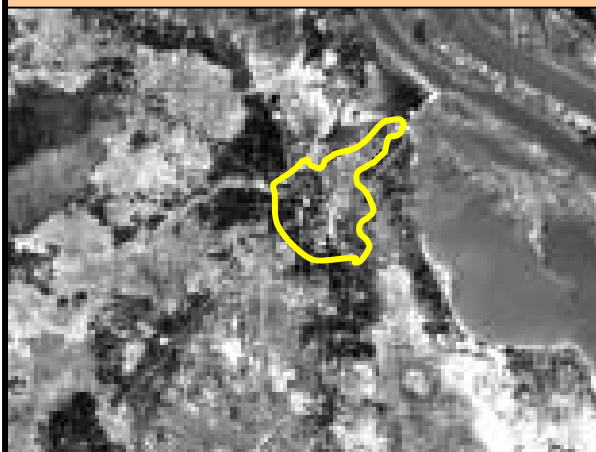


## 1) Settlement (S)

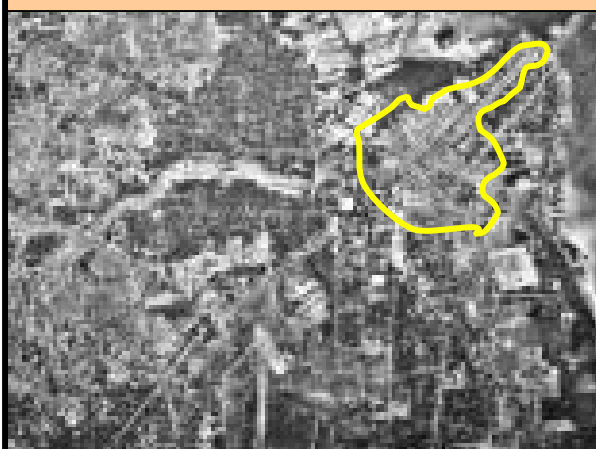
SPOT (Panchromatic)



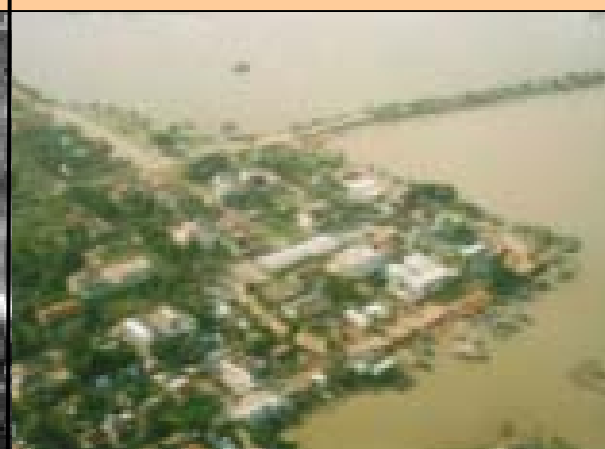
Landsat 4, 5, 3 (R, G, B)



Aerial Photo



Ground Photo



### Data Description

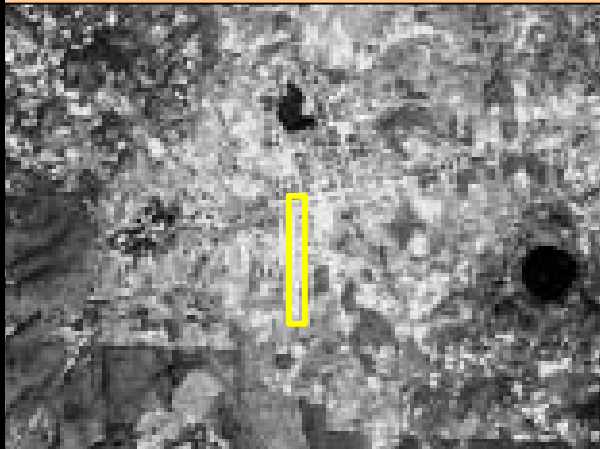
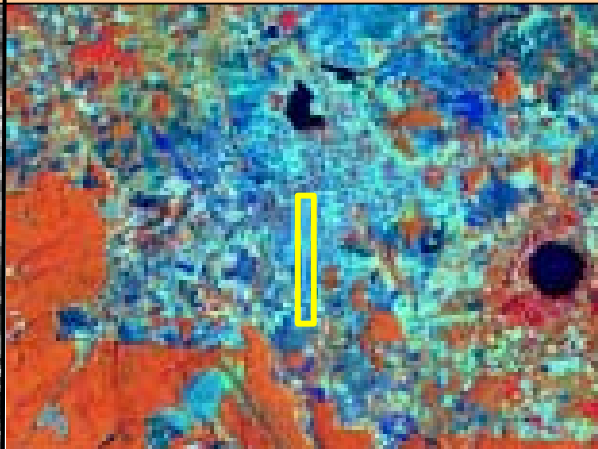
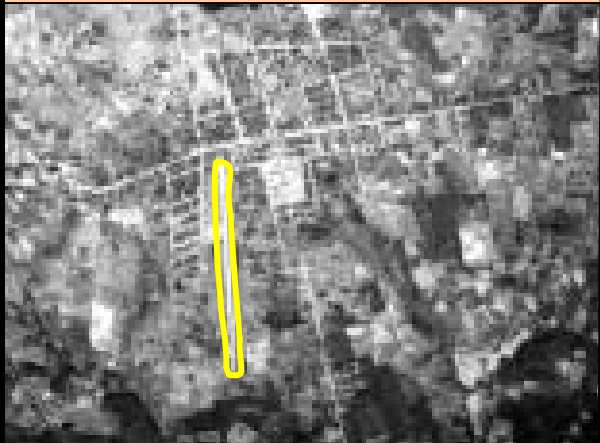
- Date of Included Data
  - Landsat (TM) 26 Dec 1995
  - SPOT (Panchromatic) 22 Jan 1996
  - Aerial Photo Dec 1992
- SPOT and Landsat data have been presented at 1:100,000 scale and Aerial Photo (AP) at 1:50,000 scale.
- Sample from map sheet 5933.

### General Description of this Class

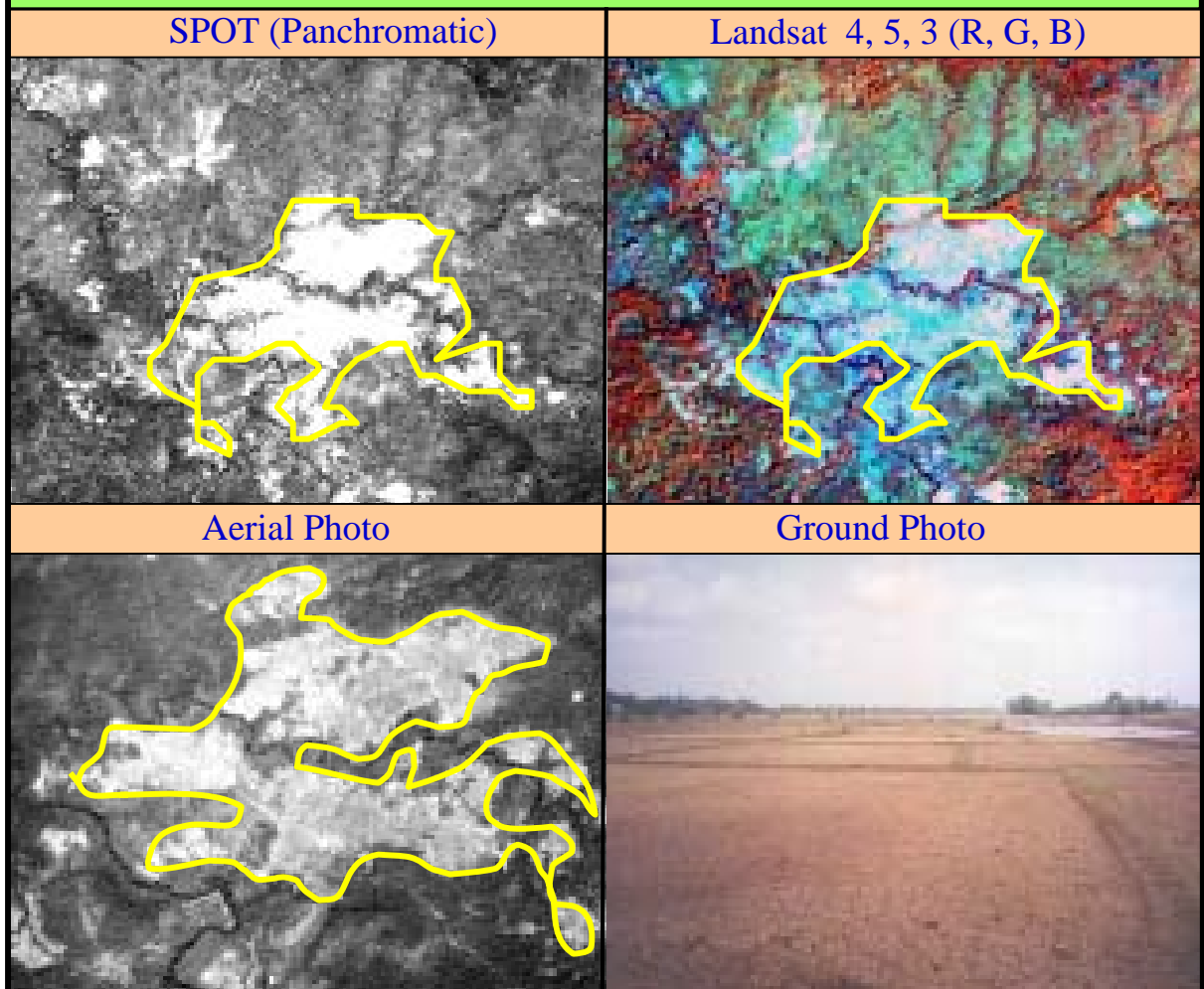
This includes the densely inhabited permanent settlements such as towns and villages. In general, these areas have too little space for agricultural activity or if occurs, only on nominal scale. This can be identified from the presence of roads, which besides connecting housing sectors, support commercial activities.

- On Landsat: House appears in very light gray and roads in bluish gray to light gray with association of red color where garden trees are present.
- On SPOT: House appears in very light gray and road in gray with association of dark spots where garden is present.
- On AP: House appears as pointed brightest tone and light grayish roads with scattered darker spots of associated garden trees.

## 2) Infrastructure (Airfield, playground, cemetery, etc.) (I)

SPOT (Panchromatic)	Landsat 4, 5, 3 (R, G, B)
	
Aerial Photo	Ground Photo
	
Data Description	
<ul style="list-style-type: none"> <li>- Date of Included Data <ul style="list-style-type: none"> <li>● Landsat (ETM) 27 Mar 2000</li> <li>● SPOT (Panchromatic) 21 Dec 1999</li> <li>● Aerial Photo Mar 1995</li> </ul> </li> <li>- SPOT and Landsat data have been presented at 1:100,000 scale and Aerial Photo (AP) at 1:50,000 scale.</li> <li>- Sample from map sheet 6336.</li> </ul>	
General Description of this Class	
<p>This includes specific types of infrastructures such as airfield, playground, cemetery, etc. These types of features can be easily recognizable due to their specific shape.</p> <ul style="list-style-type: none"> <li>● On Landsat: Airfield appears as long tarmac structure within larger area of natural vegetation and/or agricultural land. Similarly, playground and cemetery have their specific shape.</li> <li>● On SPOT: Airfield appears as very bright longer tarmac structure surrounded by darker tone. Similarly, playground and cemetery have their specific shape.</li> <li>● On AP: Airfield appears as bright longer tarmac structure surrounded by darker tone. Similarly, playground and cemetery have their specific shape.</li> </ul>	

### 3) Paddy field (Ar)



#### Data Description

- Date of Included Data
  - Landsat (ETM) 24 Dec 2000
  - SPOT (Panchromatic) 31 Jan 2001
  - Aerial Photo Mar 1995
- SPOT and Landsat data have been presented at 1:100,000 scale and Aerial Photo (AP) at 1:50,000 scale.
- Sample from map sheet 6334.

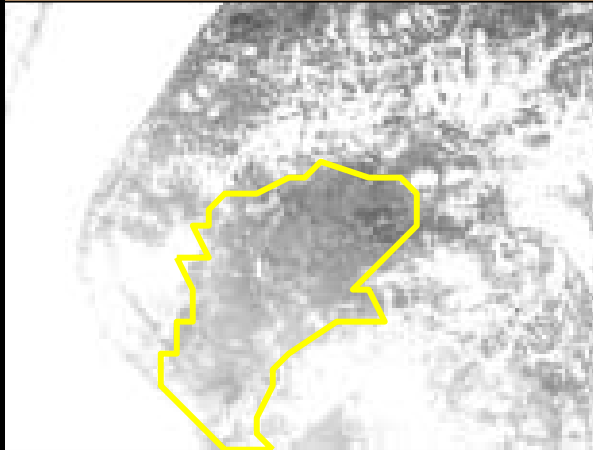
#### General Description of this Class

This refers to the areas permanently used for rice cultivation. Most of paddy fields occur in flat low-lying areas, such as on the plain or in the delta of basin. However, some of them can also be found at the valley bottom of hill where rice is cultivated along the streams in small plots. In most cases, paddy fields are associated with villages, and in some cases mixed with toddy palm trees.

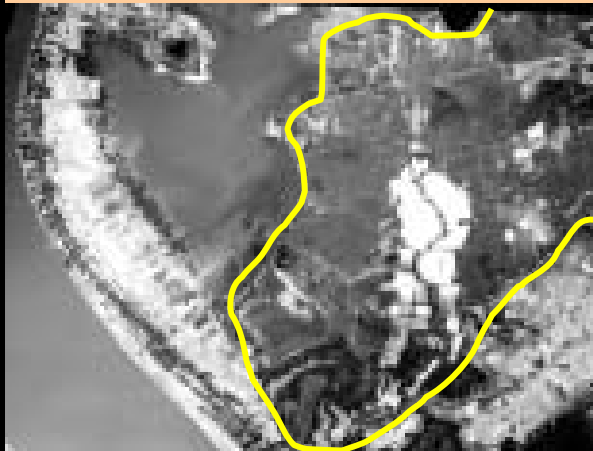
- On Landsat: Fine texture with color largely dependent on the field condition:
  - i) Bluish gray to bluish brown or light blue (for fallow field with wet soil or shallow water).
  - ii) Light gray, yellowish gray to gray (for harvested dry paddy field).
  - iii) Bluish red, light red, dark red to yellowish red (for cropped field).
- On SPOT: Fine texture, very light gray color, and sharp boundary with adjacent class.
- On AP: Medium to light gray, rectangular shape, fine to medium texture, fields are separated by dikes (often in medium to dark gray).

#### 4) Receding and Floating rice fields (Al)

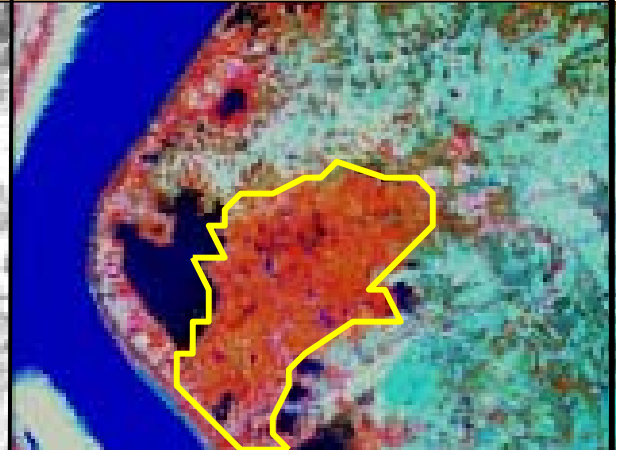
SPOT (Panchromatic)



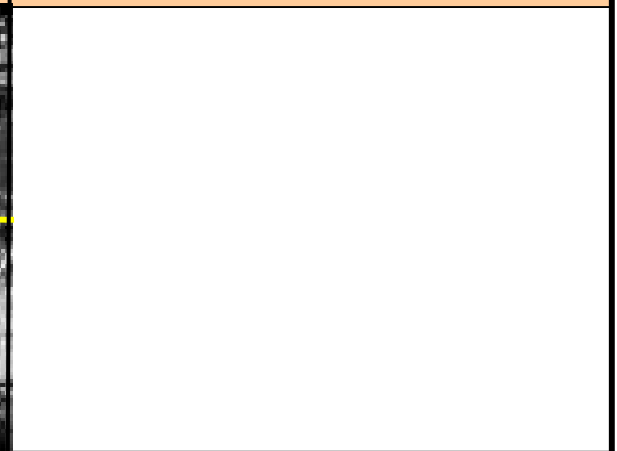
Aerial Photo



Landsat 4, 5, 3 (R, G, B)



Ground Photo



#### Data Description

- Date of Included Data
  - Landsat (ETM) 24 Dec 2000
  - SPOT (Panchromatic) 8 Feb 2001
  - Aerial Photo Mar 2000
- SPOT and Landsat data have been presented at 1:100,000 scale and Aerial Photo (AP) at 1:50,000 scale.
- Sample from map sheet 6234.

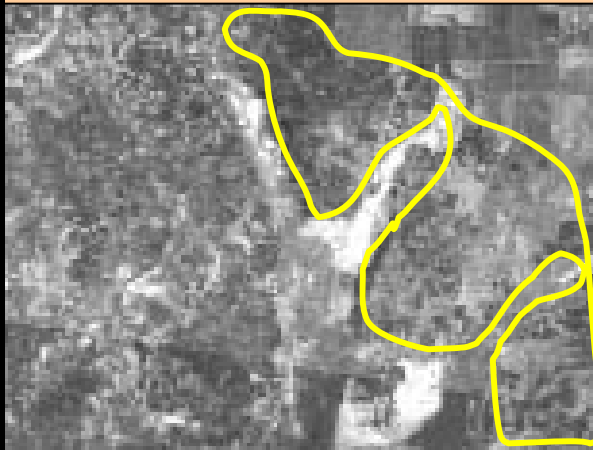
#### General Description of this Class

These are mainly found in flood plain, especially along the Tonle Sap Lake (a Khmer traditional rice cultivation around the Great Lake) and major rivers. They are relatively larger in size and longer in shape than normal paddy field (Ar).

