



# **The 4<sup>th</sup> Asia-Pacific Forestry Education Coordination Mechanism (AP-FECM) Meeting**

**Advanced Education Programs in collaboration with  
universities of USA**

**Assoc. Prof. Dr. Bui The Doi and Dr. Ha Quang Anh (VNUF)  
Assoc. Prof. Dr. Tran Quoc Hung (TUAUF)**

**Philippines, 24 February, 2016**

The logo for APFNet features a stylized globe with green leaves and branches surrounding it. The text "APFNet" is written in a black, sans-serif font across the center of the globe.

APFNet



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**2. DEMAND OF FORESTRY EDUCATION**

**3. DEVELOPING ADVANCED EDUCATION PROGRAMS  
IN COLLABORATION WITH UNIVERSITIES OF USA**

# FORESTRY SECTOR IN VIETNAM (VN)

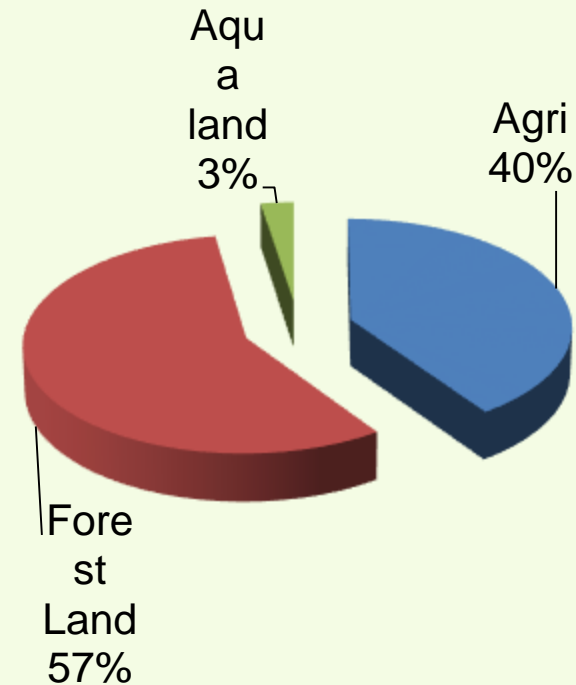
## Some figures:

- Total land area : 331,689 sq km, a coast line of ~ 3,200 km
  - 63 provinces/cities with > 120 districts
  - 2/3 of total area are mountainous & upland areas
- 
- VN has 13.954 million ha of forests (Natural: 10.4 mil. ha; plantation: 3.55 mil.
- + *National forest cover rate: ~41% (31<sup>st</sup> Dec. 2015)*



# FOREST & FORESTLAND:

- Forest land accounts for 57% of the total area:
  - Providing home and livelihoods for 25 million people; mainly ethnic minorities in mountainous areas.
  - Playing an important role in protecting environment, water resources and biodiversity conservation, especially in the context of climate change.



# CONTRIBUTION OF FORESTRY IN THE ECONOMY

Ord.	Indicators	2010-2015			
		Ave. 2010-12	2013	2014	2015 (estimated)
1	Forestry Sector Growth rate (%)	6.57	6.04	7.09	7.92
2	Furniture and other forest product export value (bil. USD)	6.2	5.5	6.3	7.1
3	Plantation (1.000 ha)	220	227	224	239
4	Harvested wood from Plantation (mil. m <sup>3</sup> )	8.5	8.0	9.0	12.8

# CHALLENGES IN FORESTRY and NATURAL RESOURCES MANAGEMENT (NRM)

- Vietnam has been seriously affected by *climate change*, sea level rise, habitat changes, biodiversity disturbance, forest fires and desertification.
- The pressure of *population growth (>91 mil pop.in 2015)* leads to increased demand for wood and NTFPs that followed by forest degradation, conversion of forest use and forestland to: rubber, coffee, cashew, macca...
- *Low productivity and quality of forest plantation:* nutrient-poor soil; small-scale production and scattering.
- The wood processing industry for export *do not meet* well the *requirements of markets*...

## 2. DEMAND IN FORESTRY/NRM EDUCATION

- Ethnic groups are mainly living dependent on forest and forestland (+20 mil.). They need to be educated how to use proper forest land and products, and forest protection
- **Limited experts with high profession** in the forestry sector, weak capability to establish SFM plans for each eco-region.
- **Lacked experts and staffs with adequate professional competence** for developing value-added from forest beside conventional products, such as NTFPs, environmental services.
- **Potentials and opportunities** to work in the highly interested fields: such as PFES, FSC, REDD+, Climate Change,...

