出國報告【出國類別：其他(國際會議)】

赴日本參加「科學收藏、材料轉讓、採集許可研討會」

服務機關：行政院農業委員會林務局
姓名職稱：劉泰成聘用助理研究員
派赴國家：日本
出國期間：99年3月6日至12日
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摘要

本次由日本國立科學博物館發起之「科學收藏、材料轉讓、採集許可研討會」，係爲使亞洲各國在生物標本、遺傳物質管理規章進行交流而舉辦，從會議中的報告可獲知目前東南亞百萬生物多樣性國家紛紛限制國外研究人員私下進行生物採集，而希望藉由國際合作計畫，以更加瞭解其國內的生物多樣性現況資訊。各國對跨國家合作的生物標本採集所採用之管理模式有兩種：第一種爲國家成立單一窗口，專門負責國際合作計畫之接洽，對於國外研究人員來說手續較爲簡便，可免於應對各機關之繁雜規定，菲律賓、泰國、馬來西亞爲此類。第二種爲權責分散於各機關，對於國外研究人員來說常無所適從，必須尋找當地國家之研究人員合作，或由合作單位提出申請，我國、日本、越南屬於此類。

目次

壹、前言

爲了充分瞭解東南亞國家所含有的豐富生物多樣性資源，先進國家早已經在東南亞進行多年的生物資源調查及標本採集工作，但隨著生物多樣性公約的簽訂，這些百萬生物多樣性（mega-diversity）國家亦開始關注本身生物資源遭到先進國家典藏發表，甚至是傳統智慧財產權遭到掠奪的狀況發生，紛紛通過相關的法令來限制生物標本的採集收藏、跨國境轉讓。

對於先進國家的研究人員來說，則開始注意海外採集必須遵守當地國家的法令規定，避免觸犯法規而遭到逮捕、罰款、沒入採集物品，甚至驅逐出境的處罰；而對於百萬生物多樣性國家，嚴格限制生物標本採集卻也可能因爲沒有足夠的研究人力，而使得國內的生物多樣性研究遲緩不進。

爲了讓東南亞各國研究人員及政府官員，瞭解各國有關對跨國家合作的生物標本採集所採用之管理方式，並且促進跨國間的生物多樣性研究機會，日本國立科學博物館的蒐藏部主任，亦兼全球生物多樣性資訊機構 (GBIF) 副主席的 Keiichi Matsuura 教授的努力，在獲得該館經費的支助後，乃訂於 2010 年 3 月 8-9 日，於該館之新宿分館召開「科學收藏、材料轉讓、採集許可研討會」 (Workshop on Scientific Collections, Material Transfer and Collecting Regulations) 。此次研習會共邀請了來自菲律賓、新加坡、泰國、台灣、越南、印尼、馬來西亞等七個東南亞國家的政府官員、博物館負責人及分類專家，共約 20 人，共聚一堂，坦誠及公開地交流。本次研討會經費全部由日本主辦單位支付，台灣方面獲邀的包括中研院邵廣昭 (動物、海洋)、彭鏡毅 (植物、陸域)及劉泰成 (台灣相關法規) 三人，也分別在會中做了三場口頭報告。

本局目前另受命收集整理世界其他國家，對於入侵動、植物管理之相關管理法規、管理機構、管理程序及風險評估辦法等，以討論規劃適合台灣的入侵種生物管理模式。故趁機於會後拜訪日本環境省自然環境局，瞭解其執行「外來生物法」之特定外來生物管制及管理狀況、環境省與農林水產省對

外來生物管理之分工、特定外來生物清單建立評估過程及後續管理情形，以供本局擬定施政之參考。

貳、行程紀要

時間	地點	備註
6(Sat)	台北-東京	去程
7(Sun)	東京	準備報告資料
8(Mon)	東京 國立科學博物館新宿分館	會議
9(Tue)	東京 國立科學博物館新宿分館	會議
10(Wen)	環境省　自然環境局 野生生物課 外來生物對策室	參訪日本外來入侵種業務負責單位，瞭解日本對於外來入侵種防制工作，及環境省與農林水產省業務分工情形，以供本局借鏡。
11(Thu)	東京農業大學	拜訪 3 年前曾受本局邀請來台指導「國家植群多樣性調查及製圖計畫」的中村幸人教授, 並致贈本局出版之「台灣現生天然植群圖集」, 表達對其協助的感激。
12(Fri)	東京-臺北	返程

參、研習內容

一、研討會部分

（一）菲律賓

菲律賓國家博物館依法有系統的進行菲律賓生物的標本採集、調查及研究，目前是菲律賓惟一一個擁有大量系統分類學人才的政府研究單位，擁有8名全職研究人員及5位技術支援人員進行研究。菲律賓國家博物館藉由標本採集活動逐步的增加了典藏的標本數量，並且時有新種（甚至是新屬）的發表，出版大量的系統學、分類學、植群及生物多樣性研究，與菲律賓國內外科學家的合作研究逐步增加，並且與東南亞、日本、歐洲及美國進行標本交換典藏。

2004年之前，在菲律賓進行水生標本的採集並無受到特別的管制，就如同一般釣魚、捕撈行爲。不過在野生物資源保育保護法（The Wildlife Resources Conservation and Protection Act）及相關行政規則通過之後，基於學術研究目的採集菲律賓野生物就受到了特別的規範，也新成立了巴拉旺永續發展委員會（Palawan Council for Sustainable Development, PCSD）來經營、保育巴拉旺省的野生物資源，而在巴拉旺省進行採集就必須先獲得PCSD的許可。在野生物資源保育保護法實施之前，採集陸生生物必須向菲律賓環境及自然資源部的保護區及野生物局申請，採集水生生物要向漁業局申請，而漁業局管轄的區域爲離岸15公里以外的海域，沿岸則屬地方政府管轄。

對於採集水生物標本的程序，漁業局特別訂定了漁業管理命令來加以規範，其中包括：1. 採集者與相關機關必須簽訂協議書。2. 採集地點的利益團體、政府單位、原住民所出具的免費及事先知情同意書。3. 採集標本的無償許可。4. 採集者及採集品的分類。

如果是爲了商業目的而進行野生物資源採集，則受到DENR-DA-PCSD-NCIP 2005年第一號聯合行政命令（Guidelines for Bioprospecting Activities in the Philippines）的規範。

（二）泰國

森林植物標本館（BKF）是泰國最大的植物標本館，擁有卓越的分類和生物多樣性研究專家，受國家公園及野生動植物部（DNP）的支持。BKF 擁有包含超過 200,000 份標本，主要是在泰國的開花植物和蕨類植物。BKF 主要進行植物分類學、真菌分類學、森林生態學、民族植物學和保護生物學的研究。BKF 同時與日本、丹麥、荷蘭和英國植物學機構合作進行「泰國植物誌計劃」，收集植物標本，並進行植物分類學研究，所採集的標本也分散、借出至各協作機構。BKF 建立聯繫並促使館藏爲科學家提供保育生物學、保護區管理、造林及生態學的應用，並促進其研究活動。

