# COMPLETION REPORT

# IMPROVING INVENTORY DESIGN TO ESTIMATE GROWING STOCK OF RAMIN (*GONYSTYLUS BANCANUS*) IN INDONESIA

## ITTO-CITES PROJECT
## INDONESIA'S WORK PROGRAMME FOR 2008 ON

ENSURING INTERNATIONAL TRADE IN CITES-LISTED TIMBER SPECIES IS CONSISTENT WITH THEIR SUSTAINABLE MANAGEMENT AND CONSERVATION

## EXECUTING AGENCY

Forestry Research and Development Agency (FORDA), Ministry of Forestry, Indonesia
Manggala Wanabakti Building, Block 1, 11th. Floor
Jl. Jend. Gatot Subroto, Senayan
Jakarta 10270, Indonesia
Tel: 021-5737945, Fax: 021-5737945

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**THEMATIC PROGRAM ON ITTO-CITES**

# ENSURING INTERNATIONAL TRADE IN CITES-LISTED TIMBER SPECIES IS CONSISTENT WITH THEIR SUSTAINABLE MANAGEMENT AND CONSERVATION

**STARTING DATE**

15 December 2008

**DURATION OF THE ACTIVITY**
12 months, extended to 20 months

**ACTIVITY COST (US$)**

| | |
|---|---|
| ITTO | US $ 113,400 |
| GOI (in kind) | US $ 17,935 |
| Total | US $ 131,335 |

**ACTIVITY COMPLETION REPORT**

**ACTIVITY TECHNICAL AND SCIENTIFIC STAFF**


**Activity Coordination Team**
Tajudin Edy Komar

**Activity Secretary**
Siti Nurjanah

**Activity Finance**
Dian Tita Rosita

**National Expert and Team Leader**
Prof. Dr. I. Nengah Surati Jaya
Prof. Dr. Ani Mardiastuti
Dr. Suwarno Sutarahardja
Samsuri
Dr. Hilman Affandi


**IMPLEMENTING AGENCY**


Center for Forest and Nature Conservation Research and Development
Jalan Gunung Batu No. 5, Bogor
Telp. 62-251-8633-234, Fax: 62-251-8638-111


**Bogor, 30 November 2010**

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# EXECUTIVE SUMMARY

## *1. Activity Context, Origin and Problem to be Addressed.*

Government of Indonesia has imposed logging moratorium policy on ramin in 2001 and listed the species in Appendix of CITES in the same year. These policies are issued in response to illegal logging and trade and to ensure its Sustainable Forest Management (SFM) and conservation.

In order to ensure the achievement of SFM and conservation of this species, provision of more accurate data on current distribution, potential growing stock are important. To achieve the provision of those data, the more cost effective design for inventory is necessary to be carried out in efficient and effective methods since its distribution in PSF is mostly with poor accessibility. The existing satellite (remote sensing) technology is explored under this activity.

## *2. Activity Objective.*

**Overall objective**

The overall objective of this Activity is to ensure the international trade of ramin in Indonesia is consistent with its sustainable management and conservation as part of global concern on ensuring sustainable management and conservation of CITES listed timber species, not only in South East Asia, but also Latin America and Africa with different timber species. For South East Asia, ramin (*Gonystylus* spp.) is naturally found in Indonesia and Malaysia including Sarawak and Sabah.

The other objectives are to assist relevant authorities to meet the scientific, administrative and legal requirements for managing and regulating trade in and *Gonystylus* spp. (ramin) and to develop guidance to ensure that utilization is not detrimental to the survival of CITES-listed tropical timber species.

**Specific objective**

To explore satellite (remote sensing) technology in the estimation of standing stock of ramin and natural distribution.

## *3. The Most Critical Differences between Planned and Realized Activity Implementation.*

**Activity personnel**: There was a change in activity personnel. Dr. Hilman Affandi of SEAMEO-BIOTROP, who was originally designed to be a Team Leader, replaced by Mr, Samsuri (a Team Leader) and supervisor (National Expert) for all activities by Prof I Nengah Surati Jaya from Remote Sensing Lab, Faculty of Forestry, IPB.

**Time schedule**: There is only slight delay in the completion of each individual activity.

**Budget amendment**: The amendment of previously prepared budget plan is unavoidable and is necessary to make the most efficient use of Activity fund.

## *4. The Situation Prevailing after Activity Completion, as Compared to the Pre-Activity Situation including the Situation of the Target Beneficiaries, and indicates the Post - Activity Sustainability (a Brief Description).*

There are several conditions have been reversed from this Activity as described below:

- The provision of data and information on the current situation on ramin (*G. bancanus*) potential standing stock.
- The improved inventory design for species growing in Peat Swamp Forests with special reference on ramin *(G. bancanus*).
- The knowledge on existing stock of ramin and policy currently implemented and its implication to the management and conservation.
- These situations would give influence to relevant stakeholders as primary beneficiaries.

## *5. The Most Relevant Outcome of the Analysis of the Activity Implementation.*

- Inventory design to estimate ramin growing stock.
- The use of existing remote sensing technology to estimate ramin growing stocks.
- General guideline of NDF which could comply with CITES requirement to ensure the non-detrimental effect to population and habitat.