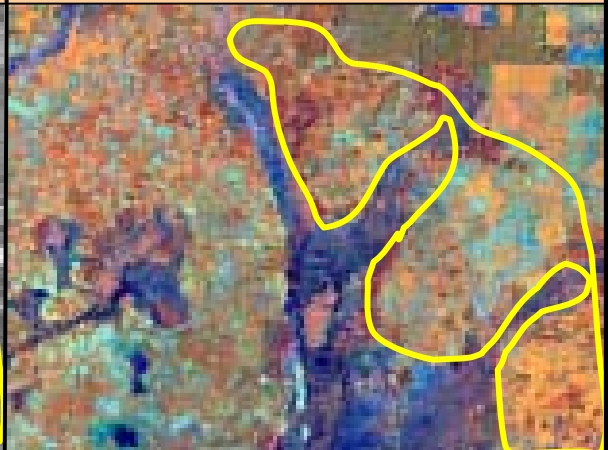
- On Landsat: The color changes seasonally as they appear as blue to dark blue (where cultivation has not begun and water is deep), magenta (where cultivation has begun and water is shallow), and red to dark red (where crop has significant height with very shallow water, e.g. in February imagery). The texture is fine and boundaries are clearly visible.
- On SPOT: They look as dark to Medium gray, regular boundary.
- On AP: Dark to medium gray, regular boundary often separated by dikes.

## 5) Field crop (Au)

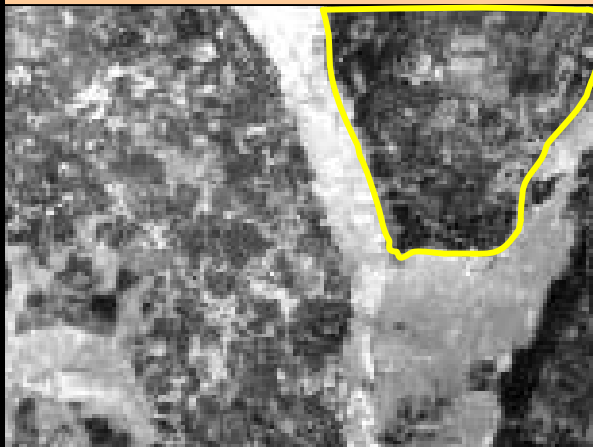
SPOT (Panchromatic)



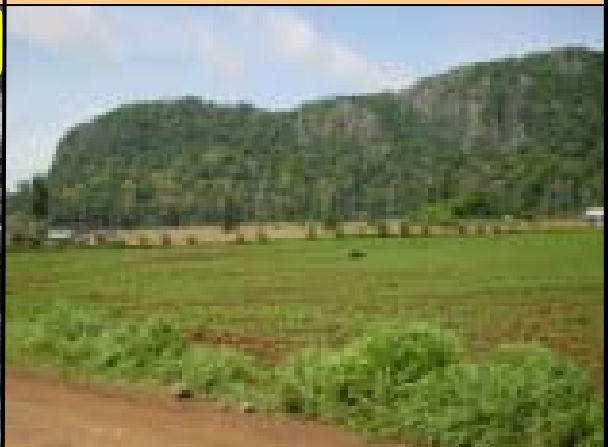
Landsat 4, 5, 3 (R, G, B)



Aerial Photo



Ground Photo



### Data Description

- Date of Included Data
  - Landsat (ETM) 6 Nov 2000
  - SPOT (Panchromatic) 8 Feb 2001
  - Aerial Photo Dec 2001
- SPOT and Landsat data have been presented at 1:100,000 scale and Aerial Photo (AP) at 1:50,000 scale.
- Sample from map sheet 6232.

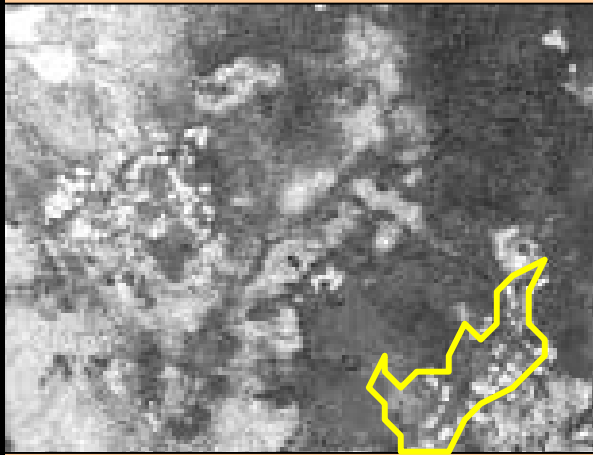
### General Description of this Class

It refers to agricultural fields typically occurring above the seasonally inundated (during monsoon) area, from plain to high terrace area. Crops in this category are generally other than paddy and may include corn, beans, tobacco and sugarcane, and others. These fields are located relatively on sloppy land near to road and path. Plot size is generally larger than that of paddy field.

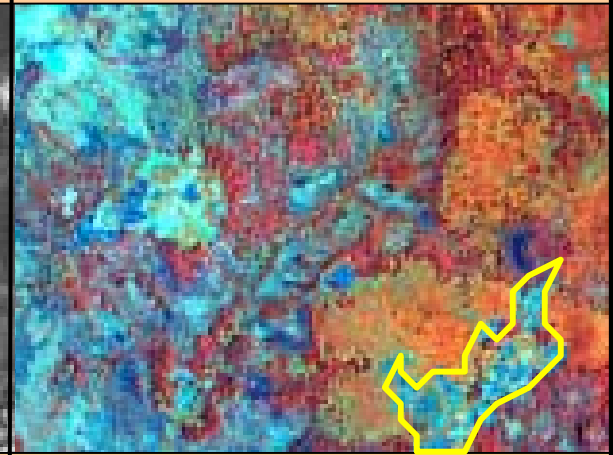
- On Landsat: Bluish light gray color with black color if area is burnt, more or less sharp boundary to adjacent areas.
- On SPOT: Very light gray, boundary to adjacent area is more or less sharp.
- On AP: light to medium gray tone, irregular shape, dikes between fields (often covered by trees or shrub in medium to dark tone).

## 6) Swidden agriculture (Slash and burn) (As)

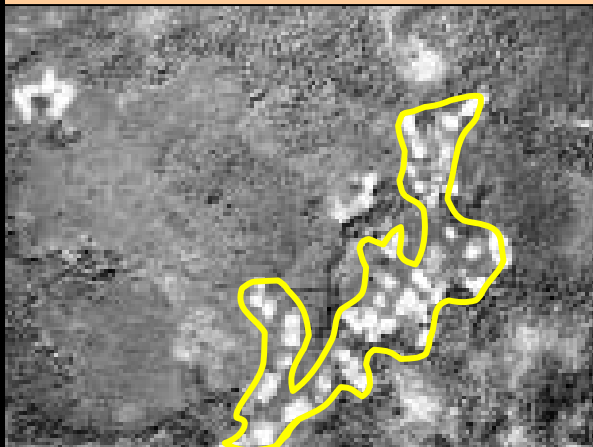
SPOT (Panchromatic)



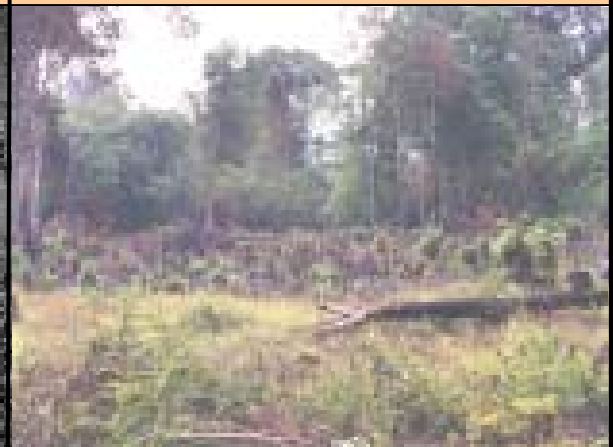
Landsat 4, 5, 3 (R, G, B)



Aerial Photo



Ground Photo



### Data Description

- Date of Included Data
  - Landsat (ETM) 27 Mar 2000
  - SPOT (Panchromatic) 01 Mar 2001
  - Aerial Photo Jan 2001
- SPOT and Landsat data have been presented at 1:100,000 scale and Aerial Photo (AP) at 1:50,000 scale.
- Sample from map sheet 6436.

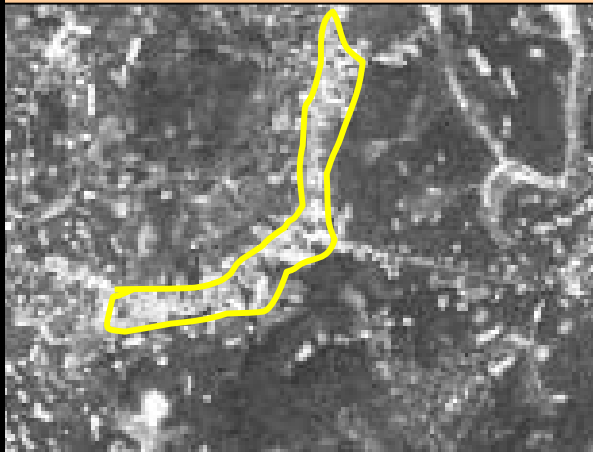
### General Description of this Class

It refers to area where the forest or other vegetation cover has been cut and burnt for temporary agricultural cultivation. Thus, in general, this zone occurs in between agricultural and forest/shrub lands, with more likely adjacent to the latter in the region of high terrace to hill and mountain. Cultivation activity is recognizable, because these lands are typically used for few years and afterwards, the plot is left fallow, allowing for growth of secondary vegetation, until the next rotation begins. In many cases, this kind of land is surrounded with parcels of shrubs (abandoned shifting cultivation), and forest. Generally, cultivated by tribe people. Crops in such areas may include hill rice, cassava, beans, and others.

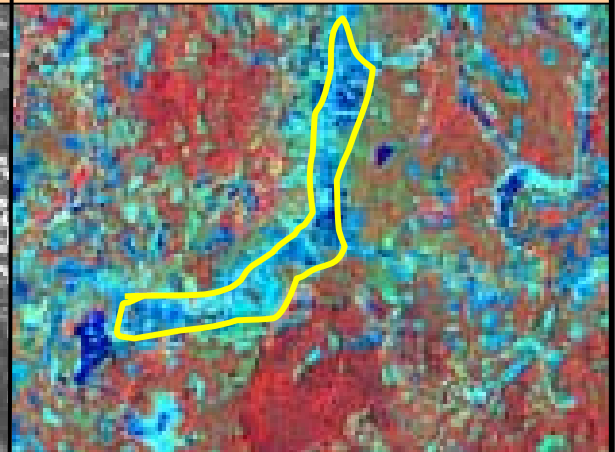
- On Landsat: Medium to deep blue (currently active) or light blue color (last year shifting cultivation), irregular shape, and sharp boundary to adjacent vegetation cover.
- On SPOT: Light gray, irregular shape, sharp boundary to adjacent vegetation cover spread over within shrub land or forest region.
- On AP: Light to medium gray, fine texture, irregular shape, sharp boundary with adjacent vegetation cover.

## 7) Orchard (Ao)

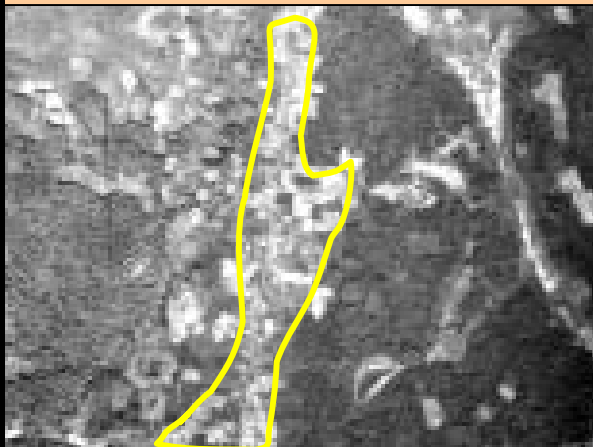
SPOT (Panchromatic)



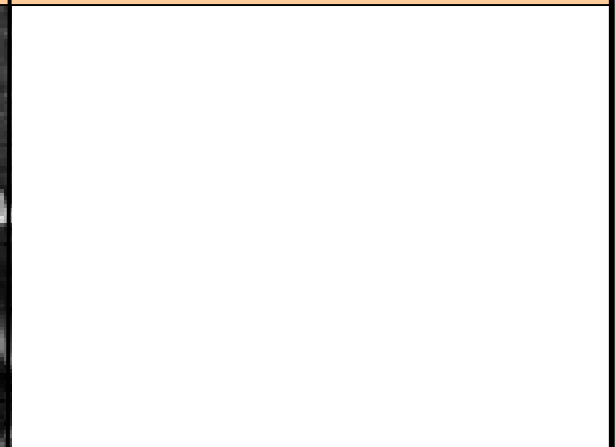
Landsat 4, 5, 3 (R, G, B)



Aerial Photo



Ground Photo



### Data Description

- Date of Included Data
  - Landsat (ETM) 27 Mar 2000
  - SPOT (Panchromatic) 01 Mar 2001
  - Aerial Photo Jan 2001
- SPOT and Landsat data have been presented at 1:100,000 scale and Aerial Photo (AP) at 1:50,000 scale.
- Sample from map sheet 6436.

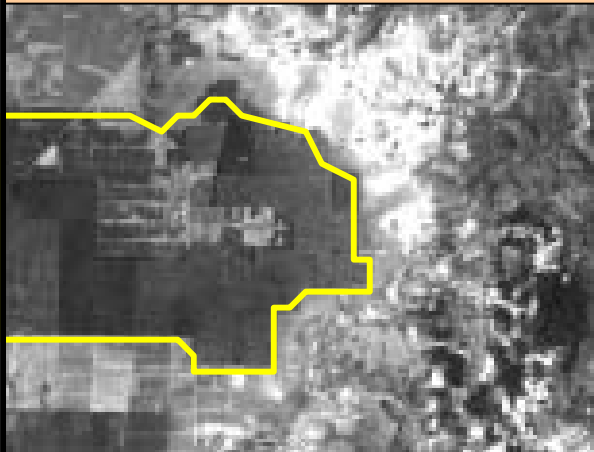
### General Description of this Class

This refers to the areas used for fruit tree cultivation, often located near the settlement, along river, or in moderate hills. Fields are relatively larger in size.

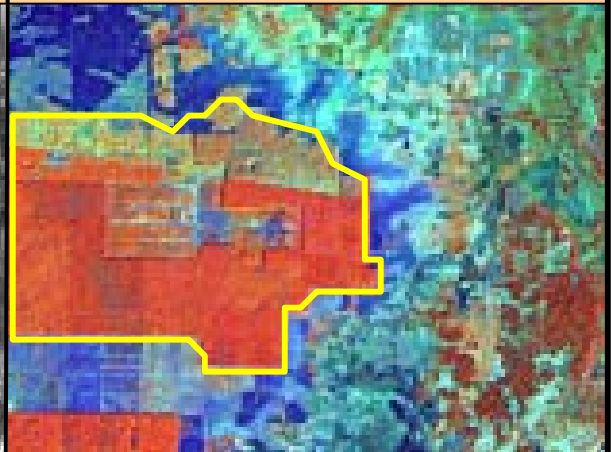
- On Landsat: Light red to brownish red color depending upon their developing stage, medium texture. Boundary of orchard is generally clear.
- On SPOT: Medium to dark gray, medium texture.
- On AP: Medium to dark gray tone, medium to coarse texture with regular pattern of rows. Sometimes, tree height can be observed.

## 8) Plantation (Rubber plantation) (Ap)

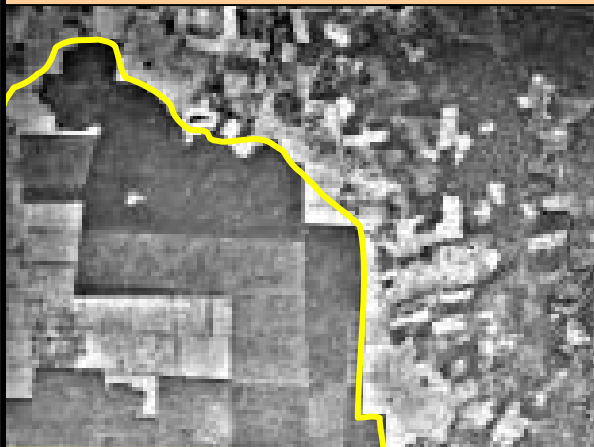
SPOT (Panchromatic)



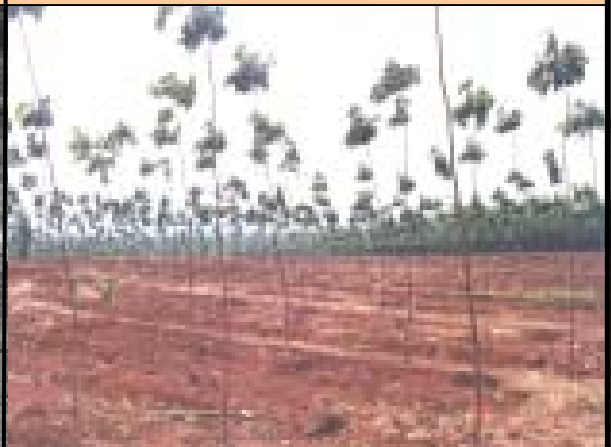
Landsat 4, 5, 3 (R, G, B)



Aerial Photo



Ground Photo



### Data Description

- Date of Included Data
  - Landsat (TM) 21 Feb 1996
  - SPOT (Panchromatic) 4 Mar 1996
  - Aerial Photo Dec 1992
- SPOT and Landsat data have been presented at 1:100,000 scale and Aerial Photo (AP) at 1:50,000 scale.
- Sample from map sheet 6133.

### General Description of this Class

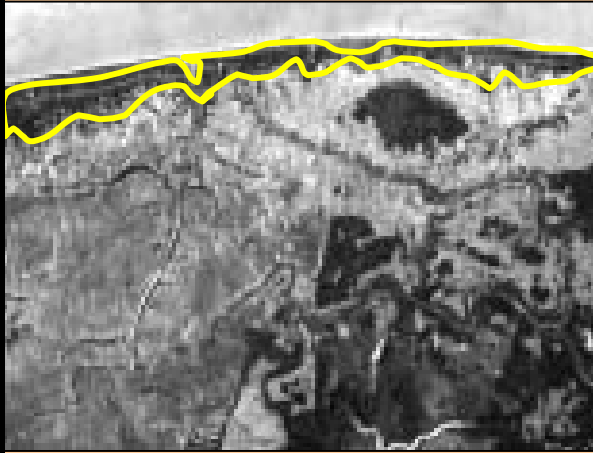
It refers to the area with Rubber plantation. Relatively larger in size and located in sloppy area often near road.

