WP 1: Inventory of community-based initiatives and selection for in-depth analysis

Deliverable 1.3:
Intermediate characterisation of case study regions

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Reference code: TESS – D1.3

Short Description:
This report presents in depth analysis of regional and country level data across six countries where TESS case study initiatives are active. Literature shows that the characteristics of regions and countries can have impact on the context in which initiatives function. In order to objectively compare and analyse the case study initiatives selected by TESS, it is crucial to understand the characteristics of the regions in which they operate. Furthermore, each country, nationally, has different potential assets and barriers to the uptake of sustainable initiatives. This paper describes the differences and special features of case study regions and the countries where they operate.

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Partners owning: Climate Futures
Contributions: All partners
Made available to:

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Internal Reviewers: Filippo Celata (Sapienza); Jürgen Kropp (PIK)
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List of Abbreviations

CBI - Community Based Initiative
CH₄ – methane
CO₂ – carbon dioxide
CO₂e – Carbon dioxide equivalent
DoW - Description of Work
EEA – European Environment Agency
EU - European Union
EU ETS – European Union Trading Scheme
GDP – Gross Domestic Product
GHG – Greenhouse Gas
GNI – Gross National Income
GWP – global warming potential
HFCs – hydrofluorocarbons
LULUCF - Land use, land-use change and forestry
MTOE – Million tonnes of oil equivalent
N₂O - nitrous oxide
OECD – The Organisation of Economic Co-operation and Development
PFCs - perfluorocarbons
SF₆ - sulphur hexafluoride
SILC - Statistics on Income and Living Conditions
TESS – Towards European Societal Sustainability
TOE – Tonne of Oil Equivalent
UK – United Kingdom
Executive Summary

The TESS regions where Community Based Initiatives (CBI) case studies are located are spread across six European countries, which vary in economic, cultural and social terms. Literature supports the view that examining these external factors, at a regional and national level can help assess the potential for uptake and sustainability of CBIs.

Background information in this report will help establish whether regional and national contexts influence the typology of CBIs, how they affect their aims and functioning, as well as their emergence, growth and replication. This will be used to demonstrate whether the success factors identified in later stages of the project are influenced by regional and national situations.

This will support analysis and research outcomes in Work Packages 2 (WP2), WP3 and WP4. It will also feed into counterfactual analysis in WP2. This paper describes the differences and special features of case study regions, and the countries in which they are located.

Literature considers an analysis of multiple indicators should be undertaken to understand the contextual drivers, which influence the emergence and persistence of community initiatives, and the particular form they take. These include geographical, demographic, social and economic factors.

CBI emergence can be driven by necessity and the need for self-sufficiency in a remote community. The availability of natural resources, such as wind, solar irradiation, timber and land are obvious influencers on the form of CBI. Human resources, in particular motivation, skills and time are significant influences on CBI creation and sustainability. Sometimes, the desire for social improvements, or a response to the prevailing political situation, are the predominant factors in CBI emergence and persistence. Other influences include the need for local economic growth or cost savings on the essentials of life including food and energy. Regional policy incentives or barriers, such as support for enterprise or job creation, or prohibitive planning legislation, are also critical factors.

National culture, policies and support have been shown to affect CBI emergence, growth and replication. Participation in CBIs is driven by the culture
of participation, appeal of social goals and intrinsic values. The rules on land use are also particularly important, as are the legal structures under which CBIs may be formed. Financial support has also been shown to be extremely important. CBIs may contribute to the solving of a number of societal challenges, including health, economic hardship, social cohesion and reducing GHG emissions.

Each TESS partner decided on a suitable boundary of analysis for their research, either as single or multiple regions. Data were collected from readily available sources, which differed by partner. The regional characterisation describes the immediate surroundings of the case study CBIs in as much detail as possible, and includes indicators such as geography and climate, socio-demographics, regional economic factors and well-being. Country level data were collected from publicly available dataset sources e.g. EUROSTAT, and include population, economy, Greenhouse Gas (GHG) emissions, well-being and domain-specific indicators.

