

CEPF FINAL PROJECT COMPLETION REPORT

Organization Legal Name:	Missouri Botanical Garden
Project Title:	Assessment of the Status and Distribution of Globally Threatened Plant Species in Indochina
Date of Report:	05 March 2013
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CEPF Region: Indochina

Strategic Direction: 1. Mitigate major threats to globally threatened species

Grant Amount: US\$506,216

Project Dates: 1 July, 2009 to 31 December, 2012

Implementation Partners for this Project (please explain the level of involvement for each partner):

The collaborative regional project led by the Missouri Botanical Garden (MBG) brought together the outstanding conservation expertise and botanical resources of the MBG, the International Union for Conservation of Nature, Botanic Gardens Conservation International, Frontier, and partner botanical institutions, academic universities, and government and non-government organizations in Vietnam, Cambodia, Laos, and Thailand.

1. International Union for Conservation of Nature (IUCN): 3 participants. As the main partner for this project, the IUCN Species Programme staff, namely, Craig Hilton-Taylor, Maiko Lutz, and Melanie Bilz, provided training on the application of IUCN Red List Categories and Criteria and entered species data into IUCN's Species Information Service (SIS) database. Mr. Hilton-Taylor and Ms. Lutz also served as facilitators in two Red Listing workshops held in Hanoi and Chiang Mai. In addition, IUCN staff members introduced an easy online mapping program (<http://geocat.kew.org>) that facilitated the estimation of the extent and area of occurrences for each species.

2. Botanical Gardens Conservation International (BGCI): 1 participant. For this project, the BGCI Director General, Sara Oldfield, participated in two Red Listing workshops and helped facilitate the assessments of tree species and the entry of data into the SIS.

3. Institute of Ecology and Biological Resources (IEBR): 8 participants. The IEBR has been MBG's long-term partner in Vietnam, jointly coordinating the MBG's Vietnam Botanical Conservation Program since 1994. The plant taxonomists at IEBR, namely, Dr. Tran Huy Thai, Dr. Duong Duc Huyen, Dr. Vu Xuan Phuong, Dr. Tran The Bach, Dr. Tran Thi Phuong Anh, and Dr. Nguyen Van Du, provided the botanical expertise to assess the threat status of a number of plant species. Two project assistants were based at the IEBR herbarium and gathered botanical data for species assessments.

4. Institute of Tropical Biology (ITB): 2 participants. One project assistant was based at the herbarium at ITB and gathered specimen data for species assessments. The herbarium curator,

Dr. Luu Hong Truong, assisted with the organization of the workshop to identify Important Plant Areas (IPA) in Vietnam.

5. Royal University of Phnom Penh (RUPP): 3 participants. The RUPP botanists, Professor Yok Lin and Ms. Lim Sidedine, provided data for threat assessments of species based on collections of Cambodian plants and participated in Red Listing workshops. Mr. Ly Viboth co-organized the IPA workshop in Phnom Penh.

6. National University of Laos (NUOL): 6 participants. The NUOL botanists, Professor Bouakhaykhone Svengsuksa, Dr. Somchanh Bounphanmy, Dr. Vichit Lamxay, Dr. Khamseng Nanthavong, Mr. Soulivanh Lanorsavanh, and Ms. Khamfa Changtavongsa, provided data for threat assessments of species based on collections of Lao plants. One project assistant was based at the herbarium at NUOL and gathered specimen data from plants of Laos.

7. Bangkok Forest Herbarium (BKF): 4 participants. The BKF herbarium provided specimen data for threat assessments of species that occur in Thailand. One project assistant was based at the herbarium at BKF and gathered specimen data from plants of Thailand. Dr. Rachun Pooma and Dr. Voradol Chamchumroon co-organized the IPA workshop in Bangkok.

8. Society for Environmental Exploration in Cambodia (Frontier-Cambodia): 4 participants. For this project, Frontier-Cambodia made a comprehensive survey of the current knowledge of the status and distribution of 32 threatened plant species from Cambodia, based on study in the field and in the herbarium and library.

