

出國報告（出國類別：其他-參加國際會議）

「亞太森林復育與永續經營網絡第三屆理事會議（The Third Meeting of the Asia-Pacific Network for Sustainable Forest Management and Rehabilitation Council）」

服務機關：行政院農業委員會林務局

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摘 要

亞太森林復育與永續經營網絡 (APFNet) 自 2010 年至 2014 年每年召開各成員之聯絡員會議 (Annual Meeting of the APFNet Focal Points)，於 2014 年第 5 次會議時，為使 APFNet 長期運作，決定修正其組織制度，以理事會 (Council) 取代現有聯絡員會議，並成立董事會 (Board of Director)。

第一屆董事會及理事會議於 2015 年 4 月中於緬甸首都奈比都召開，第二屆理事會議於 2016 年 5 月假柬埔寨暹粒市召開，本次第三屆理事會議於 2017 年 3 月於斯里蘭卡可倫坡市召開，主要由 APFNet 秘書處報告「2016 年會務成果」、「2016 年工作計畫」、「2017 年工作計畫及實施」、理事會會務討論，包含 APFNet 建立有關森林立法和政策資料庫，及第四屆理事會 (2018 年) 原則訂於 2018 年於中國舉行。

示範計畫由緬甸報告「東南亞山區永續森林復育與管理先趨示範計畫」、中國報告「湄公河流域及馬來西亞森林覆蓋與碳地圖繪製計畫」及斯里蘭卡報告「加強松樹造林計畫」。

實地參訪會方安排 Kanneliya 保護區，及 Kumburegoda 造林地考察斯里蘭卡森林經營；參訪 Kosgoda 省內的海龜復育中心，及 Maduganga 紅樹林。

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一、會議之背景及目的：

亞太森林復育與永續經營網絡（APFNet，Asia-Pacific Network for Sustainable Forest Management，以下簡稱 APFNet）之發展，源自 2007 年 9 月在澳洲雪梨舉辦的 APEC 第 15 次領袖高峰會議，會中中國提出建立亞太森林復育與永續經營網絡的倡議，美國和澳洲共同回應發起，並獲得各經濟體支持。此倡議同時納入該次 APEC 會議發布之「氣候變遷、能源安全及清潔發展宣言」雪梨宣言，該份宣言表明，將在 UNFCCC 的原則下，「重視森林及土地利用重要性」等國際行動，其中，「至 2020 年 APEC 會員的森林覆蓋面積須至少再增加 2000 萬公頃，以吸收掉 14 億公噸的二氧化碳排放量」，「建構亞太永續森林管理與復育網絡，以強化區域林業發展的能力建構與資訊交流」，列為具體的 APEC 行動計畫。

2008 年 9 月，亞太森林復育與永續經營網絡（APFNet）在 APEC 框架下於北京展開，初始成員包含大部分 APEC 經濟體、亞太地區非 APEC 經濟體以及相關之國際組織；創建經費主要來自中國，美國、澳洲亦挹注部分。2010 年 6 月召開 APFNet 第 1 屆聯絡員會議，會中通過建立「亞太森林復育與永續經營網絡」聯絡員工作機制，每年定期召開會議。惟於 2014 年第 5 次會議時，為使 APFNet 長期運作，決定修正其組織制度，以理事會（Council）取代現有聯絡員會議，並成立董事會（Board of Director）。董事會職責為政策決定者，理事會職責則為取代原先臨時指導委員會及聯絡員之功能，提供意見。隨後即於同年 8 月經由各會員確認組織制度之修正，並於 2015 年 2 月由各會員指派理事會代表及聯絡人。2015 年 4 月 8 日召開第 1 屆董事會，成員計有 13 名董事及 1 位秘書長，任期為 3 年一任並得續任 1 次，此第 1 屆任期始於 2015 年，董事會主席為趙樹叢先生（中國籍，前中國國家林業局局長、現任中國林學會第 11 屆理事會理事長），秘書長為曲桂林先生（中國籍），其餘董事分別為澳洲籍 3 名、柬埔寨、尼泊爾、菲律賓、馬來西亞、泰國各 1 名、國際組織 TNC, FAO, ITTO 各 1 名，以及地主經濟體代表 1 名（中國財政部農業司副司長）。

為滿足區域的林業發展的需要，APFNet 第 3 屆理事會議在斯里蘭卡可倫坡市舉辦，以促進各經濟體及亞洲地區國家之溝通與合作。目前 APFNet 計有 31 個會員體，包含 26 個 APEC 經濟體，以及 5 個國際組織（詳如附錄

三)。我中華台北由林務局局長林華慶先生擔任代表 (Council Representative)，林務局森林企劃組技正林雅慧小姐為聯絡員 (Contact Person)。本次會議計有 18 個經濟體及 6 個國際組織派員出席，其中墨西哥及秘魯是首次參與、2 個國際組織為觀察員 (詳如表一)。

表一、2017 年第三屆理事會議出席名單

APEC 經濟體	非 APEC 經濟體	國際組織
Bangladesh 孟加拉	Brunei Darussalam 汶萊	FAO 國際農糧組織 Food and Agriculture organization of the United Nations
Canada 加拿大	Cambodia 柬埔寨	ITTO 國際熱帶木材組織 International Tropical Timber Organization
Indonesia 印尼	Fiji 斐濟	SPC 太平洋社群秘書處 Secretariat of the Pacific Community
Malaysia 馬來西亞	Mexico 墨西哥	TNC 美國自然保育協會 The Nature Conservancy
Myanmar 緬甸	Mongolia 蒙古	觀察員
Papua New Guinea 巴布亞新幾內亞	Peru 秘魯	IUFRO 國際林學研究機構聯盟 International Union of Forest Research Organizations
P.R. China 中國大陸	Sri Lanka 斯里蘭卡	EFI 歐洲森林研究所 European Forest Institute
The Philippines 菲律賓	Chinese Taipei 中華台北	
Thailand 泰國	Viet Nam 越南	

二、會議活動及議程 (議程表詳如附錄二)

第 3 屆 APFNet 理事會會議 (The Third Meeting of the APFNet Council) 於 2017 年 3 月 23 日召開，由 APFNet 秘書處擔任幕僚及聯繫工作，會議地點位於斯里蘭卡可倫坡市 (Colombo, Sri Lanka) 之 Cinnamon Lakeside 旅館，大會行程如下：

(一) 3 月 23 日：報到、召開會議

1. 會議開幕式

2. 確認議程。
3. 報告 APFNet 2016 年會務成果、2016 年工作計畫、2017 年工作計畫及實施。
4. APFNet 退化森林復育和增加森林覆蓋率計畫成果報告（緬甸、中國及斯里蘭卡）。
5. 理事會會務討論。
6. 討論 APFNet 建立有關森林立法和政策資料庫。
7. 討論大中亞五個成員國參與理事會之型式。
8. 決定第 4 屆理事會地點。

(二) 3 月 24 日至 25 日：現場參訪

會方安排 3 月 24 日參訪 Kanneliya 保護區，及 Kumburegoda 造林地，考察斯里蘭卡森林經營；3 月 25 日參訪 Kosgoda 省內的海龜復育中心，及 Maduganga 紅樹林。

三、會議內容

本次會議開幕分別由斯里蘭卡森林部保育組長 Mr. Anura Sathurusinghe 及 APFNet 秘書長曲桂林致歡迎詞，接著即正式進入會議。會議主席、副主席依據理事會程序規則（Rules of Procedure of the Council）規定以 3 年為一任，故仍由 Preecha Ongprasert 博士（泰國聯絡員 Contact Person）履行第一任第二期主席職責，副主席 Magdalene Maihua 女士（巴布亞紐幾內亞籍）及秘書處顧問 Rosalie McConnell 女士（加拿大籍）協助會議進行。會議重要事項及決議如下：

(一) 回顧 2016 年理事會工作成果

主席將理事會對 APFNet 2016 年工作的支持進行總結報告，包括對新策略計畫（Strategic Plan, 2016-2020 年）、計畫評估小組（Project Appraisal Panel, 2016-2018）的候選人以及擬議的年度工作計劃提出建議。理事會成員針對 APFNet 的概念說明，及獲得批准的計畫進行回應，另部分代表積極參與其計畫、實施和監督。此外，理事會成員還協助 APFNet 工作人員的訪問，以探索新夥伴關係和進一步合作領域的機會。

(二) 2016 年工作及預算執行成果報告（詳如附錄四）

APFNet 秘書長曲桂林先生介紹了理事會訊息年度報告（APFNet 2016 年度報告）。曲秘書長表示，實施新策略計畫反映了 APFNet 致力於維護其核心價值觀（尊重差異，行動導向和創造性/創新思維），並按照開放性參與、互補性價值和回應目標受益人之需求等 3 個基本原則運作。去年，APFNet 正式成立理事會和董事會後，其結構和組織發生了重大轉變。在 2017 年，任命一名新的執行董事，將有更多的變化。2016 年重大項目活動和事件，包含：

1. 促進政府對大中亞地區森林恢復的承諾

APFNet 在 2016 年 5 月 30 日至 31 日舉辦「第一屆大中亞地區林業部長會議」，大中亞地區各國的林業部長第一次齊聚在哈薩克斯坦首都—阿斯塔納。會議旨在加強該地區政府對林業的承諾，促進聯結各國林業部門，並通過《阿斯塔納宣言》。

該宣言闡明了森林永續發展對該區域社會、經濟及環境發展上的重要貢獻，也強調在森林保育、保護、再生產上，以及在減輕氣候變遷、沙漠化、土地退化的負面影響上，需更密切區域合作的必要性。該宣言承諾，所有簽署國將共同努力增加該區域的森林覆蓋率，並將透過一系列活動加強彼此之合作關係。在全體討論中確定了以下優先事項：

- 防止和減少跨境森林火災和森林病蟲害
- 對抗森林土地退化和沙漠化
- 促進區域森林監測系統的發展
- 推廣森林保護的生物方法
- 促進沙漠地區永續造林的發展
- 保育和利用森林遺傳資源
- 促進制定評估森林生態系統服務價值的方法
- 促進林業專家的能力建構和培訓

2. 促進亞洲和太平洋地區的林業投資

隨著亞太地區崛起，該區域成為森林產品需求的重點區域，投資者對此森林市場機遇漸增興趣，這些機遇不只是圖利，也需負起社會與環境之責。然而，決策者仍面臨挑戰，需建立可靠的法律制度和穩定的投資環境，以維持林業部門的相關投資。

亞太森林動員投資互動式研討會應運而生，以期能更為了解林業投資，

並分享關於克服林業投資挑戰的案例研究。提出如下建議：促進公共和私營部門決策者、金融家和其他利益攸關方之間的跨部門對話與夥伴關係，以期為亞太區域的森林和其他自然資產之綠色投資，創造有利的政策環境。

APFNet 還提出了潛在的初步行動，例如舉辦跨部門的多重利益相關者研討會，以建立綠色投資方面的知識和關係，並支持政府從綠色氣候基金和全球環境基金等機構尋求有利的投資。

3. 亞太林業教育協調機制

2016 年 AP-FECM 的主要成果包括：

- 英屬哥倫比亞大學（加拿大）、茂物農業大學（印尼），越南國立林業大學和國立宜蘭大學（中華台北）簽署多項合作備忘錄（MoUs）和學生流動協議。
- 主辦 ECAP 支援大會的研究員，於 10 月份在北京舉行的 IUFRO 世界大會前，提高相關林業研究能力。
- 為找出教育趨勢及挑戰，區域林業大學和研究機構的專家正在共同找出發展趨勢，並提出解決林業教育挑戰的方案。本研究的結果將在 2017 年“亞洲及太平洋林業教育年度報告”中提出。

秘書長曲桂林先生另針對 2016 年度工作計畫和財務狀況進行報告。報告指出，大部分項目已經完成，預期成果得以實現。在預算方面，2016 年收入增長約 265 萬美元，到 2016 年達到 680 萬美元，費用增加了 115 萬美元，達到 353 萬美元，其中 54% 分配運用於各項計畫。

(三) 2017 年工作計畫及預算建議討論

理事會審查 2017 年擬議的工作計畫和預算（詳如附錄五）。指出需要加強 APFNet 的 4 個核心目標之間的聯繫，理事會希望董事會不僅將此信息傳達給秘書處，而且還能提供投入以完成此任務。例如，在進行森林復原的計畫中，應對相關能力需求進行評估，並鑑別政策和立法間之差距。會中決議，將向董事會建議，不僅應敦促秘書處處理這個問題，還須就如何促進聯繫提出建議。

另建議，具相對優勢之 APFNet 應建立有效方法，以持續支援合作伙伴。

例如，APFNet 在 FAO 於菲律賓舉辦之亞太林業周中，以主導之姿，共舉辦了 16 次活動，並安排了逾百位講者發言或演講。會中決議，此舉對區域、APFNet 及其會員體皆有助益，因此，將向董事會建議，將該本項目添加到 2017 年擬議的 APFNet 工作計畫中。

(四) 退化森林復育及森林覆蓋提升計畫成果分享

APFNet 計畫成果分享分由緬甸報告「東南亞山區永續森林復育與管理先趨示範計畫」、中國報告「湄公河流域及馬來西亞森林覆蓋與碳地圖繪製計畫」（已完成計畫）及斯里蘭卡報告「加強松樹造林計畫」（已核准之計畫，尚未完成）。（詳如附錄六）

1. 緬甸「東南亞山區永續森林復育與管理先趨示範計畫」

本計畫為 2013 年至 2015 年之 3 年計畫，計畫目標係找出該區森林恢復的策略，透過優先使用稀有和瀕危的本地樹種，發展永續森林復育能力，並提高在地居民經濟收入。

據指出，確保幼苗高存活率的最佳方法之一是種植當地物種，並強調其對當地社區的重要性。但是，主要的挑戰之一就是保護新種植區免受放牧。另一個問題是窮人對收入的迫切需求。在這方面建議在五年內種植快速增長的物種，其次才是當地物種，可能是一個解決辦法。而混農林業也被視為可能的短期方法，但經驗表明，當市場有限時，這一戰略並不總是成功。結論為與會者同意，該計畫是 APFNet 與合作夥伴合作為該地區帶來的好處的案例之一。

2. 中國「湄公河流域及馬來西亞森林覆蓋與碳地圖繪製計畫」

本計畫為 2011 年至 2014 年之 4 年計畫，計畫目標係利用光學和雷達遙感技術，開展森林覆蓋測繪技術，以監測該地區森林覆蓋類型的變化；使用地面測量、衛星籌載雷達取樣數據和成像遙感數據，制定森林地上生物量估算框架；以 30、500 公尺之空間解析度製作 2005、2010 年的森林覆蓋圖；以 300 公尺空間解析度製作 2005 年森林地上生物量圖。

本計畫開發出森林覆蓋圖和碳估算方法，並已建置參考數據庫和遙感數據庫。根據所製作之森林覆蓋圖等結果，計畫範圍內 2005 年森林覆蓋率為 45%，2010 年為 42%。從 2005 年至 2010 年，森林損失約 3%。估計碳庫存總量為 10.16 億噸，而馬來西亞和緬甸擁有該地區總碳儲量的一半。本計

畫也建議，隨著現已發展出的許多方法和更多可用的衛星數據，森林繪測方法可套用到更大範圍的區域，並在時間尺度上可含括更長之時期。

理事會成員表示這計畫成果十分重要，並希望在雙邊基礎上可安排額外介紹。墨西哥並表示承諾與中美洲其他經濟體將以該項目所使用的方法為基礎，進行森林監測工作。

3. 斯里蘭卡「加強松樹造林計畫」

鑑於該項目尚未實施，強調設計對於實現預期成果至關重要。在這方面，森林部門表示打算向當地社區諮詢約 500 戶家庭，以選擇本地種植和非木材林產品種植，以期創造最多的收入。

(五) 理事會會務討論

本節由 Rosalie McConnell 女士（秘書處顧問）主持，藉由概念交流，以加強與 APFNet 互動，並強化理事會做為諮詢機構的功用。例如，如何確保參加會議的參加者熟悉 APFNet 並積極參與其工作，將會有助於改善未來會議的組織結構。鑑於溝通是條雙向管道，本屆會議不僅應關注 APFNet 如何與會員及聯繫人進行有效連結，且應確保溝通管道保持開放和正常運作。主持人並提醒理事會，除提供交流意見外，還應設法了解 APFNet 的工作計畫和優先事項，以便提供反饋意見，並向董事會就實質事宜提供建議。

經過與會人員討論，提出了許多想法，以改進理事會成員和 APFNet 之間的溝通，以及如何加強會員代表和聯絡人參與 APFNet 活動，意見小結如下：

1. 向所有成員發行電子報
2. 在會議之前發送相關文件
3. 提供更多有關已核准計畫的訊息，包括進展和影響
4. 以電子郵件通知即將舉行的活動，以便理事會成員參與
5. 安排工作小組會議時間，以討論工作計畫之提案
6. 在 2017 年工作計畫中增加「維護及建立夥伴關係」項目
7. 使用電子郵件作為首選的溝通方式，但考慮將社交媒體/ E groups 作為進一步保持聯繫的方式
8. 建立相關同事的通訊錄，以促進後續行動
9. 定期召開電話會議，但若參與人員眾多，這種方法可能難以進行

10. 將特色計畫作為電話會議討論項目之一，討論計畫進展，挑戰和經驗等
11. 關注重要議題，而非一般性問題
12. 在會議期間組織工作小組，以促進討論
13. 要求計畫提案者準備 1-2 頁關於心得經驗和實際做法建議的簡報
14. 鼓勵同事/國內專家分享信息

本節決議請秘書處列出使用社交媒體的可能選擇方案，並將其發送至各經濟體，以獲取偏好和反饋意見，以加強理事會成員與 APFNet 之聯繫。

(六) 其他會務

1. APFNet 10 週年

秘書處向理事會通報 APFNet 於 2018 年成立十週年，並通過電子郵件尋求特別活動的建議。TNC 美國自然保育協會 (The Nature Conservancy) 的代表指出，RAFT 計畫也規劃慶祝成立 10 週年，期與 APFNet 進行雙邊討論，以確定聯合舉辦的可能性。

2. 對大中亞經濟體觀察員身份之要求

秘書處向理事會通報了目前沒有代表的大中亞五個經濟體 (哈薩克、吉爾吉斯、塔吉克、土庫曼、烏茲別克) 在會議上獲得觀察員地位的請求。沒有提出異議。理事會決定批准來自大中亞的 5 個經濟國家作為觀察員出席理事會會議的要求。

3. 建立關於森林立法和政策的區域資料庫

響應成員國要求建立森林立法和政策區域資料庫，秘書處要求理事會批准在訊息共享的核心價值下執行這項任務。與會代表指出，這種資料有時是分散的，因此可能難以整合；另認為技術和成功方法的彙編也可能是有價值的。一般認為這樣的資料庫對經濟有益，可以幫助 APFNet 決定優先事項。但若最終可對法律和政策的有效性和原因進行分析評估，將更有價值。

經過討論，理事會決定支持 APFNet 建立一個區域森林立法和政策資料庫。下一階段，在可行的範圍內，應考慮對其有效性進行分析評估，並註明理由，並應該包含所獲取之經驗。

(七) 下次會議時間地點

鑑於 APFNet 將在 2018 年慶祝成立 10 週年，建議下次理事會會議於中

國召開。此外，理事會感謝巴布亞紐幾內亞在 2019 年舉行第五次會議的誠摯邀請。

本節決議由中國舉辦第 4 次理事會會議，並 APFNet 慶祝成立 10 週年。日期和地點將確認後再行通知。

(八)現場參訪

主辦單位安排 3 月 24 日參訪 Kanneliya 保護區，及 Kumburegoda 造林地考察斯里蘭卡森林經營；3 月 25 日參訪 Kosgoda 省內的海龜復育中心，及 Maduganga 紅樹林，重點摘要如下：

1. Kanneliya 保護區

- Kanneliya 森林位於斯里蘭卡西南山地，為熱帶雨林森林。1940 年公告為保護區，於 2004 年結合周邊區域，擴大為 Kanneliya-Dediyagala-Nakiyadeniya (KDN) 森林保護區，總面積約 10,918 公頃。
- 該區域於 1970 至 1988 年進行伐木事業，斯里蘭卡天然林禁伐後，Kanneliya 於 2003 年開放生態旅遊。
- 該保護區因具生物多樣性、水土涵養及對周邊社區經濟、歷史文化之價值，管理單位透過生態系經營、生態旅遊、森林保護及監測、保育研究、承載量管制、社區參與式經營模式、環境教育、永續財源機制等，經營管理保護區業務。(詳如附錄七)

2. Kumburegoda 造林地

- 該區為火災跡地復育造林，土壤為紅土及黏土為主，爰混植原生速生樹種進行復育。

3. Kosgoda 海龜復育中心

- 斯里蘭卡已全面禁止捕殺利用海龜，因龜卵及剛孵化之小海龜易受攻擊，成活率極低，為保護海龜，當地人巡視海灘一旦發現海龜產卵，遂將其整窩帶回復育中心孵化，並餵養小海龜至殼變硬後野放。
- 復育中心也收容受傷或疾病的海龜。其財源為參觀門票及捐款收入。

四、心得與建議

(一)我國對於 APFNet 之參與強度及未來發展策略

APFNet 為一國際組織，致力於提升亞太地區之永續森林管理與森林復原。APFNet 在 APEC 促進下，於 2008 年正式成立，2017 年將邁入第九個年頭。

本次 APFNet 會議會方承襲以往慣例，以 APEC 經濟體架構安排會務，我方以「Chinese Taipei」座位名稱，位於斯里蘭卡及泰國之間，平等與會，未有矮化我方情事。然而 APFNet 本質上係由中國大陸主導，結合部分 APEC 經濟體以及大部分東南亞、中亞之未開發或開發中國家所組成之林業合作平台。根據 APFNet 理事會組織章程架構，董事會為決策核心，理事會僅為提供建議，目前 APFNet 第 1 屆董事會成員計有 13 名董事及 1 位秘書長，任期為 3 年一任並得續任 1 次，此第 1 屆任期始於 2015 年，董事會主席為趙樹叢先生（中國籍，前中國國家林業局局長、現任中國林學會第 11 屆理事會理事長），秘書長為曲桂林先生（中國籍），其餘董事分別為澳洲籍 3 名、柬埔寨、尼泊爾、菲律賓、馬來西亞、泰國各 1 名、國際組織 TNC, FAO, ITTO 各 1 名，以及地主經濟體代表 1 名（中國財政部農業司副司長）。可惜我國未能為其中一員，雖然如此，我國目前亦能於理事會中適當的參與並提出建議。

APFNet 四大核心目標（pillars）：能力建構、示範計畫、政策對話、訊息共享及聯繫，並藉由促進永續森林管理與森林復育，幫助各經濟體及亞太地域人民，優先推動下述工作：

- a. 恢復退化森林與增加森林覆蓋。
- b. 推廣永續森林管理以增強森林生態功能和生態系統安全。
- c. 提高森林對社會經濟發展的貢獻並改善當地生計。

近年 APFNet 持續支持各區域之森林復育、生態功能加強、社會經濟及福利改善、人員培訓等相關研究計畫、觀摩、座談會、工作坊等，發展方向和我國目前林業政策方向—「永續林業」極為相符。APFNet 已規劃並執行包括「降低森林火災的風險」、「探索流域管理方法」、「強化森林經營規劃能力」、「提高森林的社會效益」、「生態旅遊發展」、「社區林業婦女的經濟賦權」等相關計畫。2011~2013 我國行政院農業委員

會林業試驗所獲得 APFNet 補助，研究山地混農林業模式，相關研究成果業提供行政院農業委員會林務局決策參考。我國若能積極引介國內研究單位機關，參與 APFNet 計畫或向 APFNet 提出計畫，更能增強我國林業研究之深度及廣度，有助於我國林業政策研擬之完整性。

綜上觀之，我國對於 APFNet 之參與強度及未來發展策略，依不同強度分析，倘欲採行弱度參與，應僅須維持基本的網絡互動即可，因為根據 APFNet 成員之開展程序所訂，會員不得連續 2 年未回應，否則會籍將會受到擱置；倘採中度參與，則可維持現行每年派員出席會議方式，以提升我國國際能見度、掌握國際林業脈動為目的；倘欲提升參與強度，建議於穩健參與會務後，積極的角逐董事席次，以發揮實質影響力；此外，提供秘書處工作人員、技術及資金贊助、主辦會議等亦是提高參與強度方法之一，惟其前提仍須先克服我國相關劣勢方得遂行。在此之前，由於目前 APEC 旗下之打擊非法採伐林木及其相關貿易專家小組(EGILAT)之部分計畫亦經由 APFNet 具體執行，因此建議仍宜掌握現有機會，維繫與 APFNet 的互動，創造跨國交流合作之機會，以提升我國國際地位，共同為亞太地區之森林生態與永續發展而努力。

(二)斯里蘭卡林業發展之啟發

以此次斯里蘭卡之行觀之，該地區經濟已擺脫未開發國家行列，人均 GDP 約為 3,990 美元（2016 年資料，我國為 23,827 美元，2017 年預測資料），產業以寶石出口和農業為主，主要農產出口如稻米、橡膠、椰子、咖啡等許多熱帶地區代表性的經濟作物；而該國最重要的出口產品是錫蘭紅茶，斯里蘭卡是世界三大產茶國之一，也因此國內經濟深受產茶情況的影響。斯里蘭卡的觀光資源也相當豐富，觀光業係為該國重要外匯收入來源，但自 2004 年印度洋大地震所引起的大海嘯以來，該國的海岸線被嚴重破壞，觀光業也因此受到了一定程度的衝擊，惟已逐漸重建恢復。

19 世紀以來，斯里蘭卡的大部分天然林源源遭到嚴重破壞，變為人工林地、農業用地、民居和輪墾地。近年由於人口日益增加和林地侵占現象日趨嚴重，天然林承受的壓力也越來越重，天然林覆蓋率將從 1993 年的 23.9% 降到 2020 年的 17% 左右。根據該國「林業總體規劃」，林業

發展趨勢為：生物多樣性保護、多用途林業、庭院林業及農用林業、商業林業、非木材林產品、人力資源開發、科學研究。其林業發展對策如下：

1. 將森林經營權轉交給當地居民、社團和私有部門。對當地居民進行培訓並與其簽訂長期租賃合同，使他們在國家資助下，永續經營其所管理之多用途森林。
2. 將森林劃分為嚴格保護林、允許非特殊利用的保護林、多用途林和農用林、人工林 4 類，並對其勘測、劃分並確定主要的受益者或經營者。同時，制定系統性計畫，為發展永續林業創造優勢條件，並符合「林業總體規劃」之目標。
3. 執行和監測各項計畫所需的各種支援系統之建置。這些系統包括：推廣、服務和財政等系統，實際面可能包含林業、教育及研究部門之組織改造。同時，森林保護（包括野生動物保護）重要性亦提高。
4. 為達成上述計畫目標，需要訂定新法規和制度，尤其特別關注生物多樣性保護、水土保持、租賃林業、私有林業、森林分類系統、林產品加工等方面的立法。

我國林業政策配合總統施政藍圖及「創新、就業與分配」等 3 項原則，以及「五加二」產業創新計畫之「新農業」之「建立農業新典範」、「建構農業安全體系」及「提升農業行銷能力」三大推動主軸及「推廣友善環境耕作」及「農業資源永續利用」重點政策，規劃「永續林業・生態臺灣」之施政願景，期兼顧「社會公平」、「經濟可行」與「環境保護」，符合永續發展目標，未來亦規劃制訂「林業政策白皮書」，期落實林業施政願景，使林業經營在顧及自然保育與國土保安前提下，合理並多元利用森林資源，以強化因應氣候變遷調適能力，維護自然生態，保育生物多樣性，回復森林生態系服務，達成環境永續利用，體現地球公民責任。

本次參訪 Kanneliya-Dediyagala-Nakiyadeniya（KDN）森林保護區，因具生物多樣性、水土涵養及對周邊社區經濟、歷史文化之價值，管理單位將該保護區區分為核心區（具生物多樣性及水源保護之高保育價

值)、及「生態系經營區」、「傳統利用」、「集約利用」及「文化」等 4 個子區，並制定和實施參與式管理辦法，透過生態系經營、生態旅遊、森林保護及監測、保育研究、承載量管制、社區參與式經營模式、自然旅遊、環境教育、永續財源機制等，經營管理保護區業務。其中，為能創造在地社區永續的經濟機會，管理單位執行「重建社區協調及動員機制」、「設計並建立社區參與程序」、「訓練社區成員發展創業及職業技能」、「提供社區成員啟業基金」及「提供社區成員微信用貸款設施」等措施建立參與式管理機制，及提高生計，部分措施應可做為我國未來發展保護區參與式管理之借鏡。

五、與會照片



照片 1. 會議開幕式



照片 2. 會議情形



照片 3. 我國與會代表



照片 4. 我國與會代表



照片 5. 我國與會代表合影



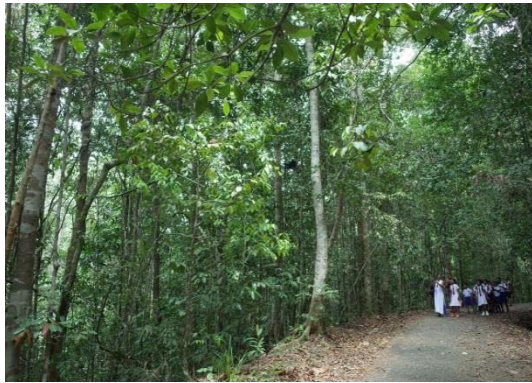
照片 6. 全體出席人員合影



照片 7. Kanneliya 保護區入口



照片 8. 於林間教室由斯國官員（中立白、紅衣者）進行簡報說明



照片 9. 保護區內昔日伐木林道已成為生態旅遊步道，林相亦已逐步回復



照片 10. 保護區內主要的餐飲及住宿設施，建材及設計含當地特色



照片 11. Kumburegoda 造林地



照片 12. 斯國官員解說 Kumburegoda 造林情形



照片 13. Kosgoda 海龜復育中心工作人員解說該國海龜資源及生態、收集海龜蛋、人工孵化等情形



照片 14. 工作人員解說海龜救傷、飼養及照護



照片 15. 搭船進入 Maduganga 紅樹林，觀察紅樹林生態



照片 16. Maduganga 紅樹林乘船入口處之解說看板

六、附錄

- (一) 出席 2017 年 APFNet 第三屆理事會相關會議簡要報告
- (二) 會議議程
- (三) 理事會代表及聯絡員名單
- (四) 2016 年工作及預算執行成果
- (五) 2017 年工作計畫及預算
- (六) 計畫成果分享
- (七) Kanneliya 保護區經營管理簡報
- (八) 理事會會議紀錄

附錄（一）、出席 APFNet Council 相關會議簡要報告

會議名稱 (含英文縮寫)	亞太森林復育與永續經營網絡第三屆理事會 (The Third Meeting of the APFNet Council)
會議時間	106 年 3 月 23 日 至 3 月 25 日
會議地點	斯里蘭卡 可倫坡市
出席會議者姓名、單位、職銜	林務局森林企劃組 技士 劉俊毅 林務局森林企劃組 專員 王怡平
聯絡電話、e-mail	技士 劉俊毅 m3100 @forest.gov.tw ; 02-23515441#613 專員 王怡平 ypwang@forest.gov.tw ; 02-23515441#618
會議討論要點及重要結論 (含主要會員體及我方發言要點)	<p>一、3 月 23 日/第 3 屆 APFNet 理事會議</p> <p>本次會議計有 23 個會員體派員出席，我方以「Chinese Taipei」座位名稱，位於斯里蘭卡及泰國之間，平等與會，未有矮化我方情事。根據 APFNet 理事會程序規則(Rules of Procedure of the Council)，理事會的職權範圍之一在於向 APFNet 董事會及秘書處提供建議，並校閱董事會及秘書處所作之處置，爰經會議討論，達成重要建議如下：</p> <p>(一) 由 APFNet 秘書長曲桂林先生報告 APFNet 2016 年會務成果，以及 2017 年工作計畫及預算。與會代表未有具體建議。</p> <p>(二) 重申 APFNet 四大核心目標(pillars)：政策對話，能力建設、示範項目與訊息共享及聯繫，並鼓勵董事會除將訊息傳達給秘書處外，同時能提供實質影響力，協助完成各項任務。例如，執行森林復育相關計畫時所需的能力評估，以及立法時各經濟體的政策差距。</p> <p>(三) APFNet 計畫成果分享分由緬甸報告「東南亞山區永續森林復育與管理先趨示範計畫」、中國報告「湄公河流域及馬來西亞森林覆蓋與碳地圖繪製計畫」及斯里蘭卡報告「加強松樹造林計畫」。</p> <p>(四) 理事會成員建議 APFNet 持續檢視合作夥伴。對某地區有利的戰略方式，並非侷限於 APFNet 和各經濟體。</p>

(五) 就支持會務及促進 APFNet 與成員間之聯繫，經討論後建議方案如下：

1. 加強經濟體間聯繫，向所有成員發送電子郵件，即時寄送會議文件，以提供更多關於計畫、活動等，讓理事會成員可以酌情參與。
2. 使用電子郵件作為主要聯繫方式，但未來將利用線上群組平台作為輔助，以促進資訊更新與橫向聯繫。
3. 組織工作小組會議，方便討論交流，吸取教訓和規劃未來做法。
4. 建議秘書處彙整各經濟體各能使用之社交媒體清單，以確定可行之聯繫管道。

(六) 會議同意大中亞五個成員國，作為下次會議之觀察員出席。

(七) 理事會決議支持 APFNet 建立有關森林立法和政策資料庫。

(八) 第四屆理事會適逢 APFNet 成立十週年，規劃擴大辦理，原則訂於 2018 年於中國舉行。

二、3 月 24-25 日/參訪行程

主辦單位安排 3 月 24 日參訪 Kanneliya 保護區，及 Kumburegoda 造林地考察斯里蘭卡森林經營；3 月 25 日參訪 Kosgoda 省內的海龜復育中心，及 Maduganga 紅樹林：

(一)、Kanneliya 保護區

1. Kanneliya 森林於 1940 年公告為保護區，於 2004 年結合周邊區域，擴大為 Kanneliya-Dediyagala-Nakiyadeniya (KDN) 森林保護區，總面積約 10,918 公頃。
2. 該區域於 1970 至 1988 年進行伐木事業，斯里蘭卡天然林禁伐後，Kanneliya 於 2003 年開放生態旅遊。
3. 該保護區因具生物多樣性、水土涵養及對周邊社區經濟、歷史文化之價值，管理單位透過生態系經營、生態旅遊、森林保護及監測、保育研究、承載量管制、社區參與式經營模式、環境教育、永續財源機制等，經營管理保護區業務。

	<p>(二)、Kumburegoda 造林地</p> <p>該區為火災跡地復育造林，土壤為紅土及黏土為主，爰混植原生速生樹種進行復育。</p> <p>(三)、海龜復育中心</p> <p>斯里蘭卡已全面禁止捕殺利用海龜，因龜卵及剛孵化之小海龜易受攻擊，成活率極低，為保護海龜，當地人巡視海灘一旦發現海龜產卵，遂將其整窩帶回復育中心孵化，並餵養小海龜至殼變硬後野放。復育中心也收容受傷或疾病的海龜。其財源為參觀門票及捐款收入。</p>
後續辦理事項	建請注意後續完整會議紀錄之傳閱確認。

Third Meeting of the APFNet Council

23 March 2017 Colombo, Sri Lanka

Provisional Agenda**Agenda item 1** Opening of the meeting

The Chair, Dr. Preecha Ongprasert (Thailand), and Vice-chair, Mme. Magdalene Maihua (Papua New Guinea) will open the meeting.

[Document: APFNet/Council/ENG/2017/INFO/01]

Agenda item 2 Adoption of agenda

The provisional agenda [APFNet/Council/ENG/2017/01] was circulated to the Council and Board of Directors in December 2016 and no proposed revisions were submitted. In this version (V1), the Secretariat proposes a slight re-ordering of items and added a number of items requiring Council attention under “other matters”.

The Council will be invited to raise additional matters it may wish to discuss and, if consensus is reached, they will be included. Members will then be asked to adopt the agenda.

[Document: APFNet/Council/ENG/2017/01-V1,
APFNet/Council/ENG/2017/INFO/02]

Agenda item 3 Review of Council’s Work in 2016

The Chair will orally brief members on Council’s engagement in APFNet activities in 2016 and provide an update of representatives and contact persons.

The Council will be invited to note the status.

[Document: APFNet/Council/ENG/2017/INFO/03]

Agenda item 4 Report of Executive Director 2016

The Executive Director will report on APFNet activities and financial status in 2016 and the Council will be invited to take note of the report.

[Document: APFNet Annual Report 2016]

Agenda item 5 APFNet Work Plan and Implementation

(1) Implementation of work plan 2016

The Council will receive and take note of the implementation of APFNet’s Work Plan and of its financial status as of the end of 2016.

[Document: APFNet/Council/ENG/2017/02, APFNet/Council/ENG/2017/03]

(2) Work plan and budget 2017

The Council will receive and consider the proposed APFNet Work Plan and Budget for 2017 and will provide recommendations to the Board when Directors discuss its adoption.

[Document: APFNet/Council/ENG/2017/04, APFNet/Council/ENG/2017/05]

Agenda item 6 Rehabilitating Degraded Forests and Increasing Forest Cover

Representatives of project implementation agencies will present outcomes and impacts of 3 projects (2 closed and 1 newly approved) in the context of APFNet Strategic Plan 2016-2020 that identifies “Rehabilitating Degraded Forests and Increasing Forest Cover” as one of three priorities.

The Council will be invited to take note of the presentations and will be invited to comment and discuss with presenters.

- (1) Sustainable Forest Rehabilitation and Management for the Conservation of Trans-boundary Ecological Security in Montane Mainland Southeast Asia – Pilot Demonstration Project of Lao PDR, Myanmar and China/Yunnan
- (2) Forest Cover and Carbon Mapping in the Greater Mekong Subregion and Malaysia
- (3) Enrichment of Pine Plantations in Sri Lanka with native species
[Document: APFNet/Council/ENG/2017/INFO/04]

Agenda item 7 Council Consultation

APFNet’s Senior Consultant will facilitate consultations, inviting Council to discuss ways to better engage in and support APFNet.

- (1) Enhance APFNet communications with its members
- (2) Enhance engagement in APFNet’s work under capacity building, such as project implementation, and suggest ways to improve Council operations, including the organization of its meetings.

Agenda item 8 Dates and venue for next meeting

The Council will be invited to consider the offer(s) from any interested member economy or economies and the secretariat.

Agenda item 9 Other matters

Following matters will be briefly introduced by the secretariat for Council’s information.

- (1) APFNet 10th Anniversary
Launched in September 2008, APFNet will celebrate its 10th anniversary in 2018.
- (2) Greater Central Asia observers in Council meetings
Secretariat requests the Council to grant observer status to representatives of Great Central Asia economies to attend Council meetings.
- (3) APFNet regional database of forest legislation and policy
APFNet seeks the support of member economies in providing an update of their laws, policies, master plans and priorities for development of the forest sector.

The Council will be invited to discuss any other matters it added to the agenda prior to its adoption.

Agenda item 10 Adoption of decisions and recommendations

The Council will be invited to adopt its proposed decisions and recommendations to the Board which the Chair will orally report at the Board's upcoming meeting.
[Document: APFNet/Council/ENG/2017/06]

Agenda item 11 Closure of the meeting

The Chair and Vice-chair will close the meeting.

