Vietnam Administration of Forestry

Ministry of Agriculture and Rural Development

Department of Agriculture and Rural Development

of Dien Bien Province

THE SOCIALIST REPUBLIC OF VIET NAM
DIEN BIEN REDD+ PILOT PROJECT
FINALE REPORT

Appendix "Operation Manual for The PFMS Database Prototype System --- Enhancing improved PFMS ---"

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Japan International Cooperation Agency
(JICA)

Japan Overseas Forestry Consultants Association
(JOFCA)

Japan Forest Technology Association
(JAFTA)

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Operation Manual for
The PFMS Database Prototype System
--- Enhancing improved PFMS ---

This is a User's Operation Manual for the prototype system which aims at enhancing "Provincial Forest Monitoring System (PFMS for short)".

The GIS Engine described in this manual is as follows.
GIS Engine : ESRI ArcGIS Desktop Basic **Ver. 10.0**

All dataset must be copied under the proper data folder before starting up the system.

A dataset for "demonstration" is stored under the following data path.
"C:/vnForest/MRVgdb.mdb"

1 System Overview

The PFMS Prototype Database System has been designed to support "Improved PFMS" which aims at strengthen the annual forest statistics survey conducted by Sub-FPD in the current PFMS. Three (3) outputs are expected by conducting the "Improved PFMS" as shown in the figure below. The prototype system was developed to demonstrate the functions required to be equipped with in order to achieve this goal (3 outputs).

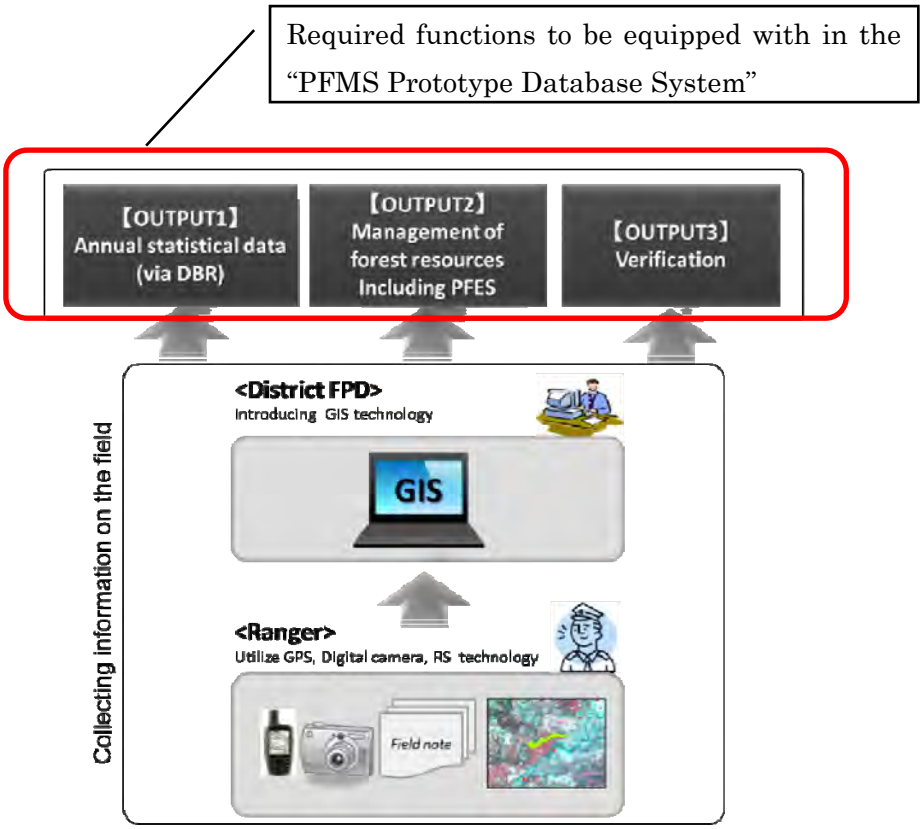


Fig. 1 : Three (3) outputs expected to strengthen the current "PFMS"

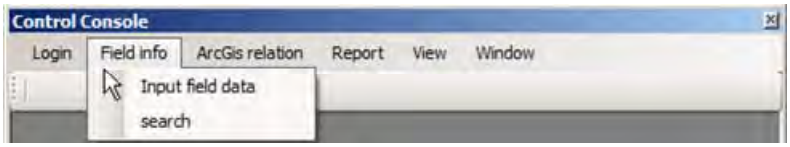
See **Appendix-1** about the detail of the "three (3) outputs" and see **Appendix-2** about supplement information on the "Structure of forest monitoring systems under the PFMS".

2 "Work flow" and "System Menu"

Following is the main "Work Flow" to manage "Area of Forest change" information by using the prototype system.

(1) Work Flow 1

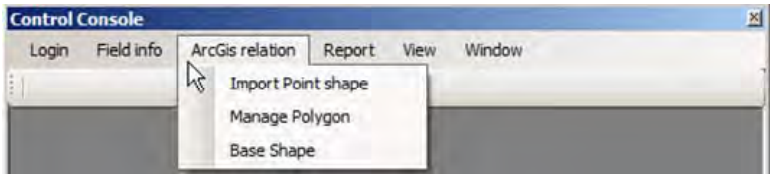
Input Field Data
from "Field Survey Sheet".



Menu	Description
Input field data	Input field data on "Area of forest change" information (including PFES information) by using "Field survey sheet". 【OUTPUT1】+ 【OUTPUT2】+【OUTPUT3】
Search	Search stored field data. 【OUTPUT2】

(2) Work Flow 2

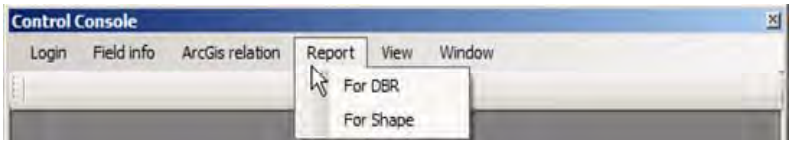
Create/Edit GIS Polygon data
of "Area of Forest Change"



Menu	Description
Import Point shape	Import Point shape of "Survey positions" derived from the GPS camera.【OUTPUT1】+ 【OUTPUT2】+【OUTPUT3】
Manage Polygon	Create / Edit polygons of "Area of Forest Change" to calculate "Area (ha)". 【OUTPUT1】+ 【OUTPUT2】+【OUTPUT3】

(3) Work Flow 3

Reporting by Excel format.
Drawing Graph using Shape file.



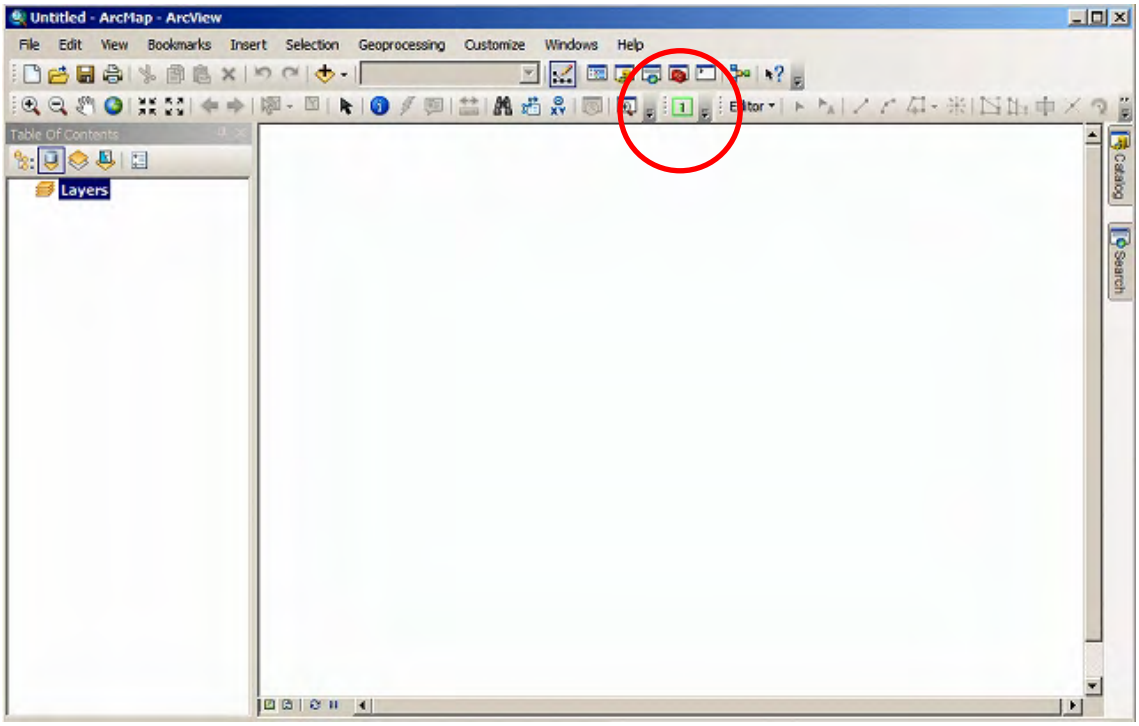
Menu	Description
For DBR	Reporting information of the "Forest change" by excel file in line with DBR format.【OUTPUT1】
For Shape	Drawing Graph using attribute data of registered shape files. 【OUTPUT1】+ 【OUTPUT2】+【OUTPUT3】

3 Operations (Work Flow 1)

("Start up" the system)

To start up the system, double-click the following Icon on the desktop.

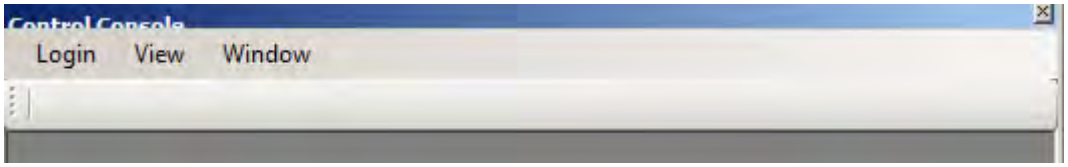
Then ArcMap starts up and a window like following figure is to be shown.



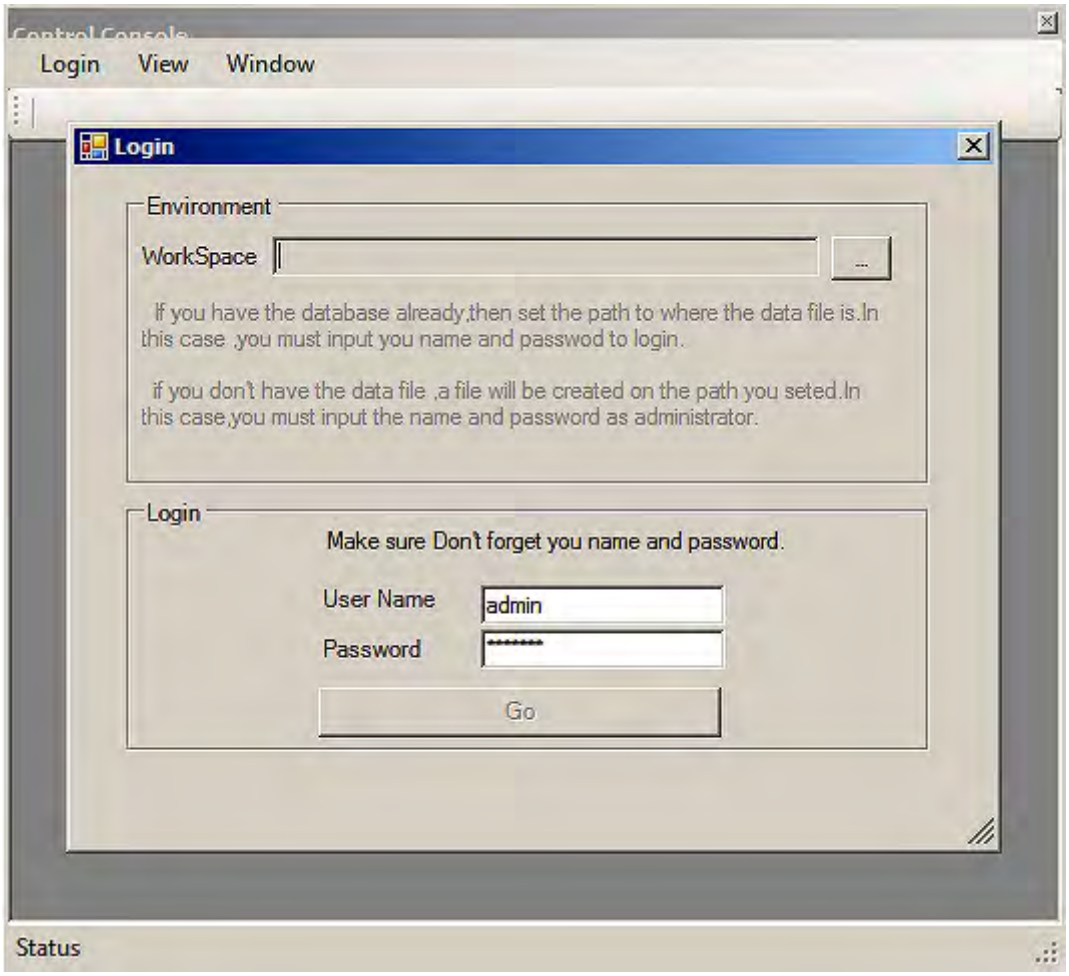
Click following Icon to start up the prototype system.

("Log in" the system)

Click "Login" from the control console (toolbar).



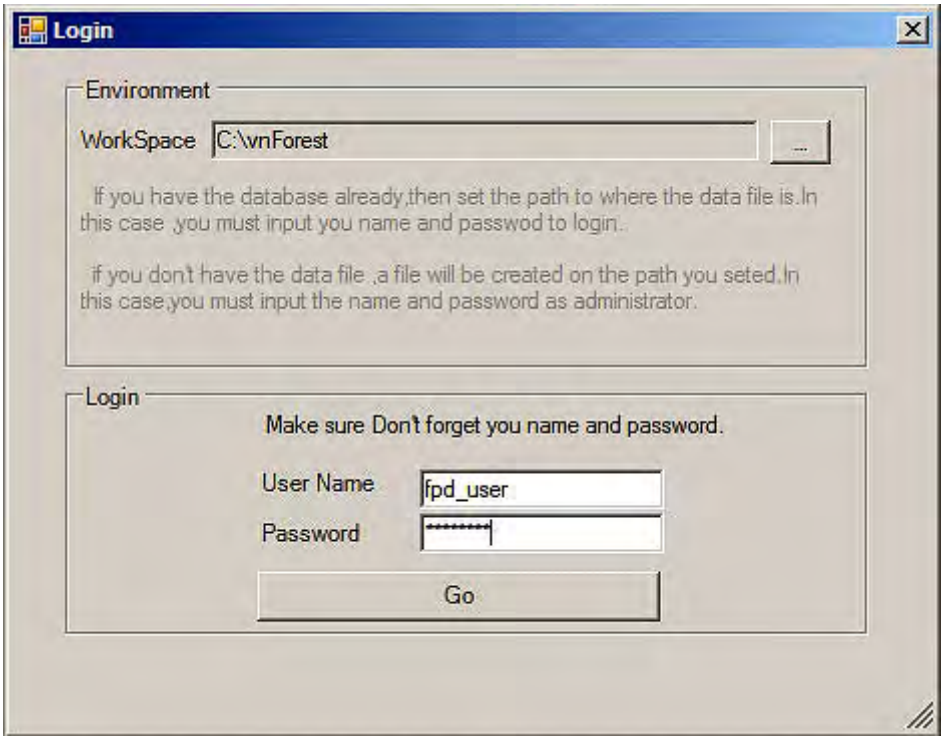
Then a login window like following figure is to be shown.



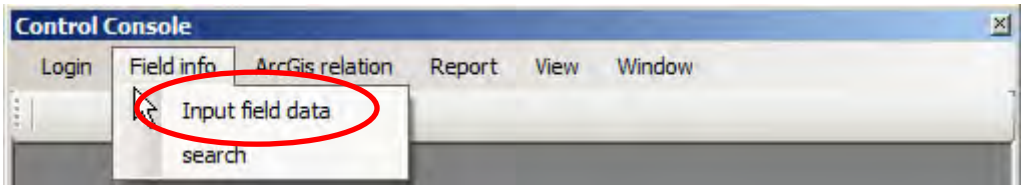
Navigate to the folder where dataset is stored and input "User Name" and "Password" respectively. Regarding dataset workspace, user name and password, ask "**System Administrator**" and get proper strings to log in the system.

(Field info)

In this manual, workspace, user and password are set to be as following figure for instance.

