metric tons/y reported previously in 1992–1998 (Chen et al. 2000). The market in Taiwan represents only a fraction of the regional trade volume of turtle-shell products, and the total regional trade volume may add up to several times this amount. In the TCM community, only plastron was used due to traditional customs; although, there was no apparent difference in the chemical composition between carapace and plastron bone (Yang 1988). In medium-sized geoemydids, each piece of plastron weighs approximately 50–200 g (T.-H. Chen, pers. obs.). The massive trade volume for turtle shells in the TCM market suggests that shells of millions of turtles and

tortoises have been consumed per year in Taiwan alone. For the case of Taiwan, observed levels of usage and trade of turtle shells appear to be unsustainable and may have a great impact on chelonian faunas in source areas.

Turtle shells, unlike many other animal products, were not traded at species-specific levels. The shipments of turtle-shell products were usually mixed with multiple species, and some items confused TCM importers and dealers. The commercial supplies of turtle shell in the TCM community are not categorized and priced based on species. Rather, they are roughly sorted by the appearance, coloration, size, and countries of origin, mainly into 7 categories: 1) Sui plastron or golden coin plastron (*Mauremys reevesii* plastron)—the most valuable item in the market (however, some *Malayemys subtrijuga* have also been lumped in this category); 2) Chihmi plastron (*Mauremys mutica* plastron)—often mistaken to be *Malayemys subtrijuga* in the market, with genuine plastron of *M. mutica* found in this category much less frequently than *M. subtrijuga*; 3) black plastron—mainly *Siebenrockiella crassicolis*; 4) big plastron—*Orlitia borneensis*; 5) Mekong River plastron or foreign plastron—mainly *Indotestudo elongata*; 6) Indonesian plastron—mainly *Cuora amboinensis*; 7) other items—a variety of species. For soft-shell turtles, the carapaces of *Pelodiscus sinensis* were usually used in TCM. However, shells imported from Southeast Asia were mainly from *Amyda cartilaginea*. In TCM markets of mainland China, *Lissemys punctata* and *Pelochelys bibroni* (likely *P. cantorii*) have been reported to be mixed with *P. sinensis* (Wang et al. 2000).

In long-term trends, we have not found a significant reduction in trade volume for the past 17 years. There have been fewer exporting countries because only 3 countries

Table 3. Chelonian species found in the traditional Chinese medicinal market of Taiwan surveyed in 1996–2002.

Species ^a	CITES status ^b	Occurrence ^c
Geoemydidae		
<i>Cuora amboinensis</i> (Malayan box turtle)*	II ²	+++
<i>Cuora flavomarginata</i> (Yellow-margined box turtle)*	II ²	+
<i>Cuora galbinifrons</i> (Indochinese box turtle)*	II ²	–
<i>Cuora mouhotii</i> (Keeled box turtle)*	II ³	–
<i>Cuora trifasciata</i> (Chinese three-striped box turtle)*	II ²	–
<i>Cyclemys dentata</i> (Asian leaf turtle)*		++
<i>Geoclemys hamiltonii</i> (Spotted pond turtle)*	I ¹	–
<i>Geoemyda spengleri</i> (Common black-breasted leaf turtle)*	III ⁵	+
<i>Hardella thurjii</i> (Crowned river turtle)*		+
<i>Heosemys annandalii</i> (Yellow-headed temple turtle)*	II ³	–
<i>Heosemys depressa</i> (Arakan forest turtle)*	II ³	–
<i>Heosemys grandis</i> (Giant Asian pond turtle)*	II ³	+
<i>Heosemys spinosa</i> (Spiny turtle)*	II ³	+
<i>Leucocephalon yuwonoi</i> (Sulawesi forest turtle)	II ³	–
<i>Malayemys subtrijuga</i> (Malayan snail-eating turtle)*	II ⁴	+++
<i>Mauremys mutica</i> (Asian yellow pond turtle)*	II ³	++
<i>Mauremys nigricans</i> (Chinese red-necked pond turtle)*	III ⁵	–
<i>Mauremys reevesii</i> (Chinese three-keeled pond turtle)*	III ⁵	+++
<i>Mauremys sinensis</i> (Chinese stripe-necked turtle)*	III ⁵	–
<i>Melanochelys trijuga</i> (Indian black turtle)		–
<i>Morenia ocellata</i> (Burmese eyed turtle)*	I ¹	++
<i>Morenia petersi</i> (Indian eyed turtle)		–
<i>Notochelys platynota</i> (Malayan flat-shelled turtle)*	II ⁴	–
<i>Orlitia borneensis</i> (Malayan giant turtle)*	II ³	+
<i>Pangshura smithii</i> (Brown roofed turtle)*	I ³	–
<i>Pangshura tecta</i> (Indian roofed turtle)*	I ¹	+
<i>Sacalia bealei</i> (Beal's eyed turtle)*	III ⁵	–
<i>Sacalia quadriocellata</i> (Four-eyed turtle)*	III ⁵	–
<i>Siebenrockiella crassicollis</i> (Black mash turtle)*	II ³	+++
Platysternidae		
<i>Platysternon megacephalum</i> (Big-headed turtle)*	II ³	–
Emydidae		
<i>Trachemys scripta elegans</i> (Red-eared slider)*		++
Testudinidae		
<i>Astrochelys radiata</i> (Radiated tortoise)	I ¹	–
<i>Geochelone platynota</i> (Burmese star tortoise)*	II ¹	–
<i>Indotestudo elongata</i> (Elongated tortoise)*	II ¹	++
<i>Manouria impressa</i> (Impressed tortoise)*	II ¹	+
<i>Stigmochelys pardalis</i> (Leopard tortoise)	II ¹	–
<i>Testudo horsfieldii</i> (Central Asian tortoise)*	II ¹	–
Trionychidae		
<i>Amyda cartilaginea</i> (Asiatic soft-shell turtle)	II ⁴	+++
<i>Pelodiscus sinensis</i> (Chinese soft-shell turtle)	III ⁵	++