The Third Meetings of the APFNet Council and Board of Directors

23-26 March 2017- Colombo Sri Lanka

Field Visit- 24-25 March

24 March 2017	
08:00	Checkout and proceed to Galle
11:00	Arrive Kanneliya Reserved Forest
11:00 -11:30	Tea
11:30 -12:00	Forest Management Experience sharing discussion Divisional Forest Officer, Galle
12:00-12:30	Excursion in Kanneliya Forest
12:30-13:00	Tree Planting programme
13:00-14:00	Lunch
14:00-15:30	Forest Restoration - Kumburegoda
15:30	Proceed to Hikkaduwa
16:30	Hikkaduwa Citrus Beach Hotel
19:00	Dinner
25 March 2017	
08:00	Check out and proceed to Maduganga
08:30 -10:00	Visit Mangrove Ecosystems in Madu Ganga – Including a boat ride)
10:00-12:00	Visit Turtle Hatchery – Kosgoda
12:30-13:30	Lunch – Light House
13:30-15:30	Galle City Tour
15:30-17:30	Proceed to Colombo a
17:30	Check in - Cinnamon Lakeside Hotel
18:30	Dinner

List of Council Representatives and Contact Persons

(as of March 2017)



Member Economies	Council Representative	Contact Person(s)
Australia [AU]	Ms. Michelle Lauder Assistant Secretary Forestry Branch Department of Agriculture and Water Resources	Ms. Emma Hatcher Director International Forest Policy Section, Forestry Branch Department of Agriculture and Water Resources
		Ms. Tarita Clark Assistant Director International Forest Policy Forestry Branch, Agricultural Adaptation and Forestry Division Department of Agriculture
Bangladesh [BD]	Absent	Mr. IMRAN AHMED Divisional Forest Officer Rajshahi Bangladesh Forest Department
Brunei Darussalam [BN]	Mr. Haji Saidin bin Salleh Director of Forestry Ministry of Industry and Primary Resources	Mr. Shahri Hussin Forestry Department Ministry of Industry and Primary Resources
		Mr. Mardani Haji Mahadi Forestry Department Ministry of Industry and Primary Resources
Cambodia [KH]	Dr. Sokh Heng Director Institute of Forest and Wildlife Research and Development, Forestry Administration Ministry of Agriculture, Forestry and Fisheries	Mr. Seab Kimsrim Official Institute of Forest Research and Development, Forestry Administration Ministry of Agriculture, Forestry and Fisheries
Canada [CA]	Mr. Robert Jones Director Trade and International Affairs, Natural Resources Canada-Canadian Forest Service	Ms. Virginie-Mai Ho Policy Analyst International Affairs, Natural Resources Canada-Canadian Forest Service

P.R. China [CN]	Mdm. ZHANG Hongyan Director General Department of International Cooperation, State Forestry Administration	Mr. ZHANG Zhongtian Director Multilateral Cooperation Department of International Cooperation, State Forestry Administration
		Ms. LIAO Jing Officer Multilateral Cooperation Department of International Cooperation, State Forestry Administration
Fiji [FJ]	Mrs. Sanjana Lal Director Corporate Services & Planning Ministry of Fisheries and Forests	Mr. Manasa Luvunakoro Acting Principal Forestry Officer Training and Education Division Ministry of Fisheries and Forests
Hong Kong, China [HK]	Mr. LAI, Chuen Chi Patrick Assistant Director (Parks) Agriculture, Fisheries and Conservation Department	Mr. HUNG Tun Hei, Tony Forestry Officer Agriculture, Fisheries and Conservation Department
India [IN]	Dr. Ranjana Gupta Chief Conservator of Forests (Wetlands) Ministry of Environment & Forests, Government of India	
Indonesia [ID]	Absent	Dr. Ir. Muhammad. Tangkas Deputy Director of Programme and Cooperation Extension and Human Resources Development Agency Ministry of Environment and Forestry
		Dr. Ir. Iwan Setiawan Assistant Deputy Director Ministry of Environment and Forestry
Lao PDR [LA]	Mr. Savanh Chanthakoumane Head of REDD Office, Department of Forestry Ministry of Agriculture and Forestry	
Malaysia [MY]	Dr. Megat Sany bin Megat Ahmad Supian Undersecretary Biodiversity and Forestry Management Division, Ministry of Natural Resources and Environment	Ms. Chitra Subramaniam Principal Assistant Secretary Biodiversity and Forestry Management Division, Ministry of Natural Resources and Environment

	<p>Dato' Sri Dr. Hj. Abd. Rahman bin Hj. Abd. Rahim Director General Forest Department Peninsular Malaysia</p>	
Mexico [MX]	<p>Mr. Francisco Quiroz-Acosta Head of the International Affairs and Financing Development Unit National Forestry Commission (CONAFOR)</p>	<p>Mr. Ing. José Armando Alanís de la Rosa Director International Cooperation and Multilateral Agreement, National Forest Commission (CONAFOR)</p>
Mongolia [MN]	<p>Mrs. TUNGALAG Majig Director General Forestry Policy and Coordination Department Ministry of Environment, Green Development and Tourism of Mongolia</p>	<p>Mr. BAATARBILEG Nachin Dean of the School of Engineering and Applied Sciences of the National University of Mongolia</p>
	<p>Ms. Enkhjargal Damia Officer Forest policy and coordination department Ministry of Environment, Green Development and Tourism of Mongolia</p>	
Myanmar [MM]	<p>Dr. Nyi Nyi Kyaw Director General Forest Department Ministry of Natural Resources and Environmental Conservation</p>	<p>Dr. Thaung Naing Oo Director Forest Research Institute Forest Department Ministry of Natural Resources and Environmental Conservation</p>
	<p>Mr. Tint Swe Director Training and Research Development Division, Forest Department Ministry of Natural Resources and Environmental Conservation</p>	<p>Dr. Ei Ei Swe Hlaing Staff Officer Forest Research Institute Forest Department Ministry of Natural Resources and Environmental Conservation</p>
Nepal [NP]	<p>Mr. Dhananjaya Poudel Chief of Foreign Aid Coordination Division Ministry of Forests and Soil Conservation</p>	Absent
New Zealand [NZ]	<p>Ms. Meredith Stokdijk Manager International Environment Ministry for Primary Industries</p>	

Papua New Guinea [PG]	Dr. Ruth Turia Director Forest Policy and Planning National Forest Service PNG Forest Authority	Mr. Tunou Sabuin Director Forest Development PNG Forest Authority
Peru [PE]	Mr. John Leigh Executive Director National Forest and Wildlife Service (SERFOR) Ministry of Agriculture and Irrigation	Eng. Sara Yalle Director Sustainable Management of the Forest Heritage, General Directorate of Forestry Heritage and Wildlife (SERFOR) Ministry of Agriculture and Irrigation
		Eng. Carolina Vidal Specialist Forest and Wildlife Sustainable and Heritage General Management, National Forest and Wildlife Service(SERFOR) Ministry of Agriculture and Irrigation
		Eng. Americo Lopez Forestry Specialist National Forest and Wildlife Service(SERFOR) Ministry of Agriculture and Irrigation
the Philippines [PH]	Mr. Ricardo L. Calderon, CESO III Director Forest Management Bureau Department of Environment and Natural Resources	Ms. Mayumi Quintos-Natividad OIC, Assistant Director Forest Management Bureau, Department of Environment and Natural Resources
Singapore [SG]	Dr. Adrian Loo Hock Ben Director Terrestrial Branch National Biodiversity Centre Division	Mr. LUA Hock Keong Manager Terrestrial Branch National Biodiversity Centre Division
Sri Lanka [LK]	Mr. Wasantha Dissanayake Additional Secretary Environment Policy & Planning Ministry of Mahaweli Development and Environment	Mr. Nishantha Edirisinghe Deputy Conservator of Forests (Silviculture & Forest Management) of the Forest Department
Chinese Taipei [CT]	Mr. Frank Lin, Wha-Ching Director-General Forestry Bureau Council of Agriculture	Ms. Ya Hui LIN Specialist Forestry Bureau Forest Planning Division Council of Agriculture
Thailand [TH]	Mr. Suchat Kalyawongsa Director	Dr. Preecha Ongprasert Director

	Forest Research and Development Bureau, Royal Forest Department	International Convention and Commitment Division, International Forestry Cooperation Office, Royal Forest Department
United States of America [US]	Ms. Catherine J Karr-Colque Division Chief, Forests Office of Conservation and Water Bureau of Oceans and International Environmental and Scientific Affairs U.S. Department of State	Ms. Cynthia Mackie Science and Technology Advisor International Programs Office of the Chief USDA Forest Service
Viet Nam [VN]	Dr. Nat.techn. Sc. NGUYEN PHU HUNG Director of Science Technology and International Cooperation/VNFOREST Ministry of Agricultural and Rural Development (MARD) Director of UNCCD Office in Vietnam REDD National Focal Point	Mr. Luu Tien Dat Official Department of Science, Technology and International Cooperation Viet Nam Administration of Forestry Ministry of Agricultural and Rural Development
Member Organizations	Council Representative	Contact Person(s)
Food and Agriculture Organization of the United Nations - Regional Office for Asia and the Pacific (FAO/RAP)	Mr. Patrick Durst Senior Forestry Officer	
International Tropical Timber Organization (ITTO)	Dr. Steven Johnson Officer-in-charge	Mr. Li Qiang Market/Systems Analyst
RECOFTC – The Center for People and Forests	Dr. David Ganz Executive Director	Ms. Pimparkarn Serithammarak Partnership Officer
Secretariat of the Pacific Community (SPC)	Mr. Sairusi Bulai Deputy Director Land Resources Division (Sustainable Resources Management Programme)	
The Nature Conservancy (TNC)	Ms. Allison Lewin Manager Responsible Asia Forestry and Trade (RAFT) Program	

Third Meeting of the APFNet Council

23-26 March, 2017 Colombo, Sri Lanka

Change of APFNet Council Representatives and Contact Persons

Jan. 2016-Feb. 2017, CR: Council Representative CP: Contact Person

APFNet members	Departures	Arrivals
Bangladesh	CR: Mr. Yunus Ali(Feb.2017)	Absent
	CP: Tariqul Islam (Dec.2016)	CP: Mr IMRAN AHMED (Dec.2016)
Canada	CR: Mr. Peter Besseau (Dec. 2016)	CR: Mr Robert Jones (Dec. 2016)
P.R. China	CR: Mr. SU Chunyu (Dec. 2016)	CR: Ms. ZHANG Hongyan (Dec. 2016)
Fiji		CP: Mr. Manasa Luvunakoro (Feb. 2016)
H.K., China	CR: Mr. SHAM Chun Hung (Jan. 2016)	CR: Mr. LAI Chuen Chi(Jan 2016)
	CP: Dr. Samuel LAM (Jan. 2017)	CP: Mr. Tony HUNG (Jan. 2017)
Indonesia	CR: Ms. Sri Murniningtyas (Jan. 2016)	CR: Dr. Ir. Bambang Soepijanto (Jan. 2016)
	CR: Dr. Ir. Bambang Soepijanto (Feb. 2017)	Absent
	CP: Mr. Sahala Simanjuntak (Jan 2016)	CP: Mr. Noviar Anggaran (Jan 2016)
	CP: Mr. Noviar Anggaran (Jan 2017)	CP: Mr. M. Tangkas and Mr. Iwan Setiawan(Jan 2017)
Mongolia	CR: Mr. BANZRAGCH Tsesed (Mar 2016)	CR: Mrs. TUNGALAG Majig (Mar 2016)
	CP: Mr. BADARCH Ochirsukh (Mar 2016)	CP: Mr. BAATARBILEG Nachin(Mar 2016)
Nepal	CR: Mr. Bishwa Nath Oli (Apr. 2016)	CR: Mr. Resham Dangi(Apr. 2016)
	CP: Mr. Ishwari Poudel (Aug. 2016)	CP: Mr. Sagar Rimal(Aug. 2016)
Singapore	CR: Dr Geoffrey DAVISON (Feb.2017)	CR: Dr Adrian Loo Hock Beng (Feb.2017)
Chinese Taipei	CR: Mr. Tao Sheng LEE (Aug. 2016)	CR: Mr. Frank Lin, Wha-Ching (Aug. 2016)
USA	CP: Mr. Luke D. Thompson (Jan. 2017)	CP: Ms. Cynthia Mackie, Ph.D. (Jan. 2017)
ITTO	CP: Mr. Ze Meka (Feb. 2016)	CP: Dr. Steven Johnson(Feb. 2016)
RECOFTC	CP: Dr. Tint Lwin Thaung (Sep. 2016)	CP: Dr David Ganz (Feb. 2017)



Asia-Pacific Network for
Sustainable Forest Management
and Rehabilitation

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APFNet

ANNUAL REPORT · 2016



APFNet Strategy 2016–2020

The Asia-Pacific Network for Sustainable Forest Management and Rehabilitation (APFNet) is an international organization dedicated to advancing sustainable forest management and rehabilitation in the Asia-Pacific region. APFNet was formally launched in 2008 under the Asia-Pacific Economic Cooperation (APEC), and entered its ninth year of operations in 2017.

• Mission •

APFNet is committed to helping the economies and people of the Asia-Pacific region by promoting and improving sustainable forest management and rehabilitation.

• Objectives •

APFNet's actions aim to:

- Contribute to the achievement of APEC's aspirational goal of increasing forest cover by at least 20 million hectares of all types of forests by 2020;
- Help to enhance forest carbon stocks and improve forest quality and productivity by promoting rehabilitation of existing but degraded forests, and reforestation and afforestation of suitable cleared lands in the region;
- Help to reduce forest loss and degradation and the associated greenhouse gas emissions by strengthening sustainable forest management and enhancing biodiversity conservation; and
- Help to increase the socio-economic benefits of forests in the region.

• Values •

APFNet implements all work in accordance with the following core values:

- Respect for differences
- Action-oriented
- Creative and innovative thinking

• Principles •

APFNet's actions are governed by a set of core principles that ensure that its activities are open to the scrutiny and participation of and guidance from all key stakeholders, that they foster cooperation and avoid duplication, and that they are targeted to the specific needs of each beneficiary:

- Openness and Participation
- Complementarity
- Beneficiary Focused

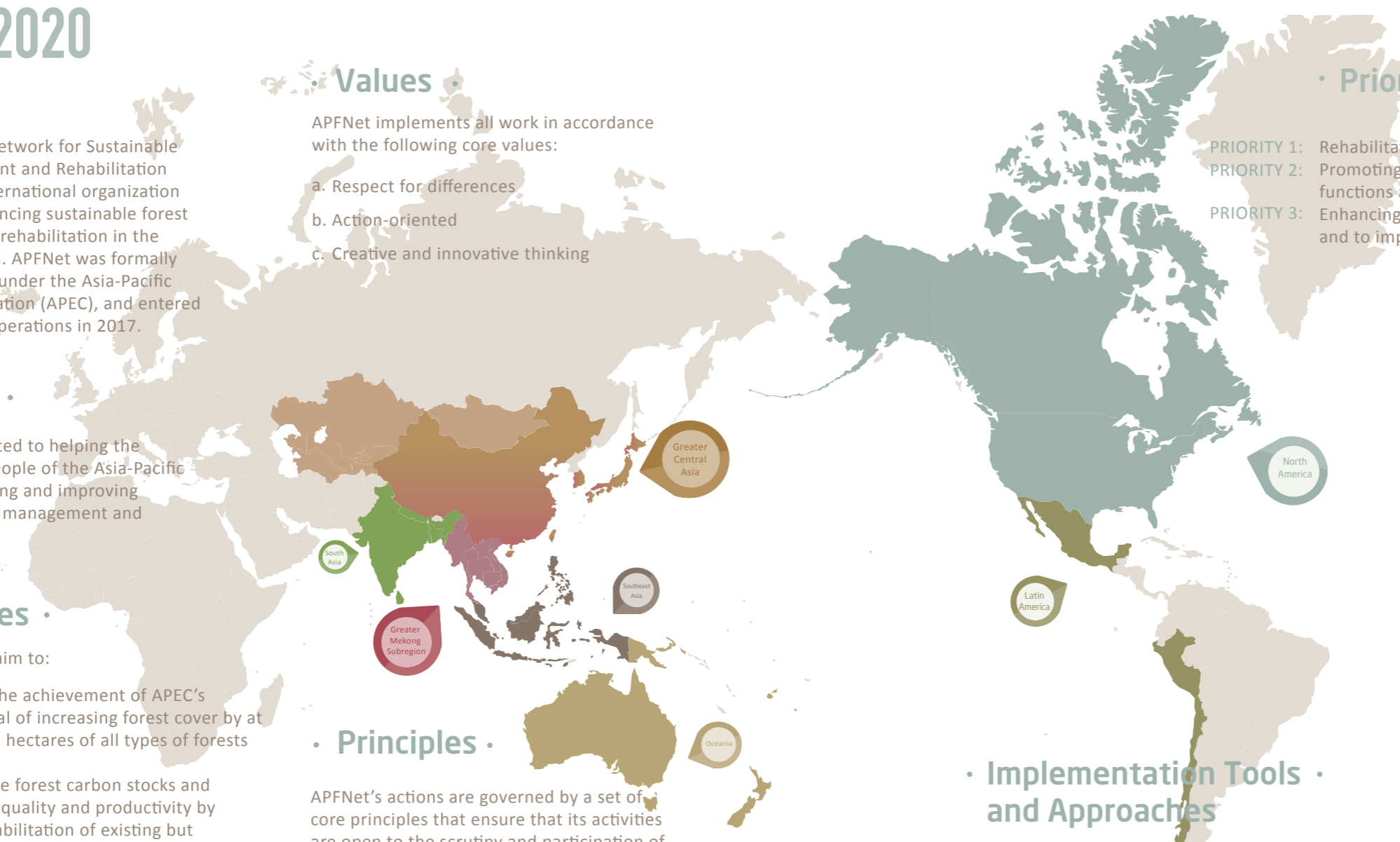
• Priorities •

- PRIORITY 1: Rehabilitating degraded forests and increasing forest cover.
 PRIORITY 2: Promoting sustainable forest management to enhance ecological functions and ecosystem security of forests.
 PRIORITY 3: Enhancing forests' contribution to socio-economic development and to improvement of local livelihoods.

• Implementation Tools and Approaches •

APFNet's activities are sub-divided into the following four interlinked key pillars :

- Capacity Building
- Demonstration Projects
- Supporting Regional Policy Dialogues
- Communication and Information Sharing



APFNet in 2016



15 active projects receiving
 US\$ 2.25 million
 in APFNet funding in 2016



Scholarship students
 + 17
 = 74



Trainees of training workshops and study tours
 + 68
 = 351



Strategic partnerships
 + 2
 = 11

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Message from the Executive Director



2016 - What a year it's been!

Last year we described APFNet's development akin to the sprouting of leaves on a small seedling. Well this year, we continued to grow taller and reached greater heights with the official establishment of the APFNet Strategic Plan for 2016 to 2020.

The official release of the 2016-2020 Strategic Plan marked a significant step forward in APFNet's development. It was a near two-year effort from the APFNet team that builds upon our work to-date, drawing on important lessons learned since our launch in 2008. Extensive feedback was collected from our many project executing agencies, stakeholders and experts to shape and refine the plan.

The Strategic Plan provides a framework for APFNet's activities under three priority areas: 1) rehabilitating degraded forests and increasing forest cover, 2) promoting sustainable forest management to enhance the ecological functions and ecosystem security of forests, and 3) enhancing the contribution of forests to socio-economic development and the improvement of local livelihoods. We chose these areas because we believe that supporting forest ecosystems and local socio-economic development are some of the most important ways to achieve sustainable forest management and rehabilitation in the region.

Besides the new Strategic Plan, this year we also intensified efforts in promoting high level forestry commitment in the Greater Central Asia region. The APFNet-organized *First Meeting of Ministers Responsible for Forestry in Greater Central Asia* was the first of its kind, and we are proud to be able to engage forestry ministers in collaborating on common issues and laying the groundwork for subsequent cooperation. In 2016, we also continued to make great strides in

our work focusing on protecting and prioritizing the ecological functions of forests in Asia and the Pacific. Our project in northern Lao PDR demonstrates how valuable technology can be in safeguarding forests and promoting cross-border sustainable forest management. Cooperation is therefore key to addressing such issues and this is also why we prioritize projects that involve collaboration among multiple economies.

Helping meet the changing socio-economic and environmental needs of the region has always been a central aspect of APFNet's work. In 2016 we placed emphasis on improving local livelihoods by promoting ecotourism in Thailand and by empowering women and marginalized households through forestry entrepreneurship in Nepal. Education is a vital component of this work, which is also reflected in the development of a range of new programs and initiatives including the Trainers in Forestry Network, the Early Career Academics Program and the Asia-Pacific Forestry Education Coordination Mechanism.

APFNet is continuously developing. Our operating procedures and practices were formalized this year with the adoption of new regulations by the Board, and in 2017 we will work closely with local communities, project partners and other organizations to make sure that we continue to contribute where we are needed most. We extend our gratitude to our donors, members, executing agencies, partners and experts, without whom we would not be able to have such a positive and wide-ranging impact across Asia and the Pacific.

I hope you enjoy reading about our activities this year as much as we enjoyed implementing them!

Qu Guilin

Promoting Government Commitment To Forest Restoration In Greater Central Asia



Ministers responsible for forestry in Greater Central Asia gathered for the first time in Astana, the capital city of Kazakhstan from 30 to 31 May, 2016 at the APFNet organized *First Meeting of Ministers Responsible for Forestry in Greater Central Asia*. The meeting aimed to strengthen the commitment of governments in the region to forestry and promote joint forestry development. The meeting resulted in adoption of the “Astana Declaration”.

The Declaration recognizes the important contribution of sustainable development and management of forests to social, economic and environmental development in the region. It also emphasizes the need for closer regional cooperation in the conservation, protection and reproduction of forests, and the mitigation of negative impacts of climate change, desertification and land degradation.

The Declaration agrees that all signatories will work together to increase forest cover in the region and will strengthen their cooperation through a range of activities. The following priorities were identified during the plenary discussion:

- Preventing and reducing cross-border forest fires and forest pests and diseases
- Combating forest land degradation and desertification
- Promoting development of a regional forest monitoring system
- Promoting biological methods for forest protection
- Promoting development of sustainable forest plantations in desert areas
- Conservation and utilization of forest genetic resources
- Promoting development of methodologies for assessing the value of forest ecosystem services
- Promoting capacity building and training of forestry specialists



Ministers took part in a tree-planting ceremony as part of the meeting.

APFNet Thematic Training Program

The Thematic Training Program enables forestry policy makers and practitioners to update their knowledge and cultivate their strategic thinking in different thematic areas consistent with APFNet’s strategic priorities.

Training course on degraded land rehabilitation for senior officials, 20-30 July

Five officials from Kazakhstan, Tajikistan and Uzbekistan were invited to the training. The training was centered on strategic planning and policy development, focusing on combating desertification and best practices in vegetation rehabilitation of seriously degraded land. The experiences and achievements covered in the training provided participants with an understanding of the methodologies and options that are available to them in their respective economies.

Fostering Forestry Investment In Asia And The Pacific Region

At Asia-Pacific Forestry Week in Clark Freeport Zone, Pampanga, Philippines, held from 22 to 26 February 2016, APFNet took the lead to facilitate *Stream 5: Our Green Future - Green Investment and Growing Our Natural Assets*. Perspectives and experiences on forestry investment opportunities, barriers and solutions were exchanged.

With the rise of the Asia and the Pacific region as a hotspot for forest product demand, investors have become increasingly interested in forest market opportunities that are not only profitable but also socially and environmentally responsible. However, challenges remain for policymakers to establish reliable legal systems and stable investment environments to sustain investments in the forestry sector.

An Interactive Workshop on Mobilizing Investments in Asia-Pacific Forests was organized to better understand forestry investments and share case studies on overcoming forestry investment challenges.

The diversity of views, experiences and recommendations from the stream culminated in one stream recommendation: “Facilitating cross-sectoral dialogue and partnerships among policymakers, financiers and other stakeholders in the public and private sectors, with a view to creating an enabling policy environment for green investments in forests and other natural assets in the Asia-Pacific region.”

APFNet also proposed potential initial actions such as conducting a cross-sectoral multi-stakeholder workshop to build knowledge and relationships on green investment, and supporting governments to seek enabling investments from mechanisms such as the Green Climate Fund and the Global Environment Facility.

APFNet Thematic Training Program

Workshop on Forest Rehabilitation and Management in Kunming, China from 5 to 18 July

This training engaged approximately 20 participants from the region to enhance their knowledge and skills in implementing forest rehabilitation programs. It provided a comprehensive coverage of the state of forest rehabilitation in the Asia and the Pacific region, and covered core aspects of designing rehabilitation programs including the drivers of forest degradation, policy and institutions, governance, ecology, landscape approaches, social dimensions, climate change issues and forest economics.



Distinguishing between rehabilitation approaches according to local needs was emphasized at the workshop.



Participants visited local rehabilitation sites to witness experiences in China.

Planned Projects For 2017

The APFNet call for proposals was launched in February 2016. A total of 31 project concept notes (22 regular projects and nine small projects)¹, were collected from 13 economies, covering the priority fields of the rehabilitation of degraded forest land, community forestry and rural development, biodiversity conservation, climate change and forestry education. Through a thorough review by the Project Appraisal Panel, eight projects were selected as potential projects to receive funding from APFNet in 2017. Planned projects for 2017 are detailed in the table below.

<i>Project Name</i>	<i>Executing Agency</i>	<i>Project Type</i>	<i>Target economy(ies)</i>
Community Tree Planting Project	Voice of Yongos	Demonstration project	Papua New Guinea
Enhancing ecosystem services from rehabilitated forests, using the Policy Learning Protocol and the Pathway Influence Framework	Kyoto University	Policy development project	P.R. China; Laos PDR
Phase II of Innovative Sustainable Forest Management Education in the Asia-Pacific Region	Faculty of Forestry, University of British Columbia	Capacity building project	Asia-Pacific region
Enrichment of Pine Plantations in Sri Lanka with native species	Forest Department, Sri Lanka	Forest Department, Sri Lanka	Sri Lanka

<i>Project Name</i>	<i>Executing Agency</i>	<i>Project Type</i>	<i>Target economy(ies)</i>
Integrated planning and practices for mangrove management associated with agriculture and aquaculture in Myanmar	The University Queensland	Demonstration and pilot project	Myanmar
Reconstruction and sustainable management of degraded forest based on the combination of inter-planting nitrogen fixation rare tree species and thinning	Institute of Forest Ecology, Environment and Protection, Chinese Academy of Forestry	Demonstration project	Cambodia
Demonstration on Sustainable Forest Management and Restoration in Hilly Areas of Southern China	Research Institute of Forestry, Chinese Academy of Forestry	Demonstration project	Anhui Province and Zhejiang Province, China
Development Participatory Management of Micro Catchment at The Bengawan Solo Upper Watershed	Watershed Management Technology Center	Demonstration project	Wonogiri and Karanganyar Districts, Central Java Province, Indonesia

¹Regular projects - concept notes and proposals that request a grant of more than US\$ 100 000. Small projects - concept notes and proposals that request a grant of less than US\$ 100 000.

Reducing the risk of forest fires

Lao PDR is strongly dependent on forestry, with forests providing the economic base for rural communities. Lao PDR lost approximately 1.6 million hectares of tree cover from 2001-2014. One of the main drivers of deforestation and forest degradation in Laos is natural and human-induced fires.

Sustainable Forest Management in the Northern Provinces of Lao PDR

The project built two forest fire monitoring towers, one in the Xishuangbanna National Natural Reserve in China and the other in the Nam Ha National Protected Area of Lao PDR. The towers can be left unattended to monitor in real-time throughout the day. The system's precision turntable – the "forest eye" - can cover a radius of 15 km within 30 minutes and has a target positioning accuracy within 100 meters.

The system is the first of its kind in Laos and has great potential to significantly improve forest fire monitoring and prevention, securing strong buy-in from the local government as a result.

Forest land use planning at the district and village levels in northern Lao PDR has been initiated, with forest restoration and rehabilitation under way. Personnel exchange and consultation have also taken place to help address the issues of trans-boundary biodiversity conservation along the border areas between China and Lao PDR.

Launched in 2014

Objectives

1. To explore, test and demonstrate effective approaches on forest restoration, forest management and response mechanisms to generate a sustainable flow of benefits to closely related stakeholders;
2. To strengthen forest law enforcement and promote cooperation on trans-boundary biodiversity conservation; and
3. To share information and knowledge of best practices on forest restoration and rehabilitation.

Expected outcomes

1. Forest land use plans at district and village levels;
2. Demonstration of best practices and approaches for forest restoration and rehabilitation;
3. Improvement of forest inspection systems;
4. Enhanced cooperation on trans-boundary biodiversity conservation; and
5. Improved capacity of forest staff and communities.



Forest fire monitoring tower



Forest eye

Exploring watershed management approaches

Miyun Reservoir is situated in Miyun District, a mountainous area in northeast Beijing, and is the largest of its kind in north China. The reservoir is the primary source of drinking water for Beijing's residents, providing more than 60% of the capital's surface drinking water. Available water per capita in Beijing is 150 cubic meters, much lower than the internationally acknowledged water scarcity line of 1,000 cubic meters per capita. Ensuring the long-term sustainable management of the Miyun Reservoir Watershed is therefore a high priority for the local government.

Rehabilitation and Management of Degraded Forests in Miyun Reservoir Watershed, Beijing

After one and a half years, the project has successfully transformed the 148.93 ha monoculture forest. Thinning and interplanting native species in the even-aged monoculture plantations of the project site have improved the forest's hydrological capabilities, and purified drinking water while increasing soil water retention capacity.

The project's ecotourism activities built an 8 km footpath and conducted training sessions on forest therapy, presentations on farming culture, and outdoor activities such as camping, BBQs and trekking. The low-carbon ecotourism plan is improving local livelihoods while meeting the increasing desire of urban residents for accessible outdoor recreation. In the future, capacity building activities on ecotourism will take place and a marketing plan will be developed.



Seedlings are planted as part of the transformation of the watershed.



Green trail built as part of the project's ecotourism activities.

Launched in 2015

Objectives

1. To improve the water conservation capacity of the forests in three sites of the project by applying a close-to-nature management approach;
2. To reduce water pollution caused by fertilizer application in the selected orchards;
3. To improve the livelihood of the selected local community by promoting the development of forest recreation;
4. To enhance the capacity of relevant stakeholders in forest management in an environment-friendly manner; and
5. To produce best practice models for a better long-term forest management in the watershed.

Expected outputs

1. The water conservation capacity of the forests in demonstration sites is improved;
2. Best management models can be produced to contribute to finding solutions to the conflict between forest protection for water conservation and rural development;
3. The livelihood of the local community is improved by promoting eco-tourism; and the
4. Capacity of relevant stakeholders in managing forest and eco-tourism is improved.

Strengthening forest management planning capacity

Forests and trees play a significant economic, social and environmental role in the lives of Pacific Islanders. The major challenge in this region is to ensure the sustainable management of scarce and diminishing forests. Many of the forest resources on Pacific Islands such as Fiji, Tonga and Niue have been depleted through agricultural clearing and unsustainable harvesting. This requires urgent attention in the form of better standards and practices and effective enforcement to minimize negative impacts to forests and the surrounding environment.

Launched in 2015

Objectives

1. To enhance the capacity for sustainable forest management in Fiji, Tonga and Niue.

Expected outputs

1. National forest management plans for Tonga and Niue;
2. Strategies and mechanisms for implementing forest management plans, including codes of forest practices in Tonga, Fiji and Niue; and
3. Mechanisms for monitoring and reporting on the implementation of the forest management plans and codes of forest practices in Tonga, Fiji and Niue.



Capacity Building towards Effective Implementation of Sustainable Forest Management Practices in Fiji, Tonga and Niue

Under the project, the national forest management plan for Tonga has been drafted through a consultation workshop held in September 2016, and is currently being approved. The forest management plan for Niue has been approved by its Cabinet and is scheduled for printing. Workshops and training programmes for forest management plans and codes of forest practices in the three economies will be conducted in the next stage of the project.

“We live off the forests; they sustain us with food and our culture, we have been concentrating on timber but we need to ensure that the birds and coconut crabs and other biodiversity are sustained into the future.”

— the Hon. Billy Talagi, Niue Minister for Forests, at the national workshop for the Capacity building towards effective implementation of sustainable forest management practices in Fiji, Tonga and Niue project.

Asia-Pacific Forestry Planning Network (FPN)

APFNet, extensively consulting with member economies, developed the concept of the Asia-Pacific Forestry Planning Network (FPN), which aims to strengthen economy-level forestry planning processes in the region. These developments were based on the outcomes of two forestry strategic planning workshops in New Zealand in November 2013 and Cambodia in December 2014.

Improving the social benefits of forests

At just over 7 percent of its territory, Mongolia has relatively low forest cover and is facing environmental problems such as drought, forest and watershed degradation, desertification and air pollution. The city of Ulaanbaatar has low forest cover and a very sensitive ecosystem. In 2009, the City Governor of Ulaanbaatar made a resolution to develop the National Garden Park in Ulaanbaatar City, aiming to preserve the watershed area and provide a natural green area for citizens.



Construction of a mini botanic park in the National Park of Mongolia

The mini 8.4 ha botanic park was built within the National Garden Park in Ulaanbaatar and was officially opened to the public on 27 October 2016.



“This project will definitely assist Mongolia in improving the forest landscape of Ulaanbaatar city and raising public awareness of ecological conservation in Mongolia.”

— Ms. D. Ouynkhorol, Minister of Minister of the Ministry of Environment and Tourism, during the garden park’s opening ceremony.

Launched in 2016

Objectives

1. To develop a mini botanic park of 8.4 ha within the National Garden Park in Ulaanbaatar, which would provide a pleasant and comfortable environment for rest and entertainment of citizens of Ulaanbaatar.

Expected outputs

1. Construction of the 8.4 ha project site;
2. Capacity building for the staff of the National Park; and
3. Publicity of the project to key stakeholders.

APFNet Thematic Training Program

Training course on combating desertification and utilization of sand resources, 20-29 September

Six technical forestry officials from Kazakhstan, Uzbekistan and Tajikistan attended the training. Livelihood benefits resulting from combating desertification with drought resilient tree and plant species were demonstrated. Participants expressed that the skills and techniques being used could be applied in their home economies.



Drought resilient tree species such as sea buckthorn have the potential to help economies in Greater Central Asia combat desertification.

Eco-tourism development

Bang Kachao is an island located in Samut Prakarn province, which is approximately 10 km from Bangkok city centre and bordered by 15 km of the Chao Phraya River. The unique ecosystem in Bang Kachao makes it one of the largest and richest areas of biodiversity in this lowland area.

Strengthening Urban Forestry Demonstration Site of Bang Kachao for the Biodiversity Conservation and Natural Learning Center



Eco-tourism is a major component of Bang Kachao's conservation activities.

Since the start of the project, Bang Kachao has seen a tenfold increase in the number of visitors, with people of all ages coming to visit the area to relax, learn about the environment and taste authentic Thai dishes prepared by the local women's group. The area is also used as a site for the corporate social responsibility activities of many organizations, and has become famous at both the national and international levels.



Bang Kachao is referred to as Bangkok's "green lung" due to the escape it provides from the surrounding urban environs.

The project has also achieved success in conserving rare species of local flora and fauna, providing seedlings for visitors to plant within the community, encouraging younger generations to form youth groups to ensure that conservation is continued in future generations, and establishing a forum for members of all the local communities within Bang Kachao to discuss conservation in the area.

Launched in 2012

Objectives

1. Establishing a demonstration and learning site for interested groups and visitors;
2. Developing and promoting biodiversity conservation through linking the number of visitors and the income flow of the local people; and
3. Maximizing the potential of the area as an ecotourism attraction by improving the habitat for dependent flora and fauna species.

Expected outputs

1. An exhibition and interpretative center on eco-tourism and agroforestry established;
2. Livelihoods of local people improved through eco-tourism development; and
3. Project information available for public outreach.

APFNet Thematic Training Program

Workshop on Forestry and Rural Livelihood Development in Negombo, Sri Lanka from 1 to 14 November

This workshop engaged approximately 20 economy representatives to share experience on rural livelihood development, and strengthen their understanding of the linkages between forests and livelihood. It covered core elements of livelihood development including rural policies, institutions, governance, technologies, economics (e.g. PES), small-scale enterprises, land use systems, and the inclusion of indigenous communities and traditional knowledge.



Participants experienced a case of rural forestry firsthand at the Nuala Beliyakanda Sinhagama Community.



Extensive sharing between economies was a core part of the workshop.



Empowering women in community forestry

Supporting Community Based Sustainable Forest Management and Economic Empowerment of Women in the Central Region of Nepal

Community forestry plays an important role in Nepal's forestry and socio-economic development. After 20 years of development, Nepal's community forest area totals 1.65 million hectares, accounting for about 35% of the national forest area. The development of community forestry still faces low levels of forest management, unsustainable use of forest resources, unbalanced forest management and unequal distribution of income. These challenges hinder the long-term and stable development of community forestry in Nepal.

To-date, the project has developed three women-led enterprises: an ecotourism development in Kathmandu, advanced wooden handicrafts in Makwanpur District and aromatic herb production in Sarlahi District. Trainings were conducted to enable local women to produce marketable and handicraft products, which were exhibited during the World Wood Day campaign in Kathmandu. The project also established a marketing committee and sales center for promoting aromatic herbal products.



Handicraft skills trainings help local women produce products that they can later sell.

Objectives

1. To build livelihood through sustainable forest management;
2. Empower women and marginalized households through forestry entrepreneurship;
3. Build decision-making capacity in community forest financial management, benefit-sharing and forest planning; and
4. Promote alternative energies to reduce carbon emissions and pressures on forest resources.

Expected outputs

1. Biogas devices, solar panels and efficiency-improved cook stoves installed in households;
2. Mini-enterprise business models (on ecotourism, handicrafts and other forest products); and
3. Publications, media releases and other knowledge sharing products.

Launched in 2014



APFNet Scholarship Program

New Enrollments, Graduates And Partner Universities

In 2016, APFNet enrolled 17 new students from Bangladesh, Lao PDR, Malaysia, Mongolia, Myanmar, Nepal, Peru, Papua New Guinea and Thailand in Beijing Forestry University (7 students) and Nanjing Forestry University (10 students). The programs that students enrolled in include Forestry Economics and Management, Forestry, Environmental Engineering and Forestry Engineering. Sixteen students that were enrolled in 2014 also graduated with their respective Master's degrees in July.

Since its initiation in 2010, APFNet has provided full scholarship support to over 70 students from 14 economies in the region to obtain two-year Masters degrees in forestry-related fields.

Besides fostering the next generation of foresters from APFNet member economies, the Scholarship Program has also enabled host universities to boost their international visibility and promote their internationalization through exchanges. The regular intake of foreign students since the initiation of the program has allowed the two host universities to improve their teaching methods, and align with the knowledge gaps of member economies.

In addition, this year two new host universities have signed onto the APFNet Scholarship Program: the Northwest Agriculture and Forestry University and Inner Mongolia Agriculture University. The new host universities will provide targeted programs on relevant issues in the Greater Central Asian region, such as vegetation recovery, desertification and soil erosion. The programs will target Greater Central Asian economies including Mongolia, Kazakhstan, Uzbekistan, Tajikistan, Turkmenistan and Kyrgyzstan, based on a comprehensive feasibility study at a later stage.