普吉海洋生物中心（Phuket Marine Biological Center, PMBC）爲泰國自然資源及環境部（Ministry of Natural Resources andEnvironment）海洋及沿海資源分部下屬的研究單位，PMBC 負責海洋資源多樣性及海洋生態系環境的研究及監測，所有的資料跟數據將會經過分析後，提供社區、當地政府和公眾作爲管理、棲地復育之用。PMBC 目前有紀錄的標本裡面，統計有 412 個模式標本及 24963 個典藏標本，研究人員、學生及大眾可以透過網際網路瀏覽網站 http://www.pmbc.go.th 來獲取資訊，相關的出版品及報告並已經上網，而 PMBC 每年也進行展覽活動及分類學訓練課程。

泰國自然資源及環境部爲了有效的匯集生物多樣性研究報告、政策建議報告，成立了「以生物多樣性爲基礎的經濟發展辦公室」（Biodiversity-based Economy Development Office, BEDO），負責建立泰國的生物多樣性資料庫和生物多樣性資訊網路。BEDO 爲法人單位，年經費約爲 60 萬美金，目前正進行第一階段國家生物多樣性資料庫網路及系統發展計畫（National Biodiversity Database Network and System Development Project: Stage 1）及資源調查發展計畫（Resource Inventory Development Project），藉由收集、建立生物多樣性管理系統及資料庫，於網路上提供有用的生物多樣性資源消息及有價值的發展過程。

海外研究機構若是想在泰國國家公園和野生動物棲息地進行研究，可以向泰國國家研究委員會（National Research Council of Thailand , NRCT）要求申請表格及相關規定，或從網站http://www.nrct-foreignresearcher.org 下載表格。NRCT 成立的 4 個目的爲 1.加強泰國與和外國研究人員的合作與協作，並提供了知識，技術專長和經驗交流的機會。2.促進泰國的研究活動，以便讓研究結果可進一步的用於國家發展。3.穩定泰國的社會和經濟安全。4.控制和調節泰國的自然資源，以確保泰國能獲得利益。申請程序必須於研究人員抵達泰國 90 天前提出，NRCT 將代爲聯繫泰國相關機構並安排合作，並將會發出許可信作爲申請簽證之用。

（三）越南

越南是世界上擁有高度生物多樣性的國家之一，全國擁有 128 個保護區域，森林覆蓋度是 33%。越南目前紀錄有 295 種哺乳類、880 種鳥類、483 種兩棲爬蟲、超過 10,500 種維管束植物與數千種無脊椎動物。雖然已經有許多動植物的研究，不過在許多森林地區的生物多樣性狀況仍然是不甚清楚，尤其是在越南中部地區，每年仍不斷的有新紀錄及新種的發表。到目前爲止，有 100 多萬份植物標本、數百萬份無脊椎動物標本和數千份哺乳動物標本收集和保存在不同的地方，不過因爲高溫、高濕、不足的保存設備及研究人員，這些標本的保存狀況並不理想，許多標本因而毀損或侵蝕而不能夠再被使用。爲了能妥善的研究及保管這些標本，越南國家自然博物館獲得經費挹注，重建了新的大樓供保存標本、陳列展示研究成果，並進行教育宣導及國際合作。

越南海洋研究所在 1961 年成立，並持續進行採集研究迄今，不過標本的數量及分類群的覆蓋度仍不足，無法充分的對越南的海洋生物多樣性達到瞭解。

爲了保護野生動植物，特別是 IUCN 紅皮書物種及 CITES 物種，越南除

了簽署加入相關國際生物多樣性保護公約外，並在國內嚴格的執行法規，同時也立法保護森林，由農業及鄉村發展部爲中央主管機關，省人民議會爲地方主管機關，以確保森林能被良好的保護跟經營。爲了保護稀有、瀕危的物種，越南總理簽署了 32 號法令，將瀕危物種區分爲兩個保育等級，保育 I 級物種有 15 種植物、62 種動物，在任何情況下均不得採集利用；保育 II 級物種有 37 種植物、89 種動物，在學術研究的目的下可少量的被採集利用。基於對森林保護及發展的 23 號及 99 號法令內的申請規定，外國科學家要在越南國內保護區內進行研究必須有越南人同行，若要進行動植物標本採集、轉移則需要先獲得農業及鄉村發展部的許可。

（四）馬來西亞

馬來西亞所擁有的豐富動植物多樣性（15,000 種開花植物，1,500 種陸生脊椎動物及 15 萬種無脊椎動物），使得他躋身爲世界上 12 個百萬生物多樣性國家之一，造成這種豐富的生物多樣性關鍵因素，是因爲政府的政策和保護自然生物資源的能力。馬來西亞目前已有 139 萬公頃的森林（約國土面積的 7.6%）爲了生物多樣性保育而被保留下來。在保護區域的生物多樣性管理方面，國家公園及州立公園的經營管理策略尚未到位，不過監測計畫已經開始執行。

作爲一個擁有 9,323 公里海岸線和 335,914 平方公里面積大陸架的海洋國家。在探索海洋生物多樣性時，無疑的需要更多的分類學家來辨認未知的海洋生物成爲新種，不過馬來西亞卻也面對著嚴重的分類人才短缺情形，因此與國外專家的合作就是很切合實際的行爲，將可使馬來西亞獲得生物多樣性資訊以外，更可以培訓發展當地的專門人才及提升能力。

外國人想要在馬來西亞進行生物採集或相關研究，都必須先提出申請，待申請通過後才可以執行，申請到核准的時間不定，通常都要半年左右。一位在馬來西亞國民大學馬來世界與文明研究所（Institut Alam dan Tamadun

Melayu (ATMA), Universiti Kebangsaan Malaysia）就讀的臺灣人梁志輝先生在他的「Hap Lada Tak Sedap! 馬來半島柔河（Johol）地區 Temuan 族群田野調查紀實」文章中，就提到了他申請進行研究的過程：「首先必須先向 EPU 這個單位取得申請書（幸運的是，現在可以從其網頁 www.epu.jpm.my 下載申請書與申請規則），寫好申請書連同研究計畫、經費資助信函、在馬來西亞的接待單位推薦函、護照影本、照片、手續費等一併寄出，其中正本寄給 EPU，副本寄給移民局、學術審核單位（依照學科分送不同單位）、教育部、所要前往的州政府、相關政府單位等。因爲副本收件的單位多，而且各單位可能再轉發給下級單位審查後才彙整意見，接下來就是等待每個單位走完個別的審核流程。最後每一個單位將審核意見送回 EPU，由 EPU 再召開審查會議，進一步討論，而這個審查會議可能因爲許多其他的因素（諸如人員渡假不在）而延期召開。整個申請期間研究許可申請案會在政府各部門裡被轉送過來轉送過去，當完全不認識任何承辦人員時，研究者所能作的就只是等待了。漫長等待過後，得到的審核結果可能是肯定的答案，也可能是否定的。就我所知，被拒絕的機率還不低，特別是提出政府不喜歡的議題做研究時，或是申請者過去有不良紀錄，都可能面臨被禁止的命運。」最後在五個月的等待後，梁志輝先生的研究許可才被核准了。

