Estimating the Size of the Economic Contribution of Small Scale Woodland Related Businesses in Scotland

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The Forest Policy Group (FPG) seeks to further the development of sustainable forestry in Scotland, by contributing informed inputs to the policy debate. Its membership is drawn from woodland organisations, forestry and land use professionals and timber users, who subscribe to a view of forestry in which:

- *Environmental and social issues are treated as core parts of forestry on an equal footing with economic interests; and*
- *diversity is actively fostered – diversity of tree species and woodland types, woodland tenure, management approaches, timber production and processing, and wider economic opportunities.*

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Summary

- The aim of this desk-based study is to identify what data sources there are that could be used to estimate the magnitude of the economic contributions that small-scale woodland-related activities might be making to Scotland's rural economy and to estimate the scale of those contributions
- The publications and statistical bulletins produced by the UK and Scottish Governments that were found to have the most potentially useful sets of statistics for identifying information on woodland related businesses and their contribution to Scotland's economy were: *Business in Scotland / Scottish Corporate Sector Statistics Publications*, *Business Population Estimates for the UK and Regions Publications*, UK Business: *Activity, Size and Location Statistical Bulletins* and *Business Demography Statistical Bulletins*.
- None of these official sources of national statistics gives an accurate estimate of the number of woodland related micro- businesses operating in Scotland, but there was information that allowed estimates to be made.
- There were 2,035 enterprises involved in woodland related activities in Scotland in 2017 employing less than 10 people (micro-businesses).
- These enterprises are estimated to have been employing some 4,255 people in Scotland in 2017.
- It is not possible to calculate the GVA related to small scale woodland related activities because they do not all take place in corporate entities or micro businesses, but it is estimated that the total income generated by woodland related activities could be £63.8 million per annum. This assumes that all people working on woodland related activities on average receive the minimum agricultural wage.
- These figures are likely to be an underestimate of the total number of people involved in economic related activities because there will be people who are involved in woodland related activities that not registered in a formal way as an enterprise and many activities do not have a separate SIC code. The total may amount to some 2,000 people generating an income of approximately £6.0 million per annum per year.
- The overall total number of people connected with small-scale woodland related activities could be about 6,255 people whose income and local spend amounts to an estimated £69.8 million per annum in Scotland.
- Agriculture, Fisheries and Forestry enterprises are predominantly found in rural areas, as would be expected, and are of particular importance to the local economies in some localities such as Aberdeenshire, Argyll & Bute, Dumfries & Galloway, Highland, Perth & Kinross and the Scottish Borders.
- The statistics show that there are more people working for themselves in in agriculture, fishing and forestry in remote rural areas than the more accessible areas which is largely to be expected, and they show the particular importance of these activities to Scotland's rural economy in remoter areas.

- National statistics do not offer any understanding of the scale and nature of the contribution that woodland related micro-businesses make to the local economies or how the money circulates locally in the rural economy.
- These findings suggest that it is important that national forestry, social and economic policies include measures to support woodland related micro-businesses given the fragile nature of the economies in rural areas.
- A better understanding is also needed of the scale and nature of the contribution that woodland related micro-businesses make to the local economies and how the money circulates locally in the rural economy.

Abbreviations

ASHS	Association of Scottish Hardwood Sawmillers
BEIS	Department for Business, Energy & Industrial Strategy. (Created July 2016 through the merger of BIS and the Department of Energy & Climate Change)
BIS	Business in Scotland
BPE	Business Population Estimates for the UK and Regions
CWA	Community Woodland Association
FRS	Family Resources Survey
GOR	Government Office Region
GDP	Gross Domestic Product
GVA	Gross Value Added
IDBR	Interdepartmental Business Register
LFS	Labour Force Survey
NWFP	Non-Wood Forest Products
ONS	Office for National Statistics
PAYE	Pay As You Earn
SCSS	Scottish Corporate Sector Statistics
SA	Self-Assessment
SIC	Standard Industrial Classification
VAT	Value Added Tax

Definitions

Accessible Small Towns	Settlements of 3,000 – 9,999 people within 30 minutes' drive of a settlement of 10,000 or more.
Accessible Rural	Settlements of less than 3,000 people within 30 minutes' drive of a settlement of 10,000 or more.
Division	Each SIC Sector is broken down into Divisions.
Remote Small Town	Settlements of 3,000 – 9,999 people with over 30 minutes' drive to a settlement of 10,000 or more.
Remote Rural	Settlements of less than 3,000 people with over 30 minutes' drive to a settlement of 10,000 or more.
Gross Value Added (GVA)	It is the value for the amount of goods and services that have been produced, less the cost of all inputs and raw materials that are directly attributable to that production. It is measured at current basic prices, which include the effect of inflation, excluding taxes (less subsidies) on products (for example, Value Added Tax).
Standard Industrial Classification	A system for classifying industries by a four-digit code and is used by government agencies to classify industry areas.

Estimating the Size of the Economic Contribution of Small Scale Woodland Related Activities in Scotland

1. Introduction

1.1 Small scale woodland related activities and businesses are operating in Scotland, but there is very little known about their aggregate economic contributions to Scotland's rural economy because they are small scale and they can be scattered throughout Scotland wherever there are woodlands.

1.2 There are no formally defined and agreed definitions of what a small-scale activity is. For the purpose of this study, it has been assumed to be one where 10 or fewer people are involved and that the activity can be of any type provided that it is woodland related. This type of activity is frequently defined as a 'micro-business'.

1.3 There is no central database where all these activities and businesses are recorded. Some individual case studies and anecdotal evidence suggest that these small scale rural activities can make significant contributions to a local economy, although by the very nature of their scale and diversity, their individual contributions will be small and can also include the informal economy.

