

**Pacific Islands Database - FIA User's Guide**  
**Pacific Northwest Research Station, Forest Inventory and Analysis**  
**USDA Forest Service**

**April 20, 2009**

(to be updated, enhanced, expanded over time)

User Interface developed by Karen Waddell;  
Database developed and compiled by Joseph Donnegan and Bruce Hiserote;  
Data collected by Pacific Island foresters in cooperation with FIA field staff.

The U.S. Forest Service, Forest Inventory and Analysis (FIA) program conducts resource inventories on the U.S. affiliated Pacific Islands of American Samoa, Guam, Palau, the Northern Mariana Islands, the Federated States of Micronesia, the Marshall Islands, and Hawaii. Six island groups have been measured since 2001, with only Hawaii remaining without a recent survey. Data from these inventories have been reviewed, edited, and compiled into a database called the **PNW- FIA Pacific Islands Database**, which contains all of the plot data collected to date. This user's guide describes an application that was developed as an interface to the Microsoft Access® database software, where the Pacific Islands data are stored. We have provided a series of pop-up screens containing push buttons that simplify a variety of tasks. The User's Interface is a product that will continue to evolve as we receive input from clients, users, and FIA staff.

The goal of this Interface is to make it easy to view data and run summary reports, which in turn can be incorporated into Island-specific projects. In addition, users can open up the database window to work directly with the raw data. This will be important to help advanced users become familiar with the data, relational tables, queries and reports. We have not placed any restrictions on access to any of the data (they are **not** read-only), and thus the user must be careful not to change the original data. We hope that customized queries and reports will be created by users to answer individual questions that arise over time.

Currently, the Pacific Islands User Interface allows you to view and browse through the entire database, plot by plot. There are also a number of selection options to help users focus on a subset of plots to view and produce reports.

The application, data, and a number of references (such as field manuals, publications, and data dictionary) have been zipped and placed on a CD.

We recommend copying the zip file to a folder of your choice on your desktop computer, unzipping the file, and creating a shortcut for your desktop for easy access.

## Getting Started:

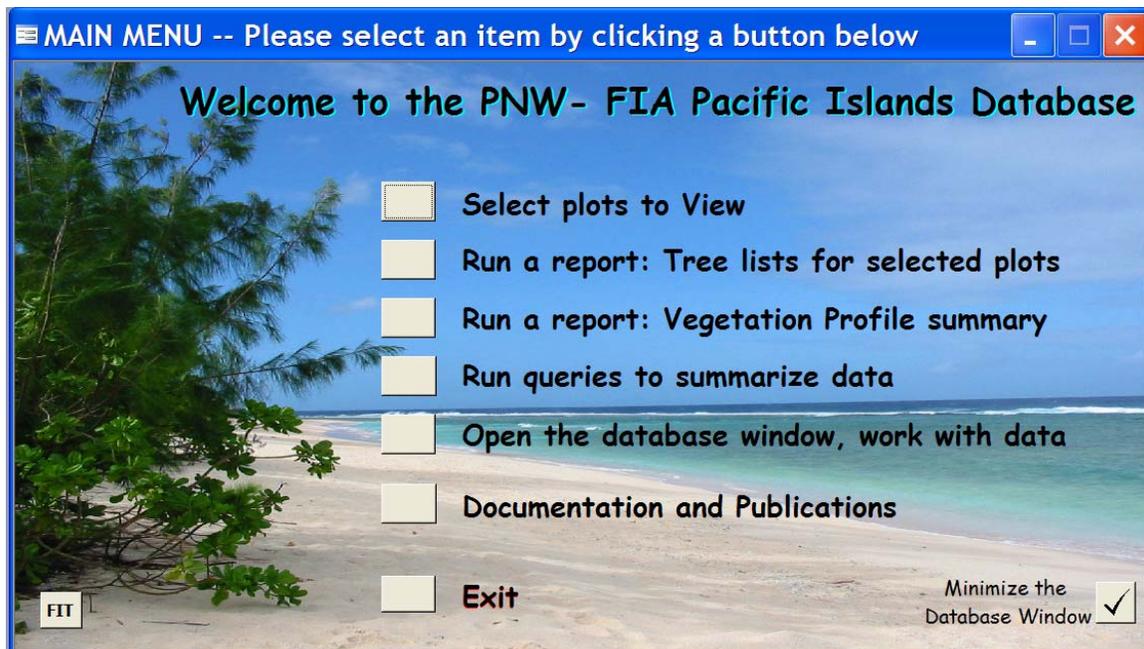
1. Copy the database from the CD onto your computer.
2. Unzip the database to the same location. Double click on the zip file and it will automatically unzip to the location of your choice.
3. Create a shortcut. To do this, find the database file that you just unzipped and right click on the file name. Select the menu item called 'Send to' and choose "Desktop". A shortcut will be created and placed on your desktop. It should have an Icon name similar to:

### Shortcut to FIADB\_Pacific\_Islands\_Database.mdb

It should look something like this (you can edit the text of the icon):



4. Click on this icon to Open the Database and startup the User Interface. This is the Main Menu screen that will pop up:



## Navigating around the screen

The screen is movable, so you can position it where you want it, by click-and-holding on the title bar and dragging it around.

Minimize the  
Main Menu  
Screen

Close the Main Menu  
(you can get it back)

Click any button to use the database

MAIN MENU -- Please select an item by clicking a button below

Welcome to the PNW- FIA Pacific Islands Database

- Select plots to View
- Run a report: Tree lists for selected plots
- Run a report: Vegetation Profile summary
- Run queries to summarize data
- Open the database window, work with data
- Documentation and Publications
- Exit

Minimize the Database Window

Minimize the Main Menu Screen

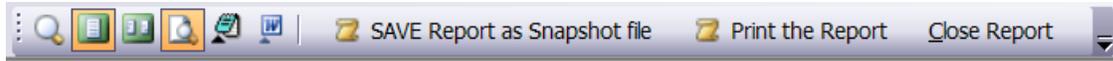
Close the Main Menu (you can get it back)

This button will close the database.

If you have the database window open, this button will minimize it down to a small box in the lower left of your screen.

## Islands Report TOOLBAR

This is the toolbar that will show up when you run a report and want to either save the file, export it to other software, or close the report window and return to the menu.

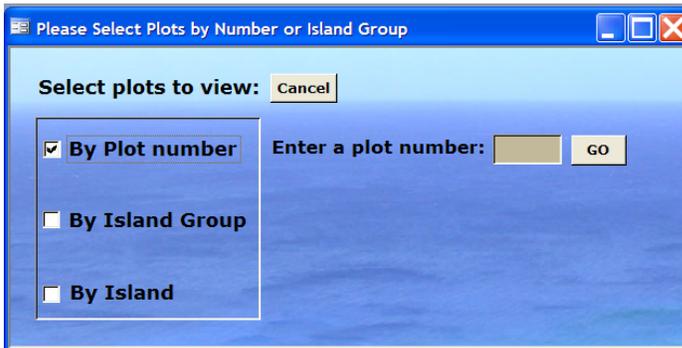


Options on the tool bar let you do a variety of things by clicking on the icons. You can zoom, display 1 page or many pages, Export reports to notepad or Word, create a Snapshot file (.snp), print one or more pages of the report, or close the report and return to the menu. Note that the snapshot file type creates a fixed image of the report, which is similar to an Adobe PDF file. This is a good way to save a copy of the formatted report for later use. Exporting reports to Word or Notepad is another option, however the formatting tends to be modified or removed. Once in Word or Notepad, you can copy part or all of the information and paste it into another document if desired. If a new query is created, Exporting to Excel or Word works well.

## Getting Familiar with the Buttons on the Main Menu

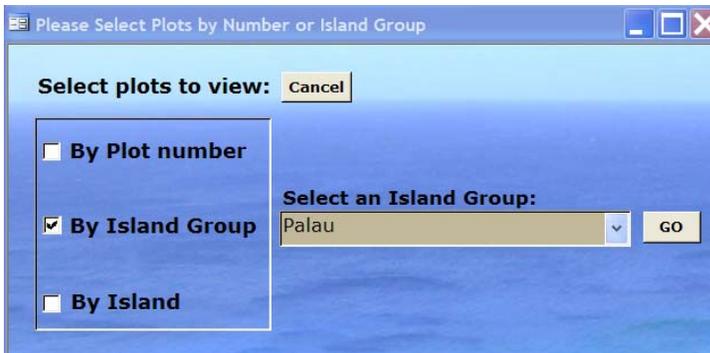


If you select Plot number, a field appears for you to enter a number. Click GO, to display information about the one plot on a tabbed viewing screen.



The screenshot shows a dialog box titled "Please Select Plots by Number or Island Group". It has a blue background and a "Cancel" button. On the left, there are three radio button options: "By Plot number" (checked), "By Island Group", and "By Island". To the right of the "By Plot number" option, there is a text input field labeled "Enter a plot number:" and a "GO" button.

If you check Island Group, a drop down box will appear, allowing you to select an island group from the list. Click GO, to view all information about all plots that were sampled in this group.



The screenshot shows the same dialog box, but now "By Island Group" is selected. The "Enter a plot number:" field is replaced by a dropdown menu labeled "Select an Island Group:" with "Palau" selected and a "GO" button.

Or, you can select plots for an individual Island. A drop down box will appear, allowing you to select an island from the list. Click GO, to view all information about all plots that were sampled in this group.



The screenshot shows the same dialog box, but now "By Island" is selected. The dropdown menu is labeled "Select an Island:" and has "Koror" selected, with a "GO" button.

Once a selection is made, another screen will show all of the data collected on each plot, displayed in separate tabbed pages, as shown below. Click on the tab marker to view information about the plot. The first tab displays information about the plot and condition class, other tabs show data about live and dead trees, seedlings, and understory vegetation.

The screenshot displays the 'PNW-FIA Pacific Islands Database' interface. At the top, the title bar reads 'PNW-FIA Plot Tree and Understory Veg Information'. Below the title, the database name 'PNW - FIA Pacific Islands Database' is centered, with a 'Main Menu' button in the upper right corner. The interface includes several input fields: 'Palau' in a dropdown, 'Aimeliik' in a text box, 'PLOT NUMBER: 240', and 'COND. ID: 1'. A row of five tabs is visible: 'Plot Information', 'Tree Data', 'Seedlings', 'Vegetation Profile', and 'Vegetation summary'. An orange arrow points to these tabs with the label 'TABS'. The 'Plot Information' tab is active, showing fields for 'Date of Measurement: February 2003', 'Owner: State government', and 'Unreserved'. Below these are fields for 'Type of land: Accessible forest land', 'SLOPE: 30 (percent)', and 'ASPECT: 200 (degrees)'. A section titled 'Characteristics of the forest found on this plot and condition' contains fields for 'FIA Forest Type: Lowland tropical rainforest', 'Estimated Stand Age (years): 15', and 'Stand size: 2 Stands with tree diameters predominantly 5-10.9 in.'. At the bottom, there are navigation buttons: 'Previous PLOT' with a left arrow, a right arrow, and 'Next PLOT or Condition'. A box with the text 'Click here to scroll through the set of plots' has two arrows pointing to the left and right navigation arrows.

Note the **Main Menu** button in the upper right corner of the screen takes you back to the Main Menu Screen. The Arrows on the bottom of the screen let you scroll through the plots. The wheel on your mouse will also let you scroll through the database.