- On Landsat: Light to medium gray tone, fine texture.
- On SPOT: Bluish light gray (young plantation) or yellowish to medium red (old plantation). Generally, the texture of the plantation is fine.
- On AP: Light to medium gray tone, trees are in rows (regular pattern), fine to medium texture, tree height can be observed (with old plantation). Clear road between parcels can be seen.

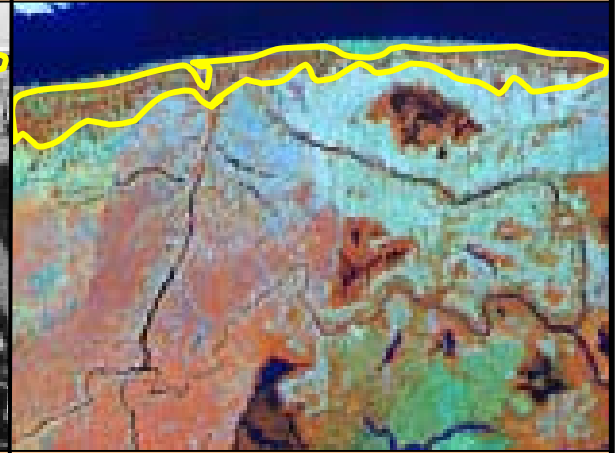


## 9) Village garden crop (Av)

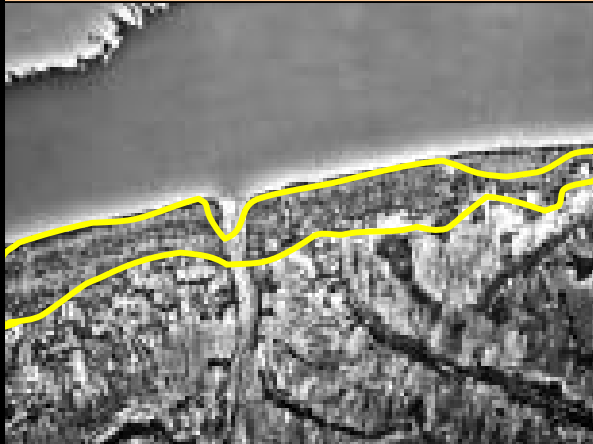
SPOT (Panchromatic)



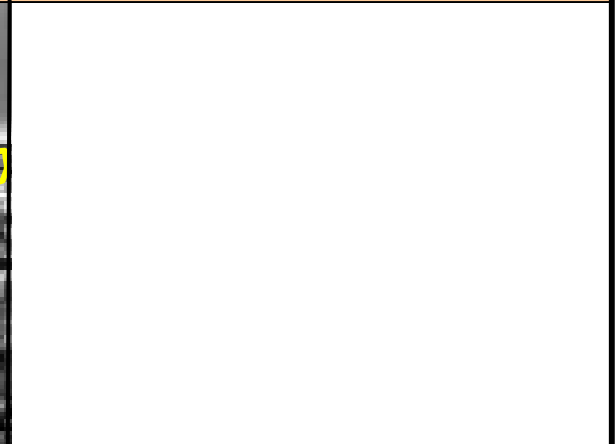
Landsat 4, 5, 3 (R, G, B)



Aerial Photo



Ground Photo



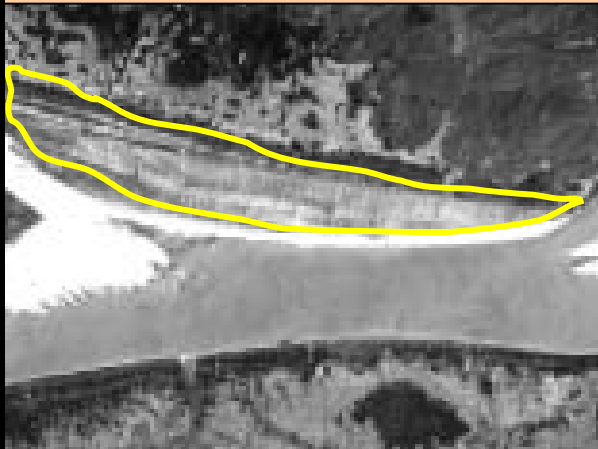



### Data Description

- Date of Included Data
  - Landsat (TM) 21 Feb 1996
  - SPOT (Panchromatic) 4 Mar 1996
  - Aerial Photo Dec 1992
- SPOT and Landsat data have been presented at 1:100,000 scale and Aerial Photo (AP) at 1:50,000 scale.
- Sample from map sheet 6133.

### General Description of this Class

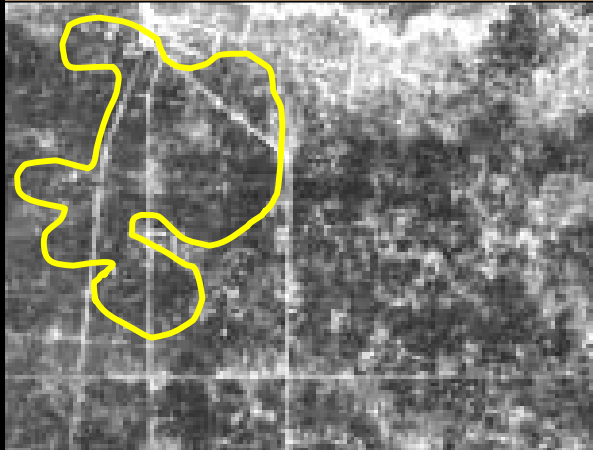
This includes the agri-activity occurring in the proximity of (adjacent to) village, which get seasonally inundated likes floodplain. The plot may be combination of fruit trees and field crops.

- On Landsat: This class shows up as structured areas of small parcels of field with red color of fruit gardens mixed with small settlement area. Texture of such area is medium.
- On SPOT: Medium to light gray intermixed (light gray of house and dark gray of tree).
- On AP: Medium to light gray houses mixed with dark gray tone of trees.

10) Garden crop (Ag)	
SPOT (Panchromatic)	Landsat 4, 5, 3 (R, G, B)
	
Aerial Photo	Ground Photo
	
Data Description	
<ul style="list-style-type: none"> <li>- Date of Included Data <ul style="list-style-type: none"> <li>● Landsat (TM) 21 Feb 1996</li> <li>● SPOT (Panchromatic) 4 Mar 1996</li> <li>● Aerial Photo Dec 1992</li> </ul> </li> <li>- SPOT and Landsat data have been presented at 1:100,000 scale and Aerial Photo (AP) at 1:50,000 scale.</li> <li>- Sample from map sheet 6133.</li> </ul>	
General Description of this Class	
<p>This includes the agri-activity occurring along the Mekong main stream, which gets seasonally inundated. Plots generally are located perpendicular to rivers and consist of vegetables and cash crops such as beans, corns, sugarcanes, and tobacco.</p> <ul style="list-style-type: none"> <li>● On Landsat: Orange and light gray to bluish white color, texture medium.</li> <li>● On SPOT: Light to medium gray, texture fine to medium.</li> <li>● On AP: Light gray to medium gray, texture fine to medium.</li> </ul>	

## 11) Paddy field with villages (Arv)

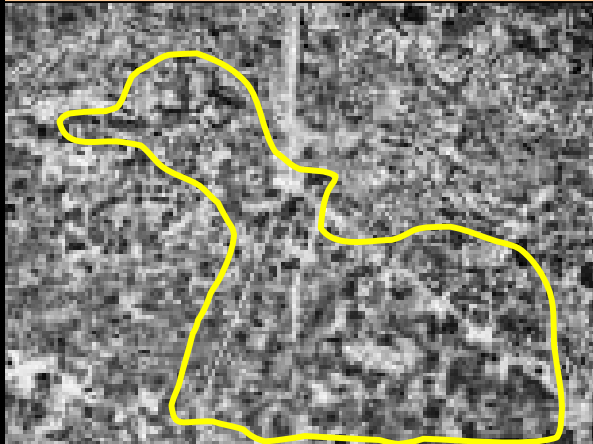
SPOT (Panchromatic)



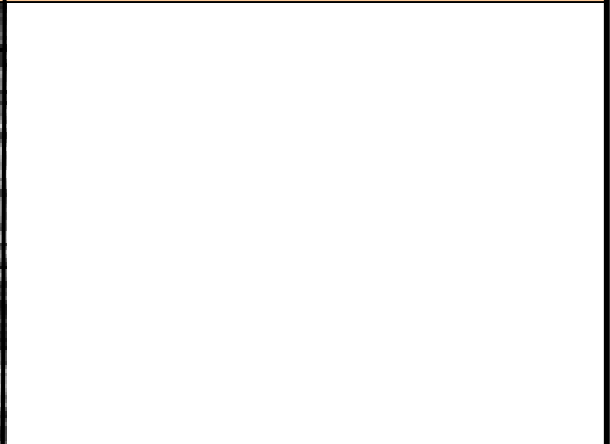
Landsat 4, 5, 3 (R, G, B)



Aerial Photo



Ground Photo



### Data Description

- Date of Included Data
  - Landsat (TM) 26 Dec 1995
  - SPOT (Panchromatic) 16 Nov 1992
  - Aerial Photo Dec 1992
- SPOT and Landsat data have been presented at 1:100,000 scale and Aerial Photo (AP) at 1:50,000 scale.
- Sample from map sheet 5931.

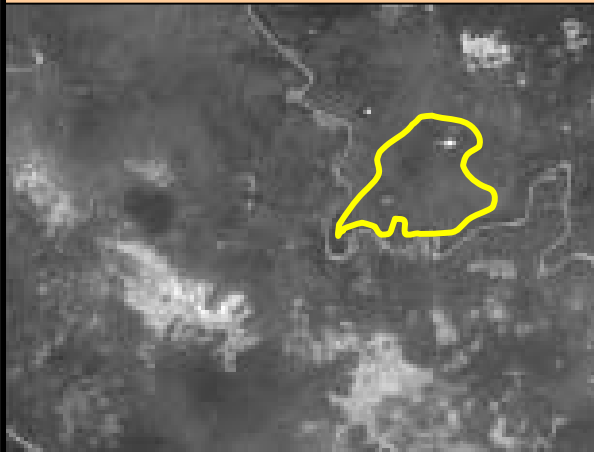
### General Description of this Class

This class is similar to that of paddy fields. The only difference is that there are clusters of villages scattered in area of this class, which makes the delineation of villages from paddy fields difficult at this scale of Landsat (TM/ETM) imagery.

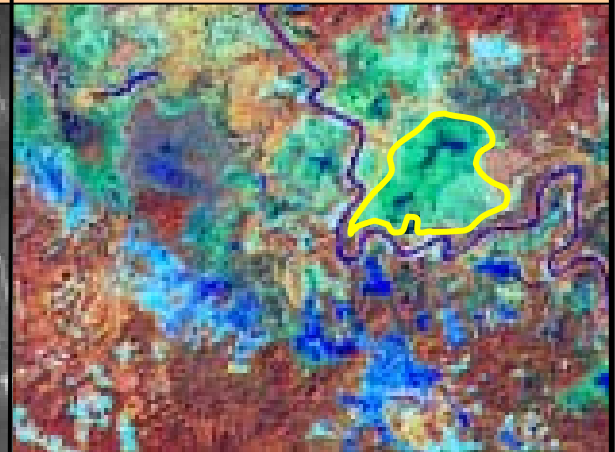
- On Landsat: Similar to paddy field (Ar) but includes patches (or spots) of bright color of village.
- On SPOT: Medium to light gray intermixed with bright patches, texture medium to coarse.
- On AP: Medium to light gray intermixed with bright patches, texture medium to coarse.

## 12) Grassland (undifferentiated) (G)

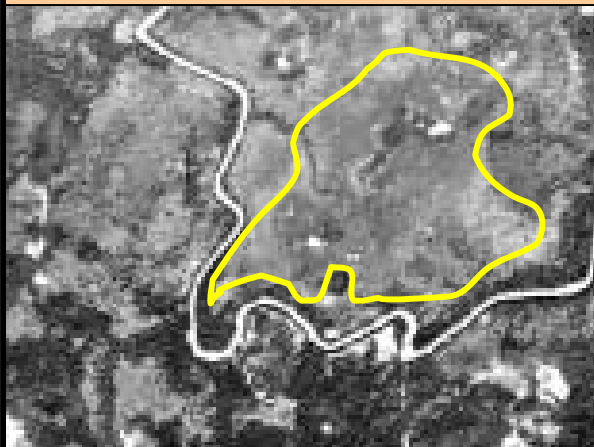
SPOT (Panchromatic)



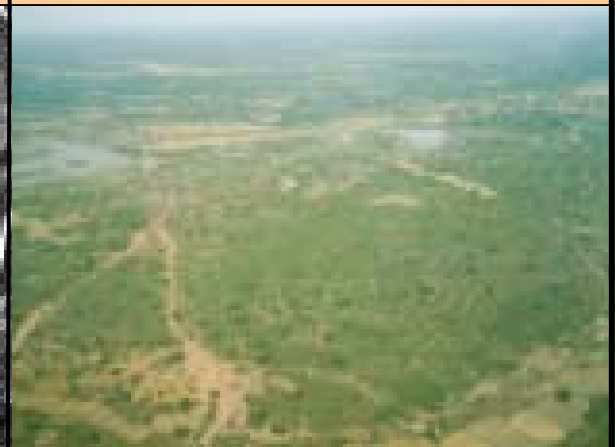
Landsat 4, 5, 3 (R, G, B)



Aerial Photo



Ground Photo



### Data Description

- Date of Included Data
  - Landsat (TM) 28 Nov 1999
  - SPOT (Panchromatic) 31 Jan 2001
  - Aerial Photo Dec 1994
- SPOT and Landsat data have been presented at 1:100,000 scale and Aerial Photo (AP) at 1:50,000 scale.
- Sample from map sheet 6233.

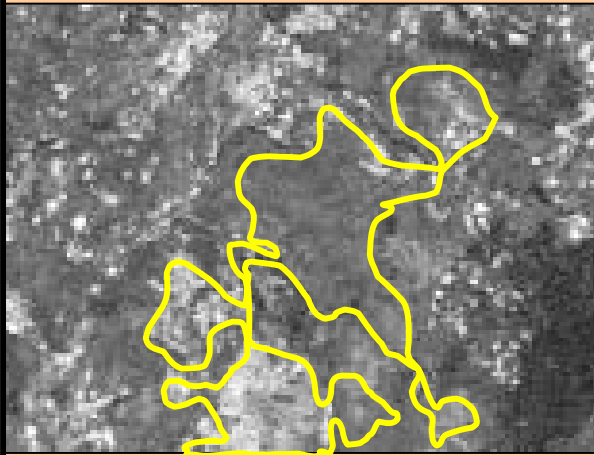
### General Description of this Class

It refers to infertile or degraded land on which no tree or shrub can grow naturally. It might be an area that is too dry to support trees but has been significantly covered by grasses under the prevailing environment. This category of Grassland can also be found on deep sand.

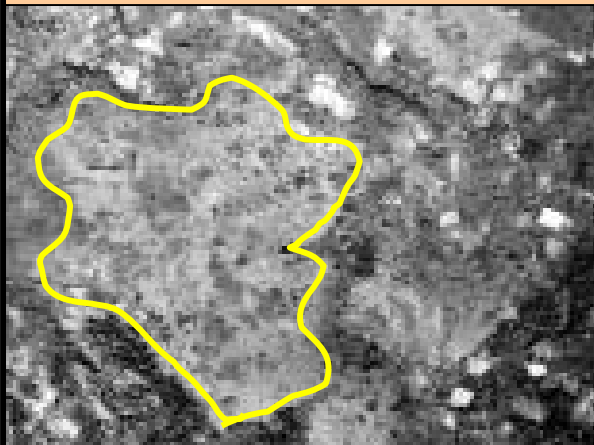
- On Landsat: Such land appears in gray (dry grass) to orangish yellow (healthy grass) to black (burnt). Its texture is fine for dry and healthy, and medium for burnt grass.
- On SPOT: Light medium gray for dry & healthy, and dark gray for burnt), medium texture, and irregular boundary.
- On AP: Light medium gray for dry & healthy, and dark gray for burnt), medium texture, and irregular boundary.

### 13) Abandoned field covered by grass (Ga)

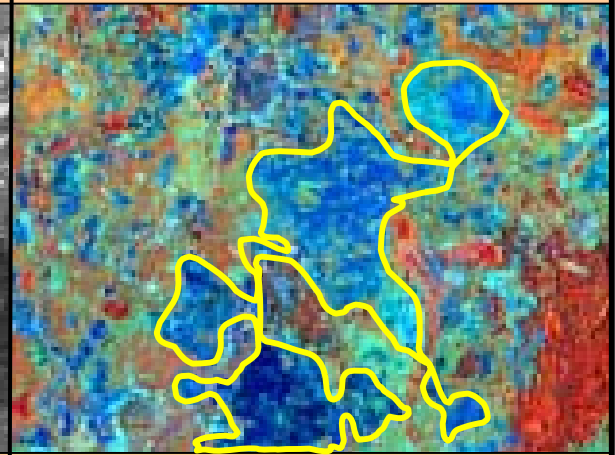
SPOT (Panchromatic)



Aerial Photo



Landsat 4, 5, 3 (R, G, B)



Ground Photo



#### Data Description

- Date of Included Data
  - Landsat (ETM) 27 Mar 2000
  - SPOT (Panchromatic) 01 Mar 2001
  - Aerial Photo Jan 2001
- SPOT and Landsat data have been presented at 1:100,000 scale and Aerial Photo (AP) at 1:50,000 scale.
- Sample from map sheet 6436.

#### General Description of this Class

It refers to the agricultural field left uncultivated for sufficient period, which has favored to grow grasses significantly. Otherwise, such field is potential for agricultural cultivation.

- On Landsat: In general, reddish to dark brown color, fine to medium texture but coarser than that of paddy fields.
- On SPOT: Light gray tone, fine texture.
- On AP: Light to medium gray tone, fine to medium texture.