Early Career Academics Program

Cultivating young forestry researchers

APFNet is currently honing the design of its Early Career Academics Program (ECAP), which will support early career academics across the Asia-Pacific to bridge the gap between the level of support that young forestry researchers need and what is currently available.

Forest research is a key contributor to the development and management of forest resources, yet is often viewed as being low priority due to resource constraints and a lack of funds. This is particularly the case for early career academics, who often face difficulty in career advancement due to a competitive research environment and limited funding availability.

A consultation meeting on the design of ECAP was held at the International Union of Forest Research Organizations (IUFRO) Regional Congress for Asia and Oceania in Beijing, China on 25 October 2016.

During the facilitated discussion on the program's design, participants emphasized a number of key points, including:

- The importance of further refining eligibility criteria for applicants;
- The benefits of combining both short- and longer-term trainings and fellowships;
- The proven effectiveness of mentoring; and
- The need to incentivize researchers to stay in their home economies.



The ECAP consultation meeting collected regional feedback on how the new program can address the needs of young academics.

Several institutions expressed interest in becoming involved in ECAP, including IUFRO, the Center for International Forestry research (CIFOR) and the Yunnan Academy of Forestry.

ECAP consists of three main and interconnected components: a research grant, a fellowship and a forestry science forum. These components will be further refined and developed in 2017.

Asia-Pacific Forestry Education Coordination Mechanism

Advancing international cooperation in forestry education



APFNet-developed SFM online courses win Canadian award of excellence

In 2016, the Asia-Pacific Forestry Education Coordination Mechanism (AP-FECM) has grown stronger with 10 Steering Committee members, 58 mechanism members and over 20 experts.

The Mechanism is helping to bridge the education gap in the Asia Pacific region by strengthening the forestry educational network, encouraging experience sharing, promoting student mobility, and developing SFM capacity through cooperation.

This year, the Faculty of Forestry of the University of British Columbia began to serve as the Chair of the Steering Committee, which involves hosting the new Executive Office for the next four-year term.

The Sustainable Forest Management Online Courses developed by an APFNet-funded project in 2015 received the Canadian National Award for "Excellence and Innovation in the Integration of Technology in Educational Practices/Collaboration". The course has secured the interest of over 1000 individuals including students, faculty members and professionals from the Asia-Pacific region.

Professor Juan Pulhin from the University of the Philippines Los Baños indicated that faculty members involved in teaching greatly benefited from the online courses, which could be used as additional and different learning resources for their students. This type of blended learning introduced through the AP-FECM opens up opportunities for universities to innovate and be more responsive to the changing learning environment in forestry.

Major achievements of the AP-FECM in 2016 include:

- Formation of multiple Memoranda of Understanding (MoUs) and student mobility agreements - with the University of British Columbia (Canada), Bogor Agriculture University (Indonesia), the Vietnam National University of Forestry and National Ilan University (Chinese Taipei).
- Hosting the ECAP's Supporting early career researchers, improving forestry research capacity pre-congress event at the IUFRO World Congress in Beijing in October.
- Initiation of an expert study to identify educational trends and challenges - experts from regional forestry universities and research organizations are working together to identify development trends and recommend solutions to address forestry education challenges. The results of this study will be issued in the Annual Report on Forestry Education in Asia and the Pacific in 2017.

"The mechanism provides a priceless networking and resource sharing opportunity for members and professionals, all which help to build capacity in the Asia Pacific region"

– Dr Bui The Doi, Vice President of Vietnam National University of Forestry.

APFNet forms the Trainers in Forestry Network

In December 2016, APFNet established the "Trainers in Forestry (TIF) Network", which further specifies trainers and skill builders in the region as the target groups of the Network. The consultation workshop was organized in Kuala Lumpur, Malaysia.

Participants agreed on the design and relevance of the TIF Network at the workshop. The workshop also identified key priorities and actions for the next couple of years.

To address gaps in capacity that restrict forest managers from tackling emerging issues in forestry development, such as forest tenure reform, forest landscape restoration and forest and climate change, APFNet began gathering regional policymakers to discuss forestry human resources development in 2014, which eventually transformed into the TIF Network.

Institutional Development

APFNet reached a number of governance milestones in 2016. These include the formulation and adoption of a series of plans, programs and policies to further improve the daily operations of APFNet, as well as the efficiency, transparency and accountability of the organization.

Implementation of the decisions made at the Second Board Meeting

The second annual meetings of the APFNet Council and Board of Directors were successfully convened from 10 to 12 May 2016 in Siam Reap, Cambodia. Key decisions were made to:

1. Adopt the APFNet strategic Plan 2016-2020, which directs APFNet's scope of work and priority areas in the Asia and Pacific; and
2. Approve the APFNet Operations Manual, APFNet Salary and Subsidy Scheme and APFNet Accounting Policies and Travel Standards.

Update to the Board and Council Memberships

The 2016 composition of the APFNet Board of Directors was updated as follows:

1. Replacement of Mr. ZHANG Yansong by Mr. FAN Kejun in representing China, the host economy of APFNet; and
2. Extension of another three years for Dr. Chea Sam Ang, Mr. Li Qiang, Mr. Pralong Dumrongthai and Mdm. Wan Hasmah Wan Mohd to April 2018.

In the APFNet Council, the following economies updated their representatives:

1. Canada: to be represented by Mr. Robert Jones, Director, Trade and International Affairs, Natural Resources Canada - Canadian Forest Service.
2. China: to be represented by Ms. ZHANG Hongyan, Director General, Department of International Cooperation, State Forestry Administration.
3. Indonesia: to be represented by Dr. Ir. Bambang Soepijanto, Director General, Extension and Human Resources Development Agency, Ministry of Environment and Forestry.
4. Mongolia: to be represented by Mrs. TUNGALAG Majig, Director General of Forestry Policy and Coordination Department, Ministry of Environment, Green Development and Tourism of Mongolia.

Membership development

The regular communication and engagement of APFNet members in 2016 was mainly done through the Council. Economy visits were arranged in Laos, Cambodia and Sri Lanka to strengthen cooperation and explore new areas of collaboration.

Initiation of recruitment for the Executive Director position

The selection of the next APFNet Executive Director was initiated in 2016 in preparation for the completion of the current Executive Director's term in September 2017.

Partnerships development

This year, APFNet and IUFRO forged an MoU to explore collaborative programs and activities. To-date, APFNet has signed eight MoUs with various international organizations to promote sustainable forest management and forest restoration in the region.

Notable collaborative events in 2016 include:

1. With the Food and Agricultural Organization of the United Nations (FAO): Asia-Pacific Forestry Week in February in the Philippines;
2. With IUFRO:
 - a. the "Supporting early career researchers, improving forestry research capacity" workshop during the IUFRO Regional Congress for Asia and Oceania in October in Beijing; and
 - b. the "Science-Policy Interactions: Making Science Work for Forest Landscape Restoration" training workshop for APFNet Scholarship students also in October in Beijing; and
3. With RECOFTC (The Center for People and Forests): the TIF training workshop in December in Malaysia.

Activities

22-26
February

APFNet at the Asia-Pacific Forestry Week

APFNet was one of the stream leaders of the 2016 Asia-Pacific Forestry Week: *Stream 5 Our Green Future: Green Investment and Growing Our Natural Assets*. Stream 5 gathered over 100 experts to discuss the most pressing issues in forestry green investment and natural asset management.



24
February

Mobilizing investments in Asia-Pacific forests: interactive workshop

APFNet organized an interactive workshop to build forestry investment literacy, discuss how to overcome investment challenges in the sector, and provide a platform for cross-sectoral stakeholder discussion.

24
February

4th Asia-Pacific Forestry Education Coordination Mechanism Conference

The fourth conference of the Forestry Education Coordination Mechanism focused on challenges in sharing forestry education resources and the potential of mutual course recognition as a solution for promoting regional education standards.



April

Launch of the project Carbon Sink Forests Plantation and Rehabilitation

The project, funded by the People's Insurance Company of China Foundation, aims to support and promote sustainable forest management and rehabilitation through various related activities including developing plantations, growing saplings, and sound management and protection of forests.

10-12
May

Second Meeting of the APFNet Council & Board of Directors

The Second Meeting of the APFNet Council and Board of Directors were held in Siem Reap, Cambodia and was hosted by the Ministry of Agriculture, Forestry and Fisheries of Cambodia.



30-31
May

First Meeting of Ministers Responsible for Forestry in Greater Central Asia

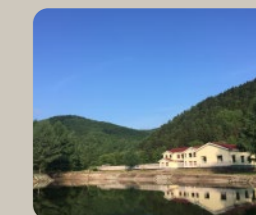
The Meeting of Ministers Responsible for Forestry in Greater Central Asia is the only platform for dialogue and exchange on forestry in the region. This initial meeting marked the first time that forestry ministers in Greater Central Asia have gathered to discuss experiences and know-how.



June

Opening of APFNet Multi-functional Forest Experiment and Training Center in Wangyedian Forest Farm

The APFNet Multi-functional Forestry Experiment and Training Center is the primary output of the "Inner Mongolia Multifunctional Forest project" in Wangyedian Forest Farm.



21-24
June

Training workshop builds capacity on implementation of reforms to state-run forest areas in China's northeast

The State Council of China issued the Reform Plan and Guidelines for State-run Forest Farms in February 2015, with a commercial ban on harvesting in state-run natural forests in Northeast China and Inner Mongolia coming into effect in April 2015. The State Forestry Administration's Human Resource Department and Resource Management Department and APFNet held a training workshop to help deepen reforms in key state-run forest areas and build capacity of local forest bureau directors.

24&30
June

Graduation of 16 master's students from the APFNet Scholarship Program in Nanjing and Beijing

The 16 students who graduated from the APFNet Scholarship Program this year came from Lao PDR, Malaysia, Myanmar, Mongolia, Nepal, Pakistan and Papua New Guinea.



20-30
July

Study visit for senior forestry officials of Greater Central Asia

APFNet invited officials from Tajikistan, Uzbekistan and Kazakhstan to visit a number of sites in Inner Mongolia, China, that demonstrate well-developed models and best practices in combating desertification, obtaining income from processing plants that grow in sandy areas, and ecotourism in areas of mixed coniferous broad leaved forest.



5-18
July

Workshop on Forest Rehabilitation and Management

This workshop identified key factors for promoting forest rehabilitation in the region, including strong top-down policy interventions; a governance system that provides support/incentives/disincentives; the need to correct counterproductive policies in other sectors; empowerment through tenure reform; and the importance of paying attention to the social dimensions of restoration and rehabilitation.



13
September

Workshop on the development status and trends of small community-based forestry enterprises in the Greater Mekong Sub-region (GMS)

The workshop invited representatives of governments and enterprises from Cambodia, Lao PDR, Myanmar and Thailand to discuss how to improve local enterprises' use of technology and equipment for wood processing.



20-29
September

Workshop on combating desertification and utilization of sand resources

As a continuation of the thematic training workshop on combating desertification, this second workshop shifted the focus to related industrial development. The workshop was designed for policy makers, planners and researchers, and dealt specifically with combating desertification, sustainable management of dryland ecosystems and utilization of sand resources in the Greater Central Asia region.

21-23
October

Making science work for forest landscape restoration

A three-day training workshop was organized for APFNet scholarship students of Beijing Forestry University and Nanjing Forestry University on how scientific knowledge can be transformed into practical information for policy-making.



25
October

Early Career Academics Program (ECAP) consultation meeting

APFNet organized the "Supporting early career researchers, improving forestry research capacity" parallel session to the IUFRO Regional Congress. ECAP intends to improve the research capacity of early career forestry researchers in the Asia-Pacific region through three components, namely an Early Career Research Grant, an Early Career Forestry Researchers Fellowship and Forestry Science Forum.



27
October

Opening of botanic garden in Mongolian National Garden Park

An 8.4 ha mini botanic garden park was opened inside the National Garden Park in Ulaanbaatar, Mongolia. This is APFNet's first demonstration project in the Greater Central Asia region, and marks the beginning of efforts to increase forest area, improve the quality of forest ecosystems and support sustainable development in Greater Central Asia.



1-14
November

Workshop on Forestry and Rural Livelihood Development

Participants shared their knowledge and experiences on forestry management, paying particular attention to rural livelihood development. The workshop was hosted by the Forest Department, Ministry of Mahaweli Development and Environment, Government of Sri Lanka.

15
November

Launch of the project Demonstration on Sustainable Forest Management and Restoration in Hilly and Low Mountains Area of Southern China

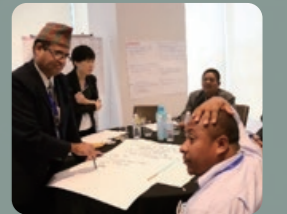
This project aims to improve forest ecosystem productivity and forest carbon storage by restoring forests, developing a carbon accounting methodology for the hilly areas of Southern China, and capacity building activities.



1-3
December

Asia-Pacific Trainers in Forestry (TIF) workshop

The workshop gathered participants from across Asia-Pacific to further co-develop the TIF Network, a regional program launched by APFNet in 2014 (previously called the "Forestry Human Resource Development Dialogue"). The TIF Network aims to strengthen the effectiveness and efficiency of forestry training efforts in the Asia-Pacific region through information exchange, capacity building and collaboration. Participants identified main potential areas for future activities, including trainings on project management for senior officers, methods of assessing training needs, study tours and staff exchanges, and training on specific technical areas.



13
December

Launch of the project To Demonstrate the Development and Application of Staining-Tree Carbon Equations to Improve the Accuracy of Forest-Cover Carbon Stock Estimates in Thailand

The project's goal is to provide accurate information on national forest carbon stocks to support informed sustainable forest management policy decision-making and balanced public debate on the benefits of forests in climate change mitigation in Thailand.



Publications

APFNet Strategic Plan 2016-2020

The APFNet Strategic Plan 2016-2020 sets out the organization's principles, priorities and activities under APFNet's four core activity pillars: capacity building, project implementation, policy dialogues and information sharing. It also outlines seven sub-regions where APFNet will direct its focus and plan its interventions: the GMS; Southeast Asia (except GMS); South Asia, Greater Central Asia; Pacific Islands; North America and Latin America.



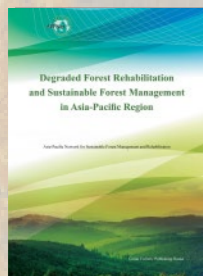
APFNet annual report 2015

The year 2015 saw APFNet take a big step forward in its internationalization efforts with the official establishment of its Board of Directors and Council. These bodies will be important in guiding and bringing an increasingly diverse perspective to APFNet's future development and activities. In addition, 2015 also marked the mid-point of the timeline for the APEC 2020 Forest Cover Goal, with APFNet conducting an interim assessment with the FAO on progress made so far.



Degraded Forest Rehabilitation and Sustainable Forest Management in the Asia-Pacific Region

Deforestation and forest degradation remain major problems for the majority of economies in the Asia-Pacific region. In the context of climate change mitigation and adaptation, rehabilitation of degraded forest lands has become a priority for most economies. This book highlights the nature and scale of the degradation problem, the causes of degradation, impacts, ongoing efforts to rehabilitate degraded forest lands and important lessons learnt.



APFNet Communication Guide

The APFNet Communication Guide provides general guidance and good practices for communication, visibility and dissemination activities for all projects, programs and mechanisms. The purpose of the guide is to assist APFNet project and program managers to develop and implement effective communication strategies, and share knowledge and lessons learned with target audiences.



Financial information

APFNet's 2016 financial performance remained steady, with total revenues at US\$ 6 771 311.80 and expenditure at US\$ 5 317 870.21 (US\$ 1 = CN¥ 6.9370, according to the exchange rate issued by the People's Bank of China on 31 December, 2016).

BALANCE SHEET

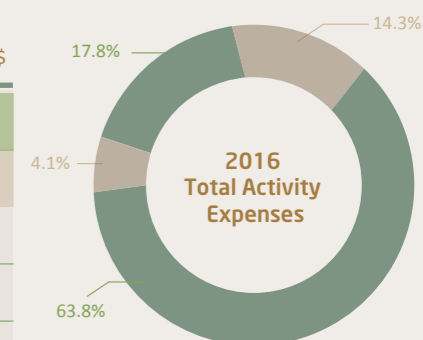
Currency: US\$

ASSETS	2016	2015
CURRENT ASSETS		
Monetary Funds	3 559 908.04	2 496 446.10
Accounts Receivable	65 345.60	
Accounts Prepayment	184 556.10	
Prepaid Expenses	106 436.50	
TOTAL CURRENT ASSETS	3 916 246.24	2 496 446.10
Fixed Assets:		
Fixed Assets	72 312.93	56 937.84
Less: Accumulated Depreciation	29 022.07	15 109.51
Fixed Assets - Net Value	43 290.86	41 828.33
Cultural Assets	1 225.31	
Total Fixed Assets	44 516.17	41 828.33
TOTAL ASSETS	3 960 762.42	2 538 274.43
LIABILITIES AND NET ASSETS	2016	2015
CURRENT LIABILITIES:		
Accounts Payable	3 291.32	
Tax Payable	12 696.44	46 941.36
TOTAL CURRENT LIABILITIES	15 987.76	46 941.36
TOTAL LIABILITIES	15 987.76	46 941.36
Net Assets:		
Unrestricted Net Assets	1 546 957.67	2 376 009.44
Restricted Net Assets	2 397 816.98	115 323.63
Total Net Assets	3 944 774.66	2 491 333.07
TOTAL LIABILITIES AND NET ASSETS	3 960 762.42	2 538 274.43

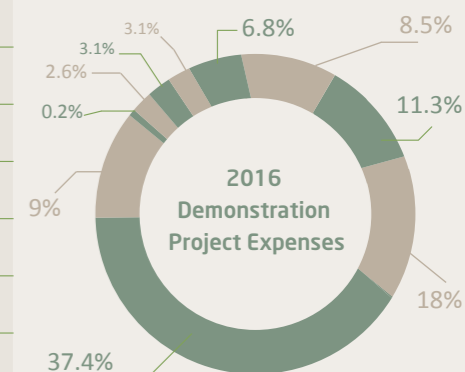
BUSINESS ACTIVITY STATEMENT

Currency: US\$

ITEMS	2016	2015
1. INCOME		
Donation Income	1 584 085.34	526 255.37
Government Subsidy Income	5 180 743.00	3 597 017.40
Other Income	6 483.46	7 649.25
TOTAL INCOME	6 771 311.80	4 130 922.02
2. EXPENSES		
(1) Activity Costs	4 523 239.16	3 151 698.17
Employee Expenses	311 175.75	
General Expenses	3 836 415.20	3 142 545.79
Accumulated Depreciation		9 152.38
Previous Project	375 648.21	
(2) Management Expenses	799 456.69	1 021 251.79
Employee Expenses	111 051.73	281 318.78
General Expenses	674 492.39	739 933.01
Accumulated Depreciation	13 912.56	
(3) Financing Expenses	-4 825.63	-4 281.43
TOTAL EXPENSES	5 317 870.21	4 168 668.53
3. Restricted Net Assets Transferred To Unrestricted Net Assets	-	-
4. Net Assets Changes Increase/(Decrease)	1 453 441.59	-37 746.52



- Demonstration Projects 63.8%
- Capacity Building 14.3%
- Policy Dialogue 17.8%
- Information Sharing 4.1%



- National Park 37.4%
- Forest Rehabilitation 18%
- Climate Change 11.3%
- Community Alleviation 8.5%
- Watershed Management 6.8%
- Sustainable Forest Management 3.1%
- Biodiversity Protection 3.1%
- Forest Resources Monitoring 2.6%
- Ecological System Planning Project 0.2%
- Project Planning And Monitoring 9%

Abbreviations and acronyms

APEC	Asia-Pacific Economic Cooperation
AP-FECM	Asia-Pacific Forestry Education Coordination Mechanism
APFNet	Asia-Pacific Network for Sustainable Forest Management and Rehabilitation
CN¥	Chinese yuan
ECAP	Early Career Academics Program
FAO	Food and Agriculture Organization of the United Nations
GMS	Greater Mekong Sub-region
ha	hectare(s)
IUFRO	International Union of Forest Research Organizations
km	kilometre
Lao PDR	Lao People's Democratic Republic
MoU	Memorandum of Understanding
P.R. China	People's Republic of China
RECOFTC	The Center for People and Forests
TIF	Trainers in Forestry
US\$	United States dollar(s)

Photo Credits

Cover	Wangyedian Forest Farm
P4 P23	Wang Guo Qin/APFNet
P5 P6	Liu Wei/APFNet
P6 P18 P20 P32	APFNet Kunming Training Center
P12	Project team of Sustainable Forest Management in the Northern Provinces of Lao PDR
P13 P14	Project team of Rehabilitation and Management of Degraded Forests in Miyun Reservoir Watershed, Beijing
P16	Project team of Capacity Building towards Effective Implementation of Sustainable Forest Management Practices in Fiji, Tonga and Niue
P17	Project team of Construction of a mini botanic park in the National Park of Mongolia
P19	Project team of Strengthening Urban Forestry Demonstration Site of Bang Kachao for the Biodiversity Conservation and Natural Learning Center
P22	Project team of Supporting Community Based Sustainable Forest Management and Economic Empowerment of Women in the Central Region of Nepal
P24 P26 P31	Chen Lin/APFNet
P29	Luo Xi/APFNet
P30	Huang Kebiao/APFNet

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The designations employed and the presentation of material herein do not imply the expression of any opinion whatsoever concerning the legal status of any economy, territory, city or area, or of its authorities or concerning the delimitation of its frontiers and boundaries.

Implementation status of APPNet Funded Projects 2016

NO.	Project ID	Project Title	Executing Agency (EA)	Target area(s)	Goal(s)	Objectives	Outputs	Progress in 2016
1	2011P2/6-GMS+	Forest Cover and Carbon Mapping in the Greater Mekong Subregion and Malaysia	Institute of Forest Resources Information Techniques (IFRIT), Chinese Academy of Forestry (CAF)	GMS+Malaysia	Estimate forest coverage and above-ground carbon stock in the GMS and Malaysia	1. Develop a framework and methods for forest mapping and carbon estimation using remote sensing technology. 2. Produce forest cover change maps from 2005 to 2010 and a forest above ground biomass map. 3. Enhance institutional capacity in GMS and Malaysia to perform forest mapping and assessment.	1. Remote sensing database 2. National institute-owned ground truth database 3. Annual forest map at coarse resolution (300-500m) during 2005-2010 4. Mid-resolution (30m) forest map product in 2005 and 2010 5. Forest carbon storage mapping product (300-500m) of 2005 6. Training workshops 7. Analysis report of forest coverage and carbon storage in each GMS economies and Malaysia	1. Analysis report finalized 2. Project officially concluded 3. Preparation for Phase II started
2	2012P1/2-THA	Strengthening Urban Forestry Demonstration Site of Bang Kachao (Thailand) for Biodiversity Conservation and Natural Learning Center	Royal Forest Department of Thailand (RFD)	Bangkok, Bangkok	Maximize biodiversity conservation and strengthen urban forestry by establishing a demonstration site and learning center, including to promote ecotourism and benefit local communities.	1. Establish a demonstration and learning site for interested groups and visitors. 2. Promote biodiversity conservation by linking the number of visitors and the income flow to local people. 3. Improve the habitat for endemic flora and fauna species and maximize the attraction to ecotourism in the area.	1. A demonstration and learning site for interested groups and visitors to be established. 2. Biodiversity conservation and habitat for endemic flora and fauna species in Bang Kachao to be improved. 3. Income to local people increased through ecotourism. 4. Project information made available to the public.	1. The period of Project Year 2 restarted: Feb, 2017-Jan, 2018
3	2012P2/2-UNU	Forest Rehabilitation and Sustainable Management for the Conservation of Trans-boundary Ecological Security in Montane Mainland Southeast Asia- Pilot Demonstration Project of Lao PDR, Myanmar and China/Yunnan	United Nations University Institute for the Advanced Study of Sustainability (UNU-IAS)	Luang Prabang (Laos) Shan state (Myanmar), Yunnan (China)	Create new knowledge and options for community-based forest rehabilitation and sustainable management for broader replication in the MMSEA region in order to improve livelihoods in the uplands and safeguard the trans-boundary ecology in MMSEA.	1. Identify and adopt best practices for forest rehabilitation in the target areas and around the MMSEA. 2. Experiment and demonstrate good practices for forest rehabilitation, using local knowledge and locally preferred, rare and endangered native tree species. 3. Develop capacity to rehabilitate degraded forests and reach out to farmers and policy makers. 4. Integrate lessons and establish a network to develop a regional strategy for wider replication in MMSEA.	1. Knowledge of ecological, social, cultural and economic processes associated with forest degradation and rehabilitation in pilot sites enhanced. 2. Replicable and adaptable models for community-based rehabilitation of degraded forests and toolkits developed and demonstrated at pilot sites. 3. Capacity of different target groups, including local communities, local authorities and young researchers, strengthened through tailored made programmes. 4. Strategies and mechanisms for up-scaling effective practices are developed and disseminated.	1. All activities completed and project positively evaluated. 2. Balance payment transferred and the project officially closed.
4	2013P2-FCDMM	Innovative Sustainable Forest Management Education in the Asia-Pacific Region	FCDMM-Office thru Beijing Forestry University	Asia-Pacific Region	Improve the region's capacity to manage forests sustainably and facilitate the exchange of technologies and experiences to educate the new generation of foresters.	1. Build a major course on SFM as a basis for developing a core curriculum to be adopted in the region. 2. Create a platform for exchanging ideas and experiences on educating the new generation of foresters in the APR. 3. Facilitate collaborations on forestry education between developed and less developed economies. 4. Promote reforms in forestry education in the region and build a model for sharing the results.	1. Develop 6 core SFM courses. 2. Develop an on-line learning platform. 3. Develop an on-site training package, with options. 4. Convene an international conference on on-line learning in forestry education.	1. Project evaluated and technically concluded; 2. Financial closure in process.

NO.	Project ID	Project Title	Executing Agency (EA)	Target area(s)	Goal(s)	Objectives	Outputs	Progress in 2016
5	2013P4-NPL	Supporting community based sustainable forest management and economic empowerment of Women in Central Region of Nepal	Consortium (HIMAVANT/IASMI) z/CRMO	Nepal	Improve local livelihoods through well managed community forests and develop models and approaches to SFM that government and communities accept and apply.	<ol style="list-style-type: none"> 1. Demonstrate sustainable forest management practices and promote alternative energy sources to reduce pressure on forest and carbon emissions. 2. Promote development of community forest based multi-enterprises to better use forest resources and improve the livelihood of marginalized communities. 3. Identify best approaches in which communities are empowered to manage and use forest resources in a sustainable way. 	<ol style="list-style-type: none"> 1. Sustainable forest management practices demonstrated and local capacity built or improved. 2. The income from community forestry increased through development of multi-enterprises. 3. Alternative energy sources promoted and pressure on forest and carbon emissions reduced. 4. Community forest management improved, including decision making, financial administration, benefit-sharing, and planning. 3. Best practices disseminated to policy makers and practitioners. 	<ol style="list-style-type: none"> 1. 34,476 seedlings produced in three nurseries. 2. Ecotourism management plan in CFCOs of Kaskmandha developed. 3. Training on ecotourism management for six CFCOs conducted. 4. A five-month advanced wooden handicraft training for 30 women organized. 5. 90 solar panels and 300 improved cook stoves installed and 75 biogas plants in installation.
6	2014P4-ASEM	Sustainable Forest Management in Northern Provinces of Lao PDR	Ministry of Agriculture and Forestry (MAFF), Lao PDR	Provinces of Oudomxay, Boleo, Luang Nam Tha, Laos	Explore and demonstrate innovative approaches for forest restoration and rehabilitation in northern Lao PDR	<ol style="list-style-type: none"> 1. Explore, test and demonstrate effective approaches for forest restoration and forest management to increase the flow of benefits to stakeholders from SFM. 2. Strengthen forest law enforcement and promote cooperation on trans-boundary biodiversity conservation. 3. Share information and knowledge of best practices on forest restoration and rehabilitation. 	<ol style="list-style-type: none"> 1. Forest land use plan at district and village levels developed. 2. Best practices and approaches for forest restoration and rehabilitation demonstrated. 3. Forest inspection system improved. 4. Cooperation on trans-boundary biodiversity conservation enhanced. 5. Capacity of forest staff and communities improved. 6. Best practices and lessons learned disseminated. 	<ol style="list-style-type: none"> 1. Forest fire prevention and monitoring system established in China's Yunnan Province and Laos completed. 2. Overall work plan and second annual work plan approved. 3. Project Coordinator hired, consultants for land use planning selected.
7	2015P1-KHM	Landscape Approach to Sustainable Forest Management in Prek Thnot Watersheds	The Institute of Forest and Wildlife Research and Development (IFRD),	Kampong Speu, Cambodia	Balance the need for ecosystem services in the Prek Thnot Watershed with socio-economic development by using landscape and participatory approaches to land use planning.	<ol style="list-style-type: none"> 1. Raise awareness of and build capacity for integrated watershed/landscape planning through scientific assessments, analysis and participatory approaches. 2. Improve the integrated management of Prek Thnot Watershed with the participation of stakeholders 3. Share experiences and lessons learned 	<ol style="list-style-type: none"> 1. Knowledge and awareness of stakeholders on integrated watershed planning and development issues in Prek Thnot Watershed improved. 2. Report on Prek Thnot Watershed completed. 3. Two agroforestry demonstration sites to conserve soil and water and to improve livelihoods established. 4. Forest-based community enterprises supported. 5. Project success and experiences disseminated and policy briefs for the sustainable development of the Prek Thnot Watershed submitted to authorities. 	<ol style="list-style-type: none"> 1. Trainings to FA staff on GIS/participatory Mapping and Agroforestry provided. 2. Trainings to farmers on Agroforestry and Hydrologic Monitoring provided; critical areas in Prek Thnot Watershed mapped out. 3. Consultative meetings on integrated watershed planning conducted. 4. Two agroforestry sites identified. 5. Regular soil and hydrological monitoring systems to collect hydro meteorological and soil data established. 6. Forest-based community enterprise identified.

NO.	Project ID	Project Title	Executing Agency (EA)	Target area(s)	Goal(s)	Objectives	Outputs	Progress in 2016
8	2015P2-MY	Management and Rehabilitation of Degraded Forests in Beijing's Miyun Reservoir Watershed	Beijing Forestry Society	Miyun, Beijing	Safeguard water quality of Miyun Reservoir watershed by applying integrated forest management approaches.	<ol style="list-style-type: none"> 1. Improve the capacity of forests to conserve water in three sites by applying a close-to-nature management approach. 2. Reduce water pollution caused by fertilizer application. 3. Improve local livelihoods by promoting the development of forest recreation. 4. Enhance the capacity of stakeholders to manage forests in a sustainable manner. 5. Produce best practice models for better long-term forest management in the watershed. 	<ol style="list-style-type: none"> 1. Monoculture plantations of Pinus tabulaeformis and Platycladus orientalis (Linn.) on 280 hectares in three sites managed in a close-to-nature approach. 2. Local livelihoods improved by promoting eco-tourism. 3. Capacity of stakeholders to manage forests and develop eco-tourism improved. 4. Experience and lessons learned summarized and disseminated. 5. A knowledge hub on line developed. 	<ol style="list-style-type: none"> 1. The biophysical and social-economic survey completed. 2. The master plan of eco-tourism for project site completed. 3. Training materials on silviculture and eco-tourism drafted. 4. Two international consultants hired to provide technical support. 5. A knowledge hub on line developed.
9	2015P4-SPC	Capacity building towards effective implementation of SFM practices in Fiji, Tonga and Niue	Secretariat of the Pacific Community (SPC)	The forests and tree resources of Fiji, the Kingdom of Tonga and Niue	Enhance the capacity of Fiji, Tonga and Niue for sustainable forest management	<ol style="list-style-type: none"> 1. Develop a forest management plan for Tonga and complete one for Niue. 2. Develop strategies and mechanisms for effective implementation of these plans and codes of forest practices in Tonga, Fiji and Niue. 3. Develop mechanisms for monitoring and reporting on implementation. 	<ol style="list-style-type: none"> 1. Background report prepared on the current status of forests and forest management in Tonga and the issues to consider in the forest plan of Tonga highlighted. 2. FMPs completed for Tonga and Niue. 3. Background reports prepared to review the current legal and policy frameworks; institutional arrangements and mechanisms for implementing FMPs and codes of practices in Tonga, Fiji and Niue. 4. Implementation strategies developed and submitted for governmental approval. 5. Training and education packages developed for implementing FMPs and codes of practices. 6. Enforcement strategies in place. Develop a forest management plan for Tonga and complete one for Niue. 7. Arrangements in place to monitor the implementation of the FMPs and codes of practices. 8. Monitoring and reporting protocols developed. 9. Training developed and conducted. 	<ol style="list-style-type: none"> 1. The National Forest Management Plan for Tonga drafted through workshops; 2. The forest management plan for Niue approved by its Cabinet and is scheduled for printing.
10	2015P4-MAS	Community-based Sustainable Forest Management of Sungai Medikit Watershed Sarawak, Malaysia	Sarawak Forest Department	Sarawak, Malaysia	Promote the sustainable management of the Sungai Medikit watershed by building the capacity of the community, demonstrating innovative operational model and establishing new governance mechanism on community development.	<ol style="list-style-type: none"> 1. Improve sustainable forest management through sound planning, innovative techniques and effective mechanisms. 2. Enhance the capacity of communities for sustainable forest management and livelihood improvement. 3. Improve living conditions by renovating the community's service infrastructure. 	<ol style="list-style-type: none"> 1. Community forest management improved. 2. Capacity for community development enhanced. 	<ol style="list-style-type: none"> 1. Baseline survey of target communities completed. 2. Sustainable forest management demonstration sites established. 3. Alternative livelihood activities on progressing. 4. Infrastructure for SFM improved.

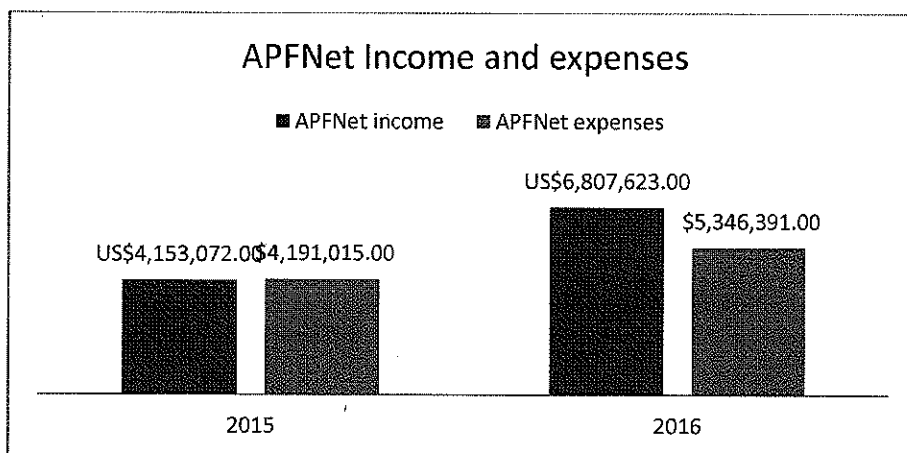
NO.	Project ID	Project Title	Executing Agency (EA)	Target area(s)	Goal(s)	Objectives	Outputs	Progress in 2016
11	2015P5-MN	Monitoring Forest Cover Change in Mongolia using a participatory approach	EA: Environmental Research, Information and Study IA: Center/NUM-TTC UNESCO Space Science/Remote Sensing International Laboratory, National University of Mongolia	Forest Communities of "Khan Bayar", "Bayarl domain" of Bagan province, Mongolia	Assess forest cover in Mongolia to assist the Government to develop and strengthen the strategic planning at the national and local levels by the production of 30 m resolution Landsat data of the entire territory.	<ol style="list-style-type: none"> 1. Monitor forest cover change from 2000 to 2014. 2. Determine forest cover in 2014 and assess the accuracy of the findings. 2. Map forest cover/type in two forest communities using 2015 data. 3. Strengthen strategic forest management plans in pilot communities. 	<ol style="list-style-type: none"> 1. Landsat and Modis data downloaded and corrected. 2. Forest cover change between 2000 and 2014 determined. 3. Forest cover data checked for accuracy. 4. KONS data procured and corrected. 5. Mapping of 2015 or 2016 forest types completed and verified. 6. PhD thesis two thirds complete and almost ready for publication. 7. Guidelines for community forest management issued. 8. Manual for use of maps for development of management plans developed. 9. TV program aired and TV interviews given. 10. Articles published in scientific forestry journal. 11. Workshop organized. 	<ol style="list-style-type: none"> 1. Forest cover change between 2000 and 2014 determined using the corrected Landsat and Modis data. 2. Mapping of 2015 or 2016 forest types completed and verified. 3. Guidelines for community forest management issued. 4. Manual for use of maps for development of management plans developed. 5. Master and Doctoral articles drafted for publication. 6. Broadcast on the project progress through TV program 7. Mid term progress report approved by APFNet.
12	2015P6-THA	Development and Application of Standing-Tree Carbon Equations to Improve the Accuracy of Forest-Cover Carbon Stock Estimates in Thailand	Kasetsart University Faculty of Forestry, Bangkok, Thailand	Thailand	Provide accurate information on national forest carbon stocks to support informed decision-making on sustainable forest management policies and to balance public debate on the benefits of forests in climate change mitigation.	<ol style="list-style-type: none"> 1. Test the development and application of accurate standing-tree carbon equations for the preparation of a forest-cover carbon stock map in the Naeo Demonstration Forest, Lamphang Province. 	<ol style="list-style-type: none"> 1. Methodology to construct new tree carbon equations developed and pilot-tested. 2. Application of tree carbon equation to prepare a carbon cover map demonstrated. 3. Action plan to construct and promote national standing-tree carbon equations prepared. 4. Information and lessons learned disseminated. 	<ol style="list-style-type: none"> 1. Project agreement signed in Dec. 2016 2. AWP1 approved for implementation
13	2015P7-UBCCM	Adaptation of Asia-Pacific Forests to Climate Change - Phase II	Faculty of Forestry, University of British Columbia	Asia Pacific	Build upon the successful outputs of phase one and strengthen the capacity of policy makers and forest managers in selected economies to develop robust adaptation strategies to improve the health and productivity of forest ecosystems and their resilience to climate change.	<ol style="list-style-type: none"> 1. Improve and expand the tools developed in phase I to further facilitate and promote related research and application in more locations in the Asia-Pacific region. 2. Continue to build a strong scientific basis and provide adaptive management options to enhance capacity for decision making regarding adaptation to climate change. 3. Expand the network built in phase I and continue capacity building through workshops, communication and policy notes to enhance information sharing and technology transfer. 	<ol style="list-style-type: none"> 1. Capacity to conduct annual climate projections established. 2. Impact of climate change on forest ecosystems, key species and vegetation types assessed. 3. Adaptive forest ecosystem management strategies evaluated through model integration, development of indicators and analysis of trade-offs. 4. A web platform for data access and visualization for the five pilot economies developed. 5. Networking and capacity building strengthened. 	<ol style="list-style-type: none"> 1. The pilot sites selection has been finalized. 2. A comprehensive database required for model development and calibration has been established. 3. Provided training and capacity building for all local partners. 4. A third one and held two international conferences for disseminating the project.
14	2015P8-INM(M)	Construction of Demonstration Sites for the Multifunctional Management of Forests - Phase II	Wangyedian Forest Farm, Chifeng	China	Build pilot and demonstration sites oriented towards multifunctional forestry through the inclusion of community participation, forest recreation and forest eco-tourism, thereby contributing to sustainable forest management in the Asia-Pacific region.	<ol style="list-style-type: none"> 1. Demonstrate high standard reforestation on over-land, intermediate cutting of young and middle-aged natural secondary forests, and close to nature forest management in mature forests. 2. Develop regional technical guidelines on close-to-nature forest transformation in Larch and Chinese pine planted forests. 3. Build a training and experimental center on multifunctional forestry as an outreach and education platform. 4. Improve the capacity of local communities and forest farmers to practice SFM. 	<ol style="list-style-type: none"> 1. Technical methods tested on demonstration sites for reforestation, intermediate cutting, and close-to-nature forest transformation. 2. Infrastructure for eco-park constructed and training center for experimenting with multifunctional forestry built. 3. Capacity of forest farmers strengthened through SFM training and the installation of a forest fire monitoring system. 4. Outcomes of project published and disseminated in the media. 	<ol style="list-style-type: none"> 1. 600 mu reforestation on over-land finished. 2. Re-measurement on 72 plots established in project phase I finished. 3. APFNet Multi-Functional Forest Experimental and Training Center put into use from May, 2016. 4. Capacity building activities to the forest farm on going.