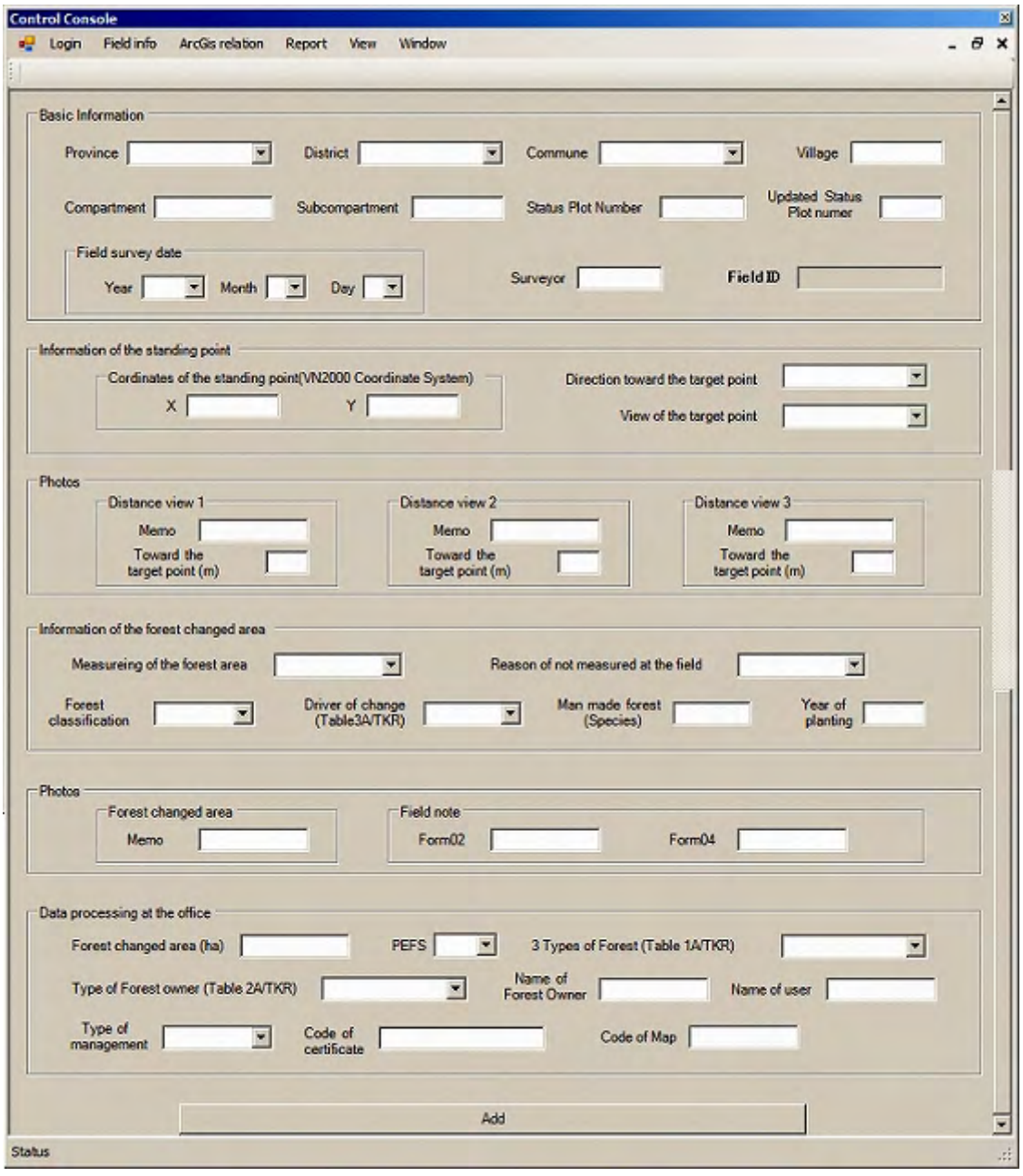


Click "Go" button.



Click "Field info" and select "Input field data" menu to get into the interface for input "Field data" from the "Field Survey Sheet".

The interface for input “Field data” from the “Field Survey Sheet” is as follows.



Fill up the vacant box and push “Add” button to save the data.

Regarding the detail of each item to input, see following tables.

"Input item" in the "Field Survey Sheet" is as follows.

Basic Information

input item	Required	Input	Description
Province	○	SEL	"Dien Bien"
District	○	SEL	See Appendix about detail code
Commune	○	SEL	See Appendix about detail code
Village	–	Any	
Compartment	–	Any	
Subcompartment	–	Any	
Status Plot Number	–	Any	
Updated Status Plot number	–	Any	Use this form when separate Status Plot number
Field survey date (Y,M,D)	○	SEL	"YYYY", "MM", "DD"
Surveyor	–	Any	
Field ID	○	Auto	This ID will be automatically assigned by the syste

Information of the standing point

input item	Required	Input	Description
Coordinates of the standing point (X,Y)	–	Any	Position where surveyor took photos
Direction toward the target point	○	SEL	"N","NE","E","SE","S","SW","W","NW"
View of the target point	○	SEL	"Full view", "Half view", "Less than half view"

Photos (Distance view1 ,2 ,3)

input item	Required	Input	Description
Memo	–	Any	
Toward the target point (m)	–	Any	

Information of the forest changed area

input item	Required	Input	Description
Measuring of the forest area	○	SEL	"Mesured at the field", "Not measured at the field
Reason of not measured at the field	○	SEL	"0 Measured the field","1 Geographical reason", "2 Wather condition","3 Not permitted by forest owner"
Forest classification	○	SEL	See Appendix about detail code
Driver of change (Table3A/TKR)	○	SEL	See Appendix about detail code
Man made forest (Species)	–	Any	
Year of planting	–	Any	

Photos

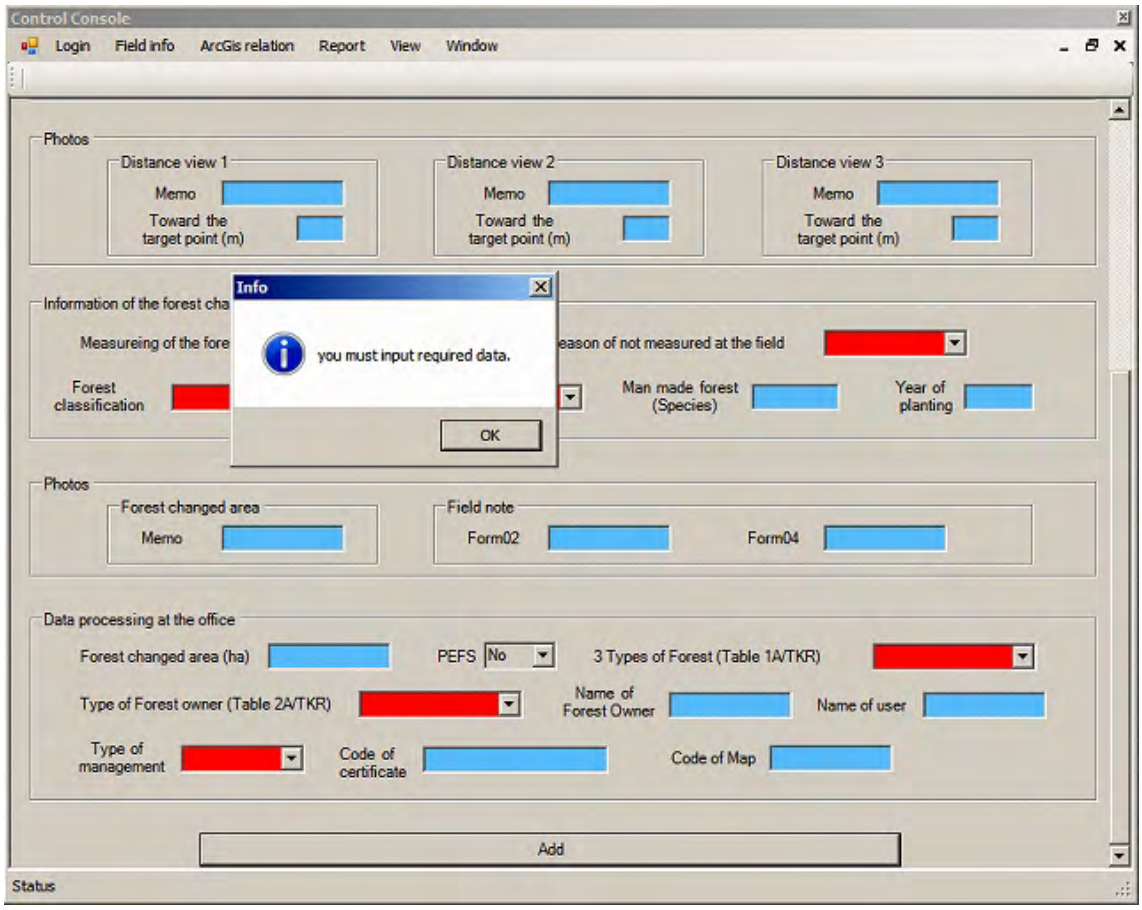
input item	Required	Input	Description
Forest changed area (Memo)	–	Any	
Filed note (Form02, Form04)	–	Any	

Data processing at the office

input item	Required	Input	Description
Forest change area (ha)	–	Any	
PFES	○	SEL	PFES area or not. Specify "Yes" or "No"
3 type of forest (Table1A/TKR)	○	SEL	See Appendix about detail code
Type of forest owner (Table2A/TKR)	○	SEL	See Appendix about detail code
Name of forest owner	–	Any	
Name of user	–	Any	
Type of management	○	SEL	Specify "Unknown","Allocation","No Leasing"
Code of certificate	–	Any	
Code of map	–	Any	

In this table, "○" mark in the "Required" column means "must" item to input. And you can choose appropriate code from the combo box, which is shown as "SEL" in the "Input" column. See Appendix-3 about the detail code.

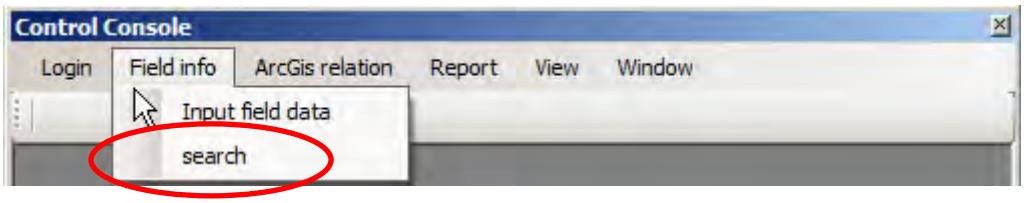
In case “must” items are not properly filled up, “Warning window” like following figure is to be shown. In the following figure, red color box must be filled up anything from the listing of the combo box. On the other hand, blue color box is option. Fill up blue color box items if necessary.



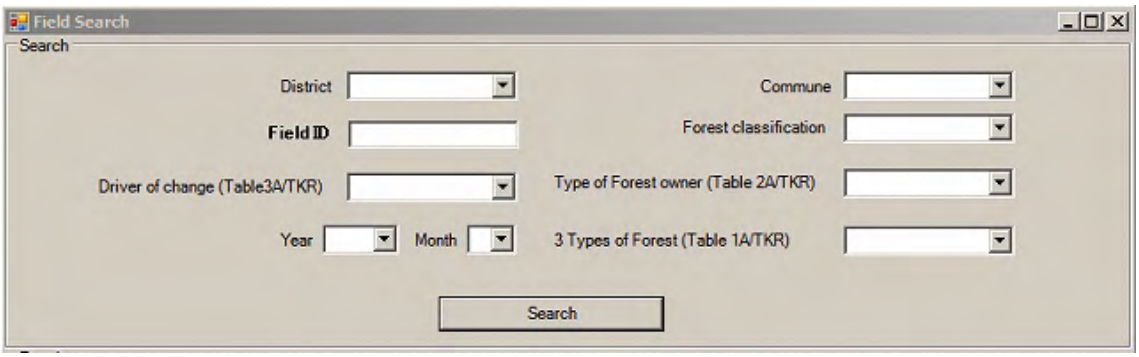
(Search)

Search menu of the “Control Console” is much related to the “Output2” that is for “Management of forest resources including PFES”.

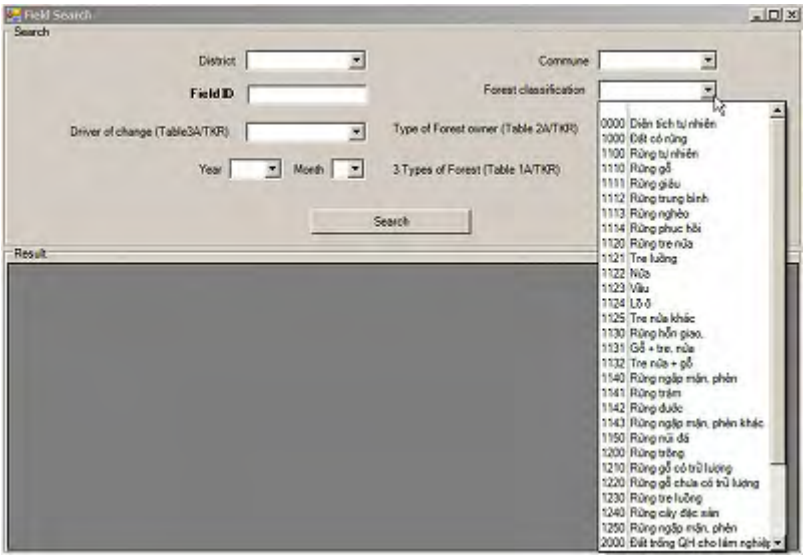
By clicking “search” menu, user can proceed to find any stored field data. These data can be listed up by specifying search conditions from the query interface.



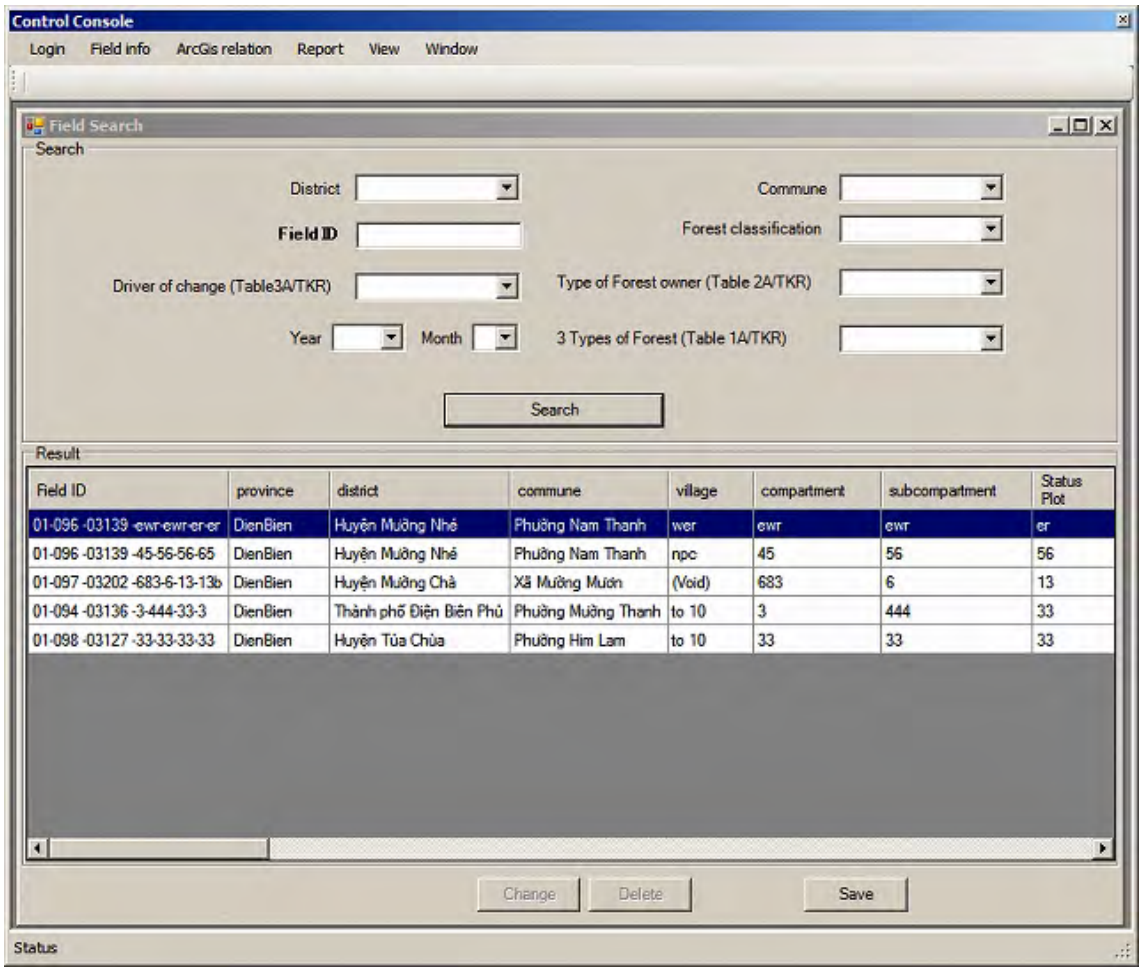
Query interface for searching registered field data is as following figure.



Specify search conditions from the listing of the combo box as following figure.



Following figure is the example of the search results.
(When click “search” button without specifying any conditions, all of the stored field data can be listed.)

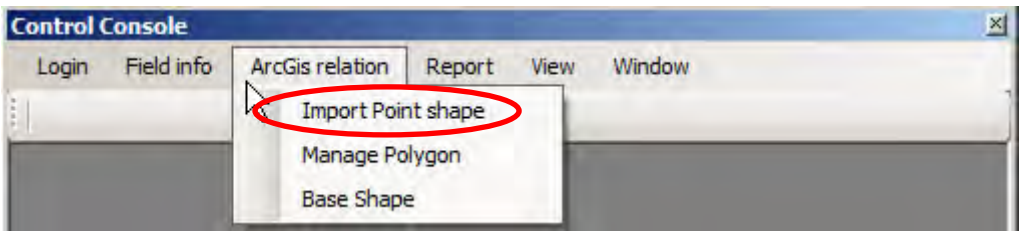


Tips
Make the most use of this “search” function to manage forest resources information.