Five staff members of the Missouri Botanical Garden were involved in the project: Dr. Jacinto Regalado, Jr. served as the full-time Project Manager based in Hanoi. Dr. Tatyana Shulkina, who served as the half-time project assistant based in the herbarium of the Missouri Botanical Garden, helped with specimen sorting, data gathering, and library searches. MBG Assistant Curator Roy Gereau, Project Manager of the CEPF project "Plant Conservation Assessment in the Eastern Arc Mountains and Coastal Forests Biodiversity Hotspot of Tanzania and Kenya" conducted from 2005-2008, visited Vietnam during the project inception meeting in September 2009 and imparted lessons learned and experiences gained from the CEPF project in East Africa. MBG's Vice-President for Conservation and Sustainable Development, Olga Martha Montiel, and MBG's Grant and Contract Administrator, Dianne Schmitt, provided guidance and financial oversight throughout the project period.

In addition to the thirty-six direct participants named above, the project drew upon the expertise from the botanical community within the region and the world at large. Thirty-nine plant taxonomists and ecologists participated in the Red Listing and IPA workshops: Professor Phan Ke Loc of Hanoi National University; Professor Le Cong Kiet and Dr. Diep Thi My Hanh of HCM City University of Science; Dr. Nguyen Tien Hiep of the Vietnam Center for Plant Conservation; Mr. Vu Anh Tai of the Institute of Geography; Dr. Vu Quang Nam and Dr. Hoang Van Sam of Vietnam Forestry University; Dr. Nguyen Hoang Nghia and Dr. Tran Van Tien of the Vietnam Forest Science Institute; Mr. Vu Van Dung and Mr. Nguyen Quoc Dung of the Vietnam Forest Inventory and Planning Institute; Dr. Nguyen Van Tap of the Vietnam National Institute of Medicinal Materials; Mr. Nguyen Manh Cuong of Cuc Phuong National Park; Mr. Khou Eanghourt of the National Authority of Preah Vihear, Cambodia; Mr. Chhang Phourin of Cambodia's Forest Administration; Dr. Neil Furey and Dr. Joel Jurgens of Fauna and Flora International in Cambodia; Ms. Somsanih Bouamanivong of the National Herbarium of Laos; Dr. Sounthone Ketphanh of the Lao National Agriculture and Forestry Research Institute; Dr. James Maxwell of Chiang Mai University; Dr. Martin van den Bult of the Doi Tung Chiang Rai Development Project; Dr. Piya Chalermglin and Dr. Pramote Triboun of the Thailand Institute of Science and Technology Research; Dr. Suksathan Piyakaset of Queen Sirikit Botanical Garden; Dr. Jana Leong-Skornickova and Mr. Tran Huu Dang of the Singapore Botanic Garden; Dr. George Orel of the Royal Botanic Garden, Sydney; Professor Sun Weibang of the Kunming Botanical Garden; Dr. Nianhe Xia of the South China Botanical Garden; Professor Leonid Averyanov of the

Komarov Botanical Institute; Dr. Rogier de Kok of the Royal Botanic Gardens, Kew; Dr. Mark Newman and Dr. David Middleton of the Royal Botanic Garden Edinburgh; Dr. Sovanmoly Hul of the National Museum of Natural History, Paris; Dr. Hans Nooteboom of the National Herbarium, Leiden, Netherlands; Ms. Ida Hartvig of the University of Copenhagen; Dr. Andrew Henderson of the New York Botanical Garden; Dr. Henk van der Werff and Dr. Pete Lowry of the Missouri Botanical Garden.

Altogether, a total of seventy-five botanically oriented professionals participated in this three-year multi-institutional collaborative project.

Conservation Impacts

Please explain/describe how your project has contributed to the implementation of the CEPF ecosystem profile.