## *6. The Lessons Learned.*

- The use of satellite technology (remote sensing) has been becoming useful for ramin inventory, even though to obtain more accurate estimation, the technology still requires some improvement.
- Ground truthing is still required to obtain correction factor between the actual and that from the satellite images.
- There are several alternative images to be used depending on the specification required and the purpose.
- The use of remote sensing technology has produced relatively more accurate data and information and cost effective.

## *7. Recommendations*.

The use of the satellite technology in estimating standing stock and inventory not only for ramin but also for other PSF species is recommended to be further developed.

The testing with more samples will produce more accurate data and information and therefore it is recommended that similar activity needs to be further carried out.

# 1. ACTIVITY IDENTIFICATION

## 1.1. Context

**Social, economic and environment**

Early 1980, this species have been exploited both in Sumatra and Kalimantan and many concession companies involved in the exploitation. Ramin has been popular timber for furniture and other indoor ornament and uses. Because of this use, this species has become important timber species and receiving high economic values.

This economic value has driven to the excessive harvest including illegal logging. This harvest has caused rapid degradation of population and habitat both in Sumatra and Kalimantan. Conversion of ramin habitat to other uses has escalated the decrease in population, which is in turn, will produce negative impact to the environment including the shelter for various animal and other environmental services. On the other hand, intensive assessment on ramin timber has not been conducted.

**Activity location**

The Activity consists of desk study, field test of the found technology other than training workshop, expert discussion meetings. These activities were carried out in Bogor Remote Sensing Lab, Faculty of Forestry, Bogor Agriculture University, field test in Riau (Sumatra) and Sebangau (Central Kalimantan) for testing and collecting data and information required for inventory design.

**Relevant national and regional policy and program**

There are two policies currently implemented on ramin; logging moratorium which has been imposed since 2001 and only one concession company is allowed to harvest ramin located in Sumatra and listing into CITES Appendix III and II, to assist in the trade control by both exporting and importing countries. The requirements of these policies include NDF assessment prior to harvest and set yearly quota with subject to be approval from CITES Authorities. The overall harvest requires more effective inventory method. This Activity also supports national program in the assessment of national forest resources.

## 1.2. The Origin and the Main Problem to be Addressed

Previous activities related to ramin have revealed several findings on the problems in management practice of ramin both in Sumatra and Kalimantan. Some of these findings are related to deficiency and inaccurate of data and information on ramin resources. These deficiency and inaccurate data influence the effective resource management on ramin. The main barrier in the collection of data and information on ramin and other PSF is poor accessibility. This Activity is aimed to obtain comprehensive data and information on that resource through the improvement of inventory design by exploring existing technology on remote sensing (satellite technology).

# 2. ACTIVITY OBJECTIVES AND IMPLEMENTATION STRATEGY

**Overall objective**

The overall objective of this Activity is to ensure the international trade in CITES-listed species is consistent with its sustainable management and conservation. This objective is further elaborated into more specific objectives which are parts of implementation of main activities with particular on ramin for Southeast Asia countries, Indonesia and Malaysia.

The availability of accurate data and information on ramin resources is essential in formulating management and conservation plan. Ramin, which is naturally growing in PSF, is mostly having problem in data collection. This is primarily due to the accessibility in PSF is mostly poor. The poor accessibility is causing the cost for ground survey is becoming high. The presence of satellite technology is expected to assist in more accurate data collection and reduce the cost. This Activity is intended to address the problem.

**Specific objective**

The specific objective: to develop an inventory design for ramin in peat swamp forest areas in Sumatra and Kalimantan for estimating the standing stock of ramin by utilizing satellite technology to obtain relatively more accurate data and information on the population and the standing stock of ramin.

**Adjustments made in the implementation phase**:

Primary adjustment for this Activity document is the Activity management. Originally this Activity would be executed by SEAMEO-BIOTROP (Dr. Hilman Affandi). Dr. Hilman Affandi was not available during the implementation period and therefore it was decided to be fully carried out by other team and institution. The meeting organized by Center for Forest and Nature Conservation R&D, the Executing/Implementing Agency of this Activity decided to appoint Remote Sensing Lab, Faculty of Forestry (Prof. Dr. I. Nengah Surati Jaya, supervisor-National Expert and Mr. Samsuri, Team Leader) to fully execute the activities.

In addition to that, two more additional extended activities were carried out in the extension period using the unspent fund during the primary activity period. The two activities are basically to strengthen the findings (outputs) through the development of guidelines and the training workshop using the two guidelines.

**Implementation strategy**

Several strategies have been taken: Review of existing technologies on natural resources inventory using satellite technology through workshop.
- Identification of relevant stakeholders in natural resource inventory using remote sensing technology.
- Developing a design which is the most cost effective methods.
- Carry out field test and make adjustment.
- Carry out training workshop.
- Dissemination of findings and guideline for inventory.