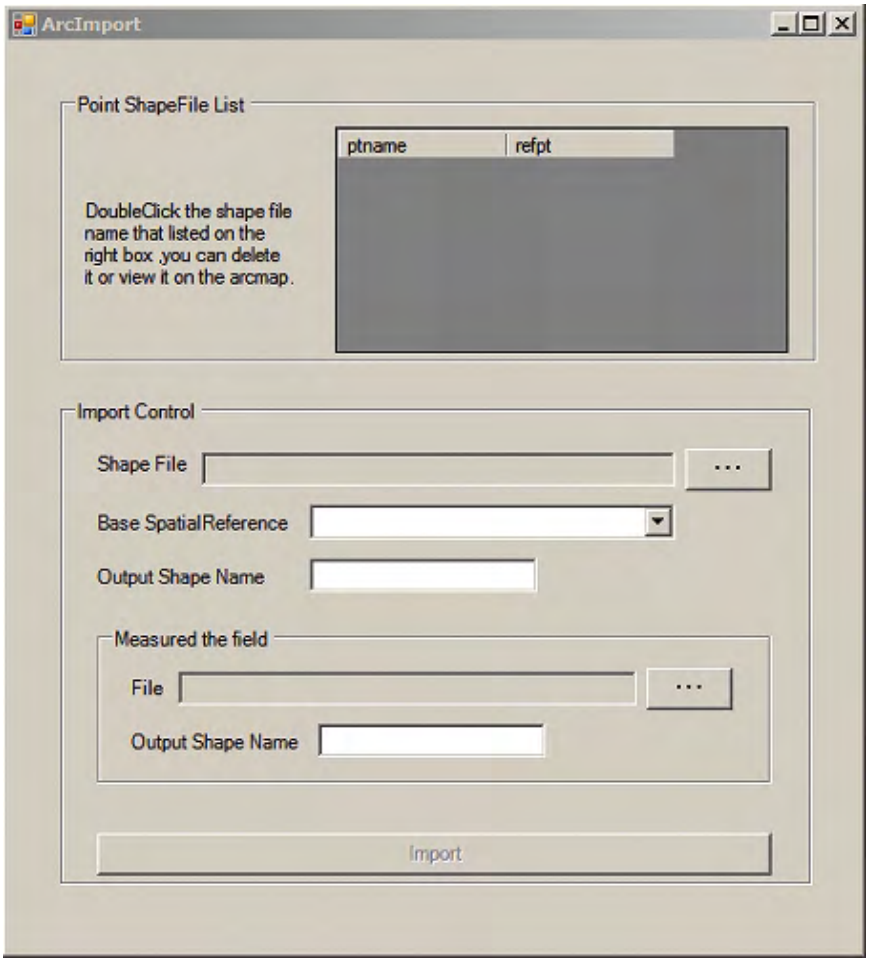
4 Operations (Work Flow 2)

Work flow 2 operations described here play an important role to manage "Area of forest change" in terms of reporting accuracy since user can calculate the area (ha) of them by using GIS polygons. GIS polygons can be created or edited based on referencing the JPEG photo images taken by the GPS camera.

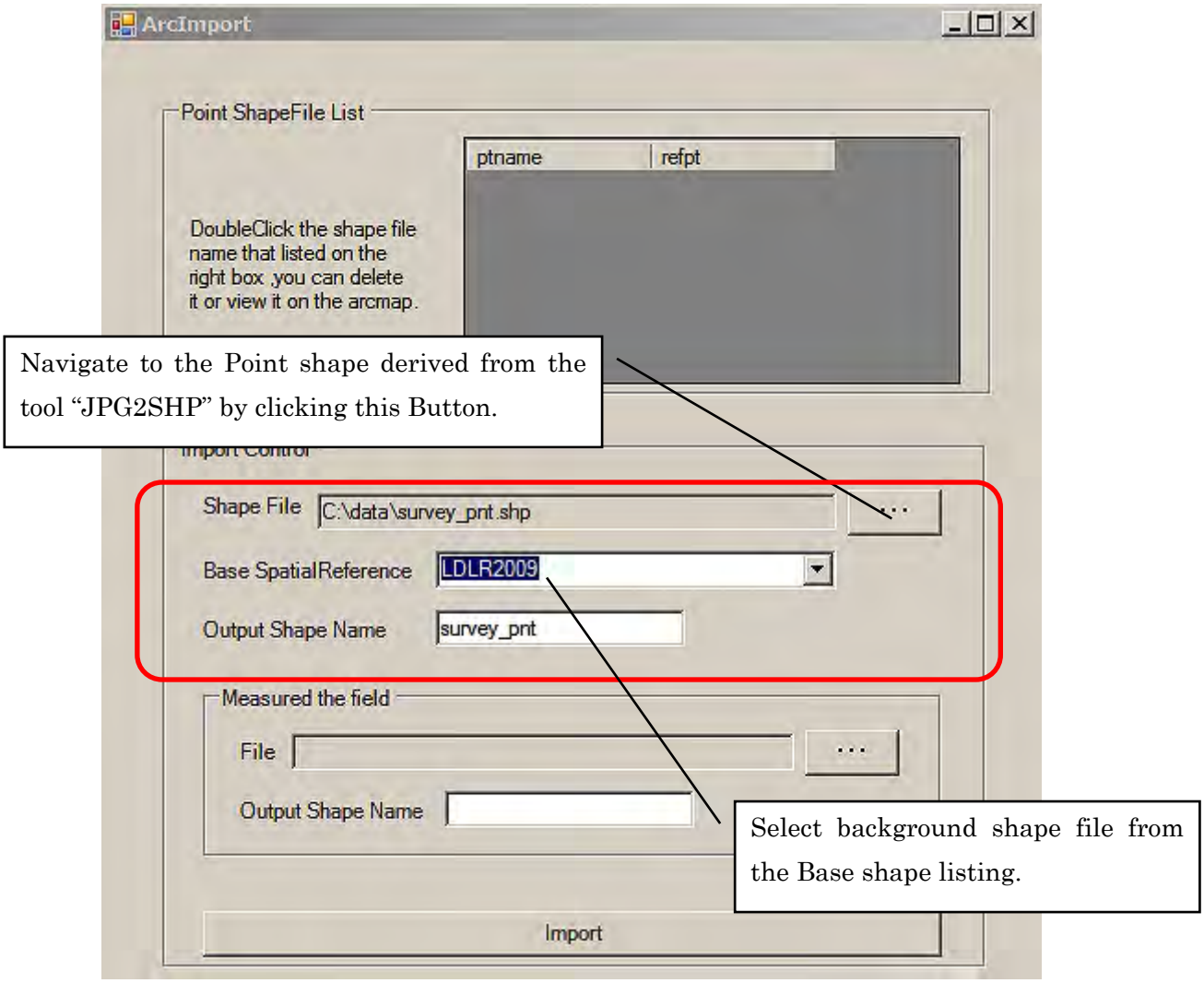
(How to see "Reference Survey Point" with JPEG photos)



Click "Import Point shape", then following interface will be shown.



Prior to creating / editing polygons for calculating area (ha) information, specify a shape file which is the output result of running the tool “JPG2SHP”. Polygons will be created / edited by referencing this shape file. Regarding the tool “JPG2SHP”, see Appendix-5.

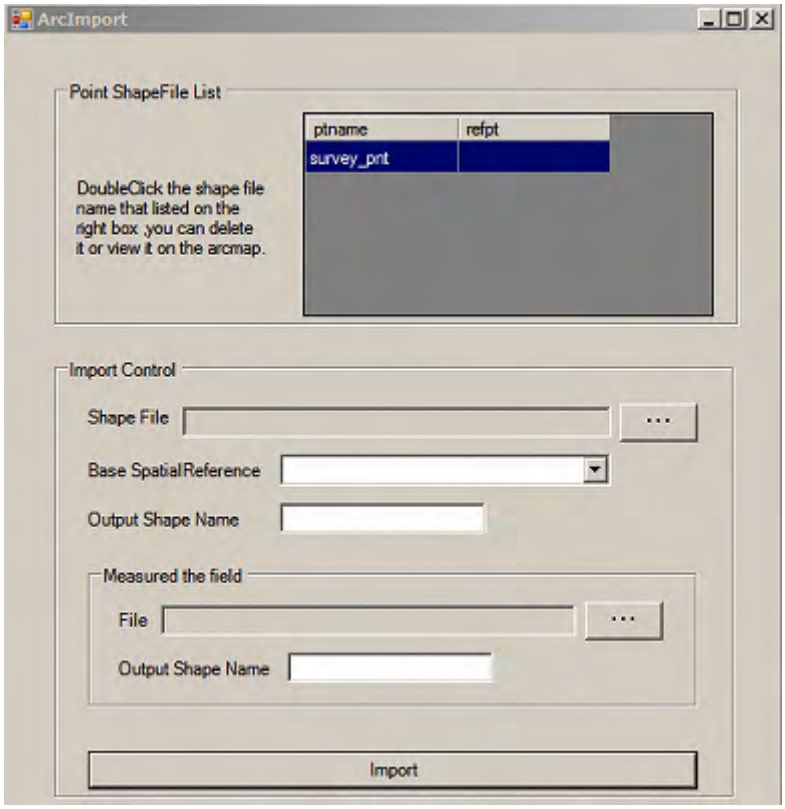


Base Spatial Reference : Background shape file such as a Land use map

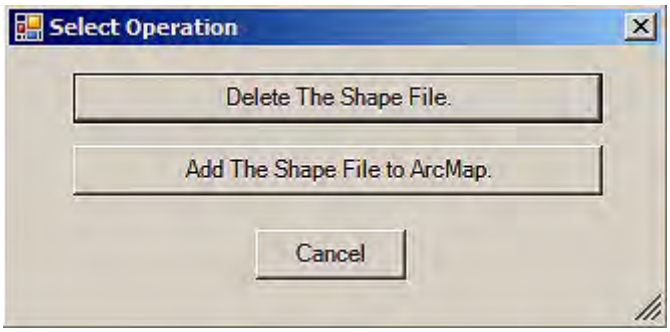
Ask system administrator on “Base shape”, “Base shape” should be registered by the system administrator.

Output Shape Name (Option) : Specify different shape name if user want to change name.

Click “Import” button, then the relevant point shape will be listed as following figure.

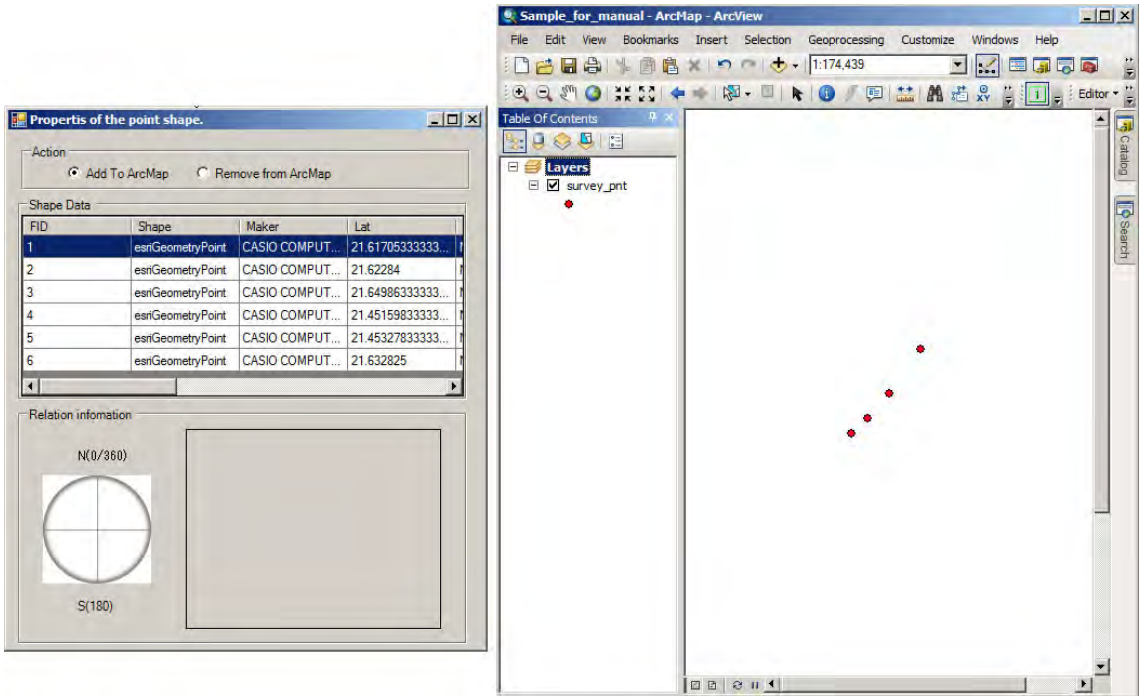


Double click the shape file name in the listing. Then following menu will be shown.



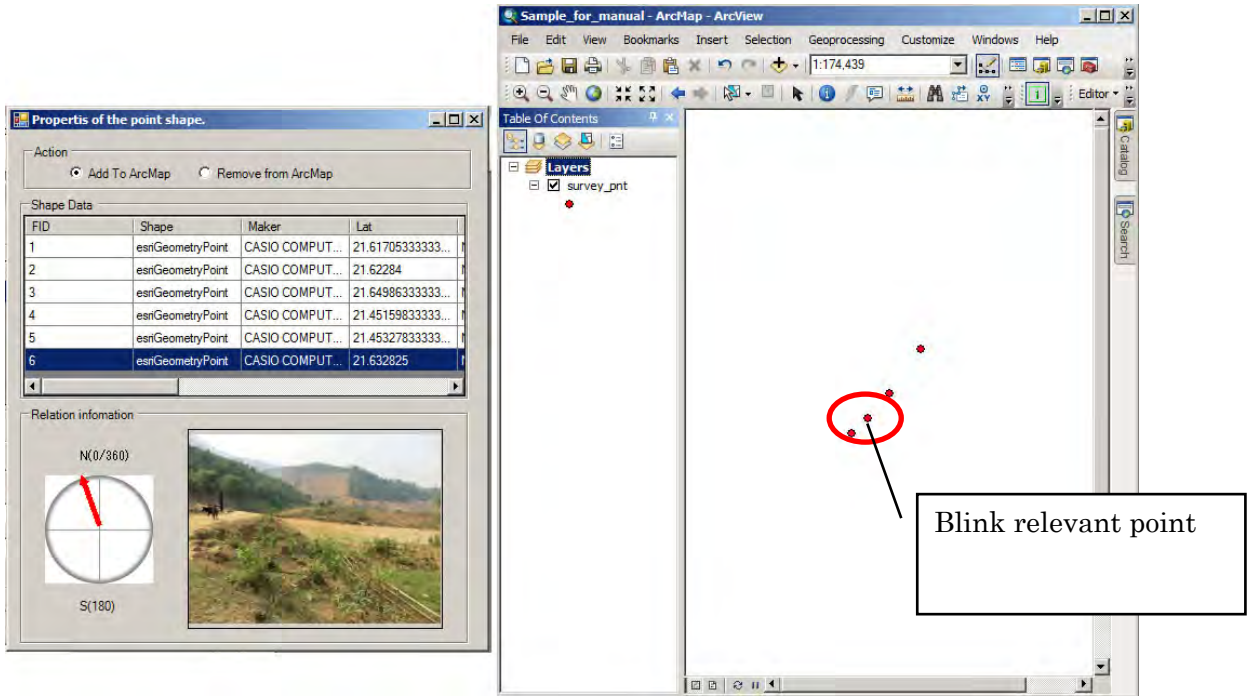
Click “Add the Shape File to ArcMap” button.

Then JPEG photo listing is shown. And the relevant point shape will be drawn in the Map frame as following figure.

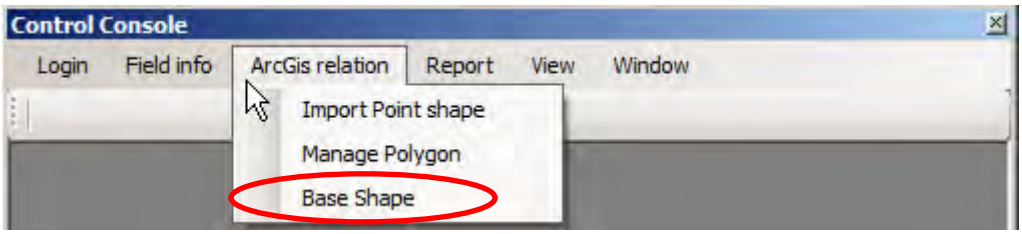


Select a photo from the listing and double-click the list you are interested in.

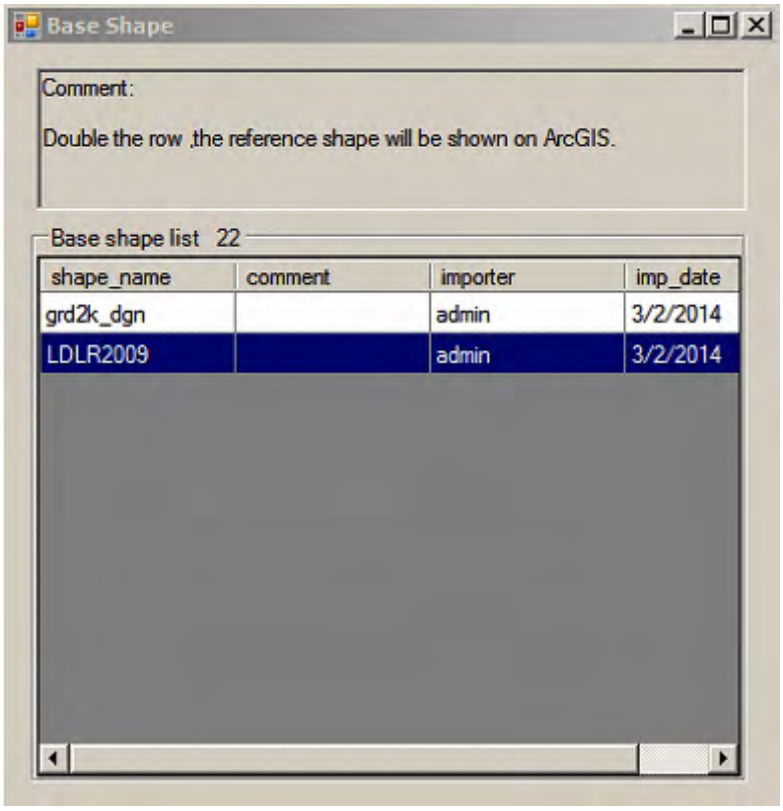
A photo with “picture angle” will be shown. And the relevant point data will be blinked in the map frame.



Add background layers in the map frame from the “Base Shape” menu.

