



# REDD+ FOR THE GUIANA SHIELD

## Technical Cooperation Project



How to classify shifting cultivation?

Anne-Cécile Capel, ONF International

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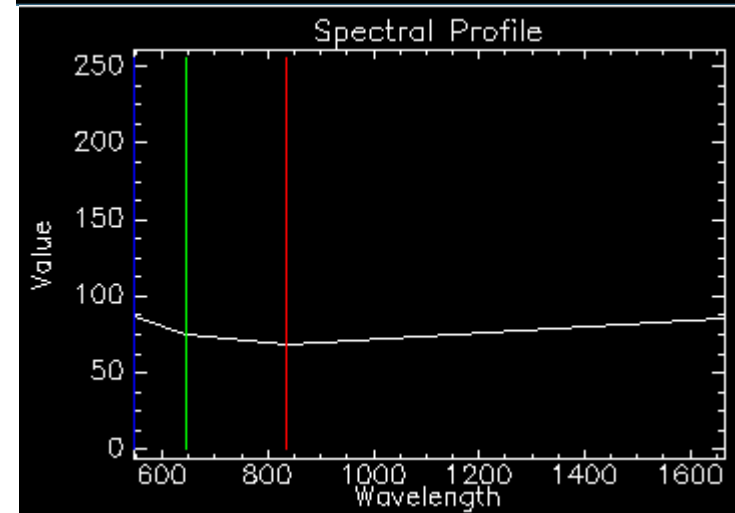
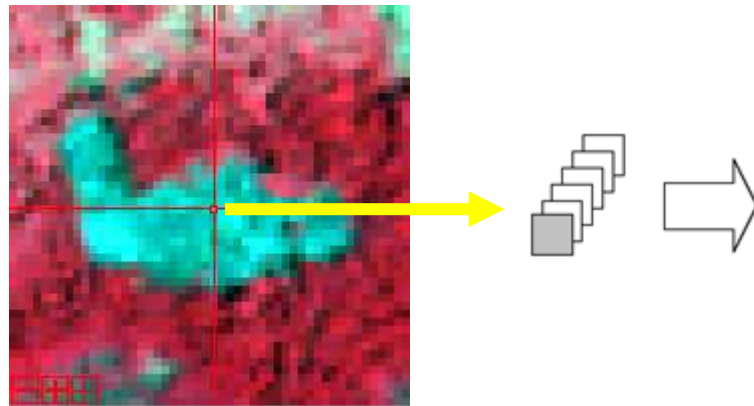
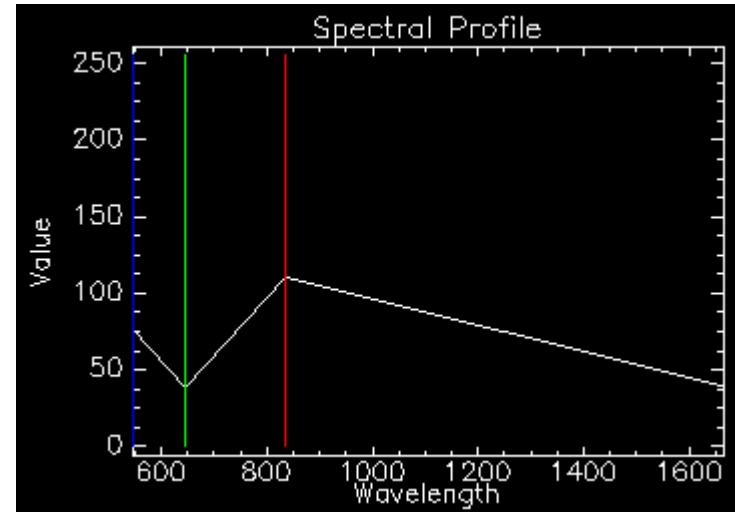
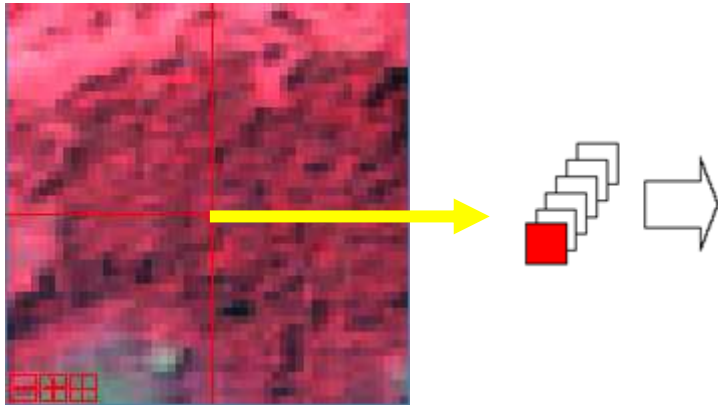
Paramaribo

