



**Improving Sustainable *Pericopsis elata* Conservation and
Trade Regulations in Ghana**

**Report on Training-Workshop on *Pericopsis elata* for Field
Staff of the Forest Services Division**

12th April, 2017

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TRAINING WORKSHOP REPORT

**“IMPROVING SUSTAINABLE *PERICOPSIS ELATA* CONSERVATION AND TRADE
REGULATIONS IN GHANA”**

PROJECT SPONSORED BY ITTO

**IMPLEMENTED BY, NATURE AND DEVELOPMENT FOUNDATION (NDF) IN
GHANA**

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LIST OF ABBREVIATIONS AND ACRONYMS

CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
FC	Forestry Commission
FIP	Forest Investment Programme
FSD	Forest Services Division
ITTO	International Timber Trade Organization
IUCN	International Union for Conservation of Nature
KNUST	Kwame Nkrumah University of Science and Technology
NDF	Nature and Development Foundation
P. ELATA	Pericopsis Elata
RMSC	Resource Management Support Centre

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1.0 INTRODUCTION

1.1. Background

Over the years, unsustainable logging and commercial overexploitation is said to have posed a threat to *Pericopsis elata* which ranks among the most valued hard tropical timber species across the globe. This resulted in the classification of the tree as endangered on the IUCN Red List in 2004, and subsequent listing on Appendix II of the Convention for International Trade in Endangered Species (CITES). *Pericopsis elata* (Afromosia) even though listed as a CITES appendix II species (meaning trading in this species is not permitted without special authorization by the relevant authorities), continues to be a victim of over exploitation mainly for its precious hard wood. The problem with respect to the management of *pericopsis elata* is the inadequate data on the distribution, conservation and trade of the species in Ghana. This is due to the non-assessments of the in-situ conservation status, of market and trade status and the lack of dedicated initiative for the protection of the species.

Funded by the ITTO (International Tropical Timber Organization), Nature and Development Foundation (NDF) have carried out studies on the distribution, conservation and trade of the species in Ghana. This workshop will build the capacity of state monitoring officers to enable them undertake periodic monitoring of the species and make available current data on the species.

The project, “Improving Sustainable *Pericopsis elata* Conservation and Trade Regulation in Ghana” has the aim of making available current data on the distribution, conservation and trade of *Pericopsis elata* in Ghana.

1.2 Date and Venue

The training workshop was organized on the 12th April, 2017 at the Crystal Rose Ambassador Hotel Conference Room in Kumasi.

1.3 Workshop Objective

The core aim for this training was to build the capacity of the state monitoring and regulation officers in the identification, recording and exploitation of the species from the natural forest to ensure sustainable management of the species.

1.4 Workshop Attendance

Forest field staff (range supervisors, forest guards, and stock survey team members) within the range of *Pericopsis elata* in Ghana; Goaso, Sefwi -Wiaso, Nkawie, Sunyani, Dormaa and Bechem were selected for the workshop. Speakers at the workshop included experts from the Resource Management Support Centre (RMSC) of the Forestry Commission, Faculty of Renewable Natural Resources (KNUST) and Nature and Development Foundation. In total 24 persons participated in the workshop.

1.5 Profile of Resource Persons

- Mr. Kwasi Kwarteng Boakye, a curator of Ntim Gyakari Herbarium, a representative of Resource Management Support Centre (RMSC).
- Mr. Adoma Owusu, Assistant Manager of Ntim Gyakari Herbarium, RMSC.
- Professor S.K Oppong, Faculty of Renewable Natural Resource Management, Department of Wildlife and Range Management, K.N.U.S.T.

2.0 WORKSHOP PROCEEDING

2.1 Opening and Welcome address

Mr. Seidu opened the session by welcoming participants to the training. He spelt out the objectives of the training and encouraged participants to get involved to make the training as participatory as possible. This is because, according to Mr. Seidu, learning is enhanced and effective when participation is high. He urged participants to feel free and ask any question which may cross their minds in the cause of the training. Participants were then, made to introduce themselves after which ground rules for the training period were established.