# CHALLENGES IN EDUCATION

## ***1) Universities and Colleges for forestry education:***

- Vietnam National University of forestry – VNUF (leading)*
- Thai Nguyen University Thai Nguyen University of Agriculture and Forestry Vietnam (TUAF)*
- Some others: Nong Lam University at Hochiminh City; Hue Agr-Forestry uni. (Central Vietnam); Tay Nguyen University*

## ***2) Vocational training: to be decreased***

- Students and faculties in agriculture and/or forestry universities are *increasing in Vietnam.*
- However, nearly 30% of graduates can not find a proper job and needed to be re-educated (2012).

**Big challenges!**



# CHALLENGES IN FOREST EDUCATION

- Competing for student enrollment among colleges/universities of other fields
- Low quality of enrolled students.
- Mainly from remote and rural regions with low-income families

*\* Promoted by cut-off tuition fees for minority groups.*

# 3. DEVELOPING ADVANCED EDUCATION PROGRAMS IN COLLABORATION WITH UNIVERSITIES OF USA



# 1. VNUF AT GLANCE!

VNUF was established in 1964

The University is under management of MARD & MOET

VNUF is a multi-disciplinary institute, with the mission to provide high quality employees and staff for the fields of forestry and rural development, environmental protection.



MARD



MOET

## MISSION

- To offer a higher education on forestry, natural resource management, environmental science and rural development
- To conduct researches and transfer technologies in agriculture, forestry and natural resource management....)



# HUMAN RESOURCES

Total of staff: **~1,300** (05 full Prof., 19 Assoc. Prof. and ~80 PhD.

Currently ~70 lecturers are doing PhD and MSc in oversea (USA, EU, Australia, Japan, Canada, Philippines, China...)



# STUDENTS

About **17,000** students at all levels  
(PhD., MSc., BSc., and high-school)

## Academic programs

### 27 Undergraduate programs

- Forestry,
- Silviculture,
- Wood Technology,
- Furniture Design & Interior Decoration
- Social Forestry
- Forest resources & Environment Management,
- **Natural resources management**
- Environmental Sciences,
- Agro-Forestry,
- Urban Forestry
- Extension and Rural Development,
- Industry for Rural Development,
- Forestry Mechanization,
- Forestry Economics,
- Business Administration,
- Land Management,
- Accounting,
- Biotechnology,
- Civil Engineering Techniques.
- Resources and Environment Economics
- Information System
- Mechanics Technique
- Landscape Architecture

# Academic programs

## 7 Masters degree

1. Silviculture,
2. Forest Resources Management & Protection;
3. Wood Technology;
4. Mechanical Forestry Techniques.
5. Economic of forestry
6. Environmental Sciences
7. Biotechnology (coming soon)

## 5 Doctorate

1. Genetics and forestry tree variety selection;
2. Forest inventory and planning;
3. Silvicultural techniques;
4. Mechanical techniques and forestry equipments.
5. Forest Resources Management;

# Trainees

- ~33,000 BSc., 2500 masters and doctors graduated.
- ~350 students from Laos and Cambodia certificated.





# SCIENTIFIC RESEARCH

**Wood Technology and Modification**

**None-Timber Forestry Products**

**Designing and making Wood**

**Chemistry Forestry Technology**

**Silviculture**

**Biodiversity & WildLIFE**

**Forest Resources Management**

**Environment management & REDD+**

**GIS and Remote Sensing**

**UNDERSTANDING  
WOOD** A CRAFTSMAN'S GUIDE TO  
WOOD TECHNOLOGY

R. Bruce Hoadley



# SCIENTIFIC RESEARCH

Biotechnology application

Urban Forestry and Landscape

Agriculture and Rural Development Policy

Agriculture and Forestry Product Market

Land Management

Forestry Mechanization

Civil Engineering Techniques

## PUBLICATION

About 160 papers /year (20-30 on international journals)