# Shifting cultivation detection

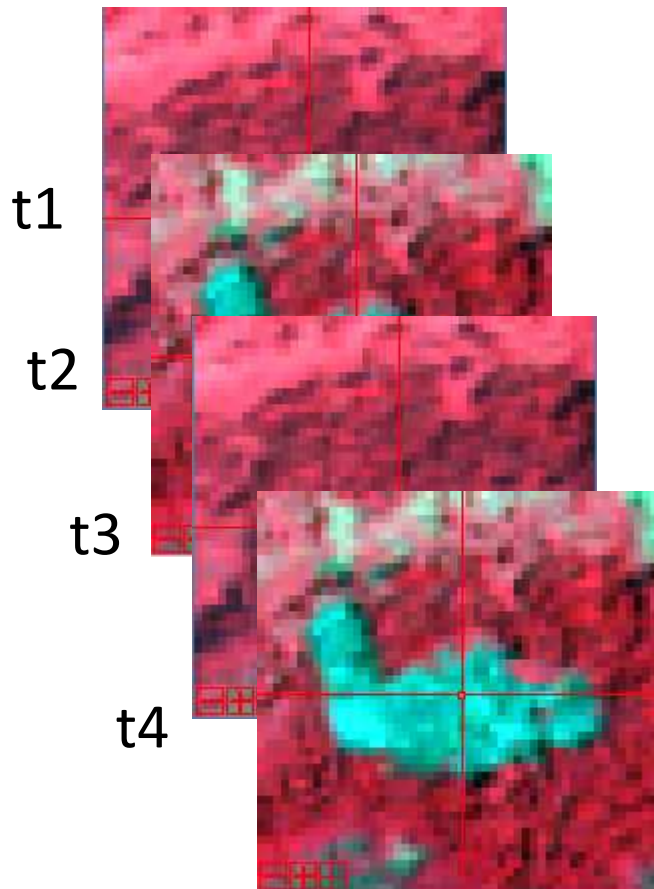
- On the field
  - Usually small plots (< 5ha)
  - Plots are heterogeneous (cycle) – **Spatial dynamic**
  - Short rotation cycle – **Temporal dynamic**
- Satellite imageries
  - Give a view at T time
  - Unadapted classification process based on pixel analysis
  - Difficult to delineate
- Examples of researches topics to answer to this issue



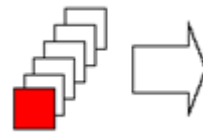
# Temporal analysis



# Temporal analysis



Artificial increase number of bands by adding data from different dates

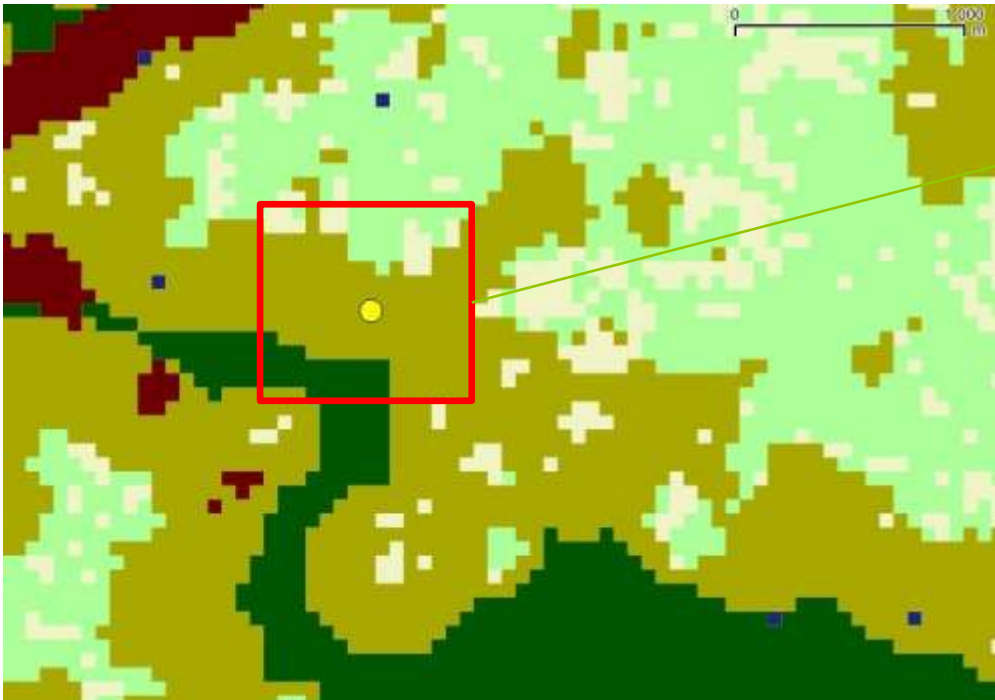


Direct change classification



# Spatial analysis

- Mosaic analysis
  - Analyse based on the generalization of a classification map
    - Neighborhood analysis by using a moving window



Primary Forest: 25 pixels  
Bare soil: 156 pixels  
Secondary forest: 12 pixels  
Agricultural crops: 7 pixels

- Analysis is realized for each pixel in the image
- Choose threshold values to define mosaic classes



# Manual detection

- Good field knowledge
  - Informations on culture characteristics
    - Agroforestry?
    - Plot size?
    - What type of culture?
    - Seasonal activities?
    - Location
    - ...
- The field knowledge is always necessary whatever the method used to extract information



# Conclusion

- Methods are still research topics
- Many data / historical images are needed to compute an automatic process
- Field knowledge is always necessary





**MERCI / THANK YOU / DANK U / OBRIGADO**

[ac.capel@onfinternational.com](mailto:ac.capel@onfinternational.com)

[www.onfinternational.org](http://www.onfinternational.org)

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