Geographical and climate diversity is a common feature of mapped regions, many of which are urban. Many also reported an increasing population, apart from Argyll and Bute in Scotland and the Center region of Romania. This latter region is also the most ethnically diverse. Each of these factors has been shown by literature to be a potential positive stimulus to CBIs. Conversely, CBIs have themselves been shown to promote health and a better diet. Catalonia reported the longest life expectancy of regions under consideration, and Romania’s Center region the shortest. Aberdeen and Aberdeenshire reported the highest proportion of population experiencing good health. Economic hardship can be a motivation factor for CBI emergence. Argyll and Bute and Romania’s Center region reported a lower GDP than the national average. Partner motivations for choosing their given regions included the diversity of area and initiative types, representativeness and ‘inspiration’. A common opportunity was cited as the potential of renewable energy and food development, with major barriers being a lack of land ownership, lack of policy and remote government.

A dense population may have an effect on CBI emergence in cities, particularly in food and transport domains. The highest population increases of TESS
countries were recorded by the UK, Italy and Finland. Furthermore, the most densely populated countries were the UK and Spain. Private household occupancy, declining in all countries, and overall occupancy rates, highest in Romania and Spain, have also been shown to be significant. These hypotheses will be investigated further by TESS. So too will economic factors. Spain recorded an unemployment rate of five times that of Germany in 2013.

GHG emissions are indicative of national policies as well as being influenced by CBIs. GHGs fell in most Eurozone countries over the last decade, with a particular downturn in 2009 due to the global recession. Stringent EU carbon policy and renewable energy targets have continued to influence emissions reduction in Europe. Emissions per capita give an interesting picture, with Finland recording the highest ratio. All TESS countries show a reducing trend since 2000. The carbon intensity ratio of the EU’s GDP has also fallen over the period.

Well-being indicators show important trends in quality of life, happiness and health. Low well-being may stimulate CBIs as a reaction. An ageing population is driving the number of dependents on the employed in Spain, Italy, UK and Finland, and it is also noted, from the literature, that CBIs may be stimulated as a result of this trend as the retired seek gainful involvement in projects. Self-perceived health varied considerably across TESS countries, with Italy reporting ‘very good’ health at only one third of the UKs. CBIs often emerge as a means of self-improvement. Alternatively, Germany’s relatively high housing cost may stimulate alternative, CBI approaches. The economic downturn has particularly affected Romania’s and Spain’s at-risk-of-poverty index. TESS research will show whether these have stimulated CBIs. Domain-specific indicators (energy, food, transport, waste) were researched to identify understood and potential inter-relationships with CBIs, and the extent to which they may be influenced. Energy production showed a peak in 2006, and has shown a reduction since in line with policies, energy efficiency improvements and consumption patterns. Finland and Germany showed high and increasing levels of renewable energy, respectively, whilst the UK generated by far the lowest proportion of energy from these sources. By contrast, Finland produced the highest waste per capita in 2010, over twice that of the UK, the second largest producer. The UK also recorded the highest share of passenger-car use in 2011.
This report presents in depth analysis of regional data and country level data, across the six countries where case study initiatives are active.

Not surprisingly, the information presented has shown a wide variation across a number of characteristics between countries and regions.

Many of these will be influencing factors in the emergence, persistence and replication of CBIs. Subsequent TESS research will show which are statistically and materially significant, and to what extent.
1 Introduction

1.1 The importance of characterising areas for TESS

The TESS case study Community Based Initiatives (CBIs) are spread across six European partner countries (Finland, Germany, Italy, Romania, Scotland and Spain). In researching the influences on community transitions in Europe, this characterisation report considers some of the underlying factors at regional and country level, which may potentially be relevant.

Literature suggests an analysis of multiple indicators should be undertaken to understand the factors which influence the emergence and persistence of community initiatives (Geels, 2011), and the particular form they take. These include technological, economic, environmental, social and cultural factors.

The context in a specific country, or within specific regions or locations within a country, may create opportunities for the emergence and growth of certain kinds of initiatives or, on the contrary, may discourage them from emerging or developing (Roberts, 2005; Seyfang and Smith, 2007; Hain et al., 2005; Kellet, 2007; Burch, 2010). An understanding of the region in which a CBI operates is therefore crucial to allow comparisons to be made between initiatives chosen as case studies for TESS.