Third Meetings of the APFNet Council and Board of Directors
23 and 26 March 2017 Colombo, Sri Lanka

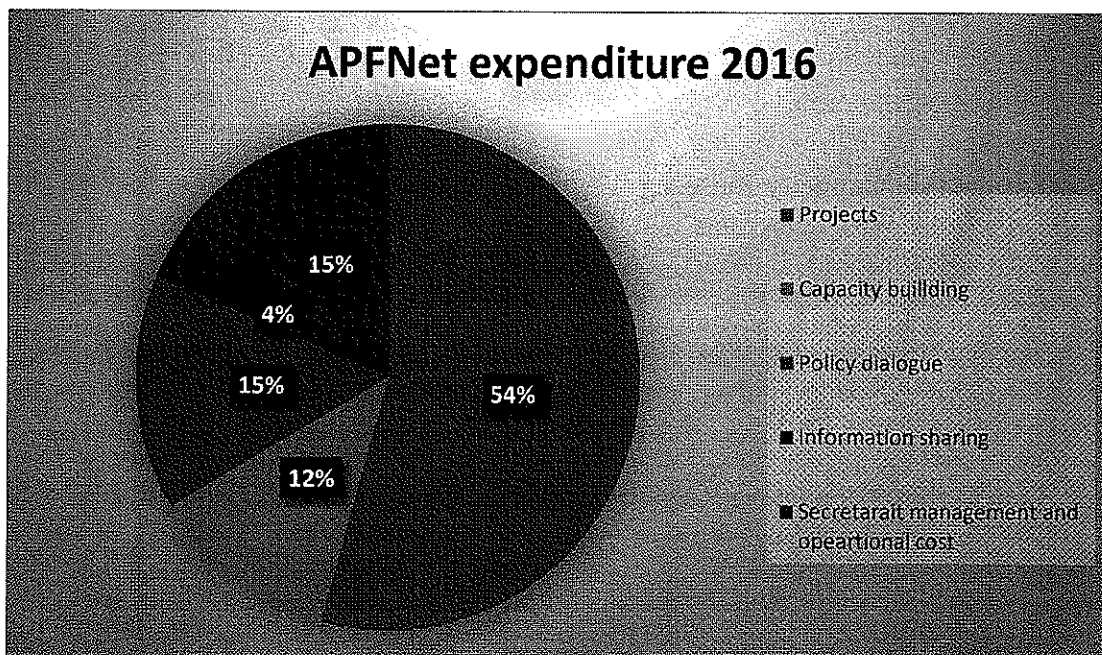
APFNet Financial Status 2016

In line with accounting policies adopted by Boards, APFNet finance was managed more systematically, and able to present details for analysis for future activity planning and resource allocation. The financial status has been audited.

Income and expense in 2016 were US\$6,807,623.00 and US\$5,346,391.00. Compared with those in 2015, they were increased by US\$2,654,551 and US\$1,155,376 respectively.



Regarding the expense, US\$4,547,493.00 was spent on APFNet activities, US\$803,739.00 on secretariat operations, US\$ 4,841.00 of exchange gains.



Expense on Projects

Project planning and M&E	9.00%
Project implementation	91.00%
TOTAL	100.00%

Project implementation

by sub-region

Great Central Asia	43.52%
East Asia	23.96%
GMS and Southeast Asia	16.26%
North America	7.80%
South Asia	5.71%
Pacific Islands	2.75%
TOTAL	100.00%

by thematic area

Landscape restoration	41.10%
Forest rehabilitation	19.78%
Climate change	12.42%
Poverty alleviation of forest communities	9.34%
Watershed management	7.47%
SFM	3.41%
Biodiversity	3.41%
Forest resources monitoring	2.86%
Integrated ecosystem planning	0.22%
TOTAL	100.00%

Expense on Capacity Building

Scholarship programs	40.00%
Regular trainings for Asia and the Pacific	38.00%
Trainings and study tours for Great Central Asia	11.00%
APFNet Secretariat capacity building	11.00%
TOTAL	100.00%

Expense on Supporting Regional Policy Dialogues

Third APEC Meeting of Ministers Responsible for Forestry	41.00%
First Forestry Minister Meeting in Great Central Asia	13.00%
Forestry Education Coordination Mechanism	24.00%
Partnership collaboration	15.00%
TIF Network	4.00%

Women and forest management workshop	3.00%
TOTAL	100.00%

Expense on Information Sharing

Website maintenance and technical support	53.00%
Publication, media, exhibition and brochures	47.00%
TOTAL	100.00%

Expense on APFNet secretariat operations and management

Institutional development (Boards & Council Meetings and relevant activities)	14.70%
Networking (Visits, travels, catering and hospitality)	2.00%
Human resource management (Salaries, welfare and post allowances)	14.50%
Administrative work and office operation (Premise, office appliance and consumables, vehicles, depreciation, miscellaneous)	68.80%
TOTAL	100.00%

Third Meetings of the APFNet Council and Board of Directors
23 and 26 March 2017 Colombo, Sri Lanka

Proposed APFNet work plan 2017

No.	Activity	Actions /Implementation approaches	Timing	Expected results/ outcomes
I. Institutional development				
1.1	Consultation and decision making for APFNet 2017	Conduct Third meetings of Council and Board of Directors	23-26, Mar.	1. APFNet work regularly reported, monitored and assessed; 2. Decisions, recommendation and suggestions made to direct APFNet work 2017; 3. Communication with members and partners enhanced to explore cooperation; 4. Routine organizational work done for the 2 bodies in line with Rules of Procedures.
1.2	Selection and appoint of next Executive Director	Establish a selection committee within the Board to select final candidate and appoint next Executive Director	Apr.-Sept.	New ED takes office by September 2017.
1.3	Regional expansion of APFNet office(s)	Report research findings to Board for decision	Apr.-Dec.	Work initiated in line with Board's decision.
II. Partnership				
2.1	Collaboration on Regional workshop on Natural regeneration, (Guangxi, China)	1. Mobilize participants and speakers through APFNet network, 2. Coordinate the field trip to Experimental Center for Tropical Forest,	3 days, June	1. Awareness raised among policymakers and practitioners regarding the potential of natural generation in contributing to the achievement of forest restoration goals; 2. Experience shared in using natural regeneration as a tool for forest restoration;

		3. Support the local logistic, 4. Participate in the development of workshop proceedings		3. Key issues related to restoring forestlands through natural regeneration discussed; 4. Barriers, gaps and opportunities for mainstreaming the application of natural regeneration identified; 5. Recommendations made on the way forward to promote the use of natural regeneration in regional and national restoration initiatives.
2.2	Study tours for embassy people in Beijing	Invite embassy diplomats from APFNet member economies in Beijing to APFNet training bases/project sites	June and Oct.	1. Showcase APFNet efforts in sustainable forest management, including rehabilitation 2. Enhance APFNet networking with its members
III. Supporting regional policy dialogues				
3.1	Asia-Pacific Forestry Planning Network (FPN)	Conduct a baseline review, gap and needs assessment of forestry strategic planning in the Asia-Pacific region, led by expert and in consultation with FPN members	Apr.-Dec.	1. Forestry strategic plans collected from FTP members as the starting point for a regional database (or similar knowledge platform); 2. Similarities and differences in approaches, challenges and priorities in forestry strategic planning well understood 3. Understanding increased on the gaps and needs in knowledge, skills and capacity in forestry strategic planning; and 4. Develop recommendations for FPN support.

3.2	Third Great Central Asia (GCA) Strategic Cooperation workshop	Co-host the Workshop in Kyrgyzstan	3 days, June/July	<ol style="list-style-type: none"> 1. Information and experiences exchanged on best practices across the region in forestry management and desertification combating; 2. Needs and gaps identified and recommendations developed for the potential support for forestry in GCA region; 3. Possible actions and approaches of implementing the Astana Statement discussed and identified.
3.3	Cooperation on transboundary wildlife protection in GMS Region	Organize a regional workshop on transboundary wildlife protection in GMS Region	2-3 days, July/ Aug.	<ol style="list-style-type: none"> 1. Information exchanged among policy makers from national authorities on the topic; 2. Possibility explored for future actions to enhance regional cooperation.
IV. Projects				
Project planning and design				
4.1	Integrated Forest Ecosystem Management Planning and Demonstration in Greater Mekong Sub-region	Coordinate and help develop project proposal in Cambodia, Laos, Myanmar and Thailand	Jan.-Dec.	<ol style="list-style-type: none"> 1. Feasibility studies conducted in project sites, 2. Consultations made with relevant stakeholders in each economy, 3. Project proposals completed.
4.2	Demonstration project on Vegetation Rehabilitation and Forest Resources Management in Great Central Asia	Initiate and prepare for project design	Jan.-Dec.	<ol style="list-style-type: none"> 1. Visits made to GCA economies to consult relevant stakeholders and project concept well understood, 2. Necessary information collected for the preparation of the project, 3. Concept notes developed.

4.3	Phase II of Innovative Sustainable Forest Management Education in the Asia-Pacific Region	Revise and complete project proposal	Jan.-Dec. 1. Project proposal revised based on comments from PAP 2. Project proposal finalized.
4.4	Rehabilitation and sustainable management of degraded forest by thinning and enrichment of nitrogen fixing species	Revise and complete project proposal	Jan.-Dec. 1. Project proposal revised based on comments from PAP 2. Project proposal finalized.
Project management			
4.5	Strengthening Urban Forestry Demonstration Site of Bang Kachao (Thailand) for Biodiversity Conservation and Natural Learning Center [2012P1/2-THA]	Establish a learning center for the visitors to Bang Kachao Promote urban forestry education curriculum	Jan.-Dec. 1. Learning center established and open to public, 2. Biodiversity information, attractions and ecotourism programs of Bang Kacha displayed to visitors, 3. Knowledge transferred and public awareness raised. 1. Curriculum developed in the 1st project year proposed in local schools; 2. Marketing plan of ecotourism in Bang Kachao developed; 3. One training for four guides organized for local communities 3. One workshop in biodiversity conservation and ecotourism organized for local school students
		Continue to promote ecotourism development	Jan.-Dec. 1. Marketing plan of ecotourism in Bang Kachao developed; 2. One training for four guides organized for local communities 3. One workshop in biodiversity conservation and ecotourism organized for local school students

4.6	Sustainable Forest Management Project in Northern Provinces of Lao PDR [2014P1-ASEM]	Demonstrate effective approaches on forest restoration and forest management	Jan.-Dec.	<ol style="list-style-type: none"> 1. Forest land use plan at district and village levels developed; 2. Best practice and approaches for forest restoration and rehabilitation demonstrated at selected plots
	Strengthen forest law enforcement, promoting trans-boundary cooperation on biodiversity conservation	Jan.-Dec.	Forest inspection system improved and cooperation on trans-boundary biodiversity conservation enhanced	
	Enhance capacity of relevant stakeholders	Jan.-Dec.	Training courses and study tours organized for forestry officials and local communities respectively	
4.7	Community-based Sustainable Forest Management of Sungai Medihit Watershed Sarawak, Malaysia [2015P4-MAS]	Continue to promote community forest management in project area	Jan.-Dec.	<ol style="list-style-type: none"> 1. Community forest management plan developed; 2. Sustainable community forest management practices demonstrated in line with the plan
	Improve local livelihood	Jan.-Dec.	<ol style="list-style-type: none"> 1. Activities on understory poultry raising, 2. Vegetable cultivation and fish raising conducted 	
4.8	Landscape Approach to Sustainable Management of Forests in Prek Thnot Watersheds [2015P1-KHM]	Improve knowledge and awareness	Jan.-Dec.	<p>Knowledge and awareness of the target stakeholders on the concept of integrated Watershed Planning and the development issues in Prek Thnot Watershed that affect the forest-dependent communities improved through training and distribution of brochures.</p>
	Promote integrated watershed landscape management	Jan.-Dec.	<ol style="list-style-type: none"> 1. Integrated watershed landscape development plan for Prek Thnot Watershed developed; 2. Two demonstration sites on agroforestry established; 3. One forest-based community enterprise supported 	

4.9	Rehabilitation and Management of Degraded Forests in Beijing's Miyun Reservoir Watershed [2015P2-MY]	Manage 280 ha monoculture plantations of <i>Pinus tabulaeformis</i> and <i>Platycladus orientalis</i> of in 3 project sites in a close-to-nature approach	Jan.-Dec.	<ol style="list-style-type: none"> 1. Target trees identified 2. Crushing trees cut 3. Thinning and enrichment conducted
		Develop and promote eco-tourism activities to improve local livelihood	Jan.-Dec.	<ol style="list-style-type: none"> 1. Ecotourism plan developed; 2. Tourism related infrastructures built; 3. Marketing conducted
		Improve capacity in managing forest and eco-tourism	Jan.-Dec.	<ol style="list-style-type: none"> 1. One training and one study tour on long-term sustainable forest management organized for forestry practitioners; 2. One training and one study tour on eco-tourism management organized for local communities
4.10	Supporting community based sustainable forest management and economic empowerment of Women in Central Region of Nepal [2013P4-NPL]	Promote sustainable community forest management	Jan.-Dec.	<ol style="list-style-type: none"> 1. Target trees identified 2. Crushing trees cut 3. Thinning and enrichment planting conducted
		Promote community forest-based mini enterprises	Jan.-Dec.	<ol style="list-style-type: none"> 1. Sales center renovated 2. Marketing conducted
		Summarize best practices on sustainable community forest management and community forest-based mini enterprises with emphasis on women's economic empowerment.	Jan.-Dec.	<ol style="list-style-type: none"> 1. Best practices summarized and compiled 2. Brochures published

4.11	Participatory Monitoring of Forest Cover Change in Mongolia [2015P5-MN]	Hold project conclusion meeting and outcomes dissemination workshop	Jan.-Apr.	<p>Following project outcomes disseminated to relevant stakeholders in Mongolia:</p> <ul style="list-style-type: none"> - Quantified forest cover data and maps during 2000-2014 of Mongolia - Maps of forest types of 2 pilot community forests - Improved of the forest management plans of the 2 pilot community forests
4.12	Adaptation of Asia-Pacific Forestry to Climate Change – Phase II [2015P7-UBC(II)]	<p>Assess the impact of climate change on forest ecosystems, key species and vegetation types</p> <p>Evaluate adaptive forest ecosystem management strategies through model integration, development of indicators and trade-off analysis</p> <p>Build web platform for data access and visualization for specific economies</p>	Jan.-Dec.	<ol style="list-style-type: none"> 1. Climate nich model built; 2. Consensus projections generated using multiple climate change scenarios <p>A comprehensive analysis report developed</p> <ol style="list-style-type: none"> 1. Web platform built 2. Web platform test run conducted 3. Web platform operated
4.13	Multifunction Forest Demonstration Sites–Phase II [2015P8-INM(II)]	Promote forest eco-tourism through facilities construction in project area	Jan.-Dec.	<ol style="list-style-type: none"> 1. A botanic garden of tree species constructed; 2. A forest therapy region constructed; 3. A forest education center constructed
4.14	Capacity Building Towards Effective Implementation of Sustainable Forest Management Practices in	Develop training and education packages to promote implementation of the Forest Management Plans and codes of practices	Jan.-Dec.	<ol style="list-style-type: none"> 1. Training materials developed 2. Training activities conducted 3. A summary report of the training produced

	Fiji, Tonga and Niue [2015P3-SPC]	Develop enforcement strategies of the Forest Management Plans	Jan.-Dec.	Enforcement strategies of the Forest Management Plans submitted and approved by authorities
4.15	Development and Application of Standing Tree Carbon Equations in Thailand [2015P6-THA]	Develop methodology to construct new tree carbon equations	Jan.-Dec.	1. Methodology developed 2. Pilot-test of the methodology conducted
4.16	Inception and management of six projects approved in 2016 <i>(Detailed information attached)</i>	Projects inception and management	Jan.-Dec.	Six new projects launched for implementation
V. Capacity building				
5.1	APFNet scholarship program	Support and coordinate host universities		1. Up to 30 young forestry officials from APFNet member economies awarded for masters programs 2. Students enrolled in 2015 graduated
		Set up scholarship alumni network	Jan.-Dec.	1. Information on the scholarship alumni updated and maintained on APFNet website 2. Alumni regularly informed via APFNet newsletters and publications, and possibly involved in APFNet work

5.2	Thematic trainings	Conduct a training workshop for senior GCA officials on combating desertification and sustainable management of dryland ecosystems towards livelihood improvement	10 days, July	1. Success models and practices on combating desertification and ecosystem management shared and summarized; 2. Capacity of GCA senior officials enhanced, visions broadened; 3. Training manuals improved and released.
	Conduct a training course for officers and practitioners on combating desertification and industry development	10 days, September	1. Success models and practices on combating desertification and ecosystem management shared and summarized; 2. Capacity of GCA officials enhanced, visions broadened; 3. Training manuals improved and released.	
	Regular Training of Forest Rehabilitation and Management (Siem Reap, Cambodia)	24 Jul. - 4 Aug.	1. Drivers, current issues/challenges and future scenarios related to workshops' topics analyzed; 2. Knowledge and skills of the participants in the formulation and implementation of forest rehabilitation and livelihood development programmes and projects enhanced; 3. Training outputs widely shared through workshop proceedings.	
	Regular Training of Forestry and Rural Livelihood Development (Kunming City, Yunnan Province, China)	1-14 Nov.	Communication enhanced in the Network, and information on forestry HRD/training shared	
	Set up communication platform for TIF Network	Feb.-Mar.	HRD gaps assessed and well understood	
	Conduct resources and needs assessment on forestry HRD in the region	Jan.-Dec.	Knowledge and experience on the topic shared with participants	
5.3	Trainers in Forestry (TIF) Network	One week, 3rd quarter	Objectives, strategies and potential partners identified.	
	Plan for next TIF Network meeting	Nov.-Dec.		

5.4	Asia-Pacific Forestry Education Coordination Mechanism	Supervise the Executive Office to promote forestry higher education internationally	Jan.-Dec.	<ol style="list-style-type: none"> 1. Annual work report and work plan reviewed and approved; 2. Membership of the Mechanism expanded; 3. SFM online course widely utilized; 4. Regional forestry education annual report released.
	5.5	Early Career Academics Program (ECAP)	Organize a young forestry researchers' forum to launch the Program	2 days, 3rd quarter
VI. Communication and information sharing				
6.1	APFNet media channel enhancement	<ol style="list-style-type: none"> 1. Renovated Official website 2. Create APFNet WeChat page 		APFNet better advertised, and knowledge transfer enhanced through existing and new media channels in a timely manner
6.2	Policy information sharing platform	Improve and maintain forestry database of Asia-Pacific region	Apr.-Dec.	Forestry strategies and policies collected and shared with members on APFNet website
		Publish the report on forest transition in Asia-Pacific economies: past experiences and future options	July	Report published to share results of APFNet-APAFRI project
6.3	Sharing of APFNet project outcomes and research findings	Publish Reports on forest development and best practices in Greater Central Asia	Jan.-July	Reports published to share forest development and best practices in Greater Central Asia
		Publish Forest Planning Network (FPN) reports		Findings shared

6.4	Policy research	Research on Fragmentation of forest governance in Asia and Pacific region, in collaboration with UNFF	Jan.-Dec.	<ol style="list-style-type: none"> 1. Economy factsheets detailing current situation with regards to forest governance fragmentation 2. Consultation workshop report 3. Research report, providing an up-to-date analysis on fragmentation in forest governance in the target economies, highlighting the on-the-ground situation and concerns of each economy.
VII. APFNet fund				
7.1	Supporting community based enterprises in GMS region	Provide machines and training to help beneficiary enterprises and communities better utilize wood and NTFP resources to improve livelihood	Jan.-Dec.	<ol style="list-style-type: none"> 1. Three sets of machinery to Loppori Forestry Plantation Corporation delivered and put into operation 2. Efficiency of production and wood utilization of the small community-based forest enterprises improved; 3. Capacity of the enterprises enhanced
7.2	Forest carbon plantation supported by PICC Foundation	Manage the plantation established in 2016	Jan.-Dec.	Plantation well managed for CO ₂ fixation and farmland protection

Annex

APFNet funded projects to be launched in 2017

No.	Project title	Executing Agency	Project summary
01	Community Tree Planting Project	Voice of Yongos (Papua New Guinea)	<p>Type: Demonstration Project Duration: 24 months Budget in USD (total / APFNet grant): 214,120/ 168,220 Target economy(ies): Papua New Guinea</p> <p>Goal: 450 hectare trees will be planted in the Yongomugl Sub-District by 2020 to complement and support the PNG National Forest Authority's goal.</p> <p>Expected outcomes:</p> <ul style="list-style-type: none"> • Establishment of 4 new nurseries; • Conduct surveys on new planting sites, coordinate, distribute & supervise tree planting; • Maintain & tend the established woodlots; • Raising public environmental awareness. <p>Key activities:</p> <ul style="list-style-type: none"> • Plant 200,000 trees (180ha) on degraded forest areas; • Distribute 300,000 tree seedlings to 100 local tree farmers to plant in their respective land, which is about 270 hectares.
02	Enhancing ecosystem services from rehabilitated forests, using the Policy Learning Protocol and the Pathway of Influence Framework	Kyoto University	<p>Type: Policy development project Duration: 36 months Budget in USD (total / APFNet grant):492,000/335,000 Target economy(ies): P.R. China, Laos PDR</p> <p>Goal: To enhance the provision of forest ecosystem services from rehabilitated forests.</p> <p>Expected outcomes:</p> <ul style="list-style-type: none"> • The project will apply the Policy Learning Protocol 11 steps to link a specific policy problem with options to draw from international instruments, • A full report will be prepared. <p>Key activities:</p> <ul style="list-style-type: none"> • Preparing the Playbook; • Undertake field work in the three target economies; • Organizing at least two project meetings with representatives; • Organizing one single report back meeting will be organized in PR China, India and Laos DPR.
03	Enrichment of Pine Plantations in Sri Lanka with native species	Forest Department, Sri Lanka	<p>Type: Demonstration Project Duration: 36 months Budget in USD (total / APFNet grant): 596,800 / 477,300 Target economy(ies): Sri Lanka</p> <p>Goal: To enhance ecosystem services provided by existing pine plantations.</p> <p>Expected outcomes:</p> <ul style="list-style-type: none"> • 350 ha monoculture pine plantations converted into multi

			<ul style="list-style-type: none"> species forests ; • NTFP composition of above 350 ha of forests improved ; • 500 families permitted to collect NTFPs; • Community based ecotourism program established. <p>Key activities:</p> <ul style="list-style-type: none"> • Baseline survey; • Canopy opening and inter-plantation; • NTFP seedling production and planting; • NTFP collection and marketing; • Ecotourism plan development and implementation;
04	Integrated planning and practices for mangrove management associated with agriculture and aquaculture in Myanmar	The University of Queensland	<p>Type: Demonstration & pilot project Duration: 36 months Budget in USD (total / APFNet grant): 540,570/ 303,170 Target economy(ies): Myanmar</p> <p>Goal: To contribute sustainable livelihood and community development within the project areas.</p> <p>Expected outcomes:</p> <ul style="list-style-type: none"> • Integrated mirco-planning approaches for sustainable mangrove management; • Implementation of participatory mangrove management planning and practices in each country; • Capacity building and expertise exchange; • Improvement of ecosystem services and local livelihoods. <p>Key activities:</p> <ul style="list-style-type: none"> • Assessment of local capacity and needs; • Estimation of the mangrove forest area; • Technical protocols and training workshops for local practitioner; • Establishment of Mangrove restoration model of 71ha; • Holding 9 training courses for capacity building; • Holding 2 regional dialogue workshops.
05	Demonstration on Sustainable Forest Management and Restoration in Hilly Areas of Southern China	Research Institute of Forestry, Chinese Academy of Forestry	<p>Type: Demonstration project Duration: 48 months Budget in USD (total / APFNet grant): 1,423,247/ 706,867 Target economy(ies): Anhui Province & Zhejiang Province, China</p> <p>Goal: To promote restoration and sustainable management of forest.</p> <p>Expected outcomes:</p> <ul style="list-style-type: none"> • Identified Drivers of Forest Degradation; • Demonstration on sustainable forest management and restoration; • Accounted Forest Carbon Storage and Sinks in Target Areas; • Enhanced Capacity Building and Information Sharing among relevant Stakeholders. <p>Key activities:</p> <ul style="list-style-type: none"> • Identifying types of forest degradation and evaluating current restoration measures; • Identifying project activity region(160 hectares); • Surveying and analyzing baseline data of carbon pools of forest restoration projects; • Developing the carbon accounting and monitoring

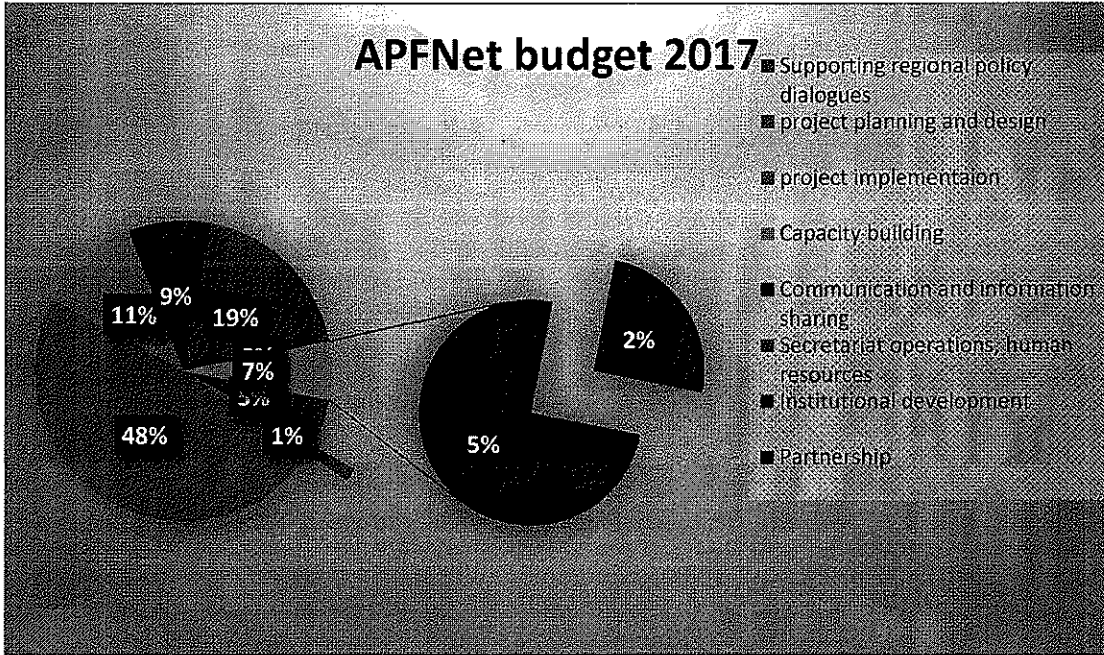
			<p>methodology fit for forest restoration at the project level;</p> <ul style="list-style-type: none"> • Holding project initiation meetings and expert consulting meetings for program implementation.
06	<p>Development Participatory Management of Micro Catchment at The Bengawan Solo Upper Watershed</p> <p><i>(small project)</i></p>	<p>Watershed Management Technology Center (WMTC) Indonesia</p>	<p>Type: Demonstration projects Duration: 24 months Budget in USD (total / APFNet grant): 224,738/ 97,927 Target economy(ies): Wonogiri and Karanganyar Districts, Central Java Province, Indonesia</p> <p>Goal: To build a model of successful watershed management at the operational level (micro catchment) based on soil and water conservation principles. This model may be used as an example of the successful watershed management.</p> <p>Expected outcomes:</p> <ul style="list-style-type: none"> • Potential and vulnerability of micro catchment (already obtained) • Micro catchment management plans (already developed) • Increased stakeholders commitment for effective participatory management of micro catchment • Formulation of integrated participatory management of micro catchment • Demonstration plot of conservation farming and watershed rehabilitation • Enhanced community awareness in management of micro catchment • M & E system of watershed performance within scale of micro catchment, landscapes and household <p>Key activities:</p> <ul style="list-style-type: none"> • Identification of issues and problems, and the potential vulnerability of micro-catchment • Focus Group Discussion (FGD), coordination and outreach with stakeholders • Technical plan preparation of micro watershed management, including the design of land rehabilitation and conservation of soil and water, planning of institutional empowerment and reinforcement techniques as well as inter-sector coordination; • Implementation of micro catchment management, including the development of conservation farming demonstration plots (incentive), forest and land rehabilitation activities, applications of soil and water conservation, community empowerment and dynamics of farmer groups. • M & E on the performance of micro catchment

Third Meetings of the APFNet Council and Board of Directors
23 and 26 March 2017 Colombo, Sri Lanka

APFNet Resources and Budget 2017

2017, about US\$ 8,271,015.00 will be available to support activities of APFNet. Budget by category are detailed in table below.

Category	Budget(US\$)	APFNet Resources(US\$)	Other resources (US\$)
APFNet activities			
Supporting regional policy dialogues	455,072.00	455,072.00	
Projects	4,612,242.00	3,620,290.00	991,952.00
<i>Project planning and design</i>	137,681.00	137,681.00	-
<i>Project implementation</i>	4,474,561.00	3,482,609.00	991,952.00
Capacity building	1,027,536.00	1,027,536.00	
Communication and information sharing	831,884.00	831,884.00	
Subtotal	6,636,879.00	5,934,782.00	
Governance and operations			
Secretariat operations	1,756,522.00	1,756,522.00	
<i>Human resources</i>	1,014,493.00	1,014,493.00	
<i>Administration & office operation</i>	742,029.00	742,029.00	
Institutional development (Council and Board meetings, relevant activities, and activities regarding APFNet governance)	434,783.00	434,783.00	
Partnership & networking (joint meetings, travels, hospitalities)	144,928.00	144,928.00	
Subtotal	2,336,233.00	2,336,233.00	
Total	9,262,967.00	8,271,015.00	





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Third meeting of APFNet Council

Sustainable Forest Rehabilitation and Management for the Conservation of Trans-boundary Ecological Security in Montane Mainland Southeast Asia– Pilot Demonstration Project of Lao PDR, Myanmar and China/Yunnan

Dr. Thaung Naing Oo

Director

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March, 2017

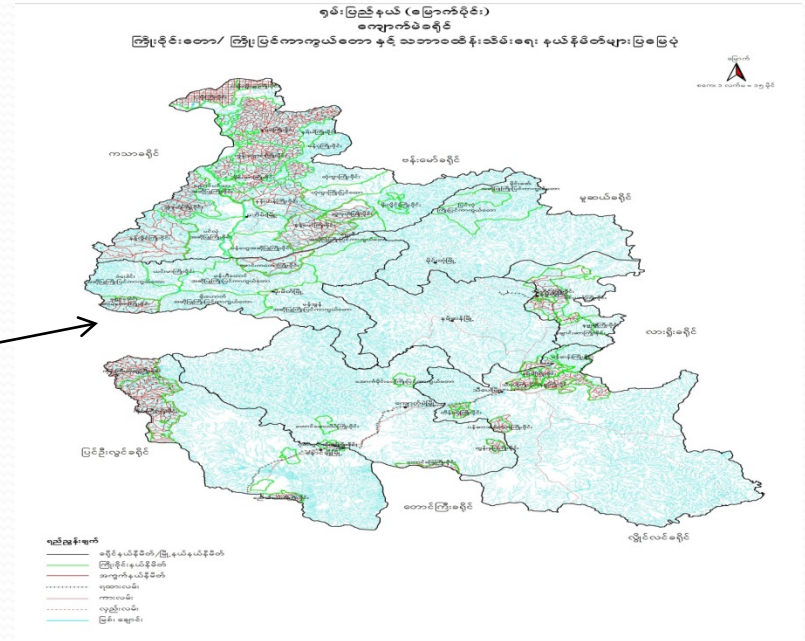
Scope of the presentation

- Project profile
- Outcomes of project activities
- Conclusion

Objectives of the project

- Identify and adapt the **best practice for forest rehabilitation** in the target areas and around the MMSEA
- Experiment and demonstrate **good practice for forest rehabilitation**, especially use of **locally preferred, rare and endangered native tree species** as well as **local knowledge**
- **Develop capacity** in sustainable forest rehabilitation and reach out to farmers and policy makers
- Integrate project lessons and network with other initiatives for a **regional strategy** on sustainable forest rehabilitation

Location of project site



Northern Shan State

Kyauk-me District

Nyaung-Cho Township

Nyaung Htauk village

Project area Profile

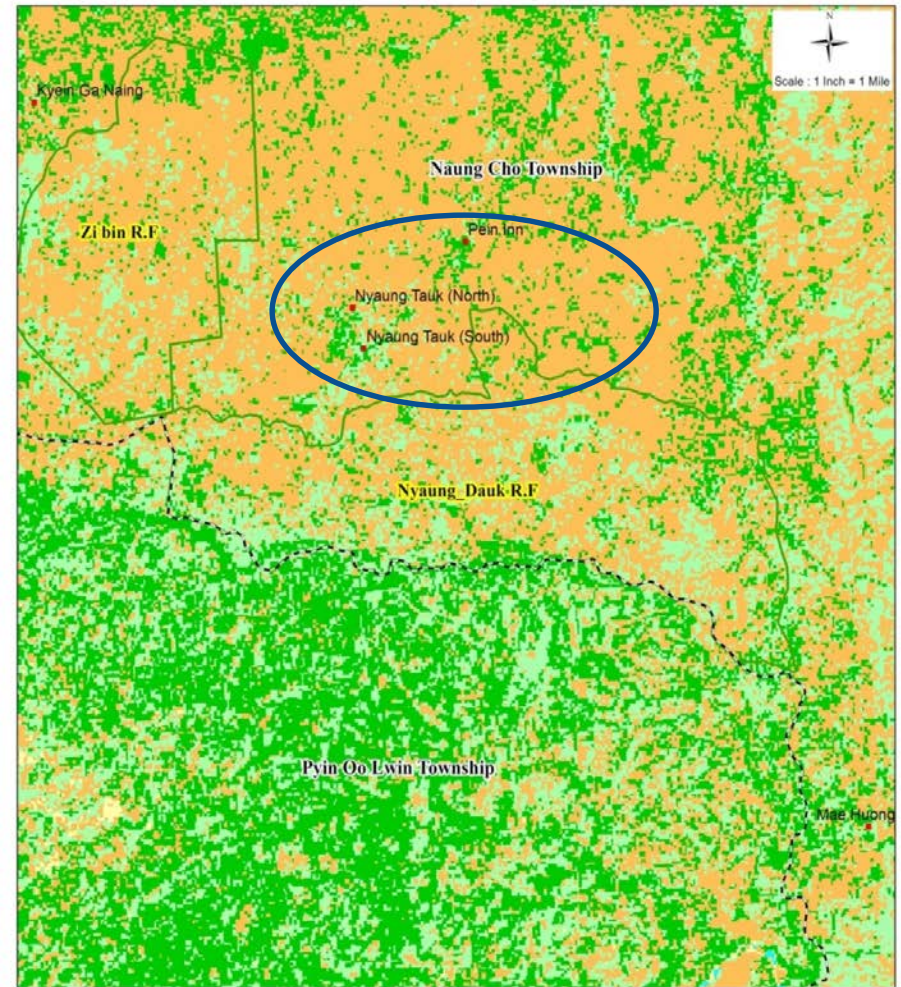
- Primarily endowed with moist upper mixed deciduous forest (MUMD)
- High productive forest composed with commercially important timber species

- Logging practices until 1980s (both legally and illegally)
- Shifting cultivation, fuelwood collection and charcoal production by local people



Deforestation and forest degradation

Landuse & Landcover Map of Nyaung Dauk Forest Reserved Area (2013)



Legend

- | | |
|---|---|
|  Township Boundary |  Closed Forest |
|  Forest Reserved Boundary |  Opened Forest |
|  Town / Village |  Scrub |
| |  Agricultural Land |
| |  Water |

Village profile

Total household : 220

Total populaion :800

Ethnic : Danu (Shan)



Main livelihood: Agriculture in farm land

Agriculture in degraded forest land

Charcoal for subsistence income



Religious : Buddhist

Annual project activities

Year I
2013

- on-the-job training of **young researchers** in project implementation; assessment of forest resources and review of **best practices** of forest rehabilitation
- **participatory planning** for sustainable forest development; initiation of **nursery**; identification of locally preferable and endangered species

Year II
2014

- experimentation of **various models of forest rehabilitation**
- build **local capacity** for forest rehabilitation; providing alternative rural energies
- social fencing of natural regeneration.

