

Factors influencing woodfuel production by private landowners

A scoping study in Fife



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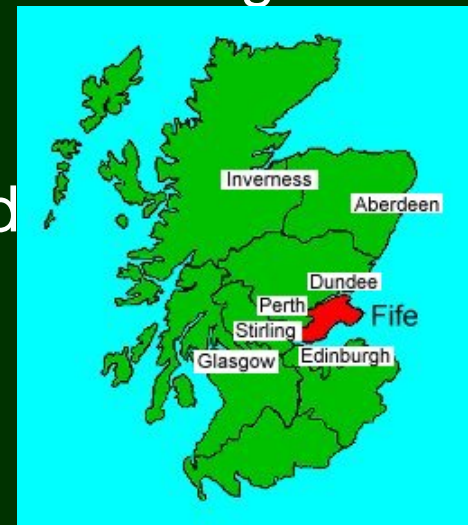


Background

This scoping study was designed as part of the Forestry Commission's current focus on woodfuel, mainly due to its potential to reduce climate change.

Designed with Norman Dandy (ND) + Anna Lawrence, of the Social & Economic Research Group, to parallel a larger study by ND in E. Midlands.

Carried out Oct 08 - Mar 09, in Fife, E. Scotland
Fife land cover ~65% arable, ~10% woodland



Aim & Method



Aim:

To interview 10 private land owners/managers to identify social barriers to, and enablers for, woodfuel production



Identified 10 prepared to take part in the study:

- 5 produced woodfuel commercially (owned: 77– 200+ ha),
- 5 produced no commercial woodfuel (owned: 34 – 200+ ha).

3 estate owners, 1 estate manager, 6 farmers

Method:

Semi-structured interviews + questionnaire



3 Types of fuelwood production

1. Short Rotation Coppice (SRC)

-growth + sale managed by woodfuel company 3/10 owners

1.



2. Commercial firewood as a byproduct of timber ops

-managed by timber companies 3/10 owners

2.



3. Non-commercial firewood from other woodlands –

‘farm woodlands’ (for landscape/wildlife/shelter/shooting)

-managed by landowner (and/or employees) 9/10 owners

-used on site by landowner

-cut & given or sold on small scale at farm gate

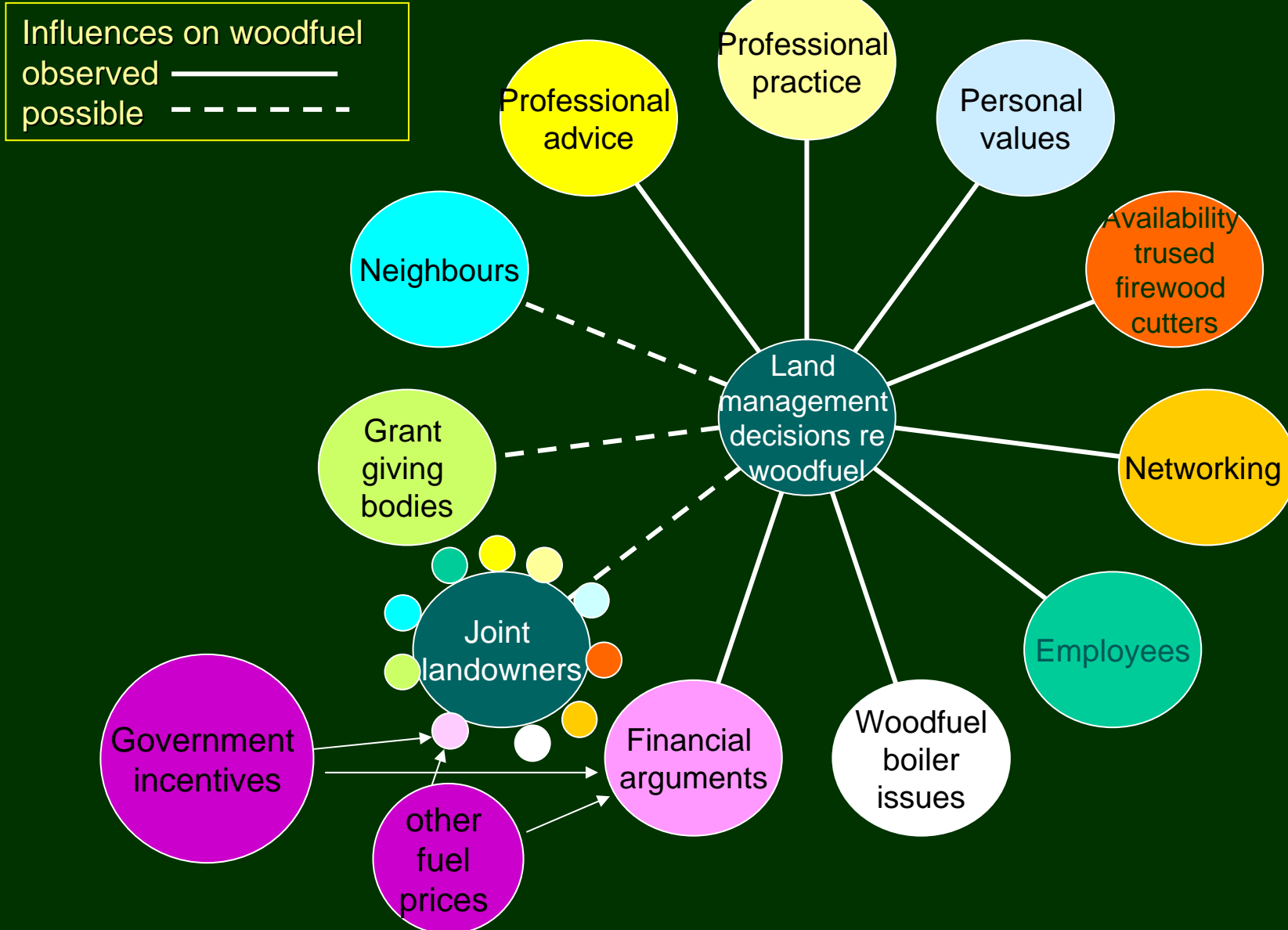
-given away standing to third party who may sell it