在馬來西亞，各州政府擁有對土地、森林、漁業、農業、水資源和地方執政管轄的權力，並有權核准伐木許可、收取租稅、決定開發及保留的森林範圍。根據砂勞越州的生物多樣性中心條例規定，砂勞越生物多樣性委員會（SBC）被賦予規範生物資源研究的責任；而沙巴生物多樣性條例則爲維護生物多樣性和生物資源提供了法律規範。對於生物標本的交換與採集申請來說，沙巴相較來說是較爲寬鬆的；而以目的來說，學術性、分商業營利行爲的採集也會被較快的核准。

（五）印尼

同爲百萬生物多樣性國家之一，也因爲分類人才的缺乏，印尼也努力發展分類研究的國際合作計畫，以更加瞭解其國內的生物多樣性現況資訊。根據相關法令，所有的外國大學、研究機構、企業或是個人想在印尼進行研究都必須要有當地的研究單位或與研究主題相關的 NGO 組織合作。在印尼採集野生植物或動物標本需要獲得管理機構「森林保護及自然保育署」（PHKA）的許可及科學機構「印尼科學研究所」（LIPI）的推薦，而 LIPI 內則由生物研究中心（RCB）負責此項工作。而在印尼國內進行生物標本的轉移，則必須取得由省級單位自然資源保育辦公室（BKSDA）的區域辦公室所核發的許可。

印尼政府也制訂了材料轉移協定來規範生物標本的進出口，完整的材料轉移協定包括材料的定義、材料的收集、材料的所有權、材料的使用、研究方案、智慧財產權、新的發現、出版、保密、免責聲明、賠償、終止、仲裁、規則、生效期間和期限。該材料轉移協定因應研究企劃書、材料的形式及研究雙方的協議不同，也可予以簡化。

二、拜會日本環境省部分

3 月 10 日在駐日代表處林一等秘書榮貴的陪伴下，赴日本環境省自然環境局，拜會野生生物課外來生物對策室 Tomonori Ugajin 與 Takafumi Osawa 兩位先生，透過林秘書的翻譯進行外來入侵種生物管制的交流，以下爲參訪的紀錄：

1、日本執行外來生物法之行政部門分工爲何？地方環境事務所（Regional environment office）及都道府縣政府的角色爲何？

回應：

（1）日本外來生物管理由「環境省自然環境局野生生物課外來生物對策室」負責法規制度制訂、調整，特定外來生物的指定公告、與其他相關部會單位之工作協調（尤其是關稅、檢疫機關），以及相關預算之編列，日本全國外來生物分布、防除方法的資訊收集、推廣教育等。環境省內目前每年約編列 1 億日圓經費作爲外來生物相關經費使用，惟對於農作物的損失補償是由農林水產省負責編列發放。

（2）環境省地方環境事務所野生生物課：負責飼養許可發放、防除成果確認、研究許可發放及各區域的特定外來生物防除事務及推廣教育。

（3）地方政府在外來生物法中並未分配工作，是基於維持區域生態系統穩定及防止農林水產業被害，而由各地方政府進行特定外來生物防除事務及推廣教育。

2、特定外來生物（IAS）之決定程序、評估方式、評估時間長短爲何？是否有評估標準供作參考？

回應：

（1）外來生物法施行至今已有 6 次特定外來生物公告，前 3 次

是對已有明確入侵事例的物種加以公告，後 3 次是針對未判定外來生物（UAS）的輸入申請案加以審查，並依據審查結果指定爲 IAS，審查時間約爲 6 個月。

（2）IAS 的指定係由 6 個物種專家群（哺乳類鳥類、爬蟲類兩生類、魚類、昆蟲類、無脊椎動物、植物）分組討論、專家大會決定後，經由 WTO 的 SPS 協定聽取 WTO 會員國意見、各省廳意見、以及民眾意見反映後，再公告 IAS。

（3）目前並沒有具體的各分類群通用評估基準。

3、在 IAS 的邊境管理部分，目前環境省（MOE）是否有人員派駐關口協助進行檢查？MOE 是否有人員協助物種鑑識、判定？

回應：

目前特定外來生物只許可由成田、中部、關西及福岡等四個國際機場輸入，但只有成田機場配置一名正職、一名兼職的自然保護官事務所職員，負責處理特定外來生物的邊境事務。其他三個機場則由關稅、植物防疫所協助進行如輸入、飼養許可證明及種類證明書的確認，必要時則由各地方環境事務所視情況派員協助，有需要時亦會由環境省委託的民間契約業者協助進行物種鑑定。

4、關於 IAS 的移除，目前 MOE 是否有配置專屬人員進行移除？或是採用契約與民間廠商、補助人民組織進行？是否有採用金錢誘因進行鼓勵移除？是否進行移除成效的評估？

回應：

（1）目前 MOE 並無配置專門人員進行 IAS 移除，目前多由政府單位執行「生物多樣性保全推進支援事業」計畫經費中，與民間

業者簽訂契約執行防除行動；或鼓勵 NGO 團體聘用當地人力、志工進行移除。

（2）防除成果通常會向環境省提出成果報告書、事業報告書。

5、MOE 是否有進行日本國內 IAS 監測的計畫？對於 IAS 的控制管理方法的開發，是由何機關進行？

回應：

目前並無全國性監測計畫，民眾若是有發現可疑的外來生物，可向環境省地方環境事務所、植物防疫所及地方政府等單位提出報告，再進行種類鑑定、後續處理（種類鑑定則由環境省契約之專門業者進行）。

6、環境省與農林水產省在特定外來生物議題上的分工狀況爲何？以セイヨウオオマルハナバチ（西洋大熊蜂）爲例，MAFF 是否在輔導農民使用設備上著力，或是僅由 MOE 單方面進行？

回應：

（1）IAS 若屬對農林水產業有危害狀況者，其相關管理規定由環境省與農林水產省共同管理，除此之外，係由環境省單獨管理。共同管理物種的飼養許可等，由兩機關共同發放許可，其餘則由環境省單獨發放許可。西洋大熊蜂因爲對於農林水產業並無危害，是因爲可能對生態系有影響而被指定爲 IAS，故由環境省單獨管理。

（2）但是因爲主要是農家、農會等獲得西洋大熊蜂飼養許可，所以農林水產省也對蔬菜栽培的農家、農會進行外來生物法的教育宣導。另外對獲得飼養許可的 1 萬 5 千戶農家實地檢查工作，則由地方環境事務所及農會職員一同進行檢查。

肆、心得與建議事項

（一）藉由東南亞七個國家各自報告各國詳細之生物標本採集及管理的法規，與會者得以迅速了解各國現行最新的規定及如何正式申請採集的程序。顯然各國之管理辦法不同，且多半都十分繁瑣費時。故最好的辦法仍是透過國際學術交流合作，在各國找到合作夥伴代爲打點採集與標本借出或攜出境的手續，如此既省事又安全，又可達到合作交流和技術與知識轉移或傳承的目的。當然如採獲有新種或新記錄種，在描述與發表完成後的模式標本或唯一的標本，均應歸還給原產地之國家級或指定之博物館做永久典藏。