1.4 Small scale woodland related activities should be contributing to the rural economy as people tend to live and work in the same location, so the money is likely to be recycled within the local economy. This compares with large-scale woodland related activities which tend to be transient in an area with workers and machines coming into an area for a limited period of time to complete a job and then leave, and any woodland products are then transported out of the area to be processed elsewhere.

1.5 The aim of this desk-based study is to identify what data sources there are that could be used to estimate the magnitude of the economic contributions that small-scale woodland-related activities might be making to Scotland's rural economy and to estimate the scale of those contributions.

1.6 Depending on the findings of this study, there could be a case for more detailed fine-grained studies involving case studies to improve the estimates given in this report and to look at how the impacts might vary according to the type of activity and the structure and nature of the local economy where they take place.

2. Scotland's Rural Economy

2.1 Since this study was commissioned, the Scottish Government has published a report called 'Understanding Scotland's Rural Economy[1]. The report gives a good overview of Scotland's rural economy, but only mentions forestry within a broader category called 'Agriculture, Fisheries and Forestry'.

2.2 The authors of 'Understanding Scotland's Rural Economy' recognised that there was no agreed definition of what the rural economy is, and so the Rural Environmental Science & Analytical Services of the Scottish Government developed new definitions to get a more

[1] Eva Kleinert, Graeme Beale, Neil Henderson, Neil Davidson, 2018. Understanding the Scottish Rural Economy RESAS (Rural & Environment Science & Analytical Services), Scottish Government

nuanced and detailed picture of rural Scotland. Further details are given Annex 1. The definitions they have used are given below:

Larger Cities	Glasgow City. City of Edinburgh, Aberdeen City, Dundee City.
Urban with Substantial Rural	North Lanarkshire, Fife, South Lanarkshire, West Lothian, Renfrewshire, Falkirk, East Renfrewshire, Inverclyde, West Dunbartonshire, Midlothian, North Ayrshire.
Mainly Rural	East Ayrshire, Aberdeenshire, Clackmannanshire, East Lothian, South Ayrshire, Moray, Angus, Perth & Kinross, Highland, Dumfries & Galloway, Scottish Borders.
Islands & Remote Rural	Argyll & Bute, Shetland Islands, Orkney Islands, Na h-Eileanan Siar.

2.3 The authors found that 'Agriculture, Fisheries and Forestry' account for 4% of the Gross Value Added (GVA) in Islands and Remote Rural areas of Scotland and 3% in Mainly Rural Scotland. On the Scottish wide average, the sector accounts for 1.3% of the GVA. It is the smallest employer in Mainly Rural Scotland (4.4%) and the fifth smallest employer in the Islands and Remote Rural areas (7.7%). Overall GVA growth since 1997 has been positive for rural Scotland and highest in Mainly Rural areas. The largest increase in growth is in 'Business Services' (up by 169 %) and the smallest growth was in 'Agriculture, Fisheries and Forestry' (up by 34%). There was no growth in 'Agriculture, Fisheries and Forestry' for the Islands and Remote Rural Scotland.

2.4 GVA growth between 2007 and 2015 has been positive across Scotland and strongest in Mainly Rural areas (24%); followed by GVA growth in Larger Cities and Islands and Remote Rural areas (both 19%) and Urban with Substantial Rural areas (14% GVA growth since 2007). The rural economy is highly variable in economic performance between sectors and local authorities. Aberdeenshire and Highland councils have the largest GVA in most sectors; the Islands authorities are much smaller in employment and GVA terms.

2.5 This top-level analysis does not provide an encouraging picture for 'Agriculture, Fisheries and Forestry'. One of the purposes of this paper is to see if more detailed statistics are available for 'Forestry'.

3.1 The following publications and statistical bulletins produced by the UK and Scottish Governments are the most potentially useful sets of statistics for identifying official information on woodland related businesses and their contribution to Scotland's economy:

- *Business in Scotland publication / Scottish Corporate Sector Statistics Publications*
- *Business Population Estimates for the UK and Regions Publications*
- *UK Business: Activity, Size and Location Statistical Bulletins*
- *Business Demography Statistical Bulletins*

3.2 The most obvious limitation of using these information sources is that small scale woodland related activities are not all undertaken by people operating in some form of legally recognised unit. Some activities, and possibly many of them are undertaken by sole traders[2].

[2] A sole trader is someone who runs their own business as an individual and is self-employed

3.3 Although any information relating to small business taken from analyzing the official data sources will have its limitations, because it will not cover all the activities, it will nonetheless potentially provide an estimate of the size and nature of the contribution that small companies make to the local economy from their woodland-related activities. This figure can be recognised as the minimum size of any contribution in the knowledge that there are other activities taking place outside a corporate structure.

3.4 Both the Scottish Corporate Sector Statistics publication and the Business Population Estimates publication use the Inter-Departmental Business Register (IDBR) to obtain the number of registered enterprises. The IDBR is maintained by the Office for National Statistics (ONS) and is a database of all registered enterprises operating in the UK i.e. enterprises that are registered for VAT and/or PAYE. It is estimated to covers 99% of economic activity in the UK. Those excluded are small sole traders or partnerships with no employees and an annual turnover of less than the VAT threshold of £85,000.

Business in Scotland Publication

3.5 Scottish corporate sector statistics are produced by the Scottish Government and were given in publications called *Scottish Corporate Sector Statistics* (SCSS) but the statistics are now given in a publication called 'Businesses in Scotland'. These publications provide information on the number of enterprises (businesses) operating in Scotland. The focus of the publication is on private sector enterprises, where the private sector is defined as including the following enterprise types:

- Companies (including Building Societies)
- Sole Proprietors
- Partnerships
- Public Corporations/Nationalised Bodies
- Non-profit making bodies and mutual associations

Data is also provided on enterprises' employment and turnover.

