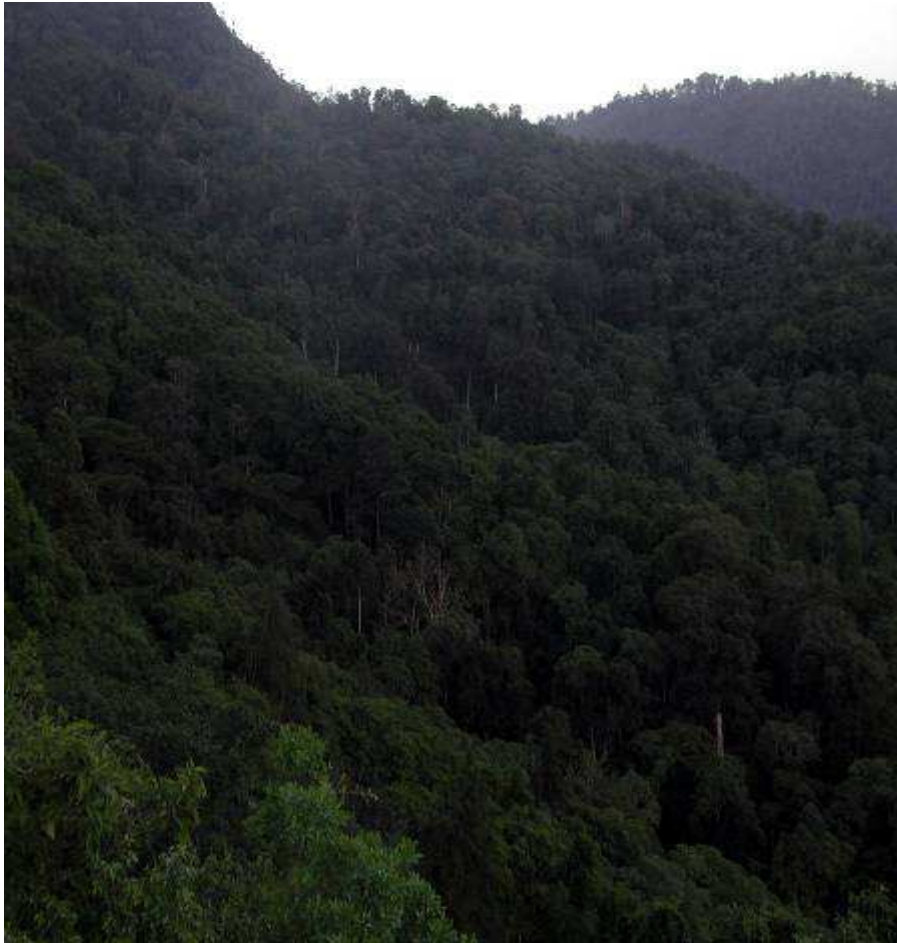


# Khat production and Forest Decline in Ethiopia

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**Background**

**Forest decline....**

**Khat production and expansion....**

**Possible link between forest decline and khat expansion?**

**Investigating the link...**

**How does khat expansion result forest decline?**

**Processes of khat expansion....