## 14) Flooded grassland (Gf)

SPOT (Panchromatic)



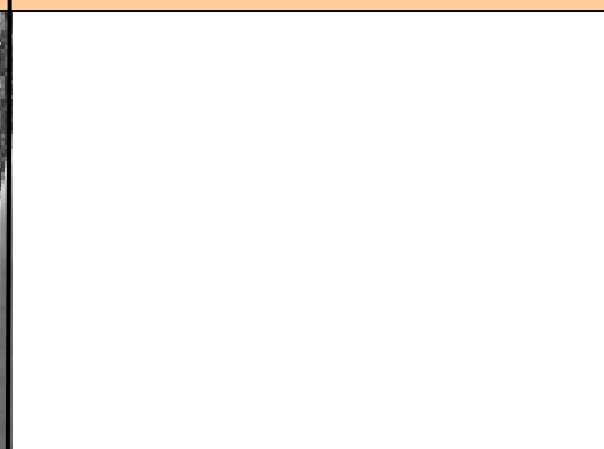
Landsat 4, 5, 3 (R, G, B)



Aerial Photo



Ground Photo



### Data Description

- Date of Included Data
  - Landsat (TM) 26 Dec 1995
  - SPOT (Panchromatic) 22 Dec 1995
  - Aerial Photo Dec 1992
- SPOT and Landsat data have been presented at 1:100,000 scale and Aerial Photo (AP) at 1:50,000 scale.
- Sample from map sheet 6133.

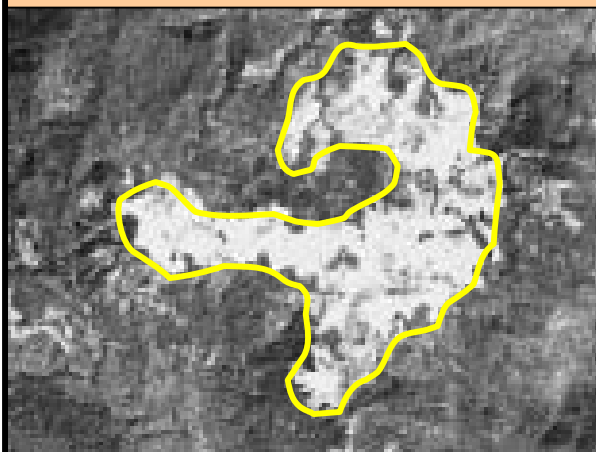
### General Description of this Class

It refers to the grassland that gets seasonally flooded, such as along the Mekong river and in the delta, especially around the Tonle Sap lake. This also includes the floating grassland found especially around the Tonle Sap lake.

- On Landsat: Flooded grassland appears as dark brown color. Its texture is fine. Floating grass appears as pink rose color.
- On SPOT: Light to medium gray tone, medium to coarse texture.
- On AP: Light to medium gray tone, medium to coarse texture.

## 15) Grass savannah (Gs)

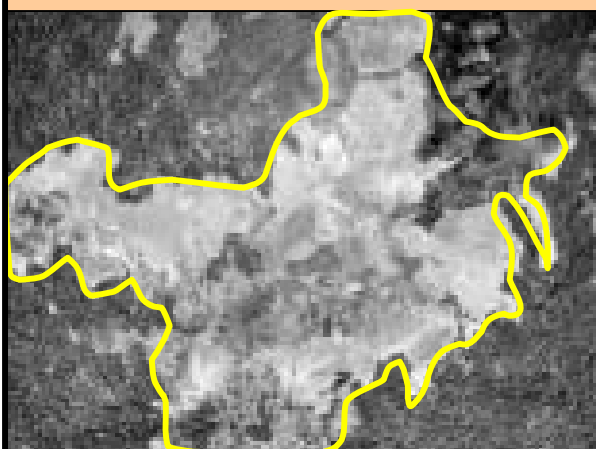
SPOT (Panchromatic)



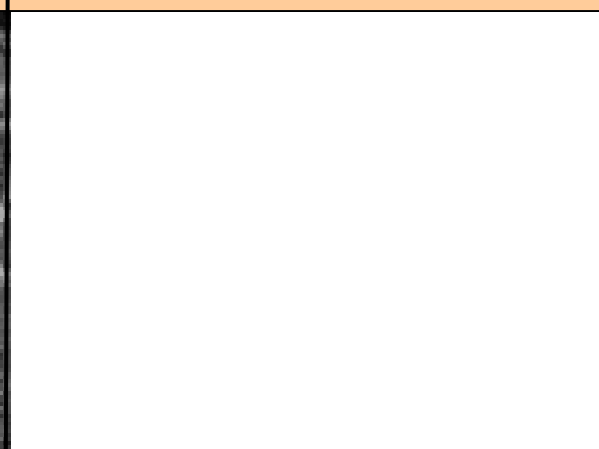
Landsat 4, 5, 3 (R, G, B)



Aerial Photo



Ground Photo



### Data Description

- Date of Included Data
  - Landsat (ETM) 27 Mar 2000
  - SPOT (Panchromatic) 1 Mar 2001
  - Aerial Photo Feb 1997
- SPOT and Landsat data have been presented at 1:100,000 scale and Aerial Photo (AP) at 1:50,000 scale.
- Sample from map sheet 6437.

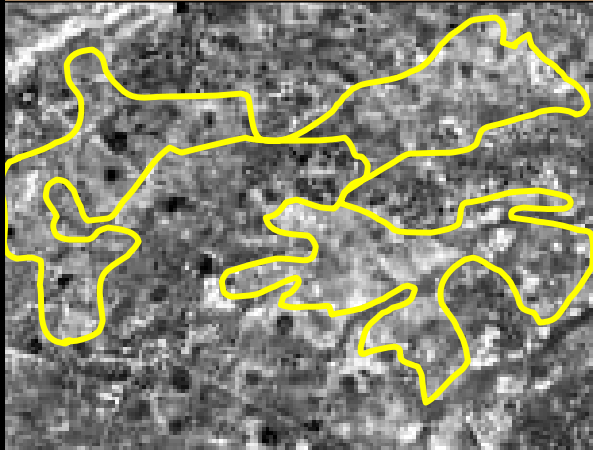
### General Description of this Class

It refers to the area with soil conditions that are not suitable for either tree growth or agriculture production, but covered by graminaceous and herbaceous plants forming a story under scattered trees. Such trees are drought resistant and shorter. Normally, the savannah does not occur on very steep slopes, but in plains.

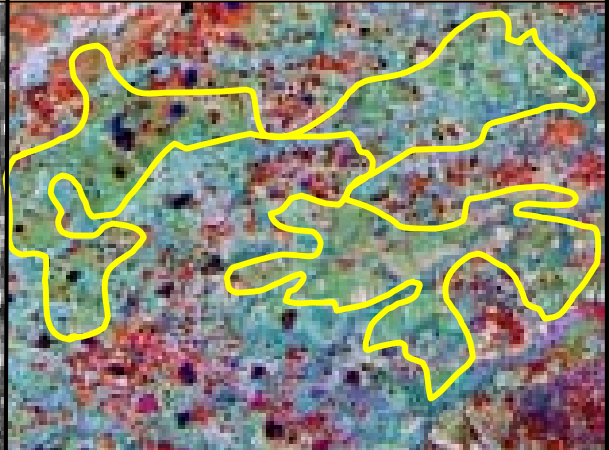
- On Landsat: This class appears with light yellow to light gray color.
- On SPOT: Medium to light gray, irregular boundary, fine texture.
- On AP: Medium gray, irregular boundary, fine texture.

## 16) Grass with termite mounds (Gm)

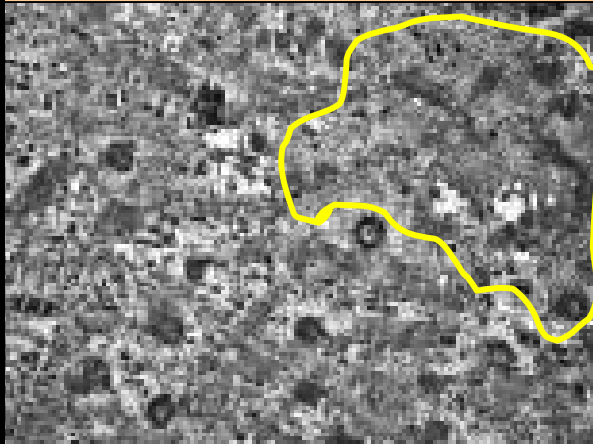
SPOT (Panchromatic)



Landsat 4, 5, 3 (R, G, B)



Aerial Photo



Ground Photo



### Data Description

- Date of Included Data
  - Landsat (TM) 26 Dec 1995
  - SPOT (Panchromatic) 22 Nov 1995
  - Aerial Photo Dec 1992
- SPOT and Landsat data have been presented at 1:100,000 scale and Aerial Photo (AP) at 1:50,000 scale.
- Sample from map sheet 5932.

### General Description of this Class

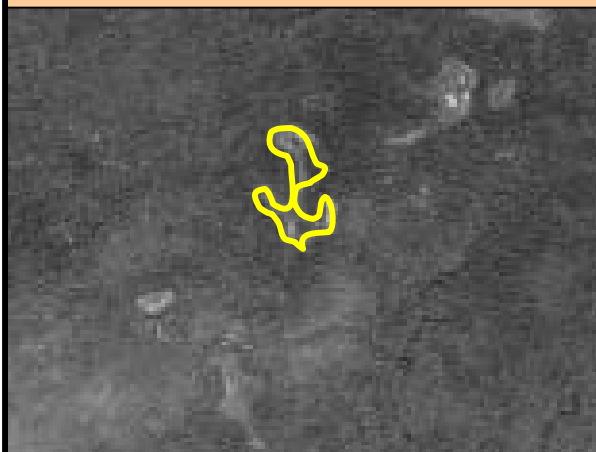
This category of grassland has scattered termite mounds covering the significant area. This is usually found in high land above the flooding zone.

- On Landsat: It appears in white to whitish yellow color. Texture is coarse.
- On SPOT: Medium to dark tone, fine texture.
- On AP: Medium to dark tone, fine texture.

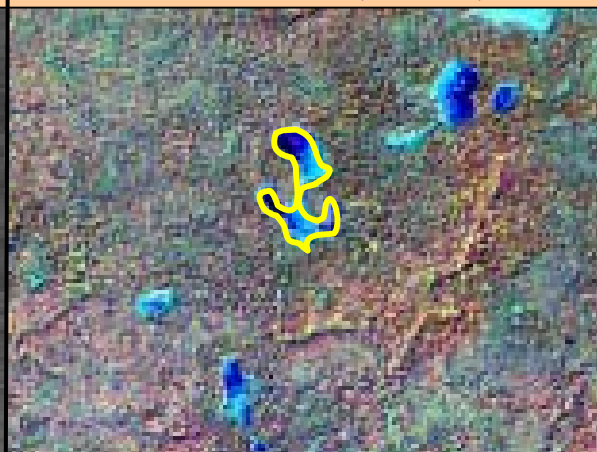


## 17) Marsh and swamp (Ms)

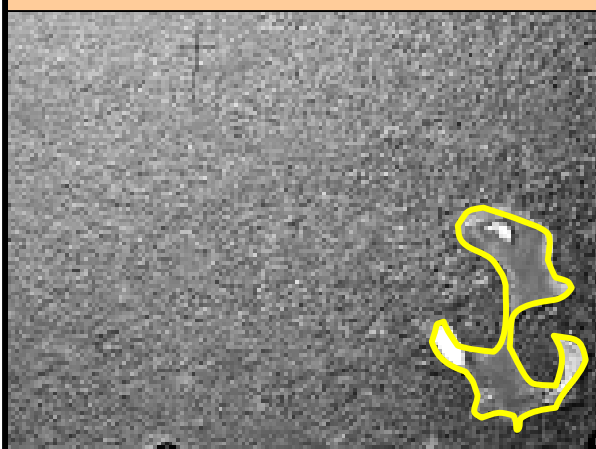
SPOT (Panchromatic)



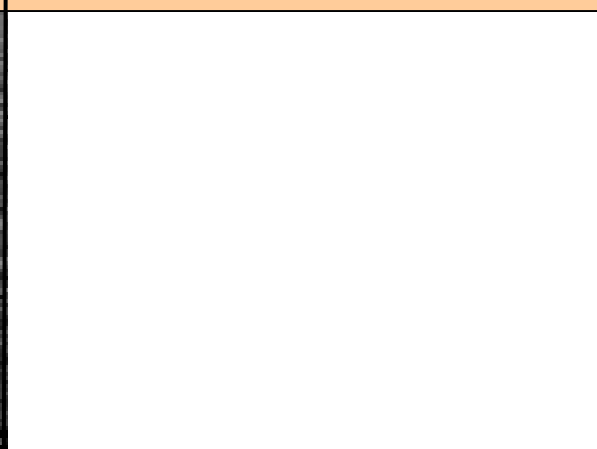
Landsat 4, 5, 3 (R, G, B)



Aerial Photo



Ground Photo



### Data Description

- Date of Included Data
  - Landsat (TM) 28 Nov 1999
  - SPOT (Panchromatic) 31 Jan 2001
  - Aerial Photo Dec 1994
- SPOT and Landsat data have been presented at 1:100,000 scale and Aerial Photo (AP) at 1:50,000 scale.
- Sample from map sheet 6333.

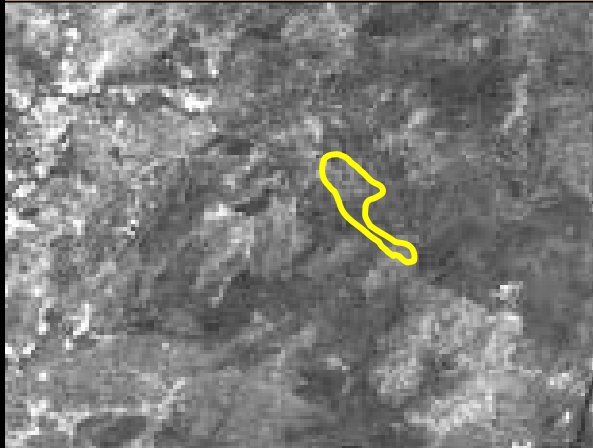
### General Description of this Class

Marshes are muddy areas along the seashore or lakes, often associated with grass. Swamps are the areas with excessive saturated water. The soil is basically fertile but the lack of oxygen limits its agricultural or forest production capacity. In general, swamps are found in inland zone around the Tonle Sap lake.

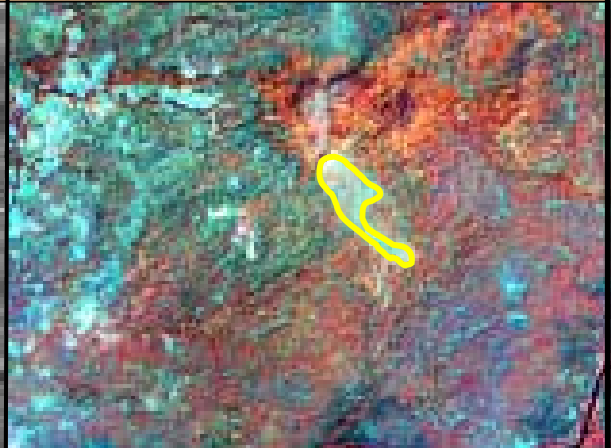
- On Landsat: These areas have generally dark gray color, fine texture.
- On SPOT: Medium to dark tone, fine texture.
- On AP: Medium to dark tone, fine texture.

## 18) Shrubland (undifferentiated) (S)

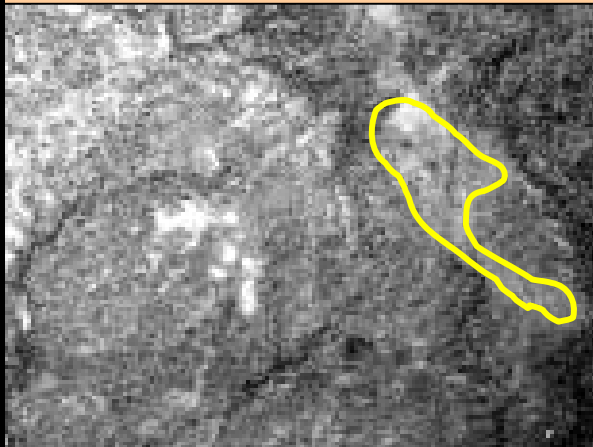
SPOT (Panchromatic)



Landsat 4, 5, 3 (R, G, B)



Aerial Photo



Ground Photo



### Data Description

- Date of Included Data
  - Landsat (TM) 28 Nov 1999
  - SPOT (Panchromatic) 8 Feb 2001
  - Aerial Photo Dec 2001
- SPOT and Landsat data have been presented at 1:100,000 scale and Aerial Photo (AP) at 1:50,000 scale.
- Sample from map sheet 6233.

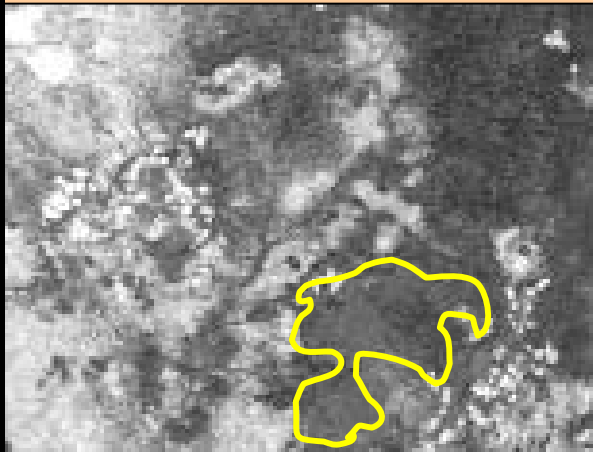
### General Description of this Class

Shrubland is located in area with infertile shallow soil and mainly found in the zone between permanent agriculture and forest, and along the tributaries of main rivers.

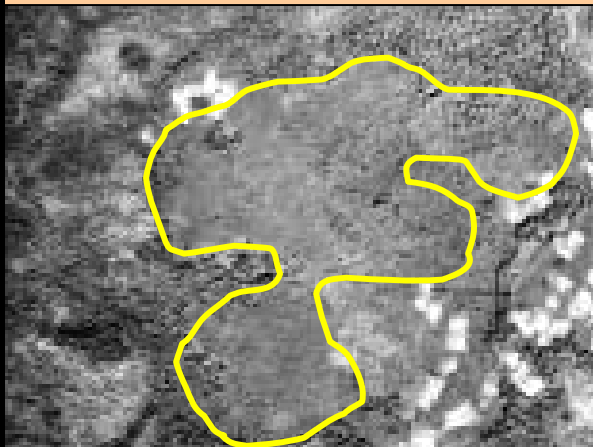
- On Landsat: This appears with light red color and smooth texture.
- On SPOT: Light to medium gray tone, medium texture.
- On AP: Light to medium gray tone, medium to coarse texture.