Year III
2015

- **monitoring** models of forest rehabilitation
- provision of training modules for training of local farmers and officials on forest rehabilitation



Outcomes of project activities

Outcome I: Knowledge of forest degradation and rehabilitation in pilot sites is enhanced

Outputs achieved are

1.1 Field assessment of forest resources

1.2 Review of best practices of forest rehabilitation

1.3 Participatory plan of forest rehabilitation

primary forest 10 tree species

secondary forest 31 tree species

Medicinal plants 9 species

Outcome II: Replicable and adaptable model for community-based rehabilitation of degraded forests and related toolkits are developed and demonstrated

Outputs:

2.1 Database of locally preferred, rare and endangered native tree species, site requirements, and nursery techniques

2.2 Techniques for soil improvement in degraded areas for tree planting demonstrated

2.3 Agroforestry systems, including understory cultivation designed and tested at all sites

2.4 Toolkits to facilitate social fencing of assisted natural regeneration developed

2.5 Package for alternative rural energy demonstrated

2.6 Areas of total demonstration plots established: **25.3ha**

Demonstration of agroforestry



*Intercropping of
Sterculia versicolor and
Maize in shifting
cultivated land*



*Intercropping of ground nut and
Sterculia versicolor*



*Planting Gmelina arborea and
Casia siamea at the boundary of
agroforestry plots*

Monitoring on agroforestry plots



May 2014 in agroforestry plots



July 2014



September 2014



June 2015



October 2015



October 2015

Demonstration of enrichment planting



Pterocarpus macrocarpus in
Rocky Land



Pterocarpus macrocarpus
in Transplanting plot

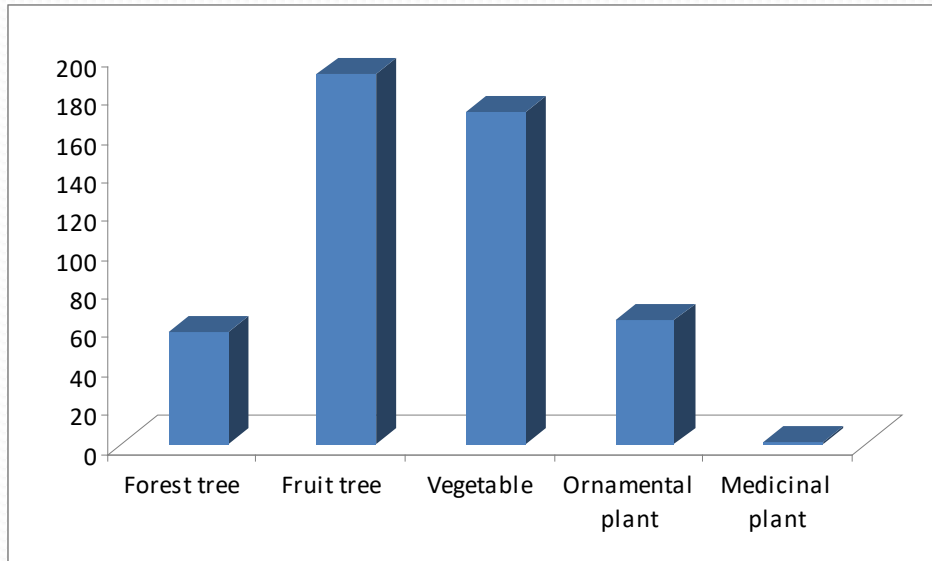


Pterocarpus macrocarpus in
Seed sowing plot

- ❖ Height :**8 inches to 2.8ft.**
- ❖ Padauk is the best in growth and most adaptable species

Improvement of Traditional homegarden

No. of trees



- 40 % of households were randomly selected and surveyed the planted species (in figure)
- Local farmers are using homegarden products not only for self-consumption but also for subsistence income
- 850 mangoes *Mangifra indica*, 500 hybrid jack fruits, 1050 of lemon, avocados and danyin *Archidendron jiringa* and 5 viss of Horlan flowers were distributed



Demonstration of planting trees around sedimentary farm



- ❖ Distributed preferable species of farmers: Eucalyptus & Teak
- ❖ Natural boundary for future generation
- ❖ To get pole and post



Understory cultivation at spring water resources



- Specie – Yam (*Amorphophallus campanulatas*)
- Purposes
 - ✓ To conserve rare species of *Amorphophallus campanulatas* because of market demand
 - ✓ To show the survival of this crop under tree canopy

Outcome III: Capacity of different target groups in sustainable rehabilitation and management of degraded forests is strengthened

Output:

- 3.1 Local guidelines in assessment of forest resources and participatory planning of forest rehabilitation developed for on-the-job training
- 3.2 On-the-job training of 15 young researchers in assessment of forest resources and participatory planning of forest rehabilitation based on local guidelines.
- 3.3 Training of more 100 villagers in application of sustainable forest rehabilitation models.

Building local capacity of forest rehabilitation



Outcome III: Upscaling and dissemination of project outcomes

- ❖ Presents the on-going activities and financial matters in the **regular monitoring meetings** led by Deputy Minister and senior officials
- ❖ presented the project at the **1st APFNet council meeting** held in Nay Pyi Taw, Myanmar in April 2015
- ❖ presented the project at the **6th annual conference of Asian Social Forestry Network** (ASFN) held in Inlay Lake, Myanmar in July 2015
- ❖ presented the project at the 38th annual **research conference of Forest Research Institute** held in FRI, Myanmar in December 2017
- ❖ some of local NGOs (e.g. evergreen environmental group) visited project site to observe and replicate the model
- ❖ Replicated the experiences of community forests rehabilitation by means of agroforestry by two more user groups within the same village

Annual Project workshop and cross-site visit



Laos



Myanmar



China



Conclusion

- ❖ . In the process of rehabilitation, the main challenge of introducing community based forest management approach is trust building with local farmers
- ❖ Once we build up the trusts among local authority, elder people and villagers; the level of community participation become high
- ❖ The community forest user group has been involved in planning, implementing and monitoring of the demonstration trials.
- ❖ It will be good demonstration site to convince role of local farmers for rehabilitation of degraded forest land to policy makers
- ❖ High-level policy makers are willing to continue the project to demonstrate economic/social and environmental benefits of models and to replicate in other villages.
- ❖ Local communities hope that they will succeed in forest rehabilitation with the help of Forest Department and good market access for cash trees in Myanmar.



Thank you very much for your attention



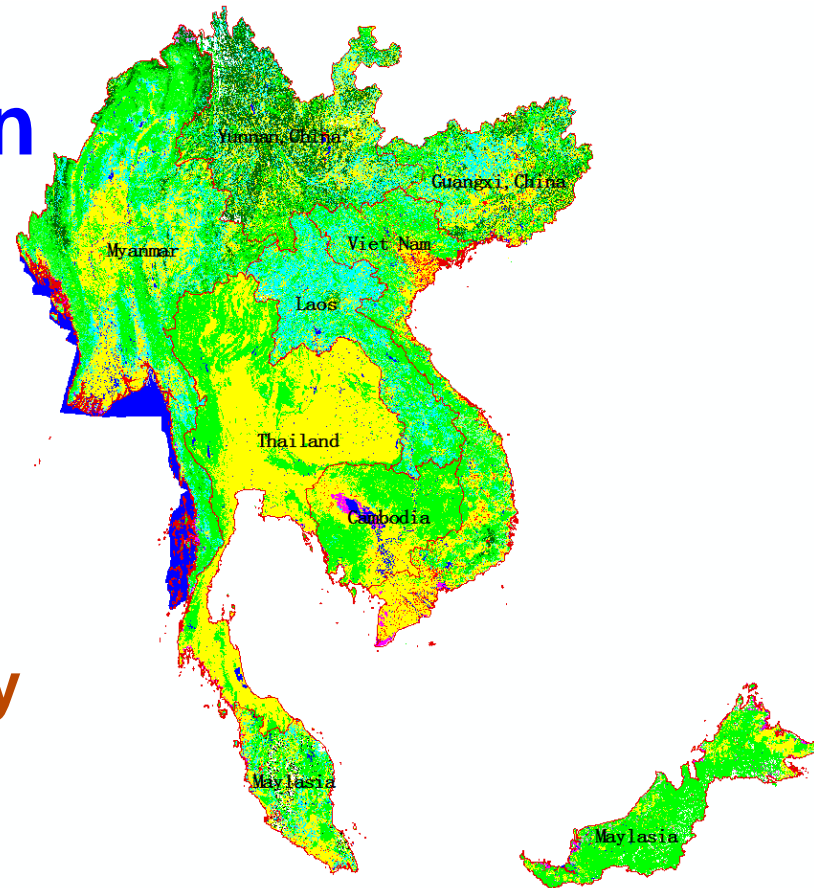
Third Meeting of the APFNet Council
23-25 March, 2017 Colombo, Sri Lanka



Forest Cover and Carbon Mapping in the Greater Mekong Subregion and Malaysia

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Beijing, China

with project participants of IAs





Outline

1 Project introduction

2 Methodology

3 Outputs

4 Impacts

5 Summary

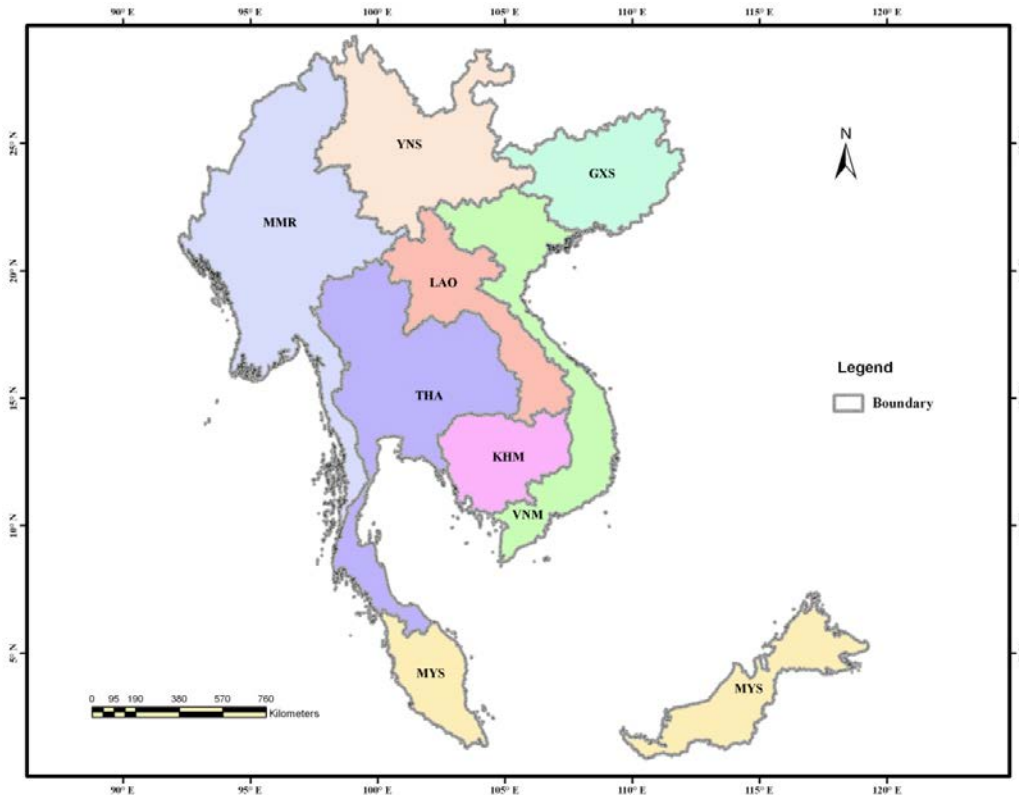




Project Introduction



- **Title: Forest Cover and Carbon Mapping in the Greater Mekong Subregion and Malaysia**
- **Period: Sep, 1, 2011 ~ Feb. 28, 2014**
- **Supported by APFNet (Asia-Pacific Network for Sustainable Forest Management and Rehabilitation)**



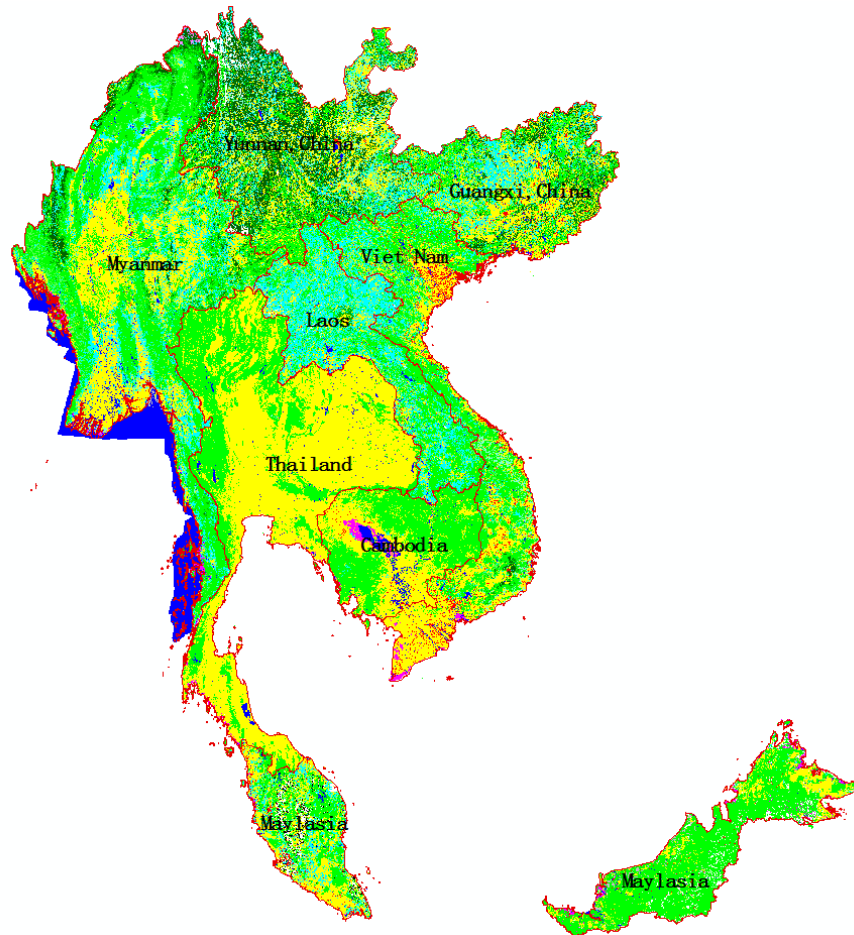
Includes Cambodia, the People's Republic of China (Yuannan province and Guangxi province), Lao People's Democratic Republic, Myanmar, Thailand, Viet Nam, and Malaysia.



Project Introduction



Forests in the Greater Mekong Subregion & Malaysia



- The study area of the GMS and Malaysia demonstration project is rich in forest resources.
- The forests are undergoing rapid changes due to human activities.
- The region's biodiversity is ranked as a top-five most threatened hotspot by the Conservation International.

Legend

Needleleaf forest	Shrub land	Bare land
Broadleaf forest	Savannahs	Snow
Mixed forest	Grassland	unclassified
Bamboo	Crop land	Cloud/Cloud shadows
Wetland forest	Urban and Built-Up	
Gallery forest	Water	



Project Introduction

Goal and Objectives

- I. Develop forest cover mapping techniques to monitor forest cover type changes in the region, using both optical and radar remote sensing techniques.**
- II. Develop a framework for forest above ground biomass estimation using ground measurements, spaceborne lidar sampling data and imaged remote sensing data.**
- III. Produce forest cover maps of 2005, and 2010 at 30 m spatial resolution and forest cover maps annually from 2005 to 2010 at 500 m spatial resolution.**
- IV. Produce a forest above ground biomass map for 2005 at 300 m spatial resolution.**



Project website



<http://apfrm.net>



Forest Cover and Carbon Mapping in the Greater Mekong Subregion and Malaysia



[Home](#) [Objectives](#) [Activities](#) [Researchers and Partners](#) [Test Sites](#) [Meetings](#) [Resource](#) [Contact Us](#)

Forests play a vital role in sustainable development and provide a range of economic, social and environmental benefits, including essential ecosystem services such as climate change mitigation and adaptation.

The project "Forest Cover and Carbon Mapping in the Greater Mekong Subregion and Malaysia" comes from discussions of the International Workshop on Forest Monitoring in Support of Sustainable Forest Management in the Asia-Pacific Region, April 29-30, 2010, Beijing, China and the Training Workshop on Forest Mapping using Geospatial Technology in the Asia-Pacific Region, January 3-12, 2011, Nanning, China.

This project was approved by Asia-Pacific Network for Sustainable Forest Management and Rehabilitation (APFNet). The general aim of the project is to map forest coverage and carbon storage in the Greater Mekong Subregion (GMS) and Malaysia. The project will be achieved by making intensive use of recent satellite remote sensing technology, establishing regional forest cover maps, documenting forest change processes and estimating carbon storage in the GMS and Malaysia.

The area of the project ranges from 92.2° to 119.3° east longitude and 0.8° to 29.2° north latitude, with total land area of 317,242,000 ha and total population of 348 million. It includes Cambodia, the People's Republic of China (Guangxi province and Yunnan province), Lao People's Democratic Republic, Malaysia, Myanmar, Thailand, and Viet Nam. The total forest area is 148,128,000 ha reported by FRA 2010 (Yunnan & Guangxi data were from the 7th national forest inventory of China).



Events Calendar

June 2012						
Mon	Tue	Wed	Thu	Fri	Sat	Sun
28	29	30	31	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	1
2	3	4	5	6	7	8





Project Participants



- Institute of Forest Resources Information Techniques, Chinese Academy of Forestry, China
- Forestry Administration of Cambodia
- Guangxi Forest Inventory & Planning Institute (GFIPI), China
- Faculty of forestry, National University of Laos
- Forest Research Institute Malaysia (FRIM)
- Planning and Statistics Division, Forest Department, MOECA, Myanmar
- Royal Forest Department of Thailand
- Forest Inventory & Planning Institute of Viet Nam
- Southwest Forestry University, China
- Department of Geographical Sciences, University of Maryland, USA
- Geoinformatics Center, Asian Institute of Technology (AIT), Thailand
- Global Observation of Forest & Land Cover Dynamics (GOFC-GOLD)





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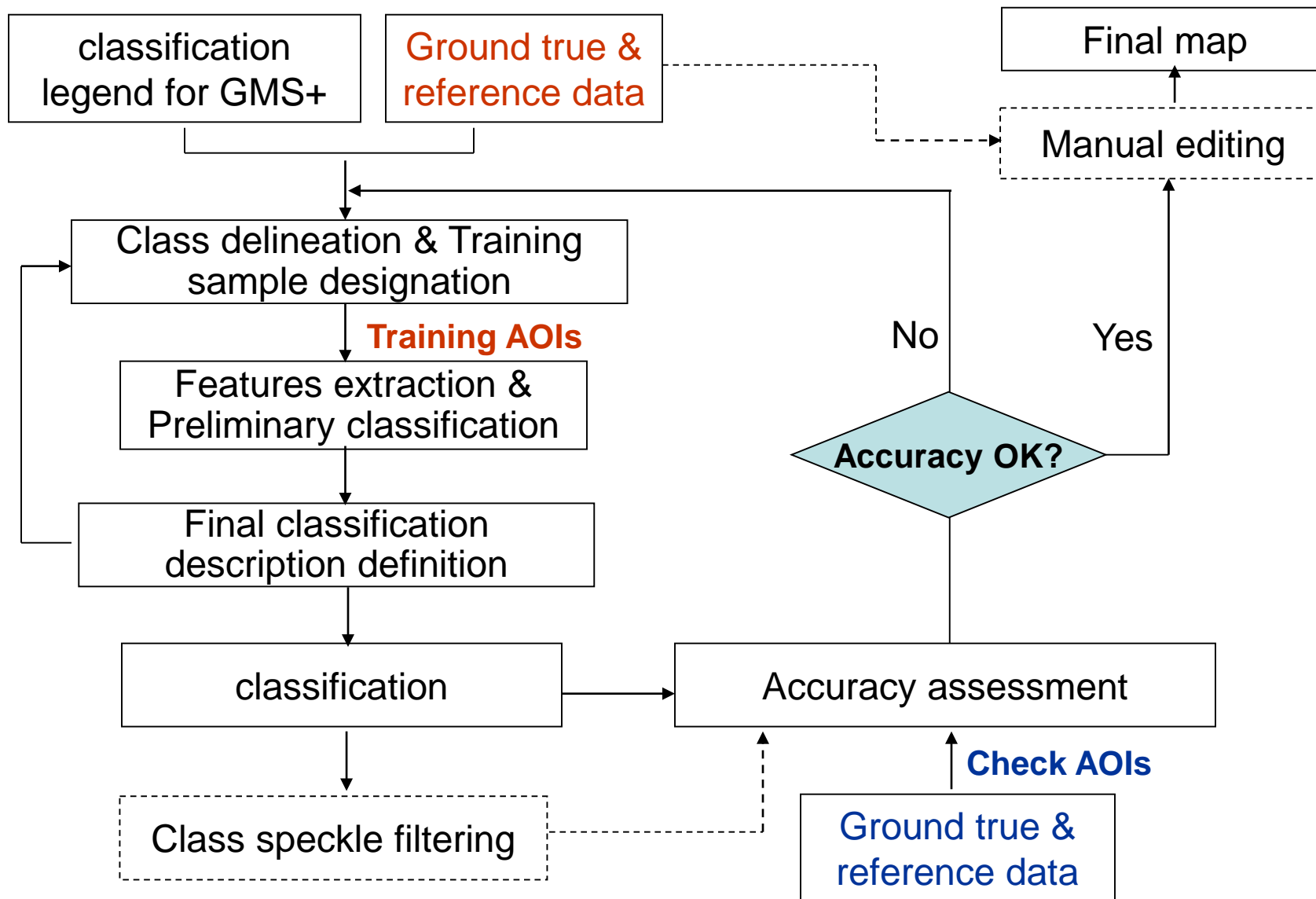
Hierarchical classification system



Level I	Level II	Level III
1Forest	1Needleleaf forest	1Evergreen Needleleaf Forest
		2Deciduous Needleleaf Forest
	2Broadleaf forest	1Evergreen Broadleaf Forest
		2Deciduous Broadleaf Forest
	3Mixed forest	
	4Bamboo	
	5Wetland forest	1Mangrove Forest
		2Peat Swamp Forest
		3Fresh Water Swamp Forest
	6Gallery Forest	
2Non-Forest	1Shrub land	
	2Savannahs	
	3Grassland	
	4Crop land	
	5Urban and Built-Up	
	6Water	
	50Bare land	
	51Snow	
3Cloud	1Other unclassified	
4No data		



Mid-resolution forest mapping algorithms development-**General classification routes**

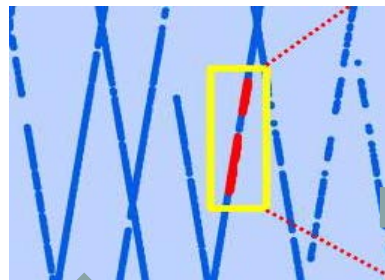




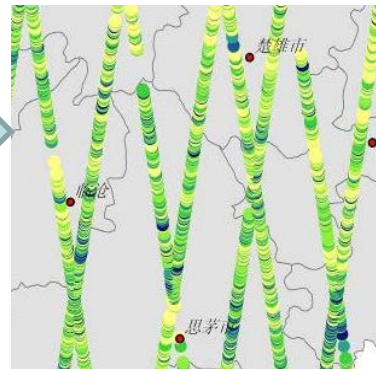
Scheme for GMS+ AGB estimation



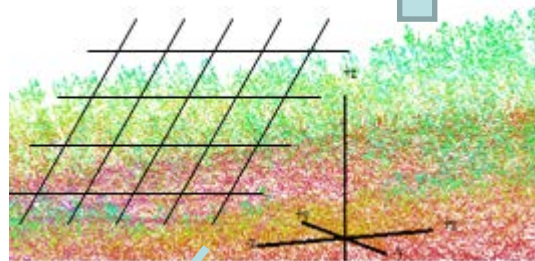
Spaceborne
Lidar data



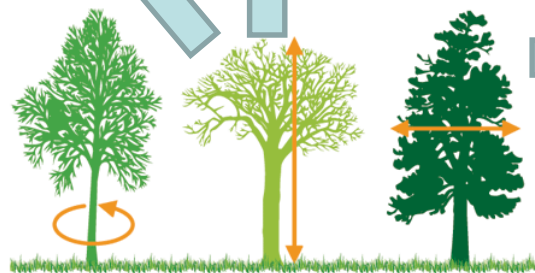
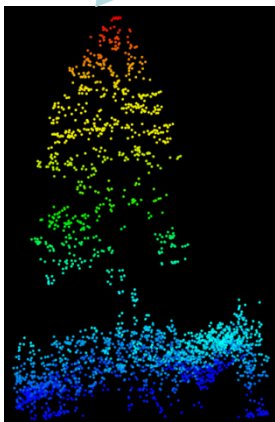
AGB @ Lidar
footprints



Imagery RS data



ALS data

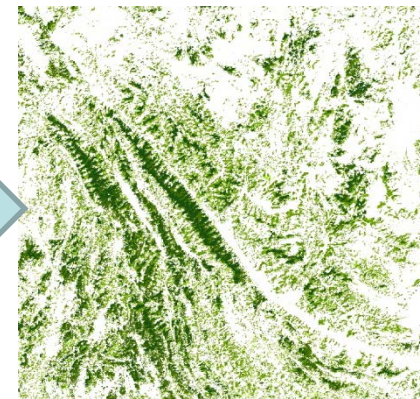


TRUNK
CIRCUMFERENCE VERTICAL
HEIGHT AVERAGE
CROWN SPREAD

Field measurements



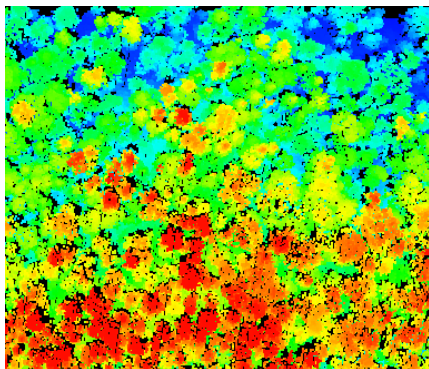
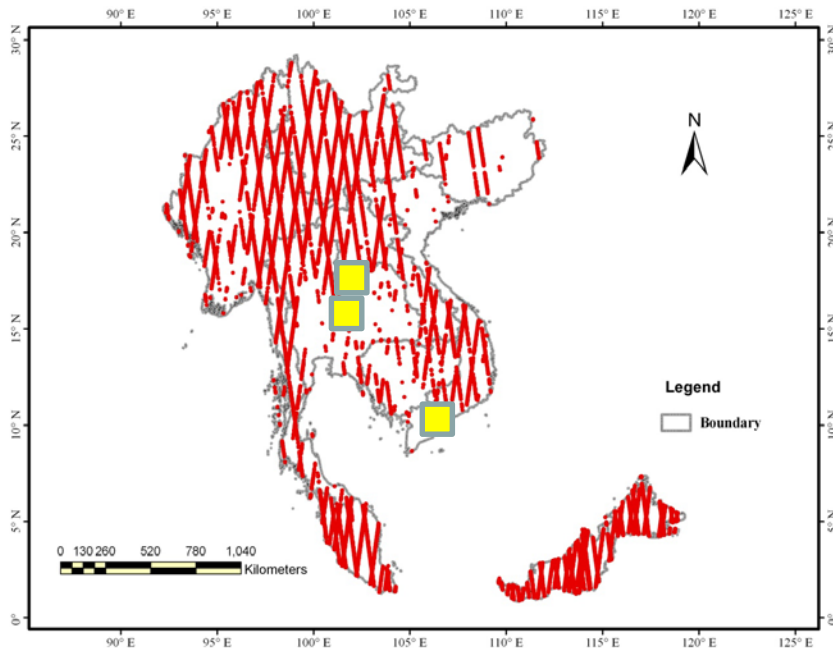
Auxiliary
datasets



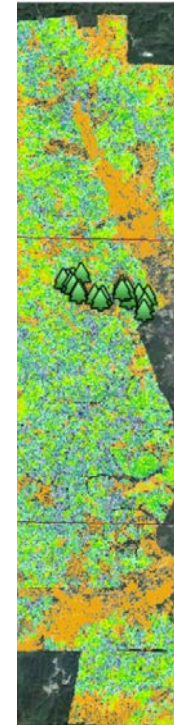
Continuous AGB
@ regional scale



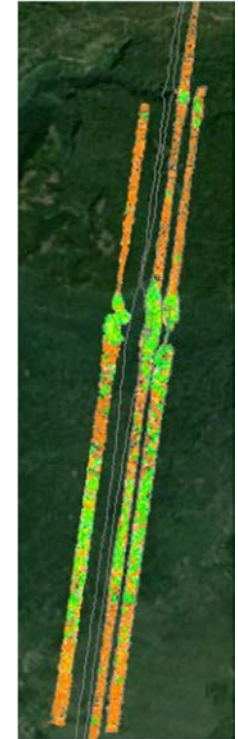
Airborne Waveform Lidar Data Collection along ICESat GLAS Orbits



**Kunming, China
2007**



**Jinghong,
China,
2009**



**Chambas,
Laos, 2012**



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National-institute-owned ground truth database



Country	Previous and current land cover maps or forest inventories
Cambodia	The reference dataset for using forest map validation were generated from other relevant project
Guangxi , China	1) 4946 CFI plots in 2005 and 2010 of Guangxi Continue Forest Inventory. 2) Sampling data from the Forest resources database of Guangxi in 2009, which compose of 20,000 sub-compartments. 3) The thematic map of mangrove distribution in Guangxi in 2007 and 2010
Lao PDR	Land use land cover map for 1993, 1997, and 2002.
Malaysia	Biomass data that has been measured from forest inventories study
Myanmar	IRS Liss 3 of 2010 for the whole country, 1: 50,000 scale UTM topographic maps of the whole country, Forest Department owned ground truth data GPS photo points were used for 17 land use classes
Thailand	The forest cover maps for Thailand were produced in 2000, 2004 and finally 2008.
Vietnam	Forest and land use map 2005-2010 and auxiliary document of forest land use on 3 test site
Yunnan, China	Collected classification reference data in vector format for the 3 key test sites and the other 3 counties outside the key test sites. Collected more than 600 forest temporal inventory plots data measured by angular gauge measurement in the year of 2006 for the 3 key test sites.



Field work

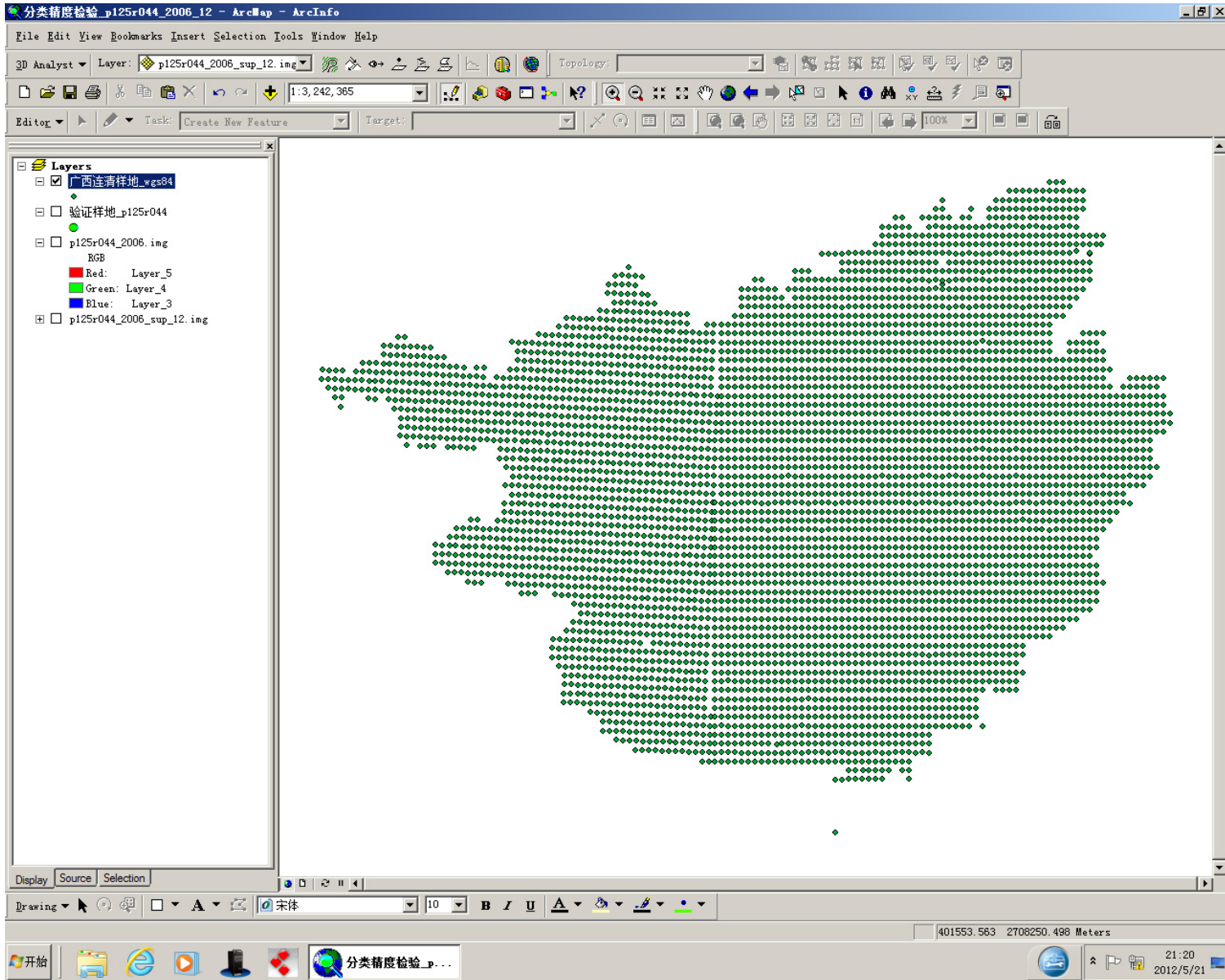
Each IA will measure 100 forest field plots centered by ICESat GLAS footprint from typical forests for biomass estimation and establish classification validation plots (50 plots for each class) for forest distribution maps evaluation.

Country	Status of plots centered by ICESat GLAS footprint from typical forests for biomass estimation and for forest distribution maps evaluation
Cambodia	100 GLAS plots, 384 GPS photo points.
China Guangxi	103 plots for GLAS footprint. Fixed plot data of National Forest Inventory
China Yunnan	103 GLAS plots. 356 points of field plots with photos and 54 with no photos, 900 sample plots with land cover information from forest inventory data in 2 test sites were collected.
Laos	120 sample plots. 850 GPS points.
Malaysia	100 GLAS plots. A total of 50 GPS photographs for each type of land use were collected
Thailand	97 GLAS plots. 172 sample points
Vietnam	40 GLAS plots. 1045 key check point



Institute-owned reference database

Continuous Forest Inventory plots in Guangxi, China





Tree measurement at field of Laos PDR



- Tree species was identified and noted in the field
- Collaboration with district staff and local people to do fieldwork





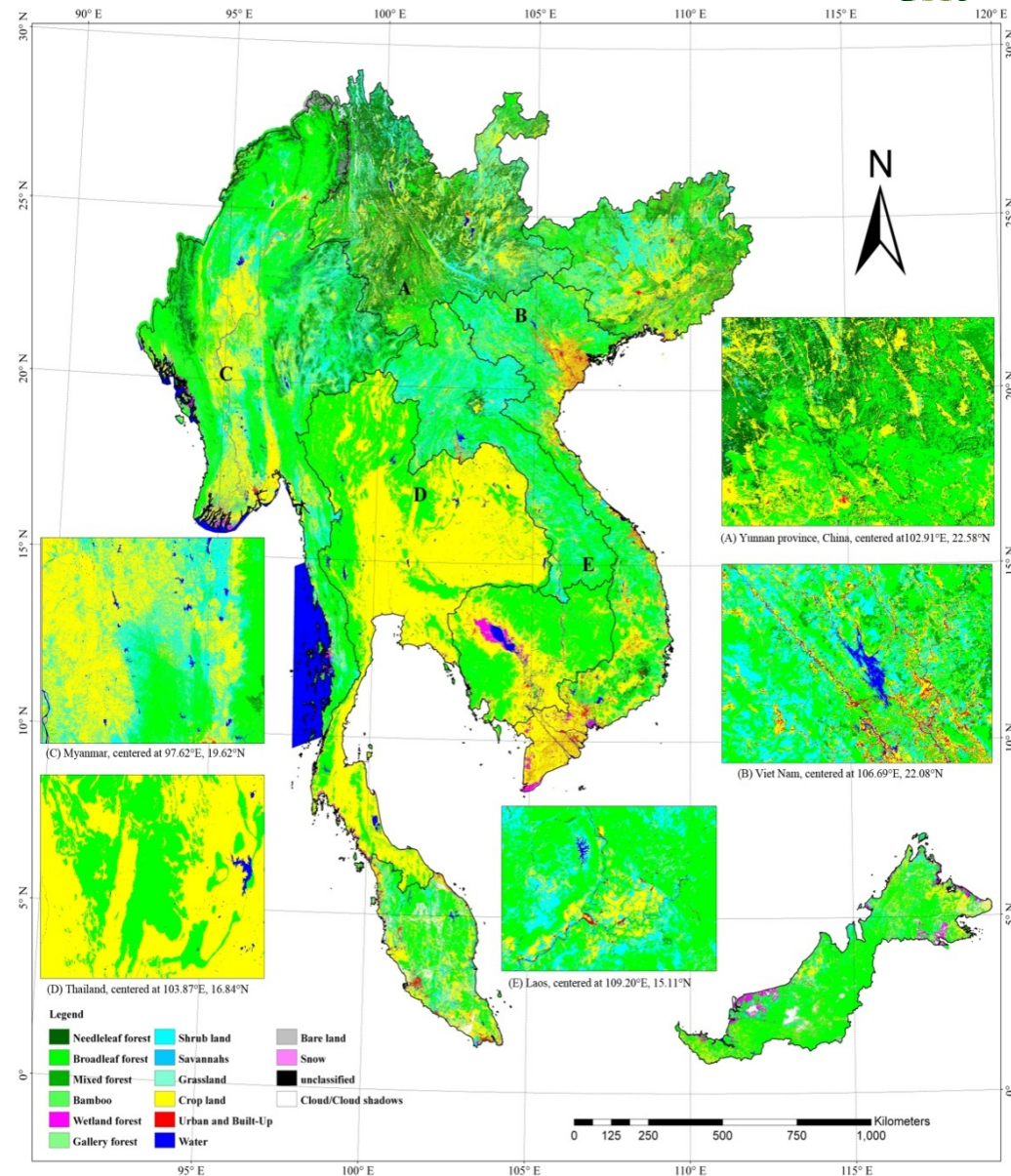
Forest coverage of 2005 (30 m)



- Whole region forest coverage is 45%.

Forest coverage of each country is as (%):

<i>Cambodia</i>	<i>59</i>
<i>Guangxi, China</i>	<i>59.32</i>
<i>Lao</i>	<i>51.39</i>
<i>Malaysia</i>	<i>67.41</i>
<i>Myanmar</i>	<i>54</i>
<i>Thailand</i>	<i>33.79</i>
<i>Viet Nam</i>	<i>37</i>
<i>Yunnan, China</i>	<i>53.42</i>





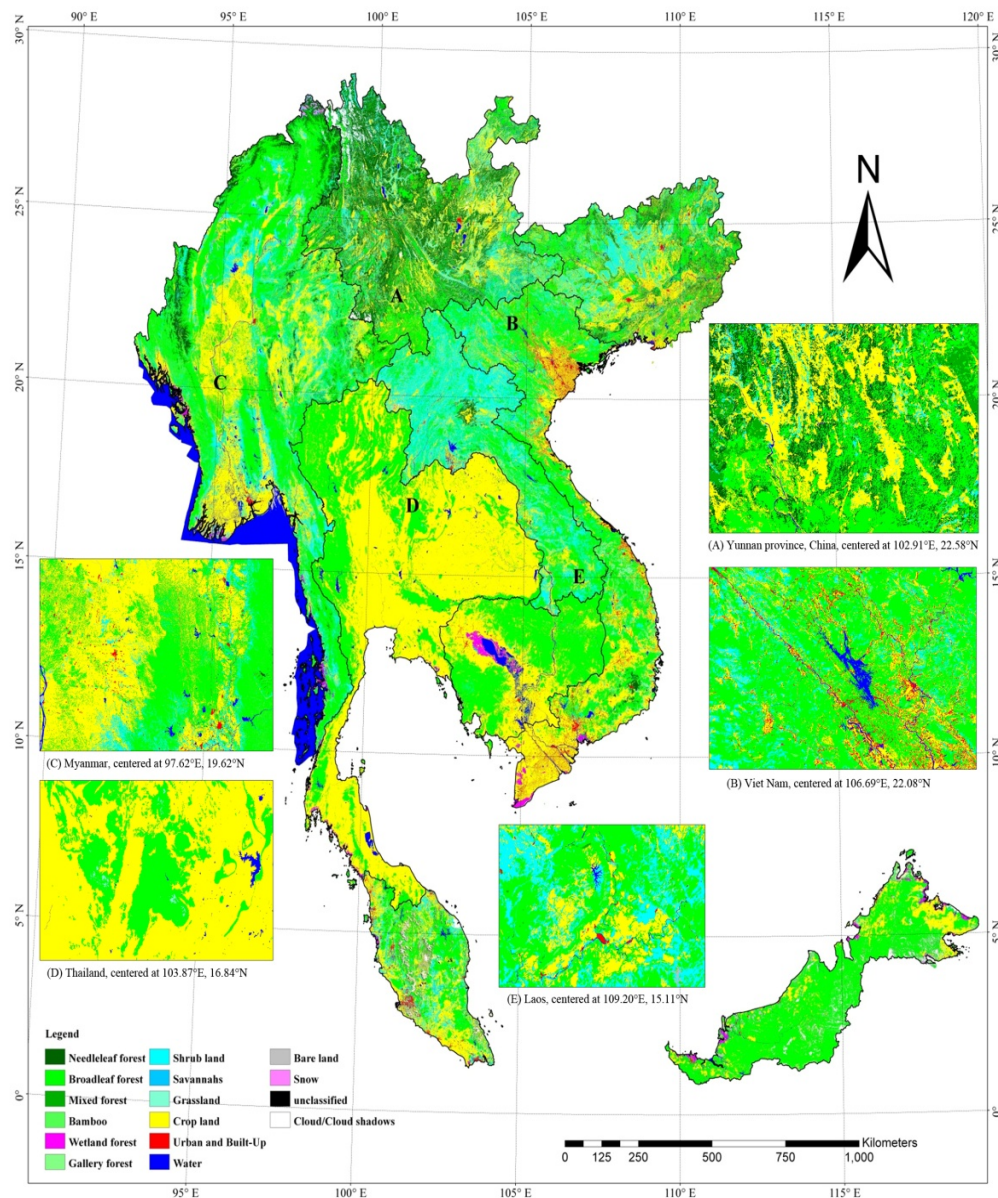
Forest coverage of 2010 (30 m)



- Whole region forest coverage is 42%.