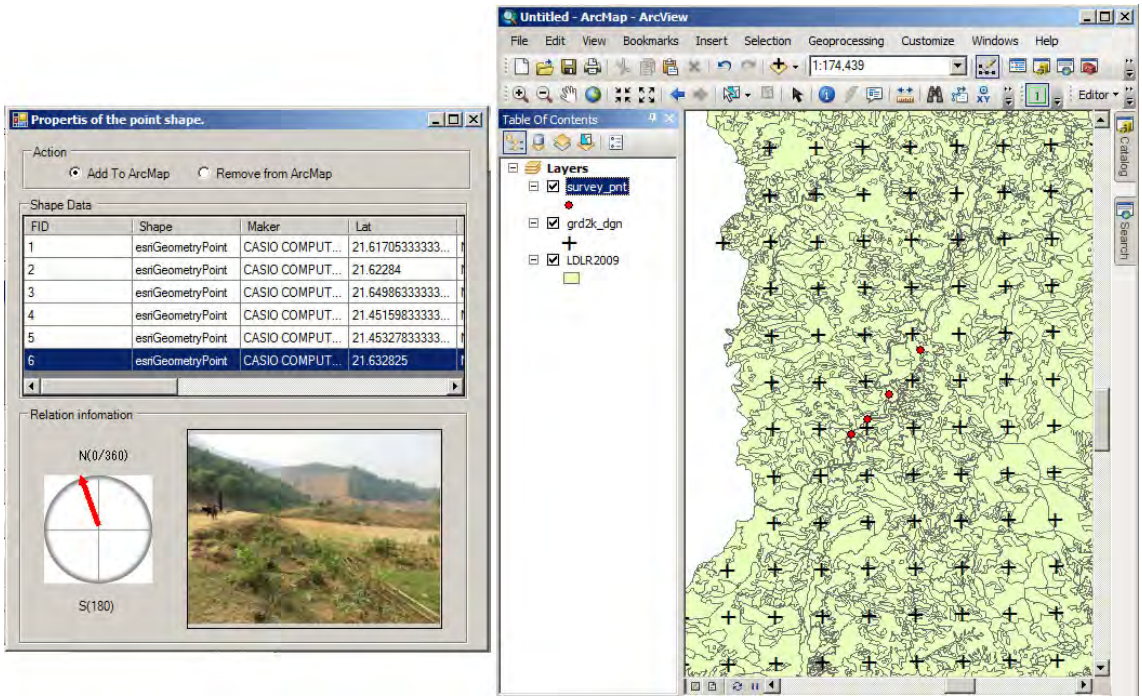


Click “Base Shape” menu then following base shape listing will be shown.
In this example, “grd2k_dgn” is a point shape file which stores 500m systematic GRID points. “LDLR2009” is a polygon shape file which stores planning land use information.



(Ask system administrator on “Base shape”, “Base shape” should be registered by the system administrator.)

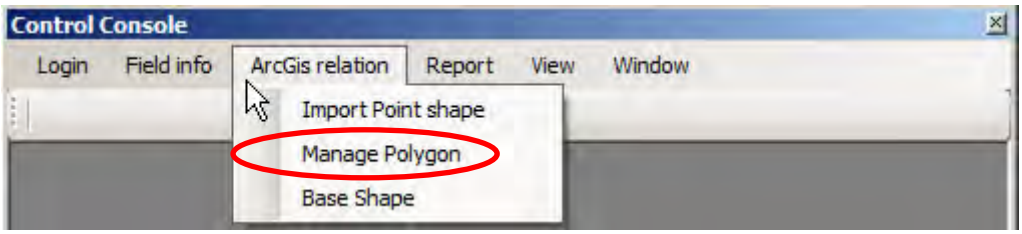
Double-click the shape name from the listing. Then background shape will be added to the map frame. See following figure.



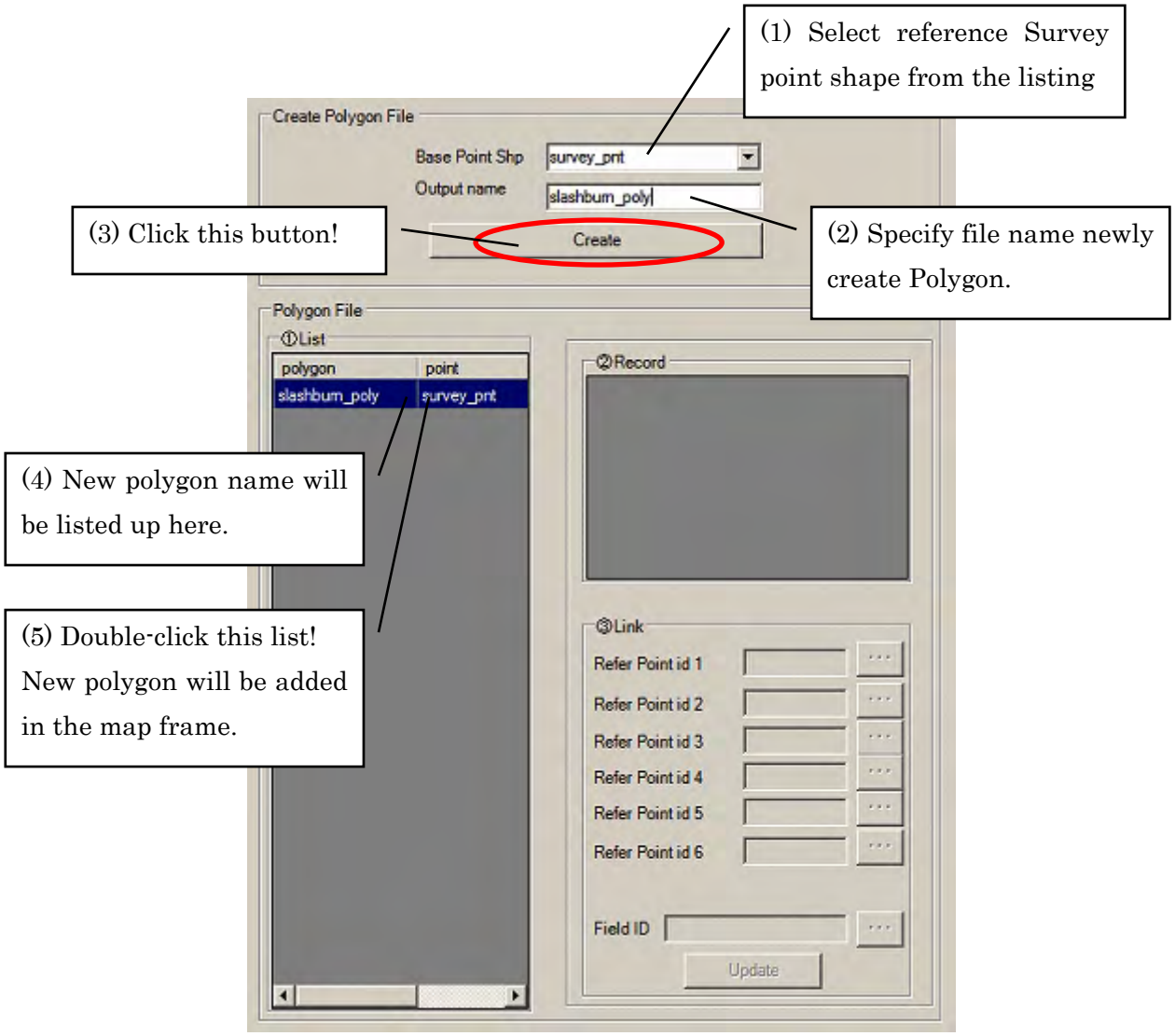
Tips

Make better use of “Base Shape” menu to add managerial information such as “500m GRID points” It contributes to the “OUTPUT3”, the internal verification which is one of the requirements to the PFMS database.

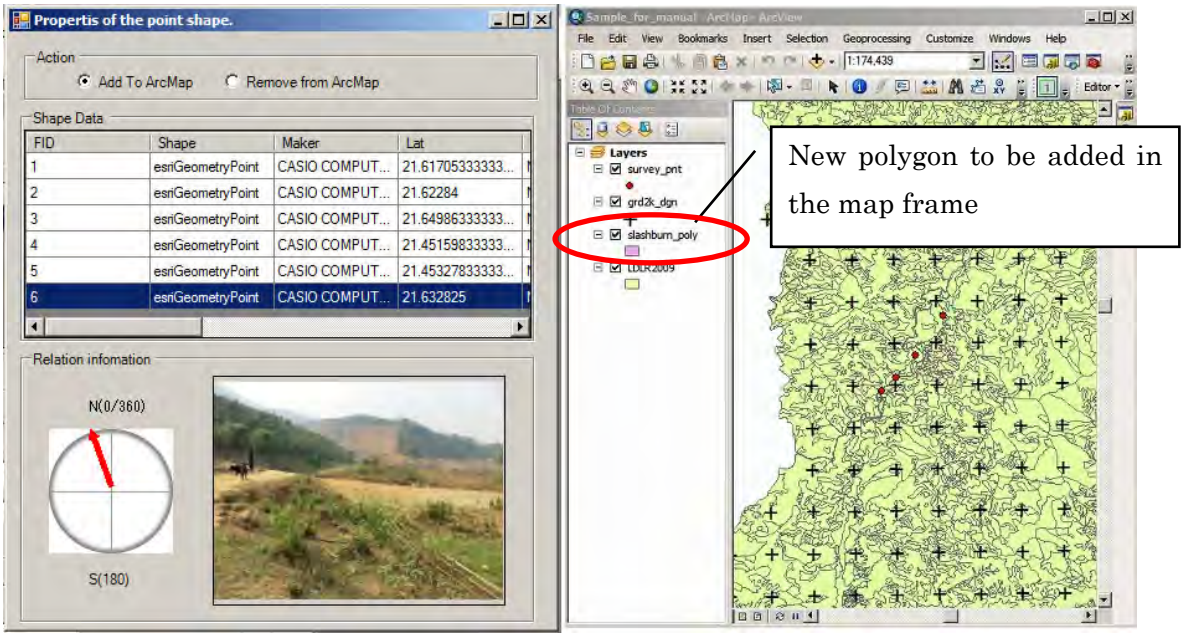
(How to create / edit polygon with referencing JPEG photo)



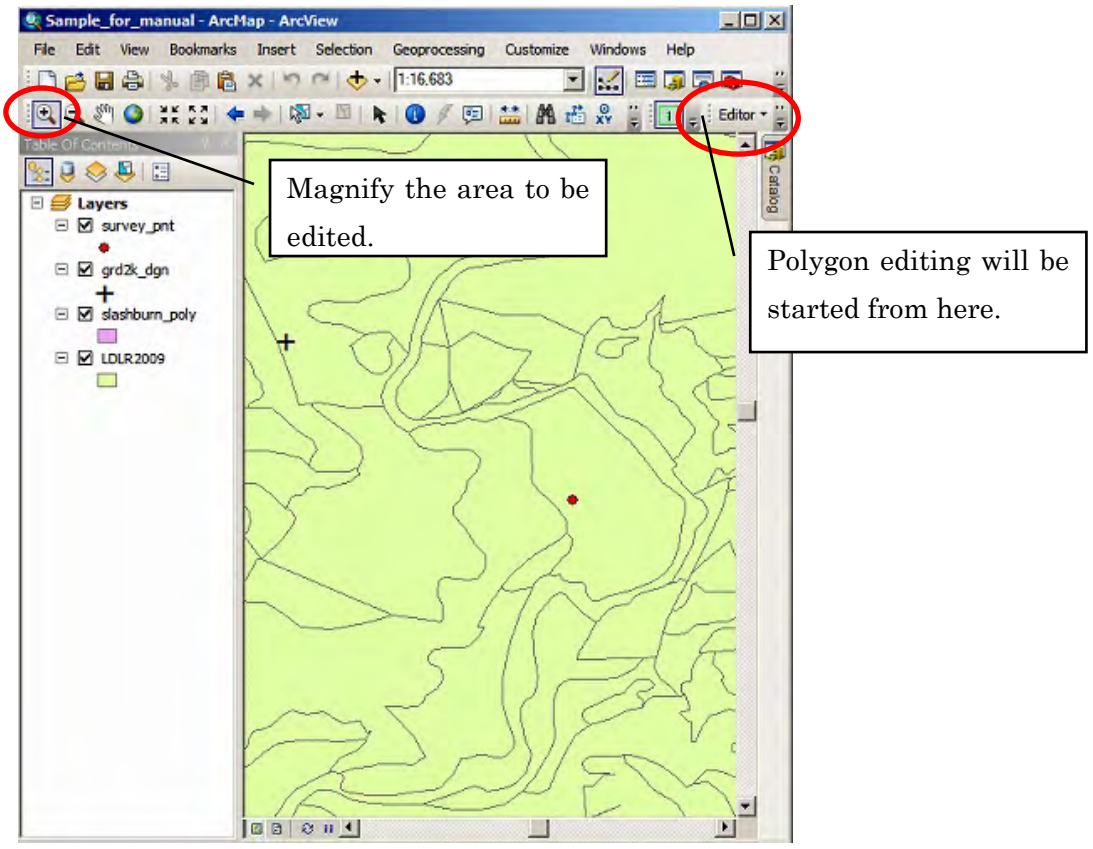
Take following steps [(1) to (5)] to create new polygon for the "Area of forest change".



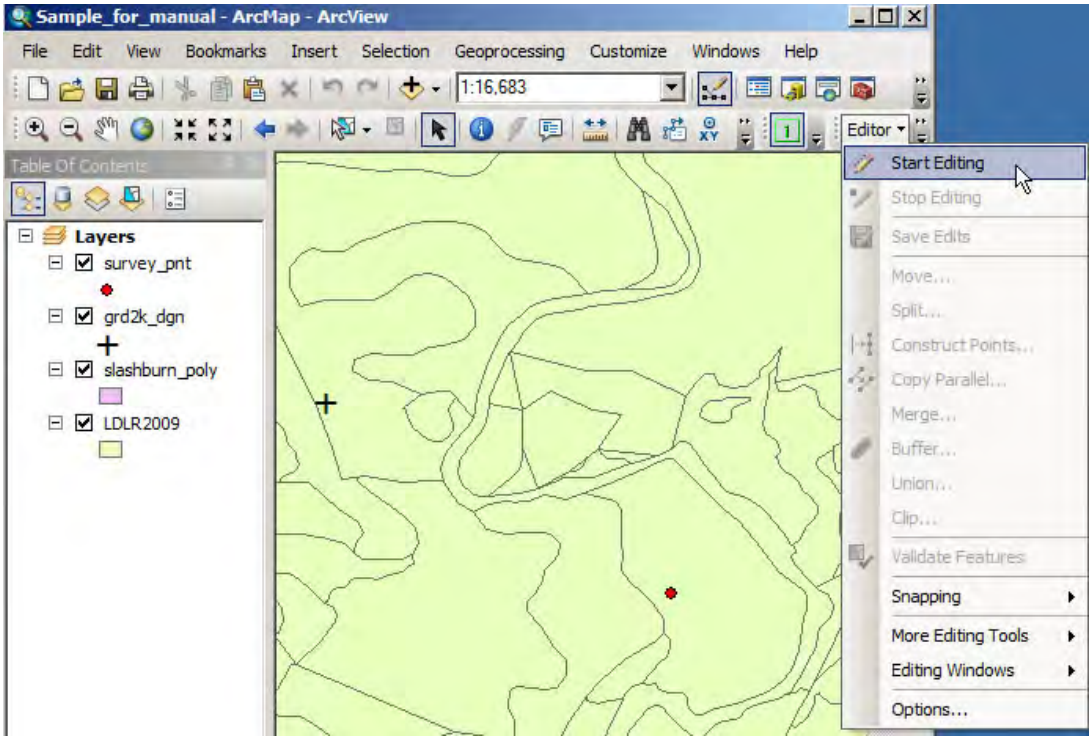
Select area of interest (AOI) to create polygon by clicking the survey point list.



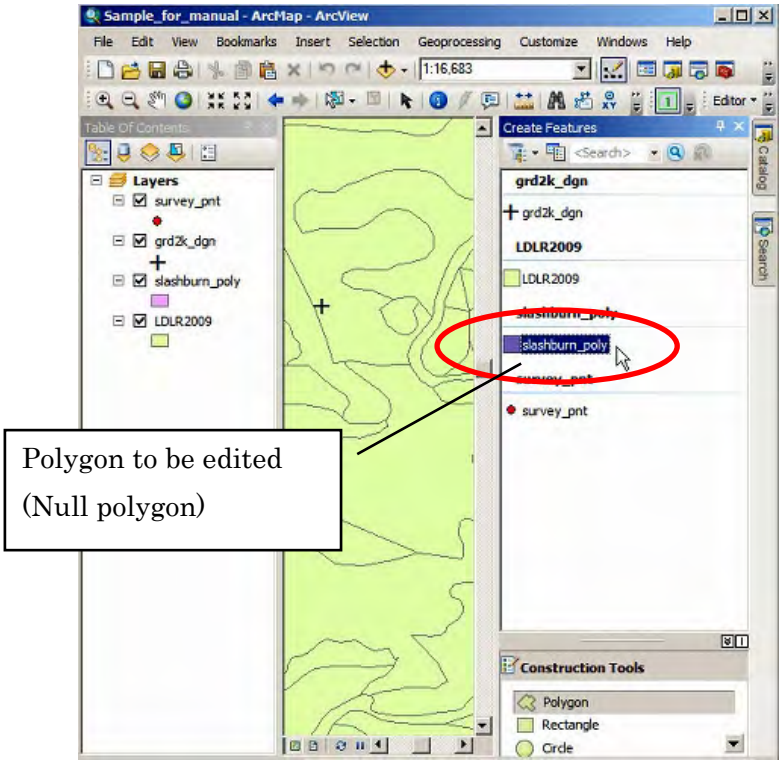
Magnify the area of interest (AOI) to the proper scale of editing using “Magnify” icon.