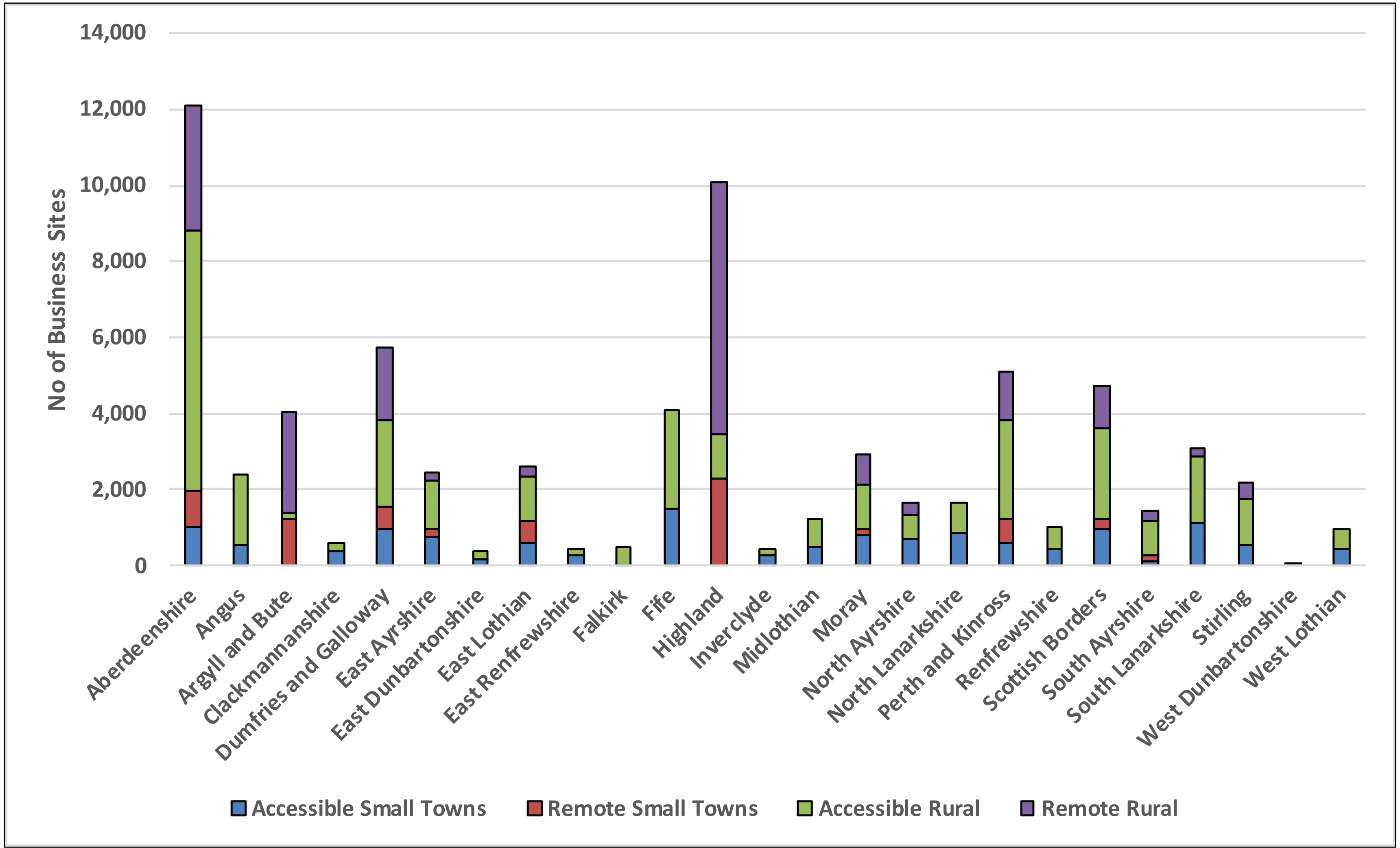
3.6 The estimates have been constructed using data from the Inter-Departmental Business Register (IDBR), the Annual Population Survey (annual version of the Labour Force Survey (LFS)), the Family Resources Survey (FRS) and Self-Assessment (SA) data. The IDBR provides the number of enterprises registered for VAT and/or PAYE in Scotland. However, there is a substantial number of very small enterprises that have no employees and are therefore not included on the IDBR. The Scottish Government's Statistician Group undertakes a modelling procedure that combines data from the IDBR with estimates derived from the LFS, FRS and SA data from which they estimate the number of unregistered enterprises.

3.7 The main purpose of the Business in Scotland publication is to provide an estimate of Scotland's business stock. Within the publication, the Scottish business stock is broken down into business size, local authority area, urban/rural area and country of ownership. The publication includes all enterprises that operate in Scotland regardless of where the business is based.

3.8 Further details of the methodology used in developing these datasets can be found at: http://www.gov.scot/Topics/Statistics/Browse/Business/Corporate/Methodology.