The first CEPF Ecosystem Profile (2007) for the Indo-Burma biodiversity hotspot recognized the inadequacies of the current Red Data list of globally threatened species in Indochina region. The Profile accounted for 248 Red Listed plant species in Indochina, fewer than 1% of the ca. 15,000-25,000 indigenous vascular plant species. Before the project started, only a small number of comprehensive global threat assessments following IUCN Criteria had been conducted, and these assessments addressed only selected groups of plants, such as the cycads, conifers, dipterocarps, legumes, and magnolias. Except for the cycads and conifers, species were evaluated using outdated 1994 IUCN Criteria rather than the more recent 2001 Criteria. Most of the assessments were more than ten years old and therefore were no longer accurate, and they did not have the necessary supporting documentation that is now required by IUCN. In effect, the project can be considered the first proper assessment of the status of plants in this region. More importantly, the project mobilized a group of plant experts in the Indochina region who compiled and evaluated all existing information on the targeted plants of this hotspot, including previously published information, data on herbarium specimens distributed among widely scattered collections, specialist knowledge, and new conservation assessments, and entered the information into the IUCN SIS database. A number of new assessments are already accessible online on the IUCN Red List website (www.iucnredlist.org). The collation of all available data into a single, publicly accessible database provides the foundation for conservation assessments in the future. The project also conducted workshops that identified for the first time the Important Plant Areas (IPAs) for site conservation action in the region and trained local botanists and conservation biologists in the use of internationally accepted methods for plant conservation assessments. The project thus clearly contributed to the implementation of the CEPF Strategic Direction 1.3: "To investigate the status and distribution of globally threatened plant species, and apply the results to planning, management, awareness raising and/or outreach" and Strategic Direction 4.1: "To build a broad constituency of civil society groups working across institutional and political boundaries toward achieving the shared conservation goals described in the ecosystem profile."

Please summarize the overall results/impact of your project.

Planned Long-term Impacts - 3+ years (as stated in the approved proposal):

1. Effective and sustained conservation of threatened plant species in the Indochina region and adequate protection of their habitats leading to increased species survival and reduction of threat rankings.
2. A strengthened regional network of local government, academic, and civil society organizations capable of safeguarding plant species and contributing to global conservation strategies.

Actual Progress Toward Long-term Impacts at Completion:

1. Effective and sustained conservation of threatened plant species in the Indochina region and adequate protection of their habitats leading to increased species survival and reduction of threat rankings.

The updated Red List data and maps of Important Plant Areas, when published and available online, will provide decision-makers and conservation managers with the scientifically rigorous information necessary to protect threatened species and manage key natural areas in Indochina. The assessments have been submitted to the IUCN Species Programme, which will conduct consistency checks and reviews before publication on the IUCN Red List website.

2. A strengthened regional network of local government, academic, and civil society organizations capable of safeguarding plant species and contributing to global conservation strategies.

The project built a collaborative network of botanists and conservation professionals and strengthened botanical institutions and organizations that will continue to generate scientific knowledge and primary baseline data for sound decision-making on the conservation of threatened plant diversity in Indochina. Since this work constitutes their mission, they will continue to work toward these goals, now with increased interaction and cooperation in a strengthened network.

Planned Short-term Impacts - 1 to 3 years (as stated in the approved proposal):

1. Improved understanding of the conservation status and distribution of globally threatened plants in the Indochina region.
2. Online access of updated Red List data to policy-makers, conservation managers, environmental consultants, journalists, and the public.
3. Increased awareness in the region to use the Red List data for conservation planning, management, monitoring, and decision-making.
4. Increased capacity of local botanists to be able to use the internationally accepted methods for plant conservation assessment.

Actual Progress Toward Short-term Impacts at Completion:

1. Improved understanding of the conservation status and distribution of globally threatened plants in the Indochina region.

The project participants examined specimens in local and foreign botanical institutions, reviewed both published and grey botanical literature, and compiled taxonomic information and geographic distributions for 88 of the 248 Red Listed plant species and the 519 additional potentially threatened species selected by the botanical experts.

2. Online access of updated Red List data to policy-makers, conservation managers, environmental consultants, journalists, and the public.