## Examples of data displayed in the other tabs of the VIEW form

### TREE TAB

PNW-FIA Plot Tree and Understory Veg Information

PNW - FIA Pacific Islands Database

Palau Aimeliik PLOT NUMBER: 240 COND. ID: 1

Plot Information **Tree Data** Seedlings Vegetation Profile Vegetation summary

| PLOT | SUBP | CONDID | TREE | STATUS | SPECIES CODE | Scientific Name            | DIAMETER (ir |
|------|------|--------|------|--------|--------------|----------------------------|--------------|
| 240  | 1    | 1      | 101  | LIVE   | 454          | Cerbera manghas            | :            |
| 240  | 3    | 1      | 128  | LIVE   | 945          | Ptychosperma palauensis    | !            |
| 240  | 2    | 1      | 112  | LIVE   | 814          | Camposperma brevipetiolata | !            |
| 240  | 4    | 1      | 139  | LIVE   | 945          | Ptychosperma palauensis    | !            |
| 240  | 4    | 1      | 138  | LIVE   | 814          | Camposperma brevipetiolata | 1:           |
| 240  | 1    | 1      | 103  | LIVE   | 945          | Ptychosperma palauensis    |              |
| 240  | 4    | 1      | 137  | LIVE   | 959          | Swietenia mahogoni         | (            |
| 240  | 2    | 1      | 115  | LIVE   | 440          | Calophyllum inophyllum     | :            |
| 240  | 1    | 1      | 102  | LIVE   | 454          | Cerbera manghas            | (            |
| 240  | 1    | 1      | 104  | LIVE   | 105          | Annona reticulata          | (            |
| 240  | 3    | 1      | 126  | LIVE   | 814          | Camposperma brevipetiolata | 2:           |
| 240  | 1    | 1      | 106  | LIVE   | 814          | Camposperma brevipetiolata | {            |
| 240  | 3    | 1      | 133  | LIVE   | 888          | Morinda latibracteata      |              |
| 240  | 1    | 1      | 100  | LIVE   | 454          | Cerbera manghas            | 1:           |

Record: 1 of 44

Previous PLOT + Next PLOT or Condition

### SEEDLING TAB

PNW-FIA Plot Tree and Understory Veg Information

PNW - FIA Pacific Islands Database

Palau Airai PLOT NUMBER: 184 COND. ID: 1

Plot Information Tree Data **Seedlings** Vegetation Profile Vegetation summary

| PLOT | SUBPLOT | CONDID | SPECIES | Scientific Name            | TREE COUNT |
|------|---------|--------|---------|----------------------------|------------|
| 184  | 4       | 1      | 101     | Aidia cochinchinensis      | 2          |
| 184  | 1       | 1      | 805     | Alphitonia carolinensis    | 1          |
| 184  | 4       | 1      | 814     | Camposperma brevipetiolata | 4          |
| 184  | 1       | 1      | 454     | Cerbera manghas            | 5          |
| 184  | 4       | 1      | 521     | Ficus tinctoria            | 4          |
| 184  | 2       | 1      | 521     | Ficus tinctoria            | 5          |
| 184  | 4       | 1      | 874     | Horsfieldia palauensis     | 3          |
| 184  | 2       | 1      | 874     | Horsfieldia palauensis     | 3          |
| 184  | 1       | 1      | 876     | Macaranga carolinensis     | 5          |
| 184  | 2       | 1      | 938     | Pinanga insignis           | 2          |

Record: 1 of 13

Previous PLOT + Next PLOT or Condition

## VEGETATION PROFILE TAB

PNW-FIA Plot Tree and Understory Veg Information

**PNW - FIA Pacific Islands Database** Main Menu

Palau Airai PLOT NUMBER: 184 COND. ID: 1

Plot Information Tree Data Seedlings **Vegetation Profile** Vegetation summary

| PLOT | SUBPLOT | SPECIES CODE | Scientific Name        | TOTAL CANOPY COVER (%) | CANOPY |
|------|---------|--------------|------------------------|------------------------|--------|
| 184  | 2       | ALPCAR       | Alpinia carolinensis   | 3                      |        |
| 184  | 4       | ALPCAR       | Alpinia carolinensis   | 4                      |        |
| 184  | 1       | BLEORI       | Blechnum orientale     | 3                      |        |
| 184  | 2       | CAESA        | Caesalpinia sp.        | 2                      |        |
| 184  | 4       | COSP8        | Costus speciosus       | 1                      |        |
| 184  | 3       | DIANE        | Dianella sp.           | 3                      |        |
| 184  | 2       | DOCA5        | Donax cannaeformis     | 15                     |        |
| 184  | 3       | EURJAP       | Eurya japonica         | 2                      |        |
| 184  | 3       | ISPO3        | Ischaemum polystachyum | 40                     |        |
| 184  | 1       | ISPO3        | Ischaemum polystachyum | 10                     |        |
| 184  | 2       | IXORA        | Ixora sp.              | 2                      |        |
| 184  | 1       | IXORA        | Ixora sp.              | 12                     |        |
| 184  | 4       | IXORA        | Ixora sp.              | 1                      |        |

Previous PLOT + - Next PLOT or Condition

## PLOT SUMMARY FOR VEG DATA

PNW-FIA Plot Tree and Understory Veg Information

**PNW - FIA Pacific Islands Database** Main Menu

Palau Koror PLOT NUMBER: 247 COND. ID: 1

Plot Information Tree Data Seedlings **Vegetation Profile** **Vegetation summary**

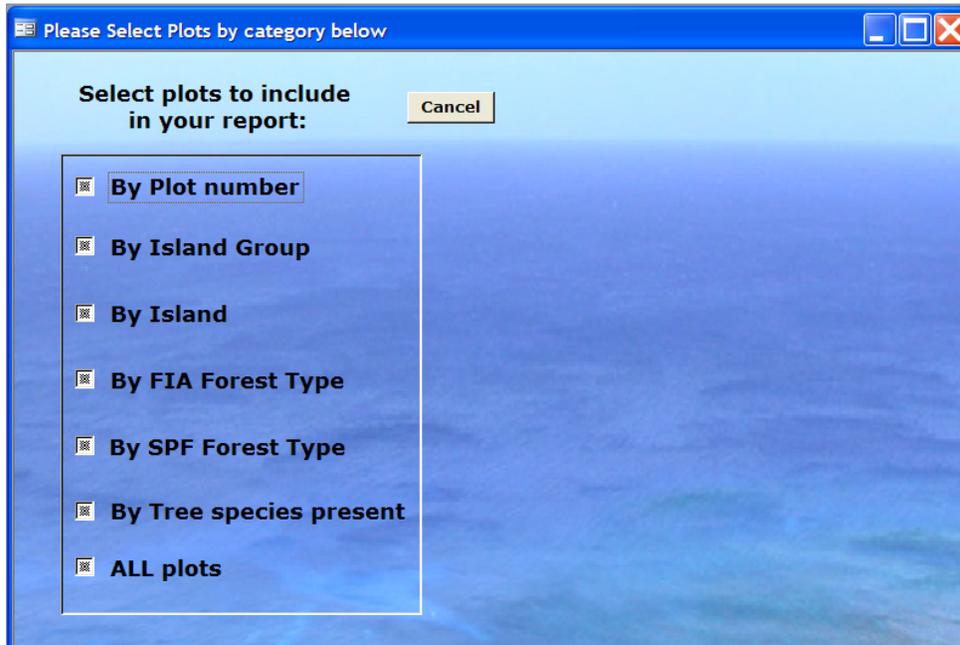
| SPECIES CODE | Scientific Name          | Avg of all canopy layers: | Avg Canopy Cover--layers 1 and 2: |
|--------------|--------------------------|---------------------------|-----------------------------------|
| ALPIN        | Alpinia sp.              | 8.0                       | 8.0                               |
| ASNI         | Asplenium nidus          | 1.3                       | 1.3                               |
| BLEORI       | Blechnum orientale       | 12.7                      | 12.7                              |
| DECAS        | Decaspermum sp.          | 1.0                       | 1.0                               |
| DETR5        | Derris trifoliata        | 12.5                      | 0.0                               |
| DIOSC        | Dioscorea sp.            | 3.0                       | 0.0                               |
| IXORA        | Ixora sp.                | 1.5                       | 1.0                               |
| MACMAR       | Machaerina mariscoides   | 1.0                       | 1.0                               |
| MERRE        | Merremia sp.             | 1.5                       | 0.0                               |
| MISC2        | Microsorium scolopendria | 2.0                       | 2.0                               |
| NEM15        | Nepenthes mirabilis      | 1.5                       | 1.5                               |
| RHAAFF       | Rhaphidophora versteegii | 2.0                       | 0.0                               |
| SCHDIC       | Schizaea dichotoma       | 1.0                       | 1.0                               |
| VINE         | Unknown Vine             | 1.0                       | 0.0                               |
| VITR7        | Vitex trifolia           | 25.0                      | 0.0                               |

Previous PLOT + - Next PLOT or Condition

## Button # 2 : Running Reports that display tree information



This button lets you select a set of plots to be displayed in a summary report. These reports show a listing of the trees along with measured and calculated data. You can select plots by plot number, Island group, individual Island, FIA forest type, S&PF forest type, tree species present, or the entire database.



The sixth option to select plots for a report is labeled “By Tree species present”. When this box is checked, a drop down list appears. Click the down arrow to see a list of tree species that have been collected on FIA inventory plots across the islands. Select one of these species from the list.

Please Select Plots by category below

Select plots to include in your report: Cancel

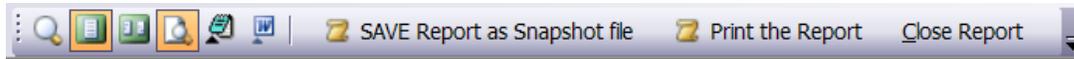
- By Plot number
- By Island Group
- By Island
- By FIA Forest Type
- By SPF Forest Type
- By Tree species present
- ALL plots

Select a Species:  GO

The report will show all plots that had at least one tree of this species tallied on the plot. Currently, there is no option to combine the selection options, so all plots, on all islands are displayed (if they contain at least one of these species).

## Report Example

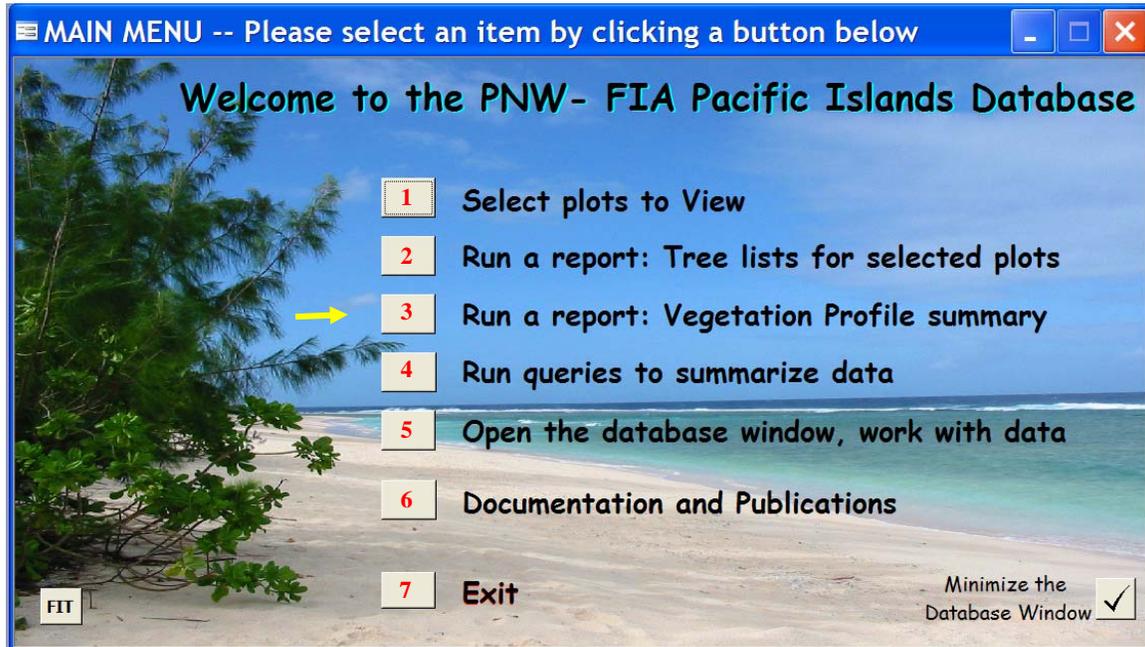
An example of a report created with this option is shown below.  
You can use the toolbar to either print or export and save the report.