3.



Results

Influences on landowners' woodfuel production decisions



Results: commercial firewood as timber byproduct

Professional Advice

Forest management companies encourage firewood production
=> offer to pay owner for extracted firewood

Though bigger profit for company if firewood left in forest

July 2008 contract: Company offered Fife landowner:
£2/t firewood
£6/t mixed conifer timber
£12/t spruce green timber



Timber contractor reported:

The contract firewood price
does not cover extraction costs

Timber profit covers firewood
loss

Professional advice

All 3 owners persuaded
by SRC company's
financial arguments
(all got
full
planting
grant)

1) 10 ha



Showcase
Not Fife

- All 3 landowners' SRC
- on marginal land
 - < 3 years old

2) 10 ha

3) Both fields above: 15 ha total

Results

Professional Practice

Landowners complained about SRC & timber companies' poor practice



1 owner: Poor site choice by woodfuel company
=> poor tree growth
=> owner removed SRC after 2 ½ years

Personal Values

⇒ Enable woodfuel production:

- Believe firewood harvest is good use of woodland

All 9 with woods used firewood from own woods

- All 9 had open fires
- 1 hydraulic log splitter for farm gate sales
- 1 log boiler (not in use)



Personal Values

=> Inhibit woodfuel planting:

- Prefer farming to tree-growing
- Believe better to grow food than fuel on good land
 - national food shortage fears
 - fear poor tree growth on good land



Availability of Trusted Firewood Cutters



Local firewood log demand rose winter 08/09
- not fully met by log supply

Not easy to find trustworthy harvesters/firewood merchants

(From firewood merchant + landowner interviews)

Why not?

Research question



Firewood grade logs in merchant's yard, Fife

Employees

Networking

- Employee could be a trusted firewood cutter
- Researcher told 2 landowners about local log shortage (Networking)
 - 1, who had a Forest Manager (Employee), collaborated with 2 others & formed log producers group

Networking:
Role for Forestry
Commission



Woodfuel boiler issues

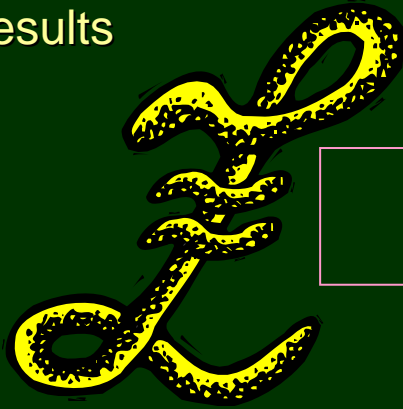
- Landowner interest in on-site biomass for heating
- Technology not user-friendly enough
 - Log boiler: too labour intensive for some
 - Woodchip: believed to be unreliable and expensive to produce
 - Pellets: delivery problems

Role for
Forestry
Commission

Currently
under
development

Mobile pelletiser
to produce fuel pellets
from on-farm biomass
including wheat straw + wood





