



Innovatively investing  
in Europe's Northern  
Periphery for a sustainable  
and prosperous future



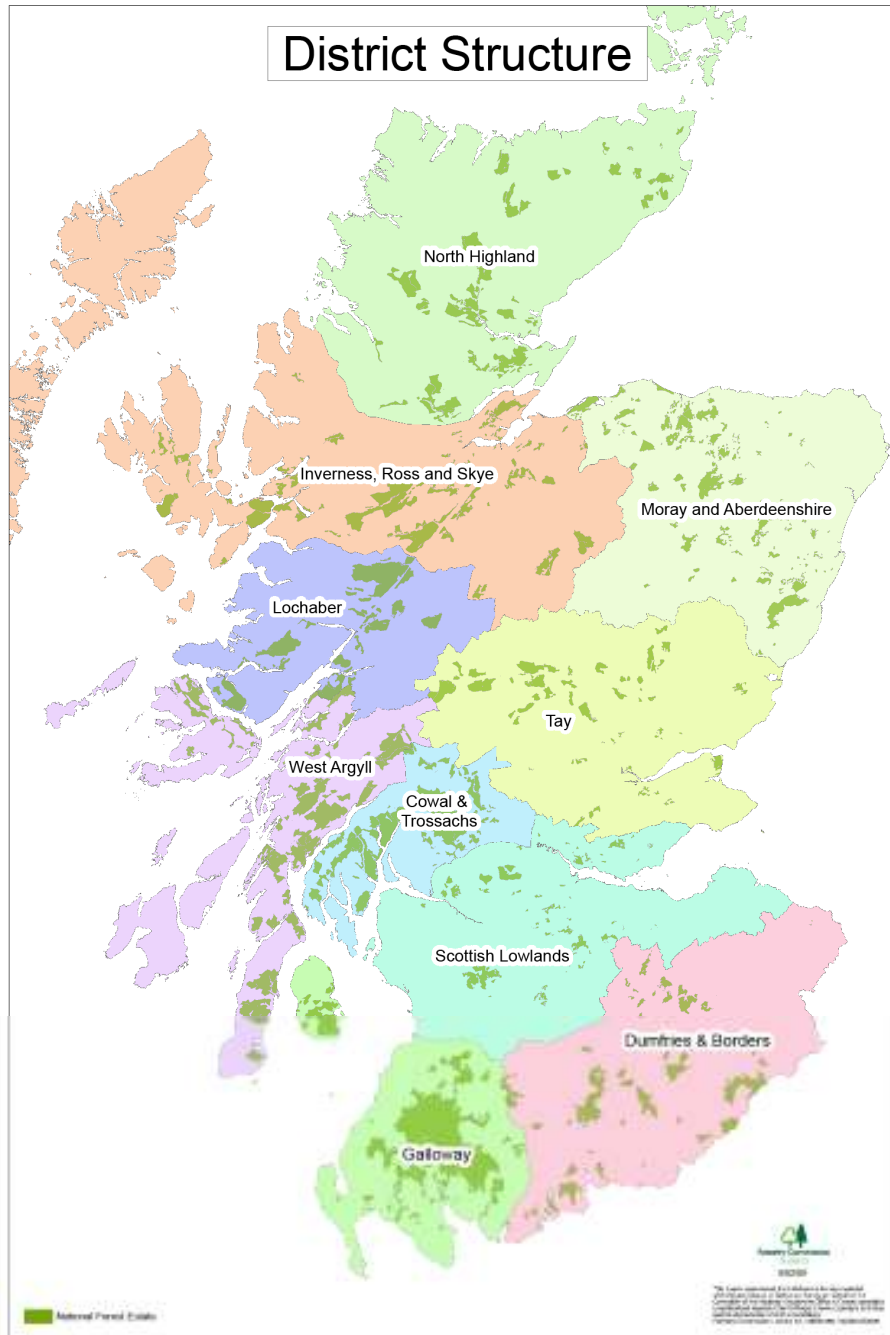
European Union  
European Regional Development Fund