Forest coverage of each country is as (%):

<i>Cambodia</i>	<i>57</i>
<i>Guangxi, China</i>	<i>57.47</i>
<i>Lao</i>	<i>37.12</i>
<i>Malaysia</i>	<i>62.43</i>
<i>Myanmar</i>	<i>45</i>
<i>Thailand</i>	<i>31.57</i>
<i>Viet Nam</i>	<i>39.5</i>
<i>Yunnan, China</i>	<i>52.19</i>



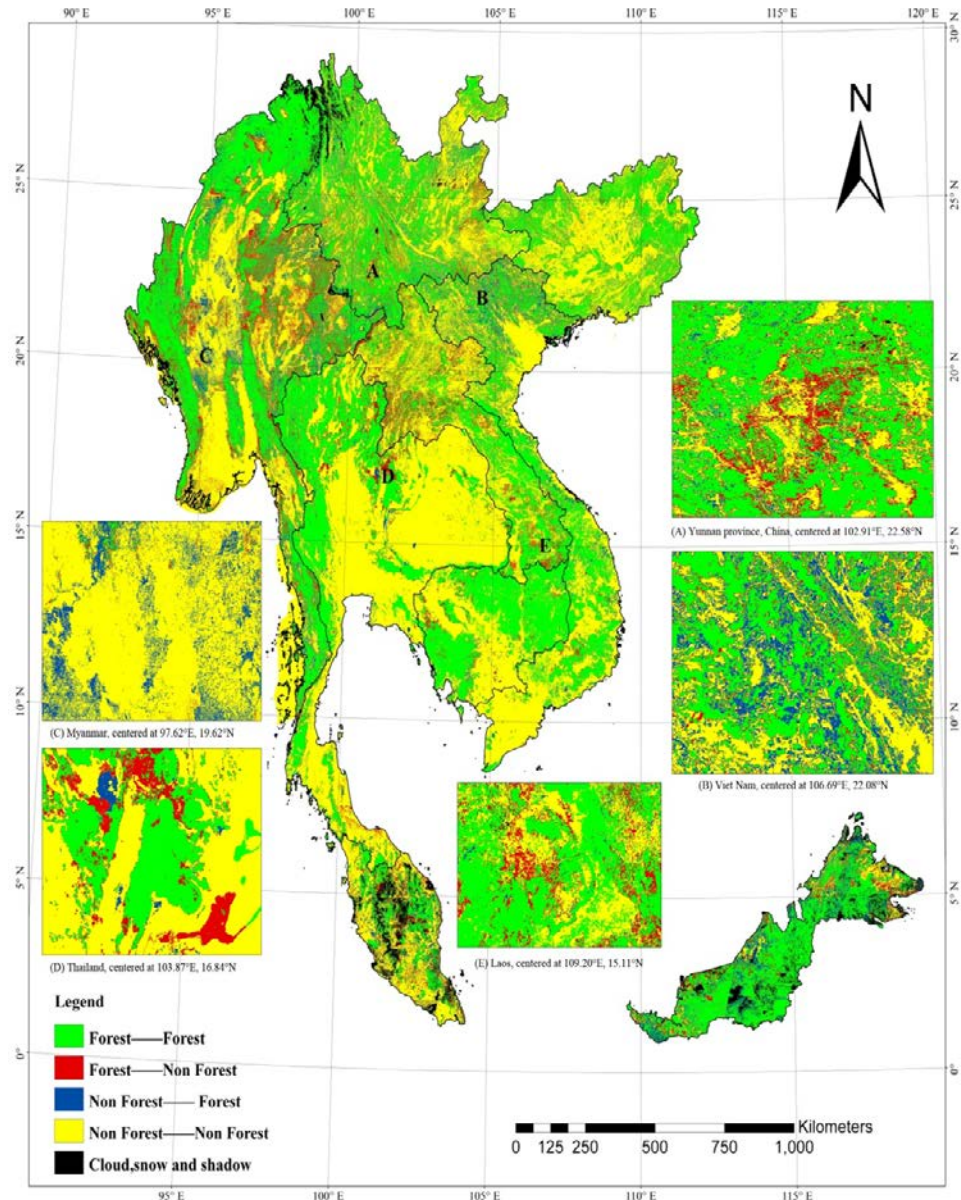


Forest change between 2005 & 2010



- Forest net loss 3%.

<i>country/area</i>	<i>forest cover 2005 (%)</i>	<i>forest cover 2010 (%)</i>
<i>Cambodia</i>	<i>59</i>	<i>57</i>
<i>Guangxi, China</i>	<i>59.32</i>	<i>57.47</i>
<i>Lao</i>	<i>51.39</i>	<i>37.12</i>
<i>Malaysia</i>	<i>67.41</i>	<i>62.43</i>
<i>Myanmar</i>	<i>54</i>	<i>45</i>
<i>Thailand</i>	<i>33.79</i>	<i>31.57</i>
<i>Viet Nam</i>	<i>37</i>	<i>39.5</i>
<i>Yunnan, China</i>	<i>53.42</i>	<i>52.19</i>

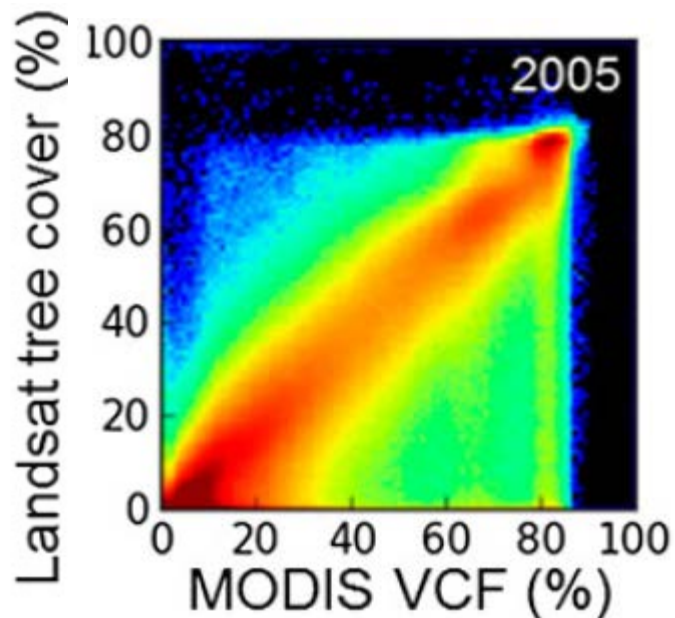




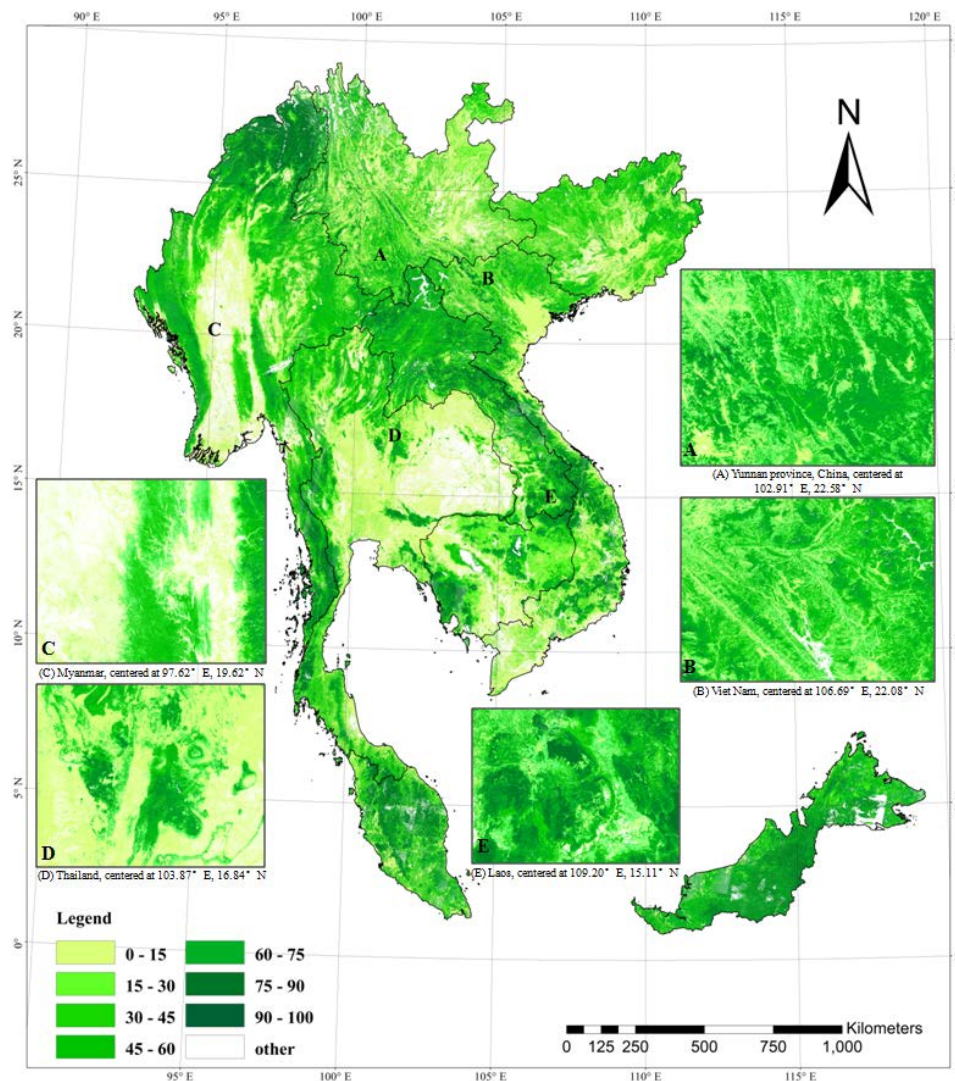
Continuous Fields of Tree Cover



Rescaled the 250-m MODIS VCF Tree Cover dataset using Landsat images and ancillary data.



2005 Continuous Fields of Tree Cover using Landsat TM/ETM+ (30 m spatial resolution)



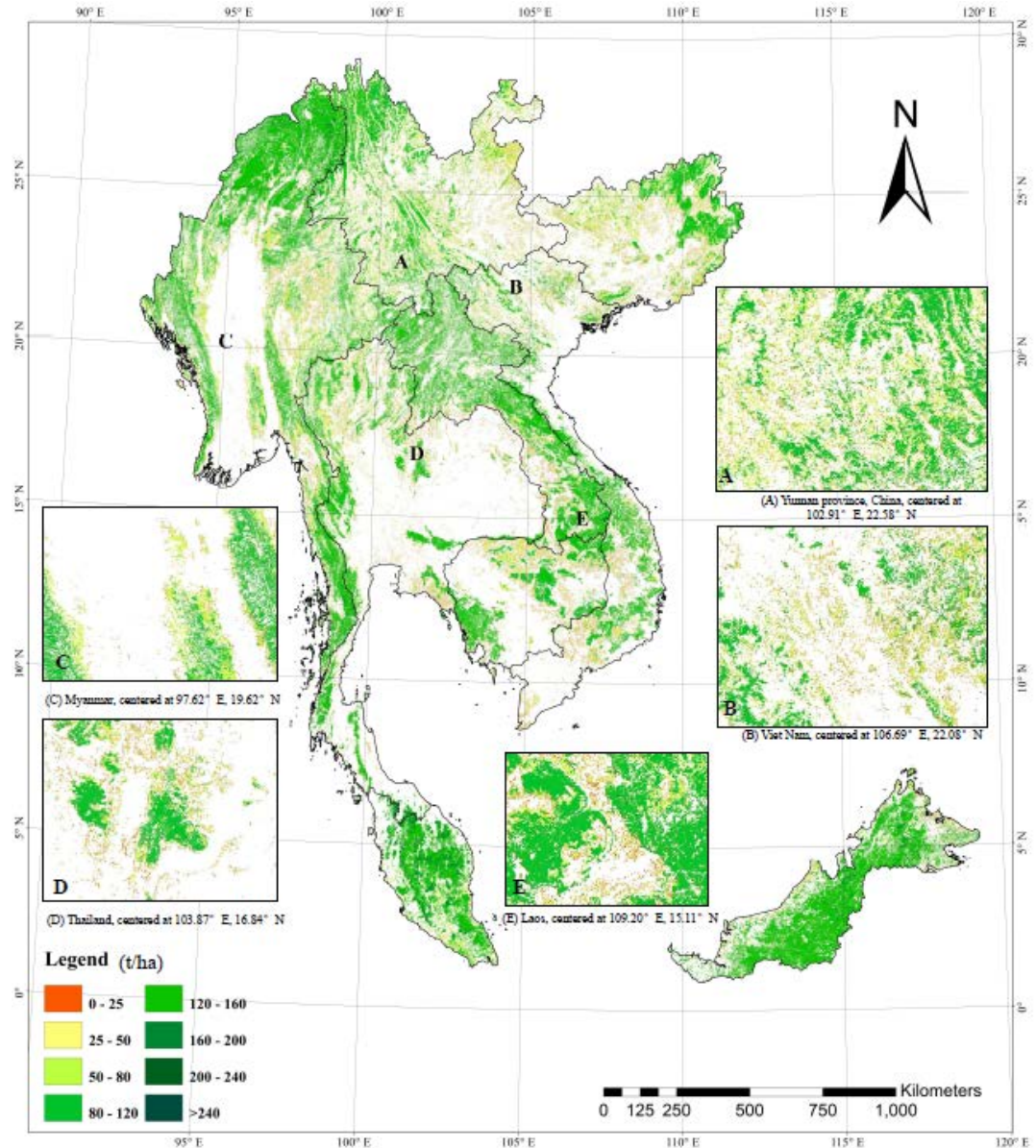


Forest carbon storage of 2005



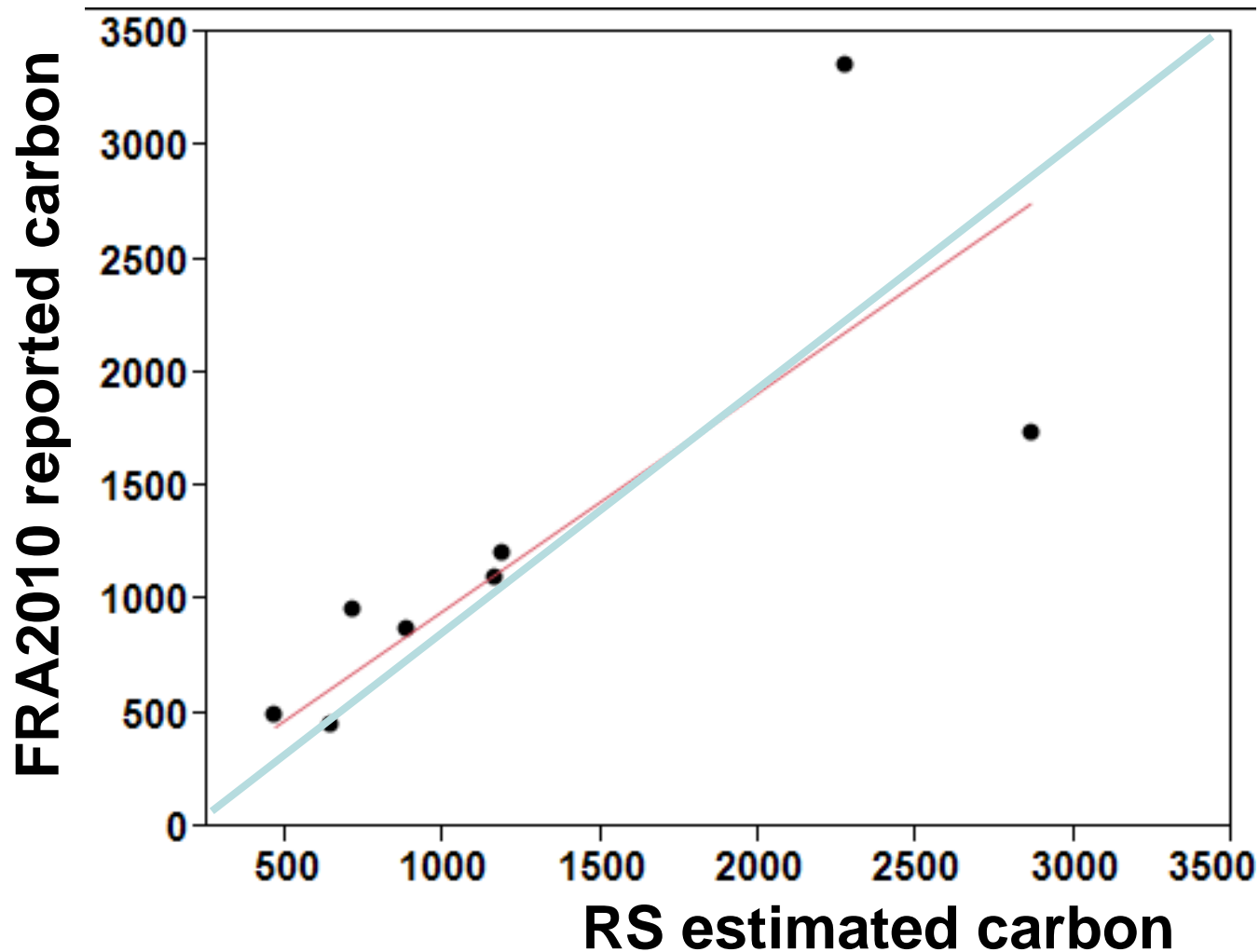
- The total estimated carbon stock was 10,165 million tons.

Carbon density distribution patterns are along most mountains.





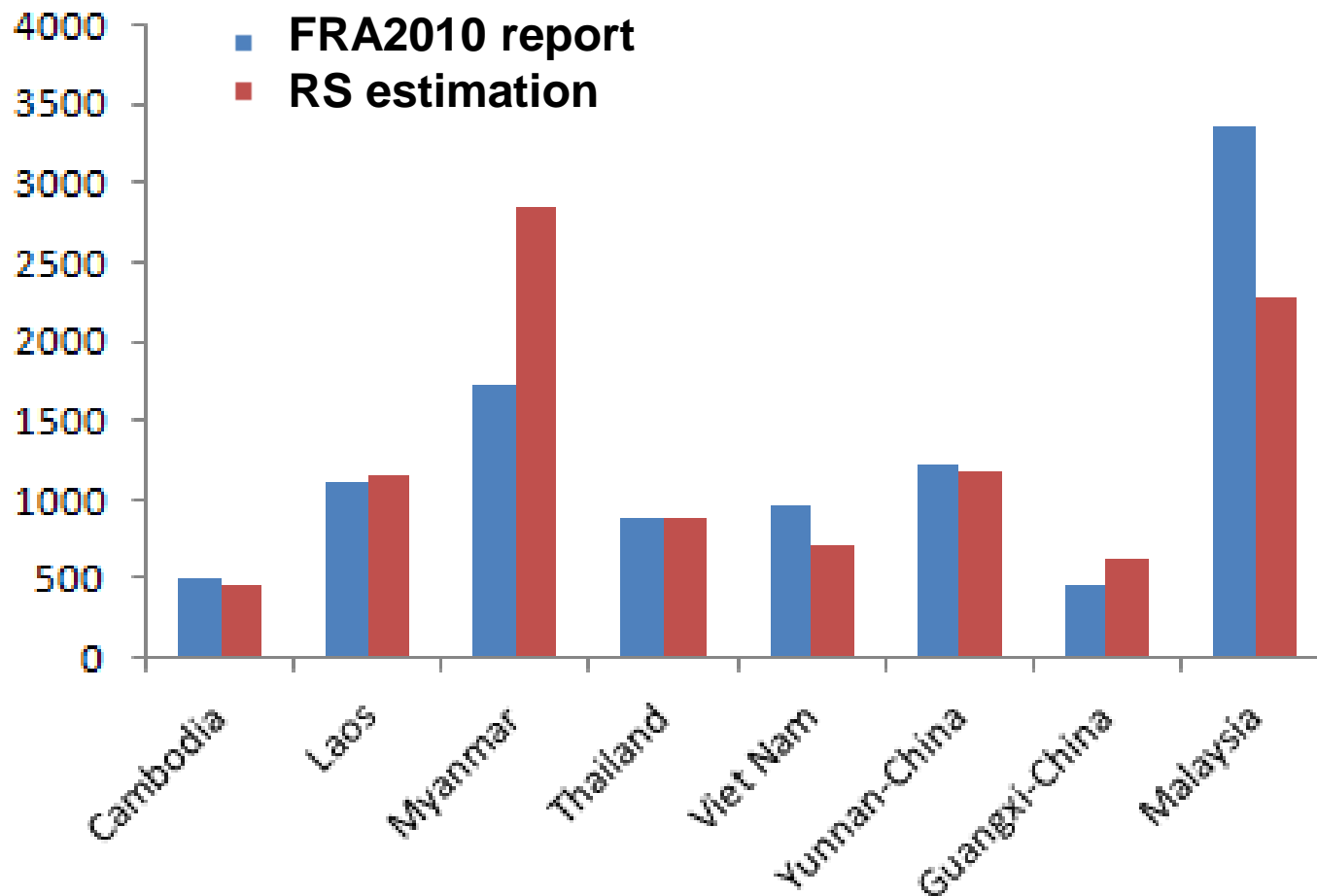
Comparison of estimated forest carbon with FRA2010 (million ton)



(* Yunnan & Guangxi was from the 7th National Forest inventory of China)



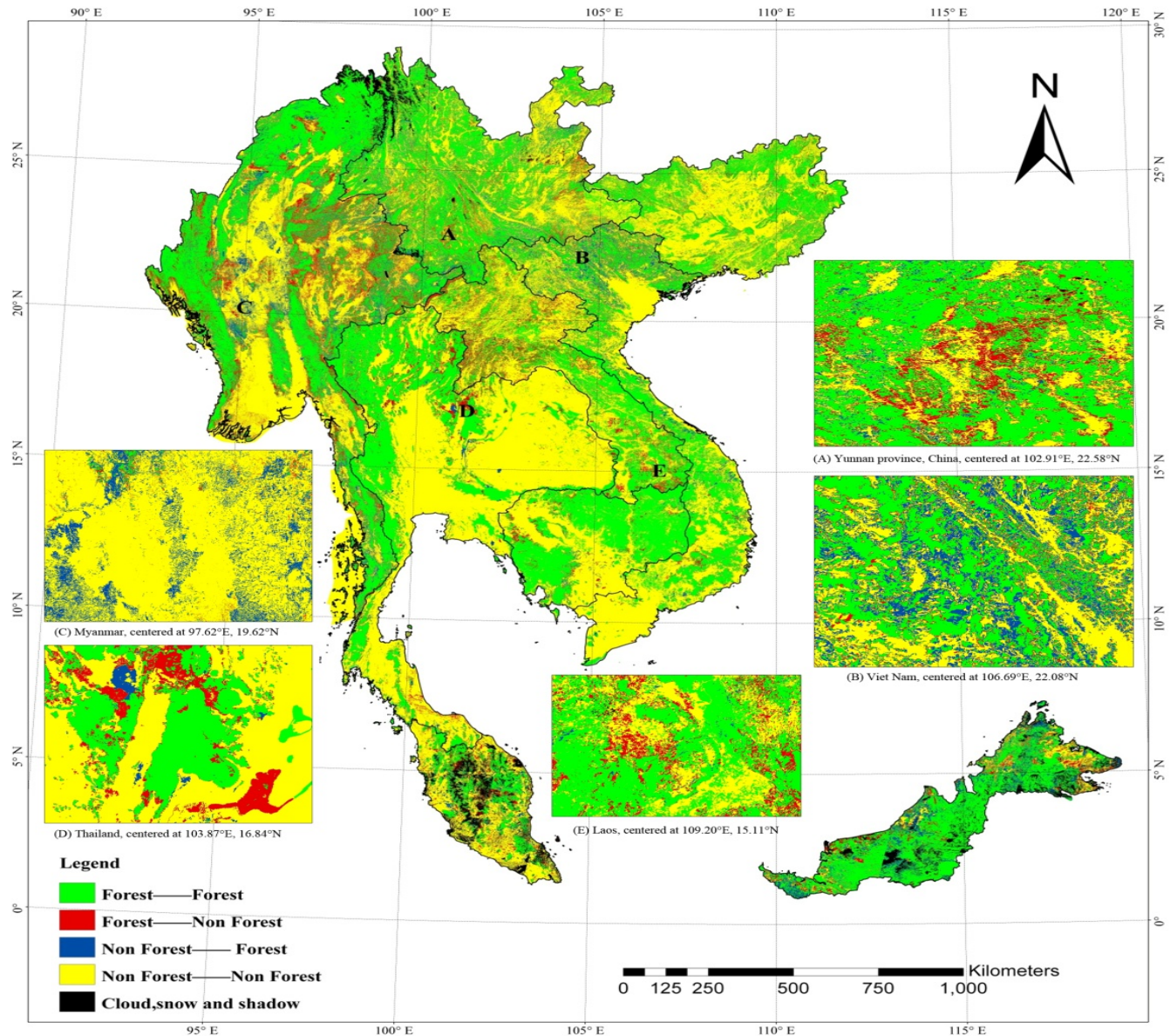
Comparison of estimated forest carbon with FRA2010 (million ton)



(* Yunnan & Guangxi was from the 7th National Forest inventory of China)

