

Some information about implementary result of pilot project

Forest inventory and statistic of Bac Kan Province

Forest inventory and planning institute
(FIPI)

Hanoi, 31 Aug 2012

Context

- Implementing text No: 80/TTg-KTN date 15/01/2009 of Prime Minister, MARD, building up forest inventory and statistic project period 2011-2015.
- Prime Minister released decision No: 1240/QĐ-TTg date 22/7/2011 to approve pilot project of forest inventory and statistic in Bac Kan and Ha Tinh provinces.
- Conducting of forest inventory and statistic aims to withdraw practical experience, complete guideline, these implemented Natinal project on forest inventory and statistic period 2011-2015

Aims of forest inventory and statistic

- 1) To know about forest area, stock and quality; land areas have no forestry planning with concrete owner.
- 2) Forest management file establishment according to forest management owner, administrative units, supporting for management activities, update and monitoring every year.

1. Forest inventory:

Forest inventory activity aims to provide input information these supplies with forest statistic step:

- 1) Forest status map system scale 1/10.000 at commune level
 - 2) Reporting of inventory result and database sheet
- Summarising database sheet of forest area and land which have no forestry planning at province, district and commune level.
 - Summarising sheet of average stock per hectare (wood, bamboo and carbon stock) for forest status individual

Implementary office: Forest inventory and planning institute (FIPI)

Inventory in term of

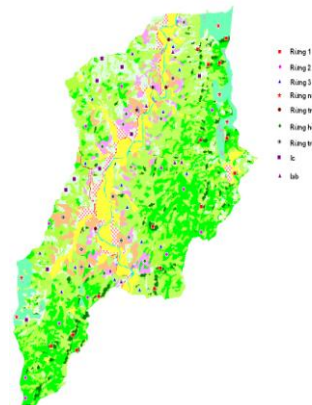
Area

- Forest map that used in the field was predicted from SPOT 5 satellite image (2,5m X 2,5m resolution). Apply automatic prediction method in eCognition Developer 8 software.
- Inventory in the field to add, adjust and complete forest status map at commune level.



Inventory in term of forest stock

- Forest inventory stock aims to identify average stock (wood, bamboo) parameter for each forest status and total stock of each forest status.
- Forest stock /ha calculated average for around the province, according to forest status individual.



2.Forest statistic

Forest statistic aims to identify about boundary, area of forest land and non forest land, forest quality at owner level. Statistic result include:

1)Final map system of forest statistic result at province, district, commune level.

2)Report of forest statistic result accompany with forest area and stock database sheet:

- According to province, district, commune level
- According to forest management target: Special, protection, plantation type.
- According to management ownership.
- According to forest using situation

Implemental office: **Forest inventory and planning institute**
Bac Kan Department of forest protection

Contents and steps of forest statistic step

1. Preparation: Map, materials, equipment.

- Forest and non forest land sheet to enumerate, Statistic sheet
- Forest status map with scale 1/10.000 at commune level (Result of inventory step).
- Report of inventory result (accompany with area sheet of each forest type, summary of average parameters and forest stock)
- Map, materials and equipment relevant.

2. Setting up forest statistic planning at province, district, commune.

3.Training organization for forest statistic team including: central units, local relevant department (province, district, commune)

4).Forest statistic in commune

- The contents of forest statistic in commune

- ❖ Identify position, boundary and area of forest and forest land (belong to forestry land type but without forest) according to each owner in map and in the field.
- ❖ Check, review and gather information related to statistic plots: The situation licence of land using right and situation dispute.
- ❖ Check, review and gather information related to statistic plots: originality, function (special, protection, plantation), tree composition, stock.

Implementary steps

- Step 1: Hamlet meeting
- Step 2: Statistic in each forest owner
- Step 3:Complete database and field map
- Step6: Transfer forest statistic result at province, district, commune level.

3.Forest management file establishment

Forest management file establishment aims to update, statistic forest and forest land happening every year, these include:

1)Forest management file for each owner

2) Forest management file for administrative unit

Method and steps of forest management file establishment bases on guideline of MARD

Implementary office:

Forest inventory and planning institute

Bac Kan Department of forest protection

Achievements of project

1. Forest inventory results

Forest status map system at commune level

Forest inventory reports

Forest area and stock sheets at province, district, commune levels.