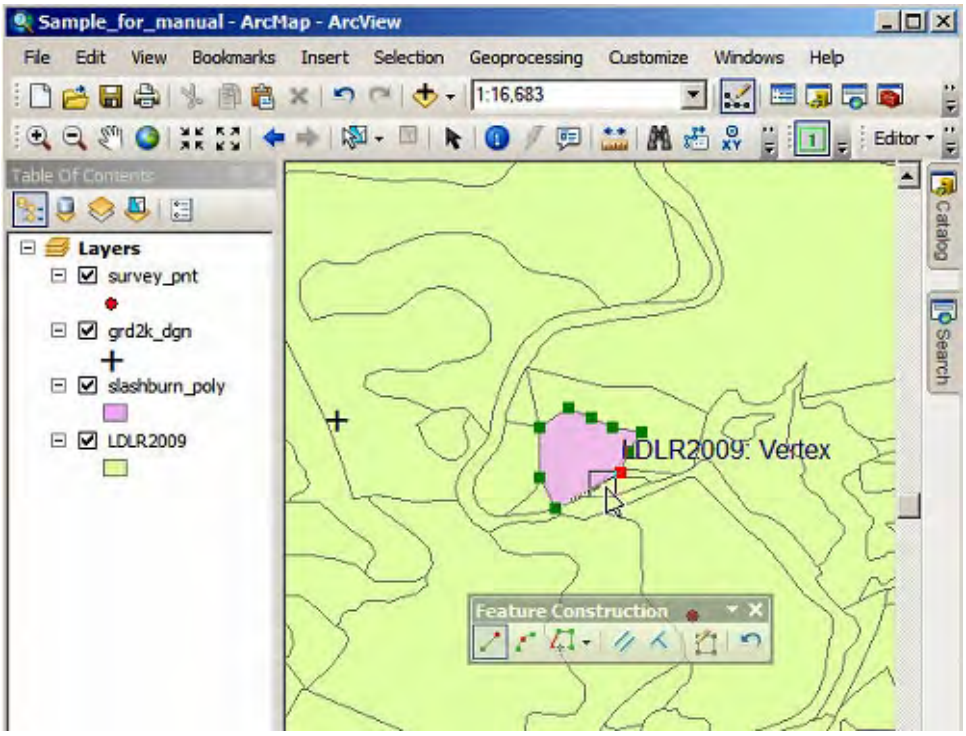
Start polygon editing as following figure.



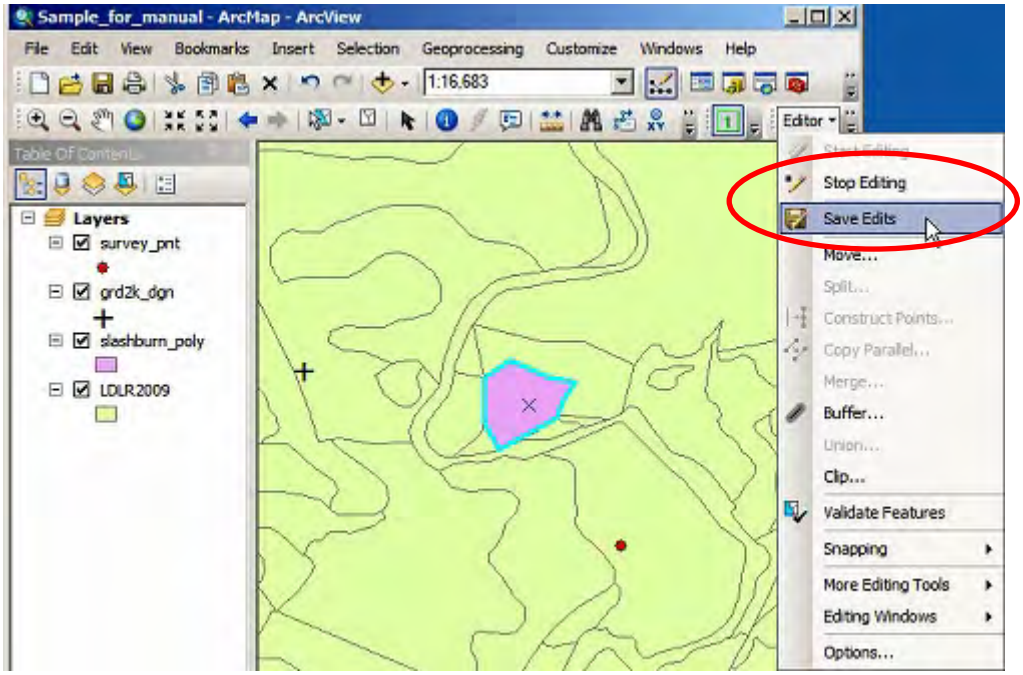
Then specify the newly created polygon (Null polygon) as follows.



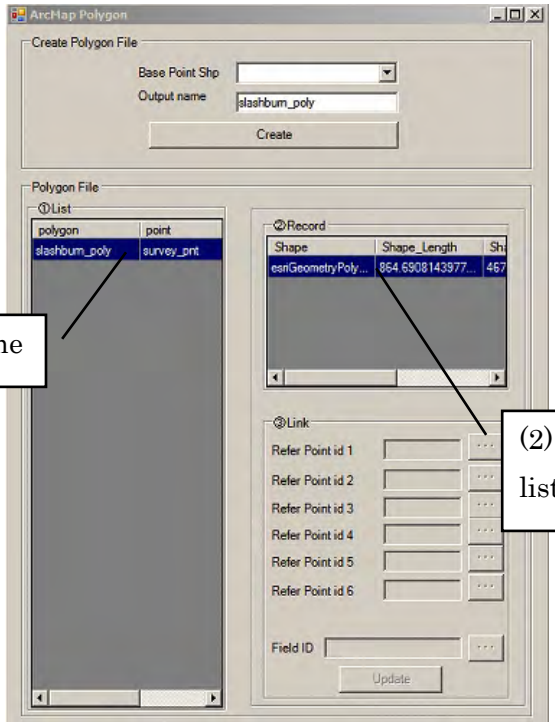
Then start editing polygon referencing the photo image of actual forest change.



Be sure to “Save Edits” before stopping edits.

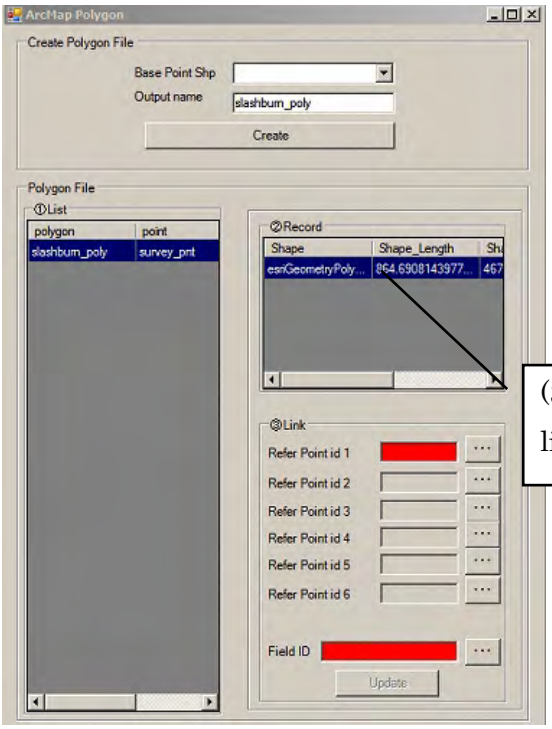


User can link edited polygon to some survey point records with JPEG photos (6 records maximum) and also can link it to the registered field data by conducting the following steps.

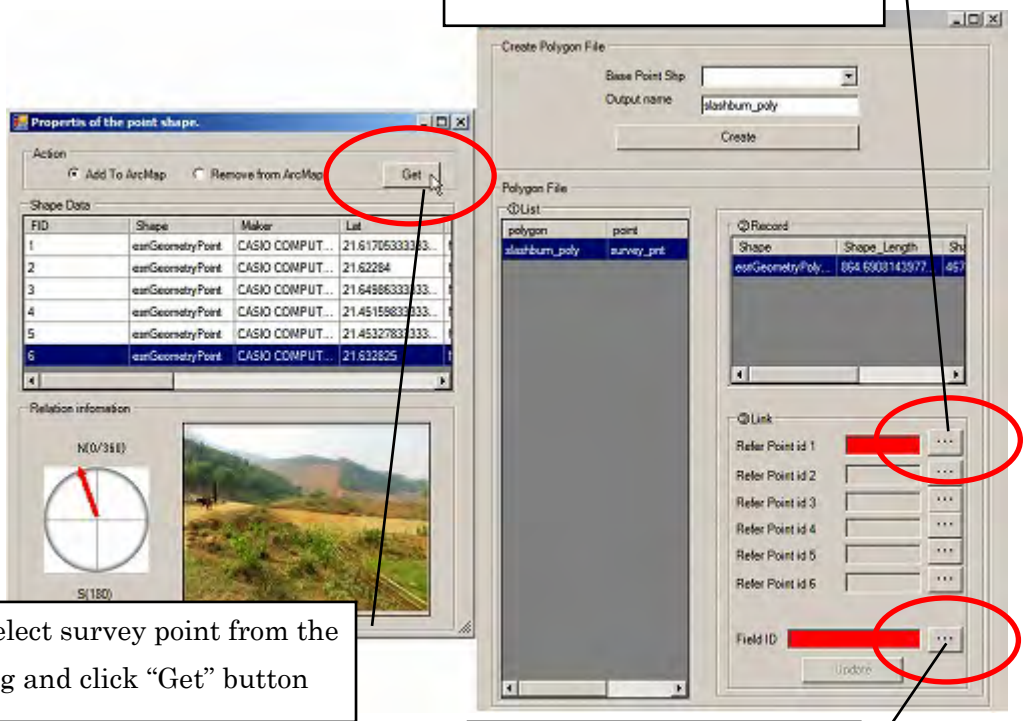


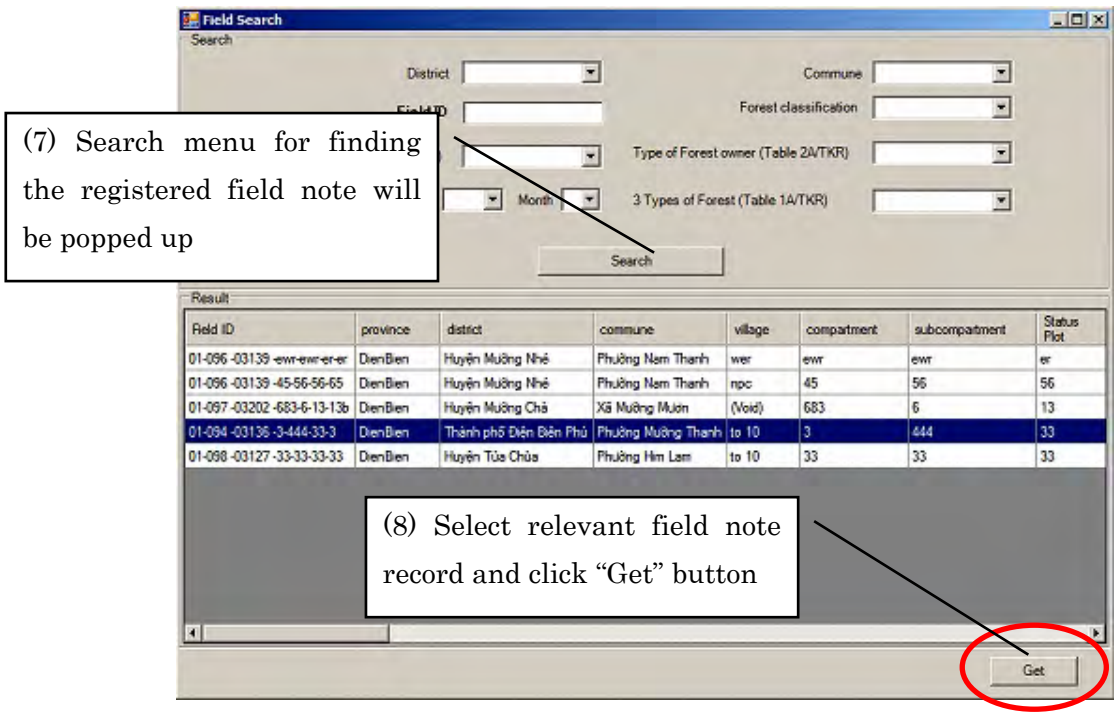
(1) Click polygon name

(2) Edited feature to be listed here.

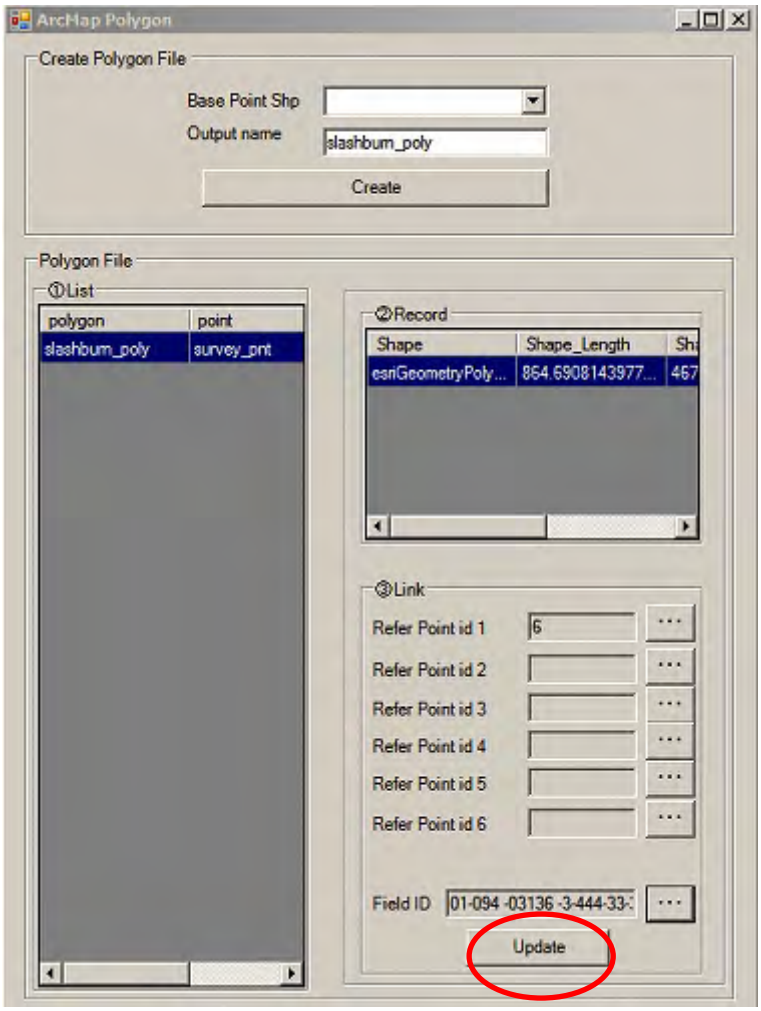


(3) Click feature to be listed here.


(4) Click here to link the survey point record with photo
Create Polygon File
Base Point Shp
Output name
slashburn_poly
Create
Propertis of the point shape.
Action
Add To ArcMap
Remove from ArcMap
Get
Shape Data
FID
Shape
Maker
List
Relation information
Polygon File
List
polygon
point
slashburn_poly
survey_pnt
Record
Shape
Shape_Length
Link
Refer Point id 1
Refer Point id 2
Refer Point id 3
Refer Point id 4
Refer Point id 5
Refer Point id 6
Field ID
Update
(5) Select survey point from the listing and click "Get" button
(6) Click here to link the registered field note


Field Search
Search
District
Commune
Field ID
Forest classification
Type of Forest owner (Table 2A/TKR)
Month
3 Types of Forest (Table 1A/TKR)
Search
Result
Field ID
province
district
commune
village
compartment
subcompartment
Status Plot
01-096 -03139 -ewr-ewr-er-er DienBien Huyện Mường Nhé Phường Nam Thanh wer ewr ewr er
01-096 -03139 -45-56-56-65 DienBien Huyện Mường Nhé Phường Nam Thanh npc 45 56 56
01-097 -03202 -683-6-13-13b DienBien Huyện Mường Chà Xã Mường Mươn (Void) 683 6 13
01-094 -03136 -3-444-33-3 DienBien Thành phố Điện Biên Phủ Phường Mường Thanh to 10 3 444 33
01-098 -03127 -33-33-33-33 DienBien Huyện Tủa Chùa Phường Him Lam to 10 33 33 33
Get
(7) Search menu for finding the registered field note will be popped up
(8) Select relevant field note record and click "Get" button

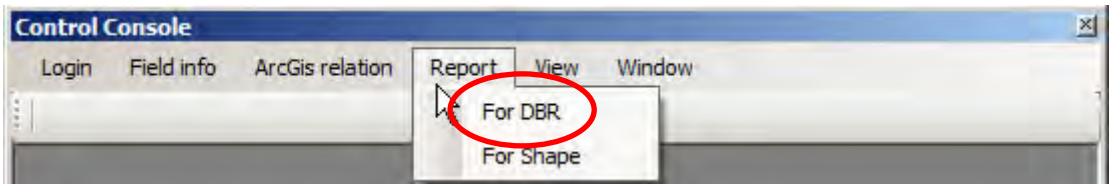
Click update button when all of the related items (survey point with photo, field note) are to be linked.