## 19) Abandoned field covered by shrub (Sa)

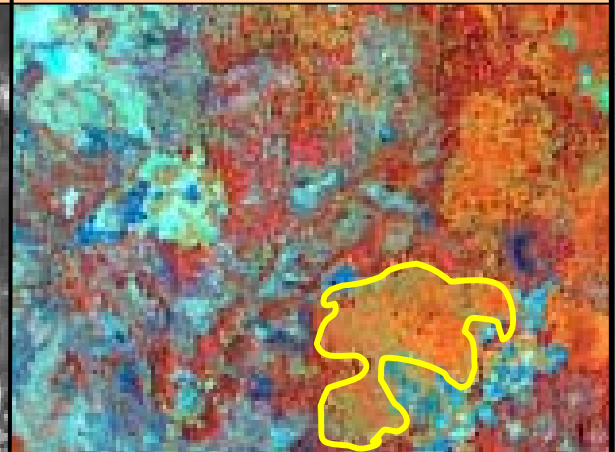
SPOT (Panchromatic)



Aerial Photo



Landsat 4, 5, 3 (R, G, B)



Ground Photo



### Data Description

- Date of Included Data
  - Landsat (ETM) 27 Mar 2000
  - SPOT (Panchromatic) 1 Mar 2001
  - Aerial Photo Jan 2001
- SPOT and Landsat data have been presented at 1:100,000 scale and Aerial Photo (AP) at 1:50,000 scale.
- Sample from map sheet 6436.

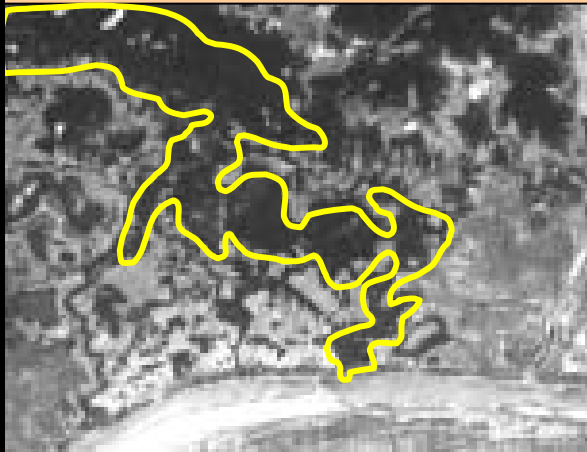
### General Description of this Class

It refers to shrubland resulted from the abandoning of paddy/Sweden agriculture/fields for several years. Boundary to adjacent vegetation cover may or may not be sharp.

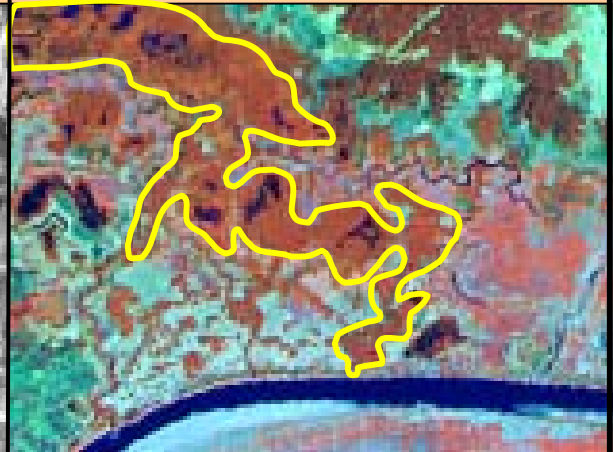
- On Landsat: Bluish light gray (sparse shrub) or bluish yellow (with dense shrub), medium to coarse texture, irregular shape
- On SPOT: Light to medium gray, fine to medium texture, irregular shape.
- On AP: Very light to light gray, fine to medium texture, irregular shape.

## 20) Flooded shrub (Sf)

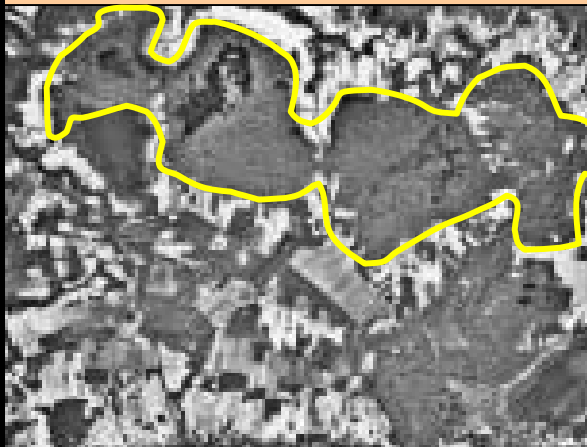
SPOT (Panchromatic)



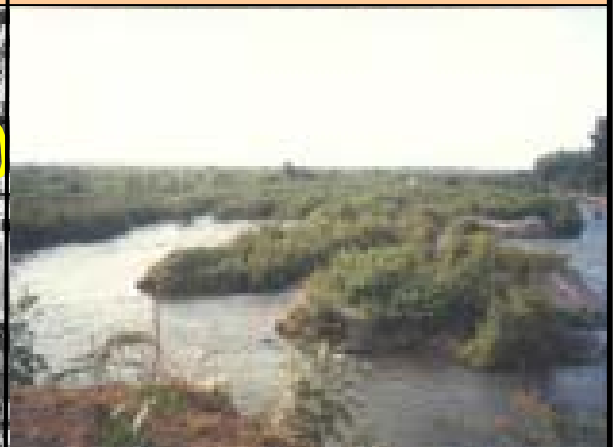
Landsat 4, 5, 3 (R, G, B)



Aerial Photo



Ground Photo



### Data Description

- Date of Included Data
  - Landsat (TM) 27 Jan 1996
  - SPOT (Panchromatic) 4 Mar 1996
  - Aerial Photo Dec 1993
- SPOT and Landsat data have been presented at 1:100,000 scale and Aerial Photo (AP) at 1:50,000 scale.
- Sample from map sheet 6133.

### General Description of this Class

It refers to shrubland that gets seasonally flooded. This class of land is mainly concentrated within the Mekong corridor and in the delta, especially around the Tonle Sap lake.

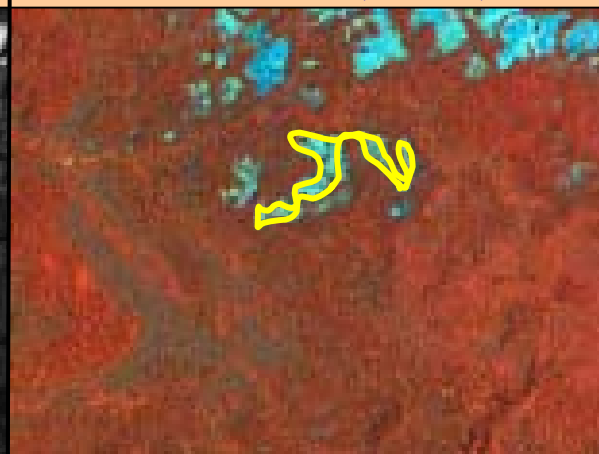
- On Landsat: This appears as light orange mixed with grayish color, medium to coarse texture.
- On SPOT: Medium grayish tone, medium texture.
- On AP: medium to dark gray, medium to coarse texture.

## 21) Woodland and scattered trees (C < 10%) (St)

SPOT (Panchromatic)



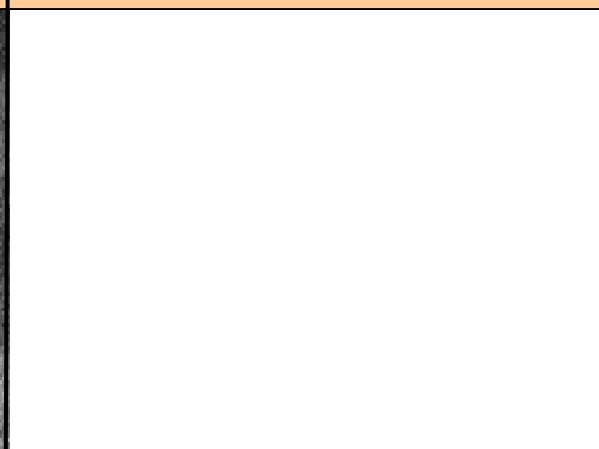
Landsat 4, 5, 3 (R, G, B)



Aerial Photo



Ground Photo



### Data Description

- Date of Included Data
  - Landsat (ETM) 27 Mar 2000
  - SPOT (Panchromatic) 19 Feb 2001
  - Aerial Photo Dec 1992
- SPOT and Landsat data have been presented at 1:100,000 scale and Aerial Photo (AP) at 1:50,000 scale.
- Sample from map sheet 6236.

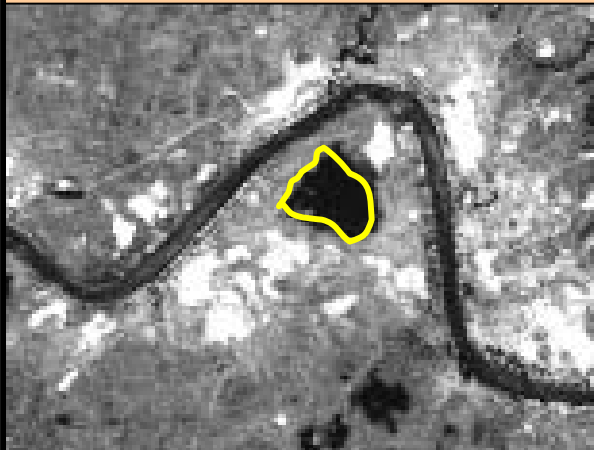
### General Description of this Class

These refer to areas with scattered trees, but with crown closure less than 10% (naturally or artificially). Under natural condition, this class generally occurs on infertile shallow soil and older stands of undisturbed shrub land while artificially this might have resulted due to logging of trees from forest.

- On Landsat: Bluish light to very light gray, medium texture.
- On SPOT: Light to very light gray tone, medium to coarse texture.
- On AP: Medium to light gray tone, medium texture, individual tree crowns and undergrowth vegetation cover can be observed.

## 22) Evergreen broad leaved forest (Fe)

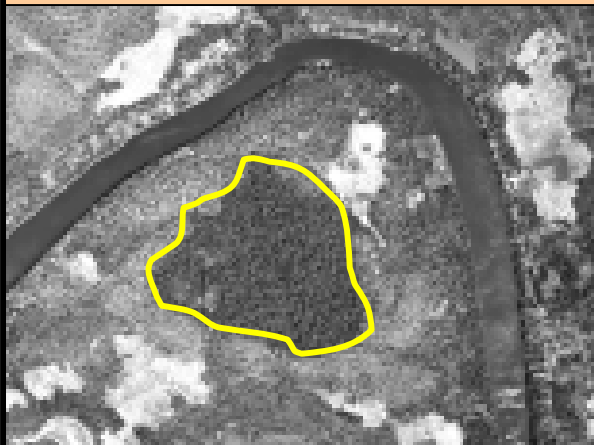
SPOT (Panchromatic)



Landsat 4, 5, 3 (R, G, B)



Aerial Photo



Ground Photo



### Data Description

- Date of Included Data
  - Landsat (ETM) 24 Dec 2000
  - SPOT (Panchromatic) 8 Feb 2001
  - Aerial Photo Jan 1996
- SPOT and Landsat data have been presented at 1:100,000 scale and Aerial Photo (AP) at 1:50,000 scale.
- Sample from map sheet 6335.

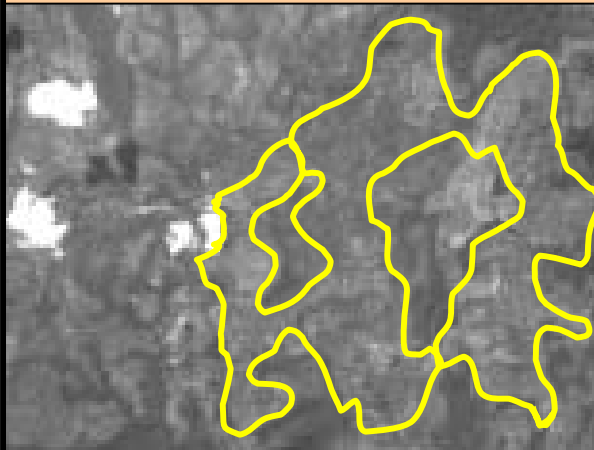
### General Description of this Class

It refers to the multi-story forest dominated by evergreen species. This category of forest is found in areas usually not subjected to inundation, such as upland and mountainous region. In the study area, these are found as solid block.

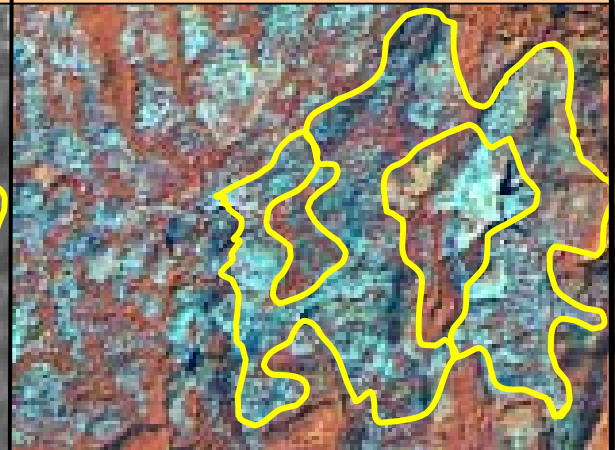
- On Landsat: This category has red or dark red color, medium texture, and irregular pattern.
- On SPOT: Medium to dark gray tone, medium texture, irregular pattern.
- On AP: Medium to dark gray tone, coarse texture.

## 23) Coniferous forest (Fc)

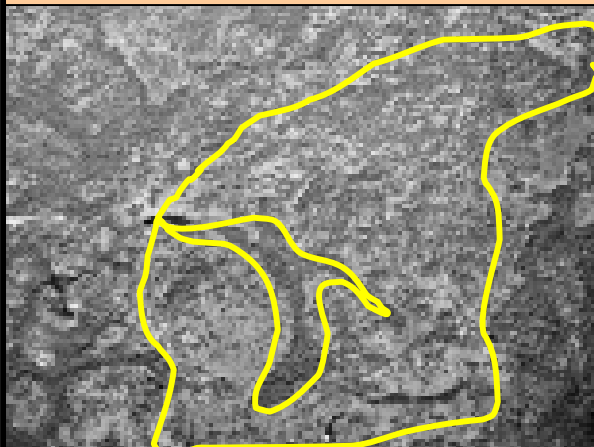
SPOT (Panchromatic)



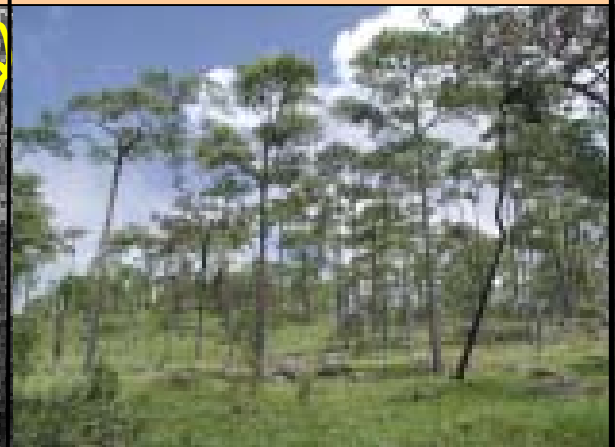
Landsat 4, 5, 3 (R, G, B)



Aerial Photo



Ground Photo



### Data Description

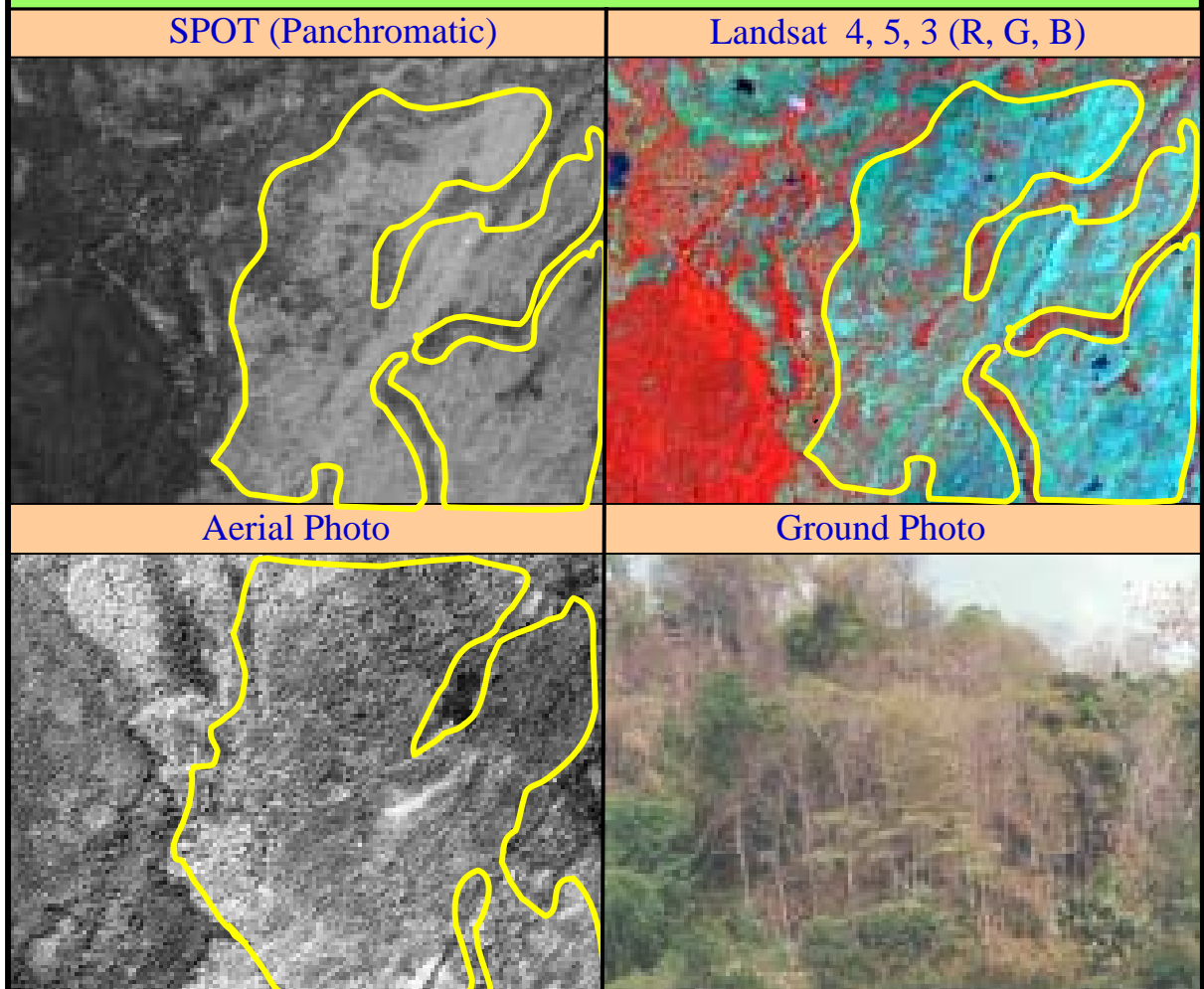
- Date of Included Data
  - Landsat (TM) 26 Dec 1995
  - SPOT (Panchromatic) 2 Jan 1997
  - Aerial Photo Nov 1992
- SPOT and Landsat data have been presented at 1:100,000 scale and Aerial Photo (AP) at 1:50,000 scale.
- Sample from map sheet 5831.