# INTERNATIONAL COLLABORATION

**65 UNIVERSITIES,  
RESEARCH  
INSTITUTES  
OUTSIDE VIETNAM**



- **Germany**
- **USA**
- **Switzerland**
- **Sweden**
- **The Netherlands**
- **Canada**
- **Russia**
- **Australia**
- **Finland**
- **Hungary**
- **Japan**
- **Korea**
- **China**
- **Thailand**
- **Philippines**
- **Nepal**
- **India**
- **Israel**
- **Malaysia**
- **Indonesia**
- **Laos PDR**
- **Singapore**
- **Cambodia**

# INTERNATIONAL COLLABORATION



US-AID, LEAF, SNV, WWF, IUCN, CIFOR, IWAS, GIZ, DAAD, FAO, UNDP, WB, WWF, ITTO, JICA, JIFPRO, FFI, HELVETAS, ...



# COLLABORATION VNUF – CSU NATURAL RESOURCE MANAGEMENT



**BEGINNING IN  
May, 1999 with the  
1<sup>st</sup> MOU signed by**

**VNUF Director:  
Dr. Nguyen Dinh Tu  
and  
CSU President:  
Dr. Albert C. Yates**



Many exchanges  
followed

## INTERNATIONAL MEMORANDUM OF UNDERSTANDING

In recognition of their mutual educational, *research*, and scholarly interests, the Forestry University of Vietnam, with address at Xuan Mai - Ha Tay, Vietnam (FUV) and the Colorado State Board of Agriculture by and through Colorado State University, Fort Collins, Colorado, 80523, USA

10. This IMOU takes effect when signed by authorized representatives of both participants and remains in effect for 5 years. If either party chooses to end the cooperative efforts related to this IMOU, that party may end this IMOU by notifying the other party.

Forestry University of Vietnam

By: [Signature]  
Name: Dr Nguyen Dinh Tu  
Title: Director, FUV

Date: 12-5-1999.

Colorado State Board of Agriculture  
through Colorado State University

By: [Signature]  
Name: Dr Albert C Yates  
Title: President, CSU

Date: May 12, 1999

By: [Signature]  
Name: Dr Loren W Crabtree  
Title: Provost, CSU

Date: May 12, 1999

Acknowledged by:

By: [Signature]  
Name: Dr Tran Dinh Dan  
Title: National Project Director,  
UNDP/GEF/Vietnam

For: David L HULSE  
Name: David L Hulse  
Title: WWF/Vietnam Country  
Representative

By: [Signature]

Acknowledged by:

By: [Signature]  
Name: Dr A Allen Dyer  
Title: Dean, College of Natural Resources

By: Catherine M Clark  
Name: Catherine M Clark  
Title: Contract Manager

# The 3<sup>rd</sup> MOU in 2009

Signed by

**VNUF RECTOR:**  
**Dr. Tran Huu Vien**  
**and**  
**CSU Vice Prrovost:**  
**Dr. James Cooney**

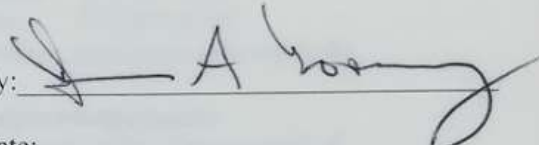
12. This agreement may be terminated at the request of either party by giving written notice of sixty (60) days.

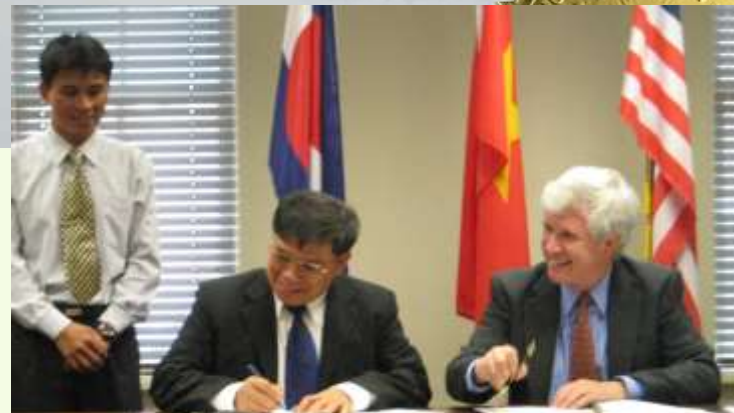
Signatures:

Vietnam Forestry University  
Hanoi, Vietnam:

By:   
Date: \_\_\_\_\_  
Name: Dr. Tran Huu Vien  
Title: Rector, Vietnam Forestry University

Board of Governors of the Colorado State  
University System acting by and through  
Colorado State University, Fort Collins,  
Colorado USA:

By:   
Date: \_\_\_\_\_  
Name: Dr. James A. Cooney  
Title: Vice Provost for International  
Affairs





# The 4<sup>th</sup> MOU in 2013

Signed by

**VNUF RECTOR: Dr. Tran Van Chu**

and

**WCNR Dean: Joyce Berry**



# BSc Natural Resources Management

- 2009: Completed curriculum with some adjustment from the original curriculum to harmonize Vietnam context (Adopted original NRM curriculum from CSU)
- Started in 2010 (1<sup>st</sup> cohort enrolled): only 31 Vietnamese students
- Teaching in English

<b>COLORADO STATE UNIVERSITY</b> Forest & Rangeland Stewardship / Ag and Resource Economics DUAL MAJORS in Natural Resource Management/ Environmental & Natural Resource Economics <i>Effective Spring 2015</i>						
DEGREE REQUIREMENTS: 137 credits; including 42 credits at 300-400 level; 2.0 GPA. Students are also responsible for knowing and meeting requirements in the University catalog (AUCC Category courses) and verifying all information on this form as course information can change frequently.						
Name of Student:			Advisor:			
Courses Completed	FRESHMAN YEAR		Offered	Prerequisites	Credits	AUCC Categ.
	AGRI 192	Orientation to Agricultural Systems	F		1	
	CHEM 107/108	Fundamentals of Chemistry + Lab	F, S	MATH 117 or higher or concurrent registration in MATH 118 or higher	4 + 1	3A
	GEOI 120/121 or 124/121	Physical Geology + Lab or Geology of Natural Resources + Lab	F, S (124 S only)		3 + 1	
	CO 150	College Composition	F, S	test or scores	3	1A
	MATH 141*	Calculus in Management Sciences	F, S	MATH 118 or test	3	1B

# TRAINING PERIOD

- 4.5 years (nine semesters)
- 08 semesters: All courses
- 01 semester: Thesis
- 138 Crd. hrs.



## The entrance exam

- Students take an national entrance examination based on MOET
- English Test for enrollment.

# Graduated



**The first cohort (2010-2014)  
graduate with good result (29/31  
completed)**



# NUMBER OF STUDENTS ENROLLED

- The 2nd cohort with 37 students graduated in Nov.2015
- Now 252 students at the next four cohorts:  
K57 (2012), K58 (2013), K59 (2014), K60 (2015).



# LECTURERS

- 1) From CSU (teaching about 30% courses): **paid by VN government and student tuition fees.**
- 2) From VNUF – who did PhD or Master degrees in English spoken institutes/univ (about 70%): **State salary**
- 3) International Experts/lecturer visitors from other countries: **almost free for teaching.**



Japan

# Scholarship for students:

- From VNUF: For Vietnamese students: *Full studying promotion scholarship for limited excellent students.*
- From other sources: *i.e. Lee&Hillary MacDonald Foundation for students who come from poor and/or minority and show their effort to be better.*
- From S.E.Asia (Laos, Cambodia, Myanmar): Free accommodation, reduced 2/3 tuition fees,
- From other countries: 2015 received one exchange students from Gottingen University (Germany) for Transfer Credit program (accommodation for free)

# NEW STEPS

- Continue to run the NRM program without any fund from Government (still limited fund from Government until 2016).
- Building a new advanced education program on Ecosystem Science and Sustainability (ESS), may start in 2017, collaborated with CSU.



# NEW STEPS

- Built the Advanced Education Program on FORESTRY collaborate with Oregon State University (starts enrollment in Sept. 2016), supported by MARD. It was developed from the Forest Operations Management Curriculum.

