RESEARCH PROPOSAL FOR SEANAFE FELLOWSHIP

To be submitted to VNAFE/SEANAFE Board

Topic: "*Assessment fixed carbon dioxide capability of some protection afforestation types in up-stream regional of Bo River in Thua Thien Hue province*".

Grantee:

1. Introduction

Climate change has strongly affected most of countries in the world. Humankind is facing with impacts of climate change such as: plague, poverty, lose biodiversity, lack of cultivated land, etc.

Scientist estimated that essential causes of climate changes are over industrial gas emission, especially carbon dioxide (CO_2) and forest destruction in the world. Decreasing forest areas declined ecological function of forest for accumulating carbon dioxide. According to Christopher Field "Low of carbon accumulation level in forest ecosystem impulses more increasing of carbon dioxide in atmosphere and process heater on the earth" and according to report of the Antarctic Statistics Organization, the Great Britain (2006), there was nearly 10 milliard tone of carbon dioxide in atmosphere in 2006, increased 35 percent in comparison with 1990.

Researching Carbon becomes a central field in science when increases amount of carbon dioxide emission in our planet. In reality amount of absorbed carbon dioxide depends on forest type, forest age, dominant species, different seasons, etc. Greenhouse effect reduction requests researches, assessments about absorption ability of forest categories, forest types as well as forest structure to quantify economic and ecological values that forests bring back.

The Kyoto Protocol with clean development mechanism (CDM) has opened up chance for developing countries receive investment of developed countries to implement projects in afforestation, regeneration, natural forest management and protection, agro-forestry, sustainable natural resources management, etc. in particular. Reduce emission with deforestation and forest degradation is also new trend which will replace the Kyoto Protocol in the future. Research fixed carbon dioxide capability in woody vegetation to determine economic value for protective function and ecological environment of forests is a new trend need to study and develop in Thua Thien Hue province, Vietnam particularly. The study "***Assessment fixed carbon dioxide capability of some protection afforestation types in up-stream regional of Bo River in Thua Thien Hue province***" with general objective is to identify the role of protection forest types in process of climate change on the earth and suggest some solutions about policy in protection forest management and utilization.

2. Research Objectives, Contents and Methods

2.1 Research objectives

- Identify accumulated carbon dioxide capability of protection forest types in study site;

- Quantify amount of fixed carbon dioxide of protection forest types in up-stream Bo River for decreasing climate change effects;

- Suggestion some forest and environment policies to manage sustainability protection forest watershed of basins in Vietnam;

2.2 Research questions

- Do present have how many forest state and how many Basketful catchment-area union inside that each forest state obtains on all sides?

- Definitely do level of biomass creating in forest's component (log of wood, non- xyloic plant and fall mulch) In different flood prevention forest states how much to be?

- Definitely what is plant carbon conversion coefficient in change forest states like?

- Do cumulative level of carbon determination in component of those forest states how much to be?

- What is environment commercial efficiency and value of those forest states like?

- Do policy about flood prevention forest exploitation have still to befit flood prevention forest's role in altered tendency how nowadays or zero? Solution climate is propounded give indestructibility to rationality with a view to ecological environmental protection?

2.3 Research Contents

- Estimating present condition forest resources and socio-economic for river head of Basketful catchment-area.

- Analyzing components and the feature of the existing flood prevention forest states on all sides the room region for catchment-area river head is Basketful

- Estimating level of biomass creating (log of wood, plant is non- xyloic and faller is caduceus) in the component of the forest the kind pure forest forms, impolite that the kind live in protective forest positions for importance and few of importance.

- Carbon conversion coefficient determination from woody stem plant spp's biomass in forest states. Carbon proportion in trunk, leaf, root, is cumulative in those forest states.

- Calculate level of carbon accumulate in components and forest states.
- Environment value and analyst commercial efficiency of forest state bring backs.

- Analyzing and propound flood prevention forest management solutions trending permanent to say about environment ecology.

2.4 Research method

- Research latitude: Hong Ha commune represent room region for importance and Huong Van commune represents room region for few of importance (forestry faculty research camp)

- Object research: protective forests poor nature regeneration and room artificial forest for genuineness the kind.

- Establish 500 m^2 species composition inquiry sample plot of forest states (10 x 50)

- Each plant the kind steal 9 plant patterns for fresh model weight analytics and weighting/ dry from trunk, leafs, root. To take out on sample plots 500 m^2.

- Definitely plant and faller shedding weight is non- xyloic on 500 m^2 sample plot

- Carbon coefficient determination according to forestry phyletic brocade bag containing secret formula

- Calculates commercial efficiency based on present market value

- Correlation analysis and variance according to notification

2.5. Research plan

- Thesis will be carried out in 1 year: From 9/ 2008 to 9/2009

- Writing proposal: From 7/2008 to 9/2008

- Field survey: From 9/2008 to 01/2009

- Analyzing data: 01/2009 - 02/2009

- Writing thesis, defend and submit to SEANAFE Board: From 02/2009 - 9/2009