### General Description of this Class

It refers to Pine forest. it occurs in higher altitude areas.

- On Landsat: This looks as a mixture of dark gray and dark brownish red areas.
- On SPOT: Mixture of light and medium gray tone, medium texture.
- On AP: Mixture of light and medium gray tone, medium texture.

## 24) Deciduous forest (Fd)



### Data Description

- Date of Included Data
  - Landsat (ETM) 27 Mar 2000
  - SPOT (Panchromatic) 21 Dec 1999
  - Aerial Photo Jan 1995
- SPOT and Landsat data have been presented at 1:100,000 scale and Aerial Photo (AP) at 1:50,000 scale.
- Sample from map sheet 6235.

### General Description of this Class

This includes dry deciduous Dipterocarp forest with nearly more than 50% crown closure. Most of characteristic species are fire resistant and have thick bark.

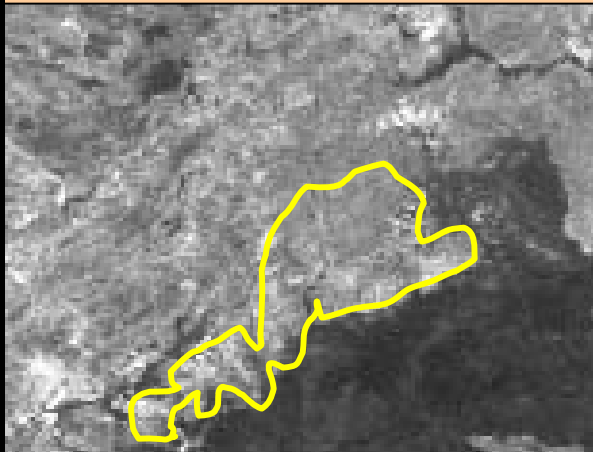
- On Landsat: Fine to coarse texture with color depending upon season:
  - i) In the beginning of dry season, it has reddish brown to reddish yellow color.
  - ii) During dry season:
    - Bluish gray (at drier locations such as hill slope where leaf shedding is earlier).
    - Reddish brown (at wetter locations such as along streams where leaf shedding is slower and thus delayed).

Period of leaf shedding is sometimes determined by relief condition. Thus, two sides of a hill covered by deciduous forest but exposed conversely to monsoon wind may appear in two different colors on same imagery.
- On SPOT: Light gray tone, fine texture.
- On AP: Medium to light gray tone, fine to medium texture, closed canopy.

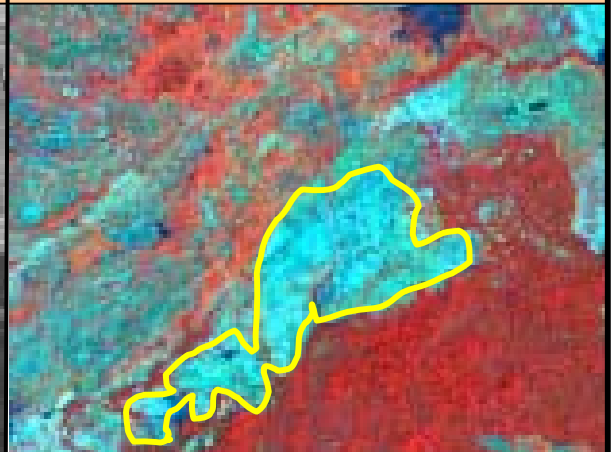


## 25) Dry deciduous (Open) forest (Fdo)

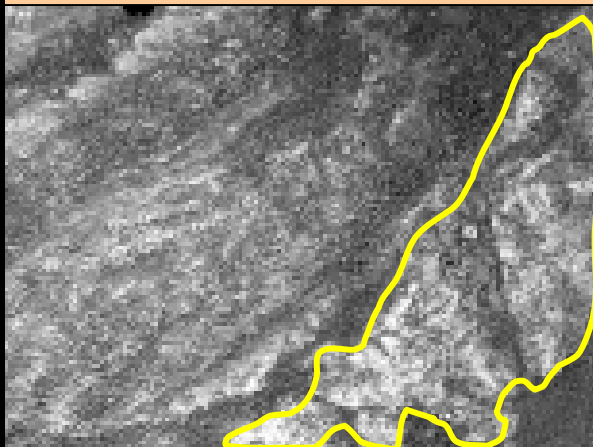
SPOT (Panchromatic)



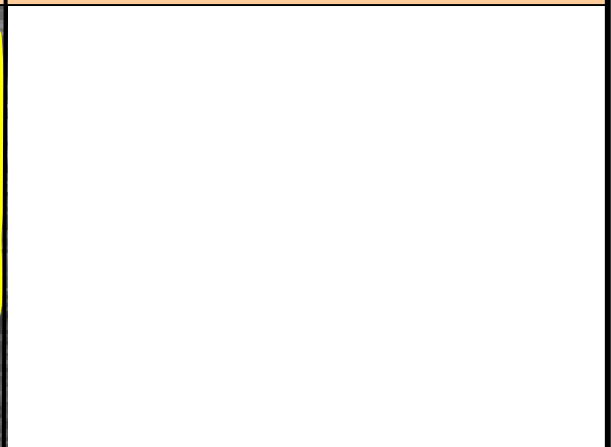
Landsat 4, 5, 3 (R, G, B)



Aerial Photo



Ground Photo



### Data Description

- Date of Included Data
  - Landsat (ETM) 27 Mar 2000
  - SPOT (Panchromatic) 19 Feb 2001
  - Aerial Photo Dec 1992
- SPOT and Landsat data have been presented at 1:100,000 scale and Aerial Photo (AP) at 1:50,000 scale.
- Sample from map sheet 6236.

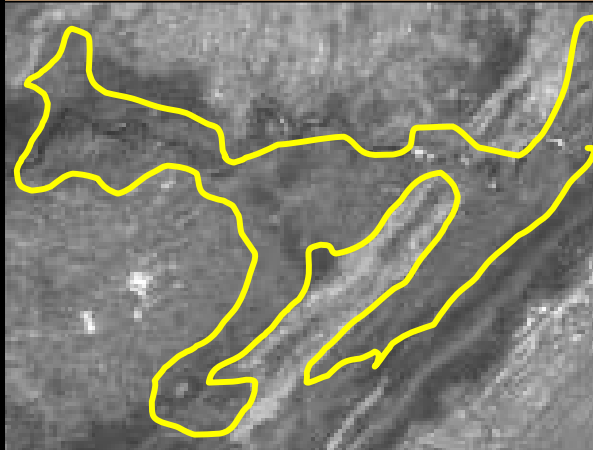
### General Description of this Class

It refers to the similar species as in deciduous forest (Fd) but with less crown closure coverage. Poor growth environment such as shallow soil may be one major cause for their less crown closure, which emphasizes for their possible distribution above the plains or highlands slopes. Canopy is open (Less than 50 %).

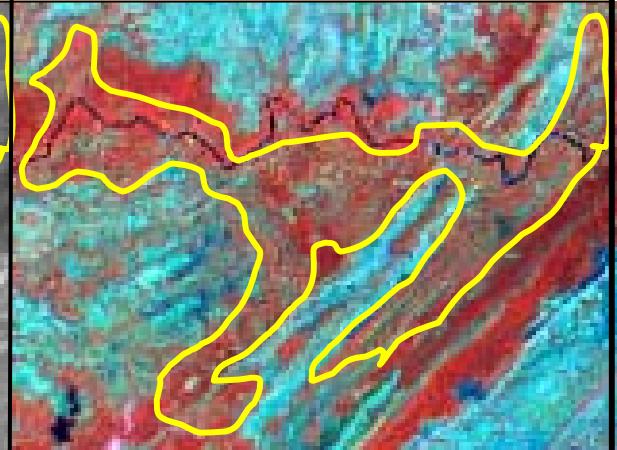
- On Landsat: Bluish light gray color, fine texture.
- On SPOT: Medium gray tone, medium texture.
- On AP: Medium to light gray, medium to coarse texture.

## 26) Mixed forest from evergreen and deciduous species (Fx)

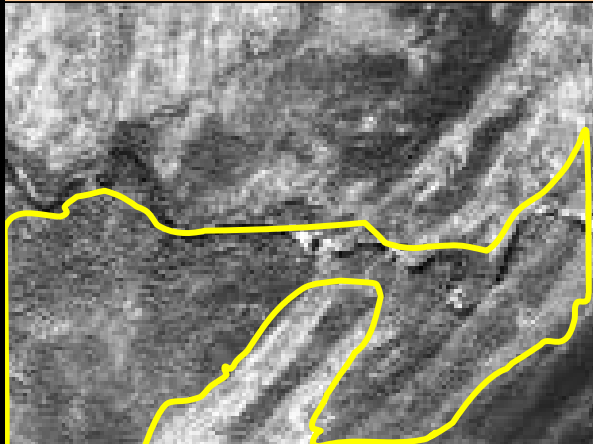
SPOT (Panchromatic)



Landsat 4, 5, 3 (R, G, B)



Aerial Photo



Ground Photo



### Data Description

- Date of Included Data
  - Landsat (ETM) 24 Dec 2000
  - SPOT (Panchromatic) 21 Dec 1999
  - Aerial Photo Jan 1995
- SPOT and Landsat data have been presented at 1:100,000 scale and Aerial Photo (AP) at 1:50,000 scale.
- Sample from map sheet 6235.

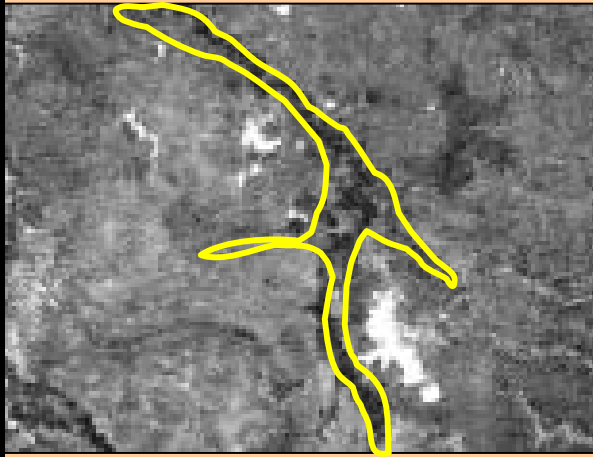
### General Description of this Class

This refers to closed canopy forest with mixed deciduous and evergreen species. This typically occupies as the transition zone between Evergreen broad leafed forest (Fe) and Deciduous forest (Fd).

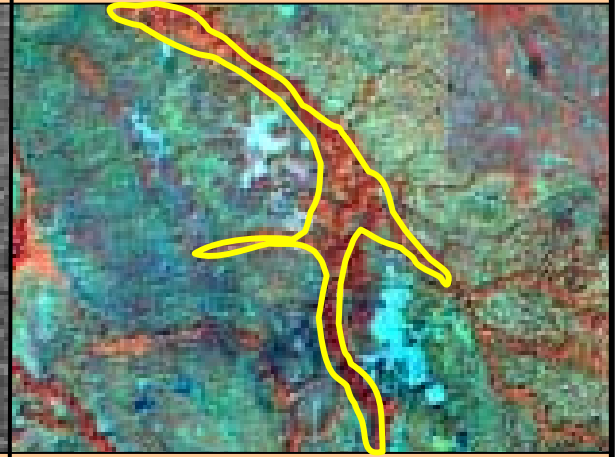
- On Landsat: Mixed between dark and medium to light gray tone, coarse texture.
- On SPOT: Light to dark gray tone, medium to coarse texture.
- On TM: Bluish light gray, medium texture.

## 27) Riparian forest (Fr)

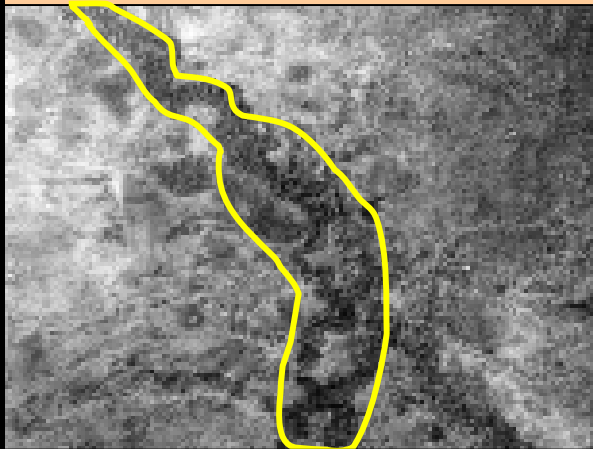
SPOT (Panchromatic)



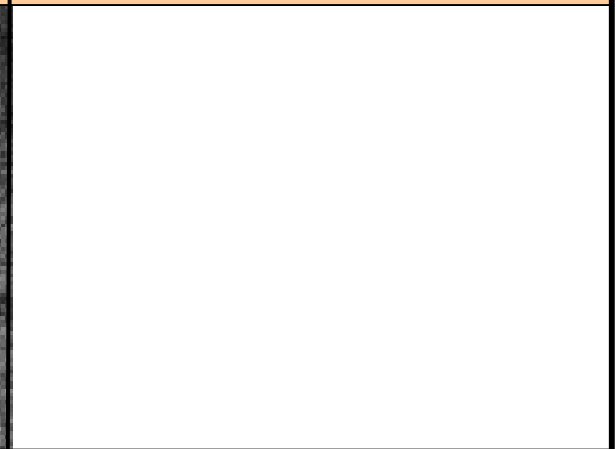
Landsat 4, 5, 3 (R, G, B)



Aerial Photo



Ground Photo



### Data Description

- Date of Included Data
  - Landsat (ETM) 24 Dec 2000
  - SPOT (Panchromatic) 8 Feb 2001
  - Aerial Photo Jan 1995
- SPOT and Landsat data have been presented at 1:100,000 scale and Aerial Photo (AP) at 1:50,000 scale.
- Sample from map sheet 6335.

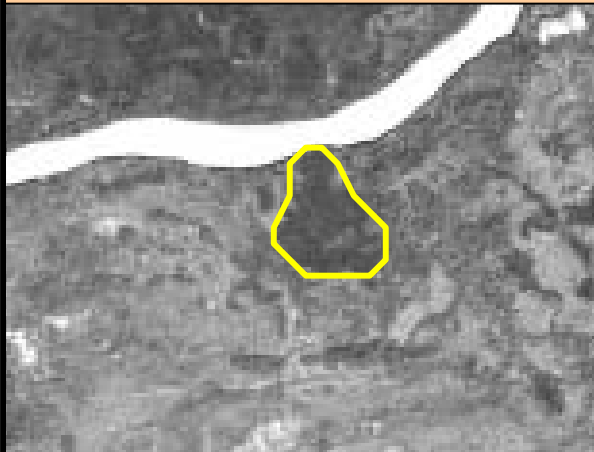
### General Description of this Class

It refers to the forest along the bank of rivers, which is typically in stripe form.

- On Landsat: It appears in red color, coarse texture.
- On SPOT: Medium gray tone, medium texture.
- On AP: Medium gray, coarse texture.

## 28) Bamboo and Secondary forests (Fs)

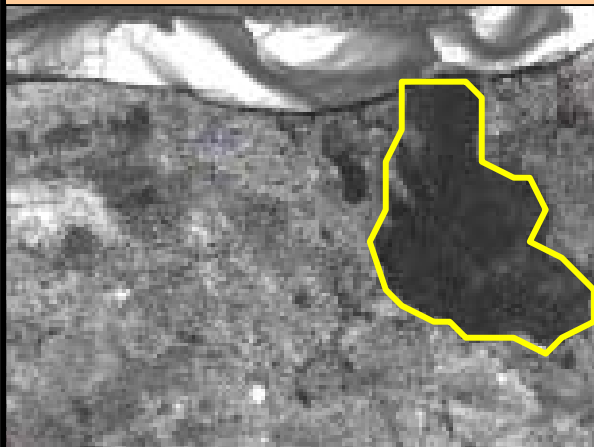
SPOT (Panchromatic)



Landsat 4, 5, 3 (R, G, B)



Aerial Photo



Ground Photo



### Data Description

- Date of Included Data
  - Landsat (ETM) 27 Mar 2000
  - SPOT (Panchromatic) 21 Dec 1999
  - Aerial Photo Jan 1995
- SPOT and Landsat data have been presented at 1:100,000 scale and Aerial Photo (AP) at 1:50,000 scale.
- Sample from map sheet 6336.

### General Description of this Class

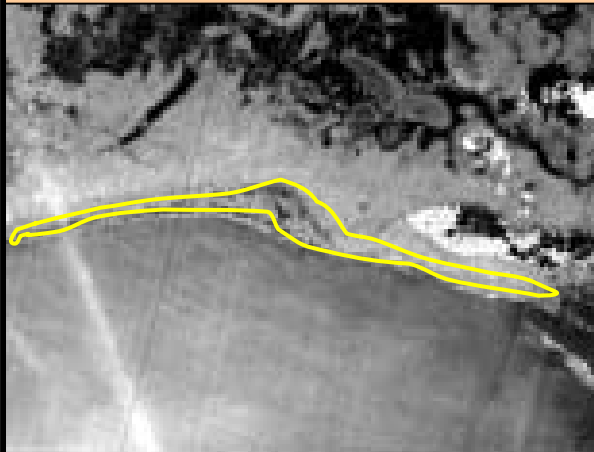
Bamboo forest forms either a pure bamboo stands or mix with woody trees keeping its dominance under the story of broad leaved forest.