2.2 PRESENTATION ON THE PROJECT: MR. MUSTAPHA SEIDU.

2.2.1 Donor Awareness

Acknowledgement of the donor (ITTO) was the first and a special feature of the project presentation as the Director of NDF (Mr. Seidu) took time to further bring into recognition the crucial role of ITTO (donor) in the project, aside the display of the ITTO logo on his presentation slides and the rollup banner which had been produced for the project.

2.2.2 CITES

The presentation also refreshed participants on CITES (the Convention on International Trade in Endangered Species of Wild Fauna and Flora) stating that, it is an international agreement between governments which aims to ensure that, international trade in specimens of wild animals and plants does not threaten their survival. Some notable CITES Appendix species in Ghana are: Chimpanzee, Bear-headed rockfowl, African Manatee, Leopard, African elephant, *Pericopsis elata* (Afromosia) and *Cedrella odorata*.

2.2.3 Relevance to Ghana's Policies

The project is in line with Ghana's policies as it fits into Strategic Direction 5.1 of Ghana Forest and Wildlife policy which support the uptake and dissemination of information built on indigenous and scientific knowledge to improve on the management of forest and wildlife resources. Also, the project is in alignment with Strategic Direction 5.3 which seeks to Support Research and Development to enhance efficiency in the wildlife industry. In summary, this project is in line with the aspiration of the government of Ghana to build national capacity for accurate accounting and timely collection of resource production and utilization of the resource data to be linked up with macroeconomic data.

2.2.4 Scope of the Project

The project will focus on the *in situ* and market survey of the species and in turn create public awareness of the status of the species and engage policy makers on the species. All of which are believed, will contribute to the management of the high forest zone of the country.

2.2.5 Discussions

Participants inquired of the target area of the project and Mr. Seidu indicated that the project (the in-situ study) is covering the high forest zones of Ghana where the species is commonly found (Goaso, Sefwi -Wiaso, Nkawie, Sunyani, Dormaa and Bechem Forest districts).

2.3 PRESENTATION ON THE IDENTIFICATION OF *PERICOPSIS ELATA* (KOKRODUA); MR. KWASI KWARTENG BOAKYE

2.3.1 General outlook of *Pericopsis elata*

2.3.2 Description

Pericopsis elata (Kokrodua) is a gregarious species that grows in both wet and dry forests. It is a large tree that can grow up to forty-five (45) metres high with a diameter of about 270cm when

matured. It has a straight bole with irregular shape in large trees. Buttress is commonly seen in large trees between 1.83m–2.44m from the forest floor. The bark is conspicuous, smooth, brownish green to grey, peeling off naturally leaving bright red-brown patches. It is of fine texture with straight grains and resembles teak but slightly heavier, stronger, durable and harder than teak.

2.3.3 Classification

The species belongs to the family: Papilionaceae (Leguminosae), Genus: Periscopsis, Species: elata. The formal name is *Afromosia elata* and the local name: Kokrodua.

2.3.4 Ecology

The tree is usually found in the Rain Forest and was previously abundant in dry semi-deciduous forests and moist semi-deciduous North West subtype.

2.3.5 Locations in Ghana

In Ghana, the species is mostly found in Goaso Forest District (Subim and Bia-Tano Forest Reserves), Dormaa – Ahenkro Forest District (Mpameso Forest Reserve) and Sunyani Forest District (Asukese Forest Reserve)

2.3.6 Field identification

In the field, the species can be identified by the following characteristic;

Bole: Cylindrical or slightly fluted with age. Conspicuously speckled with large reddish patches where scales are fallen.

Bark and Slash: Smooth with scales falling to reveal large and rounded red patches.

Slash: Soft fibrous yellowish, soon darkening with greenish outer layer.

Scent: Like green beans

Leaves: Pinnate with 7-11 alternate leaflets.



Figure 1: Features of *Pericopsis elata*, picture taken by; Hawthorne, W.D & N. Gyakari 2006 “Photoguide for the forest trees of Ghana”.

2.3.7 Phenology

The Flowering period is between April – May. The Fruiting period is August and the fruits mature in November. Its fruits range between 10-15cm long, 2.5cm 1-3 seeded, and flat.