1.2 Geographical scales

The report provides two sets of information:

Regional characterisations give detailed local information for the CBIs under investigation.

Additional country level data provide useful contextual background for comparing TESS partner countries, and gives an indication of wider national policies. The suggestions and hypothesis made in this report are specific to the analysed regions and European country characterisations.

1.3 How information should be used

The analysis in this report will prove useful to subsequent TESS work packages. It will provide baseline information for the case studies and support
the assessment tools in Work Package 2 (WP2), WP3 and WP4. Data will also be used for counter-factual analysis in WP2. In WP3 it will help characterise the context in which initiatives emerge, grow, scale up and in some cases dissolve. Analysing regional and national data can help identify how area context could influence the typology, aims and motivations of an initiative and how success factors could be influenced by this context. In WP4, the secondary contextual data gathered in this report will be used for the statistical modelling of primary data collected during the TESS project.
2 Literature review and rationale for indicators

The choice of characteristics under consideration has been informed by literature reviews conducted for WPs 2 and 3.

Literature suggests that a strong link exists between CBIs and the environment in which they operate.

2.1 Regional Influences

The motivation for CBI emergence can be driven by necessity, created by the remoteness of community and the need to be resilient. It can be stimulated by a willingness to be self-sufficient, for example generating energy locally, which in the long term may bring financial benefits (Geels, 2001).

The climate and landscape in which CBIs function, can also incentivise community action as well as influence the character of initiatives. For example, CBIs in the energy domain emerge in specific regions with suitable resources e.g. wind and solar irradiation. Population density and size of the region in which the community functions can also influence community emergence (Geels, 2011).

The social innovation produced by CBIs is often a reaction to a local problem (Seyfang and Smith, 2007). CBIs are often regarded as representatives of the community voice in terms of policy and local rights (Luckin and Sharp, 2004; Johnston, 2008; Eizenberg, 2012; Shillington, 2013). Some CBI’s have political aims and a strong political orientation (Seyfang and Haxeltine, 2012). In densely populated urban areas characterised by higher percentage of single person households the emergence of CBIs is motivated by social needs rather than economic benefits (Marcias, 2008; Oldenburg 1999; Glover et al, 2005).

Research suggests that CBIs tend to attract people who share certain key characteristics, regardless of the fact that most initiatives strive to promote wider community participation (Hinrichs and Kremer, 2002). Homogeneity has been noticed in terms of ethnicity, income and education. Therefore, it can be
concluded that in regions inhabited by a homogenous population, with these characteristics, CBIs are more likely to emerge.

On the other hand, in some places CBI flourish in places where ‘minorities’ can act against the social imbalance. These dynamics will be further investigated in other TESS work packages. However, social indicators are considered here to provide background information on the areas of interest.

The importance of local economic indicators is recognised as the emergence of CBIs is often motivated by a counter reaction to an event or current economic situation e.g. economic crisis, public spending cuts (Seyfang and Smith, 2007). Surveys have shown that participants in the sharing economy, for example urban gardening initiatives, may become members in the hope that they may find money saving opportunities. Economic benefits are listed as some of the top reasons for participation in CBIs (Seyfang and Haxeltine, 2012). This is also true for the energy domain (Walker et al, 2010; Walker, 2008; Maruyama et al, 2007; Kellet, 2007).

Some initiatives emerge in regions isolated from competitive markets and standard trading procedures. Those localities can act as local innovation incubators, which ensure protection from a traditional market economy (Markard and Truffert 2008; Smith et al. 2010; Hoogma et al., 2002; Smith and Raven 2012.

Moreover, public institutions can influence the emergence, persistence and diffusion of CBIs. The impact of local authority bodies is considered extremely important, as is policy at national level, for example in the context of energy (Hain et al, 2005; Maruyama et al, 2007; Rogers et al, 2008; Walker, 2008; Walker et al, 2010) and waste (Robbins and Rowe, 2002; Joseph, 2006). It is therefore important to consider the regional policy context under which they operate (Roberts, 2005, Seyfang and Smith, 2007).