Involved stakeholders and beneficiaries:
- Remote Sensing Lab, Faculty of Forestry, IPB
- Wetland International Indonesia program who has carried out mapping of PSF
- Center for Forestry Planning, Ministry of Forestry
- SEAMEO-BIOTROP
- National Board for Terrestrial Survey (BAKOSURTANAL)
- CITES Management and Scientific Authorities
- Directorate of Forest Production, MoF
- Provincial and District Forest Services
- Universities

**Assumptions and risks**

The Activity has very minimal risks since most of the activities are related to the collection of data through *literature search*, interviews and field visit (survey) in selected areas. For field survey, the accessibility influenced the schedule but did not cause failure in the achievement of the overall Activity objectives.

# 3. ACTIVITY PERFORMANCE

## (i) Performance of each activity

| Outputs and Operational Activities | Schedule (Duration) | Applied inputs |
|---|---|---|
| **Output 1.1 An inventory design to estimate standing stock of ramin in peat swamp forest** | | |
| Activity 1.1.1. Review of the existing methods for ramin inventory in PSF | Jan – Mar 2009 | Team leader and members, other labors. National Expert Prof. Dr. I. Nengah Surati Jaya |
| Activity 1.1.2. Selection of methods, provision of satellite images and interpretation. | Mar – May 2009 | Similar to Activity 1.1.1. |
| Activity 1.1.3. Ground checks of selected sites | May – Jul 2009 | Similar to Activity 1.1.1. |
| Activity 1.1.4. Re-interpretation of the method | May – Jul 2009 | Similar to Activity 1.1.1. |
| **Output 1.2. Estimated standing stock of ramin** | | |
| Activity 1.2.1. Application of the inventory method to estimate ramin standing stock | Aug – Oct 2009 | Similar to Activity 1.1.1. |
| Activity 1.2.2. Stakeholder consultation on the estimated standing stock of ramin | Mar-Jun 2009, Extended to December 2010 – January 2011 | Similar to Activity 1.1.1. |
| **Extended Additional Activities** | | |
| Activity 1.1. Developing guideline for ramin inventory and NDF assessment | Feb – July 2010 | National Expert: Prof. Dr. I Nengah Surati Jaya and Prof. Ani Mardiastuti, IPB |
| Activity 1.2. A short training workshop on the inventory method and NDF assessment | Feb – July 2010 | Remote Sensing Lab, IPB. Scientific meetings by activity |

## (ii) *Output achievement*

There are two outputs achieved: (1) an inventory design to estimate standing stock of species in peat swamp forests and (2) an estimated standing stock of ramin. These two outputs have been achieved in accordance with the plan. The fields visited were carried out only in PT. Diamond Raya Timber of Riau and Sebangau National Park of Central Kalimantan. Other locations were not possible due very poor accessibility because they are not in logging operation. During logging operation, forest companies established railway lorry for transportation not only for logs but also for other mobility purposes.

The outputs achieved have been disseminated through expert meeting and workshop to validate the technique and or inventory design and the estimated standing stock of ramin in the remaining production forest in PT DRT and estimated growing stock of ramin in Sebangau National Park as Conservation Areas.

In addition to that, two guidelines are further developed. One is the guideline for ramin inventory (methods) which the simplification of the method (design) to become more user-friendly. The targets of this guideline are the field staffs who work on field inventory of pre-harvest assessment for standing stock. The other guideline is related to CITES requirement on to ensure the harvest is not detrimental to the population and habitat, NDF guideline. These two guidelines have been further disseminated to relevant stakeholders and authorities as part of capacity building.

Several printed materials (deliverables) under this Activity are as follows:

1) *Proceeding Technical Workshop "Review of The existing methods and design for Ramin inventory in peat swamp forest*"

*2) Selection Methods, Provision of Satellite Images and Interpretation*

*3) Ground check of selected sites*

*4) Re-evaluation of method*

*5) Relative Efficiency of Double Sampling in Peat Swamp Forest*

6) *Manual of Ramin Inventory in Peat Swamp Forest* **(Panduan Inventarisasi Sediaan ramin di Hutan Rawa Gambut)**

7) *Inventory Technique of ramin in Peat Swamp Forest* **(Teknik Inventarisasi Sediaan Ramin di Hutan Rawa Gambut)**

8) *Guideline for Non-Detrimental Finding assessment on ramin(Gonystylus spp.)* **(Panduan penilaian Non-Detrimental Finding untuk ramin (*Gonystylus* spp.))**

### Total amount of expenditures and analysis

The total budget is US $ 113,589.02, consists of:

| | | |
|---|---|---|
| - | original amount | US $ 111,900.00 |
| - | Bank interest | US $ 189.02 |
| - | Recent transfer for NDF printing | US $ 1,500.00 |

From the above total budget, US $ 113,450.82 was spent and the remaining balance is US $ 138.20 as reflected in the 'Activity Financial Statement - ITTO contribution' and the 'Activity Cash Flow Statement - ITTO contribution' in **Annex 1 and 2**. This expenditure is including **translation and printing for NDF Guideline in English version.** In this regard from the in-kind contribution of US$ 17,935.00 from Indonesia, a total of US$ 17,935.00 was spent as shown in the 'Activity Financial Statement – Government of Indonesia (GoI) contribution' and the 'Activity Cash Flow Statement - GoI contribution' in **Annex 3 and 4**.