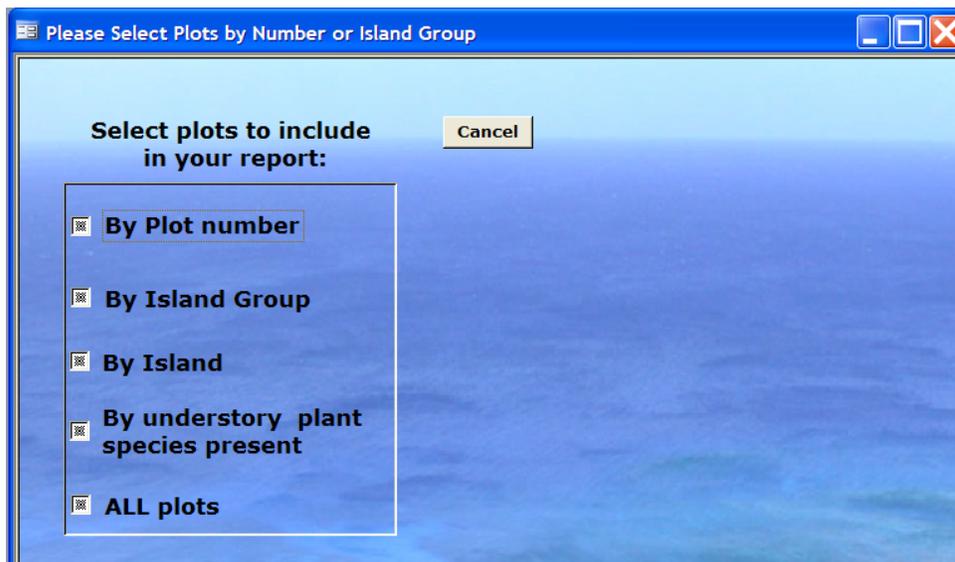
| PNW - FIA Pacific Islands Inventory Database                     |                                |        |                  |                              |                   |                  |                            |             |               |              |
|------------------------------------------------------------------|--------------------------------|--------|------------------|------------------------------|-------------------|------------------|----------------------------|-------------|---------------|--------------|
| Listing of tree data collected on the plot.                      |                                |        |                  |                              |                   |                  |                            |             |               |              |
| Island group                                                     | Federated States of Micronesia |        |                  |                              |                   | Plot number:     | 946                        |             |               |              |
| Island:                                                          | Chuuk                          |        |                  |                              |                   | Condition class: | 1                          |             |               |              |
| Measured in:                                                     | March                          | 2006   | SLOPE (percent): | 50                           | ASPECT (degrees): | 100              |                            |             |               |              |
| Type of land:                                                    | Accessible forest land         |        |                  |                              | Unreserved        |                  | OWNER: Private, Individual |             |               |              |
| Forest type (FIA): Agroforestry                                  |                                |        |                  |                              |                   |                  |                            |             |               |              |
| Stand size: Stands with tree diameters predominantly 11-19.9 in. |                                |        |                  |                              |                   |                  |                            |             |               |              |
| Stand age: 30                                                    |                                |        |                  |                              |                   |                  |                            |             |               |              |
| Disturbance found? None found                                    |                                |        |                  |                              |                   |                  |                            |             |               |              |
| Tree Data                                                        |                                |        |                  |                              |                   |                  |                            |             |               |              |
| Sub plot                                                         | Tree Num                       | Status | Species Code     | Scientific Name              | Diam              | Ht               | Crown ratio                | Crown class | Biomass (lbs) | Volume (ft3) |
| 3                                                                | 119                            | LIVE   | 101              | <i>Aidia cochinchinensis</i> | 0.1               | 2                | 90                         | 5           | 0.0           | 0.0          |
| 3                                                                | 118                            | LIVE   | 101              | <i>Aidia cochinchinensis</i> | 0.1               | 3                | 75                         | 5           | 0.0           | 0.0          |
| 2                                                                | 122                            | LIVE   | 190              | <i>Premna obtusifolia</i>    | 0.1               | 2                | 70                         | 3           | 0.0           | 0.0          |
| 3                                                                | 116                            | LIVE   | 293              | <i>Artocarpus altilis</i>    | 24.5              | 79               | 70                         | 3           | 3,419.1       | 109.5        |
| 1                                                                | 105                            | LIVE   | 441              | <i>Cananga odorata</i>       | 9.3               | 27               | 45                         | 4           | 202.3         | 6.5          |
| 1                                                                | 104                            | LIVE   | 441              | <i>Cananga odorata</i>       | 10.3              | 33               | 40                         | 3           | 262.3         | 8.4          |
| 1                                                                | 102                            | LIVE   | 466              | <i>Cocos nucifera</i>        | 9.3               | 32               | 50                         | 3           | 358.9         | 11.5         |
| 1                                                                | 100                            | LIVE   | 466              | <i>Cocos nucifera</i>        | 9.2               | 37               | 55                         | 4           | 400.1         | 12.8         |
| 1                                                                | 106                            | LIVE   | 466              | <i>Cocos nucifera</i>        | 10.6              | 39               | 50                         | 3           | 608.5         | 19.5         |
| 2                                                                | 121                            | LIVE   | 466              | <i>Cocos nucifera</i>        | 9.8               | 33               | 50                         | 3           | 387.1         | 12.4         |
| 2                                                                | 120                            | LIVE   | 466              | <i>Cocos nucifera</i>        | 10                | 47               | 50                         | 3           | 608.8         | 19.5         |
| 4                                                                | 113                            | LIVE   | 466              | <i>Cocos nucifera</i>        | 10.8              | 62               | 35                         | 3           | 721.4         | 23.1         |
| 4                                                                | 114                            | LIVE   | 569              | <i>Mangifera indica</i>      | 8                 | 29               | 60                         | 5           | 197.7         | 6.3          |
| 4                                                                | 110                            | LIVE   | 569              | <i>Mangifera indica</i>      | 26.5              | 54               | 75                         | 3           | 3,553.2       | 113.8        |
| 4                                                                | 111                            | LIVE   | 569              | <i>Mangifera indica</i>      | 17.3              | 56               | 75                         | 4           | 1,359.8       | 43.6         |
| 4                                                                | 112                            | LIVE   | 569              | <i>Mangifera indica</i>      | 6.4               | 23               | 45                         | 5           | 96.7          | 3.1          |
| 1                                                                | 103                            | LIVE   | 1460             | <i>Glochidion</i> spp.       | 11.5              | 33               | 45                         | 3           | 492.5         | 15.8         |
| 3                                                                | 115                            | LIVE   | 1650             | <i>Musa</i> spp.             | 8.4               | 24               | 50                         | 4           | 157.6         | 5.0          |
| 4                                                                | 107                            | LIVE   | 9999             | Unknown                      | 14.6              | 47               | 70                         | 3           | 825.4         | 26.4         |
| 4                                                                | 109                            | LIVE   | 9999             | Unknown                      | 19                | 49               | 75                         | 4           | 1,594.9       | 51.1         |
| 4                                                                | 108                            | LIVE   | 9999             | Unknown                      | 11                | 31               | 60                         | 4           | 314.6         | 10.1         |

## Button # 3 : Running Vegetation Profile Reports

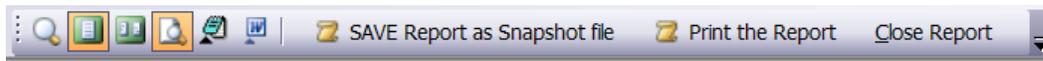
This button produces a report that displays understory vegetation for each plot that is selected. Option 3 is similar to Option 2 in terms of the selection criteria, except that the selection by forest type is not available and the species selection option is for understory vegetation instead of trees.



When you click on the “By understory plant species present” another drop down box will appear with a list of species. Choose the species you are interested in, and click GO.



The report will display all plots that had that particular species recorded in the data. Once the report is displayed, you can choose options off of the menu bar for printing or saving the file.



**PNW - FIA Pacific Islands Inventory Database**  
 Listing of data collected in the Vegetation Profile sample on the plot.

Island: **Northern Mariana Islands** Plot number: **1002**  
 County: **Saipan** Condition class: **1**

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Measured in: March 2004 SLOPE (percent): 80 ASPECT (degrees): 270  
 Type of land: Accessible forest land Unreserved  
 OWNER: State government

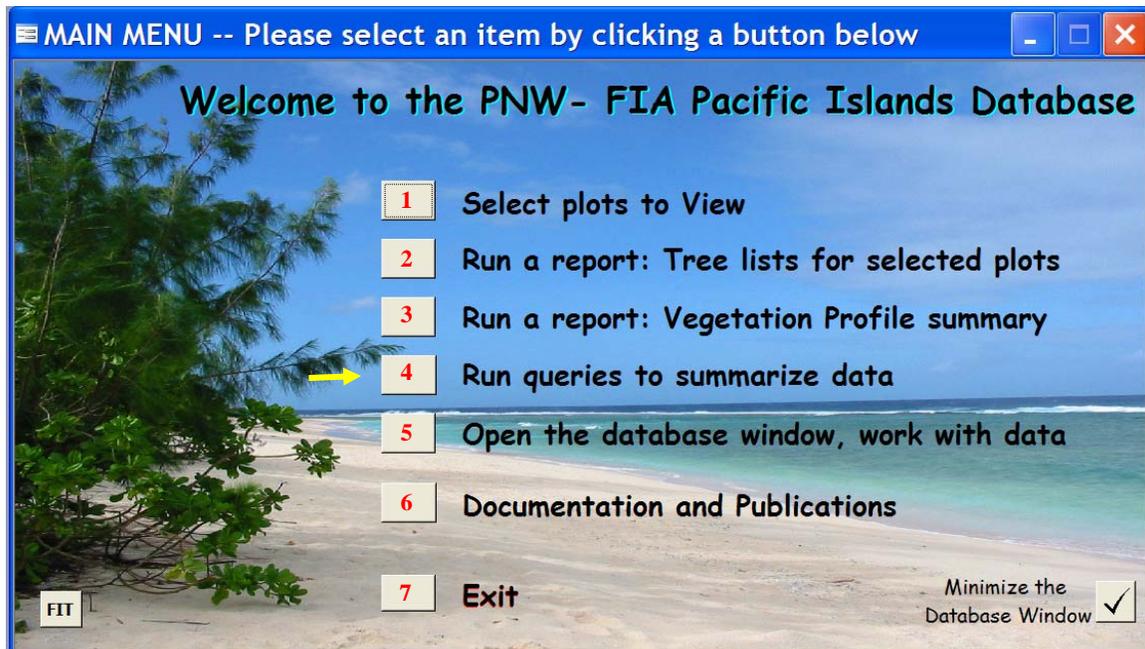
Forest type: Lowland tropical rainforest  
 Stand size: Stands with tree diameters predominantly 5-10.9 in.  
 Stand age: 20  
 Disturbance found? None found

**Vegetation Profile Data**

Note: The same profile applies to all conditions on the plot

| Sub plot | Slope (%) | Aspect (degrees) | Species |                          | Canopy          | Canopy             | Canopy            | Canopy            |
|----------|-----------|------------------|---------|--------------------------|-----------------|--------------------|-------------------|-------------------|
|          |           |                  |         |                          | Cover Total (%) | Cover Layer1,2 (%) | Cover Layer 3 (%) | Cover Layer 4 (%) |
| 2        | 80        | 285              | ASNI    | Asplenium nidus          | 3               | 3                  | 0                 | 0                 |
| 4        | 65        | 265              | CHOD    | Chromolaena odorata      | 1               | 0                  | 1                 | 0                 |
| 1        | 100       | 270              | MERPEL  | Merremia peltata         | 1               | 0                  | 1                 | 0                 |
| 2        | 80        | 285              | MERPEL  | Merremia peltata         | 1               | 0                  | 1                 | 0                 |
| 4        | 65        | 265              | MISC2   | Microsorium scolopendria | 4               | 4                  | 0                 | 0                 |
| 2        | 80        | 285              | MIMIS   | Mikania micrantha        | 1               | 0                  | 1                 | 0                 |
| 3        | 90        | 245              | MIMIS   | Mikania micrantha        | 1               | 1                  | 0                 | 0                 |
| 1        | 100       | 270              | PIPGUA  | Piper guahamense         | 1               | 1                  | 0                 | 0                 |
| 3        | 90        | 245              | PIPGUA  | Piper guahamense         | 5               | 0                  | 5                 | 0                 |
| 2        | 80        | 285              | TECCRE  | Tectaria crenata         | 4               | 4                  | 0                 | 0                 |
| 3        | 90        | 245              | TECCRE  | Tectaria crenata         | 3               | 3                  | 0                 | 0                 |
| 4        | 65        | 265              | TECCRE  | Tectaria crenata         | 1               | 1                  | 0                 | 0                 |
| 4        | 65        | 265              | THEGRE  | Thelypteris cretheri     | 1               | 1                  | 0                 | 0                 |
| 3        | 90        | 245              | FERN3   | Unknown Fern 3           | 2               | 2                  | 0                 | 0                 |
| 3        | 90        | 245              | UNK     | Unknown sp.              | 3               | 3                  | 0                 | 0                 |

## Button # 4: Running canned queries or creating your own



Clicking on the button brings up a window that lets you select from a set of existing queries and allows you to choose an island group. There is also a button labeled “Create a new Query” that takes you to the database query window, where you can create your own customized queries



## Button # 5: Opening the database window



This button will minimize the User Interface, and allow you to go directly to the database tables, queries and reports. Once the database window is open, you can review or analyze the data in each database table, create queries, or develop and run reports.

It is difficult to put restrictions on the database elements, without making it useless for advanced users to work with. Currently, many of the files we use in the application are hidden, but the raw data and reference tables are visible and usable. There are no read-only restrictions on tables. If you want to work with the data and create new columns or variables it may be a good idea to make a copy of the data before you modify the contents of a table.

Please refer to the data dictionary for details on each table and column, for their meaning and potential use.