The project participants entered the Red List assessments into IUCN's SIS database. Assessments for 15 species of aroids (family Araceae) and 54 species of gingers (family Zingiberaceae) have already been published on the IUCN Red List (www.iucnredlist.org).

3. Increased awareness in the region to use the Red List data for conservation planning, management, monitoring, and decision-making.

The project heightened interest among local botanists, particularly in Vietnam, in learning IUCN methods for plant conservation assessments in order to respond to the Vietnamese government's mandate to update the list of rare and precious flora and fauna attached to Decree 48, passed in 2002. The project shared information on threatened plant species with various conservation organizations — for example, information on the threatened aquatic plant species on the Mekong River with the IUCN Freshwater Biodiversity Unit; on the threatened medicinal plants, with the wildlife trade monitoring network TRAFFIC; on the threatened conifers and magnolias, with Fauna

and Fauna International; on the threatened camellia species with BGCI; and on the threatened Dalbergia species at the 16th meeting of the Convention of the Parties of CITES.

4. Increased capacity of local botanists to be able to use the internationally accepted methods for plant conservation assessment.

A total of forty-one local botanists from Vietnam (20), Laos (8), Thailand (6), Cambodia (5), and China (2) were trained in the rigorous application of the IUCN Red List and Criteria and engaged in the Red Listing assessments during the first and second Red Listing workshops held in Hanoi in December 2010 and in Chiang Mai in November 2011, respectively.

Please provide the following information where relevant:

Hectares Protected: N/A
Species Conserved: N/A
Corridors Created: N/A

Describe the success or challenges of the project toward achieving its short-term and long-term impact objectives.

The project made excellent progress towards achieving its short-term (1-3 years) impact objectives. The long-term (3+ years) impact objectives will be realized as soon as the updated Red List data and the lists and maps of Important Plant Areas are published and available online.

There were challenges, particularly in getting the botanical experts to complete tasks such as compilation of species assessment information and mapping of species distribution records before coming to the Red Listing workshops. Some experts were initially indifferent to the whole Red Listing process and commented on the tediousness of assembling the data in the SIS format. To address these issues, the project divided the participating experts into groups in the Red Listing workshops, each group led by a facilitator. Working in groups and arriving at species assessments by consensus allowed the experts to gain experience with, and feel comfortable with, the Red Listing process. For the experts who were not familiar with the IUCN SIS database, the project prepared Assessment Questionnaires that could be printed and completed by hand or by using a word-processing program. Staff from IUCN, BGCI, and MBG assisted in entering the information submitted by the experts into the SIS.

The flora of Indochina is still poorly known because of the small number of collections of rare and endemic species, the shortage of taxonomists studying the flora, and the lack of knowledge of the ecology of many species. For this reason, many potentially threatened species (211 out of 607 species = 35%) could not be assessed satisfactorily during the project, and the Data Deficient category was assigned for lack of data on the species. The problem of assessing taxa known only from a limited number of specimens and/or from old material is encountered very frequently, especially in poorly inventoried floras such as those of Indochina. More field surveys are therefore needed to determine the current status of populations of threatened species. The availability of new specimens and ecological data will provide more accurate assessments.

Were there any unexpected impacts (positive or negative)?

Indirectly, the project supported the Flora of Vietnam, the Flora of Thailand, and the Sud Expert Plant projects in the sharing of digitized images of botanical specimens (6500 files, 18.5 Gb data) and scanned botanical literature (110 documents, 6 Gb data).

Project Components

Project Components: *Please report on results by project component. Reporting should reference specific products/deliverables from the approved project design and other relevant information.*

Component 1 Planned:

Collation of data on globally threatened plant species in Indochina region.