Note:

All inquiries regarding the expenses for sub contract please contact:

Prof. Dr. I. Nengah Surati Jaya and Mr. Samsuri
Remote Sensing Laboratory
Kampus Dramaga, IPB
Bogor
Tel. (62 – 251) 8627130 - 8626775
Fax. (62 – 251) 8627130 -8621256

## 4. ACTIVITY OUTCOME, TARGET BENEFICIARIES INVOLVEMENT

### 4.1. The Achievement of Specific Objectives

The specific objective which is to develop an inventory design for ramin in peat swamp forest areas in Sumatra and Kalimantan for estimating the standing stock of ramin by utilizing satellite technology to obtain relatively more accurate data and information on the population and the standing stock of ramin have been achieved through a series of activities executed. The inventory

design was developed by reviewing the existing remotes sensing technologies applied to monitor land surface, forest resources and other forest resources. From the review, the more cost effective methods were further observed and developed. The project has produced the more cost effective methods by combining the use of satellite technology and ground survey. In order to improve this method further field testing are required.

**Outputs**

- The state of the art review on the remote sensing technology used for forestry inventory (Proceeding workshop)
- The most cost effective method to estimate ramin standing stock
- The guideline for ramin inventory using satellite images and field survey
- NDF guideline to be used for assessing harvest/export quota as result of extended additional Activity.

**The impact/outcome.**

The produced outputs could be very useful to be used to obtain the relatively more accurate data and information of forest resources and more on ramin (*G. bancanus*) distribution, population and potential standing stock. The estimated standing stock of ramin will also assist the relevant stakeholders to make management plan and operational management such as planning in the harvest quota to ensure the sustainable production of *ramin.*

**The activity outcomes**

- The use of satellite technology to estimate ramin standing stock
- The guideline for ramin inventory using satellite images and field survey
- NDF guideline to be used for assessing harvest/export quota.

## 4.2. **Situation at Activity Completion** as compared to the pre- Activity situation (the tangible Outputs of the Activity, sectoral policies and programs; and the physical environment)

- Problems related to the poor accessibility in PSF to carry out a field survey to estimate forest resources have been overcome by the development of this inventory design using the combination of remote sensing technology and ground survey.

- The operational activities of this Activity were executed by Remote Sensing Lab, Faculty of Forestry, Bogor Agricultural University involving graduate students from a wide range of universities in Indonesia. The involvement of universities and graduate students will likely to give positive impacts to future implementation of Activity findings.

- The estimate of standing stock of ramin is another important finding of the Activity which directly contributes to the management plan, especially in the setting harvest quota of ramin and other data and information regarding the distribution pattern of ramin.

- Other output which is also useful is the guideline of NDF assessment of ramin which is required under the listing in Appendix II of CITES.

## 4.3. **Participation of the Target Beneficiaries** had in the implementation of the Activity and how its results have been used by them or will be used in the future

The primary beneficiaries of the Activity are the Ministry of Forestry (MoF), research institutions, universities, forest concession companies and NGO. Remote Sensing lab, Faculty of Forestry, IPB and graduate students of universities also directly involved in some operational activities of the project. DG Forestry Planning and DG Production Forest Management of Ministry of Forestry, the

primary stakeholders and users of the activity findings, have involved in various workshops and discussion meetings during the Activity execution.

### 4.4. Expectation of Activity Sustainability after Activity Completion

Several outputs of Activity will be followed up and being further developed by relevant institution, especially the inventory design using the combination of remote sensing technologies and ground survey. The involvement of relevant institutions it will be likely that the findings of the Activity will be further utilized as part of Activity sustainability. This Activity also produces some guidelines which are also likely to be used for field application. Relevant field institution will utilize those documents as part of sustainability of Activity.

## 5. ASSESSMENT AND ANALYSIS

(i). Activity **rationale** and the **Activity identification process**

During the identification process, several key stakeholders involved such SEAMEO-BIOTROP, Division of forest biometrics. However, during the implementation representatives of those institutions are not available and replaced by other staffs.

(ii). No major problems faced during the implementation of the Activity and the activities have been carried out to achieve the planned outputs.

(iii). No **critical differences** between planned and actual Activity implementation.

(iv). Time and Activity inputs are sufficient.

(v). No significant external influences during the implementation of the Activity except the use of findings which is determined by relevant authorities.

(vi). Relevant stakeholders have fully participated in operational activities, such as DG Forest Production Management, DG. Forest Protection and nature Conservation (CITES-MA). Indonesian Institute of science (LIPI-CITES-SA) and other institutions which have long experience in satellite technology, such Forestry Planning, Wetland International etc.

(vii). Activity outputs are useful for collection data and information and monitoring the population and forest, and therefore there is chance that the findings will be used as part of sustainability of the activities.

(viii). In the implementation of the Activity, Center for Forest and Nature Conservation (CFNCRD) is as executing agency, and Remote Sensing Lab, (Faculty of Forestry, IPB) as implementing agencies and others are as supporting agency, such as Forestry Planning, Wetland International etc.

## 6. LESSONS LEARNED

- The use of satellite technology (remote sensing) has been becoming useful for ramin inventory, even though to obtain more accurate estimation, the technology still requires some improvement.