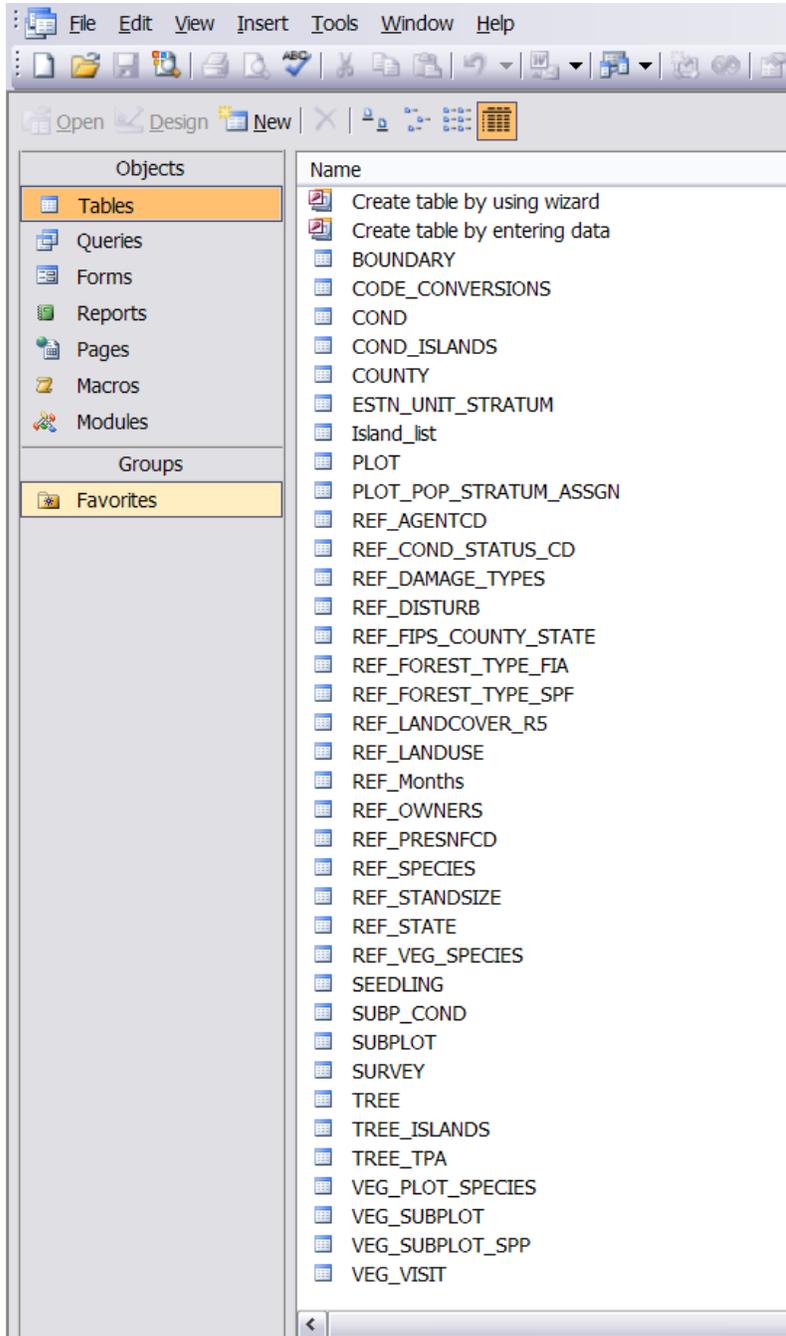
Relationships between tables have been created and saved. When tables are brought into new queries, many of the correct links will automatically be made.

## Button # 6: Opening the database window

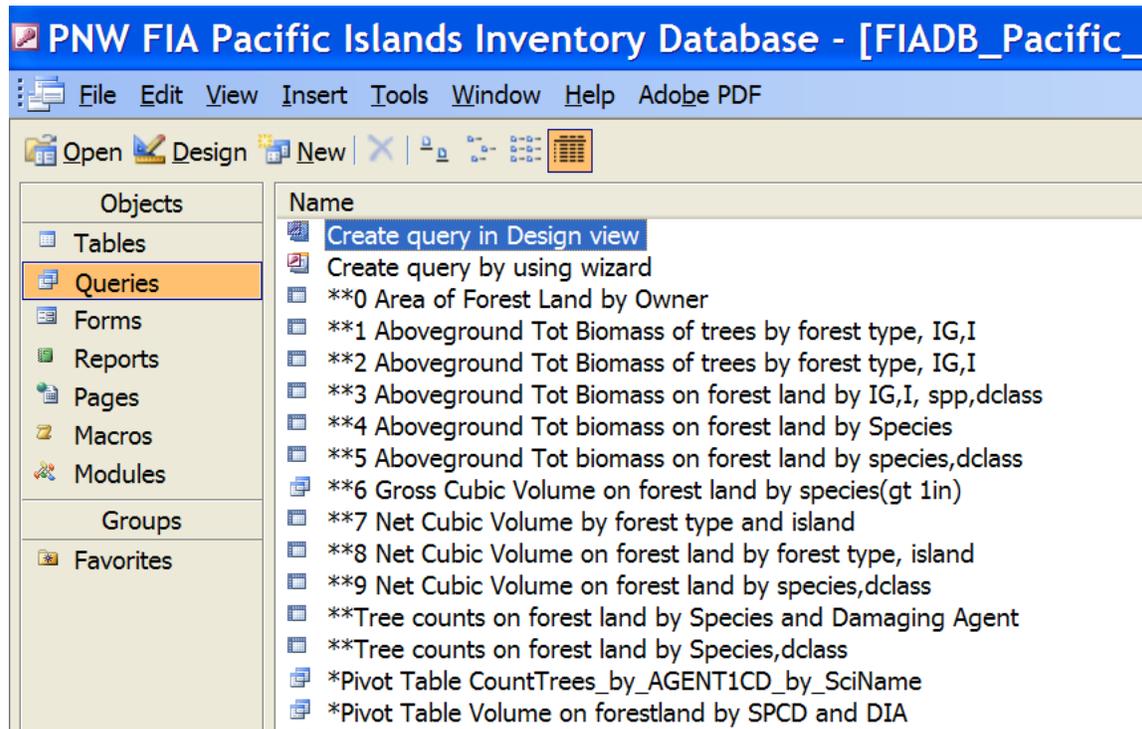
And finally, the last button brings up a list of publications that were produced with FIA data. These can serve as a reference to methods, procedures, summaries, and results.

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### Tables in the Database:



## Queries in the Database:



# Appendix A

## Samples of Reports

TREE report – by Island Group – CNMI was selected

| PNW - FIA Pacific Islands Inventory Database                    |          |        |              |                      |      |                           |             |                       |               |              |  |
|-----------------------------------------------------------------|----------|--------|--------------|----------------------|------|---------------------------|-------------|-----------------------|---------------|--------------|--|
| Listing of tree data collected on the plot.                     |          |        |              |                      |      |                           |             |                       |               |              |  |
| Island group: <b>Northern Mariana Islands</b>                   |          |        |              |                      |      | Plot number: <b>4026</b>  |             |                       |               |              |  |
| Island: <b>Rota</b>                                             |          |        |              |                      |      | Condition class: <b>1</b> |             |                       |               |              |  |
| Measured in: March 2004                                         |          |        |              | SLOPE (percent): 10  |      |                           |             | ASPECT (degrees): 320 |               |              |  |
| Type of land: Accessible forest land                            |          |        |              |                      |      | Unreserved                |             |                       |               |              |  |
|                                                                 |          |        |              |                      |      | OWNER: State government   |             |                       |               |              |  |
| Forest type (FIA): Lowland tropical rainforest                  |          |        |              |                      |      |                           |             |                       |               |              |  |
| Stand size: Stands with tree diameters predominantly 5-10.9 in. |          |        |              |                      |      |                           |             |                       |               |              |  |
| Stand age: 30                                                   |          |        |              |                      |      |                           |             |                       |               |              |  |
| Disturbance found? Wind damage (typhoon, hurricane)             |          |        |              |                      |      |                           |             |                       |               |              |  |
| Tree Data                                                       |          |        |              |                      |      |                           |             |                       |               |              |  |
| Sub plot                                                        | Tree Num | Status | Species Code | Scientific Name      | Diam | Ht                        | Crown ratio | Crown class           | Biomass (lbs) | Volume (ft3) |  |
| 1                                                               | 111      | LIVE   | 146          | Eugenia stelechantha | 1    | 9                         | 45          | 4                     | 1.5           | 0.0          |  |
| 1                                                               | 119      | LIVE   | 146          | Eugenia stelechantha | 1.1  | 11                        | 45          | 5                     | 2.2           | 0.1          |  |
| 1                                                               | 116      | LIVE   | 146          | Eugenia stelechantha | 2.1  | 15                        | 40          | 4                     | 8.7           | 0.3          |  |
| 1                                                               | 117      | LIVE   | 146          | Eugenia stelechantha | 1.1  | 12                        | 30          | 4                     | 2.4           | 0.1          |  |
| 1                                                               | 115      | LIVE   | 146          | Eugenia stelechantha | 1.1  | 10                        | 30          | 4                     | 1.9           | 0.1          |  |
| 1                                                               | 118      | LIVE   | 146          | Eugenia stelechantha | 1.1  | 14                        | 50          | 3                     | 2.8           | 0.1          |  |
| 1                                                               | 114      | LIVE   | 146          | Eugenia stelechantha | 1.2  | 10                        | 30          | 5                     | 2.4           | 0.1          |  |
| 1                                                               | 113      | LIVE   | 146          | Eugenia stelechantha | 1    | 10                        | 20          | 5                     | 1.2           | 0.0          |  |
| 1                                                               | 112      | LIVE   | 146          | Eugenia stelechantha | 1    | 10                        | 40          | 4                     | 1.7           | 0.1          |  |
| 2                                                               | 126      | LIVE   | 146          | Eugenia stelechantha | 1.2  | 8                         | 30          | 5                     | 2.1           | 0.1          |  |
| 2                                                               | 129      | LIVE   | 153          | Guamia mariannae     | 1.4  | 13                        | 50          | 5                     | 3.8           | 0.1          |  |
| 4                                                               | 135      | LIVE   | 153          | Guamia mariannae     | 1.4  | 13                        | 30          | 4                     | 3.8           | 0.1          |  |
| 4                                                               | 134      | LIVE   | 153          | Guamia mariannae     | 1.7  | 14                        | 25          | 4                     | 5.7           | 0.2          |  |
| 4                                                               | 133      | LIVE   | 153          | Guamia mariannae     | 1.2  | 10                        | 30          | 4                     | 2.4           | 0.1          |  |
| 2                                                               | 127      | LIVE   | 172          | Morus alba           | 1    | 13                        | 30          | 4                     | 2.2           | 0.1          |  |
| 2                                                               | 128      | LIVE   | 172          | Morus alba           | 1.1  | 13                        | 30          | 4                     | 2.6           | 0.1          |  |
| 2                                                               | 125      | LIVE   | 190          | Premna obtusifolia   | 8.4  | 31                        | 40          | 3                     | 193.5         | 6.2          |  |
| 2                                                               | 122      | LIVE   | 190          | Premna obtusifolia   | 5.3  | 24                        | 40          | 3                     | 61.9          | 2.0          |  |
| 4                                                               | 140      | LIVE   | 190          | Premna obtusifolia   | 5    | 15                        | 20          | 3                     | 41.4          | 1.3          |  |
| 1                                                               | 110      | LIVE   | 461          | Citrus xaurantifolia | 2.8  | 15                        | 75          | 3                     | 14.7          | 0.5          |  |
| 1                                                               | 109      | LIVE   | 461          | Citrus xaurantifolia | 1.8  | 12                        | 80          | 3                     | 5.8           | 0.2          |  |
| 1                                                               | 108      | LIVE   | 519          | Ficus prolixa        | 1    | 8                         | 30          | 5                     | 1.9           | 0.1          |  |

TREE report – by forest type – Lowland tropical rainforest was selected

**PNW - FIA Pacific Islands Inventory Database**

Listing of tree data collected on the plot.