2.3.8 Similarity with other species

Ending his presentation, Mr. Boakye said, the tree is similar to *Distemonathus bentamianus* (Bonsamdua) and usually confuses tree hunters in the field and buyers on the market. He however, differentiated the two as follows;

<i>Pericopsis elata</i> (Kokrodua)	<i>Distemonathus bentamianus</i> (Bonsamdua)
Bole & crown	
Speckled with large reddish patches where scales have fallen.	Conspicuously brown, smooth or rough in parts, often slightly bent.
Leaves	
Thread-like stipels at the base of leaflets.	Its leaves are without stipels but are grittier with contoured slash.

Table 1; shows the similarities between kokrodua and bonsamdua.



Figure 2: Features of *Distemonatus bentamianus* (Bonsamdua); picture taken by; Hawthorne, W.D & N. Gyakari 2006 “Photoguide for the forest trees of Ghana”.

2.3.9 Discussion

Some participants asked on how easily kokrodua can be identified personally in the market. Mr. Kwarteng explained that *Pericopsis elata* (kokrodua) in the market can be identified by observing its fine texture with straight grains which is slightly heavier, stronger, durable and harder than teak.

2.4 PRESENTATION ON PROTECTION OF *PERICOPSIS ELATA* (KOKRODUA); MR. ADOMA OWUSU

2.4.1 The Need to Protect *Pericopsis elata*

As a result of decades of unregulated logging, loss of habitat through wildfires and its gregarious and endemic nature, *pericopsis elata* is now uncommon. This threatened species is currently listed on the IUCN Red list and CITES Appendix II.

2.4.2 Fortification of the remaining from extinction

To be able to ensure proper sustainability of the species, the following procedures should be adopted;

- Development of a database of all *Pericopsis elata* found within forest reserves.
- Protection of existing habitats to serve as provenance trials (fine grain protection).
- Develop and implement a rigorous monitoring programme to ensure protection of existing stands
- Encourage the establishment of stands of *P. elata* through plantations and enrichment planting
- Awareness creation among all key stakeholders (foresters, loggers, traditional leaders and fringe communities).

2.4.3 Way forward of preventing *Pericopsis elata* from extinction

Economic extinction of *Pericopsis elata* will be reduced if the following ideas are being implemented;

- Establishment of provenance trials
- Establishment of *Pericopsis elata* nurseries for planting up suitable lost habitats
- Intensify restrictions on harvesting of *Pericopsis elata*
- Areas identified with *Pericopsis elata* should be protected from wildfires

2.4.4 Discussion

A representative from Dormaa asked how *Pericopsis elata* in off reserves can be conserved. Mr. Adoma responded by giving the following suggestions;

- *Pericopsis elata* should be involved in all field plantation projects.
- Proper management should be ensured to enhance more regeneration of seedlings.
- Farmers who have *Pericopsis elata* in their farms should be motivated and encouraged on the need to keep the species.

Another participant also asked if within the range, *Pericopsis elata* is being cultivating or extinct. Some participants replied by stating that;

- a) Illegal chainsaw operators are making *Pericopsis elata* go extinct.

- b) Forest guards have not been educated on the necessity of protecting the tree species.
- c) Most of forest Investment Programme does not include *Pericopsis elata* in their plantation projects.

2.5 PRESENTATION ON CONSERVATION OF *PERICOPSIS ELATA* IN GHANA AND THE ROLE OF STAKEHOLDERS ESPECIALLY THE FORESTRY FIELD WORKERS; Professor S.K. Oppong.

2.5.1 Significance of *Pericopsis elata*

Pericopsis elata is a valuable timber species which is mainly for furniture and as decorative veneer, and in traditional medicine as an anodyne. It can be found in moist semi-deciduous forests, along water courses and seasonally water-logged soils and gregarious to semi-gregarious species. Kokrodua is a pioneer species which stimulates to germinate by gaps in the canopy.

2.5.2 CITIES view on *Pericopsis elata*

CITES is an agreement between governments to ensure that trade in specimens of wild animals and plants does not threaten their survival or are not over-exploited. *Pericopsis elata* was listed on Appendix II of CITES at the 8th CITES Conference of the Parties (COP8), Kyoto, Japan in 1992.