Component 1 Actual at Completion:

1.1 Of the 248 Red Listed species in the Indochina region, the project focused only on the flowering plants. Eight species of cycads and conifers were removed from the list of plants to be re-assessed, since these plant groups have already been evaluated using the more recent IUCN Categories and Criteria. Of the remaining families previously Red Listed, the project was not able to find experts who could assess species in these taxonomically difficult plant families: maple family (Aceraceae), bittersweet family (Celastraceae), ebony family (Ebenaceae), oak family (Fagaceae), mahogany family (Meliaceae), nutmeg family (Myristicaceae), coffee family (Rubiaceae), sapodilla family (Sapotaceae), and chocolate family (Sterculiaceae). The project was able to identify and recruit several experts in the spurge family (Euphorbiaceae) and custard apple family (Annonaceae), but they were not able to submit the species Assessment Questionnaires and join either of the two Red Listing workshops.

1.2 The experts involved in the project were able to identify and collate data for 519 potentially threatened species in Indochina. The experts completed the Assessment Questionnaires for these species while the IUCN, BGCI, and MBG staff entered the data into SIS database.

Component 2 Planned:

Assessment of status and distribution of globally threatened plant species in Indochina.

Component 2 Actual at Completion:

2.1 Two Red Listing workshops were conducted and facilitated by project staff of IUCN, BGCI, and MBG. Forty-five botanical experts and facilitators attended the first Red Listing workshop held in Hanoi, Vietnam, from 1-4 December 2010. Thirty-two botanical experts and facilitators attended the second Red Listing workshop held in Chiang Mai, Thailand, from 1-5 November 2011.

In the first workshop, the experts re-assessed 88 of the 248 currently Red Listed species. Most of the species belong to two economically important and overexploited families: the dipterocarp family (Dipterocarpaceae) and the legume family (Fabaceae). The analyses revealed that 32 species (36%) maintained the same conservation status, 43 species (49%) showed improvement in conservation status, and 13 species (15%) showed deterioration in conservation status, compared to the last assessments made in 1997.

In the first workshop, the experts assessed 260 potentially threatened species in the families Apocynaceae, Arecaceae, Magnoliaceae, Styracaceae, and Verbenaceae. In the second workshop, the experts assessed 259 potentially threatened species in the families Araceae, Gesneriaceae, Orchidaceae and Zingiberaceae.

Table 1. Summary of assessments made in the 1st and 2nd Red Listing workshops.

IUCN Category	Re-assessments	New assessments	Re-assessments + New assessments
Critically Endangered	4	87	91
Endangered	33	81	114
Vulnerable	18	66	84
Near Threatened	5	13	18
Least Concern	9	80	89
Data Deficient	19	192	211
Total	88	519	607

Comparison of the results of assessments of 248 species in 1997 and the project assessments of 607 species showed that great increase in the number of Critically Endangered species (from 35 to 91 species) and in the number of Endangered species (from 38 to 114 species). The number of Vulnerable species decreased slightly.

Table 2. Comparison of the 1997 assessments of 248 species and the project's assessments of 607 species.

IUCN Category	1997 Assessments	Project Assessments	% Increase/Decrease
Critically Endangered	35	91	+ 160
Endangered	38	114	+ 200
Vulnerable	90	84	- 6
Near Threatened	18	18	0
Least Concern	47	89	+ 89
Data Deficient	11	211	+ 1818
Total	240	607	

Component 3 Planned:

Identification of important plant areas (IPAs) for site conservation action in the region.

Component 3 Actual at Completion:

3.1 Instead of a one-day workshop planned in conjunction with 2nd Red Listing Workshop in November 2011, four national consultative workshops to identify Important Plant Areas were conducted in Bangkok, Thailand, from 27-28 August 2012; in Vientiane, Lao PDR, from 20-21 September 2012; in Phnom Penh, Cambodia, from 10-11 October 2012; and in Hanoi, Vietnam, from 25-26 October 2012. A total of 37 plant taxonomists and ecologists participated in these workshops.