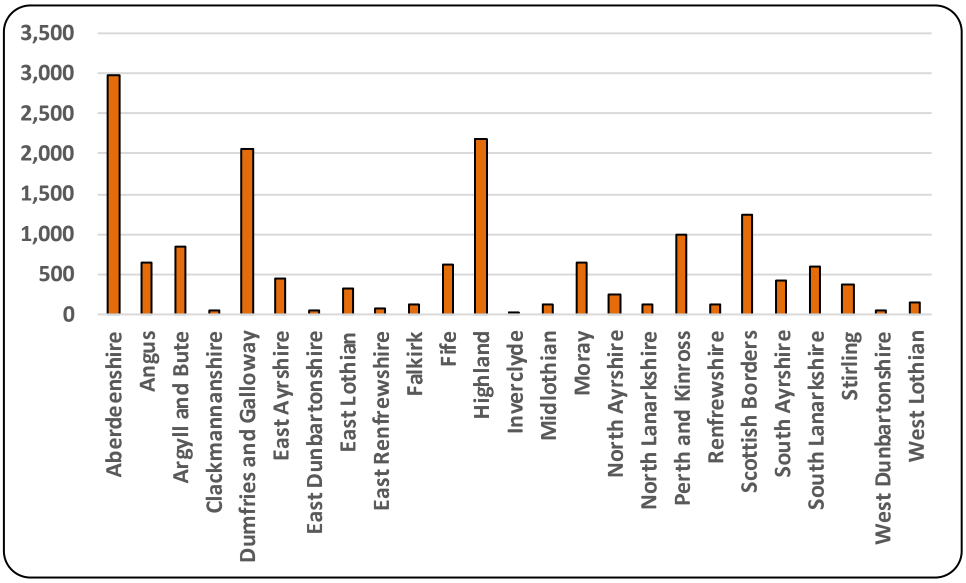
3.9 None of the datasets in this publication relate solely to forestry or woodland related activities. To provide some overall perspective, Chart 3.1 (on page 10) shows the total number of business sites of registered *enterprises of all types* in Scotland, (excluding the Islands where agriculture and fishing predominate and there is almost no forestry activity for the purposes of this paper), by local authority area and urban / rural classification (Publication Table 13). The number of business sites in Aberdeenshire is noticeable and almost certainly reflects the impact of the oil industry.

Chart 3.1: Total Number of Business Sites of all Types of Registered Enterprises in Scotland, excluding the Islands, by Local Authority Area and Urban / Rural Classification



3.10 The number of registered enterprises involved in agriculture, forestry and fishing and employing less than 50 people by Local Authority area (Publication Table 6) totals 15,445 and the results are shown graphically in chart 3.2.

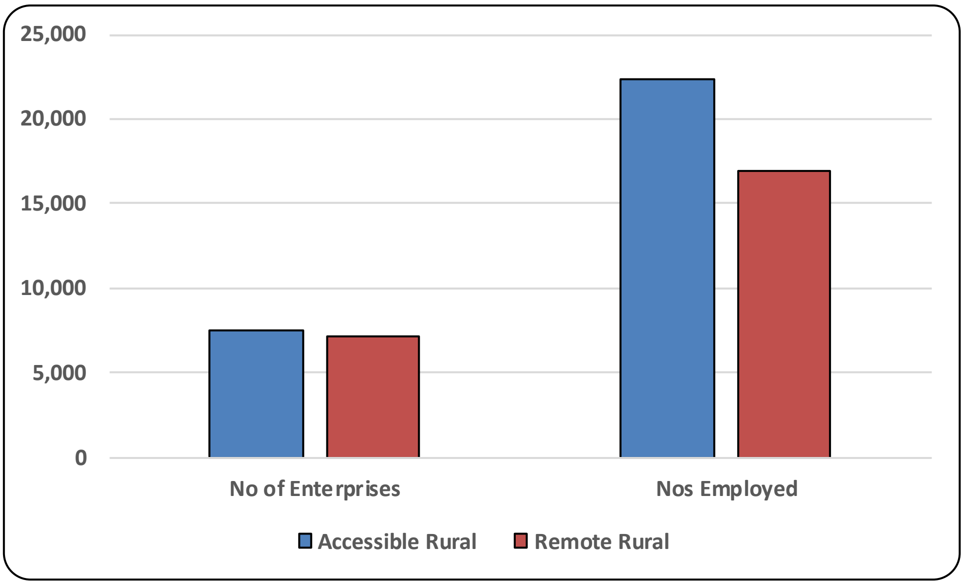
Chart 3.2: The Number of Registered Enterprises involved in Agriculture, Forestry and Fishing and Employing less than 50 People by Local Authority Area



3.11 As would be expected the chart shows that agriculture, forestry and fishing are much more significant to Scotland's local economy in predominantly rural areas of Scotland, such as Aberdeenshire, Argyll & Bute, Dumfries & Galloway, Highland, Perth & Kinross and the Scottish Borders.

3.12 Another dataset shows the number of enterprises, employees and turnover categorised as Agriculture, Forestry and Fishing in Scotland by urban/rural classification (Publication Table 11). The total numbers employed is estimated to be 39,290 and the results are given in Chart 3.3. Rural / urban definitions are given at the front of this paper and further information on them can be found at
http://www.gov.scot/Topics/Statistics/About/Methodology/UrbanRuralClassification

Chart 3.3: Number of Enterprises and Employees involved in Agriculture, Forestry and Fishing in Scotland by Urban/Rural Classification



3.13 Interestingly there are almost the same number of small businesses registered in Accessible as Remote rural areas, but the numbers employed are significantly less in Remote Rural area. This suggests that more people worked for themselves in Remote rural areas and hence self-employment may be a crucial part of the Remote rural economy.

3.14 Attempts to deduce the numbers for woodland related activities by *geographical areas* or Local Authority areas by subtracting relevant estimated figures for agriculture and fishing were not successful as the figures for these two activity categories are not recorded by type of location e.g. Accessible Rural.

3.15 The same difficulty was encountered when attempting to apply this methodology to estimating the *numbers of people* involved in woodland related activities as they are not separately identified from those employed in agriculture and fishing.