Island group: **Federated States of Micronesia** Plot number: **1529**  
 Island: **Chuuk** Condition class: **1**  
 Measured in: March 2006 SLOPE (percent): 25 ASPECT (degrees): 180  
 Type of land: Accessible forest land Unreserved  
 OWNER: Private, Individual  
 Forest type (FIA): Lowland tropical rainforest  
 Stand size: Stands with tree diameters predominantly 5-10.9 in.  
 Stand age: 50  
 Disturbance found? None found

Tree Data

| Sub plot | Tree Num | Status | Species Code | Scientific Name        | Diam | Ht | Crown ratio | Crown class | Biomass (lbs) | Volume (ft3) |
|----------|----------|--------|--------------|------------------------|------|----|-------------|-------------|---------------|--------------|
| 4        | 120      | LIVE   | 441          | Cananga odorata        | 1.9  | 19 | 20          | 5           | 8.5           | 0.3          |
| 4        | 122      | LIVE   | 441          | Cananga odorata        | 3.1  | 19 | 35          | 5           | 20.3          | 0.7          |
| 4        | 121      | LIVE   | 441          | Cananga odorata        | 3.3  | 20 | 25          | 5           | 23.5          | 0.8          |
| 4        | 129      | LIVE   | 441          | Cananga odorata        | 4    | 27 | 15          | 4           | 41.0          | 1.3          |
| 4        | 125      | LIVE   | 441          | Cananga odorata        | 1.7  | 17 | 20          | 5           | 6.5           | 0.2          |
| 3        | 138      | LIVE   | 548          | Hibiscus tiliaceus     | 7.6  | 48 | 40          | 3           | 230.3         | 6.5          |
| 2        | 118      | LIVE   | 859          | Exorrhiza ponapensis   | 15.5 | 72 | 30          | 2           | 1,824.8       | 58.5         |
| 3        | 141      | LIVE   | 859          | Exorrhiza ponapensis   | 7.5  | 37 | 30          | 3           | 187.4         | 6.0          |
| 3        | 143      | LIVE   | 876          | Macaranga carolinensis | 5.7  | 45 | 40          | 3           | 133.3         | 4.3          |
| 4        | 123      | LIVE   | 876          | Macaranga carolinensis | 3.5  | 20 | 35          | 4           | 26.2          | 0.8          |
| 4        | 137      | LIVE   | 876          | Macaranga carolinensis | 7.1  | 34 | 30          | 4           | 141.9         | 4.5          |
| 4        | 133      | LIVE   | 876          | Macaranga carolinensis | 6.3  | 34 | 35          | 3           | 118.3         | 3.8          |
| 4        | 130      | LIVE   | 876          | Macaranga carolinensis | 5.4  | 27 | 40          | 3           | 70.3          | 2.3          |
| 4        | 132      | LIVE   | 876          | Macaranga carolinensis | 6.4  | 26 | 40          | 3           | 92.2          | 3.0          |
| 4        | 131      | LIVE   | 876          | Macaranga carolinensis | 6.6  | 36 | 40          | 3           | 144.5         | 4.6          |
| 4        | 124      | LIVE   | 876          | Macaranga carolinensis | 2.1  | 22 | 25          | 3           | 11.3          | 0.4          |
| 1        | 103      | LIVE   | 1460         | Glochidion spp.        | 8.6  | 33 | 55          | 3           | 241.3         | 7.7          |
| 1        | 102      | LIVE   | 1460         | Glochidion spp.        | 6.4  | 26 | 40          | 3           | 121.3         | 3.9          |
| 1        | 105      | LIVE   | 1460         | Glochidion spp.        | 5.2  | 32 | 25          | 3           | 103.6         | 3.3          |
| 1        | 104      | LIVE   | 1460         | Glochidion spp.        | 8.4  | 32 | 45          | 3           | 242.9         | 7.8          |
| 4        | 126      | LIVE   | 1460         | Glochidion spp.        | 3.3  | 25 | 15          | 4           | 27.4          | 0.9          |
| 4        | 136      | DEAD   | 1810         | Premna spp.            | 7.4  | 9  | 0           | 0           | 84.0          | 2.7          |

VEG report – all plots on FSM were selected here

### PNW - FIA Pacific Islands Inventory Database

Listing of data collected in the Vegetation Profile sample on the plot.

Island: **Federated States of Micronesia**

Plot number: **1038**

County: **Chuuk**

Condition class: **1**

Measured in: March 2006 SLOPE (percent): 40 ASPECT (degrees): 350

Type of land: Accessible forest land

Unreserved

OWNER: Private, Individual

Forest type: Agroforestry

Stand size: Stands with tree diameters predominantly 5-10.9 in.

Stand age: 55

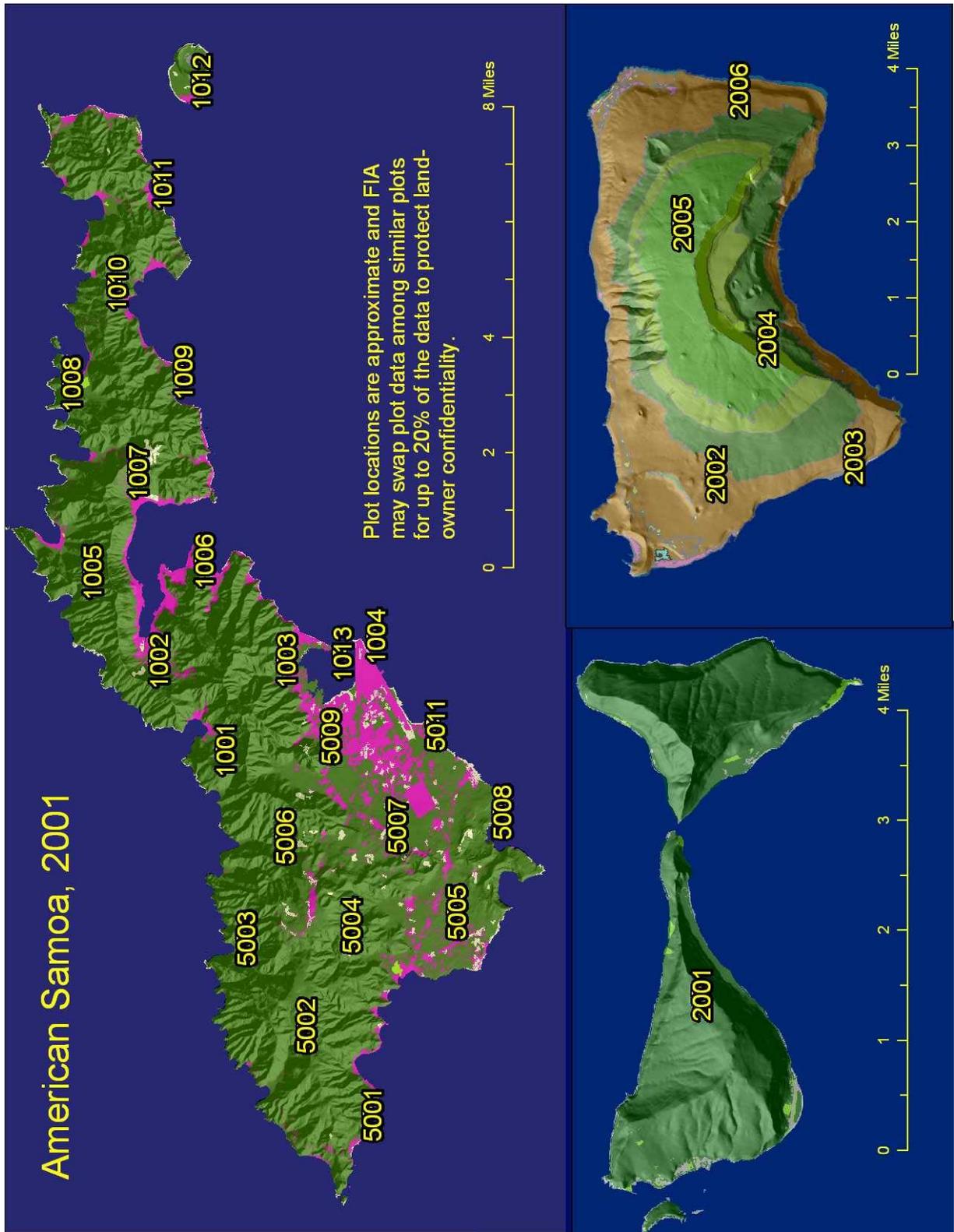
Disturbance found? None found

#### Vegetation Profile Data

Note: The same profile applies to all conditions on the plot

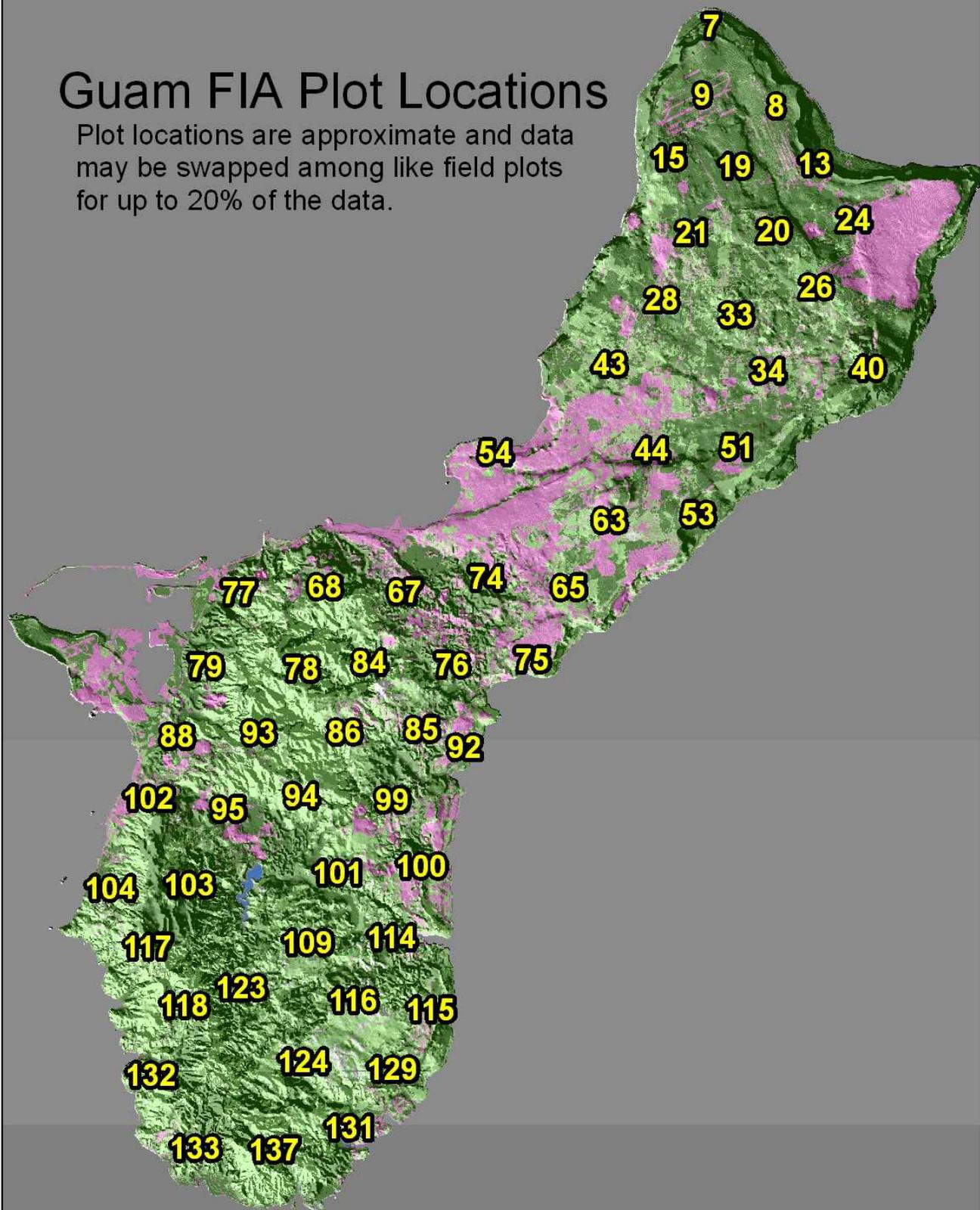
| Sub plot | Slope (%) | Aspect (degrees) | Species Code | Scientific Name       | Canopy Cover Total (%) | Canopy Cover Layer 1,2 (%) | Canopy Cover Layer 3 (%) | Canopy Cover Layer 4 (%) |
|----------|-----------|------------------|--------------|-----------------------|------------------------|----------------------------|--------------------------|--------------------------|
| 4        | 60        | 330              | ABUT1        | Abutilon sp.          | 10                     | 10                         | 0                        | 0                        |
| 1        | 25        | 2                | ACALAN       | Acalypha lanceolata   | 6                      | 6                          | 0                        | 0                        |
| 3        | 30        | 95               | ACALAN       | Acalypha lanceolata   | 8                      | 8                          | 0                        | 0                        |
| 4        | 60        | 330              | ACALAN       | Acalypha lanceolata   | 20                     | 20                         | 0                        | 0                        |
| 4        | 60        | 330              | ALMA11       | Alocasia macrorrhizos | 3                      | 3                          | 0                        | 0                        |
| 2        | 60        | 350              | BLPY         | Blechum pyramidatum   | 3                      | 3                          | 0                        | 0                        |
| 2        | 60        | 350              | CHOD         | Chromolaena odorata   | 2                      | 2                          | 0                        | 0                        |
| 1        | 25        | 2                | DEEL3        | Derris elliptica      | 25                     | 25                         | 0                        | 0                        |
| 2        | 60        | 350              | DEEL3        | Derris elliptica      | 5                      | 5                          | 0                        | 0                        |
| 3        | 30        | 95               | DEEL3        | Derris elliptica      | 8                      | 8                          | 0                        | 0                        |
| 4        | 60        | 330              | DEEL3        | Derris elliptica      | 3                      | 3                          | 0                        | 0                        |
| 3        | 30        | 95               | DIOSC        | Dioscorea sp.         | 10                     | 10                         | 0                        | 0                        |
| 4        | 60        | 330              | DIOSC        | Dioscorea sp.         | 6                      | 6                          | 0                        | 0                        |
| 2        | 60        | 350              | MAES         | Manihot esculenta     | 15                     | 15                         | 0                        | 0                        |
| 3        | 30        | 95               | MERPEL       | Merremia peltata      | 8                      | 8                          | 0                        | 0                        |
| 4        | 60        | 330              | MERPEL       | Merremia peltata      | 70                     | 70                         | 0                        | 0                        |
| 3        | 30        | 95               | NEPHR        | Nephrolepis sp.       | 3                      | 3                          | 0                        | 0                        |
| 1        | 25        | 2                | OPLIS        | Oplismenus sp.        | 10                     | 10                         | 0                        | 0                        |
| 3        | 30        | 95               | OPLIS        | Oplismenus sp.        | 15                     | 15                         | 0                        | 0                        |
| 2        | 60        | 350              | PACO14       | Paspalum conjugatum   | 5                      | 5                          | 0                        | 0                        |
| 3        | 30        | 95               | PACO14       | Paspalum conjugatum   | 6                      | 6                          | 0                        | 0                        |
| 2        | 60        | 350              | FORB         | Unknown Forb          | 0                      | 0                          | 0                        | 0                        |
| 3        | 30        | 95               | FORB         | Unknown Forb          | 0                      | 0                          | 0                        | 0                        |