（二）東南亞各國因缺乏分類學者，故多半願意藉著上述與先進國家合作研究的方式來協助調查研究該國之生物相，達到雙贏的目的。此次與會可以讓與會者同時認識各國主要承辦此業務的政府官員及博物館館長或管理員，可說是一網打盡，機會十分難得。如彼此間能先建立友誼與互信，相信對促進各國間標本之流通甚有助益。如中研院及海大於 2008 年在菲律賓參與 Census of Marine Life 之國際合作航次所採獲之魚類及甲殼類標本，藉由此次出席會議菲國代表之協助，可望在近期內解禁，運回台灣進行研究。

（三）爲了能加速各國標本、分類學專家及管理法規之交流，應鼓勵各國將這些標本、專家及法規資訊數位化並上網公開，方便查閱及點閱，這是促成標本跨國跨館間流通的重要工作之一。台灣在這方面經驗豐富，故在會中介紹了這方面的數位化成果及與國際 GBIF 接軌的經驗，以提供東南亞國家學習的參考。特別是台灣已完成物種名錄資料庫的基礎工作，以及 TaiBNET、TaiBIF 網站之建置與整合。在此次會議中，除台灣外，只有泰國在資料庫方面已有所整合。

（四）在會議主辦人之熱誠號召下，所有報告人均同意將 ppt 檔公開上網，並在會後能另行撰述文章，集結出版一本論文集。相信此論文

集對擬作跨國採集的分類學者而言，將甚具參考價值。

（五）此外，日本亦考慮在 GTI (Global Taxonomy Initiative)下，成立 Asian Center for Biodiversity 來統籌、協調及推動亞洲國家分類學相互合作之網路 (有如歐洲之網路及 ETI)。

（六）標本之採集及交換太嚴太鬆均各有其利弊得失，太嚴不利於學術研究發展與交流，太鬆又無法保障原產國之遺傳資源及智慧財產權，乃至於生物安全的問題。因此如何能取得中庸之道的平衡點，著實不易。我國「遺傳資源法」雖已擬具草案，但仍以暫時擱置方式來處理，看來也是明智之舉。目前現行各項針對保育物種及保護區之保育管理辦法已可暫時足以用在生物標本採集及交換之管理上。

Workshop on Scientific Collections, Material Transfer and Collecting Regulations

8−9 March 2010

National Museum of Nature and Science

Tokyo

Workshop Program

Day 1: 8March

09:30-10:00 Registration with Coffee & Tea Service

10:00-10:20 Keiichi Matsuura---Opening Remarks for Workshop

Session 1: Collections and Museums

10:20-10:50 Domingo A. Madulid---Collection of Biological Specimens in the Philippines by the National Museum, and Regulations Governing Biological Collection

10:50-11:20 Peter K. Ng---The Ownership of Biodiversity and Challenges for Asian Museum Managers

11:20-11:40 Coffee Break

11:40-12:10 Somran Suddee---The Forest Herbarium (BKF) a Summary of Its Operations and Services

12:10-12:40 Wannakiat Thubthimsang---The PMBC Reference Collection: Collection Management and Database

12:40-13:40 Lunch

Session 2: Databases of Collections

13:40-14:10 Kwang-Tsao Shao---Digitizing and Opening Collections to the Public Can Promote Specimen Transfer and Research Collaboration – Taiwan's Experience

14:10-14:40 Suchada Chayamporn---Biodiversity Database and Information Development in Thailand

14:40-15:10 Ching-I Peng---Introduction to the Flora, Herbarium Collections and Their Digitization in Taiwan

15:10-15:40 Coffee Break

Session 3: Collections and Regulations

15:40-16:10 Somchai Bussarawit---Scientific Collections, Material Transfer and Collecting Permissions in Thailand

16:10-16:40 Bui Dinh Chung---Status of Marine Biodiversity Specimens of Vietnamese Seawaters

16:40-17:10 Tay-Cheng Liou---The Application Process of Specimens Collecting in Taiwan.
17:10-17:40 Plenary Discussion

18:00 Welcome Party at Sunpark Hotel

Day 2: 9 March
Session 3 (continued): Collections and Regulations
09:30-10:00 Pham Van Luc---Regulations and Conventions Related to Collecting and Transferring Permissions for Biological Specimens in Vietnam
10:00-10:30 A.G. Mazlan, A. Latiff and A. Aziz---Regulation and Policy for the Conduct of Research and Specimen Exchanges in Peninsular Malaysia

10:30-10:50 Coffee break

Session 3 (continued): Collections and Regulations
10:50-11:20 Vu Van Lien---Terrestrial Biodiversity of Vietnam: Specimen Collection and Related Issues
11:20-11:50 Abdul Latiff Mohamad---Collection, Material Transfer of Terrestrial Biodiversity and Some Related Issues on Biodiversity in Malaysia
11:50-12:20 Siti Nuramaliati Prijono---Indonesian Government Policies and Regulation Regarding Collecting Biological Specimen and Material Transfer for Research

12:20-13:30 Lunch

Session 3 (continued): Collections and Regulations
13:30-14:00 Edwyn B. Alesna---Scientific Collections of Aquatic Wildlife: Philippine Regulatory Requirement
14:00-14:30 Suharsono---Indonesian Material Transfer Agreement of Marine Biota
15:00-15:30 Aziz Arshad, Mazlan Abd Ghafar and Abdul Latiff Mohamad---Legislative Procedures on the Exchange and Sharing of East Malaysian Borneo Diversified Faunal Resources

15:30-16:00 Plenary Discussion
16:30-16:40 Closing Remarks

Collection of Biological Specimens in the Philippines by the National Museum, and Regulations Governing Biological Collection

Domingo A. Madulid

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The Philippine National Museum is a government agency created by law to undertake collection, survey and research on Philippine flora and fauna and to curate and maintain its systematic collections for scientific study and education. it is the only government research institution that has the largest systematic and biological resources for taxonomic study and backed up by 8 full-time researchers and 5 technical and support staff specifically trained for this job.

We collect specimens throughout the country and exchange duplicate specimens from Southeast Asia, Japan, Europe and the United States. Our collecting activity went smoothly and without any problem through the years resulting in the rapid increase of the botanical and zoological holdings of the institution, discovery of new species (and even genera) of plants and animals, numerous scientific publications in taxonomy, systematics, floristic and biodiversity studies, etc. and increase collaboration between local and international scientists who visited the Philippines.

However, the activity of the National Museum was affected by the passage of the Philippine Wildlife Act and the NIPAS Act which restricted the collection of biological specimens in the country for biodiversity conservation and habitat protection. This recent laws prohibit collection of biological specimens in the country without securing a permit from the DENR, DA or Palawan Council for Sustainable Development or the PAMB. The National Museum, despite its official mandate to collect specimens under the National Museum Act of 1998 is subjected to strict regulations by these bodies. It is the experience of many scientists and researchers not only from the National Museum but from other academic and research institutions that they are, in some cases, subjected to red tape and undue delay in securing collecting and export permits from the authorities concerned. As a consequence, the collection of biological specimens by the National Museum has significantly dropped and in many cases opportunities were lost to catalogue and identify important biological specimens especially the rare and threatened species remaining in the wild. Since the Philippines is one of the hottest of the hotspots for threatened species in the world, the urgency of collecting these specimens for conservation should be convincing reasons for scientists and researchers to be given considerations in the speedy processing of permits.