2.2 National influences

Literature also suggests that national economic, social and technological level changes stimulate the emergence of community-based initiatives (Geels, 2011). Therefore, analysis of country-level characteristics has also been undertaken.
In some cases opposition against the current political and economic regime can be a driver for emergence of community action (Eames and Hunt, 2013). Relevant indicators include GDP, unemployment levels, poverty, well-being and land tenure.

Clusters of community-related factors can also be relevant in community emergence. These include social capital, infrastructural capacity, cultural capacity (Middlemiss and Parrish, 2010) and community identity. Some of these factors, for example infrastructural capacity, can be addressed by analysing the transport data, GHG emissions and organic farming data on country level.

Cultural capacity and community identity relate to history and community values. Therefore, ethnic background could be an important influencing factor.

Conversely, other research shows that some CBIs are actively engaged in innovation processes, which can reduce the level of GHG emissions locally for example through renewable energy schemes (Hargreaves et al. 2013). In some cases, regional emissions data compared to GHG emissions at a country scale, may indicate whether the region is innovative. The indicators analysed in this chapter include absolute GHG emissions by country, GHG emissions per capita and GHG emission from sectors such as energy, manufacturing, transport, waste, industrial processes and agriculture.

Community initiatives are highly influenced by socio-demographic and cultural regional characteristics. Willingness to commit unpaid time in the start-up phase is an important factor for community initiatives emergence (Hopkins 2014; Feola and Nunes 2013). Participation in CBIs is driven by the culture of participation, appeal of social goals and intrinsic values. It is also driven by the material conditions under which a participant lives, such as income, health, food and shelter. Well-being may be an indirect impact of involvement in some CBIs (Bremer et al, 2003; SGS Economics and Planning, 2012; Bellows et al., 2003; NYCDCP 2009). Research shows that volunteering for CBIs can be associated with improved physical and mental health conditions (Bremer et al, 2003; Bellows et al., 2003; NYCDCP 2009). Volunteering and public participation is considered one of the contributors to building social capital, improvement in public health, happiness and well-being (Borgonovi, 2008; Jenkinson et al., 2013).
It is suggested in some literature that CBIs bring non-financial advantages to participants such as healthier diet and improved health condition in general by encouraging physical activity and helping participants deal with stress. Research indicates that members of community gardens eat healthier than families that do not grow their own food (Bremer et al, 2003). Healthy diet is often quoted as one of the factors contributing to decrease in obesity rates (Hagan et al. 2013) and improvement of mental health (Maller et al., 2006; Van Den Berg and Casters, 2011). Moreover, literature suggests that buying local produce by a small group of people can diffuse onto other residents of the area improving not only health but also local economy (Hagan et al. 2013, p. 11). In low-income urban areas, CBIs have often succeeded in providing good quality and affordable local produce (Peña, 2005).

Initiatives are often responsible for visual improvement of the neighbourhoods and local space, providing opportunities for leisure and healthier lifestyle (Wakefield et al. 2007, Freeman et al. 2012). CBIs related to transport often encourage participation in physical activities bringing both social and health benefits (SGS Economics and Planning 2012).
3 Methodology

3.1 Partner approaches for identifying suitable characterisation regions

A collaborative process was used to select regions and decide on boundaries for analysis.

Potential case study regions chosen by partners vary widely by many features, including size, economic situation, population density etc. Partners chose single or multiple regions, as representative of their regions of study (motivations supporting their choice are given in Annexes A-F):

i. Regions mapped covered only one administrative area of a country which was then used as the characterisation region: adopted by UAB (Spain), Sapienza (Italy), JHI (Scotland), PIK (Germany);

ii. Several administrative areas, or the whole country, were mapped and the region where the majority of key case studies are located was chosen as the characterisation region: adopted by OULU (Finland), CF (Scotland), USV (Romania).