5 Operations (Work Flow 3)

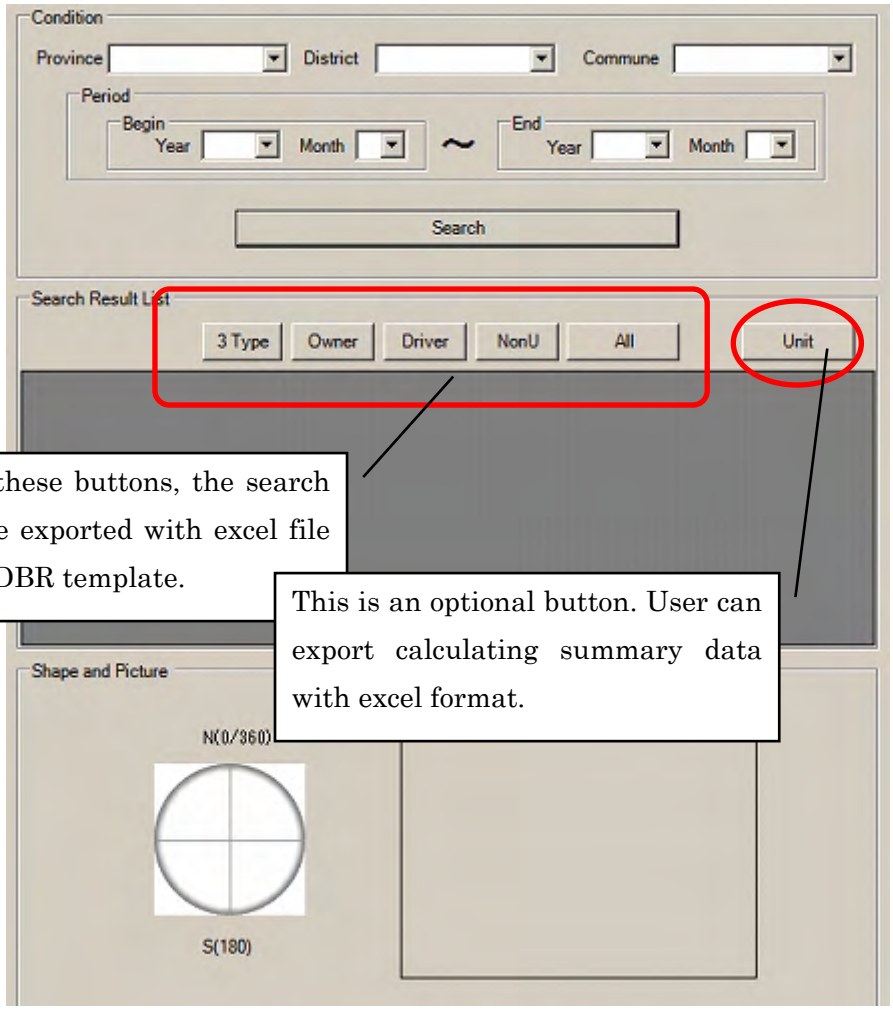
Work flow 3 is the output process of registered data. User can confirm the "area of forest change" with digital data. There two (2) menus for reporting.

From "For DBR" menu, user can not only report "area of forest change" information by excel format for the input data of currently used DBR system in FPD but also report it with original reporting form.



Following is the interface of the menu "For DBR"

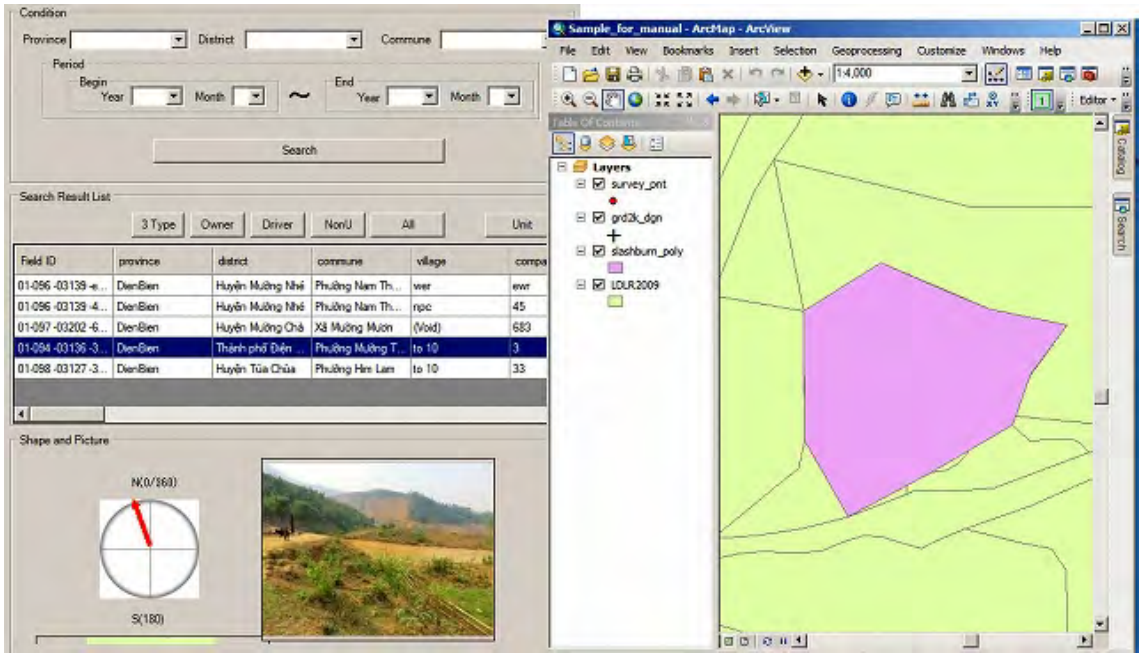
Find the data first specifying the query condition prior to exporting the results.



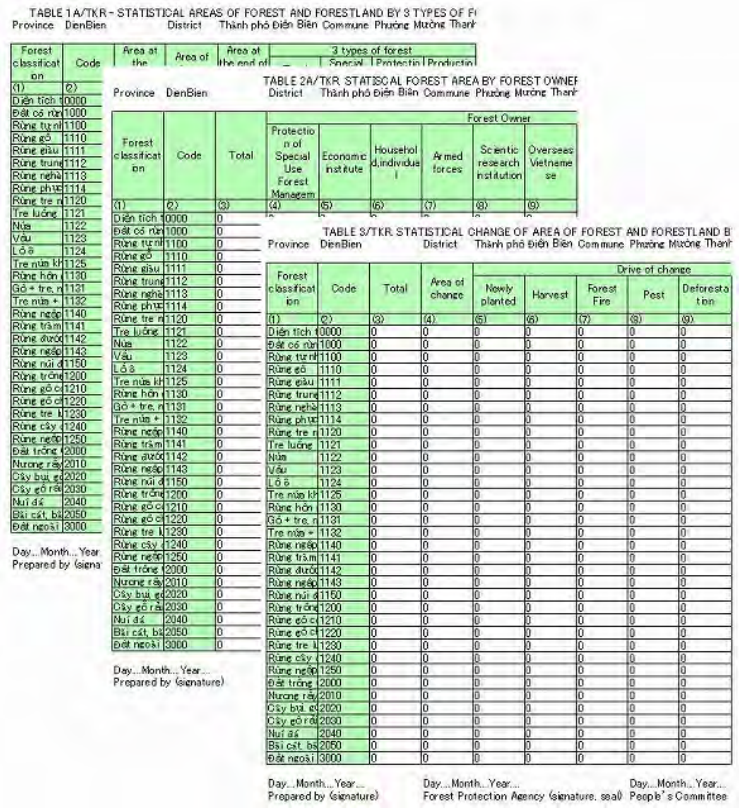
By clicking these buttons, the search result can be exported with excel file in line with DBR template.

This is an optional button. User can export calculating summary data with excel format.

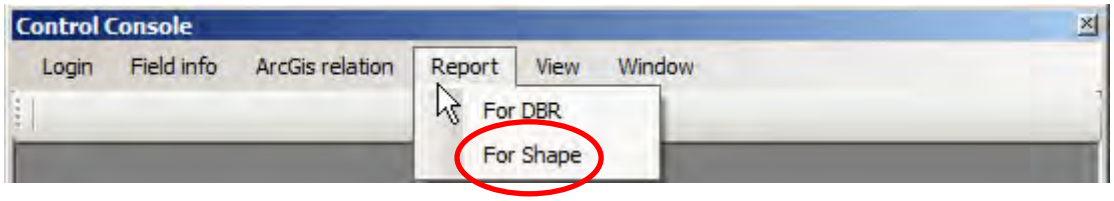
Following is the example of the data confirmation prior to exporting the results.



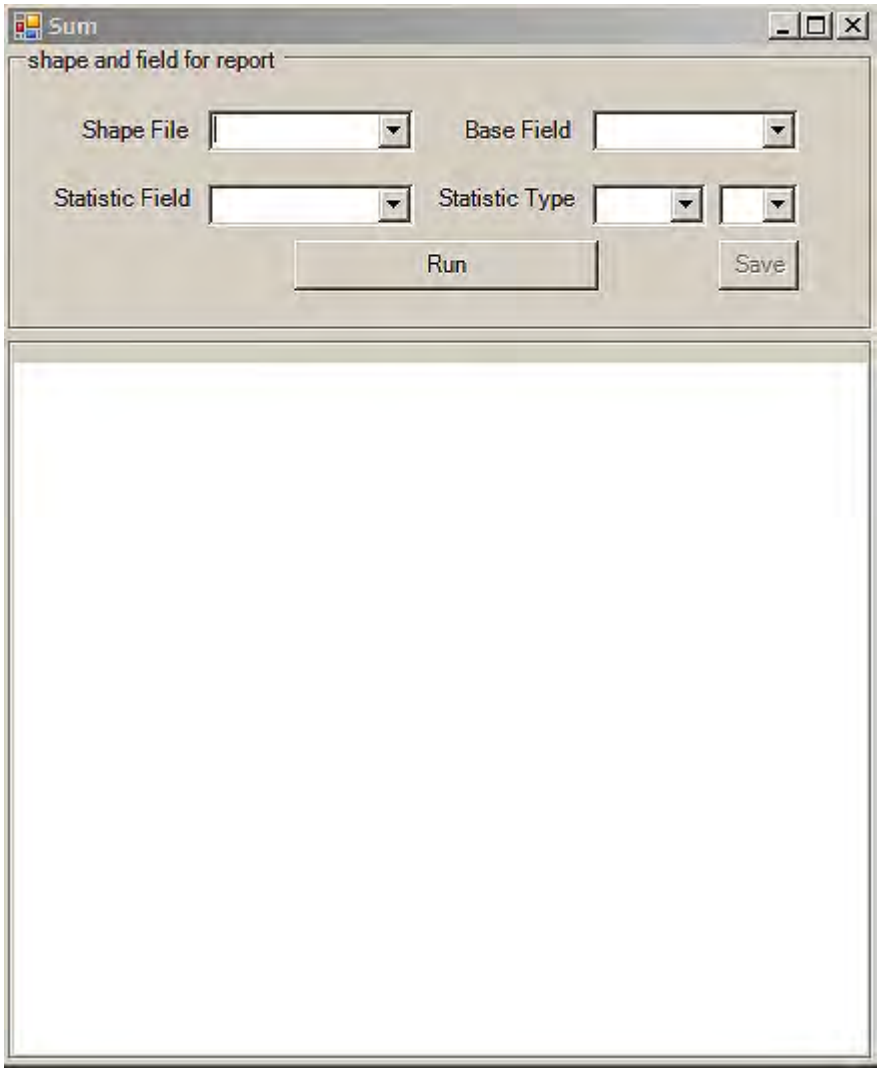
By clicking export buttons for DBR, the data will be exported with excel file in line with DBR template. See Appendix-4 about details about the DBR template.



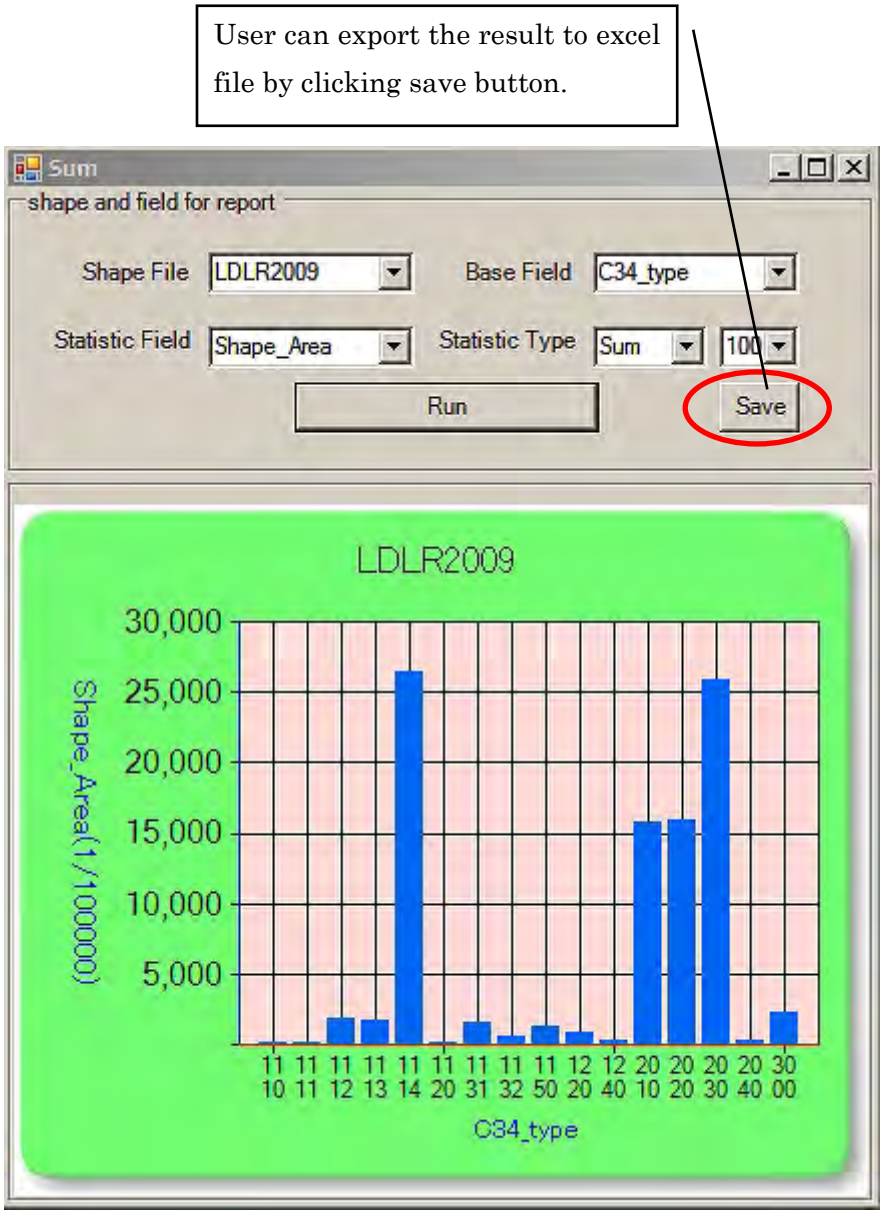
From “For Shape” menu, user can draw statistical graph using attribute tables of registered layers in “Base shape”.



Following is the interface of the drawing graph function using the attribute table of shape files. Once registered items for calculation such as “Success rate of PFES implementation”, user can confirm the progress status visually by the function.



Following is the example of drawing graph.



Tips

It depends on the user what kind of statistics to show using this function.

Before using this function, shape file must be registered as “Base shape”. Ask system administrator how to register shape file in the system.

6 Appendix

Appendix – 1 “Detail of three (3) outputs”

Appendix – 2 “Structure of forest monitoring systems under the PFMS”

Appendix – 3 “Code table of Field Data”

Appendix – 4 “Reporting form of the current DBR system”

Appendix – 5 “JPG2SHP”, the tool for creating a shape file using JPEG photos

Appendix – 1 "detail of three (3) outputs"

Output 1 "Annual statistical data (via DBR)"	
Purpose	To monitor the forest changed area (increase and decrease) based on the report from the village in order to reflect the output of the result into the DBR software which is used for the reporting of annual statistical survey of the province to the central government
To be monitored	Forest changed area (increase and decrease)
Monitoring items	✓ Area (ha) of forest change ✓ forest classification, 3 types of forest, forest owner, driver of change
Necessary information	Digital data: Maps of 3 types of forest; forest owner; forest classification; FPDP plan, FPDP land use land cover; cadastral. At field survey: forest change information from village, 3 types of forest , forest owner information (name of forest owner, type of forest management), forest classification, driver of forest change, area of forest change, year of planting and harvesting, picture
Output	5 types of tables of DBR software ① SHEET 1a –DESCRIPTION OF NON-UPLAND FIELD PLOT ② TABLE 1A/TKR – STATISTICAL AREAS OF FOREST AND FORESTLAND BY 3 TYPES OF FOREST ③ TABLE 2A/TKR. STATISCAL FOREST AREA BY FOREST OWNER ④ TABLE 3/TKR. STATISTICAL CHANGE OF AREA OF FOREST AND FORESTLAND BY DRIVER ⑤ TABLE 4/TKR. AGGREGATION OF FOREST COVERS BY ADMINISTRATIVE UNIT
Flow of the information	Village (VMBFMLD[1]) → forest ranger → district FPD → Sub-FPD

Output 2 "Management of PFES"		
Purpose	✓ To manage the location and the area of three types of area respectively as follows; ① Potential PFES area (considered as nearly equivalent to the area planned for forest protection under FPDP) ② Area planned for afforestation under FPDP ③ Area planned for regeneration under FPDP ✓ To calculate the success rate of implementation of each area by clarifying the actual implemention in the planned area respectively.	
To be monitored	Potential PFES area	Afforestation and regeneration under FPDP
Monitoring items	✓ Location and the area (ha) of the potential PFES ✓ Area of actual land and forest allocation in the potential PFES area ✓ Area of decrease of forest in the potential PFES area	✓ Location and the area (ha) of the FPDP planned area Increase of the forest area in the FPDP planned area
Necessary information	For the clarification of the allocated land and forest under PFES:	For FPDP planned area (obtain at the office):

[1] VMBFMLD : the Village Management Board for Forest Management and Livelihood Development

	✓ geographic area, forest area, implementation area (unit is commune), FPDP presell ID, status plot ID, forest classification, 3 forest types, forest owner For clarification of decrease of forest(obtain at the field): ✓ Geographic area, forest area, year of harvest, cause of forest change, picture	✓ geographic area, planned area(afforestation and regeneration), FPDP presell ID, status plot ID, forest classification, 3 forest types, forest owner For increase of the forest area (obtain by the field survey): ✓ Geographic area, forest area, year of planting, cause of forest change, picture
Output	Calculate following area and the rate in each district, commune and status plot: ① Mapping of potential PFES area = A ② Rate of land and forest allocated area under PFES = B/A ③ Success rate of PFES implementation = {(B1-B2)-C}/A Assuming: A : potential PFES area; B : area of land and forest allocated area; C : forest changed area monitored by the field survey under PFES.	Calculate following area and the rate in each district, commune and status plot: ① Success rate of afforestation under FPDP = D/E ② Success rate of regeneration under FPDP = F/G Assuming: D : aggregated forest changed area of afforestation by DBR software as a result of output 1; E : planned area of afforestation under FPDP of the district; F : aggregated forest changed area of regeneration by the DBR software as a result of output 1.G : planned are of regeneration under FPDP of the district
Flow of the information	Village (VMBFMLD) → forest ranger → district FPD → Sub-FPD	

Output 3 "Verification[2] System"	
Purpose	✓ To calculate the accuracy of the PFMS as a whole system by processing internal verification in the province in order to improve the management of PFMS
To be monitored	The point of the random sampling grid prepared by the province
Monitoring items	Under the location of random sampling grids, following shall be monitored ✓ Clarification of FPDP planed code (increase and decrease) on the map ✓ Field survey result of actual forest classification ✓ Consistency of the increase and decrease of forest respectively by comparing the plan and the survey result.
Necessary information	3 forest type, FPDP plan map, setting of random sampling grids of each district
Output	① Consistency rate of the increase of forest ② Consistency rate of the decrease of forest
Flow of the information	Sub-FPD ⇄ district FPD ⇄ forest ranger

[2] The term of "verification" used in this manual is defined as the internal verification of the reporting result by the forest ranger at the field based on the random sampling grids prepared by province.