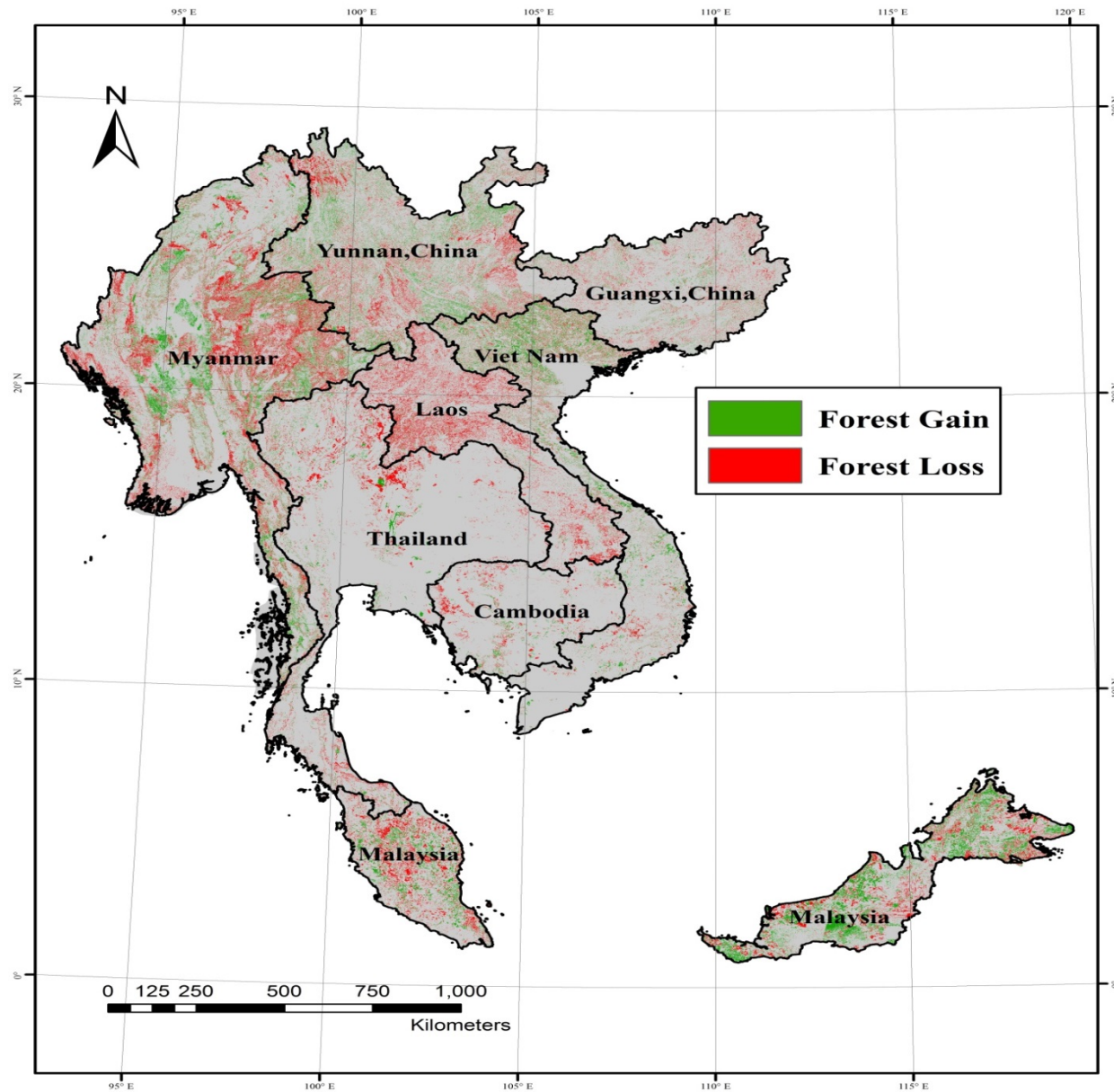


Forest Coverage Change Between 2005 and 2010 in GMS & Malaysia



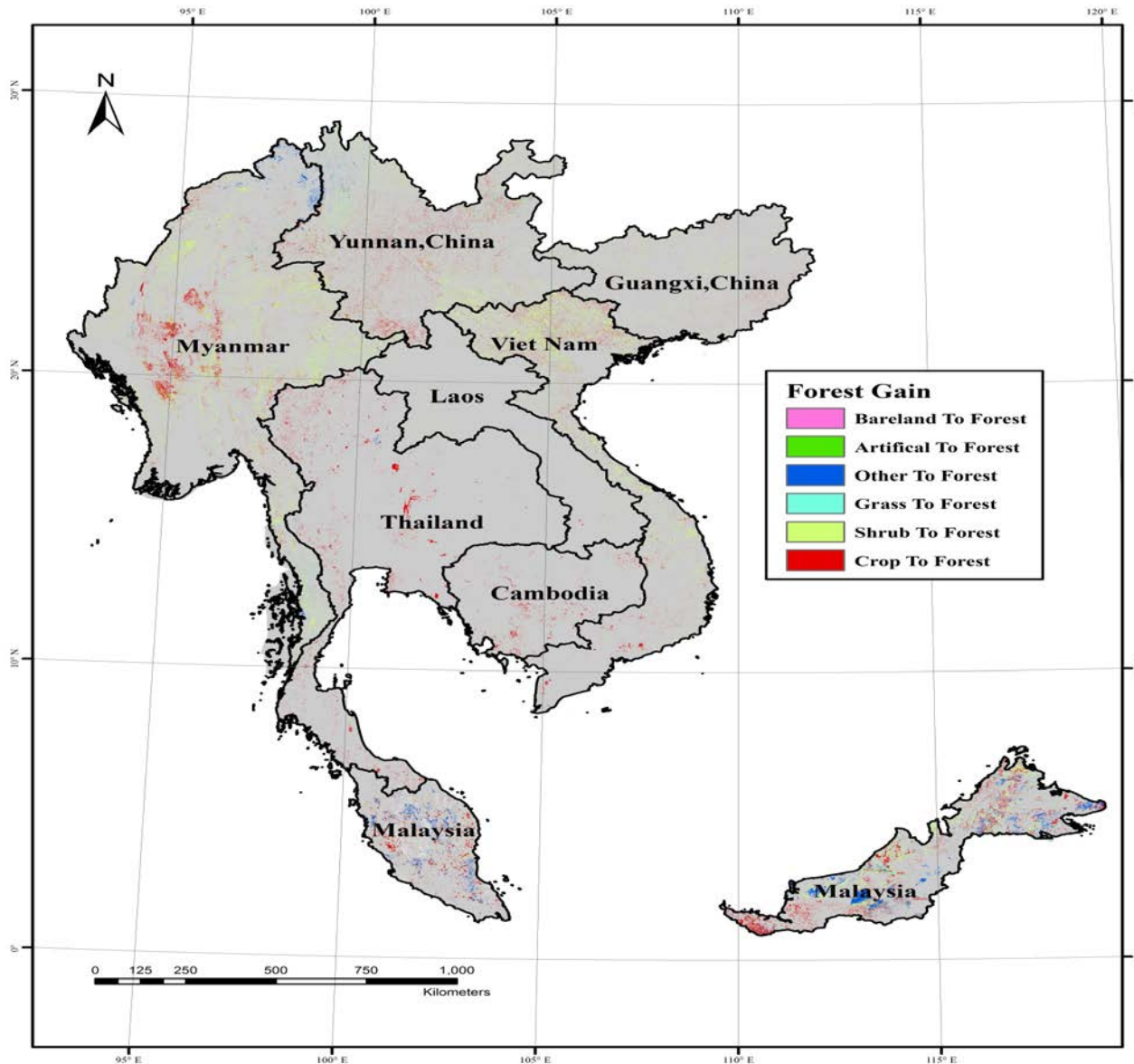


Forest Gain and Loss Between 2005 and 2010 in GMS & Malaysia



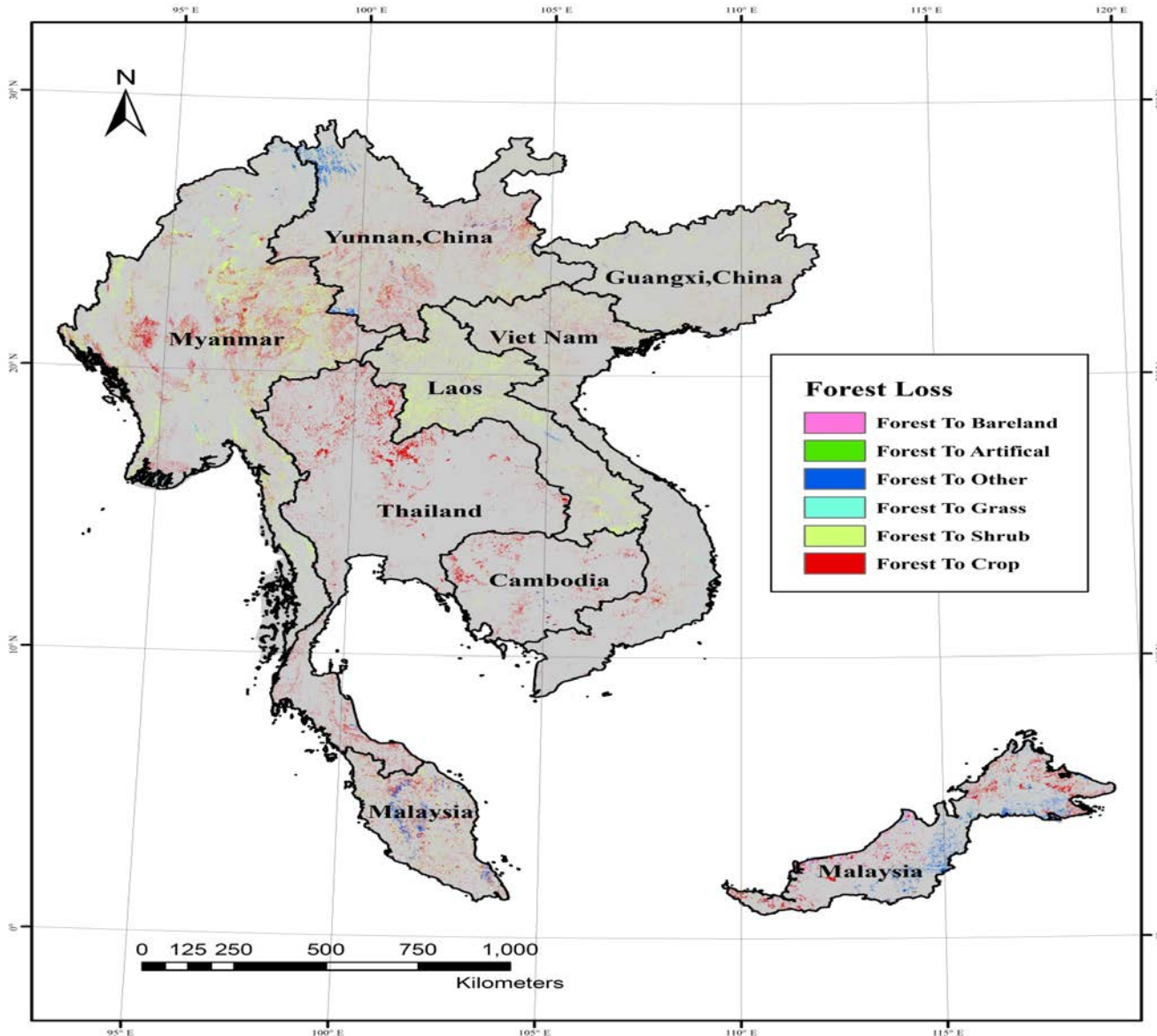


The Sources of Forest Gain Between 2005 and 2010 in GMS & Malaysia



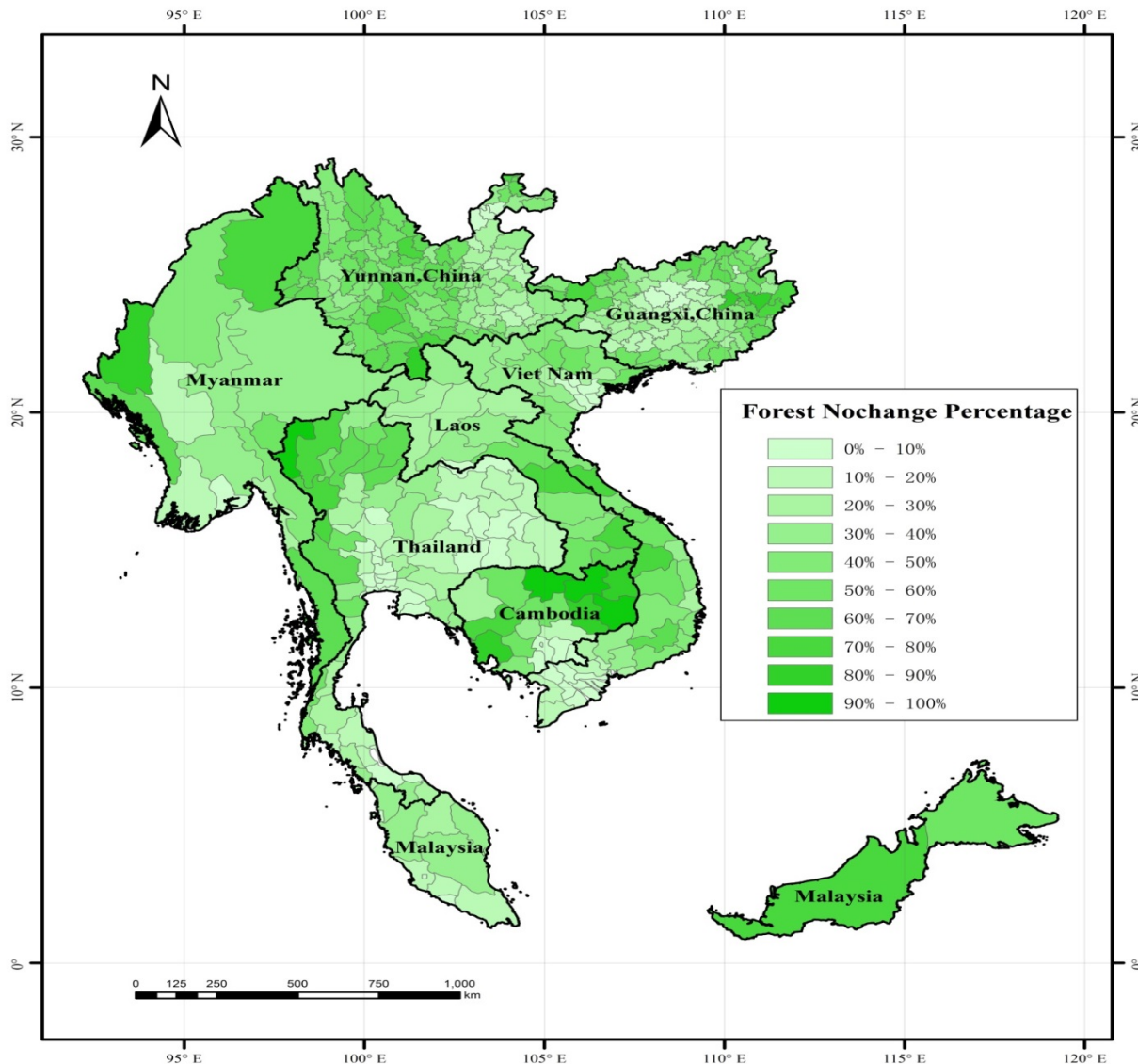


The Sources of Forest Loss Between 2005 and 2010 in GMS & Malaysia



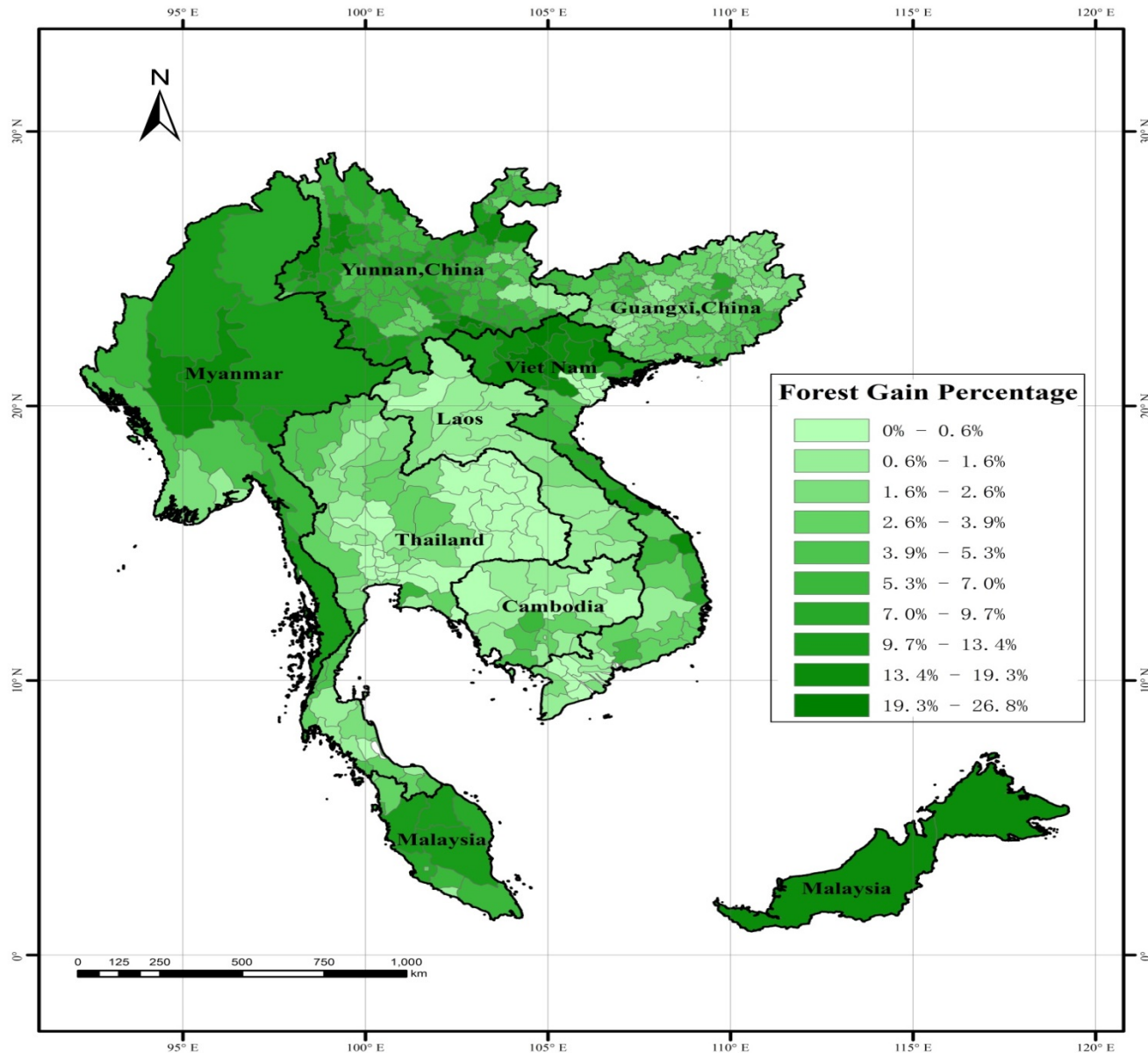


Permanent Forest Cover Percentage Between 2005 and 2010 at Province/County Level in GMS & Malaysia



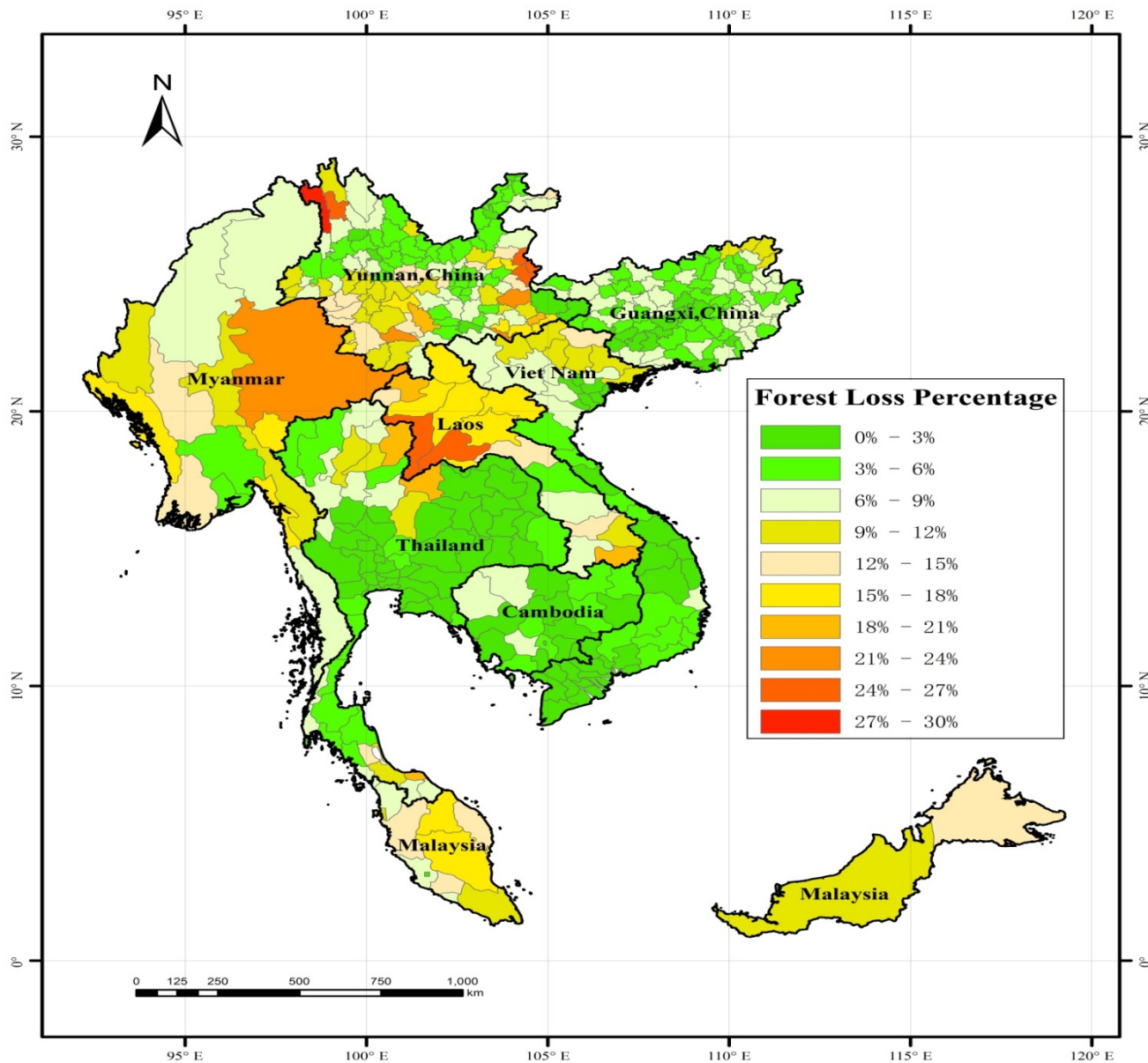


Forest Gain Percentage Between 2005 and 2010 at Province/County Level in GMS & Malaysia



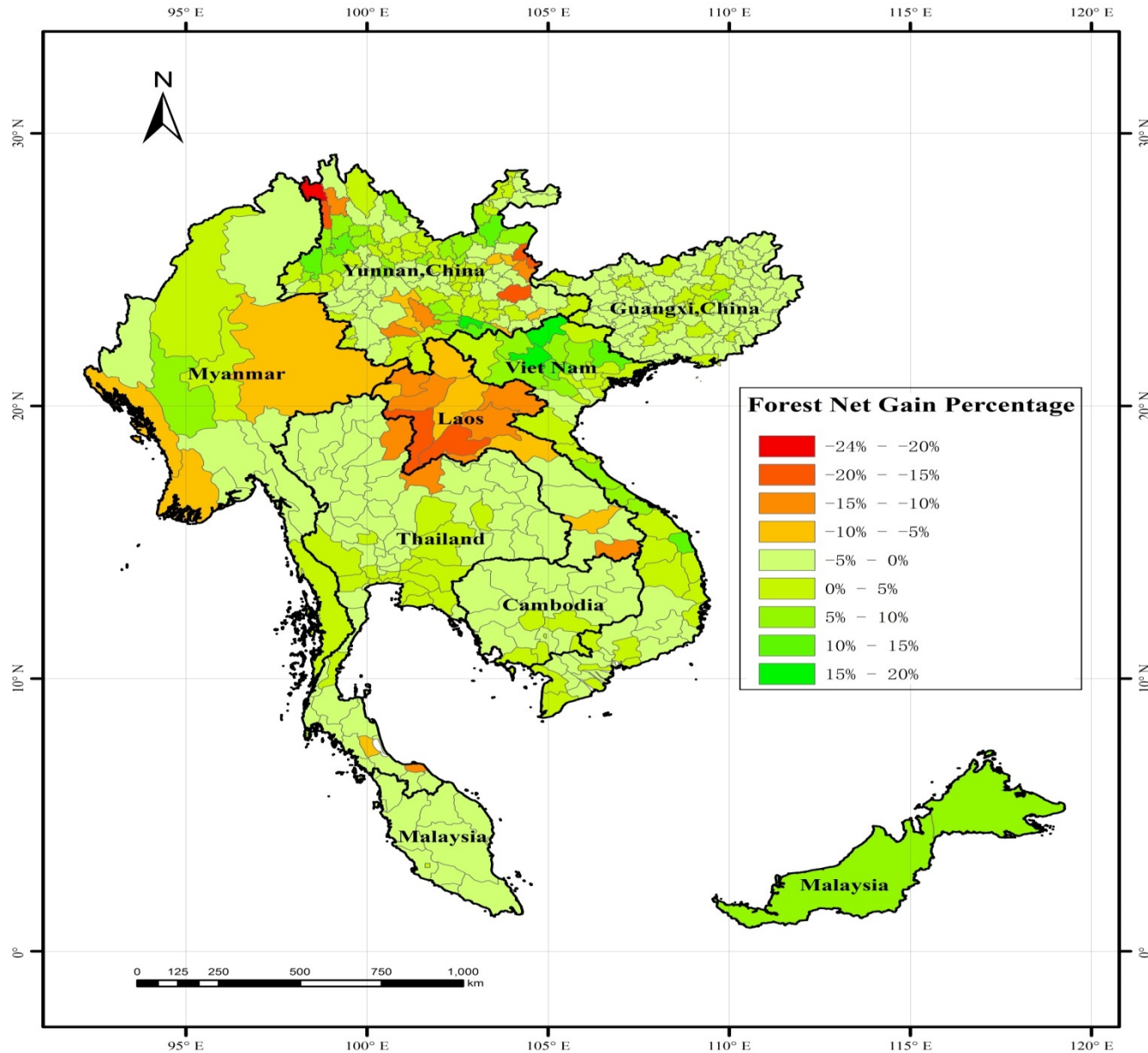


Forest Loss Percentage Between 2005 and 2010 at Province/County Level in GMS & Malaysia





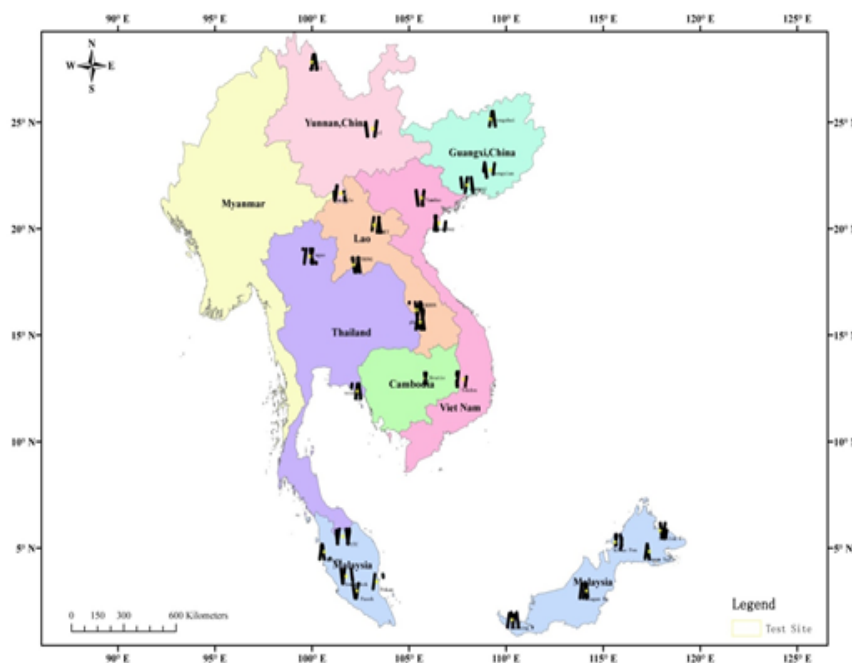
Forest Net Gain/Loss Percentage Between 2005 and 2010 at Province/County Level in GMS & Malaysia





Forest Cover Mapping in the Greater Mekong Subregion and Malaysia

Guidance and test sites work

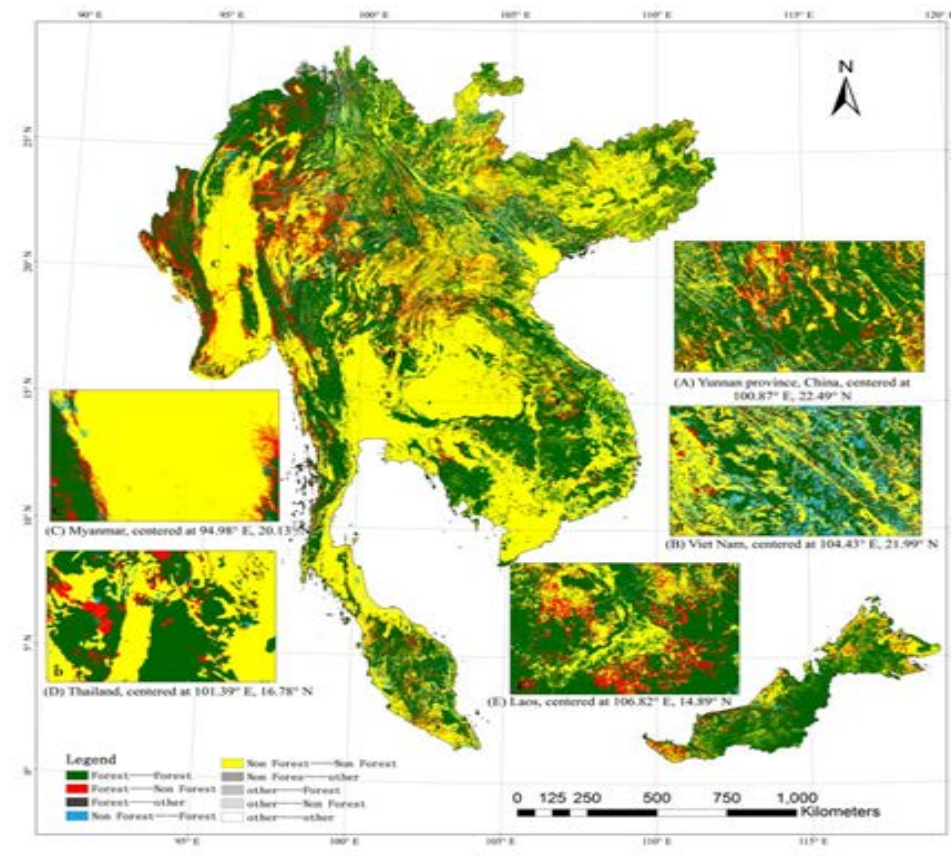


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Forest Cover Mapping in the Greater Mekong Subregion and Malaysia during 2005-2010





Document No.:
Receiving Date:
(For APFNet Secretariat)

*Asia-Pacific Network for Sustainable Forest
Management and Rehabilitation*

Completion Report

Forest Cover and Carbon Mapping in the Greater
Mekong Subregion and Malaysia

September 2011-February 2014

Institute of Forest Resources Information Techniques, Chinese Academy of Forestry, China
Department of Geographical Sciences, University of Maryland, USA
Global Observation of Forest and Land Cover Dynamics
Guangxi Forest Inventory & Planning Institute, China
Forestry Administration, Cambodia
Forest Department, Myanmar
Forest Inventory and Planning Institute, Viet Nam
Forest Research Institute Malaysia, Malaysia
National University of Laos, Lao PDR
Royal Forest Department, Thailand
Southwest Forestry University, China

May 24, 2014



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*Asia-Pacific Network for Sustainable Forest
Management and Rehabilitation*

Technical Report

Forest Cover and Carbon Mapping in the Greater
Mekong Subregion and Malaysia

September, 2011 to February, 2014

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Forest Research Institute Malaysia, Malaysia
National University of Laos, Lao PDR
Royal Forest Department, Thailand
Southwest Forestry University, China

June, 2014



Achievements Atlas of the Project “Forest Cover and Carbon Mapping in the Greater Mekong Subregion and Malaysia”

Asia-Pacific Network for Sustainable Forest Management and Rehabilitation

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Chinese Academy of Forestry, China

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Forestry Administration, Cambodia

National University of Laos, Lao PDR

Forest Research Institute Malaysia, Malaysia

Forest Department, Myanmar

Royal Forest Department, Thailand

Forest Inventory and Planning Institute, Viet Nam





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Training Workshops for forest and biomass mapping



Vientiane, Laos, June, 2012



Nay Pyi Taw, Myanmar, Sep. , 2013

- Six training and progress workshops
- 179 persons attended



Stakeholders consultation meeting - Malaysia





Stakeholders consultation meeting - Cambodia





Outputs get attention in Thailand (@ GEOINFOTECH 2017)



โครงการวิจัยเรื่อง การทำแผนที่ป่าไม้และแผนที่ก๊าซคาร์บอนไดออกไซด์ ในประเทกลุ่มอนุภูมิภาคน้ำโขงและประเทศมาเลเซีย Forest Cover and Carbon Mapping in the Greater Mekong Subregion and Malaysia

กรมป่าไม้ได้รับเชิญจาก สถาบันสารสนเทศทรัพยากรป่าไม้ (Institute of Forest Resource Information Techniques: IFRIT) ซึ่งเป็นหน่วยงานภายใต้ สถาบัน
วนศาสตร์แห่งประเทศไทย (Chinese Academy of Forestry: CAF) เมื่อได้เข้าร่วมโครงการวิจัย เรื่อง Forest Cover and Carbon Mapping in the Greater Mekong
Subregion and Malaysia โดยได้รับมอบหมายจากกระทรวงทรัพยากรธรรมชาติและสิ่งแวดล้อมเพื่อเตรียมข้อมูลและจัดการงานป่าไม้ยั่งยืน (Asia-Pacific Network for
Sustainable Forest Management and Rehabilitation: APFNet) โดยที่ IFRIT ทำหน้าที่เป็นผู้รับผิดชอบโครงการ (Executing Agency) ระหว่างสถาบันโครงการกับ
24 เดือน ตั้งแต่ 1 กันยายน 2554 - 31 สิงหาคม 2556 สำหรับหน่วยงานที่เข้าร่วมดำเนินงานประกอบด้วย

พื้นที่ศึกษาโครงการตั้งอยู่ระหว่างเส้น Longitude ที่ 92.2° E - 119.3° E และเส้น Latitude ที่ 0.8° N - 29.2° N ซึ่งมีพื้นที่โครงการทั้งสิ้น
317,242,000 เฮกตาร์

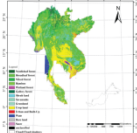
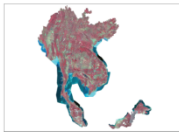
ผลลัพธ์ของโครงการวิจัย

- แผนที่ชนิดป่าไม้ปี พ.ศ. 2548 และ 2553 (Forest Map of 2005 and 2010)

แผนที่ชนิดป่าไม้ของแต่ละประเทศสอดคล้องกับปี พ.ศ. 2548 และ พ.ศ. 2553 ถูกแปลความจากดาวเทียม Landsat TM/ETM+ เป็นส่วนใหญ่ มีเพียงประเทศเวียดนามที่
แปลความจากข้อมูลดาวเทียม IRS LISS จากบินนำมาซ้อนต่อกันเป็นแผนที่ป่าไม้ของนักศึกษาคณะวนศาสตร์ มหาวิทยาลัยเทคโนโลยีพระจอมเกล้าธนบุรี ปี พ.ศ. 2548
เป็น 45% และ พ.ศ. 2553 เป็น 42% นอกจากนี้ยังมีโครงการดำเนินการวิเคราะห์โดยใช้ระบบภูมิสารสนเทศ เพื่อหาพื้นที่ป่าไม้เปลี่ยนแปลง (Forest Changes)
ระหว่างปี พ.ศ. 2548 และ พ.ศ. 2553 อีกด้วย ซึ่งพบระหว่างปี พ.ศ. 2548 - 2553 พื้นที่ป่าไม้ลดลงสุทธิ (Net loss) 3% ของพื้นที่ทั้งหมด



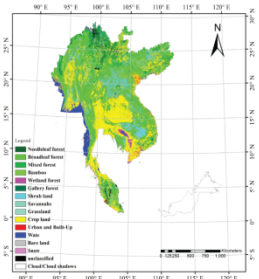
ภาพแผนที่ชนิดป่าไม้โครงการ



Landsat images of GMS subregion and Malaysia in 2005

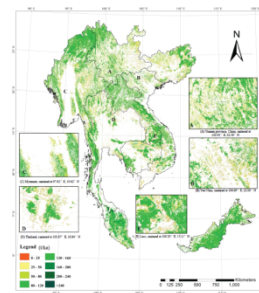
The forest cover map of GMS subregion and Malaysia in 2005

Landsat images of GMS subregion and Malaysia in 2010



country/area	forest cover 2005(%)	forest cover 2010(%)
Cambodia	59	57.07
Guangxi,China	57.87	56.13
Lao	51.51	37.88
Malaysia	59.31	61.64
Myanmar	53.94	44.56
Thailand	33.94	31.32
Viet Nam	37	39.5
Yunnan,China	53.42	52.19

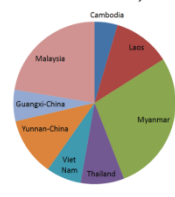
Forest cover in the GMS & Malaysia of 2005 and 2010



Forest carbon estimation in the GMS & Malaysia of 2005

- แผนที่ปริมาณคาร์บอนปี พ.ศ. 2548 (Forest Carbon Storage Map of 2005)

แผนที่ปริมาณคาร์บอนปี พ.ศ. 2543 ถูกคำนวณจากความละเอียดภาพ (Resolution) 300 เมตร โดยใช้ข้อมูลที่ได้สำรวจจากพื้นที่ (Ground
survey) จำนวนร่วมกับข้อมูล Lidar จากการสำรวจพบว่า พื้นที่ป่าไม้ที่มีความหนาแน่นของปริมาณคาร์บอนสะสม (Carbon Storage) ของ
พื้นที่อนุภูมิภาคสุญญาน (Northwest Yunnan) พื้นที่ภาคตะวันออกเฉียงเหนือของมณฑลกว่านซี (Northeast of Guangxi) พื้นที่ชายแดน
ระหว่างประเทศเวียดนาม-จีน-ลาว (Borders of Myanmar-China-Laos) พื้นที่ชายแดนตอนใต้ของประเทศเวียดนาม-ประเทศไทย (Borders
of southern part of Myanmar-Thailand) พื้นที่ตอนกลางและตอนใต้ของประเทศไทย (The center and south of Laos and border regions with Vietnam) และสำหรับประเทศมาเลเซีย พบว่า พื้นที่ป่าไม้ที่ปริมาณคาร์บอนสะสมสูงเป็นพื้นที่
ขนาดใหญ่ของอนุภูมิภาคนี้ประเทศเป็นส่วนใหญ่ และสามารถกล่าวได้ว่าส่วนของพื้นที่ป่าไม้ที่ปริมาณคาร์บอนสะสมของประเทศมาเลเซียและ
ประเทศเวียดนามนับคิดเป็นปริมาณครึ่งหนึ่งของพื้นที่ศึกษาเลยทีเดียว



The distribution of forest carbon in the economies of GMS and Malaysia
ศูนย์สารสนเทศ สำนักพัฒนาและสารสนเทศ กรมป่าไม้





6. Summary -1/2

- I. **Methods for forest cover mapping and carbon estimation were developed.**
- II. **Reference databases and Remote sensing databases have been established.**
- III. **Produce forest cover maps of 2005, and 2010 at 30 m spatial resolution and forest cover maps annually from 2005 to 2010 at 500 m spatial resolution were produced.**
- IV. **Forest above ground biomass map for 2005 at 500 m spatial resolution was produced.**





6. Summary -2/2

- I. Forest coverage is 45% in 2005 and 42% in 2010.
- II. Forest loss is about 3% from 2005 to 2010.
- III. The total estimated carbon stock was 10,165 million tons. Malaysia and Myanmar had half of total carbon stock of this region.
- IV. With the developed methods and more satellites data available, the forest mapping methods are extendable spatially for larger region and temporally for longer period.





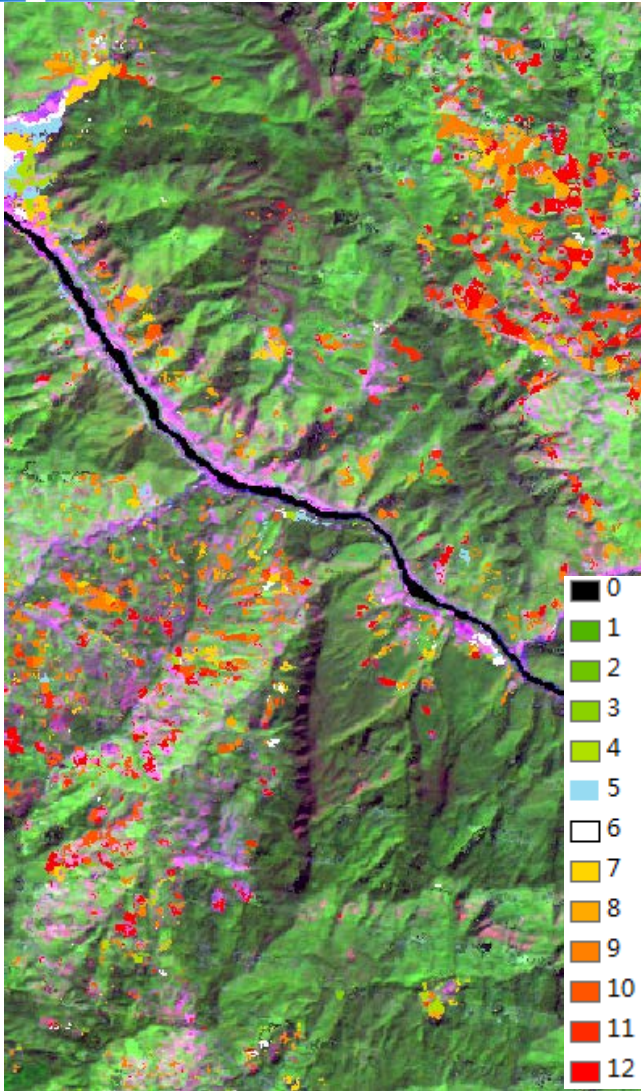
Move forward



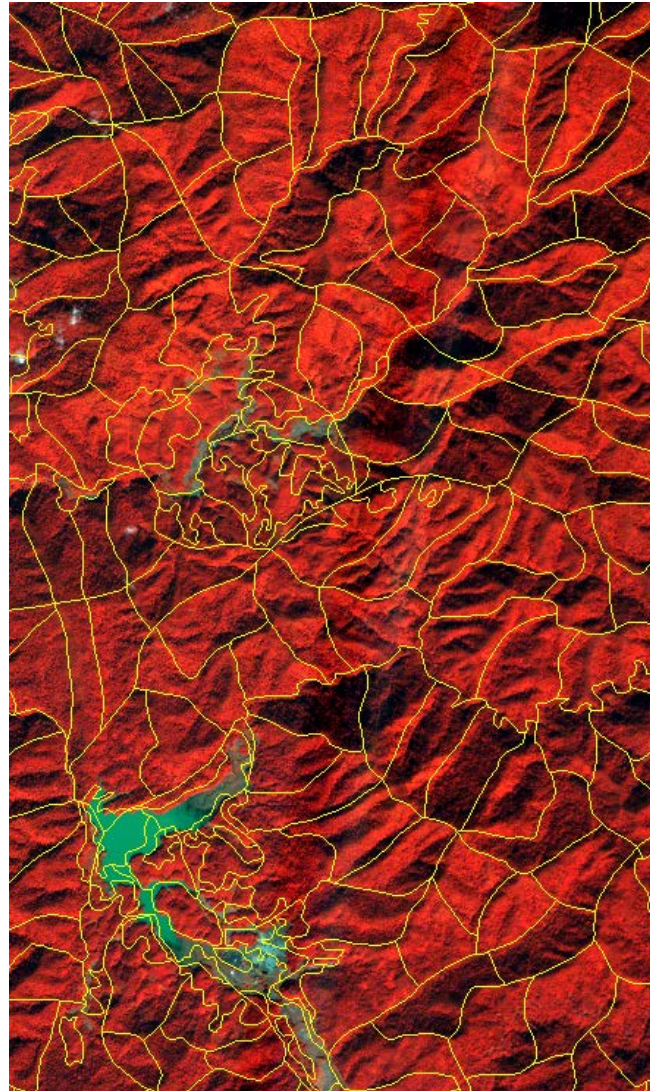
Regional Forest Observation for Sustainable Forest Management

- **Development regional forest mapping technologies in support of SFM**
- **Promote annual forest change map and annual forest coverage report in GMS+ region (extend to AP region cooperation with other organizations)**
- **Forest cover map every 5 years**
- **Annual forest change map**
- **Link with NFI framework and national applications**
- **Network / working-group development**
- **New technology demonstration & capacity building**

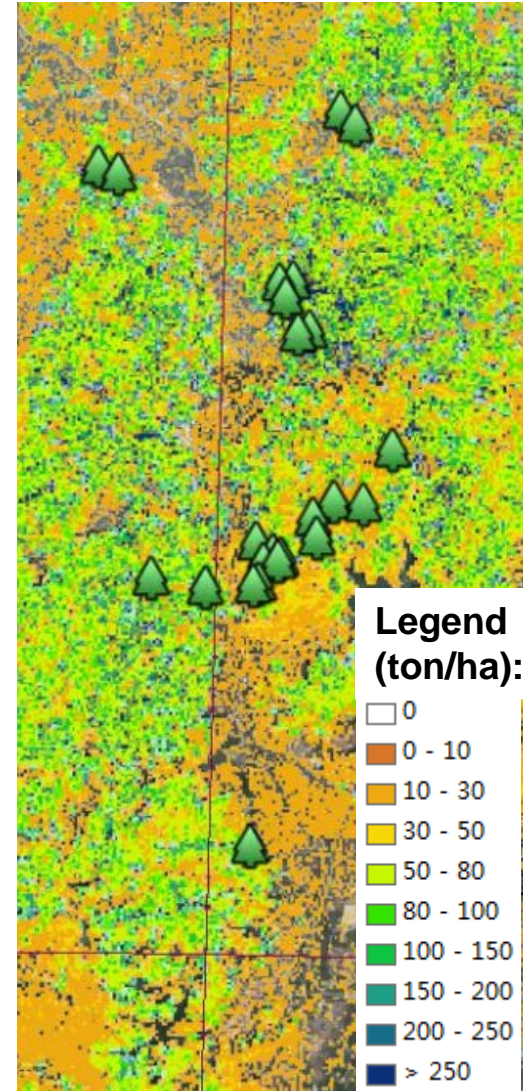
Annual forest change
detection of 2010-2015 (30 m)



Forest inventory map at
stand level (2/8 m GF data)



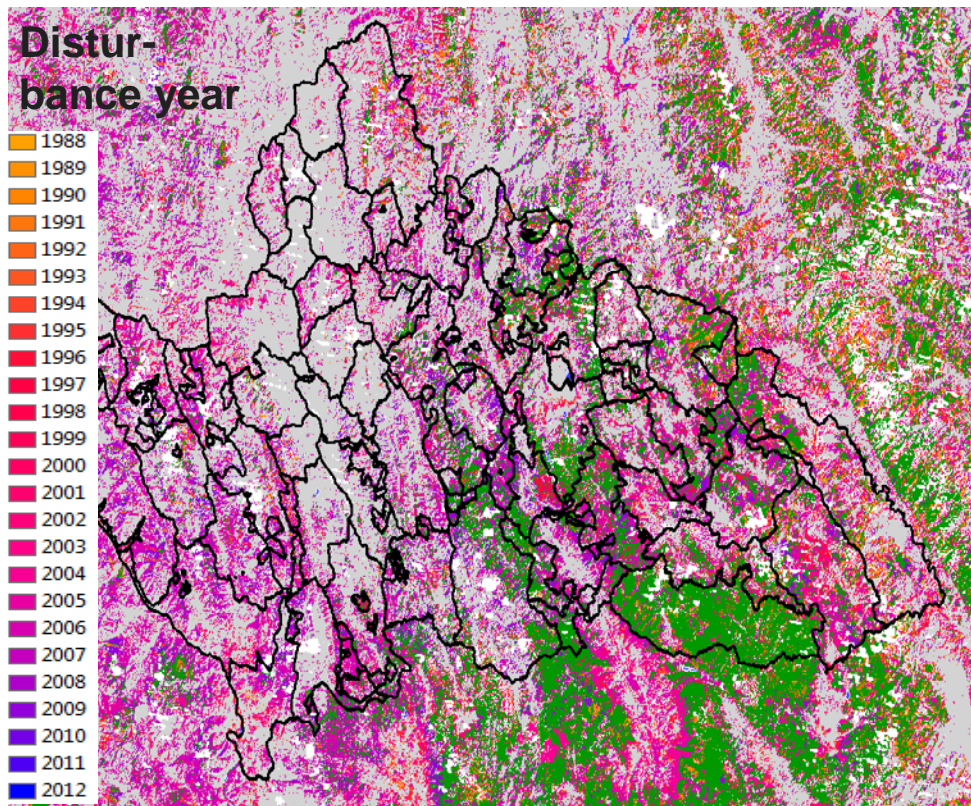
Forest carbon mapping
using airborne Lidar



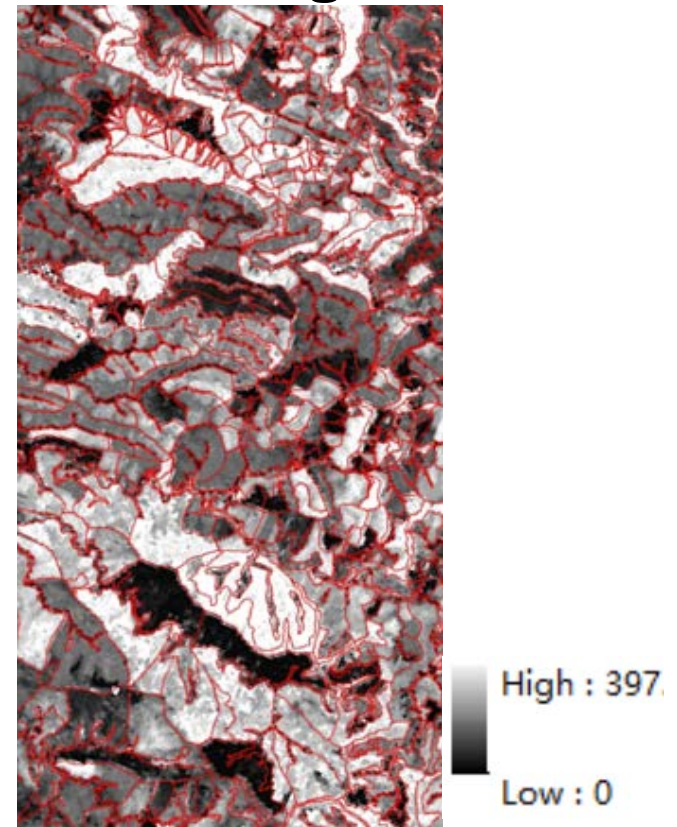
Demonstration at test sites for capacity building



Annual Forest Disturbance Detection using Time-Series RS data in Yunnan



Forest Volume Estimation using Airborne Lidar data in Guangxi





Thank You!