# Developing Tools to Meet the Demand for Sustainable Forestry

**Steve Smith**

**Inverness, Ross & Skye  
Forest District,**

**Forestry Commission  
Scotland**



Forestry Commission:-

FC Great Britain

Forest Research

FC England

FC Wales

FC Scotland

Forest Authority functions  
in 5 Conservancies

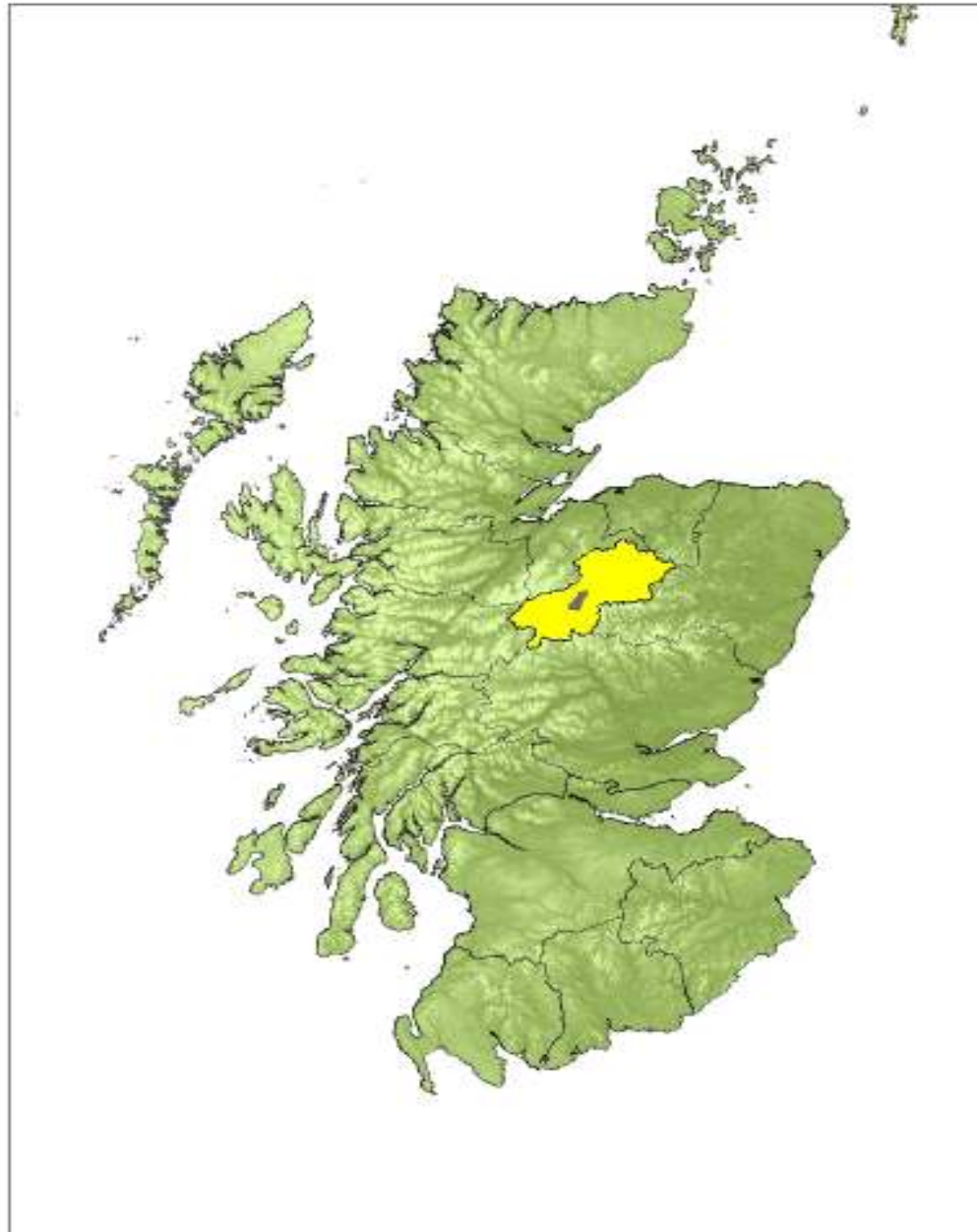
Forest Enterprise manages  
state forest/land in  
10 Districts

# NorTOSIA Objectives

To develop methods for understanding the impact of changes to forest management on the sustainability of forest based activities within the Cairngorms National Park in order to:

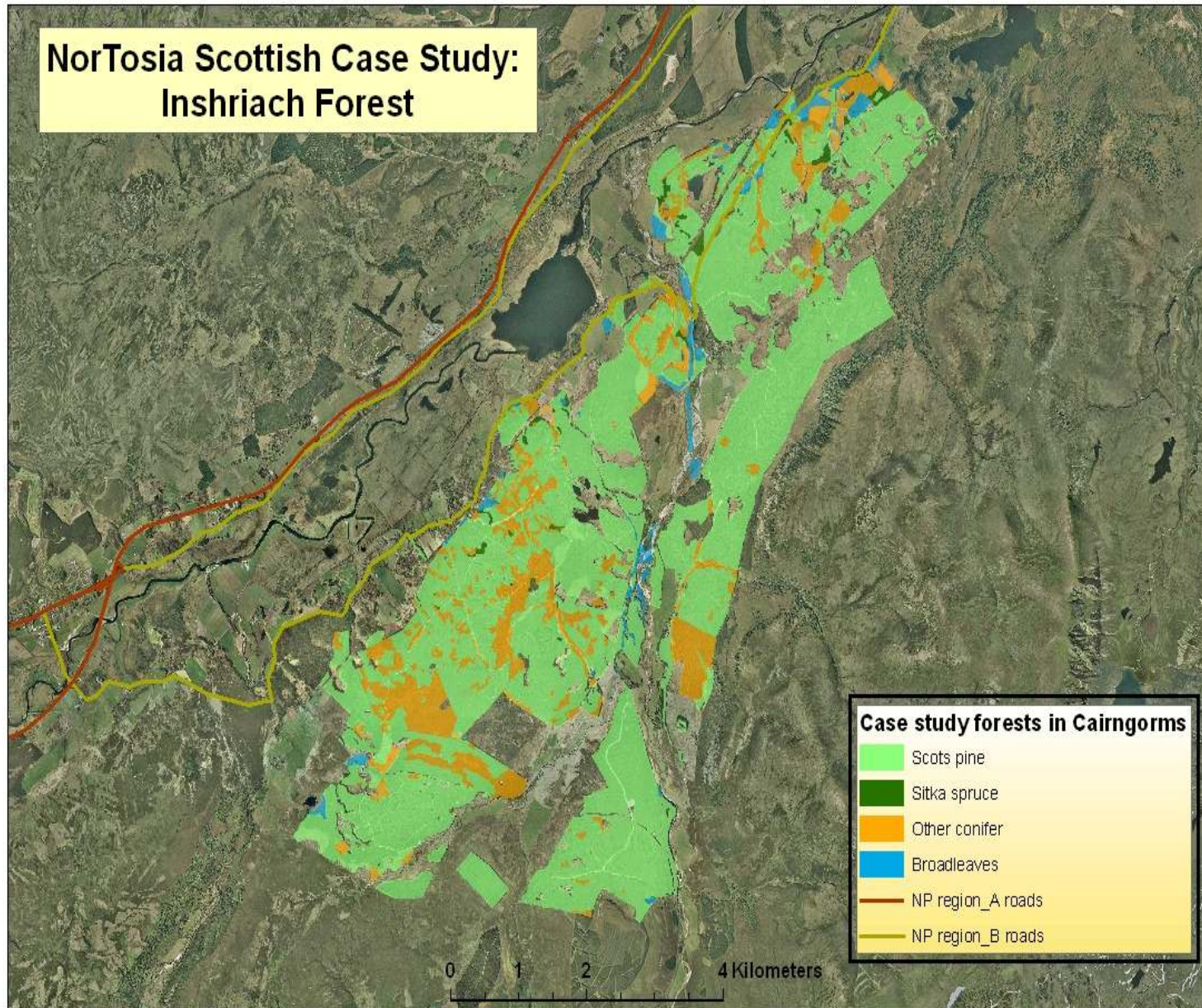
1. Study the effects of management changes at an individual forest level (eg—Inshriach forest)
2. Study the effects of management changes at a regional forest level (eg—Cairngorms National Park)
3. Investigate impacts of these changes on individual enterprises supplied from within the Cairngorms area