- Ground truthing is still required to obtain correction factor between the actual and that from the satellite images.

- There are several alternative images to be used for this purpose depending on the specification required and the purpose.

- The use of remote sensing technology has produced relatively more accurate data and information and cost effective.

## 7. CONCLUSION AND RECOMMENDATIONS.

The use of the satellite technology in estimating standing stock and inventory of ramin has been useful and produce cost effective methods compared to conventional method.

The use of this satellite technology, however, is recommended to be further developed, especially for other species in PSF whose accessibility is very poor.

The testing with more samples that produces more accurate data and information needs to be further carried out.

**Responsible for the Report**

Name: Tajudin Edy Komar Position held: Project Coordination Team
Date : 30 November 2010

## Annex 1. Activity Financial Statement – ITTO Contribution

**Programme Title:** Ensuring International Trade in Cites-Listed Timber Spesies is Consistent with their Sustainable Management and Conservation

**Period ending on:** 30 November 2010

**Activity No.** Activity Document I

**Activity Title:** Improving inventory Design to Estimate Growing Stock of Ramin (*Gonystylus bancanus*) in Indonesia

| Component | Original Amount (A) | Expenditure To-date | | | Available Funds (E) (A-D) |
|---|---|---|---|---|---|
| | | Accrued (B) | Expended (C) | Total Expended D (B+C) | |
| **I. Funds managed by Executing Agency** | | | | | |
| **10. Personnel** | | | | | |
| 11. National Expert | $ 10,250.00 | $ - | $ 10,250.00 | $ 10,250.00 | $ - |
| 12. Project Team Leader | $ 2,750.00 | $ - | $ 2,750.00 | $ 2,750.00 | $ - |
| 13. Project Secretary | $ 3,750.00 | $ - | $ 3,750.00 | $ 3,750.00 | $ - |
| 14. Project Finance | $ 500.00 | $ - | $ 500.00 | $ 500.00 | $ - |
| 15. Project Coordinator | $ 2,500.00 | $ - | $ 2,500.00 | $ 2,500.00 | $ - |
| **17. Personnel Total** | **$ 19,750.00** | **$ -** | **$ 19,750.00** | **$ 19,750.00** | $ - |
| | | | | | |
| 18. Workshop NDF Assessment Ramin | | | | | |
| 18.1 Travel and transportation | $ 1,327.18 | $ - | $ 1,327.18 | $ 1,327.18 | $ - |
| 18.3 Daily Subsistence Allowance | $ 2,656.71 | $ - | $ 2,656.71 | $ 2,656.71 | $ - |
| 18.2 Venue and logistic | $ 1,964.33 | $ - | $ 1,964.33 | $ 1,964.33 | $ - |
| 18.4. Workshop materials | $ 618.37 | $ - | $ 618.37 | $ 618.37 | $ - |
| 18.5 Others | $ 756.99 | $ - | $ 756.99 | $ 756.99 | $ - |
| **19. Training/Workshop Total** | **$ 7,323.58** | **$ -** | **$ 7,323.58** | **$ 7,323.58** | **$ -** |
| | | | | | |
| **20. Sub-contract** | | | | | |
| 21. Sub-contract to conduct activity 1.1.2 | $ 19,925.70 | $ - | $ 19,925.70 | $ 19,925.70 | $ - |
| 22. Sub-contract to conduct activity 1.1.3 | $ 25,005.77 | $ - | $ 25,005.77 | $ 25,005.77 | $ - |
| 23. Sub-contract to conduct activity 1.1.4 | $ 4,871.30 | $ - | $ 4,871.30 | $ 4,871.30 | $ - |
| 24. Sub-contract to conduct activity 1.2.1 | $ 9,920.00 | $ - | $ 9,920.00 | $ 9,920.00 | $ - |
| 25. Sub-contract to conduct training | $ 1,942.52 | $ - | $ 1,942.52 | $ 1,942.52 | $ - |
| **29. Component Total** | **$ 61,665.29** | **$ -** | **$ 61,665.29** | **$ 61,665.29** | **$ -** |
| | | | | | |
| **30. Duty Travel** | | | | | |
| 31. DSA | $ 4,190.00 | $ - | $ 4,190.00 | $ 4,190.00 | $ - |
| 32. Return Ticket | $ 1,887.06 | $ - | $ 1,887.06 | $ 1,887.06 | $ - |
| 33. Local Transport | $ 1,079.06 | $ - | $ 1,079.06 | $ 1,079.06 | $ - |
| **39. Component Total** | **$ 7,156.12** | **$ -** | **$ 7,156.12** | **$ 7,156.12** | **$ -** |
| | | | | | |
| **40. Capital Items** | | | | | |
| 41. Office space | $ - | $ - | $ - | $ - | $ - |
| 42. Capital equipment (computer) | $ 1,677.95 | $ - | $ 1,677.95 | $ 1,677.95 | $ - |
| **49. Component Total** | **$ 1,677.95** | **$ -** | **$ 1,677.95** | **$ 1,677.95** | **$ -** |
| | | | | | |
| **50. Consumable Items** | | | | | |
| 51. Fuel and Utilities | $ 224.40 | $ - | $ 224.40 | $ 224.40 | $ - |
| 52. Office supplies | $ 348.87 | $ - | $ 348.87 | $ 348.87 | $ - |
| 53. Other consumable items | $ 226.51 | $ - | $ 226.51 | $ 226.51 | $ - |
| **59. Component Total** | **$ 799.78** | **$ -** | **$ 799.78** | **$ 799.78** | **$ -** |
| | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| **60. Miscellaneous** | | | | | |
| 61. Sundry | $ 10.23 | $ - | $ 10.23 | $ 10.23 | $ - |
| 62.Printing and Editing*) | $ 11,874.07 | $ - | $ 11,874,07 | $ 11,874,07 | $ 138.20 |
| 63. Other miscellaneous | $ 3,332.00 | $ - | $ 3,332.00 | $ 3,332.00 | $ - |
| **69. Component Total** | **$ 15,216.30** | **$ -** | **$ 15,078.10** | **$ 15,078.10** | **$ 138.20** |
| | | | | | |
| **100. GRAND TOTAL:** | **$ 113,589.02** | **$ -** | **$113,450.82** | **$ 113,450.82** | **$ 138.20** |