**Appendix B—Island maps with approximate plot locations.**



# Guam FIA Plot Locations

Plot locations are approximate and data may be swapped among like field plots for up to 20% of the data.



# Palau Forest Inventory, 2003

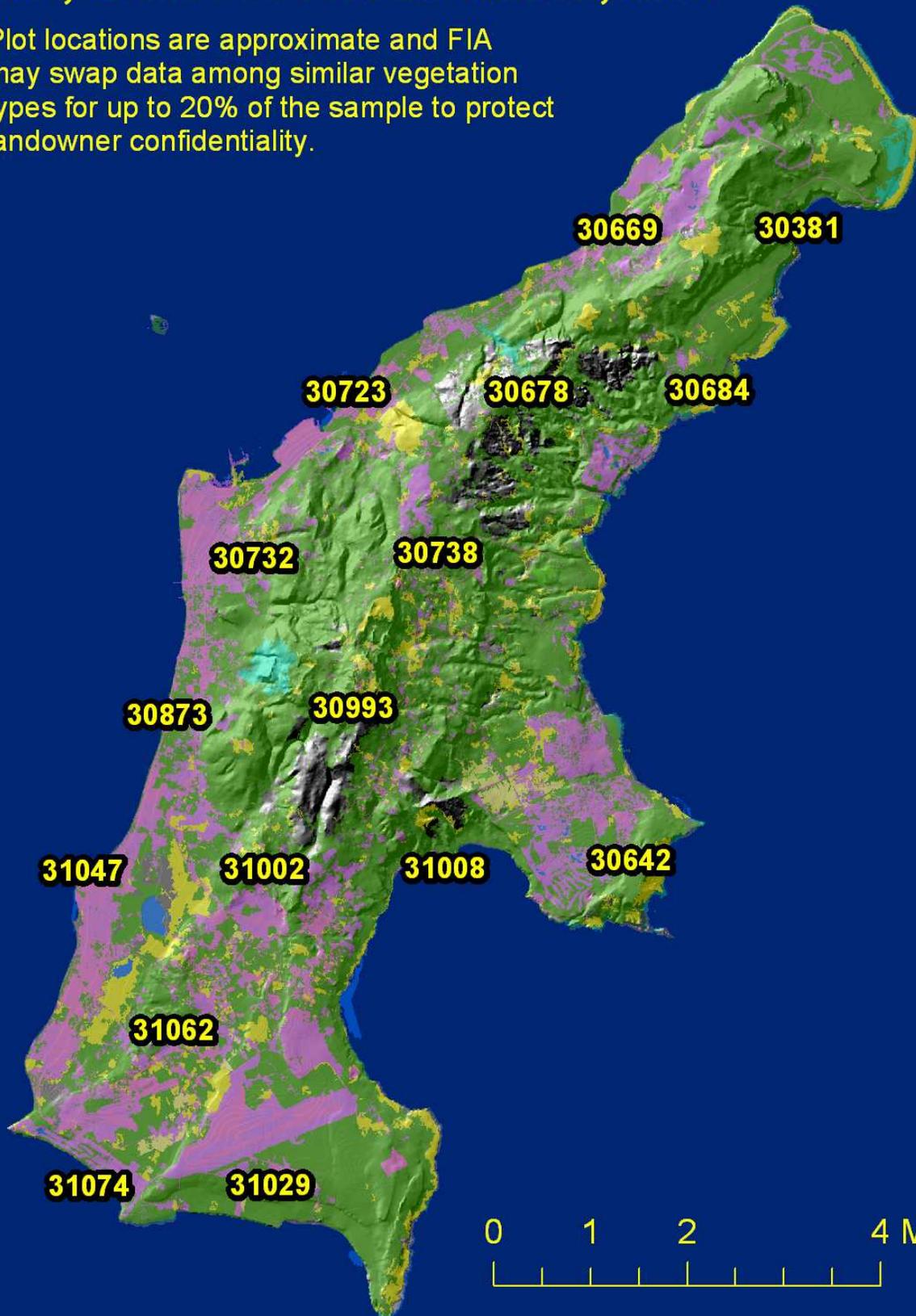


Plot locations are approximate and FIA may swap plot data between plots in similar forest types to protect landowner confidentiality.



# Saipan, CNMI FIA Plot Locations, 2004

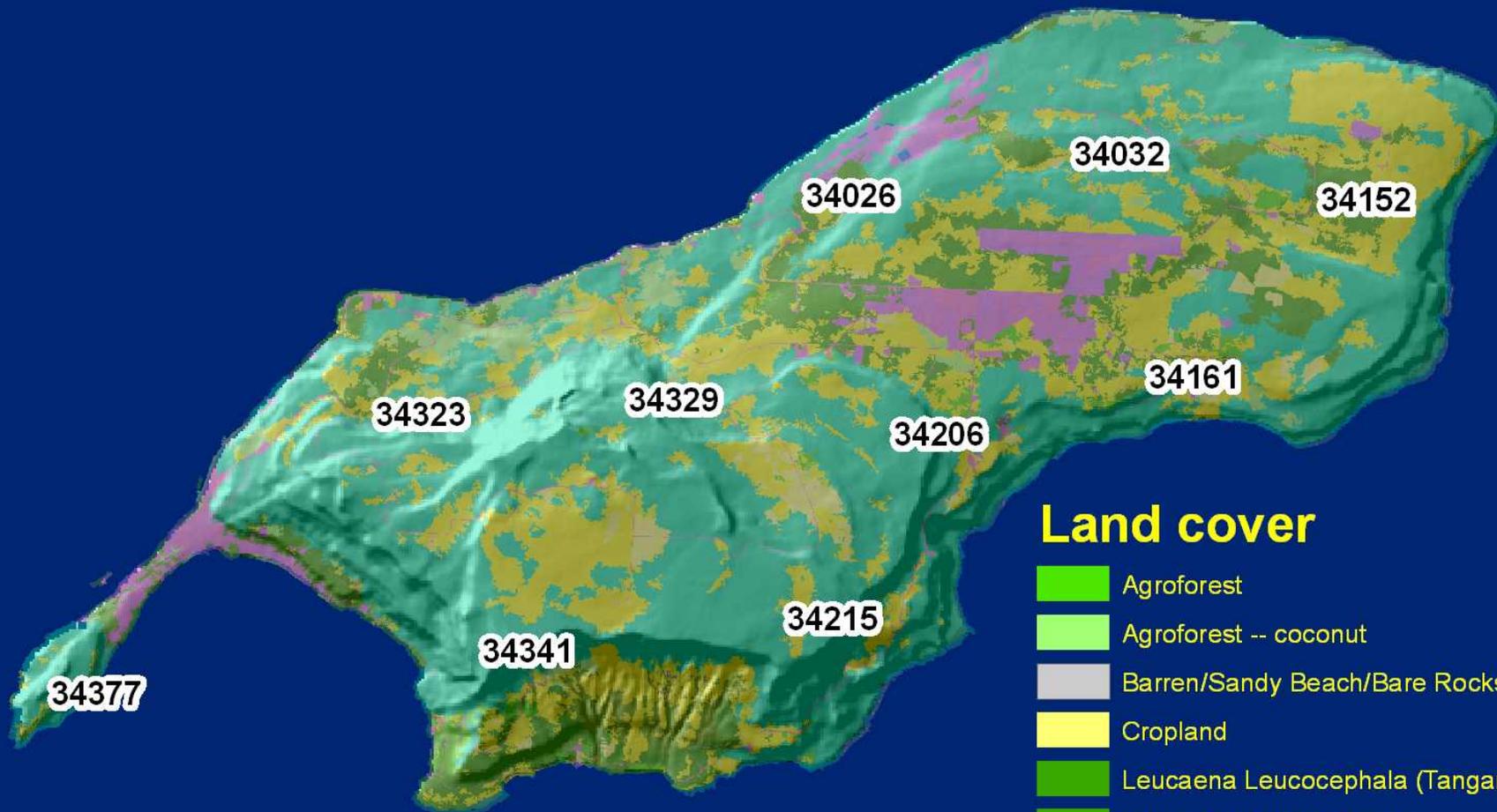
Plot locations are approximate and FIA may swap data among similar vegetation types for up to 20% of the sample to protect landowner confidentiality.



# Tinian, CNMI FIA Plot Locations, 2004

Plot locations are approximate and FIA may swap data among similar vegetation types for up to 20% of the sample to protect landowner confidentiality.





### Land cover

- Agroforest
- Agroforest -- coconut
- Barren/Sandy Beach/Bare Rocks
- Cropland
- Leucaena Leucocephala (Tangantangan)
- Mixed Introduced Forest
- Native Limestone Forest
- Other Shrub and Grass
- Ravine Forest
- Strand
- Urban Vegetation
- Urban and Built-up
- Water

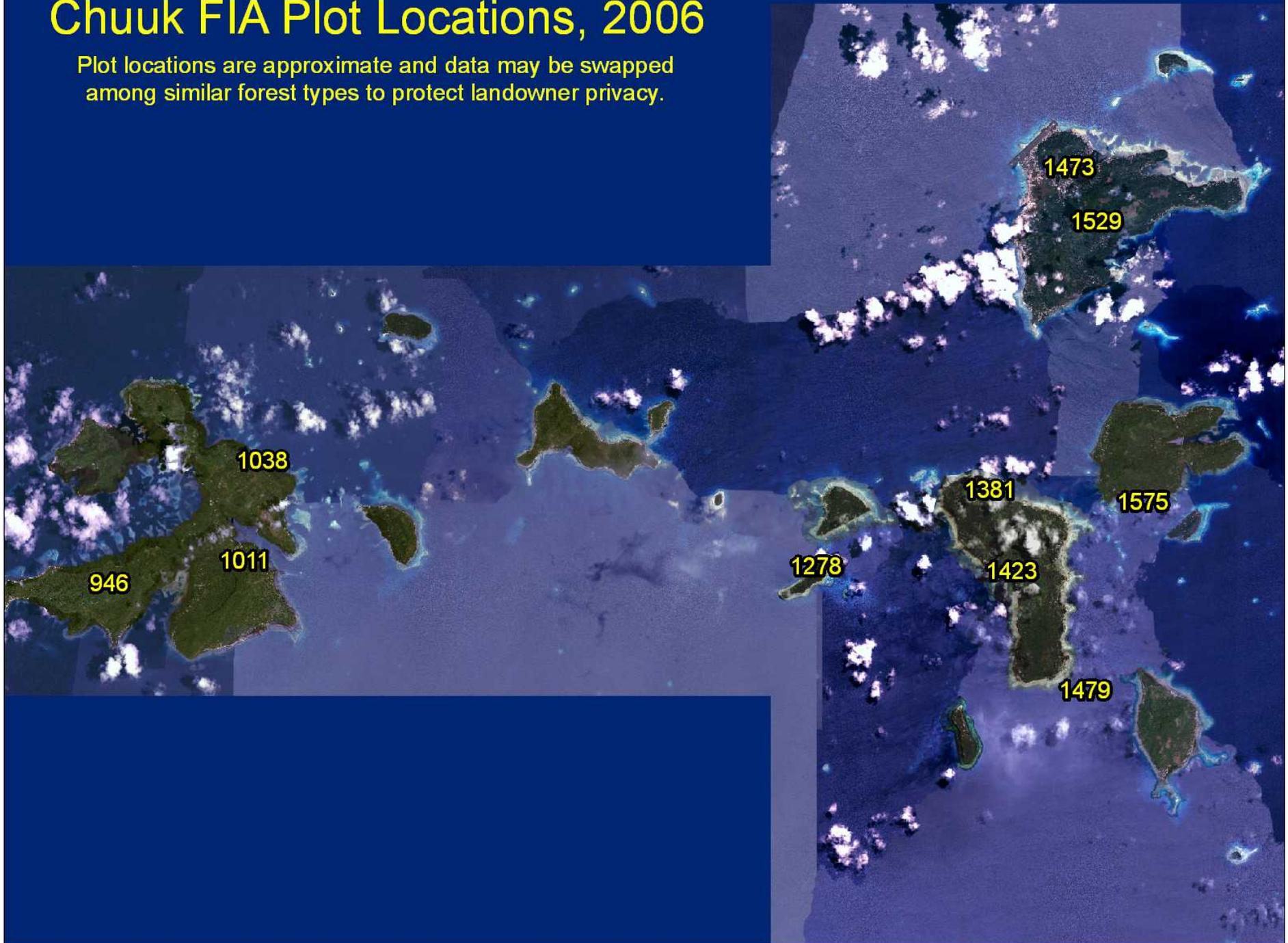
## FIA plots 2004

Locations are approximate and similar data may be swapped across plots to protect landowner confidentiality.