**

## Background

Khat is expanding rapidly during the past few decades in Ethiopia

>2 M growers

>160000 ha area

>130 M kilograms production

Forest decline is going on in Ethiopia for several decades

<2% forest cover

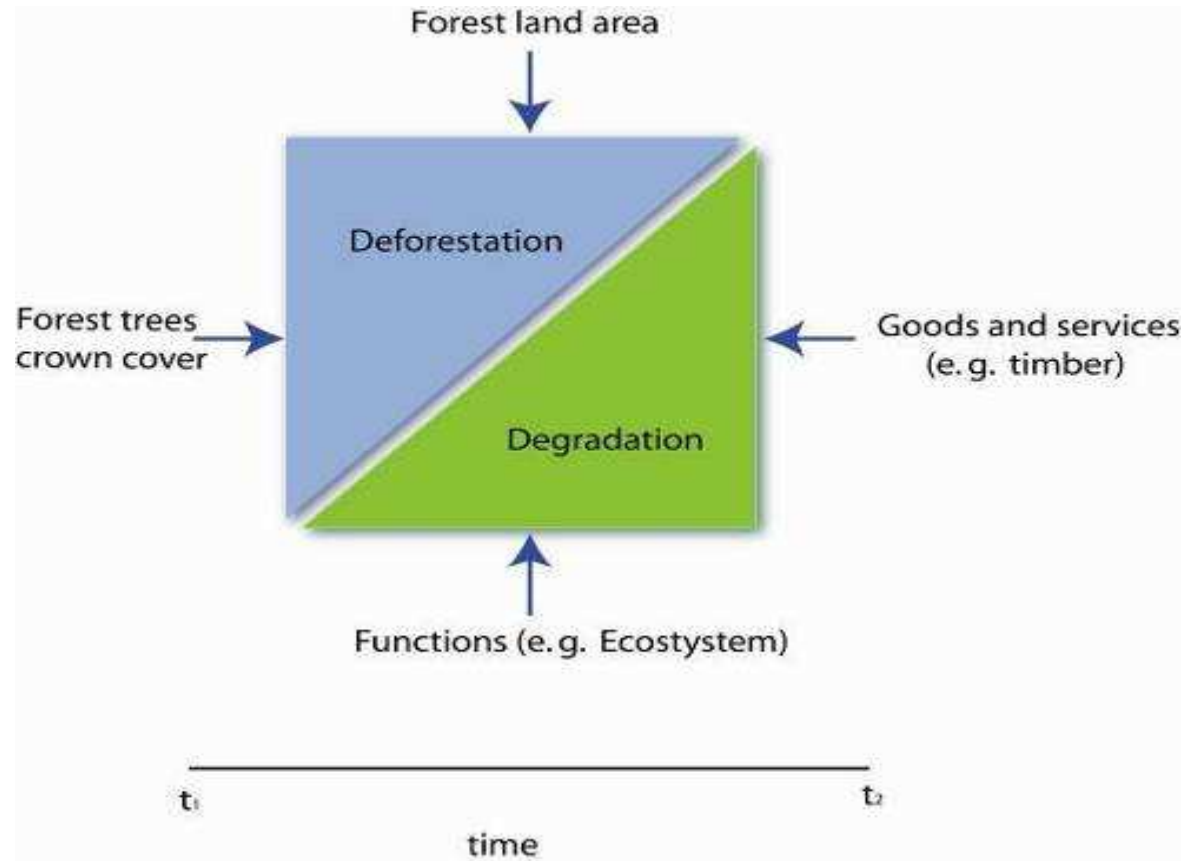
150 – 500 thousand ha/yr loss

Few remnant patches of high forests exist

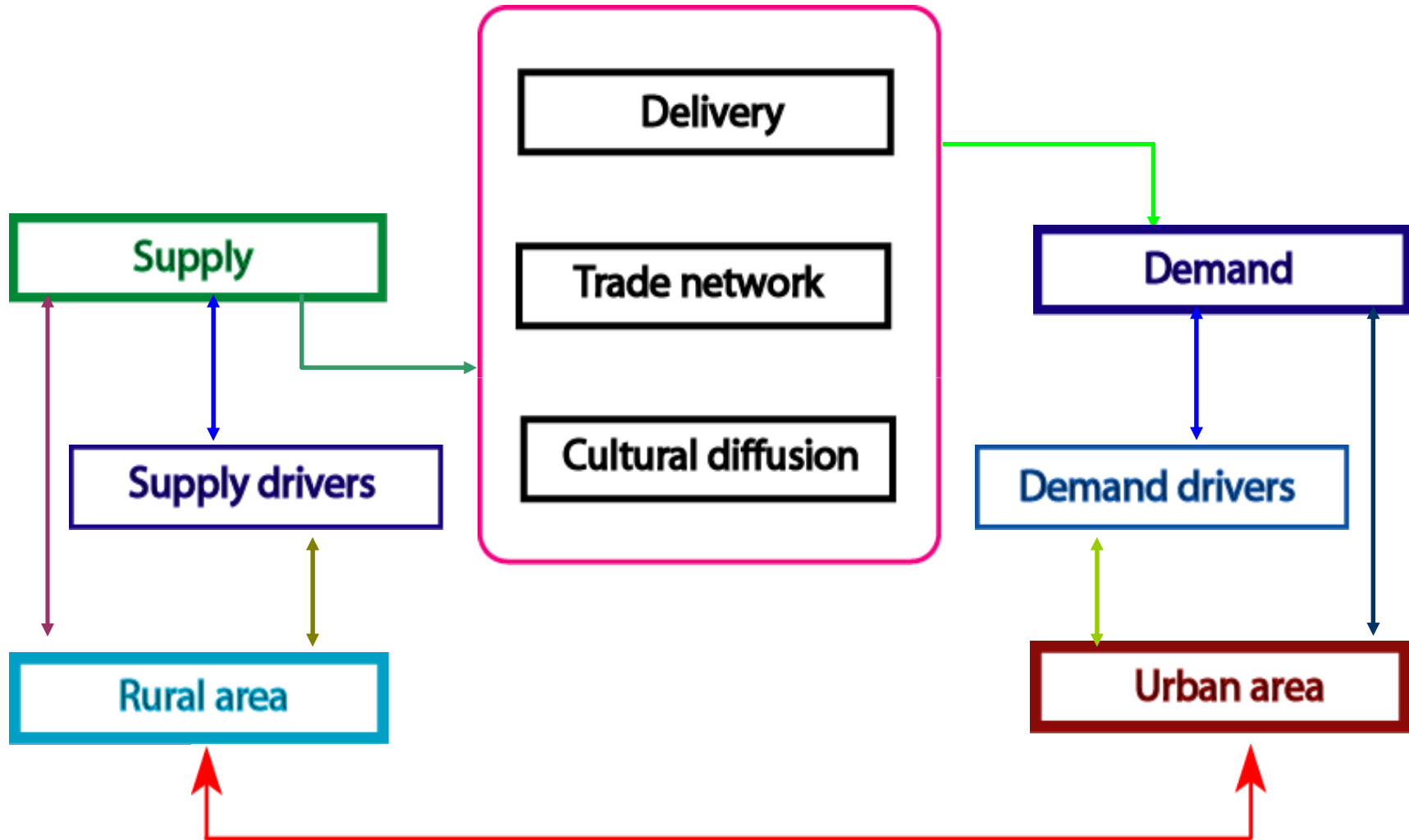
Distributed in inaccessible spots, valleys, slopes and riverbanks

The rate of natural forest loss is higher than the rate of plantation

## Forest Decline



## Khat production and expansion



## **Possible link between forest decline and khat expansion?**

Forest decline is the result of human - environment interaction

Proximate causes (direct causes e.g. expansion of agriculture)

Underlying causes (indirect causes e.g. socio economic factors)