Appendix – 2 "Structure of forest monitoring system under the PFMS"

In forest monitoring at the commune level, the forest ranger is the key person responsible for collecting and compiling all information. The reporting starts from the villagers, but due to the lack of capacity it is quite difficult to ask villagers to compile all the information correctly and in a timely manner. Therefore, the VMBFMLD supports the reporting by the villagers. Based on this, communal forest monitoring systems could describe as following figure.

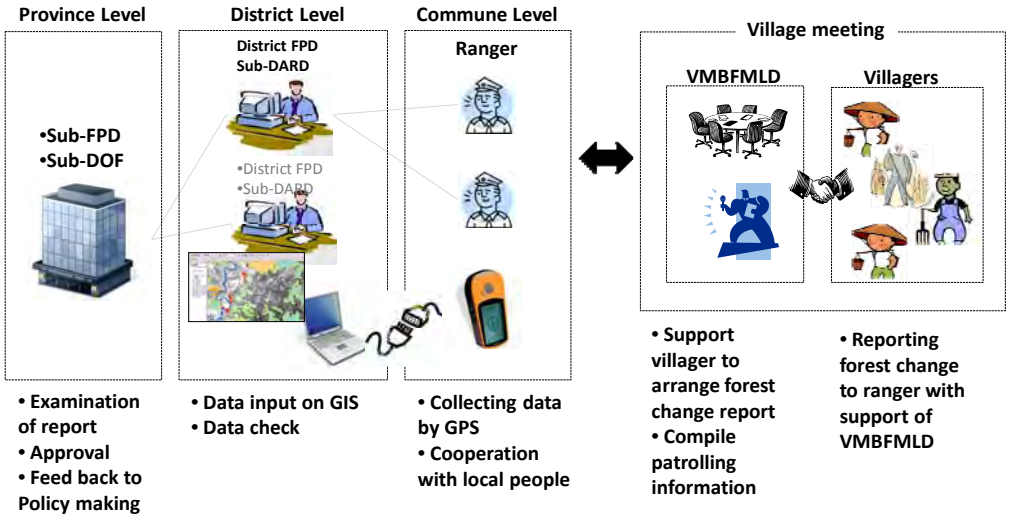


Fig. "Structure of forest monitoring systems under the PFMS"

Appendix – 3 "Code table of Field Data" (Field Survey Sheet)

Code of "District" and "Commune"

code	name of District	code	name of commune
094	Thành phố Điện Biên Phủ	03124	Phường Noong Bua
		03127	Phường Him Lam
		03130	Phường Thanh Bình
		03133	Phường Tân Thanh
		03136	Phường Mường Thanh
		03139	Phường Nam Thanh
		03142	Phường Thanh Trường
		03145	Xã Thanh Minh
095	Thị Xã Mường Lay	03148	Phường Sông Đà
		03151	Phường Na Lay
		03184	Xã Lay Nưa
096	Huyện Mường Nhé	03154	Xã Sín Thầu
		03157	Xã Chung Chải
		03160	Xã Mường Nhé
		03162	Xã Nậm Kè
		03163	Xã Mường Toong
		03164	Xã Quảng Lâm
		03165	Xã Pa Tần
		03166	Xã Chà Cang
		03168	Xã Nà Khoa
		03169	Xã Nà Hỳ
		03170	Xã Nà Bủng
097	Huyện Mường Chà	03172	Thị Trấn Mường Chà
		03174	Xã Nậm Khăn
		03175	Xã Chà Tở
		03178	Xã Xá Tổng
		03181	Xã Mường Tùng
		03187	Xã Chà Nưa
		03190	Xã Hừa Ngài
		03193	Xã Pa Ham
		03196	Xã Huổi Lèng
		03197	Xã Sa Lông
		03198	Xã Phìn Hồ
		03199	Xã Si Pa Phìn
		03200	Xã Ma Thì Hồ
		03201	Xã Na Sang
		03202	Xã Mường Mươn
098	Huyện Tủa Chùa	03217	Thị trấn Tủa Chùa
		03220	Xã Huổi Só
		03223	Xã Xín Chải
		03226	Xã Tả Sìn Thàng
		03229	Xã Lao Xả Phình
		03232	Xã Tả Phìn
		03235	Xã Tủa Thàng
		03238	Xã Trung Thu
		03241	Xã Sính Phình
		03244	Xã Sáng Nhè
		03247	Xã Mường Đun
		03250	Xã Mường Báng
099	Huyện Tuần Giáo	03253	Thị trấn Tuần Giáo
		03259	Xã Phình Sáng
		03262	Xã Mùn Chung
		03265	Xã Ta Ma
		03268	Xã Mường Mùn
		03271	Xã Pú Nhung
		03274	Xã Quài Nưa
		03277	Xã Mường Thín
		03280	Xã Tỏa Tình
		03283	Xã Nà Sáy
		03289	Xã Quài Cang
		03295	Xã Quài Tở
		03298	Xã Chiềng Sinh
		03304	Xã Tênh Phông
100	Huyện Điện Biên	03316	Xã Nà Tấu
		03317	Xã Nà Nhạn
		03319	Xã Mường Pồn
		03322	Xã Thanh Nưa
		03325	Xã Mường Phăng
		03328	Xã Thanh Luông
		03331	Xã Thanh Hưng
		03334	Xã Thanh Xương
		03337	Xã Thanh Chăn
		03340	Xã Pa Thơm
		03343	Xã Thanh An
		03346	Xã Thanh Yên
		03349	Xã Noong Luống
		03352	Xã Noong Hẹt
		03355	Xã Sam Mứn
		03358	Xã Núa Ngam
		03361	Xã Na Ư
		03364	Xã Mường Nhà
		03367	Xã Mường Lói
101	Huyện Điện Biên Đông	03203	Thị trấn Điện Biên Đông
		03205	Xã Na Son
		03208	Xã Phì Nhừ
		03211	Xã Chiềng Sơ
		03214	Xã Mường Luân
		03370	Xã Pú Nhi
		03371	Xã Nong U
		03373	Xã Xa Dung
		03376	Xã Keo Lôm
		03379	Xã Luân Giới
		03382	Xã Phình Giàng
		03383	Xã Pú Hồng
		03384	Xã Tìa Dình
		03385	Xã Háng Lìa
102	Huyện Mường Ảng	03256	Thị trấn Mường Ảng
		03286	Xã Mường Đăng
		03287	Xã Ngối Cáy
		03292	Xã Ẳng Tở
		03301	Xã Búng Lao
		03302	Xã Xuân Lao
		03307	Xã Ẳng Nưa
		03310	Xã Ẳng Cang
		03312	Xã Nậm Lịch
		03313	Xã Mường Lạn

Code of "Forest classification"

code	Forest classification	Trạng thái rừng
0000	Territorial area	Diện tích tự nhiên
1000	A. Forested area	Đất có rừng
1100	I. Natural forest	Rừng tự nhiên
1110	1. Timber forest	Rừng gỗ
1111	Rich forest	Rừng giàu
1112	Medium forest	Rừng trung bình
1113	Poor forest	Rừng nghèo
1114	Regrowth forest	Rừng phục hồi
1120	2. Bamboo forest	Rừng tre nứa
1121	Bamboo	Tre luồng
1122	Neohouzeaua	Nứa
1123	Indosasa sinica	Vầu
1124	Bambusa balsooa	Lồ ô
1125	Other bamboos	Tre nứa khác
1130	3. Mixed forest	Rừng hỗn giao,
1131	Tree + Bamboo	Gỗ + tre, nứa
1132	Bamboo + Tree	Tre nứa + gỗ
1140	4. Submerged forest	Rừng ngập mặn, phèn
1141	Cajeput forest	Rừng tràm
1142	Mangro forest	Rừng đước
1143	Other saline, alluminum submerged forest	Rừng ngập mặn, phèn khác
1150	5. Rock mountain forest	Rừng núi đá
1200	II. Man-made forest	Rừng trồng
1210	1. Timber forest with volume	Rừng gỗ có trữ lượng
1220	2. Timber forest without volume	Rừng gỗ chưa có trữ lượng
1230	3. Bamboo forest	Rừng tre luồng
1240	4. Specialty-tree forest	Rừng cây đặc sản
1250	5. Saline, aluminum submerged forest	Rừng ngập mặn, phèn
2000	B. Bareland planned for forestry	Đất trống QH cho lâm nghiệp
2010	1. Grass, reed (Ia)	Nương rẫy (LN)
2020	2. Grass and Shrub (Ia),(Ib)	Cây bụi, gỗ rải rác (Ia), (Ib)
2030	3. Scattered tree (Ic)	Cây gỗ rải rác (Ic)
2040	4. Rocky mountain	Nuí đá
2050	5. Sand beach, march, etc.	Bãi cát, bãi lầy…
3000	C. Non-forestland	Đất ngoài lâm nghiệp

Code of "Driver of change"

Code	Driver of change	Nguyên nhân thay đổi
10	Newly planted	Khai thác
20	Harvest	Cháy rừng
30	Forest Fire	Sâu bệnh
40	Pest	Phá rừng
50	Deforestation	Chuyển MĐSD
60	Change in land use purpose	K.nuôi tái sinh
70	Regeneration	Khác

Code of "3 Forest Type"

Code	Forest type	Phân theo 3 loại rừng
DDVQG	National Park	Vườn quốc gia
DDBTO	Nature Reserve	Khu bảo tồn thiên nhiên
DDBVC	Landscape Forest	Khu bảo vệ cảnh quan
DDNCU	Scientific and Experimental Forest	Khu nghiên cứu khoa học, thực nghiệm
DDSVB	Marine Life Protected Area	Khu bảo tồn sinh vật biển
PHRXY	Highly Critical Watershed Protection Forest	Phòng hộ đầu nguồn, rất xung yếu
PHXYE	Critical Watershed Protection Forest	Phòng hộ đầu nguồn, xung yếu
PHIXY	Less Critical Watershed Protection Forest	Phòng hộ đầu nguồn, ít xung yếu
PHGIO	Wind-breaking and Sand Protection Forest	Phòng hộ chắn gió, chắn cát
PHSON	Wave-breaking and Sea Expansion Forest	Phòng hộ chắn sóng, lấn biển
PHMTR	Environmental Protection Forest	Phòng hộ môi trường
PHBGI	Border Protection Forest	Phòng hộ biên giới
SX	Production Forest	Sản xuất
NN	Non-forestry	Ngoài lâm nghiệp

Code of "Forest Owner"

Code	Forest owner	Phân theo chủ quản lý
BQL rừng PH	Protection Forest Management Board	Ban QL rừng phòng hộ
BQL rừng DD	Special Use Forest Management Board	Ban QL rừng đặc dụng
D.nghiệp NN	State owned Enterprises	Doanh nghiệp Nhà nước
Tc ktế khác	Other economic organizations	Tổ chức kinh tế khác
Đvị vũ trang	Armed forces	Đơn vị vũ trang
Hộ gđ	HH	Hộ gia đình
Cộng đồng	Community	Cộng đồng
Người Việt NN	Overseas Vietnamese	Người Việt Nam ở nước ngoài
Tổ chức NN	Foreign organizations	Tổ chức nước ngoài
Cá nhân NN	Foreign individuals	Cá nhân nước ngoài
Tổ chức khác	Other organizations	Tổ chức khác
UBND	Unallocated or unleased, still under CPC control	Chưa giao hoặc chưa cho thuê, hiện vẫn thuộc UBND

Appendix – 4 "Reporting form of the current DBR system"

TABLE 1A/TKR – STATISTICAL AREAS OF FOREST AND FORESTLAND BY 3 TYPES OF FOREST

Province DienBien District Thành phố Điện Biên Commune Phường Mường Thanh

Unit:ha

Forest classification	Code	Area at the beginning	Area of change	Area at the end of period	3 types of forest				Outside of land planned
					Total	Special use	Protection	Production	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Diện tích t	0000	0	0	0	0	0	0	0	0
Đất có rừn	1000	0	0	0	0	0	0	0	0
Rừng tự nl	1100	0	0	0	0	0	0	0	0
Rừng gỗ	1110	0	0	0	0	0	0	0	0
Rừng giàu	1111	0	0	0	0	0	0	0	0
Rừng trung	1112	0	0	0	0	0	0	0	0
Rừng nghè	1113	0	0	0	0	0	0	0	0
Rừng phục	1114	0	0	0	0	0	0	0	0
Rừng tre r	1120	0	0	0	0	0	0	0	0
Tre luồng	1121	0	0	0	0	0	0	0	0
Nứa	1122	0	0	0	0	0	0	0	0
Vầu	1123	0	0	0	0	0	0	0	0
Lồ ô	1124	0	0	0	0	0	0	0	0
Tre nứa kh	1125	0	0	0	0	0	0	0	0
Rừng hỗn	1130	0	0	0	0	0	0	0	0
Gỗ + tre, r	1131	0	0	0	0	0	0	0	0
Tre nứa +	1132	0	0	0	0	0	0	0	0
Rừng ngập	1140	0	0	0	0	0	0	0	0
Rừng tràm	1141	0	0	0	0	0	0	0	0
Rừng đước	1142	0	0	0	0	0	0	0	0
Rừng ngập	1143	0	0	0	0	0	0	0	0
Rừng núi đ	1150	0	0	0	0	0	0	0	0
Rừng trồn	1200	0	0	0	0	0	0	0	0
Rừng gỗ c	1210	0	0	0	0	0	0	0	0
Rừng gỗ c	1220	0	0	0	0	0	0	0	0
Rừng tre lu	1230	0	0	0	0	0	0	0	0
Rừng cây	1240	0	0	0	0	0	0	0	0
Rừng ngập	1250	0	0	0	0	0	0	0	0
Đất trống	2000	0	0	0	0	0	0	0	0
Nương rẫy	2010	0	0	0	0	0	0	0	0
Cây bụi, g	2020	0	0	0	0	0	0	0	0
Cây gỗ rải	2030	0	0	0	0	0	0	0	0
Nuí đá	2040	0	0	0	0	0	0	0	0
Bãi cát, bã	2050	0	0	0	0	0	0	0	0
Đất ngoài	3000	0	0	0	0	0	0	0	0

Day....Month....Year....
Prepared by (signature)

Day....Month....Year....
Forest Protection Agency (signa

Day....Month....Year....
People's Committee (signature, seal)

TABLE 2A/TKR. STATISCAL FOREST AREA BY FOREST OWNER

Province DienBien District Thành phố Điện Biên Commune Phường Mường Thanh

Unit:ha

Forest classification	Code	Total	Forest Owner								
			Protection of Special Use Forest Managem	Economic institute	Household,individual	Armed forces	Scientic research institution	Overseas Vietnamese	Foreign individual, organization	Community	People's Committee
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Diện tích t	0000	0	0	0	0	0	0	0	0	0	0
Đất có rừn	1000	0	0	0	0	0	0	0	0	0	0
Rừng tự n	1100	0	0	0	0	0	0	0	0	0	0
Rừng gỗ	1110	0	0	0	0	0	0	0	0	0	0
Rừng giàu	1111	0	0	0	0	0	0	0	0	0	0
Rừng trun	1112	0	0	0	0	0	0	0	0	0	0
Rừng nghè	1113	0	0	0	0	0	0	0	0	0	0
Rừng phụ	1114	0	0	0	0	0	0	0	0	0	0
Rừng tre r	1120	0	0	0	0	0	0	0	0	0	0
Tre luồng	1121	0	0	0	0	0	0	0	0	0	0
Nứa	1122	0	0	0	0	0	0	0	0	0	0
Vầu	1123	0	0	0	0	0	0	0	0	0	0
Lồ ô	1124	0	0	0	0	0	0	0	0	0	0
Tre nứa kh	1125	0	0	0	0	0	0	0	0	0	0
Rừng hỗn	1130	0	0	0	0	0	0	0	0	0	0
Gỗ + tre, r	1131	0	0	0	0	0	0	0	0	0	0
Tre nứa +	1132	0	0	0	0	0	0	0	0	0	0
Rừng ngập	1140	0	0	0	0	0	0	0	0	0	0
Rừng tràm	1141	0	0	0	0	0	0	0	0	0	0
Rừng đước	1142	0	0	0	0	0	0	0	0	0	0
Rừng ngập	1143	0	0	0	0	0	0	0	0	0	0
Rừng núi đ	1150	0	0	0	0	0	0	0	0	0	0
Rừng trồn	1200	0	0	0	0	0	0	0	0	0	0
Rừng gỗ đ	1210	0	0	0	0	0	0	0	0	0	0
Rừng gỗ đ	1220	0	0	0	0	0	0	0	0	0	0
Rừng tre l	1230	0	0	0	0	0	0	0	0	0	0
Rừng cây	1240	0	0	0	0	0	0	0	0	0	0
Rừng ngập	1250	0	0	0	0	0	0	0	0	0	0
Đất trống	2000	0	0	0	0	0	0	0	0	0	0
Nương rẫy	2010	0	0	0	0	0	0	0	0	0	0
Cây bụi, g	2020	0	0	0	0	0	0	0	0	0	0
Cây gỗ rải	2030	0	0	0	0	0	0	0	0	0	0
Nuí đá	2040	0	0	0	0	0	0	0	0	0	0
Bãi cát, bã	2050	0	0	0	0	0	0	0	0	0	0
Đất ngoài	3000	0	0	0	0	0	0	0	0	0	0