# Cairngorms National Park / Inshriach Forest





# Cairngorms National Park / Inshriach Forest



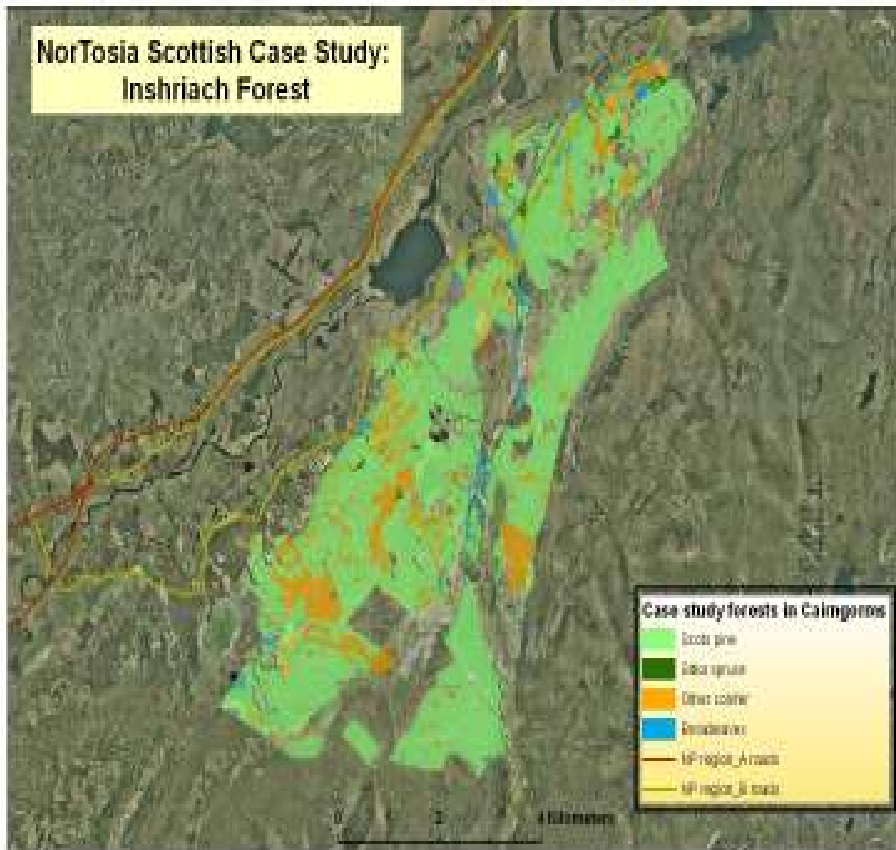
# NorToSIA case study in Cairngorms National Park



- Britain's largest national park, with 3,800 km<sup>2</sup> of varied landscapes.
- Forests include remnants of ancient pinewoods, and more recent plantations producing timber for local and other sawmills and processors.
- 39% of the land area carries habitat designations (two thirds of which are European level designations)
- Wildlife includes Red squirrels, wildcat, Capercaillie, and important salmon rivers.
- There are 16,000 permanent residents,
- And around 2 million visitors - tourism amounts to about 80% of the local economy.



# NorToSIA case study in Inshriach



- 3,700 ha with a total harvested volume in 2008 of 10,800 m<sup>3</sup> and a mean annual increment of 18,000 m<sup>3</sup>.
- Mainly even-aged stands with a history of commercial clearfelling.
- Ongoing restoration of native pinewoods by removing exotic conifers and CCF.
- Considerable recreational interest although timber production will remain an objective.
- High numbers of the endangered Red squirrel and Capercaillie.

# Key policies & strategies for the Inshriach Forest Plan

## ***The primary objectives are:***

To protect and improve biodiversity interests, whilst balancing the needs for recreation and timber production to create a diverse, high quality forest .



## **Social Issues**

- Increase attractiveness for recreational use.
- Need for land to provide affordable housing/ forest crofts.
- Minimise conflicts with biodiversity.

## **Environmental Issues**

- Designated sites and protected species.
- Restoration of ancient woodland areas.

## **Economic Issues**

- Increase in native species.
- Low impact harvesting systems and thinning.
- Manage access to protect public road infrastructure.