3.2 Maps showing the Important Plant Areas in the Indochina region were prepared and were presented at the final workshop in Hanoi from 1-2 November 2012. A total of 286 IPAs were identified and analyzed, covering 151,653 sq. km. or 12 percent of the Indochina region. Only 81% of IPAs is wholly or partly included within protected areas such as national parks, nature reserves, and wildlife sanctuaries, suggesting the need for further expansion of protected area system, particularly in Laos. Like the protected areas in the region, the IPAs are severely fragmented, varying considerably in size and condition of forest habitats. In many areas, degradation of conservation values is ongoing as a result of local agricultural encroachment, infrastructure and tourism development, illegal logging, and overharvesting of non-timber forest products. The identification and analysis of IPAs in the region will provide policy makers with geographic targets for expanding protected area coverage and prioritizing sites that require urgent conservation action.

Table 2. Area, number, and coverage of IPAs identified in Indochina.

	Thailand	Lao PDR	Cambodia	Vietnam	Total
Area (km ²)	510,890	236,800	81,035	310,070	1,238,795
Area of IPAs (km ²)	51,415	39,716	44,952	15,570	151,653
% country in IPA	10.06%	16.77%	24.8%	5.02%	12.24%
No. of IPAs	90	50	47	99	286
No. of IPAs protected	84	24	42	82	232
% IPAs protected	93%	48%	89%	83%	81%

Component 4 Planned:

Capacity building, improvement of herbarium facilities, and formation of IUCN/SSC Indochina Red List Authority.

Component 4 Actual at Completion:

4.1 A project inception workshop, conducted in Hanoi, Vietnam, on 15 September 2009, officially launched the project in the region. All project partners were represented with the exception of the BGCI. In addition to project partners, relevant stakeholders from government agencies, non-government organizations, and universities located in Hanoi and surrounding areas were invited. Of the 82 invitations sent to partners and stakeholders, 65 participants from seven countries attended the workshop.

4.2 IUCN staff members Melanie Bilz and Craig Hilton-Taylor conducted two training workshops on application of IUCN Red List Categories and Criteria and the use of the Species Information Service on 15-16 September 2009 and 1 December 2010.

4.3 The project organized an Indochina Plant Red List Authority (IPRLA), which is initially comprised of six members, namely, Dr. Jacinto Regalado, Jr. (chair), Dr. Hoang Van Sam (representative for northern Vietnam), Dr. Luu Hong Truong (representative for southern Vietnam), Dr. Rachun Pooma (representative for Thailand), Mr. Chhang Phourin (representative for Cambodia) and Ms. Somsaniith Bouamanivong (representative for Laos).

4.4 Five project assistants were trained to collect data from herbarium specimens and literature and to enter data into TROPICOS and the SIS, one from each of the following: the Institute of Ecology and Biological Resources, the Institute of Tropical Biology, the Royal University of Phnom Penh, the National University of Laos, and the Bangkok Forest Herbarium. Herbarium cases to store specimens, a laptop computer to enter data, and a scanner/camera to capture digital images were purchased for use of the project assistant at each institution. Reference books and office supplies were also purchased. An Internet connection for NUOL herbarium was established.

Component 5 Planned:

Awareness raising and outreach.

Component 5 Actual at Completion:

5.1 A one-day final workshop was organized in Hanoi, Vietnam, from 1-2 November 2012. Forty participants, including ten delegates from other countries attended. There were fourteen presentations on Red List assessments and Important Plant Areas. Photos of the workshop were posted on the Vietnam Plant Database website (<http://botanyvn.com/cnt.asp?param=news&newsid=1465>).

Component 6 Planned:

Improved knowledge of threatened plant species and strengthened local capacity in Cambodia through facilitation of subgrant to Frontier-Cambodia.

Component 6 Actual at Completion:

6.1 Frontier has submitted a comprehensive survey of the current knowledge of the status and distribution of 32 threatened species from Cambodia based upon literature review, study of herbarium specimens and field investigations.