3.16 The total workforce in the agricultural sector is estimated to be 67,039 (Abstract of Scottish Agricultural Statistics 1982 – 2017) comprising full-time, part-time and casual and seasonal workers. If only full-time agricultural employees are considered, the figure is 24,536. This contrasts with a figure of 39,290 given in the Business in Scotland publication so there is no definite figure for the number of people employed in agriculture in Scotland.

3.17 The total number of people employed in fishing on vessels that submit landing declarations is 4,823 (Marine Scotland, 2017) and the direct employment[3] in aquaculture is estimated to be 2,100 full time equivalents in 2015, giving a total of 6,923.

3.18 Deducting only full-time agricultural employees (24,536) and those involved in fishing and aquaculture (6,923) from the total of 39,290 (para 3.12) gives a total of 7,831. It would be imprudent to claim that the resulting net employment figure is the employment generated by woodland activities, as some of the 35,254 people employed part time in agriculture should

[3] http://www.gov.scot/Topics/Statistics/Browse/Agriculture-Fisheries/TrendAquaculture

almost certainly be added into the agricultural employment figure, but there is no guidance as to that number.

3.19 The SIC publication gives a dataset that gives the number of enterprises in Scotland by sector, division, employee size band and the results are shown in Table 3.4. The data shows that there are some 2,035 enterprises involved in woodland related activities in Scotland employing fewer than 10 people.

3.20 If the 900 woodland related activities enterprises employing 1 to 4 people employed on average two people, this would mean they employed 1,800 people. Similarly, if the 220 enterprises employing 5 to 9 people employed 7 people on average, they would employ 1,540 people. In total, including enterprises that had no employees because of their business structure, but could reasonably be assumed to be associated with one person, this would give a total of 4,255 people engaged in woodland related activities.

3.21 Unfortunately, this dataset is not broken down further, for example, by Local Authority area. The SIC codes do not include a number of forestry related activities such as haulage so numbers are almost certainly an underestimate.

Business Population Estimates Publication

3.22 Business Population Estimates (BPE) are provided by the Department for Business, Energy & Industrial Strategy (BEIS) and they are the main UK equivalent of Scottish Corporate Sector Statistics (SCSS). They provide information about enterprises for each Government Office Region (GOR) in the UK broken down by company size and industry. Like the Business in Scotland (BIS) statistics, BPE includes information about registered and unregistered enterprises.

3.23 SCSS includes all enterprises that operate in Scotland, giving a complete picture of the Scottish business environment. BPE allocates enterprises to Scotland only if their UK base is in Scotland and it does not include not-for-profit organisations.

3.24 The Business Population Estimates dataset gives estimates of the number of businesses in agriculture, forestry and fisheries in Scotland as a whole at the start of 2017 and these are given in Table 3.5.

Table 3.4: Number of Enterprises in Scotland Involved in Woodland Related Activities by SIC Division and Employee Size Band in 2017

Division/ Section	Description	Number: 0 employees	Number: 1-4 employees	Number: 5-9 employees	Total Enterprises
2	Forestry and Logging	545	320	85	950
16	Manufacture of Wood and of Products of Wood and Cork	305	460	85	850
17	Manufacture of Paper and Paper Products	15	20	15	50
31	Manufacture of Furniture	50	100	35	185
	Grand Total	**915**	**900**	**220**	**2,035**

Source: Scottish Corporate Sector Statistics in Business in Scotland

Table 3.5: Number of Businesses in Agriculture, Forestry and Fisheries in Scotland at the Start of 2017

Agriculture, Forestry and Fishing			
	Businesses	Employment	Turnover [1,3]
		Thousands	£ millions
With no employees (unregistered)[2]	1,110	1	32
With no employees (registered)[2]	10,460	15	797
1	2,170	6	542
2-4	2,955	11	1,150
5-9	975	7	858
Total	17,670	40	3,379

1. Businesses with no employees can either be 'registered' for either VAT or PAYE or are 'unregistered'. For more details on businesses with no employees, refer to the Methodology Section of the BPE Methodology and Quality Note.

2. Businesses with no employees can either be 'registered' for either VAT or PAYE or are 'unregistered'. For more details on businesses with no employees, refer to the Methodology Section of the BPE Methodology and Quality Note.

3. BEIS impute the turnover of unregistered businesses based on the turnover for zero-employee VAT/PAYE registered businesses at industrial sector level.

Source: Business Population Estimates provided by the Department for Business, Energy & Industrial Strategy (BEIS)

3.25 The table (3.5) shows that for Agriculture, Forestry & Fishing, there were estimated to be 11,570 Unregistered and Registered businesses without any employees that were associated with 16,000 jobs and a turnover of £828 million. The number of businesses in this category exceeded the 6,100 businesses that employed 1 to 9 people. This suggests that many in the rural sector are self-employed or work on their own which supports the evidence in chart 3.3 and the statement in para 3.13.

3.26 The Business in Scotland publication produced by the Scottish Government estimated that there were 15,445 micro-businesses employing 39,290 people in 2017. The Business Population figures indicate a total of 22,100 businesses employing 40,000 people at the start of 2017. The two sets of estimates are reasonably close given that they have been derived using different methodologies and assumptions.