2.5.3 Conservation of *Pericopsis elata*

In order to preserve kokrodua from extinction, forest field workers should keep in mind these guidelines as listed below;

- Felling limit of 110 cm DBH to delay harvest for the species to recuperate naturally.
- Harvesting permit required for the species.
- Ban on export of logs of *Pericopsis elata*.
- Export levy of 30% on air-dried lumber exports to restrain over-exploitation.
- Implementation of forest policies to enhance sustainable forest management.
- Setting of total annual allowable cut for timber within the country.
- Establishing Plantations through enrichment plantings, taungya and direct plantations.

2.5.4 Stakeholders engagement

Fringe communities, loggers, timber companies, forest workers, government and non-government organizations can all be creators by exercising:

- Law enforcement
- Plantation development
- Adhering to conservation practices
- Adopting sustainable land use practices

2.5.5 Positive interventions for sustainable conservation of *Pericopsis elata*

National forest authorities can help develop policies in response to the increasing threat to the conservation of the species if these submissions are taken into thought;

- Plantation development schemes
- Institutionalizing agroforestry practices in all agricultural land-use systems
- Soft land acquisition procedures for *Pericopsis* plantations
- Credible Credit Schemes for *Pericopsis* production systems

Also intensive research into these ideologies as listed below will assist in developing more strategies to curb *Pericopsis elata* from extinction;

- The phenological patterns and fertility of the species
- The impact of logging on seed tree populations
- The history of *P. elata* populations and why regeneration is lacking in its natural distribution area
- The genetic variation and spatial genetic structure of *P. elata*
- To understand the origins of its natural populations as well as their evolution.
- To identify affordable and effective enrichment methods that could be routinely applied by logging companies.
- Regular monitoring of plant densities and estimates of wood volumes of the species.

2.5.6 Discussion

A participant asked of how forest guards and range supervisors can cooperate effectively with their district managers. Professor Oppong answered by stating that to be able to connect easily with their district managers:

- I. There should be transparency between district managers and their subordinates.
- II. Forest field workers should be committed to their obligations both in the field and office.

2.6 GENERAL DISCUSSION SESSION

Mr. Siedu facilitated this session by asking inclusive questions concerning *Pericopsis elata*. Most of the participants gave meaningful contributions and suggestions in response to the questions listed below;

- I. What are some of the on-going interventions on *Pericopsis elata* (*Kokrodua*) that you are aware of? Are there any challenges in the protection of the species?
- II. As a field staff of the forestry Commission, what role can you play to ensure that *Pericopsis elata* is protected against local extinctions?
- III. What recommendations would you make to management of Forestry Commission and other stakeholders to ensure that the species is protected and regeneration promoted.

2.6.1 Question I: What are some of the on-going interventions on Kokrodua that you are aware of? Are there any challenges in the protection of the species?

Responses to on- going interventions;

- a) Special permit from RMSC has been issued.
- b) RMSC pilot inventory to develop a database for *Pericopsis elata*.
- c) Some forest service divisions have started *Pericopsis elata* (*Kokrodua*) plantation e.g. Bechem Forest District Plantation.

Responses on challenges;

- a) Unavailability of *Pericopsis elata* seedlings for plantation.
- b) Regeneration is very low in most of our plantation field.
- c) Forest environment does not encourage the growth of *Pericopsis elata* (*kokrodua*) seedlings.

- d) Poor management of our plantations.
- e) Illegal activities of chainsaw operators
- f) Lack of qualified personnel to train forestry employees on seed collection of *Pericopsis elata* (kokrodua)
- g) Lack of plantation departments to supervise the nursery of *Pericopsis elata* (kokrodua) seedlings.
- h) Inadequate logistics and other incentives for forest field workers.
- i) None recruiting of qualified forestry based personnel at the forest sectors

Suggestions

- i. RMSC should partner with forest districts to ensure proper management *Pericopsis elata* plantations.
- ii. Policies should be made to guide the plantation.
- iii. *Pericopsis elata* plantation should be included in Forest Investment Programme (FIP) projects.

2.6.2 Question II. As a field staff of the forestry Commission, what role can u play to ensure that *Pericopsis elata* is protected against local extinctions?

Responses:

- i. Involvement of forest guards, range supervisors and other staffs in decision making during FIP projects.
- ii. In service training for forest guards and Range Supervisors.