3.2 The data collection process

i. Regional level: Data were collected at the smallest administrative level possible within the area of interest i.e. where data were available from local sources, local databases and research institutes. This information was provided by partner organisations in a form of a template including quantitative data and qualitative research (see Annexes A-F).
ii. Country level: data were collected from publicly available dataset sources e.g. EUROSTAT\(^1\).

### 3.3 Choice of indictors: regional

The list of regional indicators considered in this report was decided by considering the literature review, supported by consultations within the TESS consortium and informed by discussions with community networks, such as Transition Network and SCCAN.

They are:

i. General characteristics comprising background information about the region, its size, population, climate type, landscape and number of initiatives (Sections 4.2-4.3, with detail in Annexes A-F)

ii. Population (Section 4.4, with detail in Annexes A-F)

iii. Social information is gathered in order to provide a better understanding of local culture and regional demographics (Section 4.5, with detail in Annexes A-F)

iv. Economic indicators give insight into the local economy and infrastructure (Section 4.6, with detail in Annexes A-F).

v. Motivation for choice of region (Section 4.7)

vi. Opportunities and barriers (Section 4.8, with detail in Annexes A-F) include unique region-specific factors, which may contribute to community emergence or constrain development. This is preliminary analysis, based on current knowledge of partners. Further research will confirm their validity.

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\(^1\) Note: The intention in the TESS DoW was that for this characterisation report includes 'the differences of the case study regions as described, divided by case study and by the different features that are analysed'. This case study approach was not possible due to limitations in data availability. As a result it was decided that country level data would be used in its place.
3.4 Choice of indicators: national

i. Population: population by country, distribution of population by degree of urbanisation, the average number of persons living in private households, distribution of population by household type (Section 5.1)

ii. Economy including GDP growth by country, GDP per capita by country, unemployment rate by country and employment rate by country (Section 5.2)

iii. Greenhouse Gas (GHG) emissions: provides context to economic indicators (Section 5.3).

iv. Well-being: including the number of weekly working hours by country (Section 5.4)

v. Domains: Energy, Waste, Transport and Food. (Section 5.5) energy consumption and national shares of fuels in energy consumed, which may indicate where the opportunities for energy initiatives could be; the share of renewable energy consumption on a country level may indicate the presence of renewable technologies on the market potentially accessible to initiatives; Section 5.5.2 considers waste generation in total, by sector and at a household. The modal split of transport informs which means of transport are widely used on a country level and which ones could be potentially supported by initiatives. The transport section 5.5.3 also provides data on renewable fuel consumption on a country level and serves as a proxy for national attitude to renewable transport and its availability; food is considered in section 5.5.4, and the share of total organic agricultural area is provided in order to better understand the approach to farming practices on a country level.
4 Results: Regional level indicators

4.1 Introduction

This section presents regional data collected by TESS partners. Each section presents a selection of features specific for the mapped region as well as justification of the regional selection.

4.2 Introduction to regional analysis

<table>
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<th>Area in km²</th>
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Table 1: Introduction to regional analysis. Source: Climate Futures based on data from partners.

Table 1 lists the regions identified during the mapping process and shows how the initiatives are embedded within analysed areas. It is clearly visible that the regions are highly diverse in terms of area covered and size of population.

The majority of regions analysed cover a geographic area, which does not correspond to NUTS2 classification or any other common classification. Therefore, the analysis of regions is based on different data sources and datasets cannot be directly compared.
### 4.3 Geography and climate

<table>
<thead>
<tr>
<th>Name of research region</th>
<th>Geography</th>
<th>Climate</th>
<th>Settlement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aberdeen City and Aberdeenshire</td>
<td>diverse landscape</td>
<td>Maritime temperate Cfb (Marine- Mild winter)</td>
<td>urban/rural</td>
</tr>
<tr>
<td>Argyll and Bute</td>
<td>diverse landscape</td>
<td>Maritime temperate Cfb (Marine- Mild winter)</td>
<td>rural</td>
</tr>
<tr>
<td>Catalonia</td>
<td>diverse landscape</td>
<td>Mediterranean Csa (Interior Mediterranean)</td>
<td>urban</td>
</tr>
<tr>
<td>Comune di Roma Capitale</td>
<td>diverse landscape</td>
<td>Mediterranean Csa (Interior Mediterranean)</td>
<td>urban</td>
</tr>
<tr>
<td>Helsinki City</td>
<td>diverse landscape</td>
<td>Humid Continental Dfb (Mild Summer, Wet All Year)</td>
<td>urban</td>
</tr>
<tr>
<td>Kreuzberg, Prenzlauer Berg, Friedrichshain, Mitte</td>
<td>homogeneous landscape</td>
<td>Maritime temperate Cfb (Marine- Mild winter)</td>
<td>urban</td>
</tr>
<tr>
<td>Center Region</td>
<td>diverse landscape</td>
<td>Humid continental Dfb (Mild to warm summer)</td>
<td>urban/rural</td>
</tr>
</tbody>
</table>