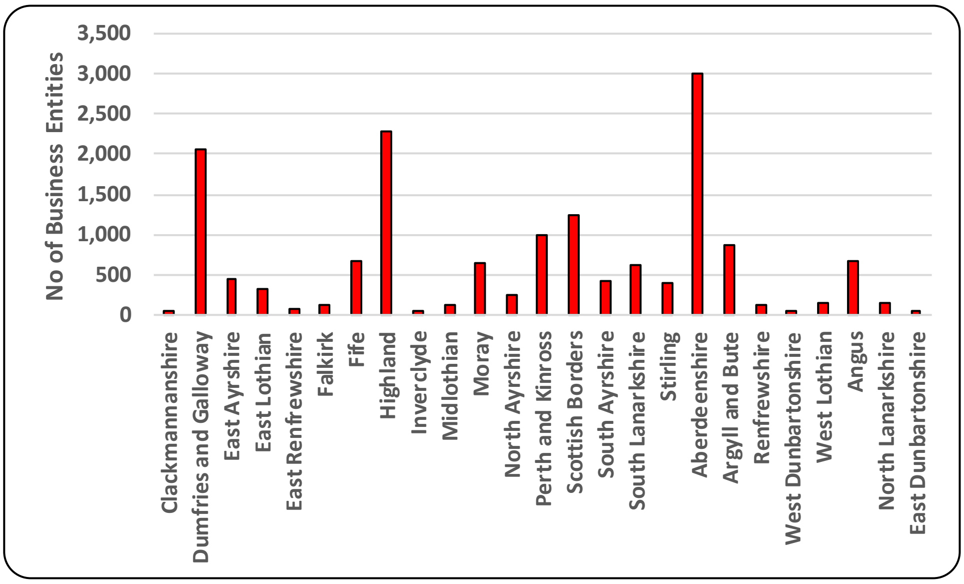
3.27 Unfortunately, the statistics are not separated out for forestry, nor are they broken down by regions or Local Authority areas.

UK Business: Activity, Size and Location Statistical Bulletin

3.28 This statistical bulletin, produced by ONS, provides information about the stock of registered enterprises in the UK. It provides information broken down by industrial sector, employee size band and turnover size band. It also provides data broken down to various geographies, including Government Office Region and Local Authority. UK Business presents data about registered enterprises and business sites based in Scotland. This is the only publication, other than the *Business in Scotland* publication, that provides data on business sites. Both publications use a March extract of statistics from the IDBR.

3.29 UK Business uses the category 'Agriculture, Fisheries and Forestry' and does not give a further breakdown for 'Forestry' alone. The total number of businesses sites it identifies in the 'Agriculture, Fisheries and Forestry' category in Scotland is 15,765. This is slightly more than the 15,445 that the Scottish Corporate Sector in Scotland estimated. The differences are due to the two estimates being developed using slightly different methodologies. Chart 3.6 shows the distribution of the businesses in agriculture, fisheries and forestry by Local Authority boundaries, excluding the Islands where agriculture and fishing predominate and here is almost no forestry activity.

Chart 3.6: Number of Businesses involved in Agriculture, Fisheries and Forestry by Local Authority Area in 2017



3.30 The chart shows that Agriculture, Fisheries and Forestry are particularly important in Dumfries & Galloway, Highland, Perth & Kinross, Scottish Borders, Aberdeenshire and Argyll & Bute. A similar pattern of importance was identified in Chart 3.2.

Business Demography Statistical Bulletin

3.31 This statistical bulletin is produced by the Office of National Statistics and is the official source for information about business start-ups, closures and survival rates. This information is of no significance to this study and it is only mentioned for the sake of completeness. It provides data on the number of enterprises that registered for VAT and/or PAYE at any time throughout the calendar year. VAT/PAYE registrations are obtained via the IDBR which means that the figures exclude the smallest firms that operate below the VAT threshold and are not registered for PAYE. Only businesses that registered for VAT/PAYE in Scotland are attributed to Scotland.

3.32 Data are presented for Government Office Regions (GORs) and Local Authority areas in the UK and are also broken down by industrial sector for the UK.

Economic Contributions to the Scottish Economy

3.33 The conventional way of identifying the importance of an activity to the economy is to calculate the value that it adds through its activities and this figure is used in the calculation of gross domestic product (GDP), which is a key indicator of the state of a nation's total economy.

3.34 This is relatively simple to do for activities involving larger businesses, but it is less reliable, and sometimes not possible for very small enterprises, and where people are sole proprietors of businesses, self-employed or are involved in part-time working activities. However, it is important to attempt to find some measure of the contribution that micro-businesses make to the rural economy otherwise their contribution can get easily overlooked when developing national policies.

3.35 One measure that can be used is to estimate the total income of everybody that might be involved with woodland related activities and employed in micro-businesses. There is no formally published figure for their annual average income so we assumed that on average across all woodland related activities people earn the minimum agricultural wage in Scotland of £7.83 / hour. If we assume each individual works 8 hours per day that would mean they earn £62.64 per day. If they work 240 days per year then they earn on average £15,033.6 per annum or in round figures £15,000 per annum.

3.36 There are an estimated 4,255 people involved in the formal woodland related activities (para 3.20) and assuming they are on average earning the minimum agricultural wage of £15,000 per annum, the total income generated in Scotland through woodland related activities is £63.8 million per annum.

3.3 While this may not appear a large amount when compared with other economic activities in Scotland such as those connected with the oil industry or whisky production, this money is largely circulating in Accessible and Remote rural areas of Scotland and in particular Local Authority areas such as Aberdeenshire, Argyll & Bute, Dumfries & Galloway, Highland, Perth & Kinross and the Scottish Borders. It is therefore making a potentially important contribution to Scotland rural economy in remote areas where the economy is often fragile.

4.1 The estimates of the number of micro-businesses, employment and income connected to woodland related activities in Scotland given in section 3 are likely to be based on the definitions that apply to SIC coding in the national accounts. A recent report[4] identified that there are 22 of business activity types involved in the local/small sector in Scotland, and these don't have specific SIC codes. Some of these are more or less unique to the sector (e.g. community woodlands, small sawmills, foraging), whereas others carry out activity in both the local/small sector and in conventional forestry (e.g. suppliers, contactors, agents).