It is important and necessary that the problems pertaining to collection of biological specimens in the Philippines and export of specimens for scientific study is addressed and discussed by scientists, government administrators and policy makers and all stakeholders. This forum being organized through the auspices of the National Museum of Nature and Science in Tokyo is an opportune time for scientists, government officials and policy makers in Southeast Asia to discuss this common but pressing problems and in the end propose strategies and action plans on how we can move as a body to solve this problem.

The Ownership of Biodiversity and Challenges for Asian Museum Managers

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The ownership of biodiversity resources and information has been a tricky global issue since the agreements at the Rio Convention some 20 years ago. Instead of increasing the information stream about biodiversity, many genuine systematic researchers have in fact been hampered by the many rules and laws drawn up by a host of countries to "preserve and conserve their national biodiversity resources". This includes requirements for intellectual property protection, potential bio-rights issues as well as a host of other economic and commercial aspects. While many of the governmental concerns are genuine, and if not addressed, national economic rights may well be stolen; many biodiversity managers are still unable to understand the nature of modern systematic science; and do not realise that taxonomic, ecological and even conservation studies do not in fact infringe on national sovereign rights. The need by scientists to publish and place their datasets and ideas on the public domain, the requirement to debate and discuss issues openly, the necessity to test hypotheses and classifications across man-made geopolitical boundaries, as well as allow open access to workers from across the world; is unfortunately, not well understood by economists, lawyers or even scientists who have to deal with these management issues. Various case studies will be discussed from the speaker's experience, both positive and negative, in the two decades, from across the Indo-West Pacific and South America. Measures on how field and museum scientists can cope and overcome these challenging problems are also discussed.

The Forest Herbarium (BKF) a Summary of Its Operations and Services

Somran Suddee

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The Forest Herbarium (BKF) is under the auspices of the Department of National Parks, Wildlife and Plant Conservation (DNP). BKF is Thailand's biggest herbarium and a centre of scientific excellence in taxonomic and biodiversity research. BKF contains a collection of over 200,000 preserved specimens, mainly of flowering plants and ferns collected within Thailand. BKF undertakes research on plant and fungal taxonomy, forest ecology, ethnobotany and conservation biology. We conduct botanical explorations, collect plant specimens and undertake plant taxonomic research for the "Flora of Thailand Project", in collaboration with Japanese, Danish, Dutch and British botanical institutions. The specimens collected are also distributed and loaned to collaborating institutions. We establish contacts and make the collections available for scientists dealing with conservation and protected area management, silviculturists and ecologists, and facilitate their research activities within Thailand.

The overseas organizations who would like to conduct research in National Parks and Wildlife Sanctuaries in Thailand can ask for an application form together with the regulations from the National Research Council of Thailand (NRCT) or download the form from the web site http://www.nrct-foreignresearcher.org/. The application has to be submitted not less than 90 days prior to your anticipated date of arrival. NRCT will contact the relevant Thai institutions and arrange their cooperation. A letter of permission will be provided for you to apply for your visa**.**

The PMBC Reference Collection: Collection Management and Database

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The Phuket Marine Biological Center (PMBC) is the research institute which is under the Department of Marine and Coastal Resources, Ministry of Natural Resources and Environment, Thailand. The responsibility of PMBC has to conduct the researches and monitoring survey on marine resources and environment status including marine ecosystem and their diversity. All of the data and information will be analyzed and disseminated to the communities, local government and public for their management, rehabilitative programs and knowledge.

The PMBC was declared operational in 1971 and officially opened on 11 May 1972. The Reference Collection was included in the PMBC activities from the beginning. The idea of the reference collection of the PMBC originated during the Fifth Thai-Danish Expedition, along the south west coast of Thailand in the Andaman Sea in 1966. PMBC Reference collection building was established in 1983, the year of the Rattanakosin Bicentennial and commemorative of the of the 15 years cooperation between the Thai and Danish Government in establishing the PMBC, with the financial support from the Government of Denmark.

PMBC Reference Collection is one of knowledge tools which is very important for scientists especially the taxonomist. 412 type materials and 24,963 specimens were recorded in collection excluding unsorted specimens. Scientists, students and visitor can access information through the internet or direct contact at Reference Collection. Specimens have been identified and recorded in the Reference Collection and update the information. Moreover, PMBC publication and also disseminated research agencies concerned and can be accessed through PMBC web-site. PMBC has provided the exhibition and training course on taxonomic research and reference collection management every year.

For collection process and material exchange there have been some constrained both of the agencies in Thailand and aboard. Many forms and process have to fill in for permissions especially specimens in the list of CITES.

Digitizing and Opening Collections to the Public Can Promote Specimen Transfer and Research Collaboration – Taiwan's Experience

Kwang-Tsao Shao

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Since 2001, Taiwan's National Digital Archives Program has helped most biological collections to digitize, integrate and open for public access (http://culture.teldap.tw). This work is very useful when borrowing or requesting specimens for taxonomical and evolutionary studies. Although the Taiwanese government has not yet approved the draft of the "Genetic Resources Law," basically it will require foreigners to show documents that prove they are in collaboration with local biologists to collect in Taiwan and take specimens out of the country. As to borrow formalin-fixed specimens from a museum, it only needs the museum manager's agreement. However, requesting an alcohol-fixed animal tissue sample is very difficult since it involves the issue of benefit-sharing for genetic resources as well as the high competitiveness in the field of molecular evolutionary study.

The cryobanking program for Taiwanese wildlife has been promoted by COA since 2003. Nearly 3,000 species and 10,000 tissue samples, together with their voucher specimens, have been accumulated so far. All the collection data, including the rules on how to request and exchange these tissue samples, have been put on the web for public access (http://cryobank.sinica.edu.tw). The difference from borrowing regular formalin specimens is that permissions from the original collectors (PIs) must be granted. Although somewhat inconvenient, this practice can help researchers to collect more tissue samples and increase the opportunities for research collaboration. In addition, providing a mailing list of local biodiversity experts is necessary for establishing collaborative channels. Taiwan's TaiBNET website (http://taibnet.sinica.edu.tw) currently contains data on about 700 experts.