Khat expansion magnitude and process contribute to forest decline

Proximate cause - direct impact

underlying cause - steers socio economic changes

## Investigating the link...



Spatial and temporal understanding

Remote sensing and GIS

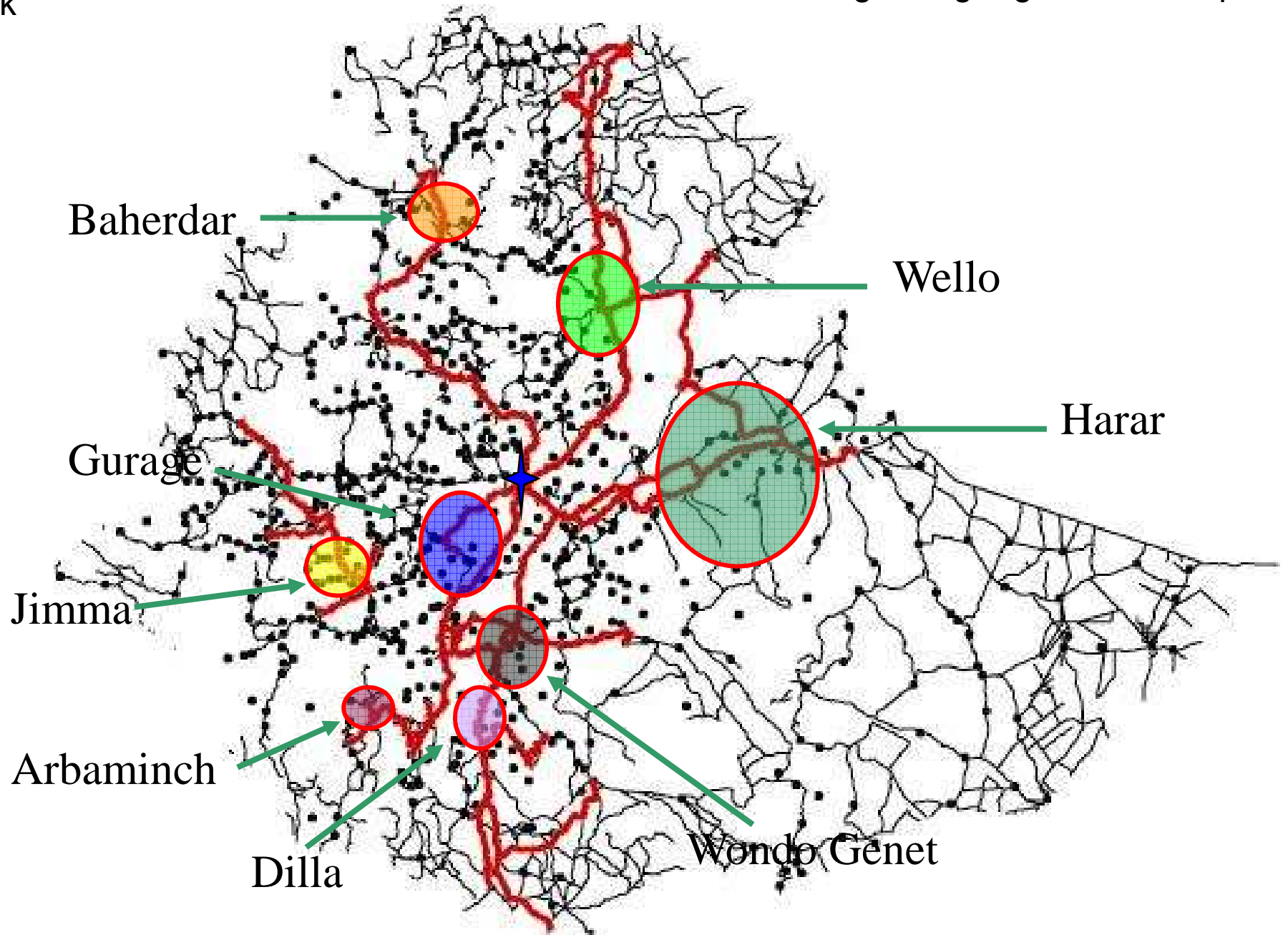
Socioeconomic understanding

Surveys and interviews



Link

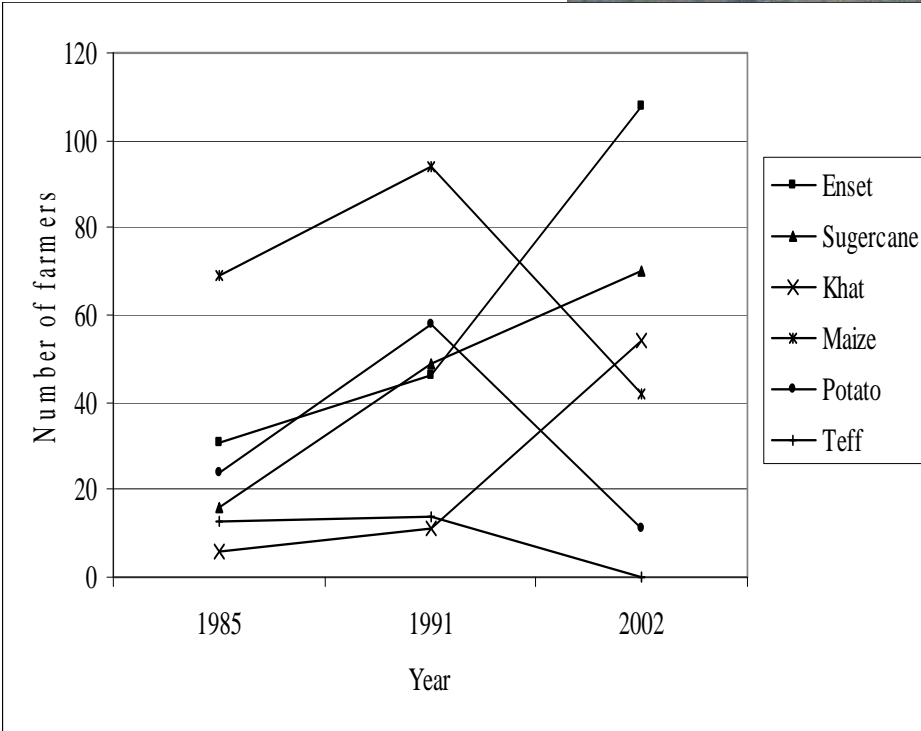
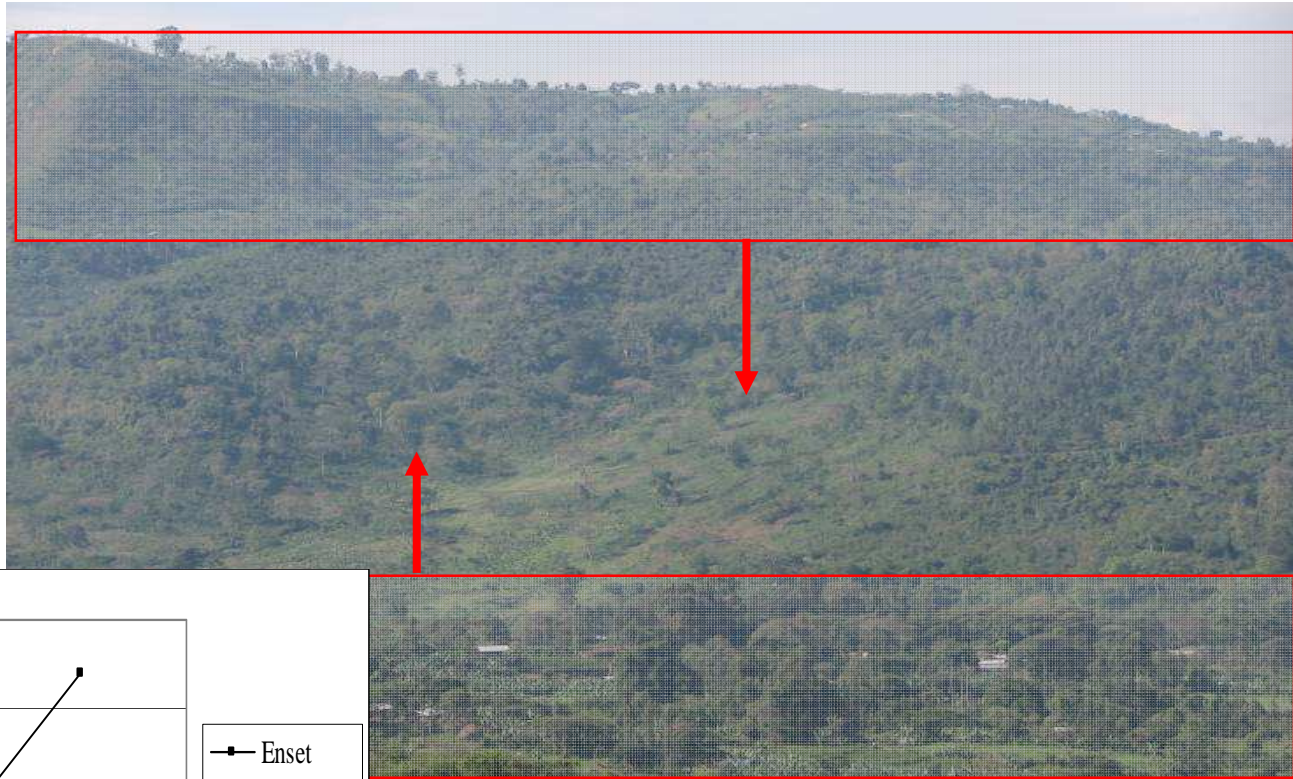
# Khat growing regions in Ethiopia