**Note**

*) Consist of original amount + bank interest and additional transferred fund from ITTO for translation and printing NDF Guideline in English version.

## Annex 2. Activity Cash Flow Statement – ITTO Contribution

**Programme Title:** Ensuring International Trade in Cites-Listed Timber Spesies is Consistent with their Sustainable Management and Conservation

**Period ending on:** 30 November 2010

**Activity No.** Activity Document I

**Activity Title:** Improving inventory Design to Estimate Growing Stock of Ramin (Gonystylus bancanus) in Indonesia

| Component | Reference | Date | Amount | |
|---|---|---|---|---|
| | | | in US $ | Local Currency |
| **A. Fund received from ITTO** | | | | |
| 1. First Intallment | G0183471864001 | December 15, 2008 | $ 55,000.00 | Rp 610,500,000.00 |
| 2. Second Installment | G0193220746301 | November 19, 2009 | $ 50,000.00 | Rp 473,500,000.00 |
| 3. Third Installment | G0101970704701 | July 19, 2010 | $ 6,900.00 | Rp 62,624,400.00 |
| 4. Fourth Installment | G0103302078901 | November 29, 2010 | $ 1,500.00 | Rp 13,549,500.00 |
| 4. Interest bank deposit*) | | | $ 189,02 | Rp 2,128,433.37 |
| 5. Losses on exchange rate | | | | Rp (54,157,924.57) |
| **Total Funds Received:** | | | **$ 113,589.02** | **Rp 1,108,144,408.80** |
| **B. Expenditures (by Executing Agency):** | | | | |
| **10. Personnel** | | | | |
| 11. National Expert | | | $ 10,250.00 | Rp 96,447,300.00 |
| 12. Project Team Leader | | | $ 2,750.00 | Rp 28,422,500.00 |
| 13. Project Secretary | | | $ 3,750.00 | Rp 38,371,250.00 |
| 14. Project Finance | | | $ 500.00 | Rp 4,572,500.00 |
| 15. Project Coordinator | | | $ 2,500.00 | Rp 22,862,500.00 |
| **17. Personnel Total** | | | **$ 19,750.00** | **Rp 190,676,050.00** |
| 18. Workshop/Seminar and Training | | | | |
| 18.1 Travel and transportation Cost | | | $ 1,327.18 | Rp 12,810,000.00 |
| 18.2 Daily Subsistence Allowance | | | $ 2,656.71 | Rp 26,094,400.00 |
| 18.3 Venue and logistic | | | $ 1,964.33 | Rp 18,975,000.00 |
| 18.4 Workshop materials | | | $ 618.37 | Rp 5,900,050.00 |
| 18.5 Others | | | $ 756.99 | Rp 7,414,317.00 |
| **19. Training/Workshop Total** | | | **$ 7,323.58** | **$ 71,193,767.00** |
| **20. Sub-contract** | | | | |
| 21. Sub-contract to conduct activity 1.1.2 | | | $ 19,925.70 | Rp 202,524,040.00 |
| 22. Sub-contract to conduct activity 1.1.3 | | | $ 25,005.77 | Rp 248,971,000.00 |
| 23. Sub-contract to conduct activity 1.1.4 | | | $ 4,871.30 | Rp 48,425,280.00 |
| 24. Sub-contract to conduct activity 1.2.1 | | | $ 9,920.00 | Rp 93,396,540.00 |
| 25. Sub-contract to conduct training | | | $ 1,942.52 | Rp 18,069,325.00 |
| **29. Component Total** | | | **$ 61,665.29** | **Rp 611,386,185.00** |
| **30. Duty Travel** | | | | |
| 31. DSA | | | $ 4,190.00 | Rp 38,523,900.00 |
| 32. Return Ticket | | | $ 1,887.06 | Rp 17,156,800.00 |
| 33. Local Transport | | | $ 1,079.06 | Rp 10,313,250.00 |