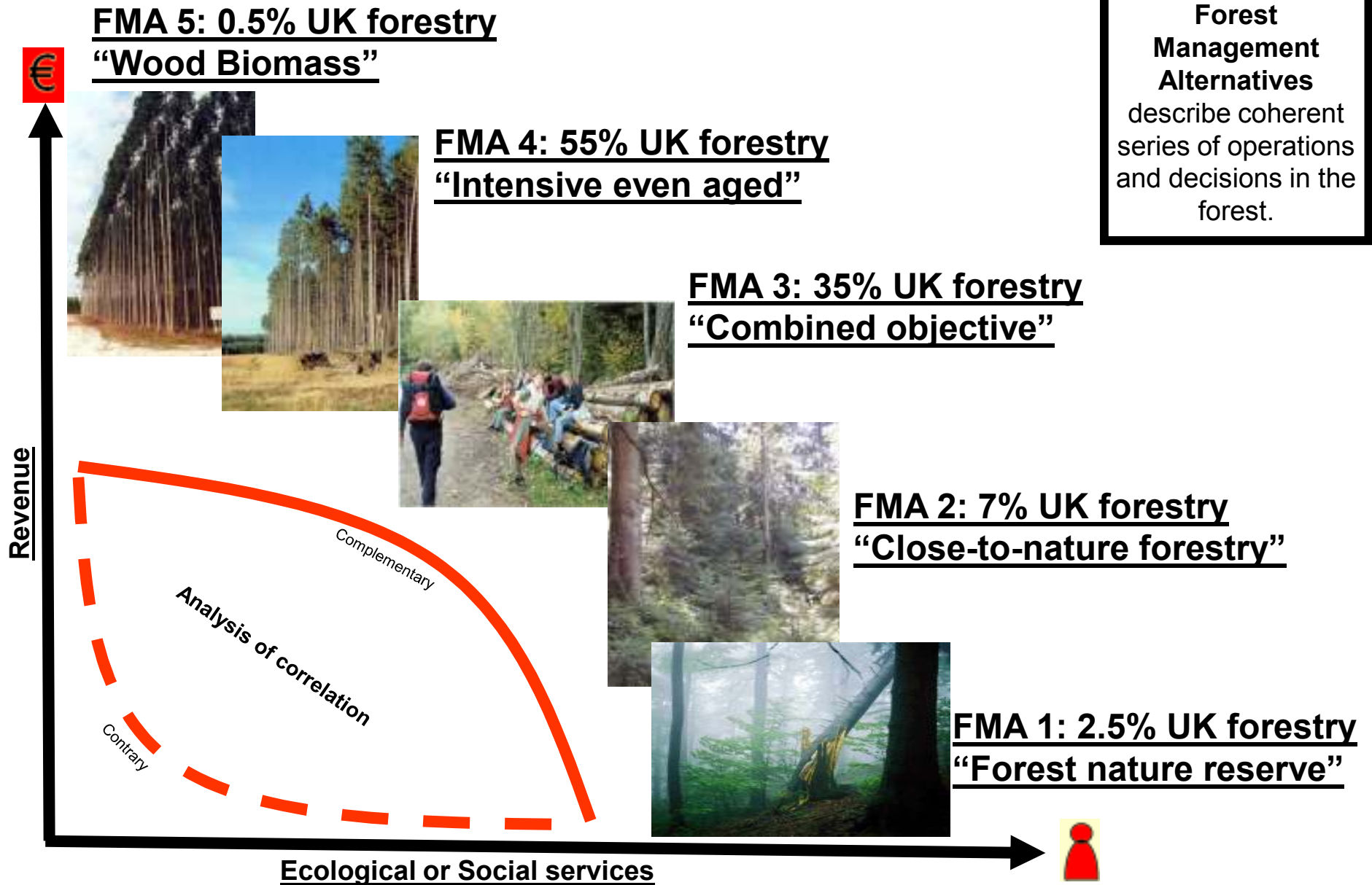
## Issues / Scenarios



1. Due to a biotic threat, i.e. Red Band Needle Blight, and a corporate target of 20% broadleaves - Scots pine must be converted to other suitable species.
2. There is a general desire to increase the area managed on a continuous cover forestry regime and decrease clear-felling - for the perceived benefits to biodiversity and possible increased attractiveness for tourism.
3. Industries invest in their production of wood based products and therefore require greater amounts of timber. The areas of forest for timber production are expanded.