Biodiversity Database and Information Development in Thailand

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In present days, biodiversity-related issues are considered significant as they are one of Thailand's national agendas. Thus, compilations, researches, studies, and policy recommendation proposals must be effective and consolidated. For these purposes, **BEDO - Biodiversity-based Economy Development Office (Public Organization)** sees the recognized needs to establish Thailand's biodiversity database and biodiversity information network, in order to enable sound coordination between public agencies and related private organizations in developing project initiatives, conservative activities, and promotion of sustainable and efficient national biodiversity resources usage. Consequently, these will lead to biodiversity-based knowledge development in the long run. Biodiversity-based knowledge discoveries in Thailand are dated back several hundreds years. However, the collections are dispersed in many places, kept by many organizations as well as individuals, which presents limitations and difficulties to the biodiversity database development. Therefore, there is an urgent need to develop the biodiversity information system, with an aim to orderly manage available biodiversity and traditional knowledge. Moreover, this will act as the central unit for Thailand's biodiversity networks and data sources, a vital tool to bring about widespread and sustainable biodiversity-based economy development in the near future. To maximize the utility of rich natural resources in Thailand's economy development, such basic information proves pivotal in planning and management of these resources, in the sense of conservation, protection and commercial usage. Although there are numerous observations and collections by agencies across the country, yet these databases only provide answers to the missions of the particular agencies. Furthermore, these sources are also disorganized; making such resources not being utilized to their potentials. Hence, the gathering of data from various agencies, which would be used to develop an inventory of biodiversity resources discovered in Thailand, is much necessary and important.

For these reasons, BEDO is responsible for implementing **National Biodiversity Database Network and System Development Project: Stage 1** or **www.ThaiBiodiversity.org**, which has the following objectives:

1. To develop collection system management and database network on biodiversity resources at the national level, acting as the center for information linkages between relevant agencies;
2. To be a public source of biodiversity information and references, accessible via the internet;
3. To provide useful information on biodiversity resources and value creation process to interested organizations.

In addition, BEDO is also carrying out **Resource Inventory Development Project**, with an aim to collect data on biodiversity from agencies across Thailand, and develop the inventory of biodiversity resources.

Introduction to the Flora, Herbarium Collections and Their Digitization in Taiwan

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Taiwan is a continental island that straddles the Tropic of Cancer. Its subtropical location combined with a tall range of steep, rugged mountains (to nearly 4,000 m altitude) creates a wide array of environments. Ecological features range from tropical to alpine, which support a rich and diverse flora of over 4,000 species, about a quarter of which are endemic. These plants represent immense germplasm for forestry, agriculture, horticulture, pharmacological and biotechnological research. In addition, they have such interesting relationships to the plants of other parts of eastern Asia and the rest of the world that the investigation of their distribution patterns and the determination of their similarity to the plants of other areas represent an interesting problem for scientific investigations. It is estimated that ca. 900,000 specimens have been deposited in major herbaria in Taiwan. Sponsored by National Science Council, a National Digital Archives Program (NDAP) was officially launched in Taiwan in January 2002. The scope of the program effectively enhances the accumulation, dissemination, and application of knowledge in cultural and biological assets. To consolidate and build on the success achieved, NDAP Phase II was launched in 2007, which was subsequently combined with National E-Learning Program into "Taiwan eLearning & Digital Archives Program" (http://teldap.tw/en/). Its primary purpose is to foster indigenous values, demonstrate Taiwan's cultural diversity, and showcase the linguistic, biological, and cultural uniqueness of Taiwan. Some major herbaria involved in the biodiversity heritage archives project include Academia Sinica, Taipei (HAST); National Taiwan University (TAI); Taiwan Forestry Research Institute (TAIF). In this paper I shall present a brief floristic account of Taiwan, status of plant specimen collections, loans/exchange and digital herbaria in major botanical institutions. International collaboration on biodiversity inventory is encouraged. Procedures in applying for biological specimens collecting permit in Taiwan shall be presented by our governmental conservation officer at this workshop.

Scientific Collections, Material Transfer and Collecting Permissions in Thailand

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Thailand Natural History Museum of National Science Museum, a state enterprise, under Ministry of Science and Technology has been opened since 2003. The Natural History Museum has one of the most comprehensive natural science collections and exhibitions. Permanent exhibition over 2,000 m^2 show biodiversity in Thailand as well as life origination and revolution with illustrations, models, and interactive exhibits that allow visitors to have first hand experiences in natural science. The Natural Science Research Division has executed a field survey and research on the diversity of amphibians, reptiles, ants, plants including marine and freshwater fauna in several wildlife National Parks in Thailand. The museum also preserves a large collection of specimens from nature and serves as the country's preserved of reference for taxonomy and biodiversity research.

The foreign researchers shall submit their research proposals to National Research Council of Thailand 3 months in advance for consideration, approval and permission. The regulations on the permission for foreign researchers to conduct research in Thailand have been formulated to achieve the following objectives: (1) Enhancing cooperation and collaboration between Thai and foreign researchers, and providing opportunities for the exchange of knowledge, technical expertise, and experience (2) Promoting research activities in Thailand so that the results can be used to further the country's development (3) Stabilizing the social and economic security of Thailand (4) Controlling and regulating the country's natural resources to ensure that Thailand receives their benefits.

Foreign researchers will be classified into one of the following four categories: Category one - foreign researchers who conduct research in Thailand under an aid program or a cooperative program with the Thai government. Category two - foreign researchers who conduct research in Thailand under a cooperative agreement between a division of the Thai government and a foreign organization. Letters of verification including a Memorandum of Understanding (MOU) signed by each organization are required. If a foreign researcher conducts research with a Thai governmental organization or governmental academic institute, a letter of recommendation from the organization is needed. Category three - foreign researchers who conduct research in Thailand to fulfill graduation requirements for a degree program at a foreign university Category four - foreign researchers whose qualifications differ from those specified in the above three categories.

Field collection in national parks and non-hunting areas should get permission from appropriated authorities eg. Department of National Parks, Wildlife and Plants Conservation. Material transfer of research specimens should get export permit document.

Status of Marine Biodiversity Specimens of Vietnamese Seawaters

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Vietnamese seawaters have main characteristics such as the long coast line, different depths, and monsoon areas with northeast wind in winter. There are areas with different oceanographical regimes, influenced by local oceanographical conditions and main currents in the West Pacific, e.g. the Kuroshio from the Japanese Sea.

Marine environments of Vietnam are also enriched with various ecosystems of tropical coral reefs, estuary, mangrove, sea grass beds, and rocky shores. The fauna and flora in the sea waters of Vietnam are greatly diversified, having primarily tropical species but also a significant ratio of temperate species.

The Institute Oceanographique de l' Indochine established in the year 1923 in Nha Trang, operated the research vessel De Lanessan, 1500 CV, equipped with bottom trawl until World War II. Great collecting efforts of this institute in Nha Trang resulted in the biggest marine collection in the country. After the French War (1946 - 1954) two comprehensive expeditions Vietnam-China (1959 - 1961) and Vietnam-Soviet Union (1959 - 1961) collected great number of specimens of phytoplankton, zooplankton, benthos, and fishes. However, many parts of the collections of these expeditions have been deposited outside Vietnam.

The Marine Research Institute and the Research Institute of Marine Products in Haiphong were established in year 1961. They have continued doing research up to now. Although these institutes keep marine collections, the coverage of taxa and the number of specimens are not sufficient to understand marine biodiversity in Vietnam. In the last two decades a number of projects concerning marine biodiversity, the universities, institutions and NGO in Vietnam have tried to collect specimens but the collections have not yet been systematically organized.

The Application Process of Specimens Collecting in Taiwan.