| | | | | | | |
|---|---|---|---|---|---|---|
| **39. Component Total** | | | **$** | **7,156.12** | **Rp** | **65,993,950.00** |
| **40. Capital Items** | | | | | | |
| 41. Office space | | | $ | - | Rp | - |
| 42. Capital equipment (computer) | | | $ | 1,677.95 | Rp | 19,825,000.00 |
| **49. Component Total** | | | **$** | **1,677.95** | **Rp** | **19,825,000.00** |
| **50. Consumable Items** | | | | | | |
| 51. Fuel and Utilities | | | $ | 224.40 | Rp | 2,316,000.00 |
| 52. Office supplies | | | $ | 348.87 | Rp | 3,556,650.00 |
| 53. Other consumable items | | | $ | 226.51 | Rp | 2,214,950.00 |
| **59. Component Total** | | | **$** | **799.78** | **Rp** | **8,087,600.00** |
| **60. Miscellaneous** | | | | | | |
| 61. Sundry | | | $ | 10.23 | Rp | 115,000.00 |
| 62.Printing and Editing | | | $ | 11,735.87 | Rp | 107,558,000.00 |
| 63.Other miscellaneous | | | $ | 3,332.00 | Rp | 32,063,260.00 |
| **69. Component Total** | | | **$** | **15,078.10** | **Rp** | **139,736,260.00** |
| Total Expenditures To-date: | | | **$** | **113,450.82** | **Rp** | **1,106,898,812.00** |
| **Remaining Balance of Funds (A-B) :** | | | **$** | **138.20** | **Rp** | **1,245,596.80** |

Notes: Cash flow statement period: 15 December 2008 - 30 November 2010
*) Interest bank rate until 30 September 2010

## Annex 3. Activity Financial Statement – GoI in kind Contribution

**Programme Title:** Ensuring International Trade in Cites-Listed Timber Spesies is Consistent with their Sustainable Management and Conservation

**Period ending on:** 30 November 2010

**Activity No.** Activity Document I

**Activity Title:** Improving inventory Design to Estimate Growing Stock of Ramin (*Gonystylus bancanus*) in Indonesia

| Component | Original Amount (A) | Expenditure To-date | | | Available Funds (E) (A-D) |
|---|---|---|---|---|---|
| | | Accrued (B) | Expended (C) | Total Expended D (B+C) | |
| **I. Funds managed by Executing Agency** | | | | | |
| **10. Personnel** | | | | | |
| 11. National Expert | $ - | $ - | $ - | $ - | $ - |
| 12. Project Team Leader | $ - | $ - | $ - | $ - | $ - |
| 13. Project Secretary | $ - | $ - | $ - | $ - | $ - |
| 14. Project Finance | $ - | $ - | $ - | $ - | $ - |
| 15. Project Coordinator | $ - | $ - | $ - | $ - | $ - |
| **17. Personnel Total** | **$ -** | **$ -** | **$ -** | **$ -** | $ - |
| | | | | | |
| 18. Workshop NDF Assessment Ramin | | | | | |
| 18.1 Travel and transportation | $ - | $ - | $ - | $ - | $ - |
| 18.3 Daily Subsistence Allowance | $ - | $ - | $ - | $ - | $ - |
| 18.2 Venue and logistic | $ - | $ - | $ - | $ - | $ - |
| 18.4. Workshop materials | $ - | $ - | $ - | $ - | $ - |
| 18.5 Others | $ - | $ - | $ - | $ - | $ - |
| **19. Training/Workshop Total** | **$ -** | **$ -** | **$ -** | **$ -** | **$ -** |
| | | | | | |
| **20. Sub-contract** | | | | | |
| 21. Sub-contract to conduct activity 1.1.2 | $ - | $ - | $ - | $ - | $ - |
| 22. Sub-contract to conduct activity 1.1.3 | $ - | $ - | $ - | $ - | $ - |
| 23. Sub-contract to conduct activity 1.1.4 | $ - | $ - | $ - | $ - | $ - |
| 24. Sub-contract to conduct activity 1.2.1 | $ - | $ - | $ - | $ - | $ - |
| 25. Sub-contract to conduct training | $ - | $ - | $ - | $ - | $ - |
| **29. Component Total** | **$ -** | **$ -** | **$ -** | **$ -** | **$ -** |
| | | | | | |
| **30. Duty Travel** | | | | | |
| 31. DSA | $ - | $ - | $ - | $ - | $ - |
| 32. Return Ticket | $ - | $ - | $ - | $ - | $ - |
| 33. Local Transport | $ - | $ - | $ - | $ - | $ - |
| **39. Component Total** | **$ -** | **$ -** | **$ -** | **$ -** | **$ -** |
| | | | | | |
| **40. Capital Items** | | | | | |
| 41. Office space | $ 1,000.00 | $ - | $ 1,000.00 | $ 1,000.00 | $ - |
| 42. Capital equipment (computer) | $ - | $ - | $ - | $ - | $ - |
| **49. Component Total** | **$ 1,000.00** | **$ -** | **$ 1,000.00** | **$ 1,000.00** | **$ -** |
| | | | | | |
| **50. Consumable Items** | | | | | |
| 51. Fuel and Utilities | $ - | $ - | $ - | $ - | $ - |
| 52. Office supplies | $ - | $ - | $ - | $ - | $ - |
| 53. Other consumable items | $ - | $ - | $ - | $ - | $ - |
| **59. Component Total** | **$ -** | **$ -** | **$ -** | **$ -** | **$ -** |
| | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| **60. Miscellaneous** | | | | | |
| 61. Sundry | $ - | $ - | $ - | $ - | $ - |
| 62.Printing and Editing | $ - | $ - | $ - | $ - | $ - |
| 63. Other miscellaneous | $ - | $ - | $ - | $ - | $ - |
| **69. Component Total** | **$ -** | **$ -** | **$ -** | **$ -** | **$ -** |
| | | | | | |
| 70. Executing Agency Management Cost | $ 16,935.00 | $ - | $ 16,935.00 | $ 16,935.00 | $ - |
| **79. Component Total** | **$ 16,935.00** | **$ -** | **$ 16,935.00** | **$ 16,935.00** | **$ -** |
| **100. GRAND TOTAL:** | **$ 17,935.00** | **$ -** | **$ 17,935.00** | **$ 17,935.00** | **$ -** |