Table 2: Regional geo-characteristics. Source: Climate Futures based on data from partners.

The majority of mapped regions are geographically diverse. The regions are located in different climate zones according to the Köppen Climate classification system\(^2\). They spread across two main climatic zones C – warm temperate and D – snow with precipitation f – fully humid and s – summer dry and temperature a – hot summer and b – warm summer (Rubel and Kottek, 2010).

Analysed regions are mainly urban (Catalonia, Rome, Helsinki, Berlin, Romania Centre Region). Aberdeen City, Aberdeenshire and Romania Centre Region are both rural and urban, whereas Argyll and Bute is mainly rural.

Literature suggests that CBIs often emerge as a response to a problem, for example the unsustainable food systems in big cities. CBIs emergence in urban areas often oppose these systems, creating alternative food networks (Conner and Levine, 2007). This may explain why food CBIs often emerge in urban areas.

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\(^2\) Köppen Climate classification is based on temperature and precipitation observations for the period 1951–2000.
4.4 Population

<table>
<thead>
<tr>
<th>Name of research region</th>
<th>Population</th>
<th>Ethnicity</th>
<th>Official languages</th>
<th>Languages spoken</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aberdeen City and Aberdeenshire</td>
<td>increasing; sparsely populated</td>
<td>Aberdeen City: 75.3% Scottish, 7.6% Other British; Aberdeenshire: 82.2% Scottish, 12.3% Other British</td>
<td>English, Scots, Gaelic</td>
<td>Aberdeen City: 97.6% English, 35.5% Scots, 0.8% Gaelic; Aberdeenshire: 98.2% English, 48.8% Scots, 0.6% Gaelic</td>
</tr>
<tr>
<td>Argyll and Bute</td>
<td>declining; sparsely populated</td>
<td>78.8% Scottish, 16.6 % Other British</td>
<td>English, Scots, Gaelic</td>
<td>99.2% English, 21.7% Scots, 4% Gaelic</td>
</tr>
<tr>
<td>Catalonia</td>
<td>increasing; densely populated</td>
<td>60% Catalans, 20% other Spanish</td>
<td>Catalan, Spanish</td>
<td>35.6% Spanish, 46% Catalan, 12% both</td>
</tr>
<tr>
<td>Comune di Roma Capitale</td>
<td>increasing; densely populated</td>
<td>90.2% Italian, 3.6% EU national, 6.2% is non-EU national</td>
<td>Italian</td>
<td>no data</td>
</tr>
<tr>
<td>Helsinki City</td>
<td>increasing; densely populated</td>
<td>91.6% Finnish</td>
<td>Finnish, Swedish</td>
<td>81.9% Finnish, 5.9% Swedish</td>
</tr>
<tr>
<td>Kreuzberg, Prenzlauer Berg, Friedrichshain, Mitte</td>
<td>increasing; densely populated</td>
<td>21% migratory background</td>
<td>German</td>
<td>no data</td>
</tr>
<tr>
<td>Center Region</td>
<td>declining; sparsely populated</td>
<td>Romanians 61,25%, Hungarians 28,41%, Romas 4,90%, Germans 0,41%, Other 5,03%</td>
<td>Romanian</td>
<td>Romanian 73,50%, Hungarian 24,89%, Roma 0,79%, German 0,43%, Other 0,39%</td>
</tr>
</tbody>
</table>

Table 3: Characteristics of population by region. Source: Climate Futures based on data from partners.