^a Note: species with asterisk have been reported in Tsai and Chang (2001).

^b 1. Included in CITES Appendix before 2000; 2. included in CITES II in 2000; 3. included in CITES II in 2003; 4. included in CITES II in 2005; 5. included in CITES III in 2005 (populations in China).

^c +++ = abundant; ++ = common; + = occasional; – = rare.

occurred in the trade records in 2006–2008. Part of this may have been due to a reduction in supply (overharvesting in some countries), and trade restriction (most turtles are listed on CITES Appendices). In the trade data, the source countries have shifted occasionally, suggesting that species composition in TCM market may have changed. However, the trade volume of the main target species, such as *M. reevesii* and *P. sinensis* from China, and *C. amboinensis*, *M. subtrijuga*, *S. crassicollis*, and *A. cartilaginea* from Indonesia, have not decreased (H.-C. Chang, pers. obs.).

In customs trade data, only the exporting countries of turtle shells can be obtained; however, the precise trade

routes were difficult to trace. The species composition indicates that a significant proportion of TCM trade consists of re-exports or trans-shipments. Some species distributed in South Asia have been identified in the market, and some South Asian species, such as *Morenia ocellata* and *Pangshura tecta*, have been found in the raw materials imported both from China and South Asia (H.-C. Chang, pers. obs.).

Numerous studies have demonstrated that sustainable use of long-lived reptiles is problematic because longevity in chelonians is usually associated with delayed sexual maturity and low fecundity (Congdon et al. 1994). The unsustainable use of nonmarine turtles and tortoises has

been discussed extensively in the literature (e.g., Gibbons et al. 2000; Moll and Moll 2004; Schlaepfer et al. 2005). They are especially vulnerable to uncontrolled exploitation. Overexploitation accompanied by habitat destruction has caused the observed decline in the chelonian populations in Asia. If the present trend in the TCM market continues, many wild populations of chelonian species will continue to be seriously threatened.

It has been generally argued that free-trade policy may facilitate growth of wildlife trade and threaten the sustainability of many wild populations (Rose 1992). In Taiwan, turtle shells for TCM can be imported freely under loose regulations; no species-specific declarations are required. Under CITES regulations, the international trade of live animals, their parts and raw materials both from wild-caught and captive-bred CITES-listed species should have been regulated and controlled through exporting permits and quotas. Although CITES listing cannot by itself solve the turtle trade problem, it relies on the support of trading nations and their willingness to take necessary action through trade management. Although Taiwan is not a signatory of CITES, the international trade of CITES-listed species still has to be regulated and reported by a monitoring system compliant with CITES standards. Better legal enforcement by trading nations is needed to regulate the large-scale turtle-shell trade.