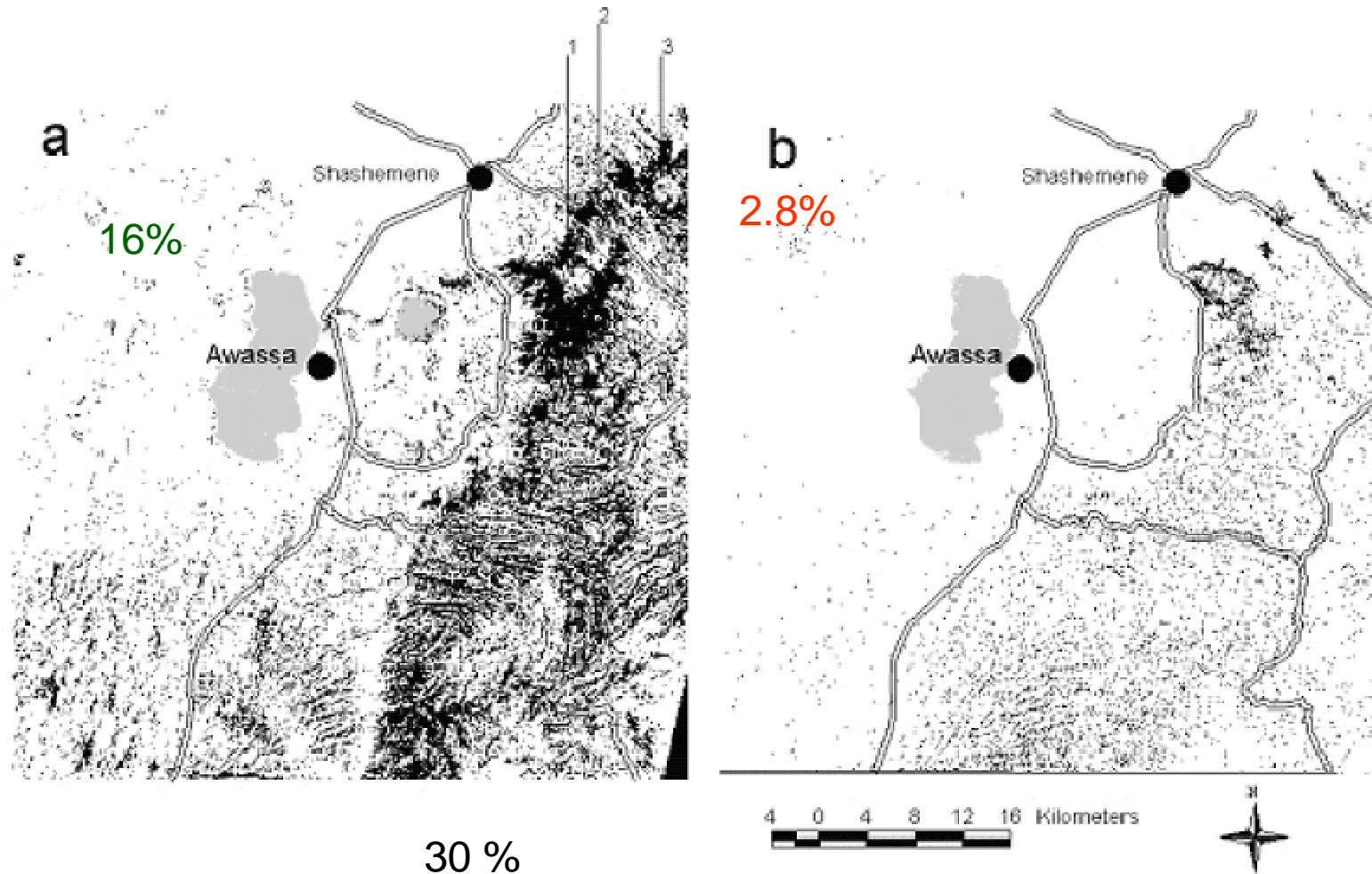
# How does khat expansion result forest decline?