6.2 The subgrant agreement to Frontier was signed in November 2009. Soon after, Mr. Run Sophearith, the Cambodian project research officer, was hired by the project. A laptop computer and a digital camera were purchased in preparation for his collection work in the field and in the herbarium. Mr. Sophearith was trained initially by Frontier-Cambodia Country Director Ms. Louise Durkin in 2010 and by Ms. Durkin's replacement, Mr. Aaron Sexton, in 2011. Mr. Sophearith gathered botanical information and herbarium and field data on threatened species concerning their range and distribution, population sizes and trends, habitats, and threats. His field survey and specimen data were incorporated in the report submitted to MBG. Unfortunately, Mr. Sophearith left his position to pursue studies in the U.S.

6.3 Site visits were made by the Project Manager to the Frontier-Cambodia office in November 2009, February 2010, and March 2012 in order to monitor the subgrant activities. Quarterly financial and progress reports were regularly submitted by the Frontier-UK office to MBG.

Were any components unrealized? If so, how has this affected the overall impact of the project?

The translation of IUCN Red List documents and SIS training manual into Vietnamese, Khmer, and Lao and Thai languages was not achieved, but this bears no significant impact on the success of the project because scientists in the region, especially those of the young generation, are becoming more fluent in the English language.

Because plant taxonomists Dr. Peter Van Welzen, Dr. Kongkanda Chayamarit, and Professor Nguyen Nghia Thin of the spurge family (Euphorbiaceae) and Dr. Paul Kessler and Dr. Richard Saunders of the custard apple family (Annonaceae) were unable to join the Red Listing workshops, the project did not have the benefit of key data providers on the taxonomy, ecology, status of natural distribution and native populations, and threats to the species in the two ecologically diverse and economically important families. As indicated above, the project was not able to find experts who could assess species in these taxonomically difficult plant families: maple family (Aceraceae), bittersweet family (Celastraceae), ebony family (Ebenaceae), oak family (Fagaceae), mahogany family (Meliaceae), nutmeg family (Myristicaceae), coffee family (Rubiaceae), sapodilla family (Sapotaceae), and chocolate family (Sterculiaceae).

Please describe and submit (electronically if possible) any tools, products, or methodologies that resulted from this project or contributed to the results.

Spreadsheets containing summary data from two Red Listing workshops and four IPA workshops as well as the KML files of IPAs that can be displayed in Google Earth have been submitted with this report.

Lessons Learned

Describe any lessons learned during the design and implementation of the project, as well as any related to organizational development and capacity building. Consider lessons that would inform projects designed or implemented by your organization or others, as well as lessons that might be considered by the global conservation community.

Even though the project participants and stakeholders are mostly botanists by profession, managing and motivating a large project team comprised of people with diverse cultural backgrounds and different languages was very challenging. During the early stages, the development of motivation and building of relationships were crucial to success of the project.

Project Design Process: (aspects of the project design that contributed to its success/shortcomings)

The two large Red Listing workshops were conducted in conjunction with two major botanical meetings, scheduling that encouraged greater participation of experts and enabled cost-sharing of lodging and accommodation expenses. Thus it was possible to invite more participants who were willing to do species assessments in the workshops. The first Red Listing workshop was held in Hanoi from 1-4 December 2010, a week before the Second International Symposium on the Flora of Cambodia, Laos, and Vietnam. Similarly, the second Red Listing workshop was held in Chiang Mai from 1-5 November 2011, a week before the Flora of Thailand Meeting. Several CEPF workshop participants were able to present oral papers and posters in these meetings and share knowledge with the wider scientific community.

The smaller IPA workshops conducted in each of four countries proved to be more logistically manageable and more effective in getting contributions and feedback from those participants who prefer to discuss the issues in their native language. In addition, the small workshops with one out-of-town facilitator also turned out to be more cost-effective than one big workshop with many out-of-town travelling participants.

Project Implementation: (aspects of the project execution that contributed to its success/shortcomings)

The project's success was dependent on the cooperation among scientists working on the flora of the Indochina region. Under the leadership of a full-time Project Manager, the project successfully engaged the botanical community working on the flora of Indochina and organized a network of more than 70 professionals who compiled and analyzed multi-taxa plant data from a conservation perspective.