# Chuuk FIA Plot Locations, 2006

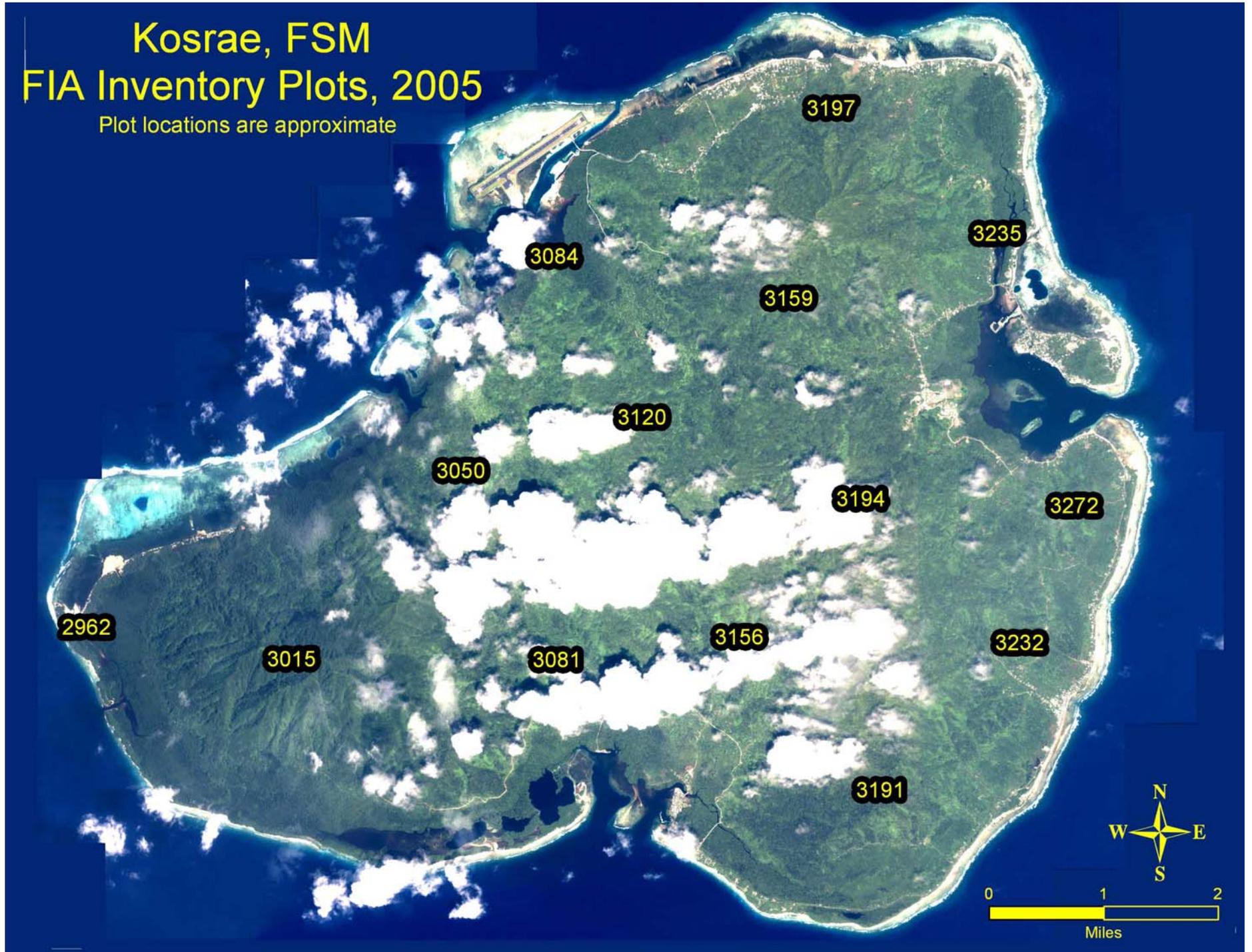
Plot locations are approximate and data may be swapped among similar forest types to protect landowner privacy.



# Kosrae, FSM

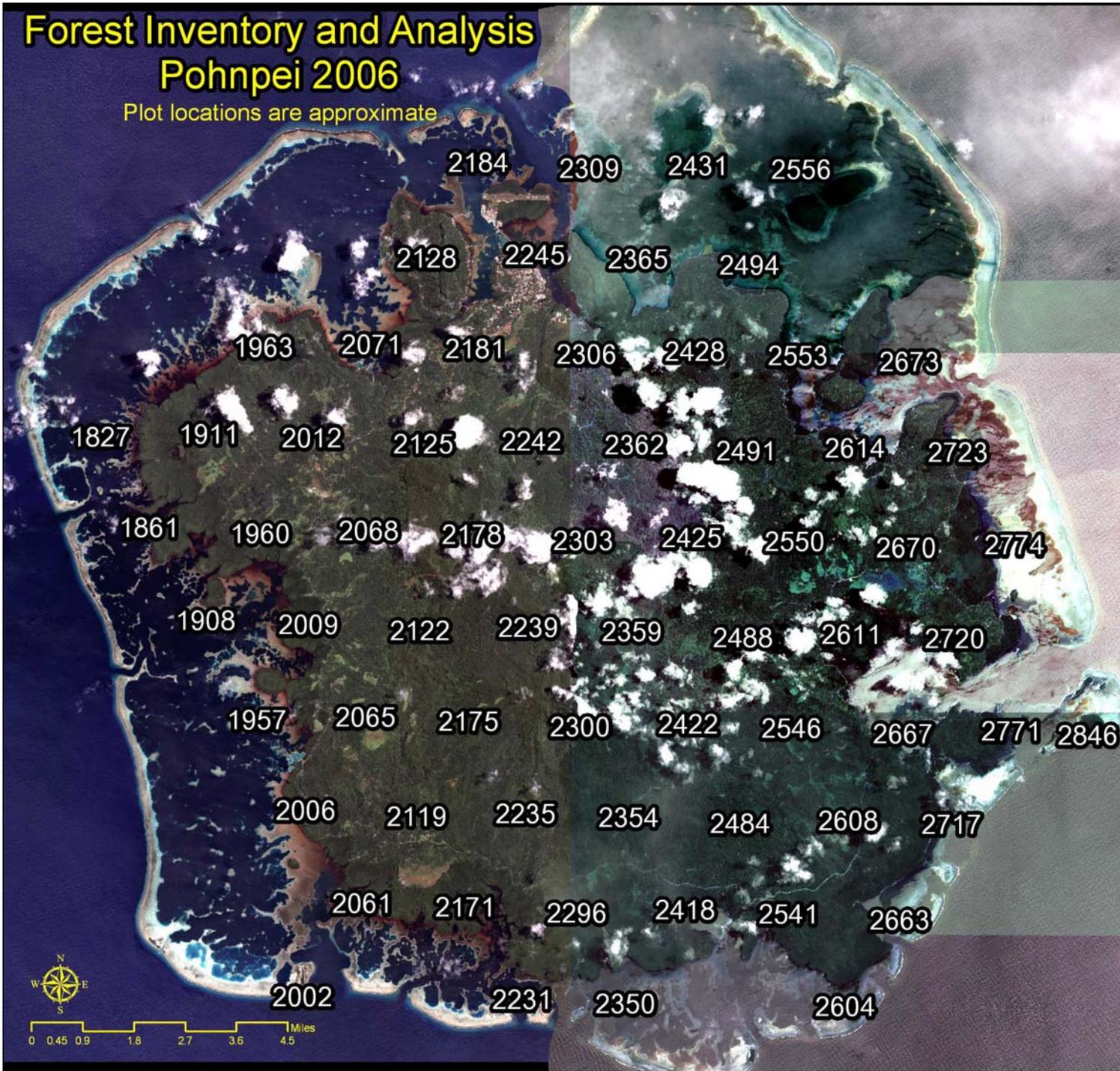
## FIA Inventory Plots, 2005

Plot locations are approximate



# Forest Inventory and Analysis Pohnpei 2006

Plot locations are approximate



# Yap, FSM FIA Field Plots, 2006

Plot locations are approximate



# Republic of the Marshall Islands

## Forest Inventory and Analysis Field Plots, 2008

Plot locations are approximate to within +/- 1 mile to protect landowner confidentiality. Plot information may be swapped among similar plots for up to 20% of the full sample.



## Ailinglaplap

0 10 20 Miles



# Republic of the Marshall Islands

## Forest Inventory and Analysis Field Plots, 2008

Plot locations are approximate to within +/- 1 mile to protect landowner confidentiality. Plot information may be swapped among similar plots for up to 20% of the full sample.



0 10 20 Miles

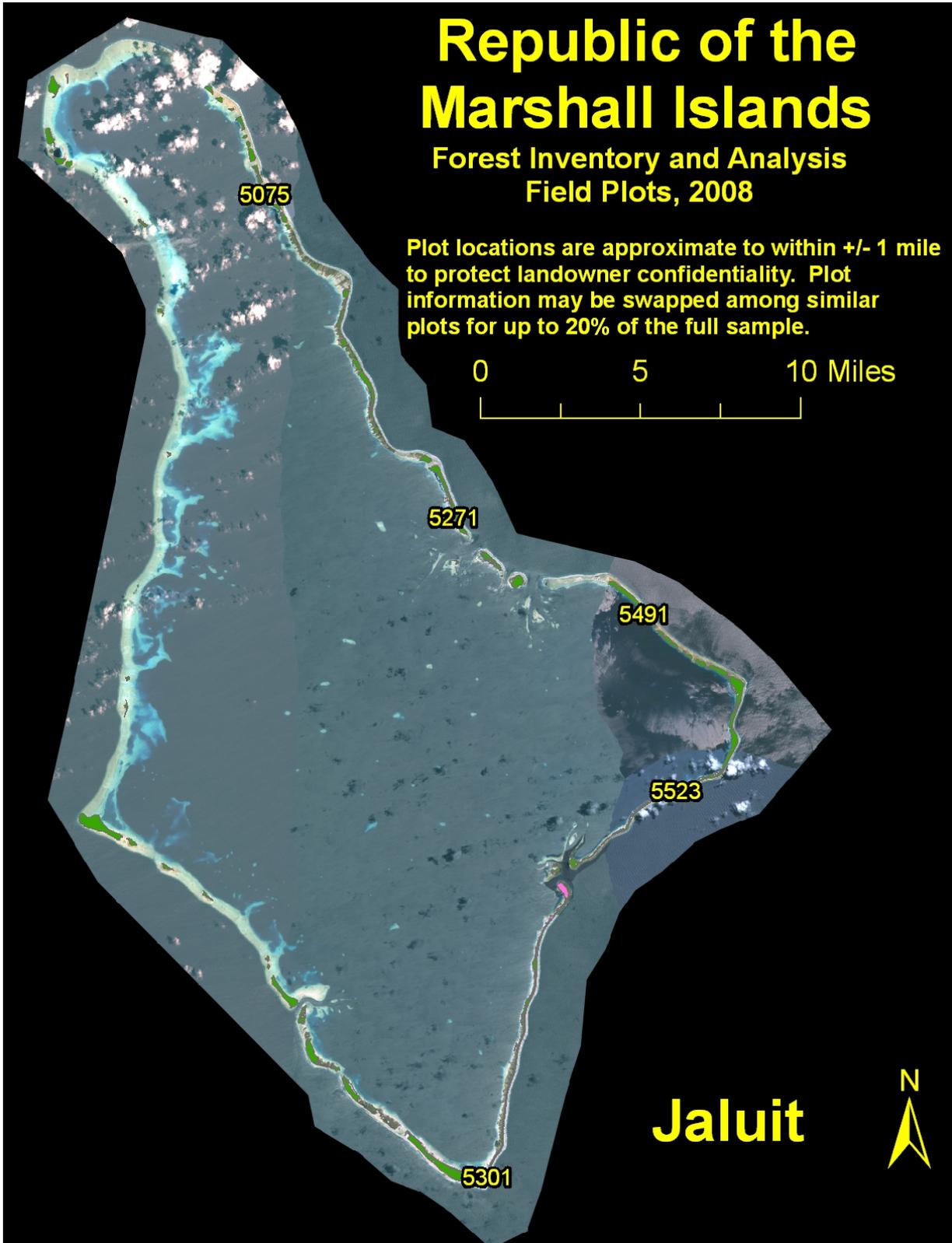


# Republic of the Marshall Islands

## Forest Inventory and Analysis Field Plots, 2008

Plot locations are approximate to within +/- 1 mile to protect landowner confidentiality. Plot information may be swapped among similar plots for up to 20% of the full sample.