Secondary forest is resulted from primary forest due to logging, shifting cultivation, or forest fire. It often occurs in the zone between agricultural land and closed forest, and near to settlement areas. This forest is often mixed with small parcels of other forest types and might not be separately delineated, rather grouped together.

- On Landsat: Bamboo forest appears in light rose color and secondary forest generally in light red color (with exception as reddish yellow). Both have fine texture.
- On SPOT: Dark to medium gray tone, fine texture.
- On AP: In most cases, trees are low with even canopy, medium to light gray tone, fine texture.

## 29) Flooded forest (Ff)

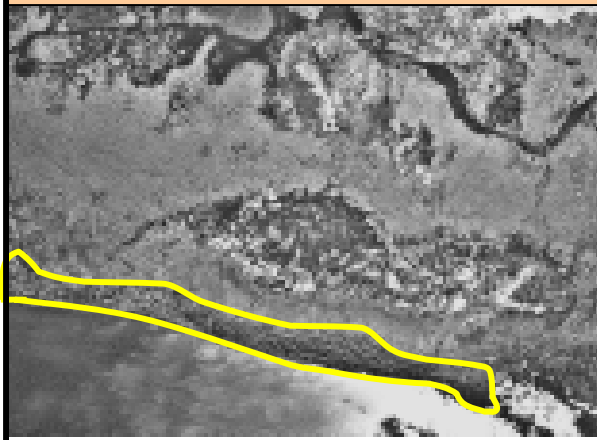
SPOT (Panchromatic)



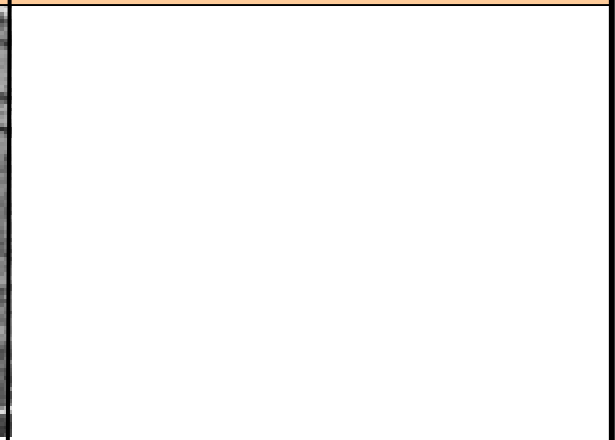
Landsat 4, 5, 3 (R, G, B)



Aerial Photo



Ground Photo



### Data Description

- Date of Included Data
  - Landsat (TM) 27 Jan 1996
  - SPOT (Panchromatic) 22 Jan 1996
  - Aerial Photo Dec 1992
- SPOT and Landsat data have been presented at 1:100,000 scale and Aerial Photo (AP) at 1:50,000 scale.
- Sample from map sheet 5834.

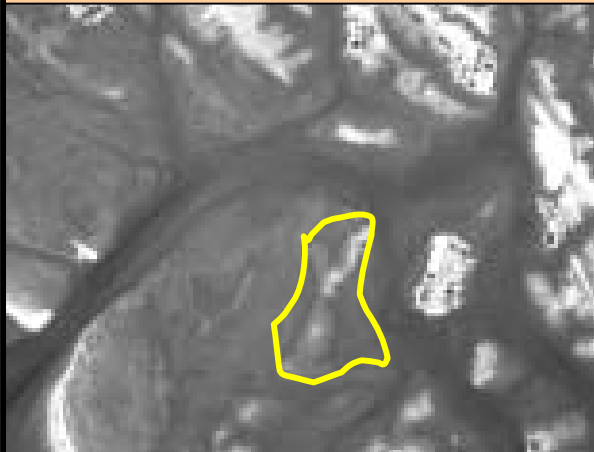
### General Description of this Class

It includes the forest that gets seasonally flooded. A large area of the flooded forest occurs around the Tonle Sap lake and around the Mekong corridor. Flooded forest adjacent to agricultural land and settlement area, in Cambodia, is badly degraded due to its clearing for agriculture.

- On Landsat: Good flooded forest appears in reddish brown while degraded one has mixture of light pink and gray color. Texture of good flooded forest is medium.
- On SPOT: Medium to dark tone, medium texture.
- On AP: Medium to dark tone, medium texture.

### 30) Mangrove forest (Fm)

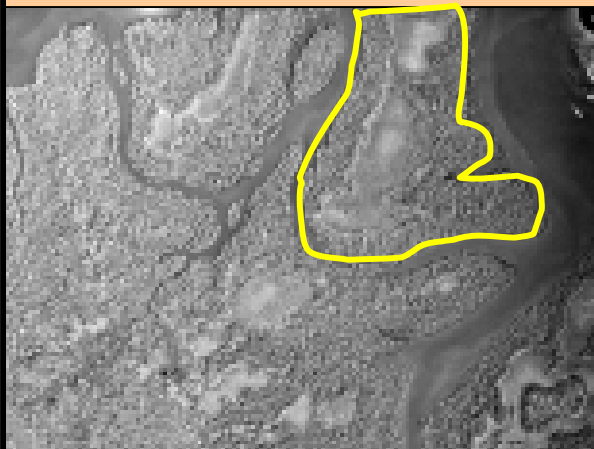
SPOT (Panchromatic)



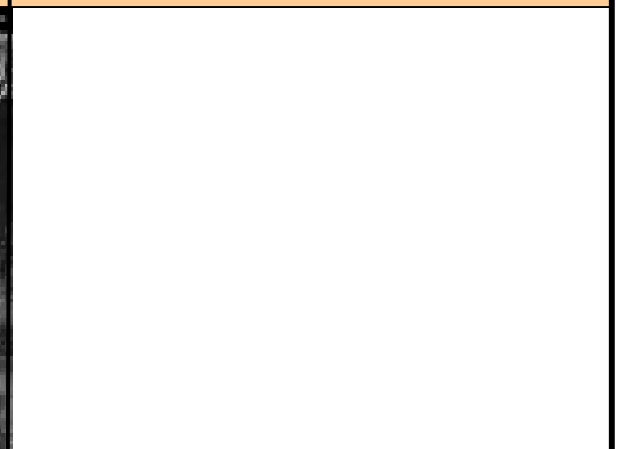
Landsat 4, 5, 3 (R, G, B)



Aerial Photo



Ground Photo



#### Data Description

- Date of Included Data
  - Landsat (TM) 22 Mar 1996
  - SPOT (Panchromatic) 3 Jan 1998
  - Aerial Photo Dec 1994
- SPOT and Landsat data have been presented at 1:100,000 scale and Aerial Photo (AP) at 1:50,000 scale.
- Sample from map sheet 5632.

#### General Description of this Class

This refers to forest type which grows either on saline tidal water along the seashore (tidal mangrove) or on seasonal flooded acid sulfate soil in the inland (rear mangrove). Mangrove forest, based on its species composition, can be further subdivided into various subtypes, such as Rhizophora forest, Nipa forest, and so on.

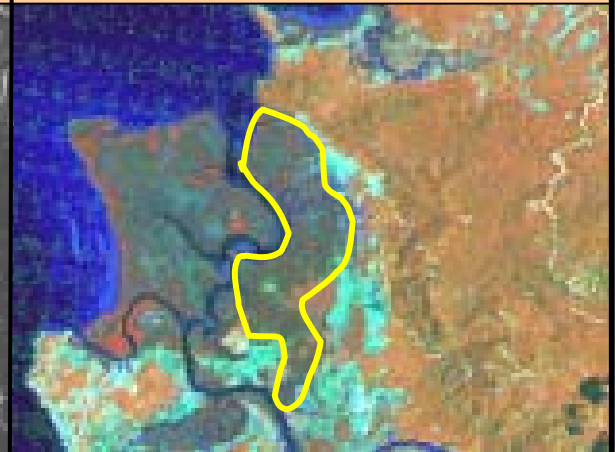
- On Landsat: This appears in red to reddish brown color with fine to medium texture. This forest does not have any specific shape, but shrimp ponds and other man-made features, present within forest region, are indirect factors for their recognition.
- On SPOT: Medium to dark tone, fine to medium texture.
- On AP: Medium to dark tone, medium texture.

### 31) Degraded mangrove forest (Fmd)

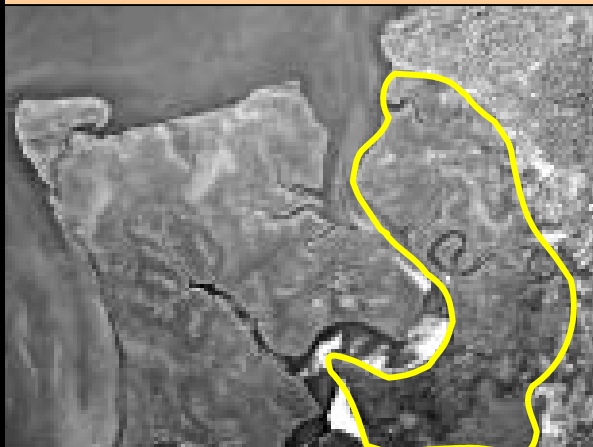
SPOT (Panchromatic)



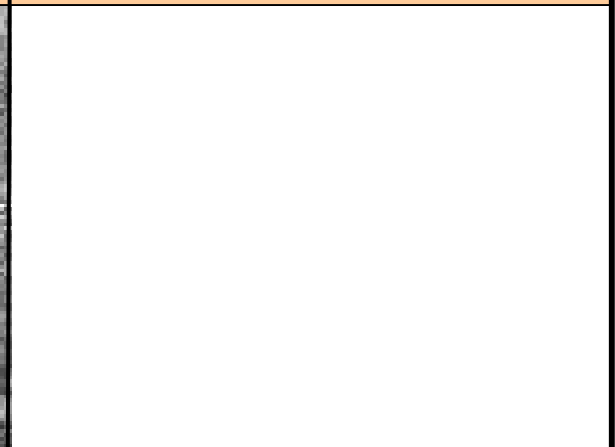
Landsat 4, 5, 3 (R, G, B)



Aerial Photo



Ground Photo



#### Data Description

- Date of Included Data
  - Landsat (TM) 22 Mar 1996
  - SPOT (Panchromatic) 22 Feb 1996
  - Aerial Photo Dec 1994
- SPOT and Landsat data have been presented at 1:100,000 scale and Aerial Photo (AP) at 1:50,000 scale.
- Sample from map sheet 5631.

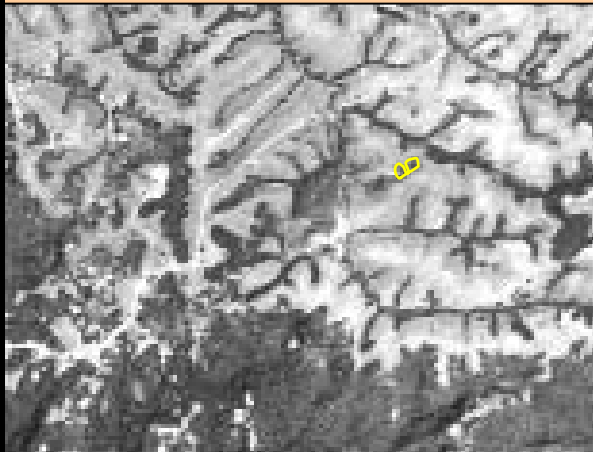
#### General Description of this Class

It refers to mangrove forest that is destroyed and degraded.

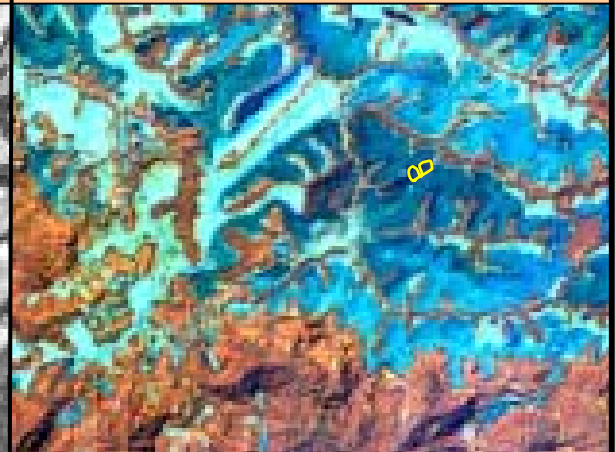
- On Landsat: It appears in reddish brown to grayish brown.
- On SPOT: Mixture of light and dark tone, medium to coarse texture.
- On AP: Mixture of light and dark tone, coarse texture.

## 32) Forest plantation (Fp)

SPOT (Panchromatic)



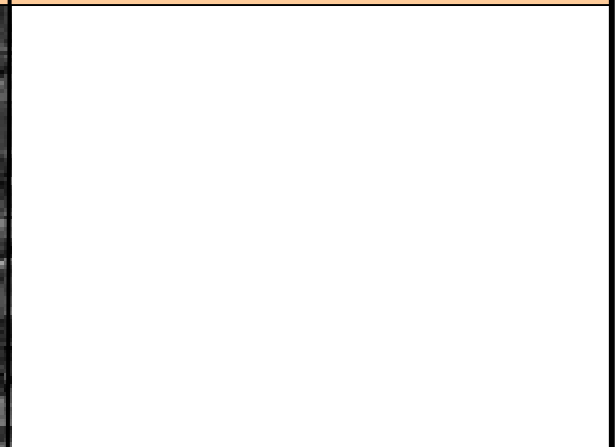
Landsat 4, 5, 3 (R, G, B)



Aerial Photo



Ground Photo



### Data Description

- Date of Included Data
  - Landsat (TM) 8 Jan 2000
  - SPOT (Panchromatic) 31 Jan 2001
  - Aerial Photo Dec 1995
- SPOT and Landsat data have been presented at 1:100,000 scale and Aerial Photo (AP) at 1:50,000 scale.
- Sample from map sheet 6433.

### General Description of this Class

This refers to man-made forests. Such forests are mostly established with fast growing or valuable exotic species. These are often established in easy accessible areas, such as along roads, tracks or near built up area.

- On Landsat: This appears in light red color, medium to fine texture, often with regular shape.
- On SPOT: Light to medium gray, fine to medium texture.
- On AP: Light to medium gray, fine to medium texture, regular pattern of row and column.

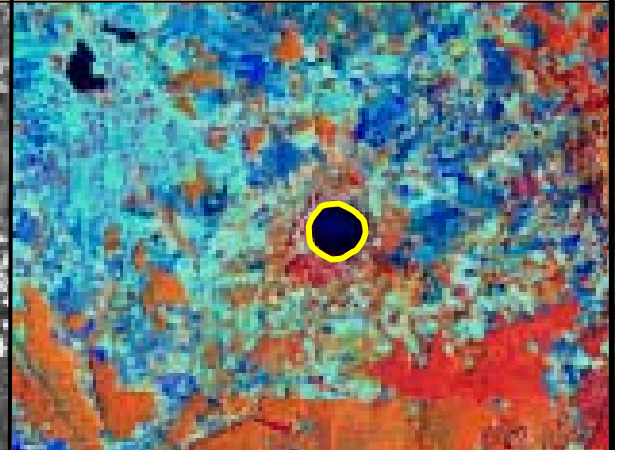


### 33) Lakes (>8 ha) (Wl)

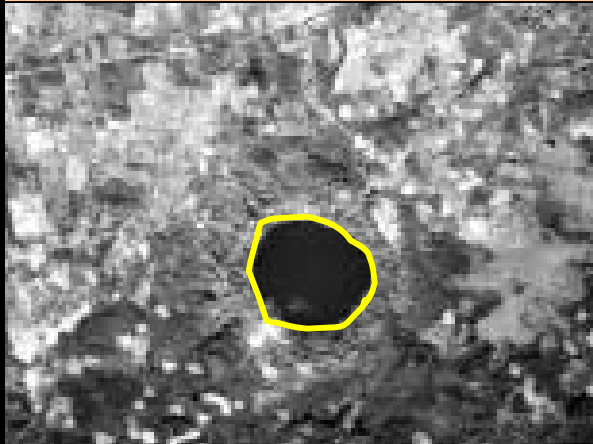
SPOT (Panchromatic)



Landsat 4, 5, 3 (R, G, B)



Aerial Photo



Ground Photo



#### Data Description

- Date of Included Data
  - Landsat (ETM) 27 Mar 2000
  - SPOT (Panchromatic) 01 Mar 2001
  - Aerial Photo Jan 2001
- SPOT and Landsat data have been presented at 1:100,000 scale and Aerial Photo (AP) at 1:50,000 scale.
- Sample from map sheet 6436.

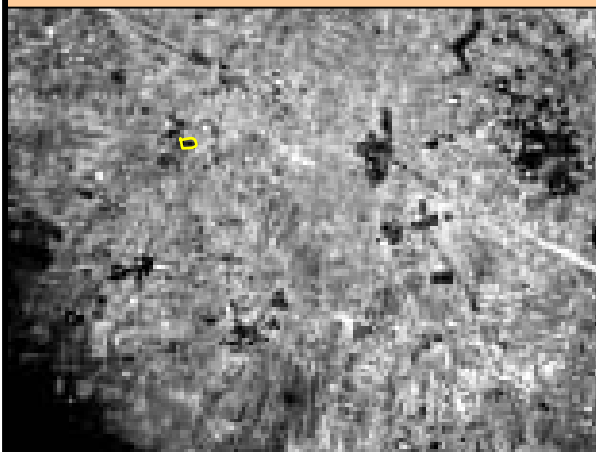
#### General Description of this Class

These include in-land natural water bodies that are larger than 8 hectare. They have irregular boundary.

- On Landsat: These appear in blue to black color depending on the depth of water with very fine texture.
- On SPOT: Medium to dark tone, fine texture.
- On AP: Light to medium tone, fine texture.