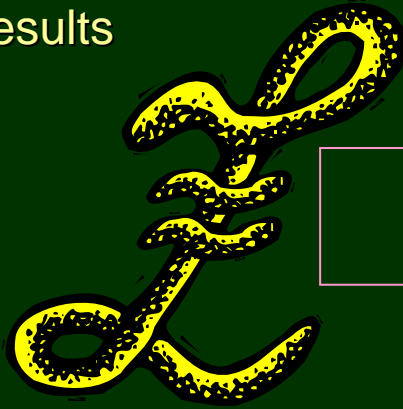
Financial considerations

=> Encourage fuelwood production

- Contract work offered to landowners who planted SRC
- Govt grants for SRC planting
- 2008 grants for log stove installation
- Oil price rise 2008

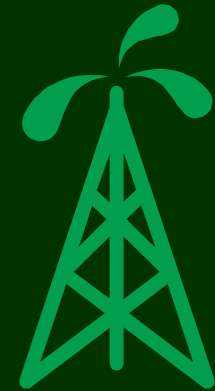
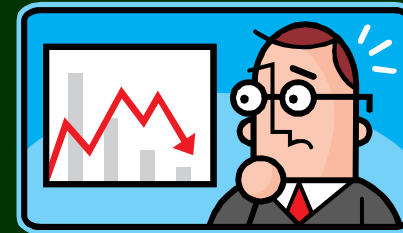
Winter
08/09
increase in local
demand for
firewood logs
in Fife





Financial considerations

=> Inhibit fuelwood production

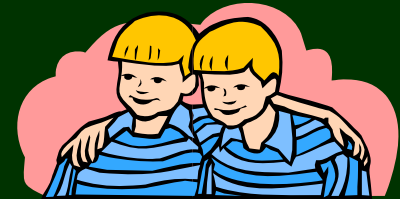


- Low oil price => firewood price must be kept low to compete
=> firewood price can be lower than harvest costs
- High expected income from alternative crops over long term
=> inhibits SRC planting



Other influences on land management decisions

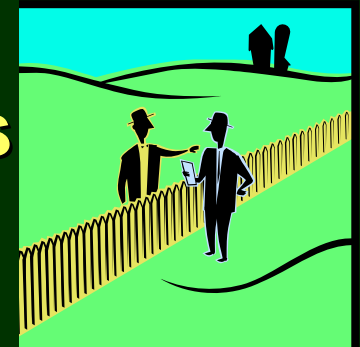
9/10 made land management decisions in collaboration with others:



- **joint owners, close family members, land management staff**

Some land management decisions influenced by

- **Neighbours**
- **Representatives of grant-giving bodies**

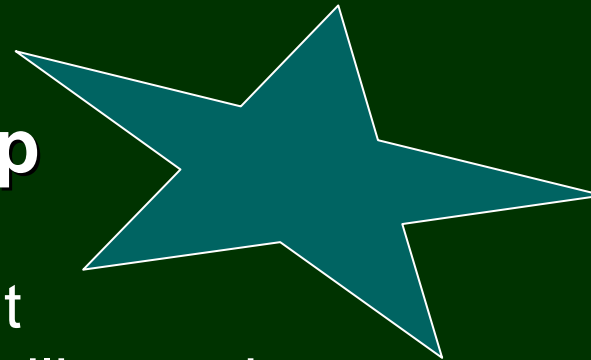


Neighbours Community Action

Could increase firewood production

Falkland Transition Group

- Aims to reduce carbon footprint
- Climate Challenge Fund: feasibility study:
use Falkland Forest firewood to heat nearby homes
- Supported in principle by forest steward, management chief executive, and forest manager



Summary

Observed influences on landowners' woodfuel decisions

Encouraging woodfuel production:

Professional advice

- Timber companies put price on firewood
- SRC companies make positive financial projections

Personal values

- Good to use firewood from woods

Networking, Employees

- Clear woodfuel shortage => growers group formed

Financial

- Oil price rise 2008
- Grants: SRC planting + woodfuel heating systems
- SRC contract work

Neighbours

- *possibly in future*: Falkland Transition Group

Suggested
Forestry
Commission
input

Inhibiting woodfuel production:

Professional practice

- Poor crop siting -> landowner removed SRC

Personal values

- Prefer farming to tree-growing
- Bad to plant trees on good agricultural land

Trusted cutters unavailable

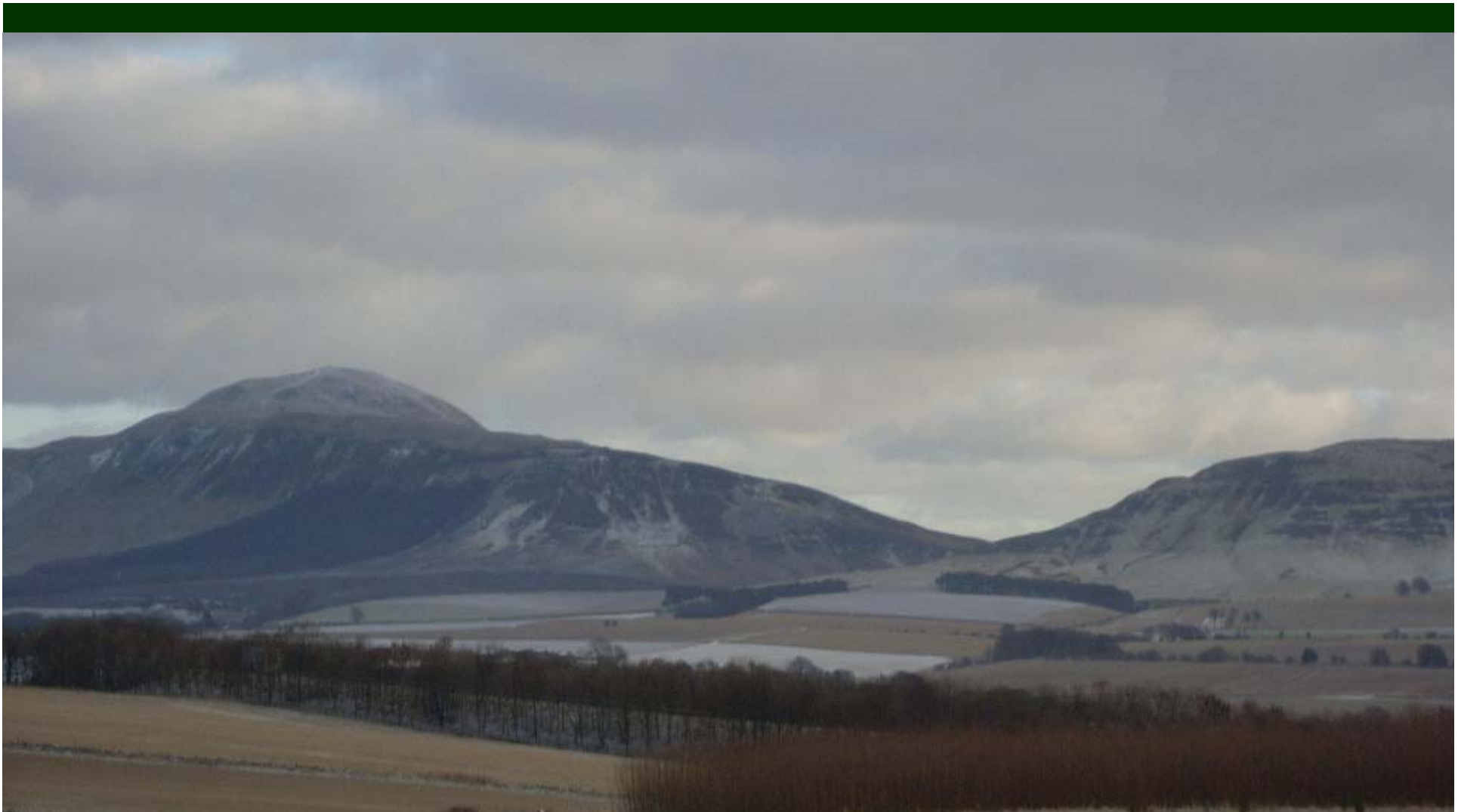
- Local firewood log demand not met. Why?

Woodfuel boilers issues

- On-farm fuel production + use not easy

Financial

- When oil prices < woodfuel harvesting costs
- Agricultural income from alternatives to SRC



Thanks to: the nine land owners & one estate manager who completed the full interview & questionnaire; the firewood merchants & forest managers and all those others I spoke to or emailed who provided much useful information; John Farrell, Forestry Commission Scotland, & Robert Smith & Pernilla Tweddle of Renewable Fuels Ltd, as well as certain landowners, who provided useful contacts; Owen Watters, Rebecca Carr & Mike Strachan, Forestry Commission Scotland for ideas and advice; Christopher Scott of PelHeat & Neill Campbell, Forestry Commission for photos, Colin Maxwell of maximized.co.uk for map, and Anna Lawrence & Norman Dandy of Forest Research who gave direction & much helpful criticism.