2.7 STAKEHOLDER'S RECOMMENDATIONS

Participants and consultants at the training workshop advised that:

- i. Forest Investment Programme should include plantation on endangered species such *Pericopsis elata* for future sustainability.
- ii. Government and the general public should ensure total band of harvesting *Pericopsis elata*.
- iii. More expert trainees on the identification of *Pericopsis elata* both in the field and market.
- iv. Nursery and plantation knowledge on *Pericopsis elata* should be more to enhance regeneration of *Pericopsis elata*.
- v. Forestry students should be involved in plantation programme during their long vacation.
- vi. Proper afforestation of extinct species should be practiced.
- vii. Adopting of sustainable land use practices such as Taunya system.
- viii. Stakeholder's engagement in *Pericopsis elata* plantation projects.
- ix. Unlicensed sawmills should be fined.

2.8 CONCLUSION

Participants actively shared their concerns and made meaning suggestions on improving *Pericopsis elata* in Ghana. Ending the workshop, Mr. Seidu expressed his appreciation to the participants for making it possible for the training workshop. And also, expressed his gratitude to ITTO for making the event possible.

APPENDIX 1: LIST OF PARTICIPANTS

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6.	Godwin Akakpo	0243045702	FSD	Dormaa	n/a
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11.	Christian K.Tetteh	0243548191	NADMO	Bechem	n/a
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21.	Baiden Deborah	0242616152	NDF	Accra	sakabaiden@gmail.com
22.	Emmanuel Agbodza	0243414596	NDF	Accra	agbodza@gmail.com
23.	Prof. Samuel Oppong	0244535692	FRNR, KNUST	Kumasi	kobbyoppong@yahoo.com
24.	Oppon Sasu	-	FC	Accra	n/a

APPENDIX 2: PROGRAM OUTLINE



TENTATIVE WORKSHOP AGENDA

Improving Sustainable *Pericopsis elata* Conservation and Trade Regulation in Ghana

Date: 12th April, 2017.

Venue: Crystal Rose Ambassador Hotel, Ahodwo, Kumasi.

No.	Item	Time (duration)	Lead
1	Arrival and registration of participants	8.00	Deborah Baiden
2	Opening	8.30	facilitator
3	Introduction of participants	8.30 – 8.40	facilitator
4	Presentation on the project and setting the scene	8.45 – 9.05	Mustapha
5	Field identification of <i>Pericopsis Elata</i>	9.05– 10.00	Mr. Kwasi Kwarteng Boakye
	Q & A session – any gaps already identified	10.00 – 10.20	facilitator
6	Presentation on the protection of <i>Pericopsis elata</i>	10.20 – 11.00	Mr. Adoma Owusu
7	Coffee Break	11.00 – 12.00	
	Q & A session	12.00 – 12.30	facilitator
8	Presentation on Conservation of <i>Pericopsis elata</i> in Ghana and the Role of Stakeholders especially the Forestry Field workers	12.30 – 1.00	Prof. S.K. Oppong
9	Q& A session	1.00 - 1.20	Facilitator
10	Lunch	1.20 – 2.20	
11	Departure	2.30	

APPENDIX 3: PRESENTATIONS BY SPEAKERS ON THE TRAINING WORKSHOP

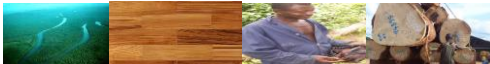


improving sustainable *Pericopsis elata*
conservation and trade in Ghana



Project Inception Workshop

By Mustapha Seidu
14th October 2015



Conservation of *Pericopsis elata* in
Ghana and the Role of Stakeholders
especially the Forestry Field
Workers

SK OPPONG
FRNR, KNUST, KUMASI

PRESENTATION ON
IDENTIFICATION OF
PERICOPSIS ELATA
(KOKRODUA)

BY KWASI KWARTENG BOAKYE
(CURATOR, NTIM GYAKARI
HERBARIUM, RMSC)

PRESENTATION ON
THE PROTECTION OF
PERICOPSIS ELATA
(KOKRODUA)

BY ADOMA OWUSU,
(ASST. MGR. NTIM GYAKARI
HERBARIUM, RMSC)