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Linkages to the APEC Objectives for APFNet



- To promote forest rehabilitation, reforestation and afforestation in the region to contribute to the achievement of the aspirational goal of increasing forest cover in the APEC region by at least 20 million hectares of all types of forests by 2020; (What, when and where are these forests?)
- To strengthen sustainable forest management and improve forest quality in the region, including climate change mitigation and adaptation response and to increase carbon sequestration; (How forest change? To what extent? Driving forces)
- To improve the productive capacity and socio-economic benefits of forest ecosystems and enhance biodiversity conservation in the region.
(The spatial explicit forest info. of EO data and products do this.)



Key findings of GMS+ project

- **Forest coverage of 2005 & 2010**
- **Forest change between 2005 & 2010**
- **Driving forces of forest change between 2005 & 2010**
- **Forest carbon storage of 2005**



Driving forces of forest change between 2005 & 2010

- **Driving forces of changes**

- Forest gain
- Forest loss
- Degradation
- Plantation
- Forest management activities
- Natural disturbance (fire, drought, disease, insects)



- **Support Materials**

- Policy
- Land use planning
- New investment
- Field validation
- Other reports



Project steering committee



Country	Name	Organization
China	Li Zengyuan	IFRIT, CAF
USA	John Townshend	University of Maryland
Canada	Michael Brady	GOFC-GOLD
Thailand	Vivarad Phonekeo	Asian Institute of Technology
Cambodia	H.E Chheng Kimsun	Forestry Administration
	Mr. Meas Makara	Department of forest and community forestry management
Guangxi, China	Li Chungan	GXFIFI
Laos	Houngphet Chanthavong	Faculty of Forestry, NUoL
Malaysia	Abdul Rashid Malik	FRIM
	Norini Haron	FRIM
Thailand	Rerngchai Prayoonwet	RFD
	Songsak Vidtayaudom	RFD
	Sumet Sirilak	RFD
Viet Nam	Nguyen Tuong Van	ICD-VNforest
	Nguyen Manh Cuong	ICD -Forest
	Nguyen Ba Ngai	VN Forest
	Ngo Ut	FIPI
	Do Xuan Lan	MARD
Yunnan, China	Xu Hui	Southwest Forestry University



Common activities committee



Country	Name	Organization
China	Li Zengyuan	Institute of Forest Resources Information Techniques, Chinese Academy of Forestry (IFRIT-CAF)
USA	John Townshend	University of Maryland
Canada	Michael Brady	GOFC-GOLD
China	Pang Yong	IFRIT-CAF
Thailand	Vivarad Phonekeo	Geoinformatics Center, Asian Institute of Technology
Malaysia	Khali Aziz Hamzah	Forest Research Institute Malaysia
Myanmar	Aung Aung Myint	Forest Department of Myanmar
Viet Nam	Nguyen Huy Dzung	Forest Inventory and Planning Institute
Thailand	Sukan Pungkul	Forest Survey and Assessment Division, Royal Forest Department
Laos	Thoumthone Vongvisouk	Faculty of Forestry, NUoL
Cambodia	Chivin Lend	Department of Forestry and Community Forestry, Forestry Administration
USA	Huang Chengquan	University of Maryland, USA
USA	Sun Guoqing	University of Maryland, USA
USA	Zhu Zhiliang	U.S. Geological Survey, USA
China	Tan Bingxiang	IFRIT-CAF
China	Chen Erxue	IFRIT-CAF
China	Liu Jianbo	RADI, Chinese Academy of Sciences (CAS)
China	Li Xingchao	China Centre For Resources Satellite Data & Application

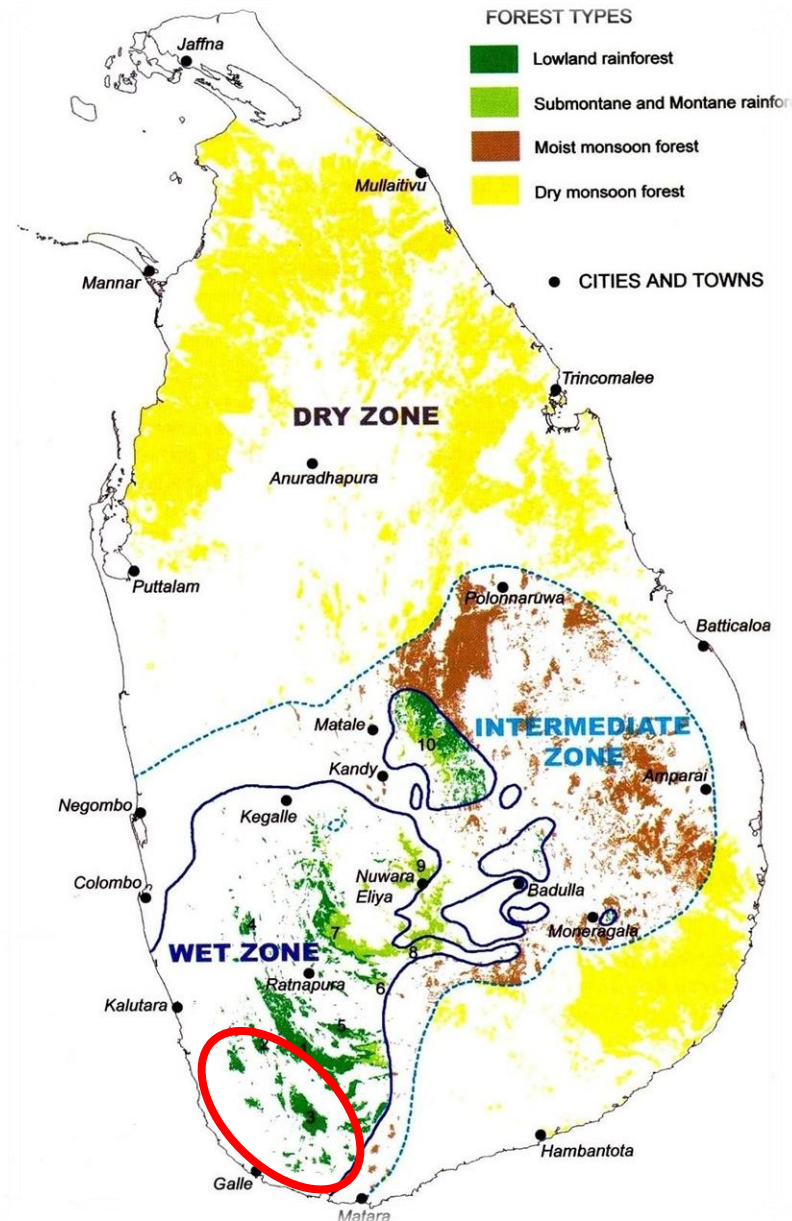
Sustainable Forest Management of KDN Forest Complex

**M. Heenatigala,
Divisional Forest Officer.**

Kanneliya Forest Reserves

- Kanneliya declared as a forest reserve in 1940
- Declared as KDN Complex MAB in 2004
- Total Extent KDN complex – 10,918 ha
 - Kanneliya -6,020 ha
 - Nakiyadeniya –1,108 ha
 - Dediyaagala -3790 ha

KANNELIYA - DEDIYAGALA - NAKIYADENIYA FOREST COMPLEX



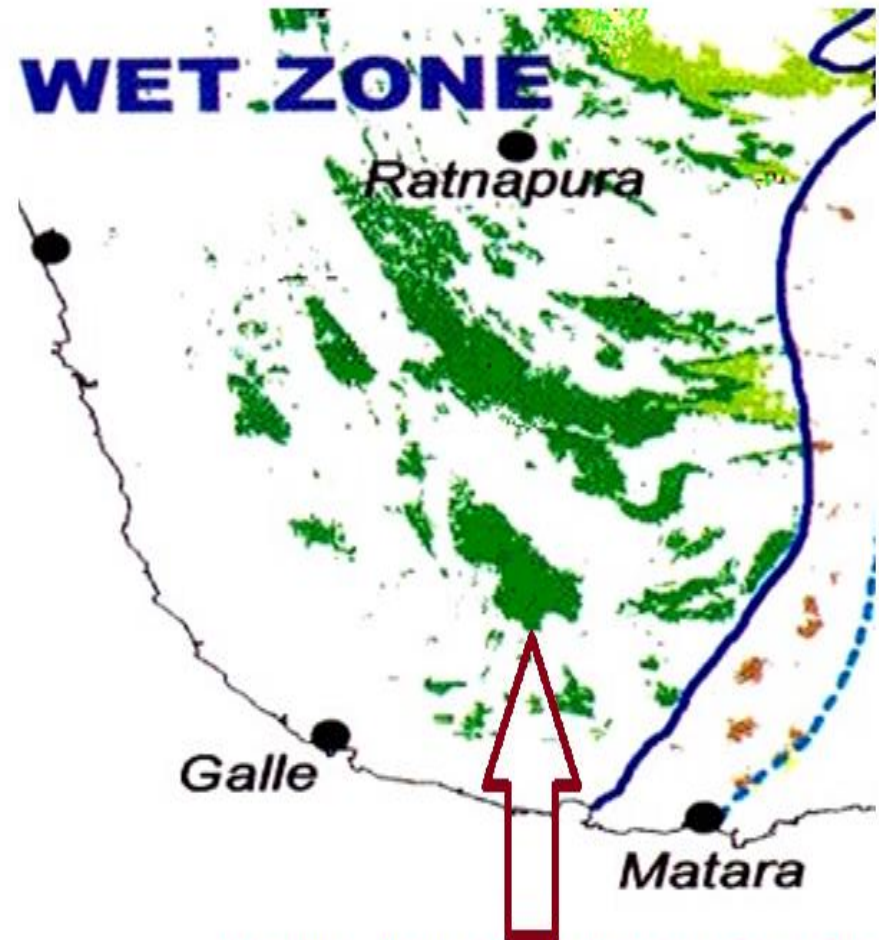
Location

- Kanneliya – Dediyaigala – Nakiyadeniya forest reserve

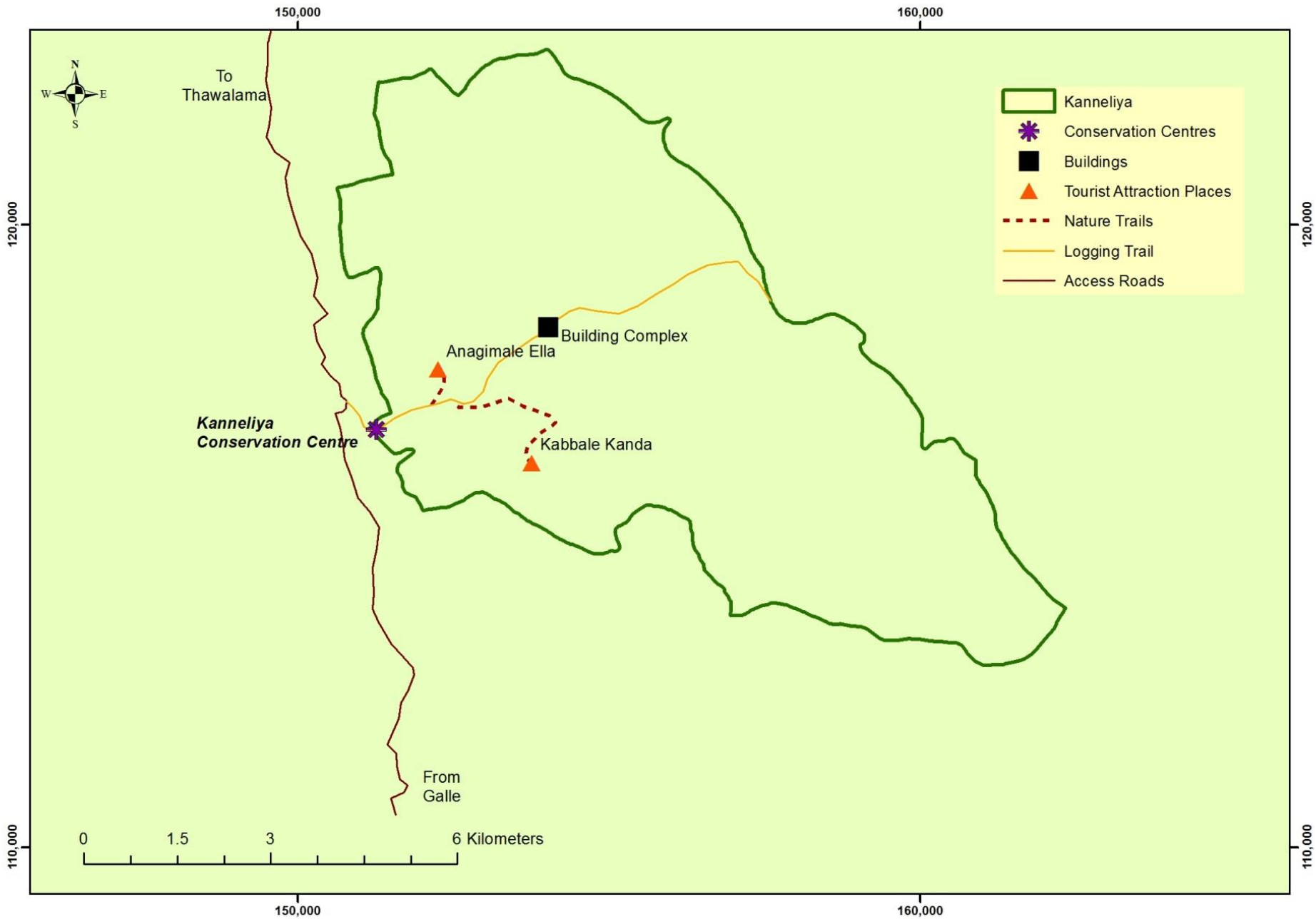
Located in

southwestern part
of Sri Lanka
(about 35 km northeast of galle).

latitudes 6 A 18` north and longitudes 80
east.



Kanneliya - Dediyaigala - Nakiyadeniya Forest Reserve



Importance

- Floral diversity(Woody trees)

Forest	Family	Generta	Species	Endemic	Nationally threatened	Globally threatened
Kanneliya	147	149	233	140	26	16
Dediyagala	126	126	189	112	18	10
Nakiyadeniya	161	164	237	117	24	11
Total			319	159		

Faunal diversity

Faunal group	Kanneliya	Dediyagala	Nakiyadeniya
Birds	59	24	22
Amphibiyans	14	2	4
Butterflies	32	2	2
Molluscs	7	6	3
Mammals	10	7	4
Fishes	7	5	2
Reptiles	4	5	6
Total	133	51	43
Nationally threatened	18	14	15
Globally threatened	5	4	3

Visiting Places



Historical Development in Kanneliya

- The entire KDN complex has been subjected to selective Felling 1970 to 1988
- Kanneliya Open for Tourism in 2003

The present visitor attraction to kanneliya include water falls (Annagimala waterfalls , and Narangas waterfalls), mountains (kabbelekanda), caves (Waul lena and Lihini gal lena) ,

there are five nature trails.

- Anagimala waterfall trail
- Narangas waterfall trail
- Kabbalekanda trail
- Giant Nawada tree trail
- Kunakatukanda trail







The plan for sustainable management

- Zoning of KDN forests complex
- The entire area of KDN forest complex is designated broadly as core zone, which has a high conservation value in terms of biodiversity and watershed characteristics. This broad core zone is being subdivided into four specific sub zones,
 - Ecosystem Management Sub –Zone
 - Traditional use Sub-Zone
 - Intensive use Sub-Zone
 - Cultural sub-Zone

Management plan

- **Goal**
- Conserve KDN forest complex for posterity with regard to biodiversity, soil, water, historical, cultural, religious, scientific and aesthetic value and the enhance contribution of forestry to the welfare of nearby community and to the national economy.

Main Objective:

- To develop and implement a participatory management approach that will ensure protection and conservation of biodiversity, soil, and water resources, cultural and historical values of KDN Forest complex, while enhancing the research and educational, nature-tourism and the skills of local communities for livelihood development through creations of sustainable economic opportunities.

Objectives:

- To enhance The composition, structure, functions and evaluatory potential of biodiversity
- To maintain ecological process in constituent forest by providing effective protection against biotic interference and Regulatory eco system service
- To Established community participation management system with buffer zone community.

Out puts

- Biodiversity, soil and water resources of KDN are effectively conserved
- Participatory Management approach is establish
- Livelihood of buffer zone communities are strengthened through alternative income generation
- Public Awareness, Nature Tourism and Research facilities are establish and operationalized
- The capacity of the Forest Department in improved and the management plan is effectively implemented
- Sustainable financing and management system is establish

Activities

Main activities (12)

1. Building Up of Management Foundation
2. Ecosystem Management
3. Building up Participatory Management with CBOs
4. Alternative Income Generation for Livelihood Development
5. Building Public Awareness through Extension and Education
6. Development of Nature Based Tourism
7. Forest Protection
8. Capacity Building
9. Conservation Research
10. Establishment of Administration
11. Progress Monitoring
12. Achieving Sustainable Financing

Sub activities

1 Building Up of Management Foundation

1.1 Establish a System for Baseline Information and Data Management

1.1.1 Establish a Data management system

1.1.2 Mapping of existing facilities and potential areas for future development

1.1.3 Survey and map habitats of threatened & endangered species and ecosystems

1.1.4 Design and carryout visitor use surveys including visitor preferences.

1.2 Designing a detail zoning plan

1.2.1 Identify zone Boundaries based on the information received from activity 1.1.3

1.2.2 Develop management Strategies and Guidelines for zones.

2 Ecosystem Management

2.1 Management programmes for the Core Zone (Ecosystem Management sub zone & Traditional Use Sub Zone)

2.1.1 Under planting of indigenous tree species in Pine & Eucalypt plantations.

2.1.2 Restoration planting with indigenous tree species in identified degraded areas.

2.1.3 Remove alien invasive species such as Alstonia & Mahogany.

2.1.4 Planting of live fences along the demarcated forest boundary.

2.1.5 Identify and mark the TUZ boundary with red coloured markers .

2.1.6 Establish an appropriate mechanism for issue of permits for regulated extraction of NTFPs from TUZ

2.1.7 Enrichment planting in TUZ with NTFP species such as Kitul & Rattan

2.2 Management programmes for the Buffer Zone

2.2..1 Establish a liaison process with other government agencies operating in the buffer zone to arrange for technical support.

2.2.2 Implement homegarden development programmes in the buffer zone and provide free seedlings

2.2.3 Develop forest nurseries managed by CBOs in the buffer zone.

3. Building up Participatory Management with CBOs

3.1 Re-establish coordination and Mobilize Communities

3.2 Design and Establish procedures to build up partnerships with communities.

4. Alternative Income Generation for Livelihood Dev

4.1 Training of CBO members in entrepreneurship and vocational skills development

4.2 Providing priming Funds to CBOs

4.3 Providing Micro Credit Loan Facilities to CBO members

5. Building Public Awareness through Extension and Education

- 5.1 Review existing public awareness material and update & develop new material to cover the gaps
- 5.2 Extension to the present information centre
- 5.3 Awareness building for school, local and national level
- 5.4 Design and fixing of sign boards in suitable locations

6. Development of Nature Based Tourism

6.1 Identification of requirements for developments.

6.2 Develop and improve facilities for visitors.

6.2.1 Accommodation.

6.2.2 Nature & Hiking Trails.

6.2.3 Other Facilities

6.3 Collaborate with Tourism Industry people for Better Support in Nature Tourism.

6.4 Development of Web Site for KDN Forest Complex

6.5 Expand Livelihood Opportunities for Buffer Zone Communities through Nature Tourism.

7. Forest Protection

7.1 Monitoring of the Forest Cover in the KDN Forest Complex

7.2. Survey and demarcation of the balance area of Dediyaagala
FR

7.3. Preventing licit Felling and Encroachments

7.3.1 Establishment of Forest Protection Committees and Issue
Identity Cards

7.3.2 Review the Staff Positions and Organize the Staff to
Strengthen Forest Protection

7.3.3 Close monitoring and streamlining of issues of NTFP
Permits

- **8 Capacity Building**

- 8.1 Training of the relevant Stakeholders

- 8.1.1 Assessment of Training Needs for improving Capabilities of FD & other staff and CBO members

- 8.1.2 Training of CBO members and other suitable stakeholders

- 8.1.3 Training of Forest Department Staff and other appropriate Government staff

- 8.2 Construction and improvements to Building

- 8.3 Procurement of vehicles and Equipment's

9 Conservation Research

9.1 Establish a strong regional and national collaboration in forestry research

9.2 Identify and prioritize the conservation research topics for KDN forest complex

9.3 persuade universities and other research organizations to undertake the selected studies

9.4 Include Conservation Research in the FD annual Research Plan

9.5 Update the data/information base with research finding and make appropriate arrangements to disseminate the information

10. Establishment of Administration

10.1 Identification and providing the required staff for effective implementation of the management plan

10.2 Set up 2 Village Forest Participatory Management Committees (VPMC) for three forests

11. Progress Monitoring

11.1 Set up a National Steering Committee (NSC) and carry out progress monitoring at national level

11.2 Set up KDN Management Committee (KMC) and carry out progress monitoring at site level

11.3 Carry out progress monitoring at village level by Village Forest Participatory Management Committees (VPMC)

12. Achieving Sustainable Financing

12.1 Establish a revolving fund

12.2 Review the entrance fee and lodging charges

12.3 Identify and solicit support/assistance from appropriate sources

12.4 Review of the Management Plan



Thank You



Report of the Third Meeting of the Council

23 March 2017

Colombo, Sri Lanka

Agenda item 1

Opening of the meeting

Remarks by Mr. Anura Sathurusinghe, Conservator General, Forest Department of Sri Lanka

After a traditional ceremony in which an oil lamp was lit to bless the meeting, Mr. Sathurusinghe extended his warm welcome to participants and was pleased that Sri Lanka was able to host the third meeting of the Council. He noted that, although a small economy, it works closely with APFNet, especially in the area of capacity-building. He also commented on the significant progress toward APEC's goal to reach at least 20 million ha of forest by 2020, largely due to China's efforts in leading the way. He expressed his best wishes for fruitful discussions and looked forward to hearing about the outcomes. He closed by stating his hope that guests would enjoy a pleasant stay.

Remarks by the Executive Director of the APFNet Secretariat

Mr. Qu Guilin thanked Sri Lanka for hosting this third meeting of the Council. He expressed his appreciation for the guidance that APFNet receives from the Council and is confident this good collaboration will continue. He mentioned that, in 2018, APFNet will celebrate 10 years since its establishment. Although still young, the organization is creating something new in the region and has much potential to make an even greater and positive difference in the lives of people who depend on forests for the multitude of benefits they provide - environmental, economic, social and cultural.

Organizational matters

Dr. Preecha Ongprasert, Chair of the Council, also extended his thanks to Sri Lanka's Forest Department for hosting the meeting and to Council members for their support over the last year. He informed the group that 19 economies, including first-time participation from Mexico and Peru, were in attendance. Six international organizations were also present, two of which had observer status. He then brought the list of Council representatives and contact persons to their attention [APFNet/Council/ENG/2017/INFO/03] and reminded those who have not submitted updates to provide them to the Secretariat as soon as possible. Following this request, he invited participants to introduce themselves.

Agenda item 2

Adoption of the agenda

The Chair called for adoption of the agenda [APFNet/Council/ENG/2017/01-V1] which includes items added by the Secretariat under "other matters" (APFNet 10th anniversary,

observer status for economies of Greater Central Asia, and establishment of a regional database on forest legislation and policy). He also asked to switch the order of items 8 and 9.

Decision C.03/01 The Council adopted the agenda, with the proposed addition of items under “other matters” and with a change in the order of items 8 and 9.

Agenda item 3

Review of Council’s work in 2016

The Chair summarized the Council’s support to APFNet, including comments it provided on the new Strategic Plan (2016-2020), on candidates to be considered for the Project Appraisal Panel (2016-2018) and on the proposed annual work plan, for example. Council members also responded to APFNet’s call for concept notes and, for projects which were approved, some representatives were actively involved in their planning, implementation and monitoring. In addition, members facilitated visits by APFNet staff to explore opportunities for new partnerships and areas for further collaboration.

Agenda item 4

Report of Executive Director 2016

Mr. Qu presented the annual report for the Council’s information [APFNet Annual Report 2016]. He indicated that implementation of the new strategic plan reflected APFNet’s commitment to maintain its core values (respect for differences, action-oriented, and creative/innovative thinking) and to operate according to 3 basic principles: openness and participation, complementarity in terms of added value, and responsiveness to the needs of target beneficiaries. Last year, APFNet went through a significant transition in its structure and organization after the formal establishment of a Council and Board of Directors. In 2017, more changes are on the horizon with the appointment of a new Executive Director. He then highlighted major project activities and key events which took place from January to December.

Agenda item 5

APFNet Work Plan and Implementation

Mr. Qu reported on the implementation of the 2016 annual work plan [APFNet/Council/ENG/2017/02] and financial status [APFNet/Council/ENG/2017/03]. He noted that most items were completed and expected results were achieved. In terms of budget, income grew by approximately USD 2.65 million over 2015 levels to reach USD 6.8 million in 2016. Expenses increased by USD 1.15 million to reach USD 5.35 million, 54% of which was allocated to projects.

The Council then reviewed the proposed work plan and budget for 2017 [APFNet/Council/ENG/2017/04 and APFNet/Council/ENG/2017/05]. The need to strengthen linkages among APFNet’s 4 pillars was noted and Council hoped the Board would not only relay this message to the Secretariat but would also provide input on how to accomplish this task. For example, in the case of projects undertaking forest rehabilitation, an assessment of related capacity needs should be made and gaps in

policies and legislation should be identified. On another matter, it was suggested that APFNet continue to reach out to partners as an effective means to build on comparative advantages. For example, APFNet took on a leadership role in one of 5 streams at FAO's Asia-Pacific Forestry Week in the Philippines where it held 16 events and arranged for more than 100 speakers to address delegates.

Decision C.03/02 On the proposed APFNet Work Plan 2017, the Council noted the importance of strengthening linkages among APFNet's 4 pillars. In this regard, it decided to recommend to the Board that it not only urge the Secretariat to address this issue but that it also provide suggestions on how to improve these linkages.

Decision C.03/03 The Council confirmed its support for APFNet to continue its efforts to reach out to partners - a strategy that is good for the region - not only for APFNet and individual economies. Therefore, it decided to recommend to the Board that it seek to add this item to the proposed APFNet Work Plan for 2017.

Agenda item 6

Rehabilitating Degraded Forests and Increasing Forest Cover

Consistent with the Council's role as a forum for the exchange of information and experiences, the Chair invited presentations on the outcomes of 2 completed projects and on the expected outcomes of a recently approved one. Following each briefing, members were given the opportunity to provide comments and ask questions.

Sustainable Forest Rehabilitation and Management for the Conservation of Trans-boundary Ecological Security in Montane Mainland Southeast Asia - Pilot Demonstration Project in Lao PDR, Myanmar and China/Yunnan [APFNet/Council/ENG/2017/INFO/04-01]: It was noted that one of the best ways to ensure a high survival rate of the seedlings is to plant local species and to stress their importance to the local community. However, one of the major challenges is to protect the newly planted area from cattle grazing. Another issue is the pressing needs of poor people for income. In this regard, it was suggested that planting fast growing species in the first 5 years, followed by local species, could be a solution. Agroforestry was also mentioned as a possible short-term approach but experience has shown that this strategy is not always successful when markets are limited. As a final comment, participants agreed that this project is a good example of the benefits APFNet brings to the region, in collaboration with partners.

Forest Cover and Carbon Mapping in the Greater Mekong Subregion and Malaysia [APFNet/Council/ENG/2017/INFO/04-02]: Council members expressed their appreciation for the opportunity to be informed of this important initiative and hoped that additional briefings could be arranged on a bilateral basis. Mexico stated its commitment to work with other economies in Central America on forest monitoring and would build on the methodologies used by this project.

Enrichment of Pine Plantations in Sri Lanka with Native Species [APFNet/Council/ENG/2017/INFO/04-03]: Given that this project is not yet

implemented, it was stressed that the design is important to achieve expected results. In this regard, the Forest Department stated its intention to consult the local community of about 500 families on the choice of native species and of non-timber forest products to plant, with a view to generating the most income possible.

Agenda item 7

Council Consultation

The facilitator introduced this item, noting that there was no document because the agenda calls for a free flow of ideas on how to better interact with APFNet and on how to strengthen Council's role as an advisory body. For example, suggestions to improve the organization of future sessions would be welcome, as would ways to ensure that the participants selected to attend meetings are familiar with APFNet and are actively involved in its work. Given that communication is a two-way street, this session should not only be about how APFNet can better engage with members and contact persons in a timely and effective manner, but how they can ensure channels of communication remain open and work well. The facilitator then reminded the Council that, in addition to providing a forum for the exchange of views, it should seek to be informed of, involved in, and better understand APFNet's work plans and priorities so that it can provide feedback and advise the Board of Directors on substantive matters.

During the discussion, many ideas were brought forward on ways to improve communications between Council members and APFNet as well as on ways to strengthen the engagement of representatives and contact persons on the implementation of APFNet activities. In this regard, the following main points were raised:

- distribute newsletters to all members
- send documents well ahead of meetings
- provide more information on approved projects, including progress and impacts
- email list of upcoming events so Council members can become involved
- schedule time in the margin of meetings for 1 on 1 discussion of proposed work plans
- add the maintenance/establishment of partnerships in 2017 work plans
- use email as the preferred method of communications but consider the social media/E groups as further ways to stay in touch informally with each other
- copy relevant colleagues on correspondences to facilitate better follow-up
- convene telephone conferences on a regular basis, recognizing this method can prove difficult if large numbers are involved
- feature projects as part of the calls, including progress, challenges, lessons learned
- focus on important issues of communication rather than those of a general nature
- organize small working groups at meetings to facilitate discussions
- ask projects to prepare 1-2 page briefs of lessons learned and best practices
- encourage colleagues/domestic experts to produce information to share

Decision C.03/04 During discussions on ways to enhance APFNet communications with Council members, it was decided to ask the Secretariat to compile a list of possible options in terms of using social media and to circulate it for comment and feedback on preferences.

Agenda item 8

Other matters

APFNet's 10th anniversary

The Secretariat informed Council of APFNet's 10th anniversary in 2018 and sought suggestions via email for special events to mark the occasion. The representative of The Nature Conservancy noted that the RAFT program is also celebrating 10 years since its establishment and indicated she would welcome a bilateral discussion with APFNet to identify possibilities for joint initiatives.

Request for observer status for economies from Greater Central Asia

The Secretariat informed Council of a request from 5 economies from Greater Central Asia (Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan) not currently represented, to be granted observer status at meetings. No objections were brought forward.

Decision C.03/05 The Council decided to approve the request from the 5 economies from Greater Central Asia to attend future Council meetings as observers.

Establishment of a regional database on forest legislation and policy

In response to a request from member economies to establish a regional database on forest legislation and policy, the Secretariat sought approval from Council to take on this task under the pillar of information sharing. Members cautioned that this type of data is sometimes decentralized, therefore could be difficult to assemble. It was also thought that a compilation of technologies and successful approaches might be of value as well. The general view was that such a database would be useful to economies and could help APFNet to decide on priorities. However, it would be even more valuable if an impartial national assessment could eventually be made on the effectiveness of laws and policies and the reasons.

Decision C.03/06 The Council decided to support APFNet's establishment of a regional database of forest legislation and policy. In a second phase, and to the extent feasible, consideration should be given to conducting an impartial assessment of their effectiveness, noting reasons. Lessons learned should also be included.

Agenda item 9

Date and venue for next meeting

Given that APFNet will celebrate its 10-year anniversary in 2018, it was suggested that China would be a good location for the next meeting of the Council. In addition, the Council expressed its gratitude for the kind offer of Papua New Guinea to host its fifth meeting in 2019.

Decision C.03/07 The Council noted, with appreciation, the Secretariat's willingness to host the next meeting in China when APFNet will celebrate its 10-year anniversary. The date and venue will be determined in due course.

Agenda item 10

Adoption of decisions and recommendations

At the request of the Chair, the facilitator provided a summary of decisions and main discussion points.

Decision C.03/08 The Council adopted the decisions and the recommendations to the Board, as presented.

Agenda item 11

Closure of the meeting

In closing the meeting, the Chair expressed his appreciation to the Vice-chair for her support and to participants for their active engagement in achieving good outcomes. He also thanked Sri Lanka and the APFNet Secretariat for their many efforts to make this event a success. There being no further business, he called the meeting to a close.

The Third Meeting of the APFNet Council

List of Participants

Economy /Organization	Name	Position and Organization
APFNet members		
Bangladesh	Mr. Imran Ahmed	Divisional Forest Officer, Rajshahi, Bangladesh Forest Department, Ministry of Environment and Forests
Cambodia	Dr. Sokh Heng	Director, Institute of Forest and Wildlife Research and Development, Forestry Administration, Ministry of Agriculture, Forestry and Fisheries
Canada	Ms. Avanti Natasha Coonghe	Trade Commissioner, High Commission of Canada in Sri Lanka
P. R. China	Mr. Wang Chunfeng	Deputy Director General, Department of International Cooperation, State Forestry Administration
	Ms. Liao Jing	Program officer, Department of International Cooperation, State Forestry Administration
	Prof. Pang Yong	Research fellow, Chinese Academy of Forestry
Fiji	Mr. Manasa Luvunakoro	Principal Forestry Officer, Ministry of Fisheries and Forests
Indonesia	Dr. Muhammad Tangkas	Deputy Director, Ministry of Environment and Forestry
	Dr. Iwan Setiawan	Assistant Deputy Director, Ministry of Environment and Forestry
Lao PDR	Mr. Somsack Sysomvang	Deputy Director of Village Forest and NTFP Management Division, Department of Forestry, Ministry of Agriculture and Forestry
Malaysia	Dr. Megat Sany bin Megat Ahmad Supian	Undersecretary, Ministry of Natural Resources and Environment
Mexico	Mr. Jose Armando Alanis de la Rosa	Director of International Cooperation and Multilateral Agreement, National Forest Commission (CONAFOR)
Mongolia	Ms. Enkhjargal Damdinsuren	Officer of Forestry Policy and Coordination Department, Ministry of Environment, Green Development and Tourism of Mongolia
Myanmar	Dr. Thaung Naing Oo	Director, Forest Research Institute, Forest Department, Ministry of Environmental Conservation and Forestry
Nepal	Mr. Shiva Sapkota	District Forest Officer, Ministry of Forests and Soil Conservation
Papua New Guinea	Ms. Magdalene Maihua	Director, Project Allocation Directorate, Papua New Guinea Forest Authority
Peru	Ms. Carolina Vidal	Specialist, Forest and Wildlife Sustainable and Heritage General Management, National Forest and Wildlife Service(SERFOR)
The Philippines	Ms. Edna Nuestro	Chief, Forest Policy, Planning and Knowledge Management Division, Forest Management Bureau, Department of Environment and Natural Resources
Sri Lanka	Mr. Wasantha Tikiri Bandara Dissanayake	Additional Secretary (Environment Policy & Planning), Ministry of Mahaweli Development & Environment

	Mr. Nishantha Edirisinghe	Deputy Conservator of Forests (Silviculture & Forest Management) of Forest Department, Sri Lanka
Chinese Taipei	Mr. Liu Chun I	Associate Technical Specialist, Forestry Bureau, Council of Agriculture
	Ms. Wang Yi-Ping	Specialist, Forestry Bureau, Council of Agriculture
Thailand	Dr. Preecha Ongprasert	Chief of International Special Program Section, Planning and Information Technology Bureau, Royal Forest Department
Viet Nam	Dr. Nguyen Phu Hung	Director General, Deptment of Science, Technology and International Cooperation, Viet Nam Administration of Forestry (VNFOREST), Ministry of Agricultural and Rural Development
FAO	Mr. Patrick Bryan Durst	Senior Forestry Officer, FAO RAP
ITTO	Mr. Li Qiang	Systems/Market Analyst, ITTO
SPC	Mr. Jalesi Mateboto	Community Forestry Technician/Project Technical Officer
TNC	Ms. Allison Lewin	Manager Responsible Asia Forestry and Trade (RAFT) Program
Observers		
APFNet Board member	Dr. Chea Sam Ang	Director General General Directorate of Administration for Nature Conservation and Protection Ministry of Environment, Cambodia
	Prof. Rex Cruz	Professor and Director Environmental Forestry Programme College of Forestry and Natural Resources University of the Philippines
	Mr. Stephen Midgley	Director, Salwood Asia Pacific Pty Ltd, Australia
	Dr. Sadanandan Nambiar	CSIRO, Forest System Sciences, Australia
IUFRO	Dr. Michael Kleine	Deputy Executive Director, IUFRO
EFI	Mr. Thomas Colonna	(China & Asia) Senior Regional FLEGT Advisor, EFI EU FLEGT Facility
APFNet		
APFNet Secretariat	Mr. Qu Guilin	Executive Director
	Ms. Rosalie McConnell	APFNet senior consultant, meeting facilitator
	Ms. Lu Qian	Officer of governance and membership
	Ms. Wang Yingyi	Partnership and outreach coordinator

Third Meeting of the APFNet Council

23 March 2017
Colombo, Sri Lanka

Provisional Agenda

Agenda item 1 Opening of the meeting

[Document: APFNet/Council/ENG/2017/INFO/01]

Agenda item 2 Adoption of agenda

[APFNet/Council/ENG/2017/01-V1, APFNet/Council/ENG/2017/INFO/02]

Agenda item 3 Review of Council's Work in 2016

[APFNet/Council/ENG/2017/INFO/03]

Agenda item 4 Report of Executive Director 2016

[APFNet Annual Report 2016]

Agenda item 5 APFNet Work Plan and Implementation

(1) Implementation of work plan 2016

[APFNet/Council/ENG/2017/02 and APFNet/Council/ENG/2017/03]

(2) Work plan and budget 2017

[APFNet/Council/ENG/2017/04, APFNet/Council/ENG/2017/05]

Agenda item 6 Rehabilitating Degraded Forests and Increasing Forest Cover

(1) Sustainable Forest Rehabilitation and Management for the Conservation of Trans-boundary Ecological Security in Montane Mainland Southeast Asia – Pilot Demonstration Project of Lao PDR, Myanmar and China/Yunnan

[APFNet/Council/ENG/2017/INFO/04-1]

(2) Forest Cover and Carbon Mapping in the Greater Mekong Subregion and Malaysia

[APFNet/Council/ENG/2017/INFO/04-2]

(3) Enrichment of Pine Plantations in Sri Lanka with native species

[APFNet/Council/ENG/2017/INFO/04-3]

Agenda item 7 Council Consultation

(1) Enhance APFNet communications with its members

(2) Enhance engagement in APFNet's work under capacity building, such as project implementation, and suggest ways to improve Council operations, including the organization of its meetings.

Agenda item 8 Dates and venue for next meeting

Agenda item 9 Other matters

Following matters will be briefly introduced by the secretariat for Council's information.

- (1) APFNet 10th Anniversary
- (2) Greater Central Asia observers in Council meetings
- (3) APFNet regional database of forest legislation and policy

Agenda item 10 Adoption of decisions and recommendations

[APFNet/Council/ENG/2017/06]

Agenda item 11 Closure of the meeting