# Forest Management Alternatives (FMA's)

**Forest Management Alternatives**  
describe coherent series of operations and decisions in the forest.



# Case Study Development



Scenario	Inshriach
0. Business as usual - current FP	FMA 1 – 5% FMA 2 – 10% FMA 3 – 35% FMA 4 – 35% FMA 5 – 15%
1. Change of species.	FMA 1 – 10% FMA 2 – 15% FMA 3 – 40% FMA 4 – 25% FMA 5 – 10%
2. More CCF.	FMA 1 – 15% FMA 2 – 40% FMA 3 – 15% FMA 4 – 20% FMA 5 – 10%
3. More timber production.	FMA 1 – 5% FMA 2 – 5% FMA 3 – 20% FMA 4 – 50% FMA 5 – 20%

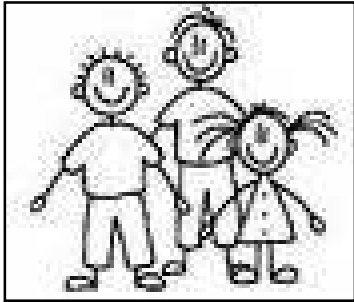
# NorToSIA Sustainability Indicators



**Economic**



**Environmental**



**Social**

<p>Gross value added</p> <p>Production costs</p>	<p>Greenhouse gas emissions and carbon stocks</p> <p>Forest biodiversity</p> <p>Forest resources</p>	<p>Employment</p> <p>Recreation</p>
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# Impact on individual enterprises



## **BSW Boat of Garten Sawmill:**

- BSW Timber is the largest sawmilling business in Great Britain
- 5 ha site located in the Spey Valley, approximately 10 km north-east of Inshriach forest
- Annual input of 80,000 m<sup>3</sup> of roundwood and produces 50,000 m<sup>3</sup> of sawn timber

# Impact on individual enterprises



## **RussWood:**

- In Newtonmore there is a small wood processing company, RussWood, who are developing a new Scots pine cladding product as part of another NPP project. We will work with RussWood to track changes in key indicators as a function of where they source their Scots pine material from.

# Impact on individual enterprises



## **Speyside Wildlife:**

- In Aviemore there is a small company, Speyside Wildlife, who are developing a business based on wildlife watching tourism. We will work with Speyside Wildlife to track changes in key indicators as a function of where and how they source tours and activities - and how they perceive the 'attractiveness' of the forests.

# Impact on individual enterprises



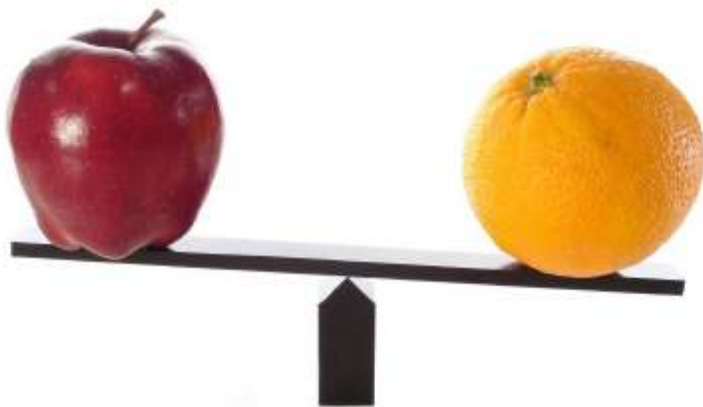
## MacAngus Adventures:

- In Aviemore there is a small company, MacAngus Adventures, who are developing a business based on outdoor activities such as mountain biking. We will work with this company to track changes in key indicators as a function of where and how they source their activities - and how they perceive the 'attractiveness' of the forests.



# Sustainability Impact Evaluation

**Multi-Criteria  
Analysis (MCA)**  
compares apples  
and oranges



**Cost-Benefit  
Analysis (CBA)**  
Converts apples and  
oranges into €



# Stakeholder Engagement for Scottish Case Study

- Stakeholder workshop (October 2009, Inverness): CNP, BSW Sawmill, Forest Research and Inverness Forest District representatives
- Highland Conservancy
- Cairngorms National Park
- Highlands and Islands Enterprise
- Highland Council
- Scottish Government
- FSC/PEFC Certification bodies
- Other businesses and sawmills

# Summary

1. Forestry in common with other land uses is being expected to provide an increasing range of benefits;
2. Our major difficulty is to understand the impacts of changing forest management on these benefits and their long-term sustainability;
3. We'll use ToSIA as a tool to allow us to evaluate potential changes within the forests, and the impacts on a selected range of dependant enterprises.
4. And we'll test this tool and ideas at a forest and regional scale in Scotland - Inshriach Forest and the Cairngorms National Park;



Thank you