## Annex 4. Activity Cash Flow Statement – GoI in kind Contribution

**Programme Title:** Ensuring International Trade in Cites-Listed Timber Spesies is Consistent with their Sustainable Management and Conservation

**Period ending on:** 30 November 2010

**Activity No.** Activity Document I

**Activity Title:** Improving inventory Design to Estimate Growing Stock of Ramin (Gonystylus bancanus) in Indonesia

| Component | Reference | Date | Amount | |
|---|---|---|---|---|
| | | | in US $ | Local Currency |
| **A. Fund received from ITTO** | | | | |
| 1. First Intallment | | | $ 1,000.00 | Rp 10,890,000.00 |
| 2. Second Installment | | | $ 16,935.00 | Rp 184,422,150.00 |
| **Total Funds Received:** | | | **$ 17,935.00** | **Rp 195,312,150.00** |
| **B. Expenditures (by Executing Agency):** | | | | |
| **10. Personnel** | | | | |
| 11. National Expert | | | $ - | Rp - |
| 12. Project Team Leader | | | $ - | Rp - |
| 13. Project Secretary | | | $ - | Rp - |
| 14. Project Finance | | | $ - | Rp - |
| 15. Project Coordinator | | | $ - | Rp - |
| **17. Personnel Total** | | | **$ -** | **Rp -** |
| 18. Workshop/Seminar and Training | | | | Rp - |
| 18.1 Travel and transportation Cost | | | $ - | Rp - |
| 18.2 Daily Subsistence Allowance | | | $ - | Rp - |
| 18.3 Venue and logistic | | | $ - | Rp - |
| 18.4 Workshop materials | | | $ - | Rp - |
| 18.5 Others | | | $ - | Rp - |
| **19. Training/Workshop Total** | | | **$ -** | **Rp -** |
| **20. Sub-contract** | | | | |
| 21. Sub-contract to conduct activity 1.1.2 | | | $ - | Rp - |
| 22. Sub-contract to conduct activity 1.1.3 | | | $ - | Rp - |
| 23. Sub-contract to conduct activity 1.1.4 | | | $ - | Rp - |
| 24. Sub-contract to conduct activity 1.2.1 | | | $ - | Rp - |
| 25. Sub-contract to conduct training | | | $ - | Rp - |
| **29. Component Total** | | | **$ -** | **Rp -** |
| | | | | Rp - |
| **30. Duty Travel** | | | | Rp - |
| 31. DSA | | | $ - | Rp - |
| 32. Return Ticket | | | $ - | Rp - |
| 33. Local Transport | | | $ - | Rp - |
| **39. Component Total** | | | **$ -** | **Rp -** |
| | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| **40. Capital Items** | | | | | | |
| 41. Office space | | | $ | 1,000.00 | Rp | 10,890,000.00 |
| 42. Capital equipment (computer) | | | $ | - | Rp | - |
| **49. Component Total** | | | $ | 1,000.00 | **Rp** | **10,890,000.00** |
| **50. Consumable Items** | | | | | | |
| 51. Fuel and Utilities | | | $ | - | Rp | - |
| 52. Office supplies | | | $ | - | Rp | - |
| 53. Other consumable items | | | $ | - | Rp | - |
| **59. Component Total** | | | **$** | **-** | **Rp** | **-** |
| **60. Miscellaneous** | | | | | | |
| 61. Sundry | | | $ | - | Rp | - |
| 62.Printing and Editing | | | $ | - | Rp | - |
| 63.Other miscellaneous | | | $ | - | Rp | - |
| **69. Component Total** | | | $ | - | Rp | - |
| **70. Executing Agency Management Cost** | | | **$** | **16,935.00** | **Rp.** | **184,422,150.00** |
| **79. Component Total** | | | **$** | **16,935.00** | **Rp.** | **184,422,150.00** |
| Total Expenditures To-date: | | | **$** | **109,953.06** | **Rp** | **195,312,150.00** |
| **Remaining Balance of Funds (A-B) :** | | | **$** | **-** | **Rp** | **-** |

Notes: Cash flow statement period: 15 December 2008 - 30 September 2010