

**Determining sustainable  
harvest levels of non-timber forest  
products in Bwindi Impenetrable  
National Park, Uganda**

Suzanne Stas  
Else Langbroek

23<sup>rd</sup> february 2010

Supervisors: Douglas Sheil ITFC  
Pieter Zuidema Utrecht University

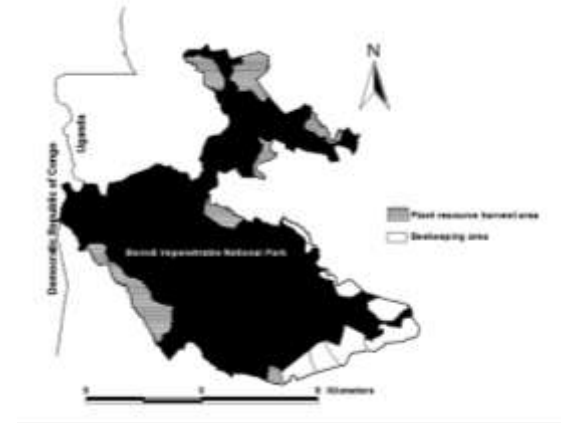
# Introduction (1)

- NTFP harvest is method for integrating the use and conservation of tropical forests (Peters, 1994)
- Sustainable harvest of NTFP
  - Overharvesting
  - Underharvesting

# Introduction (2)

## Bwindi Impenetrable National Park

- National park since 1991
- Multiple use zones
  - Controlled harvesting of NTFP
  - Harvest quota based on rapid vulnerability assessment

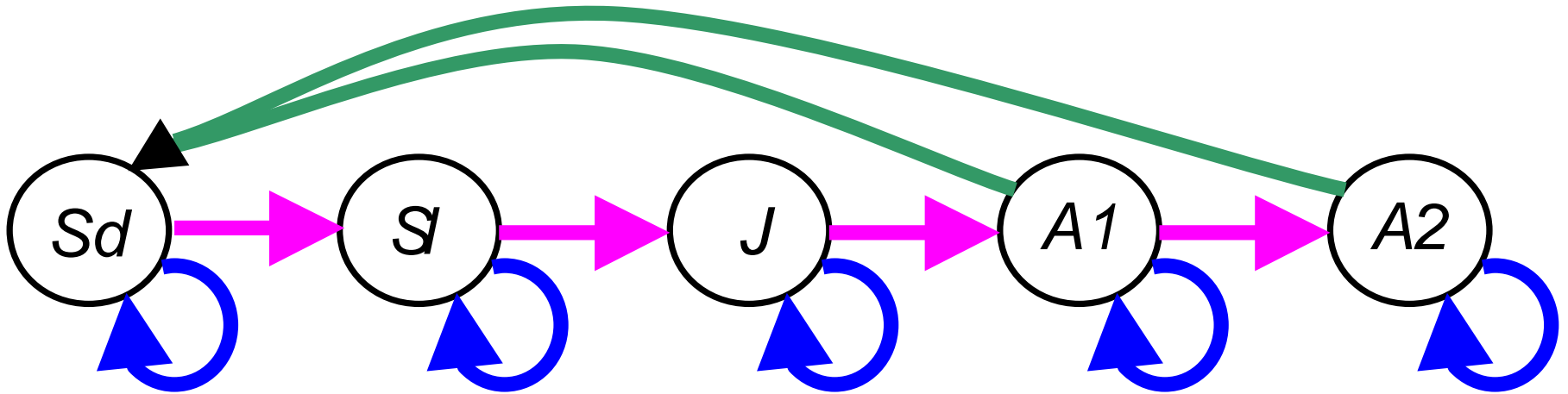


# Research question

What are sustainable harvest levels of NTFP for  
*Rytigynia kigeziensis* (Nyakibazi),  
*Ocoteausambarensis* (Omwiha) and  
*Loeseneriella apocynoides* (Omujege)?

1. Current harvest → vital rates
2. Affected vital rates → survival of populations
3. Harvest → NTFP availability future

# Model construction



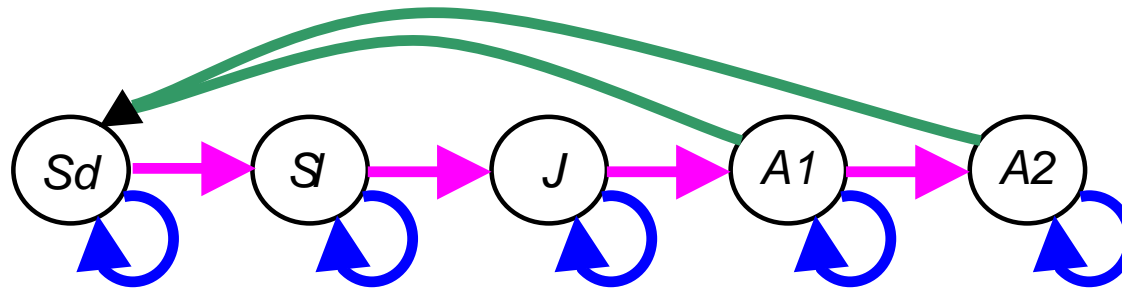
Introduction

Research question

**Methods**

Questions

# Using matrix models



*At time = t*

	<i>Sd</i>	<i>Sl</i>	<i>J</i>	<i>A1</i>	<i>A2</i>
<i>Sd</i>					
<i>Sl</i>					
<i>J</i>					
<i>A1</i>					
<i>A2</i>					

*At time = t+1*

# Thank you for your attention