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In order to protect the biodiversity of Taiwan, specimen collecting was restricted by several regulations and collecting permit might be approved by different authority, or county and city governments. The application process of specimens collecting in Taiwan are quite complex. Before the collecting application was made, 3 key points should be concerned: Species, regions and collecting methods. Protected wildlife and Natural Commemoratives (plants) should not be utilized except approved by the authorities. Specimens collecting in natural reserves, national parks, wildlife refuges, nature reserves, forest ecosystem conservation areas and designated scenic areas are prohibited, except approved by the authorities. Hunting of wildlife shall not be undertaken by the following methods: dynamite, explosives, poisons, electricity, narcotics, traps, snares, except approved by the authorities.

In recent, no single authority can issue all kinds of collecting permit for researcher in Taiwan. Perhaps after two years, when the Minister of Environment is setting up, all the related authorities will belong to MOE, the single window solution could be setting up.

Regulations and Conventions Related to Collecting and Transferring Permissions for Biological Specimens in Vietnam

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In order to protect wild plants and animals, especially endangered and rare species listed in CITES and IUCN, Vietnam has joined and signed international convention on biodiversity about collecting, transferring and trading wild plants and animals. Vietnam executes completely and tricky the convention of CITES and IUCN on export, import, re-export, protect, control, conserve and transfer wild plants and animals. Vietnam also has legislation on forest protection and development. The legislation defines that protection and development of forest are mongered by Government; Ministry of Agriculture and Rural Development is directly responsible to the Government for national management of forest protection and development; and Provincial People Committee is responsible for state management of forest protection and development in the locality. It is surely that the forest is well protected and managed. Nowadays due to forest loss as well as over-collecting, many rare species become endangered. To protect those species well, Prime Minister of Vietnam has signed Decree 32 on management of specious, rare and endangered plants and animals. They are plant and animal species having special values of economics, sciences and environment, having small populations in the wild or being at risk of extinction, and being decided by Government. They are divided into 2 groups (I and II), of which plants and animals listed in group I are not allowed to collect for any reason; species listed in group II are allowed collected limitedly for study and relevant purposes. Other Decrees (Decree 23 and 99) on application of regulation on forest protection and development. Foreign scientists or institutes do research in protected areas of Vietnam must be accompanied with Vietnamese counterpart, and permission for collecting and transferring plants and animals must be authorized by Ministry of Agriculture and Rural Development. Collecting and transferring plants and animals in protected areas of Vietnam must be followed by Legislation and Decree 32.

Regulation and Policy for the Conduct of Research and Specimen Exchanges in Peninsular Malaysia

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The diversity in flora and fauna has enabled Malaysia to earn a prestigious spot as one of the 12 mega biodiversity countries in the world. Whole over Malaysia was endowed with over 15,000 species of flowering plants, 1,500 species of terrestrial vertebrates and about 150,000 species of invertebrates recorded from terrestrial and freshwater and marine ecosystems. The critical factor that has contributed to this rich biological diversity is the government policy and ability to protect the natural living resources. Being a maritime country, it has endowed with 9,323 km coastline and 335,914 km^2 area of continental shelf. In exploring the marine biodiversity, more taxonomists are undoubtedly needed in order to make the unknown of the marine organisms to be become a known species. However, Malaysia faced a serious shortage in taxonomist. Therefore a kind of research collaboration with foreign experts is pertinent, so that Malaysia can gain excess to their biodiversity resources as well as developing local experts and capacity building. However, any scientific collaboration regarding with indigenous biodiversity will entail specimen's collection that needed to be transported or exchanged abroad. This paper aims to highlight the Federal Government of Malaysia policy and regulation for specimen exchange and conduct of research in Peninsular Malaysia.

Terrestrial Biodiversity of Vietnam: Specimen Collection and Related Issues

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Vietnam, has a high variety of habitats, is one of the high biodiversity countries in the world, and has 128 protected areas with the forest covers about 33% of terrestrial land. Vietnam has 295 mammal species, 880 bird species, 483 reptile and amphibian species, more than 10500 vascular plant species and many thousand of invertebrates. Although there have been many researches of fauna and flora, biodiversity in many forested areas is still little known, especially in central Vietnam. Many new species to science and new records have been described and added annually. So far there are more than a million plant specimens, millions of invertebrate specimens and thousand mammal specimens collected and preserved in different places through out of Vietnam. A number of specimens collected in 100 years ago, but many specimens were collected recently. However, care and preservation of specimens are not good due to hot and high humidity, lack of preservation equipment and specialists. Many specimens are broken and degraded which can not be used any more. The classification and identification of some groups of plants and animals are relatively well done but the other groups such as invertebrates still lacking of taxonomists. In order to meet the need of research and preservation of specimens as well as other purposes, Vietnam National Museum of Nature has been founded (in 2006). The new Museum of Nature is a good place to collect, preserve and exhibit specimens for scientific research, visitors, education and international cooperation. Scientists of the Museum have been working in cooperation with many institutions and museums of foreign countries and international organizations and obtain some good results. The museum would like to work in cooperation and learn experiences from institutions and museums in the world.

Collection, Material Transfer of Terrestrial Biodiversity and Some Related Issues on Biodiversity in Malaysia

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Malaysia and South-east Asia is endowed with one of the richest biodiversity in the world which is represented by various ecosystems, species and the genetic diversity. Ecosystem diversity is represented by various terrestrial and aquatic ecosystems, including marine. In Malaysia species diversity is represented by about 15,000 species of plants whilst the diversity of animals is represented by more than 6000 species, excluding that of the insects, the largest and most diverse single group which is inadequately known. As the country is also pursuing industrialisation by the year 2020, conflicts are bound to occur between biodiversity conservation and socio-economic development, unless sustainable development is adopted. To-day a total of 1.39 million ha (about 7.6%) of the forest of all types have been set aside for biodiversity conservation. However, a framework for managing biodiversity in protected areas, including National and State Parks is inadequate as strategic planning and management and monitoring programmes are in place. The country is yet to define priorities for conservation and sustainable use of biodiversity based on ecosystem, species and genetic diversity. Measures for sustainable use in traditional agriculture, forestry, fisheries are in place but those in biodiversity prospecting, eco-tourism and impacts of urbanisation on biodiversity are yet to be established. In the absence of concrete data of biodiversity loss in the country it is difficult to ascertain the list of endangered or otherwise threatened species as the various ecosystems are prone to changes. However, efforts to assess and monitor these have been initiated through the recently incepted Biodiveristy Country Study and National Policy on Biodiversity. Many factors have contributed to biodiversity loss; among them is the rapid socio-economic development of the country that transformed vast forested lands via logging activities, land openings for agriculture and resettlement and subsequently creating new built-up areas such as urban and industrial areas which are relatively poor in biodiversity. These changing land-use patterns are affecting not only biodiversity but also the environment *per se*. Other factors such as over-harvesting and pollution have also contributed in small part. These activities had led to significant habitat loss, degradation and forest fragmentation. What is needed are frameworks and strategies for biodiversity conservation, socio-economic strategies for sustainable use and benefit sharing of biodiversity and also some legal measures for sustainable use and protection of biodiversity and assessment of land-use patterns. Issues cooperation and collaboration between Malaysia and Japan on specimen collections, transfer of materials, collection permits are discussed.