### 34) Lakes (<8 ha) (Wp)

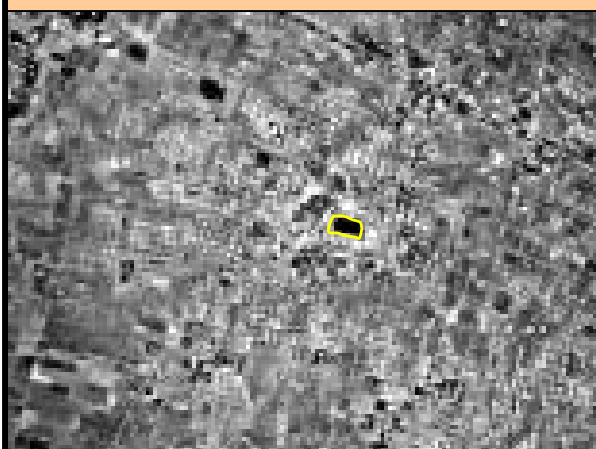
SPOT (Panchromatic)



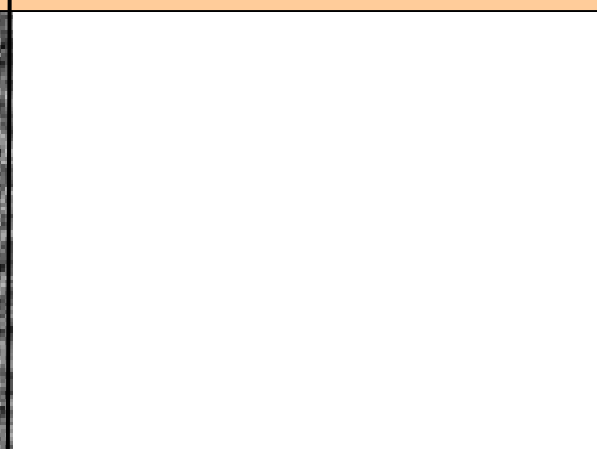
Landsat 4, 5, 3 (R, G, B)



Aerial Photo



Ground Photo



#### Data Description

- Date of Included Data
  - Landsat (TM) 18 Jan 1996
  - SPOT (Panchromatic) 22 Feb 1996
  - Aerial Photo Feb 1992
- SPOT and Landsat data have been presented at 1:100,000 scale and Aerial Photo (AP) at 1:50,000 scale.
- Sample from map sheet 5735.

#### General Description of this Class

These are in-land water bodies with size smaller than 8 hectare. These may be natural or man-made. The man-made ones can be found in agricultural areas or close to settlements. These have regular shape and boundary.

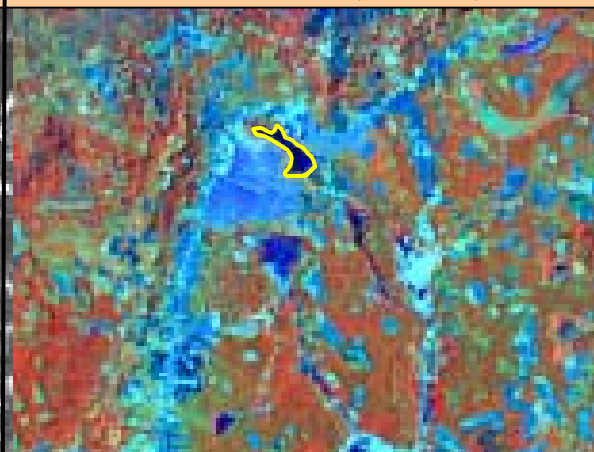
On Landsat, SPOT, and AP, their tone and texture are similar to Lakes larger than 8ha (W1).

### 35) Reservoir (Wr)

SPOT (Panchromatic)



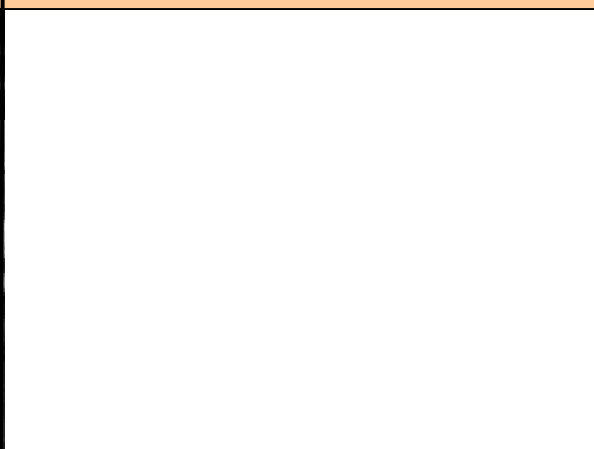
Landsat 4, 5, 3 (R, G, B)



Aerial Photo



Ground Photo



#### Data Description

- Date of Included Data
  - Landsat (ETM) 27 Mar 2000
  - SPOT (Panchromatic) 1 Mar 2001
  - Aerial Photo Jan 2001
- SPOT and Landsat data have been presented at 1:100,000 scale and Aerial Photo (AP) at 1:50,000 scale.
- Sample from map sheet 6436.

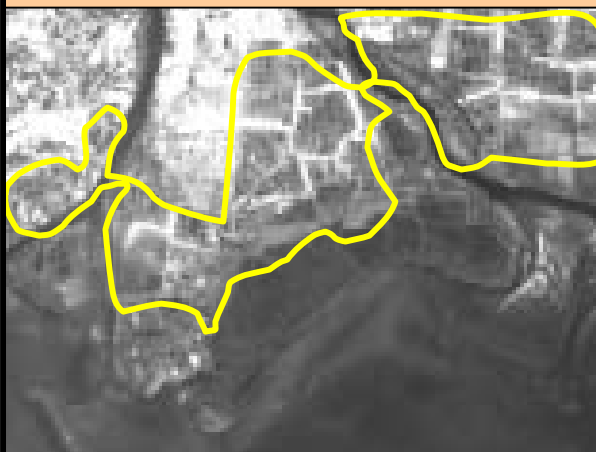
#### General Description of this Class

This refers to man-made water bodies that serve the purpose of irrigation. Dikes/barrages, which usually appear as straight lines on the imagery, are indirect recognition of reservoirs.

On Landsat, SPOT, and AP, their tone and texture are similar to Lakes larger than 8ha (W1).

### 36) Shrimp/Fish farming and Salt pan (Ws)

SPOT (Panchromatic)



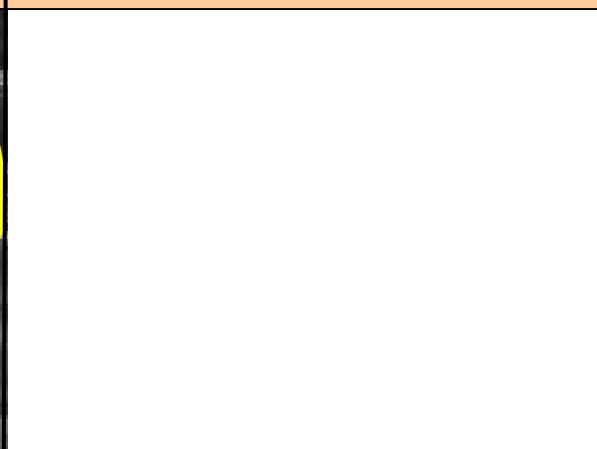
Landsat 4, 5, 3 (R, G, B)



Aerial Photo



Ground Photo



#### Data Description

- Date of Included Data
  - Landsat (TM) 26 Dec 1995
  - SPOT (Panchromatic) 2 Jan 1996
  - Aerial Photo Feb 1993
- SPOT and Landsat data have been presented at 1:100,000 scale and Aerial Photo (AP) at 1:50,000 scale.
- Sample from map sheet 5830.

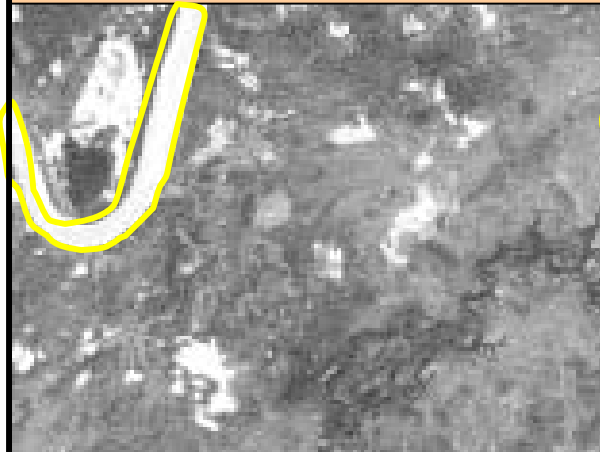
#### General Description of this Class

These are generally located in the mangrove areas as rectangular shape.

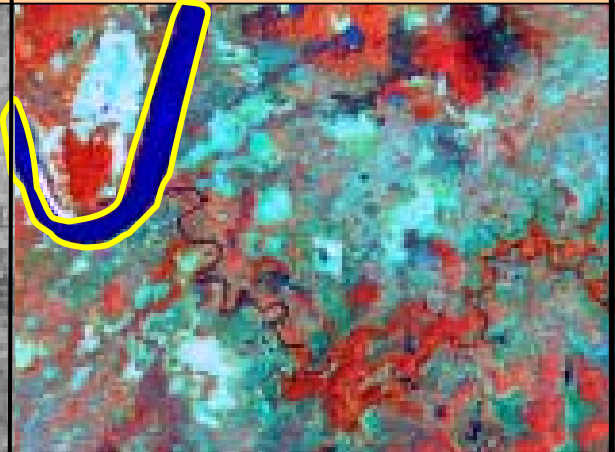
- On Landsat : These have blue to black color (depending upon water depth), fine texture.
- On SPOT: Light to medium gray, fine texture.
- On AP: Light to medium gray, fine texture.

### 37) Others (Sea, Bay, etc.) (Wo)

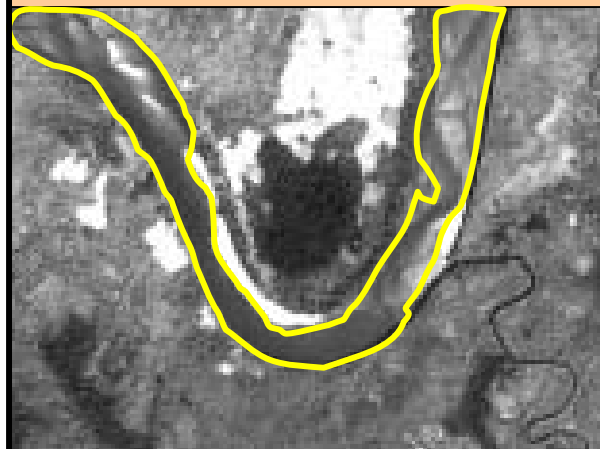
SPOT (Panchromatic)



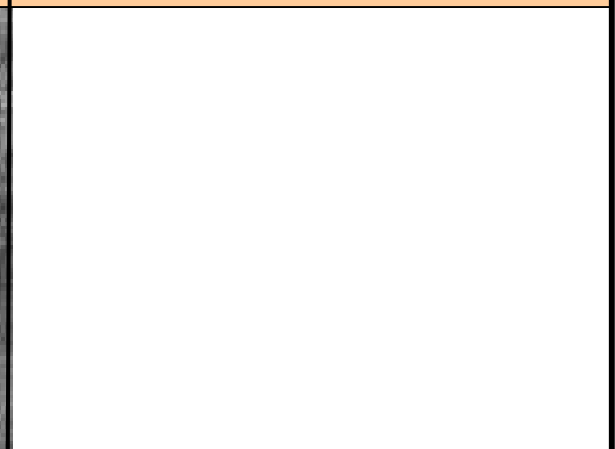
Landsat 4, 5, 3 (R, G, B)



Aerial Photo



Ground Photo



#### Data Description

- Date of Included Data
  - Landsat (ETM) 27 Mar 2000
  - SPOT (Panchromatic) 21 Dec 1999
  - Aerial Photo Jan 1995
- SPOT and Landsat data have been presented at 1:100,000 scale and Aerial Photo (AP) at 1:50,000 scale.
- Sample from map sheet 6336.

#### General Description of this Class

These refer to natural water bodies that have generally openings, such as rivers, seas, etc.

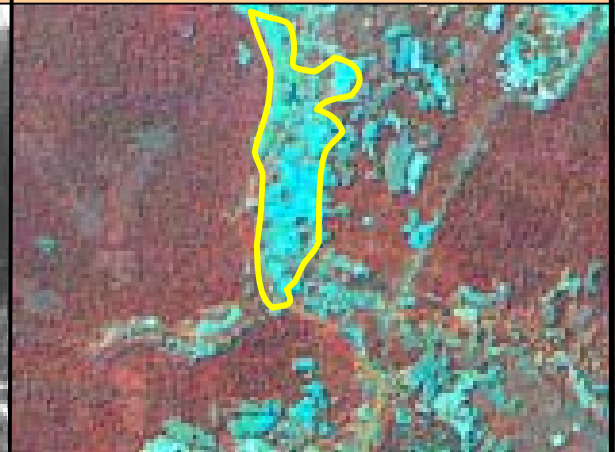
- On Landsat: Their color ranges from light blue, dark blue to black depending upon the depth and suspended materials present in water, fine texture.
- On SPOT: Light to medium or even dark depending upon depth and suspended materials present in water, fine texture.
- On AP: Light to medium or even dark depending upon depth and suspended materials present in water, fine texture.

### 38) Barren land (B)

SPOT (Panchromatic)



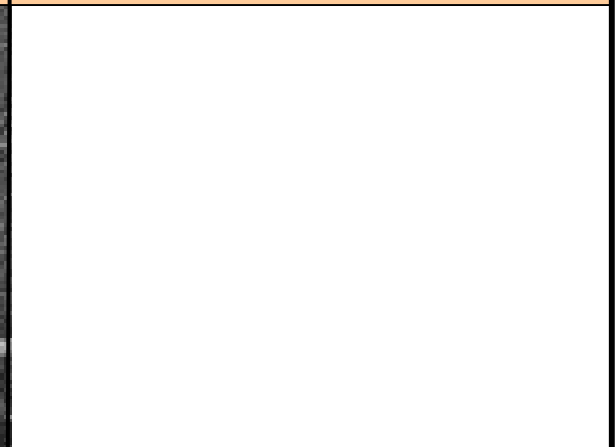
Landsat 4, 5, 3 (R, G, B)



Aerial Photo



Ground Photo



#### Data Description

- Date of Included Data
  - Landsat (TM) 21 Feb 1996
  - SPOT (Panchromatic) 4 Mar 1996
  - Aerial Photo Dec 1992
- SPOT and Landsat data have been presented at 1:100,000 scale and Aerial Photo (AP) at 1:50,000 scale.
- Sample from map sheet 6133.

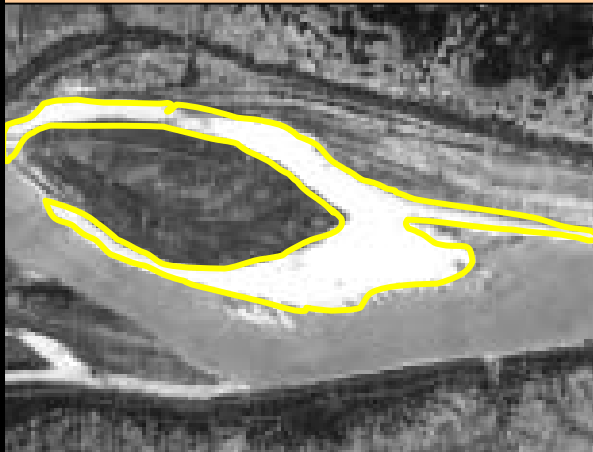
#### General Description of this Class

This refers to non-productive land, which may be as result of chemical, physical or man-induced stresses. Limitations create an area very often devoid of significant vegetation, and consequently easily recognizable. These are generally found on hillside or along the river, etc.

- On Landsat: These appear as very light gray plots.
- On SPOT: Generally light gray, fine texture.
- On AP: Generally light gray, fine texture.

### 39) Sand bank (Bs)

SPOT (Panchromatic)



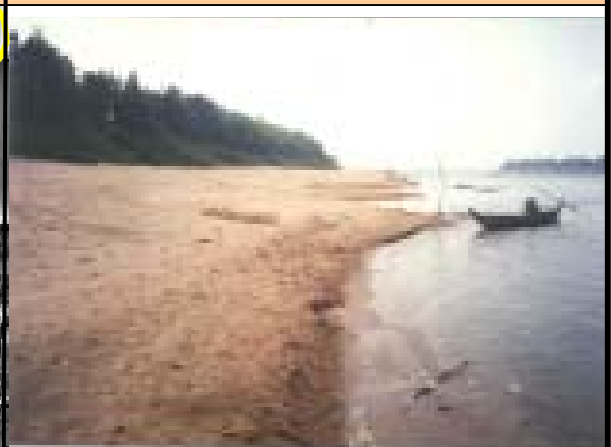
Landsat 4, 5, 3 (R, G, B)



Aerial Photo



Ground Photo



#### Data Description

- - Date of Included Data
  - Landsat (TM) 21 Feb 1996
  - SPOT (Panchromatic) 4 Mar 1996
  - Aerial Photo Dec 1992
- SPOT and Landsat data have been presented at 1:100,000 scale and Aerial Photo (AP) at 1:50,000 scale.
- Sample from map sheet 6133.

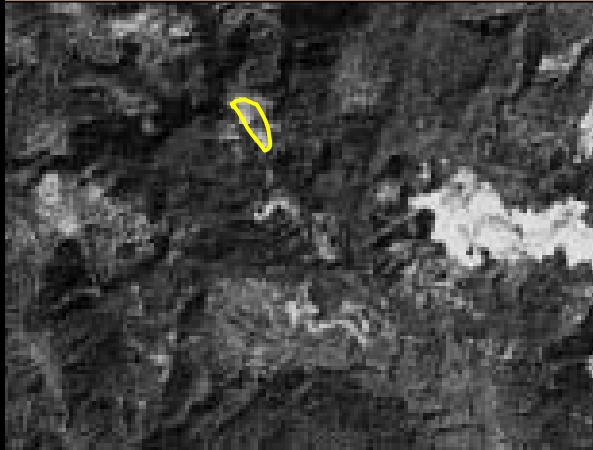
#### General Description of this Class

It refers to the sand deposited areas along rivers and seashores.

- On Landsat: It appears in white because of high reflectance.
- On SPOT: Very light tone, fine texture.
- On AP: Very light tone, fine to medium texture.

## 40) Rock outcrop (Br)

SPOT (Panchromatic)



Landsat 4, 5, 3 (R, G, B)



Aerial Photo



Ground Photo



### Data Description

- Date of Included Data
  - Landsat (ETM) 27 Mar 2000
  - SPOT (Panchromatic) 21 Dec 1999
  - Aerial Photo Feb 2001
- SPOT and Landsat data have been presented at 1:100,000 scale and Aerial Photo (AP) at 1:50,000 scale.
- Sample from map sheet 6337.

### General Description of this Class

This includes the areas with major portion as exposed rocks.

- On Landsat: Barren land appears as dark gray dissected areas. It does not have a regular shape, but pattern of dissected areas caused by cliffs is one of the elements helping to identify rock outcrops.
- On SPOT: Medium to dark gray.
- On AP: Medium to dark gray.