0 5 10 Miles



# Republic of the Marshall Islands

## Forest Inventory and Analysis Field Plots, 2008

Plot locations are approximate to within +/- 1 mile to protect landowner confidentiality. Plot information may be swapped among similar plots for up to 20% of the full sample.



## Kwajalein

0 20 40 Miles



# Republic of the Marshall Islands

## Forest Inventory and Analysis Field Plots, 2008

Plot locations are approximate to within +/- 1 mile to protect landowner confidentiality. Plot information may be swapped among similar plots for up to 20% of the full sample.



**Likiep**

0

10

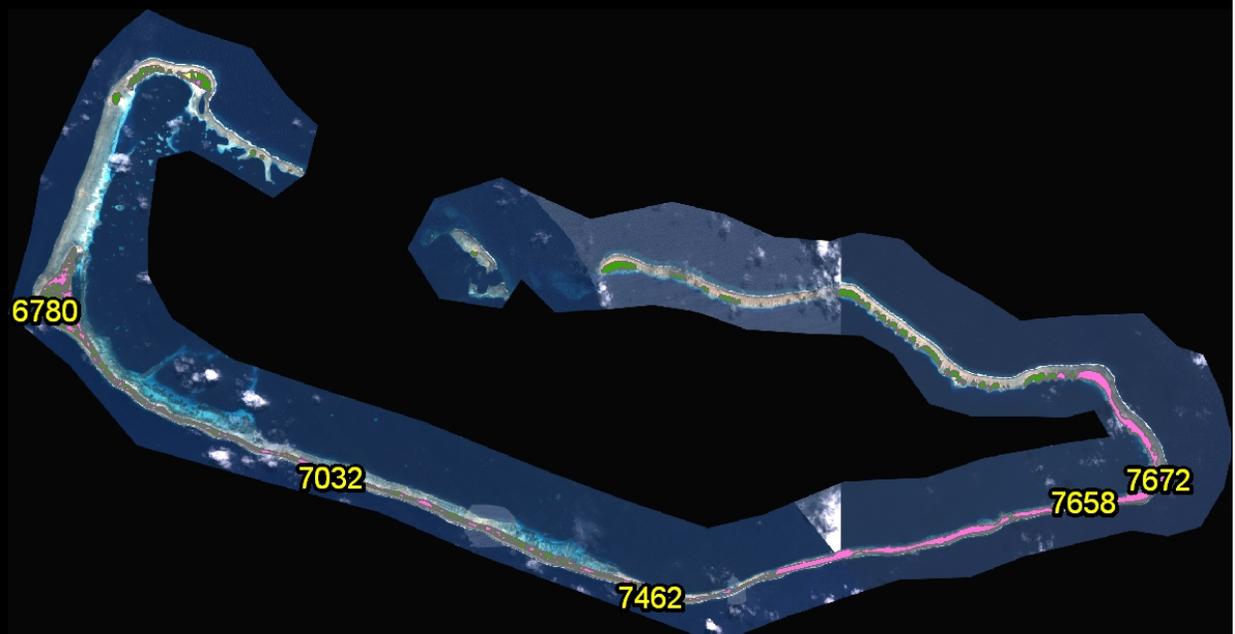
20 Miles



# Republic of the Marshall Islands

## Forest Inventory and Analysis Field Plots, 2008

Plot locations are approximate to within +/- 1 mile to protect landowner confidentiality. Plot information may be swapped among similar plots for up to 20% of the full sample.



## Majuro

0

10

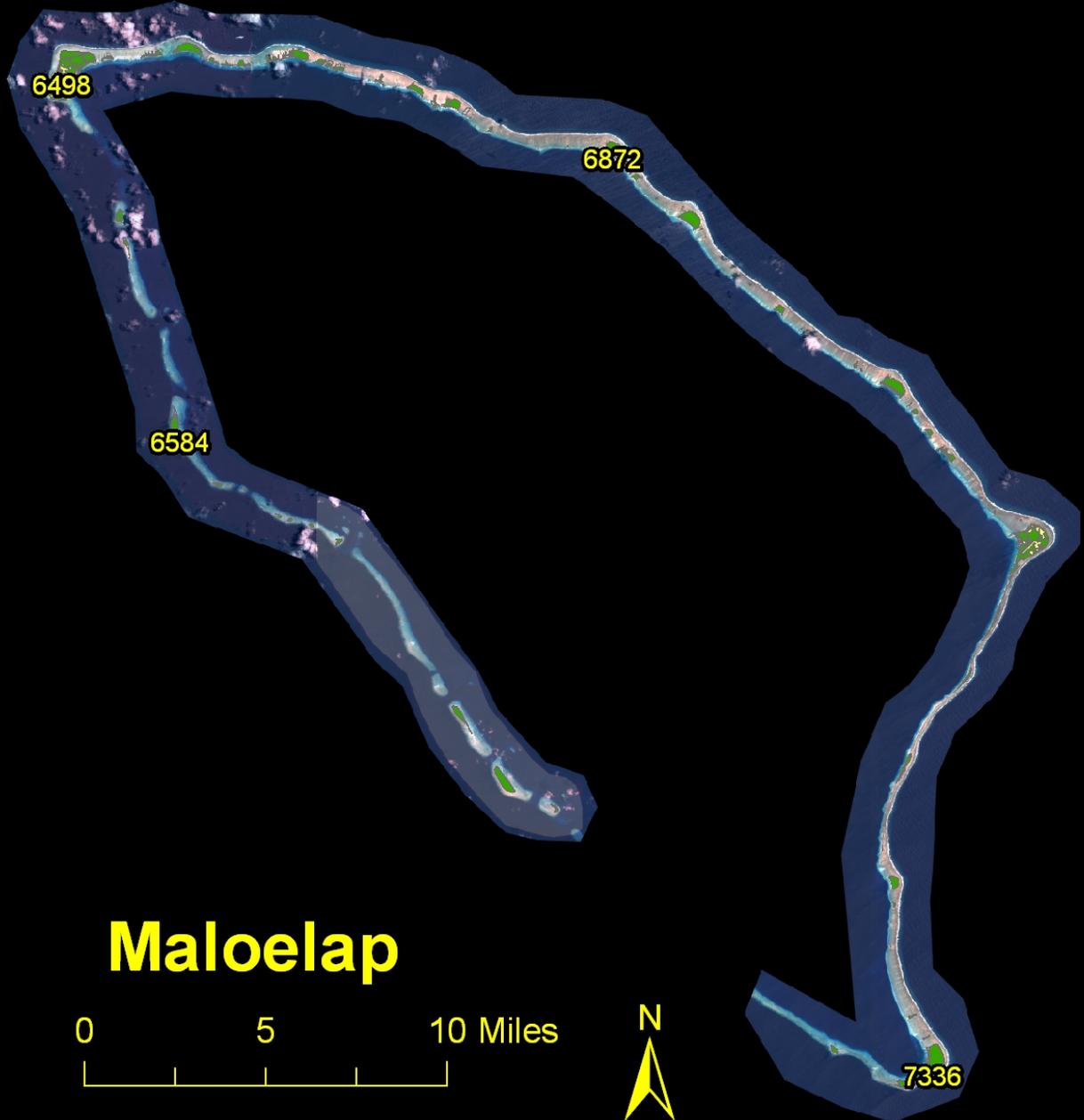
20 Miles



# Republic of the Marshall Islands

## Forest Inventory and Analysis Field Plots, 2008

Plot locations are approximate to within +/- 1 mile to protect landowner confidentiality. Plot information may be swapped among similar plots for up to 20% of the full sample.



## Maloelap

0 5 10 Miles



# Republic of the Marshall Islands

## Forest Inventory and Analysis Field Plots, 2008

Plot locations are approximate to within +/- 1 mile to protect landowner confidentiality. Plot information may be swapped among similar plots for up to 20% of the full sample.



**Mili**

0 10 20 Miles



# Republic of the Marshall Islands

## Forest Inventory and Analysis Field Plots, 2008

Plot locations are approximate to within +/- 1 mile to protect landowner confidentiality. Plot information may be swapped among similar plots for up to 20% of the full sample.



## Rongelap

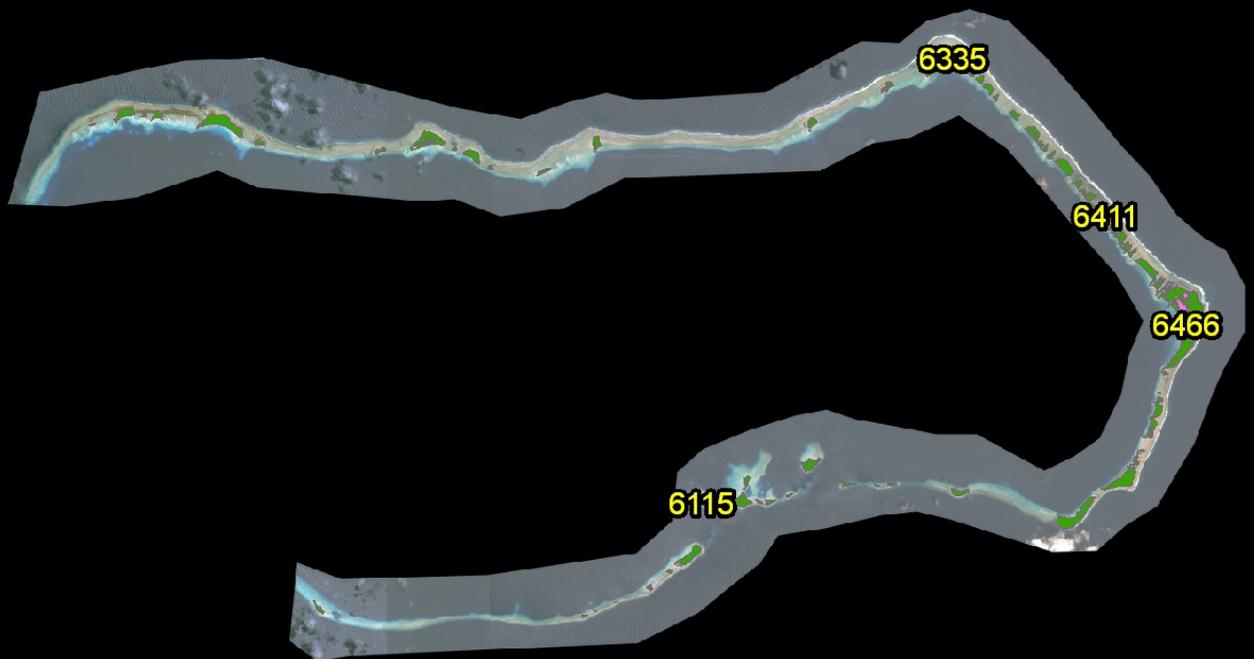
0 10 20 Miles



# Republic of the Marshall Islands

## Forest Inventory and Analysis Field Plots, 2008

Plot locations are approximate to within +/- 1 mile to protect landowner confidentiality. Plot information may be swapped among similar plots for up to 20% of the full sample.



**Wotje**

0 10 20 Miles