It has been also been argued that it is difficult to identify and check the species composition of turtles and tortoises traded in the market or on the border. In the TCM community, raw materials of turtle shells were usually priced by the quality and source of origin. Most of the plastrons were kept intact, and the specimens of most common turtles can be identified to species level with a well-illustrated identification guide. Although raw materials of turtle shell can be identified to species level using molecular tools (e.g., Hsieh et al. 2006; Lo et al. 2006), it is a time- and labor-consuming process. Because most of the target and common species of turtles and tortoises traded in East and South Asia have been listed in CITES Appendices, every shipment of international trade of turtle shells needs appropriate documentation and has to be inspected thoroughly.

From the case of the TCM market in Taiwan, we strongly urge the trading nations, both the importing and the exporting countries, to take a serious look at the large-scale turtle-shell trades in East and Southeast Asia. Rather than just CITES-listing most of the traded species and regulating trade in whole live animals, responsible agents also have to take action to regulate the trade of turtle shells which may detrimentally threaten the regional chelonian fauna, especially in source regions.

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附件 6. 中國大陸「關於加強紅珊瑚保護管理工作的通知書」

- 【标 题】 关于加强红珊瑚保护管理工作的通知
【所属类别】 国务院及其部门行政法规
【颁布日期】 2008-7-15
【实施日期】 2008-7-15
【有 效 性】 有效

关于加强红珊瑚保护管理工作的通知

颁布单位：农业部渔业局

关于加强红珊瑚保护管理工作的通知

国渔水[2008]56号 2008年7月15日

各省、自治区、直辖市及计划单列市、新疆生产建设兵团渔业主管厅（局），各海区渔政渔港监督管理局：

红珊瑚是一种海洋低等无脊椎动物，在我国主要分布于东海、南海和台湾海域，具有较高经济价值。近年来，由于过量捕捞、环境污染等原因，其资源已遭到严重破坏。为保护这一海洋珍稀濒危物种，我国于1988年将红珊瑚列为国家一级重点保护动物，濒危野生动植物种国际贸易公约（CITES）也于2008年将红珊瑚列入附录III，限制其国际贸易。近年来，部分不法商户为谋求私利，走私、违法经营红珊瑚及其制品，造成市场秩序混乱和管理困难。为了加强对红珊瑚的保护工作，规范红珊瑚经营利用行为，现将有关事项通知如下：

一、切实做好红珊瑚资源保护工作。红珊瑚生长于深海，由于对生长环境要求高、生长速度极慢，资源非常珍稀。要按照《野生动物保护法》规定，采取切实措施，加强对红珊瑚栖息地的保护，严禁开采红珊瑚。同时，加强对红珊瑚栖息地的资源调查和物种的科学研究，推动保护区建设，做好红珊瑚保护工作。

二、严格按照《水生野生动物利用特许办法》的规定加强红珊瑚经营利用管理。经营利用红珊瑚必须经农业部批准，取得农业部核发的《水生野生动物经营利用许可证》，并严格遵守以下规定：

（一）红珊瑚的来源必须是靠进口获得，不能从已取得经营利用资格的企业或个人获取红珊瑚，进口红珊瑚必须经农业部批准。

(二) 禁止红珊瑚出口或来料加工再出口。

(三) 取得经营利用资格的企业或个人必须在指定场所经营利用红珊瑚制品。红珊瑚制品只能用于直接销售，不得转售其它企业或个人用作经营。

(四) 经营利用许可证有效期两年。经营利用企业或个人应将年度销售额、库存等情况按时、如实上报农业部，并按规定按时缴纳水生野生动物资源保护费。

(五) 未经批准不得在珠宝展览会或巡展中展示、出售、收购红珊瑚。

三、加强市场监管，加大执法力度，严厉打击非法利用红珊瑚行为。对于违法经营利用红珊瑚、扰乱市场的行为，严格依法予以处罚；构成犯罪的，移交司法部门处理。对在红珊瑚保护管理工作中玩忽职守、徇私舞弊的工作人员，要进行严肃查处。