**This program will be supported by Government (MARD) for 5 years with 100,000 USD/year**

**Table 1.** Forest Operations Management Curriculum Flow Chart (There are Modest Curricular Changes in Process)

Freshman Year (44)								
Fall Term			Winter Term			Spring Term		
Course	Title	Cr	Course	Title	Cr	Course	Title	Cr
CCE 201 OR Elective	Civil Engr II: Engr Graphics & Design FOM Restricted Elective	3	MTH 241	Calculus for Management and Social Science	4	ECON 201	Introduction to Microeconomics [BC]	4
CH 121	General Chemistry	5	WSE 210	Wood Technology and Utilization	4	COMM 111 or 114	Public Speaking Argument and Critical Discourse	3
FOR 111	Introduction to Forestry	3	HHS 231	Lifetime Fitness for Health	2	FOR 141	Tree and Shrub Identification	3
FE 101	Introduction to Forest Engineering	2	HHS 241	Lifetime Fitness or Physical Activity	1	FE 308	Forest Surveying	4
WR 121	English Composition	3	FE 102	Forest Engineering Problem Solving and Technology	3		Term Total	14
	Term Total	16		Term Total	14			

Sophomore Year (46)								
Fall Term			Winter Term			Spring Term		
Course	Title	Cr	Course	Title	Cr	Course	Title	Cr
ST 351 or ST 201/202	Introduction to Statistical Methods	4	Elective	Cultural Diversity [BC]	3	FE 310	Forest Route Surveying	4
BA 260	Intro to Entrepreneurship	4	WR 327	Technical Writing [BC]	3	FOR 240	Forest Biology [BC]	4
PH 201	General Physics	5	FE 309	Forest Photogrammetry	4	SOIL 205	Soils: Sustainable Ecosystems [BC]	4
FE 357	GIS & Forest Engineering Applications	3	BA 211	Financial Accounting	4	BA 230	Business Law	4
	Term Total	16		Term Total	14		Term Total	16

Junior Year (48)								
Fall Term			Winter Term			Spring Term		
Course	Title	Cr	Course	Title	Cr	Course	Title	Cr
FOR 321	Forest Mensuration	5	BA 213	Managerial Accounting	4	FOR 443	Silvicultural Practices	5

# Collaboration b/t VNUF and OSU Jan 2016



- OSU allowed VNUF to develop the Forestry major based on the original Forest Operation Management major
- Agreed to send Profs for teaching
- Agreed to accept VNUF lecturers to be mentored with core courses.



- All courses will be taught in English
- There are priority for foreigner students by providing scholarship or cut-off accommodation fees for ASEAN country students.

# TRAINING PERIOD FOR FORESTRY

- 4.5 years (nine semesters)
- 08 semesters: All courses
- 131 Crd.
- Start in Sept. 2016.

## The entrance exam

- For Vietnamese Students: take an national entrance examination based on MOET; required English score 4,5 IELTS or higher (equivalent )
- For foreigner students: no entrance exam, only meet the English requirement.

# LECTURERS

- From Oregon State University: 20%
- From VNUF: 70%
- Others: 10%

## Priority

- Foreigner students: no tuition fee; free accomodation.
- With excellent results at each semester: more scholarship will be provided

# Develop a M.Sc. Programme in “International Tropical Forestry” collaborated with Germany universities (i.e. TIF in Goettingen Uni.)

- The project development was sponsored by DAAD (Germany)
- Accepted by MOET and MARD, will start in October 2016 for the first cohort.
- Enrollment: applicants from Cambodia, Laos, Myanmar and Vietnam;



The screenshot shows the website for the Faculty of Forestry and Forest Ecology (Fakultät für Forstwissenschaften und Waldökologie) at the University of Göttingen. The header includes the faculty name and navigation links: Home, Studium, Die Fakultät, Abteilungen, Einrichtungen, and Service. The current page is identified as 'Aktuelle Seite: Startseite > Studium > ... > M.Sc. "Forstwissenc... > Tropical and Interna...'. The main content area features a logo for 'TIF' (Tropical and International Forestry) on the left, which consists of a globe icon and the letters 'TIF' in a stylized font. On the right, there is a list of links for the program: Introduction, Goals and Degree, Professional Opportunities, and Course Scheme.



- English for starts: IELTS 5.0 or TOEFL 5.5 and above (or equivalent)
- Applicants graduated from university with right, appropriate majors with the Forestry major
- Instructors: from Germany, Vietnam, Laos, Cambodia and others.
- All participants have chance to get scholarship from DAAD

website: <http://fu.edu.vn>



**THANK YOU!**



# THAI NGUYEN UNIVERSITY OF AGRICULTURE AND FORESTRY

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