4.2 Information on numbers of businesses in each of the 22 categories is very good for a small number of business categories (i.e. community woodlands, small sawmills, basket makers, furniture manufacturers). These are typically ones with active representative bodies. Some of these have had good support from government which has presumably helped with information availability (ASHS, CWA); but there are exceptions, such as the Scottish Basket makers circle.

[4] Value from supporting local forestry businesses – a scoping study' by Anna Lawrence, Rick Worrell, Guy Watt, Willie McGhee, 2017.

4.3 The report concluded that information on numbers appear to be poor for:

a) Privately owned woodland businesses including farm woodlands.
b) Very small-scale timber manufacturers in the craft sectors (such as wood turners).
c) Non-wood forest product (NWFP) producers.
d) All types of business using woodland settings.
e) Forest suppliers and contractors.

4.4 The list of activity types associated with woodlands used in the report is given in Table 4.1. The boundaries adopted in drawing up the list of activities has been very broadly drawn and do not match the Standard Industrial Classification (SIC) of forestry normally used in national statistics.

Table 4.1: Activity Sectors Associated with Small Woods

Woodland Owners/ Occupiers	**Non-wood forest product producers**
Community forests and woodlands	Foragers (mushrooms etc.) and growers
Small Woodland Owners (private)	**Businesses using woodland locations**
Farmer with woodlands	Tourism, wildlife viewing, outdoor activities
Woodlot Holders	Accommodation
Crofters with woodlands	Hunting / shooting
Coppice growers	**Woodland suppliers**
Local Authorities	Seed collectors
Timber Processors	Local tree nurseries
Small sawmillers	Equipment suppliers
Log fuelwood suppliers	**Woodland Contractors**
Charcoal makers	Forestry Agents
Timber Manufacturers	Small-scale harvesting contractors and horse loggers
Furniture makers	Other contractors: establishment, arboriculture
Wood-turners	Training
Basket makers and willow / hazel coppice for structures	**Non-wood forest product producers**
Other wood craftworkers: boatbuilders, green wood workers etc.	Forestry Agents
Timber builders	Small-scale harvesting contractors and horse loggers
	Other contractors: establishment, arboriculture
	Training

4.5 The employment and turnover of some of these activities are likely to have been identified in the figures included in the national statistics given in section 3.

4.6 Table 4.2 gives a list of the activities, and the possible number of people employed in each activity that are unlikely to be included in the figures given in Section 3. It is particularly difficult to estimate the number of farmers that might be managing woods on their farms.

There are about 10,000 farm businesses in Scotland and if it is assumed that about 30% of these farm businesses have woods on their farms then that gives a total of 3,000 farm businesses with woods in Scotland (based on P. Jones, pers comm, SAC, 2018). Based on survey work undertaken in Grampian connected with the local Machinery Ring, about 20% of the farm businesses with woods generated income from them (based on R Stubbs, pers comm, 2018). If this percentage is applied nationally this would give a total of 600 farm businesses in Scotland generating some income from woods they own. It is unlikely that more than one full time woodland related job would be generated per farm, so it has been assumed for this study that a total of 600 individual farmers in Scotland might generate some income related work from the woods on their farms. There is no information on how much income farm businesses might generate from woodland related activities annually so if it is assumed that the income generated was £3,000 per annum that would give a figure of £1.8 million per annum.

Table 4.2: Rough Approximation of the Number of People Associated with Small Scale Woodland Related Activities in Scotland

Activity Sectors Associated with Small Woodlands	No of activity units	No of People / activity unit	Total Number of People
Woodland Owners/ Occupiers			
Community forests and woodlands	204 Communities	5	1,020
Small Woodland Owners (private)	100	2	200
Farmer with woodlands	600		600
Woodlot Holders	7		7
Crofters with woodlands	12	2	24
Coppice growers	1	1	1
Wood-turners	5		5
Basket makers and willow / hazel coppice for structures	20		20
Other wood craftworkers: boatbuilders, green wood workers etc.	No data		
Non-wood forest product producers			
Foragers (mushrooms etc.) and growers	No data		
TOTAL			1,877

4.7 It seems possible that overall the total could be as much as 2,000 people.

4.8 If a further 2,000 people earned an average of £3,000 per person per annum from part time and craft related activities, these activities would generate a further total income of £6.0 million per annum. This would bring the total income related to commercial and informal woodland related activities to an estimated £69.8 million per annum.

5. Conclusions

5.1 The officially published sources of national statistics do not give an accurate estimate of the number of woodland related micro-businesses operating in Scotland, but it does allow the following conclusions to be drawn from the information that has been extracted and presented in this report:

- There were estimated to be 2,035 enterprises involved in woodland related activities in Scotland in 2017 employing fewer than 10 people (micro-businesses) (para 3.19).

- These enterprises are estimated to have been employing some 4,255 people in Scotland in 2017 (para 3.20).

- It is not possible to calculate the GVA related to small scale woodland related activities because they do not all take place in corporate entities or micro businesses, but it is estimated that the total income connected to woodland related activities could be between £63.8 million per annum. (Para 3.36).

- These figures are likely to be an underestimate of the total number of people involved in economic related activities because there will be people who are involved in woodland related activities that not registered in a formal way as an enterprise. This might amount to a total of 2,000 people generating an income of approximately £6.0 million per annum per year. (Para 4.7).

- The overall total number of people connected with small-scale woodland related activities could be about 6,255 people who generate income amounting to an estimated £69.8 million per annum in Scotland. (Para 4.8)

- Agriculture, Fisheries and Forestry enterprises are predominantly found in rural areas, as would be expected, and are of particular importance to the local economies in some localities such as Aberdeenshire, Argyll & Bute, Dumfries & Galloway, Highland, Perth & Kinross and the Scottish Borders (Chart 2).