2. Forest statistic results

Forest statistic map system at province, district, commune levels.

Forest statistic sheet system at province, district, commune levels.

Forest statistic reports at province level.

3.Forest managerment file.

•Forest managerment file at district, province level.

•Forest managerment at owner level.

(Including: date base and map saved and printed)

[STWG-MRV meeting - Hanoi 31.8.2012/PHU LUC 31.12.2012.docx](#)

4.Guidelines for forest inventory and statistic activities

• Technical guidelines for forest inventory

•Guidelines for forest inventory and statistic result map

•Technical guidelines for checking and acceptance of forest inventory result

- Guidelines for statistic and building forest status map from satellite image
- Technical guidelines for forest stock inventory
- Guidelines for forest single year monitoring and updating
- Technical economic norms for forest inventory and statistic.

Comparison between National programme on forest resources monitoring and assessment (NPFRMA), period 2006 -2010 and National project on forest inventory and statistic (NPFIS)period 2011-2015

NPFRMA period 2006-2010	NPFIS period 2011-2015
1) Target: <ul style="list-style-type: none"> - Providing database, map on forest area, stock and quality in 5 years period. - Undetailed information in forest owner. - Assessment of forest area, quality happening during 5 years. 	1)Target: <ul style="list-style-type: none"> - Providing database, map on forest area, stock and quality at the time forest statistic implement. -Establishment of forest management file for owner individual and administrative unit (province, district, commune) - No assessment of forest area and quality happening.

NPFRMA period 2006-2010	NPFIS period 2011-2015
2) The key contents and method implement: <ul style="list-style-type: none"> - Building up forest map from SPOT 5, SPOT satellite image. Using traditional prediction method. (Use Mapinfo software to directly circle on satellite image) - Low inventory level. Map scale require only province and district level. -Stock inventory: Using permanent sample plot, these repeated every 5 years. Calculating inventory parameters at area level. -Inventory on forest growth and construction: Using permanent sample plot, these delivered under typically method, repeated very 5 years. 	2) The key contents and method implement: <ul style="list-style-type: none"> -Building up forest map from SPOT 5, SPOT satellite image. Using semi-automatic method and eCognition Developer 8 software. -High Inventory level, Map scale at commune level. -Stock inventory: Using temporary sample plot these delivered random. Calculating inventory parameters at province level. -No forest growth inventory.

NPFRMA period 2006-2010	NPFIS period 2011-2015
2) The key contents and method implement: <ul style="list-style-type: none"> -Building up theme reports such as: Silviculture, Growth, disease,... -Don't care about forest owner, provide relatively diversity information about forest resource but low detail level. The results released in macro level (area, national level) 3) Implemental office <ul style="list-style-type: none"> - Central technical agency 	2) The key contents and method implement: <ul style="list-style-type: none"> -No building up theme reports. - Forest area and stock results with detail level at forest owner. 3)Implemental office <ul style="list-style-type: none"> - Forest inventory activities conducted by central agency. - Forest statistic activities conducted by local technical office: forest owner supported by central office.

Expenditure on pilot project of forest inventory and statistic

TT	Activities	Volume	Unit	Price (1.000VND)	Expenditure
1	Forest inventory				9.264.671,0
	Area	388.000,0	ha	19,7	7.660.140,0
	Stock	900,0	plot	1.782,8	1.604.531,0
2	Forest statistic	388.000,0	ha	25,5	9.909.483,0
3	Forest management establish	388.000,0	ha	4,9	1.884.965,0
4	Other activities				1.072.759,0
	Total				22.131.878,0

The difficulties and experiences from pilot project in Bac Kan province

The eCognition software using for forest classification base on spot 5 satellite image has limited things at detail level against requirement (many forest status are confused as prediction step). To ensure accuracy and detail level these requires to concentrate on inventory in the field.

Accuracy requirement of forest status (according to Circular No: 34/2009/TT-BNNPTNT) and stock at plot level is difficult issues. These need to care and admit while development of contents and solution of forest monitoring and updating in the future.

- The mistakes (position, ownership name, etc...) between land allocation file and in the field that is remarked. These are obstacles for forest monitoring and management file establishment in coming years.
- MARD should estimate, complete and release for forest inventory, statistic guideline very soon.

Thank you for your attention