Indonesian Government Policies and Regulation Regarding Collecting Biological Specimen and Material Transfer for Research

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Estimates of global species diversity have near 10 million, and only 1.4 million have actually been named. Indonesia is one of mega-biodiversity countries which is blessed with extremely rich biological resources with high biodiversity. A lot of new species are still being discovered in Indonesia. The inventorying of biodiversity is much more incomplete in Indonesia, therefore it has committed to developing inventories of its biodiversity under article 7 of the Convention on Biological Diversity. However due to lack of available taxonomic expertise, Indonesia develop international cooperation for taxonomic research to get more complete of its species.

According to Government Decree No.: 41/2006, every foreign university, research institute, enterprise, and individual are welcome to conduct research in Indonesia. Foreign researchers who will conduct research in Indonesia have to involve scientist as local counterpart from local university, research institute or Non government Organization (NGO) who has competency in the research topic. Regarding the decree of the Ministry of Forestry No. 447/Kpts-11/2003 collecting of wild plant and animal specimens in Indonesia can only be done under a license given out by Management Authority (Directorate General Forest Protection and Nature Conservation/PHKA) and a recommendation from Scientific Authority (The Indonesian Institute of Sciences/LIPI). Daily duties of LIPI in terms of LIPI's as a Scientific Authority is carried out by the Research Center for Biology (RCB). Sending or transporting biological specimens from one location to another within Indonesia must be covered by legal documents (Article 42, Chapter X of the Regulations of the Government of the Republic of Indonesia Number 8, 1999) handed out by the regional offices for the Natural Resources Conservation Office (BKSDA) at the provincial level.

RCB is the institutions which are the national reference points for the science of taxonomy and related biodiversity studies. It has herbarium, museum zoology, museum ethnobotany and culture collection. One of missions of RCB is strengthening collaboration and improving among stakeholders concerned with issues of biodiversity conservation, ecosystem and environment. To increase the efforts of international cooperation for biodiversity research and in order to enable researchers to obtain information on what regulation are in force, therefore the policy and regulation regarding collecting biological specimens and material transfer for research will be informed.

Scientific Collections of Aquatic Wildlife: Philippine Regulatory Requirement

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Prior to 2004, collections of aquatic specimens for academic research and scientific purposes were treated as ordinary collections of aquatic species, or could be classified as ordinary fishing.

However, the passage of Republic Act No. 9147, entitled "The Wildlife Resources Conservation and Protection Act", and its implementing rules and regulations (Joint DENR-DA-PCSD Administrative Order No. 1, series of 2004), provides specific guidelines for the regulation of collection of Philippine wildlife resources for academic research and scientific purposes. A novel provision of the Act is the establishment of a third authority, the Palawan Council for Sustainable Development (PCSD) for the management and conservation of both terrestrial and aquatic wildlife in the Province of Palawan. Thus, collections of terrestrial and aquatic wildlife in Palawan, for whatever purpose, require the prior granting of appropriate permits from the PCSD. Prior to this Act, the management and conservation of wildlife resources in the country is entrusted to the Protected Areas and Wildlife Bureau of the Department of Environment and Natural Resources for terrestrial species, and the Bureau of Fisheries and Aquatic Resources for aquatic species.

As the Act, and its implementing rules and regulations, apply to both terrestrial and aquatic resources, the Bureau of Fisheries and Aquatic Resources prepared a Fisheries Administrative Order (FAO) specific for collections of aquatic specimens.

Some of the features of the Act include:

1. Requirement of a Memorandum of Agreement (MoA) between the collector and concerned implementing agency;
2. Requirement of the Free and Prior Informed Consent/Certificate (PIC) of Indigenous People (IPs) or prior clearance of the concerned local government units/Protected Area Management Board (PAMB)/individuals or associations with valid tenurial or other private rights to municipal waters, and other relevant agencies or institutions where the collection shall be made
3. Requirement for a Gratuitous Permit (GP) to collect the specimens
4. Classification of collectors and collections

Collection of wildlife resources for research, with commercial intent, is treated separately under Joint DENR-DA-PCSD-NCIP Administrative Order No. 1, series of 2005 (Guidelines for Bioprospecting Activities in the Philippines).

Indonesian Material Transfer Agreement of Marine Biota

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Indonesia is the largest archipelagic country in the world and consists of 18.110 islands with a coastline of 108.920 km long. The formation of Indonesia Island was closely related to the ancient geological process and resulting to very complex and unique ecosystems variation and habitats which make it possible for fauna to adapt themselves and to undergo maximal evolution, resulting in the most highly diversified marine biodiversity. Detailed knowledge and understanding on marine biodiversity, and species richness are not yet known. In order to protect our marine resources, the ownership marine species and the fair and equitable sharing of the benefits arising out of their used, the government of Indonesia release a regulation for transferring biota into or out from Indonesia. The regulation is namely material transfer agreement. The basic law of this regulations is law No 5 of 1990 concerning conservation of living resources and its ecosystem, United nations convention on biological diversity, the ministry health regulation No 732 of 2008 on a guidance of sending the specimens for research and development of health. The complete of of material transfer agreement consist of definition of materials, collection of materials, ownership of materials, use of material, research proposal, intellectual property right, new discovery, publication, confidentiality, disclaimer of warranty, indemnity, termination, arbitration, regulation and rules and Entry into force and duration. The material transfer agreement can also be simplified depend on the research proposal, type of materials and the agreement of both parties. The detail of materials transfer agreement will be presented.

Legislative Procedures on the Exchange and Sharing of East Malaysian Borneo Diversified Faunal Resources

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The biodiversity conservation in the ASEAN region has been the main agenda in environmental conservation in the last decade, merely relates to the hotspot biodiversity tag given to the rich and diverse faunal presence in the region. The island of Borneo where Malaysian Sabah and Sarawak states are located, is vast in tropical forest acreage and fringed with extensive mangroves, seagrass and coral reefs ecosystem. This diverse wealth could potentially have unique applications in healthcare, agriculture and industries and the two states have legislations with regards to the exploitation of the resources. In Malaysia, the respective state governments have jurisdiction over land, forests, fisheries, agriculture, water resources and local authority areas, and are empowered to gazette reserves, issue logging permits, collect royalties and premiums, decide on the use and allocation of the forest and its development. Sabah and Sarawak states are given autonomous governance due to some constitutional arrangement within the federation. Under the provisions of the Sarawak Biodiversity Centre (Amendment) Ordinance 2003, the Sarawak Biodiversity Council (SBC) is given the responsibility to regulate usage including research on biological resources and Sabah Biodiversity Enactment 2000 was enacted to provide a legal framework for the safeguarding of biodiversity and biological resources of the State. The paper will address the specific requirement of this legislation to the scientific community involved. The legislation and enforcement on the utilization of biological faunal resources of the two Malaysian states will be examined and discussed to include the specific requirement for the exchange of taxonomic specimens and deposition of biological specimens outside the states possibly through the implementation of national research projects and collaborative studies between Malaysia and other participating countries.