<http://www.hicourt.gov.cn/law/show.asp?fileno=19811>

附件 7. 中國大陸「國家計委、財政部關於水生野生動物資源保護費收費標準及其有關事項的通知」

紅珊瑚屬物種（*Corallium* spp.）是國家一級重點保護水生野生動物。農業部《關於確定野生動物案件中水生野生動物及其產品價值有關問題的通知》（農辦漁[2002]22 號）規定，國家一級保護水生野生動物的價值標準，按照該種動物資源保護費的 8 倍執行；水生野生動物標本的價值標準按照該種動物價值標準的 100% 執行。《國家計委、財政部關於水生野生動物資源保護費收費標準及其有關事項的通知》（計價格[2000]393 號，2002 年 4 月 6 日）規定，捕捉 1 公斤紅珊瑚收取資源保護費 50000 元。

具體的通知（並不限珊瑚）：

國家計委、財政部關於水生野生動物資源 保護費收費標準及其有關事項的通知 計價格[2000]393 號

農業部，各省、自治區、直轄市物價局（委員會）、財政廳（局）：

根據財政部、國家計委《關於同意徵收水生野生動物資源保護費的復函》（財綜字[1999]102 號）的規定，現就水生野生動物資源保護費（以下簡稱資源保護費）收費標準及有關事項通知如下：

一、對捕捉列入《瀕危野生動植物種國際貿易公約》（附錄一、附錄二）和列入國家一、二級保護的水生野生動物的，按本通知附件《捕捉國家重點保護水生野生動物資源保護費收費標準》規定，向捕捉單位和個人收取資源保護費。

二、對出售列入《瀕危野生動植物種國際貿易公約》（附錄一）和列入國家一級保護的水生野生動物或其產品的，按水生野生動物或其產品實際成交額的 6%，向供貨方收取資源保護費，對出售列入《瀕危野生動植物種國際貿易公約》（附錄二）和列入國家二級保護的水生野生動物或其產品的，按水生野生動物或其產品的實際成交額的 4%，向供貨方收取資源保護費。

三、對利用列入《瀕危野生動植物種國際貿易公約》（附錄一）和列入國家一級保護的水生野生動物或其產品，加工成製成品的，除中醫藥生產企業按其製成品實際銷售額的 2% 收取資源保護費外，其他均按其製成品實際銷售額的 3% 收取資源保護費；對利用列入《瀕危野生動植物種國際貿易公約》（附錄二）和列入國家二級保護的水生野生動物或其產品，加工成製成品的，除中醫藥生產企業按其製成品實際銷售額的 1% 收取資源保護費外，其他均按其製成品實際銷售

额的 2%收取资源保护费。

四、对利用列入《濒危野生动植物种国际贸易公约》（附录一、附录二）和列入国家一、二级保护的水生野生动物或其产品举办表演、展览等活动的单位和个人，按其收入的 2%收取资源保护费。

五、对经批准捕捉、收购、利用列入《濒危野生动植物种国际贸易公约》（附录一、附录二）和列入国家一、二级保护的水生野生动物或其产品进行科学研究的，经国务院渔业行政主管部门审核批准，免收资源保护费。

六、捕捉、出售、利用列入《濒危野生动植物种国际贸易公约》（附录一）和列入国家一级保护的水生野生动物或其产品的资源保护费，由国务院渔业行政主管部门在批准有关申请时，向申请单位和个人直接收取；捕捉、出售、利用列入《濒危野生动植物种国际贸易公约》（附录二）和列入国家二级保护的水生野生动物或其产品的资源保护费，由省级渔业行政主管部门在批准有关申请时，向申请单位和个人直接收取。

七、收费单位应到指定的价格主管部门申领收费许可证，按规定使用省级以上财政部门统一印制的行政事业性收费票据。收费单位应在明显的位置公布收费标准，严格执行本通知规定的收费标准，不得擅自提高收费标准，并自觉接受价格、财政主管部门的监督检查。

八、本通知自 2000 年 5 月 1 日起执行。

另外，今年 4 月 8 日，**New CITES Appendix-III Listing by China for Four Species of Corallium Coral**，具体见以下链接：

<http://www.fws.gov/le/PubBulletins/PB040808CITESAppendixIIIListingChina%20.htm>

附件 9. 「海峽兩岸 CITES 物種貿易管理討論會」相關照片