Day....Month....Year....
Prepared by (signature)

Day....Month....Year....
Forest Protection Agency (signature, seal)

Day....Month....Year....
People's Committee (signature, seal)

TABLE 3/TKR. STATISTICAL CHANGE OF AREA OF FOREST AND FORESTLAND BY DRIVER

Province DienBien District Thành phố Điện Biên Commune Phường Mường Thanh

Unit:ha

Forest classification	Code	Total	Area of change	Drive of change						
				Newly planted	Harvest	Forest Fire	Pest	Deforestation	Change in land use purpose	Regeneration
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Diện tích t	0000	0	0	0	0	0	0	0	0	0
Đất có rừn	1000	0	0	0	0	0	0	0	0	0
Rừng tự n	1100	0	0	0	0	0	0	0	0	0
Rừng gỗ	1110	0	0	0	0	0	0	0	0	0
Rừng giàu	1111	0	0	0	0	0	0	0	0	0
Rừng trung	1112	0	0	0	0	0	0	0	0	0
Rừng nghè	1113	0	0	0	0	0	0	0	0	0
Rừng phục	1114	0	0	0	0	0	0	0	0	0
Rừng tre n	1120	0	0	0	0	0	0	0	0	0
Tre luồng	1121	0	0	0	0	0	0	0	0	0
Nứa	1122	0	0	0	0	0	0	0	0	0
Vầu	1123	0	0	0	0	0	0	0	0	0
Lồ ô	1124	0	0	0	0	0	0	0	0	0
Tre nứa kh	1125	0	0	0	0	0	0	0	0	0
Rừng hỗn	1130	0	0	0	0	0	0	0	0	0
Gỗ + tre, n	1131	0	0	0	0	0	0	0	0	0
Tre nứa +	1132	0	0	0	0	0	0	0	0	0
Rừng ngập	1140	0	0	0	0	0	0	0	0	0
Rừng tràm	1141	0	0	0	0	0	0	0	0	0
Rừng đước	1142	0	0	0	0	0	0	0	0	0
Rừng ngập	1143	0	0	0	0	0	0	0	0	0
Rừng núi đ	1150	0	0	0	0	0	0	0	0	0
Rừng trồn	1200	0	0	0	0	0	0	0	0	0
Rừng gỗ c	1210	0	0	0	0	0	0	0	0	0
Rừng gỗ c	1220	0	0	0	0	0	0	0	0	0
Rừng tre l	1230	0	0	0	0	0	0	0	0	0
Rừng cây	1240	0	0	0	0	0	0	0	0	0
Rừng ngập	1250	0	0	0	0	0	0	0	0	0
Đất trống	2000	0	0	0	0	0	0	0	0	0
Nương rẫy	2010	0	0	0	0	0	0	0	0	0
Cây bụi, g	2020	0	0	0	0	0	0	0	0	0
Cây gỗ rả	2030	0	0	0	0	0	0	0	0	0
Nuí đá	2040	0	0	0	0	0	0	0	0	0
Bãi cát, bã	2050	0	0	0	0	0	0	0	0	0
Đất ngoài	3000	0	0	0	0	0	0	0	0	0

Day....Month....Year....
Prepared by (signature)

Day....Month....Year....
Forest Protection Agency (signature, seal)

Day....Month....Year....
People's Committee (signature, seal)

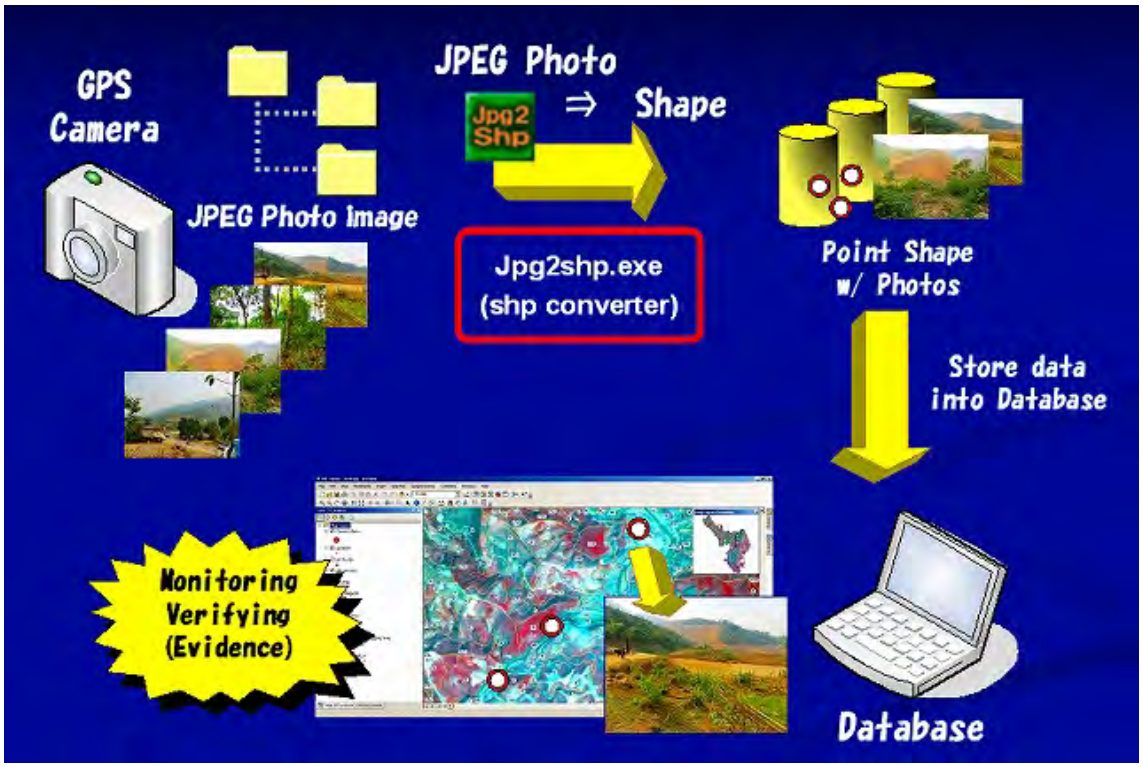
Appendix 1: STATISTICAL SHEETS AND TABLES

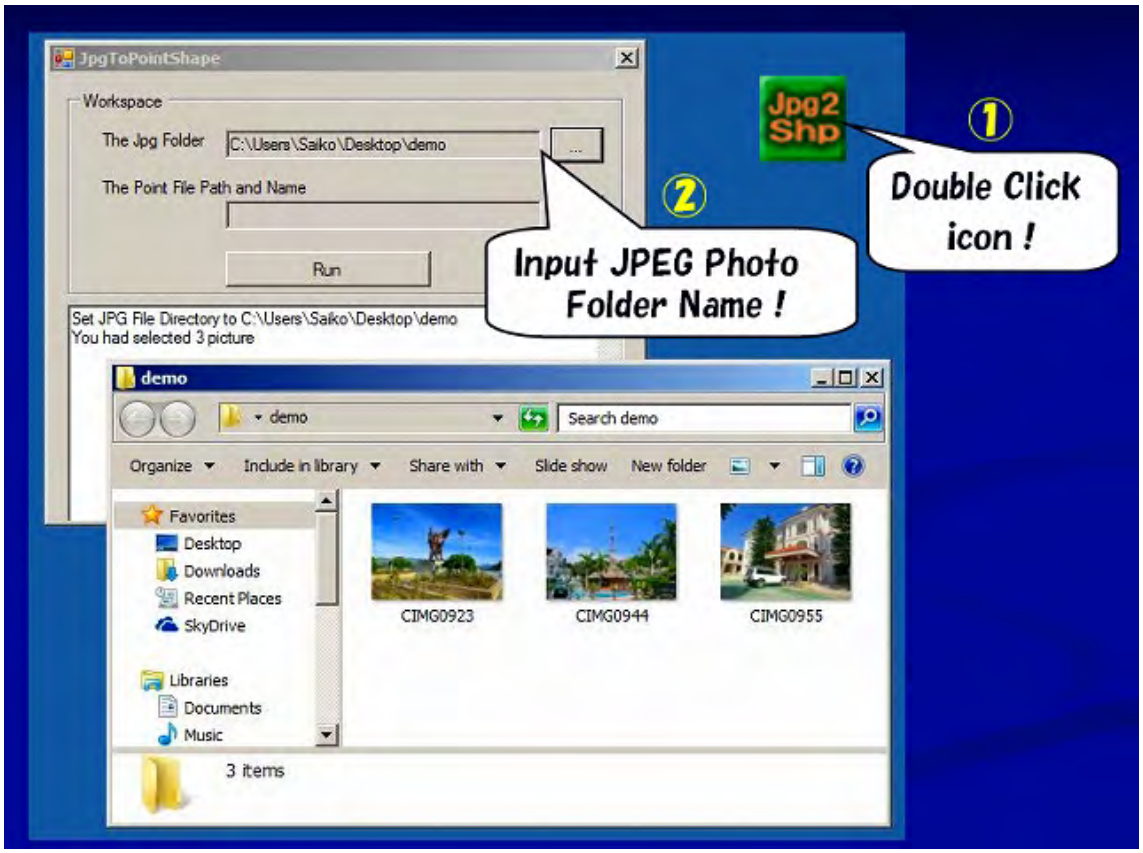
SHEET 1a -DESCRIPTION OF NON-UPLAND FIELD PLOT

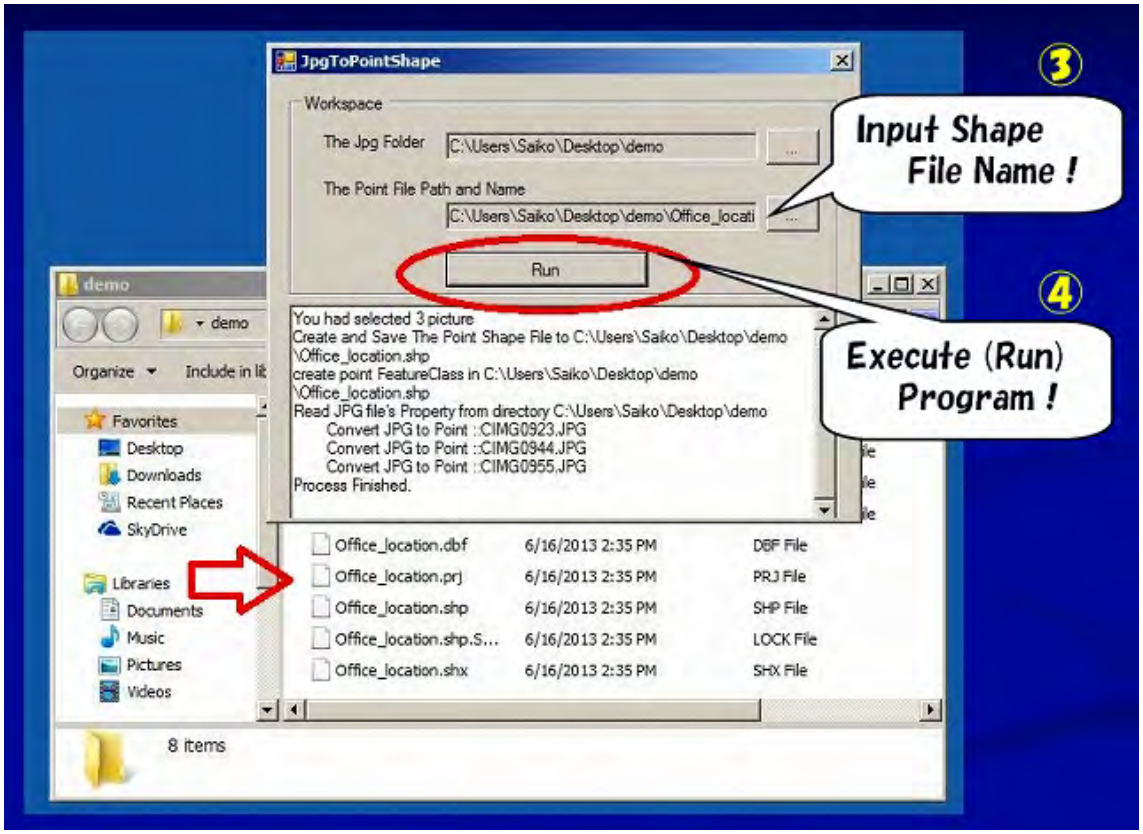
Province.....District.....Commune.....Year 20.....

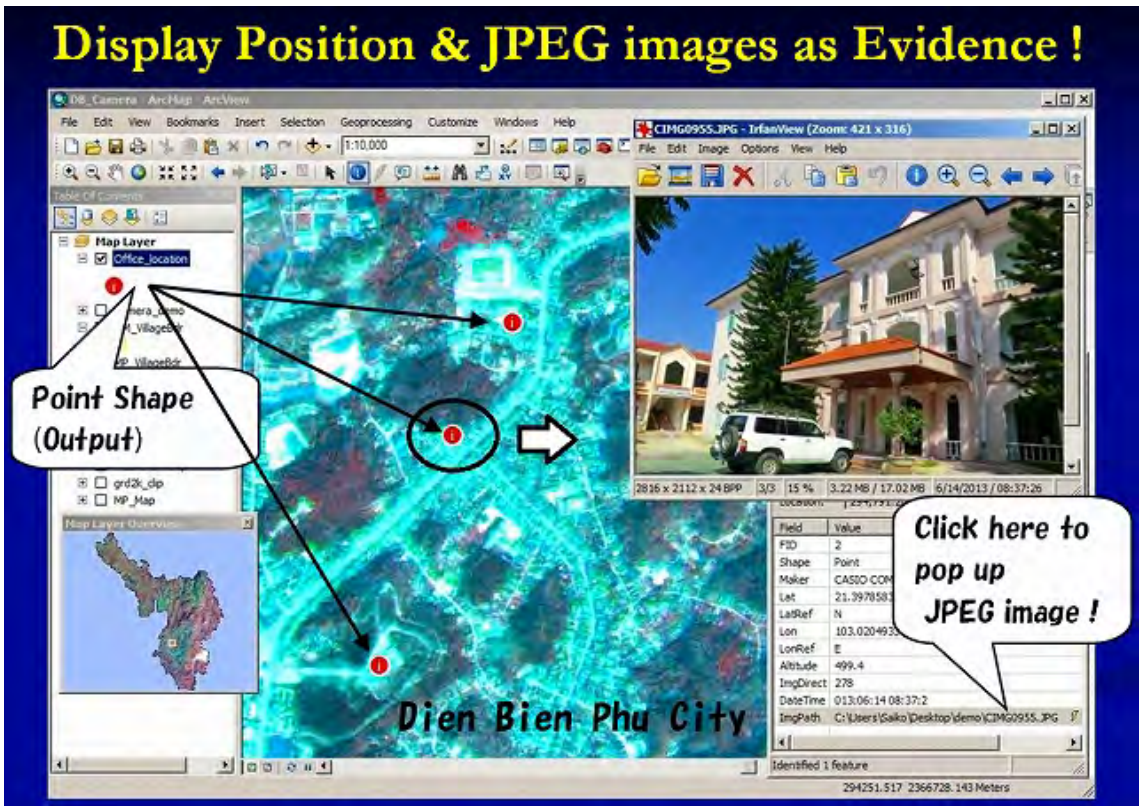
Location of plot			Area of plot (ha)			Status	Man-made forest		Volume/ha	Function of forest of 3 types[2]	Type of orest manager[3]	Name of forest manager	Name of user	Type of management [4]	Code of certificate	Code of map	Village
Compartment	Sub-compartment	Plot	Total	Excluded	Remaining		Species	Year of planting									
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)

Appendix – 5 "JPG2SHP", the tool for creating a shape file using JPEG photos






JpgToPointShape
Workspace
The Jpg Folder
C:\Users\Saiko\Desktop\demo
The Point File Path and Name
C:\Users\Saiko\Desktop\demo\Office_locati
Run
3
Input Shape File Name !
4
Execute (Run) Program !
You had selected 3 picture
Create and Save The Point Shape File to C:\Users\Saiko\Desktop\demo\Office_location.shp
create point FeatureClass in C:\Users\Saiko\Desktop\demo\Office_location.shp
Read JPG file's Property from directory C:\Users\Saiko\Desktop\demo
Convert JPG to Point :CIMG0923.JPG
Convert JPG to Point :CIMG0944.JPG
Convert JPG to Point :CIMG0955.JPG
Process Finished.
Office_location.dbf 6/16/2013 2:35 PM DBF File
Office_location.prj 6/16/2013 2:35 PM PRJ File
Office_location.shp 6/16/2013 2:35 PM SHP File
Office_location.shp.S... 6/16/2013 2:35 PM LOCK File
Office_location.shx 6/16/2013 2:35 PM SHX File
8 items


Display Position & JPEG images as Evidence !
Point Shape (Output)
Click here to pop up JPEG image !
Dien Bien Phu City


ジャイカ
JICA