- The statistics show that there are more people working for themselves in in agriculture, fishing and forestry in remote rural areas than the more accessible areas (Chart 3.) which is largely to be expected, but it does show the importance of these activities to Scotland's rural economy in remoter areas in particular.

- National statistics do not offer any understanding of the scale and nature of the contribution that woodland related micro-businesses make to the local economies or how the money circulates locally in the rural economy.

5.2 The purpose of this paper was specifically to try and identify what the contributions that small-scale woodland related activities might make to Scotland's rural economy. Based on the available information, it is estimated that the income generation / dependence from woodland related activities is £69.8 million per annum in Scotland and that it is of particular importance to the economies of rural and remote rural areas of Aberdeenshire, Argyll & Bute, Dumfries & Galloway, Highland, Perth & Kinross and the Scottish Borders. *It is therefore* *important that national forestry, social and economic policies include measures to support these activities given the fragile nature of the economies in these areas.*

5.3 A better understanding is also needed of the scale and nature of the contribution that woodland related micro-businesses make to the local economies and how the money circulates locally in the rural economy.

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Annex 1 Extract from the Publication 'Understanding the Rural Economy'

Defining the Rural Economy

There is not an agreed definition of the rural economy in Scotland, and often people use the term as a synonym for agriculture. In this paper, we take the approach that what matters in Scotland's rural economy is what is produced, built, delivered etc. in Rural Scotland and by people living there. As a result, we have looked across all sectors and employment categories to give as full a picture as possible of Scotland's rural economy today.

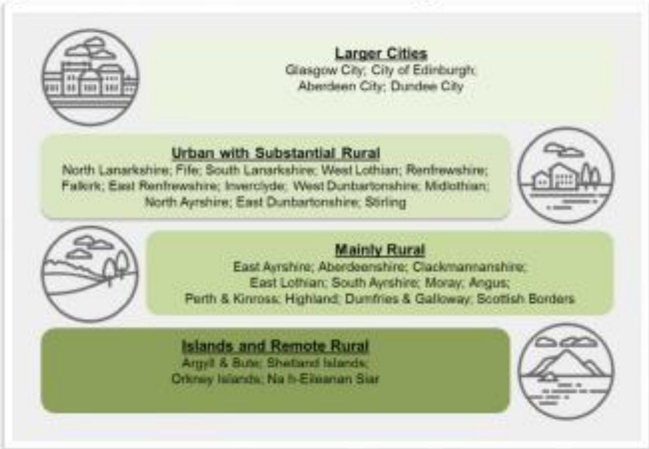
The first challenge when defining the rural economy, is to establish which areas of Scotland count as rural. Whilst this may seem straightforward, there are real challenges due to data availability, and so for different questions different definitions need to be applied.

For **social survey data** there is a standardised approach to defining whether respondents or households are in urban Scotland, or varying degrees of rurality or more Remote Rural Scotland. Definitions for social survey data are updated using data from the National Records of Scotland on population and transport data on remoteness.

Currently, there is no equivalent standardised measurement approach for **rural economy data** as economic data such as Gross Value Added is only available at the local authority level and not at a disaggregate data zone level. So while for social survey data we can distinguish areas in Scotland at a much smaller level, for economic data we need to define which local authority is considered rural or urban. In previous RESAS work we have made use of the Randall definition of Rural Scottish local authorities, first developed in 1985. The Randall definition is binary and only distinguishes between rural and urban. It is solely based on population density (see table below). As a result of using the Randall definition it is hard to get a nuanced picture of the variety within rural Scotland, and the two- fold approach is seen as being a too simplistic instrument for analysis.

In order to get a more holistic and detailed picture of rural Scotland, this paper applies a new classification of the rural economy taking more factors into account that are considered rural, both in the literature and in existing classifications. As a result of a statistical analysis (see methodological annex), **the new RESAS Classification** clusters local authorities according to their level of rurality and establishes four different groups, which are labelled as "Larger Cities", "Urban with Substantial Rural areas", "Mainly Rural" and "Islands and Remote" (see figure 1 below).

Figure 1: RESAS Classification of the rural economy



This new classification of the rural economy does not replace the main Scottish Government Urban/Rural classification which should be used for all non-economic data. The classification is based on a quantitative analysis that allows us to identify key drivers of rurality such as the relative share of population in pensionable age and broadband connectivity. An index was calculated that ranks local authorities according to their degree of rurality. In a second step, these local authorities are then divided into four groups according to their share of population living in urban settlements.

Because this index for the RESAS classification of the rural economy does not neatly follow the share of the urban population, some local authorities are classed differently than the share of their urban population would suggest. South Ayrshire and Angus for example have more than 50% of their population living in large urban and other urban areas and thus should be classed Urban with Substantial Rural. However, because according to their RESAS score they clearly are more rural than Stirling and other more urban areas, they are classed as Mainly Rural. While the island authorities and Argyll and Bute are classed as Islands and Remote Rural due to their RESAS score and the low share of urban population, Highland is classed as Mainly Rural despite the remoteness of large parts of the local authority. This is mainly due to Inverness. Dumfries and Galloway and Scottish Borders are also classed as Mainly Rural and not Island and Remote.

Rural due to their relatively lower share of population living in settlements under 10,000 and generally higher population density compared to the island authorities. These examples illustrate that the RESAS classification as all other Urban/Rural classifications is an aggregation of data and thus simplifies the heterogeneity of the Scottish rural economy. However, as it is based on wide range of data and quantitative analysis, the classification is a useful tool to describe the rural economy.