- Expand to forest areas
- Replace on farm shade casting trees
- Fragment forest stands
- Replace other land uses

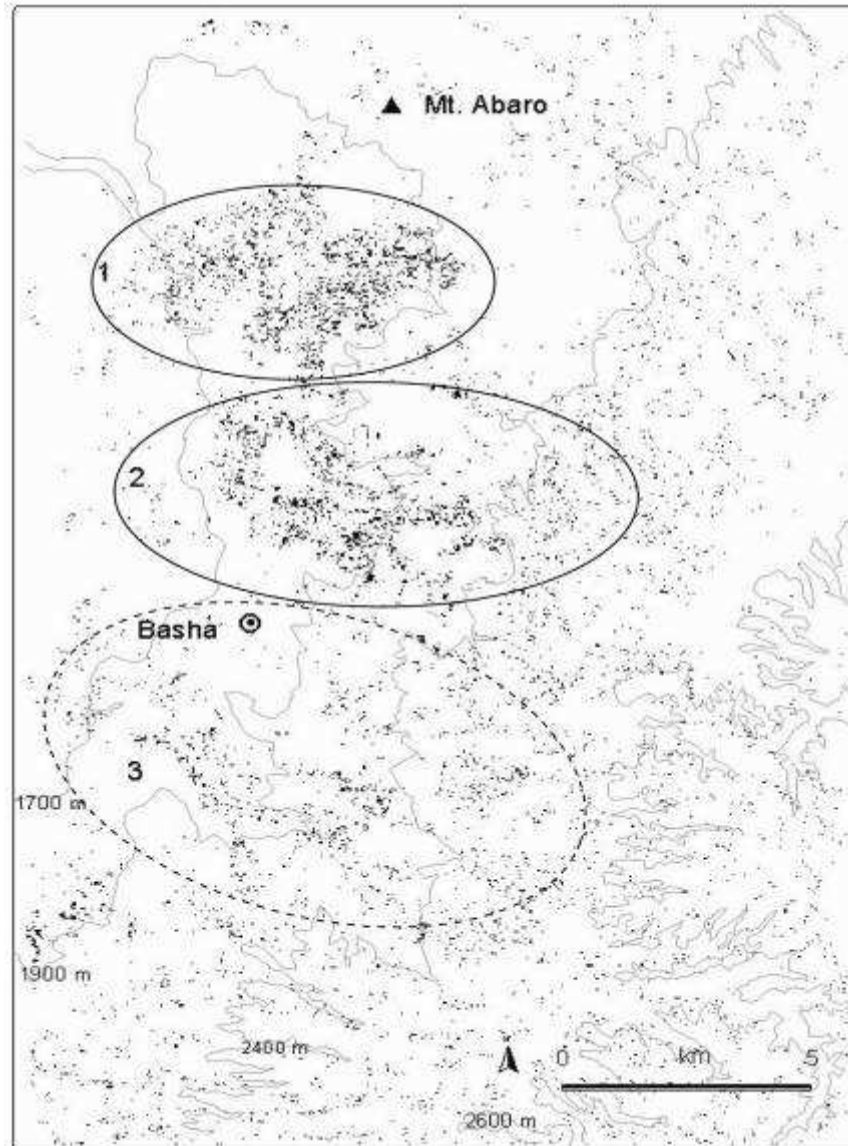


Khat expansion and forest decline.....

Forest decline in Wondo Genet Ethiopia 1972-2000



## Khat expansion and forest decline



## Processes of khat expansion....

Increase land value

Increase population density

Relocate settlement frontier

Steer landscape dynamics

Favour exotic tree plantation



Thank you