Other lessons learned relevant to conservation community:

N/A

Additional Funding

Provide details of any additional funding that supported this project and any funding secured for the project, organization, or the region, as a result of the CEPF investment in this project.

Donor	Type of Funding*	Amount	Notes
US National Geographic Society	B	\$ 17,360	NGS grant awarded to Dr. Andrew Henderson of New York Botanical Garden to survey threatened species of palms in Vietnam.
Missouri Botanical Garden	A	\$ 220,028	\$94,717 equivalent to 50% MBG Project Manager's salary and benefits, \$25,311 for waived indirect cost (5% of USD 506,216) and \$100,000 for data hosting and maintenance in TROPICOS.
Botanical Garden Conservation International	B	\$ 3,000	Travel funds for the Project Manager to attend the first Global Trees Specialist Group (GTSG) meeting in Lisle, Illinois, from 30 June – 2 July 2009 and the second GTSG meeting in Kunming, China, from 17-19 September 2012.

**Additional funding should be reported using the following categories:*

- A** *Project co-financing (Other donors or your organization contribute to the direct costs of this project)*
- B** *Grantee and Partner leveraging (Other donors contribute to your organization or a partner organization as a direct result of successes with this CEPF funded project.)*
- C** *Regional/Portfolio leveraging (Other donors make large investments in a region because of CEPF investment or successes related to this project.)*

Sustainability/Replicability

Summarize the success or challenge in achieving planned sustainability or replicability of project components or results.

To ensure sustainability beyond CEPF support, the project established an Indochina Plant Red Listing Authority (IPRLA), whose members will continue to conduct further plant conservation assessments based on scientifically sound data and will initiate projects that monitor the status and conservation needs of threatened plant species.

The IUCN Asia Regional Office requested data and outputs of the project that will be used in revising the Vietnam National Biodiversity Strategy and Action Plans. Approval of the new NBSAP for Vietnam with the adoption of the assessments coming from this project will help ensure Government of Vietnam support for updating assessments in the future.

Summarize any unplanned sustainability or replicability achieved.

N/A

Safeguard Policy Assessment

Provide a summary of the implementation of any required action toward the environmental and social safeguard policies within the project.

The project did not conduct activities that had any adverse impacts on the environment and local community.

Additional Comments/Recommendations

Information Sharing and CEPF Policy

CEPF is committed to transparent operations and to helping civil society groups share experiences, lessons learned, and results. Final project completion reports are made available on our Web site, www.cepf.net, and publicized in our newsletter and other communications.

Please include your full contact details below:

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*****If your grant has an end date other than JUNE 30, please complete the tables on the following pages*****

Performance Tracking Report Addendum

CEPF Global Targets

(Enter Grant Term)

Provide a numerical amount and brief description of the results achieved by your grant.
Please respond to only those questions that are relevant to your project.

Project Results	Is this question relevant?	If yes, provide your numerical response for results achieved during the annual period.	Provide your numerical response for project from inception of CEPF support to date.	Describe the principal results achieved from 1 July, 2012 to 31 December, 2012 (Attach annexes if necessary)
1. Did your project strengthen management of a protected area guided by a sustainable management plan? Please indicate number of hectares improved.	No			Please also include name of the protected area(s). If more than one, please include the number of hectares strengthened for each one.
2. How many hectares of new and/or expanded protected areas did your project help establish through a legal declaration or community agreement?	No			Please also include name of the protected area. If more than one, please include the number of hectares strengthened for each one.
3. Did your project strengthen biodiversity conservation and/or natural resources management inside a key biodiversity area identified in the CEPF ecosystem profile? If so, please indicate how many hectares.	No			
4. Did your project effectively introduce or strengthen biodiversity conservation in management practices outside protected areas? If so, please indicate how many hectares.	No			
5. If your project promotes the sustainable use of natural resources, how many local communities accrued tangible socioeconomic benefits? Please complete Table 1 below.	No			

If you answered yes to question 5, please complete the following table