Table 3 shows trends in regional population growth, ethnicity breakdowns and languages spoken. These characteristics can influence CBIs, for instance the remoteness, declining population or low population density might incentivise the emergence of energy-focused initiatives (Geels, 2001).

The majority of regions reported an increasing population. The only regions experiencing a reduction in population numbers are Argyll and Bute in Scotland and the Center Region in Romania. Half of the regions are sparsely populated: Aberdeen City/Aberdeenshire, Argyll and Bute and the Center Region in Romania.

Ethnic diversity might influence CBI emergence, as they are often motivated by the need to respond to local issues. In areas where population is diverse, local groups may form politically orientated initiatives. Ethnically, Center Region in Romania is the most diverse (i.e. it has the lowest percentage of local population, slightly above 60%) whereas other regions reported a greater percentage of around 80-90%.
4.5 Social indicators

<table>
<thead>
<tr>
<th>Name of research region</th>
<th>Life expectancy</th>
<th>Birth ratio</th>
<th>Population growth</th>
<th>Health</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aberdeen City and Aberdeenshire</td>
<td>Aberdeen City - men: 77; women: 81; Aberdeenshire - men: 79; women: 82</td>
<td>no data</td>
<td>Aberdeen City 5% in years 2001-2011; Aberdeenshire 11.5% in years 2001-2011; Aberdeenshire 86% in good or very good health, 4% in bad or very bad health; Aberdeenshire - 87% in good or very good health, 3% in bad or very bad health.</td>
<td></td>
</tr>
<tr>
<td>Argyll and Bute</td>
<td>men: 77; women: 81</td>
<td>no data</td>
<td>-3.4% in years 2001-2011; Aberdeenshire 11.5% in years 2001-2011;</td>
<td>51.6% in very good health, 30.9% in good health, 12.7% in fair health, 3.8% in bad health and 1.1% in very bad health;</td>
</tr>
<tr>
<td>Catalonia</td>
<td>men: 79; women: 85</td>
<td>10.3 per thousand</td>
<td>1.9% in 2012</td>
<td>51.9% in good health; 23.4% in very good health; 5.7% health problems; 2.2% severe health problems.</td>
</tr>
<tr>
<td>Comune di Roma Capitale</td>
<td>men: 79; women: 84</td>
<td>9.4 per thousand</td>
<td>no data</td>
<td>no data</td>
</tr>
<tr>
<td>Helsinki City</td>
<td>men: 77; women: 83</td>
<td>11.3 per thousand</td>
<td>2,638,842 in 2012 compared to 2,533,048 in 2003; 612,664 in 2013 compared to 595,384 in 2012</td>
<td>no data; 46% in good health, 34% quite good health, 5% in bad or very bad health.</td>
</tr>
<tr>
<td>Kreuzberg, Prenzlauer Berg, Friedrichshain, Mitte</td>
<td>men: 78; women: 83</td>
<td>0.8% between 2003 and 2013</td>
<td>no data</td>
<td>no data</td>
</tr>
<tr>
<td>Center Region</td>
<td>men: 71; women: 79</td>
<td>no data</td>
<td>-6.45% in years 2012-2011</td>
<td>no data</td>
</tr>
</tbody>
</table>

Table 4: Social indicators by region. Source: Climate Futures based on data from partners.

Literature suggests that CBIs promote a healthier diet and improved health conditions in general by encouraging physical activity and helping participants deal with stress (Bremer et al, 2003). Therefore, indicators such as life expectancy and self-perceived health are considered significant.

Catalonia reported the longest life expectancy of all regions, 79 for men and 85 for women, followed by Aberdeenshire with 79 for men and 82 for women. The shortest life expectancy was reported for Center Region in Romania (71 for men, 79 for women). There are major data gaps in birth ratios across the analysed regions, but the highest ratio is reported in Helsinki City region (11.3 per thousand).

Aberdeenshire experienced the highest population growth of all the regions. This is likely to be attributed to a high level of immigration encouraged by promising job prospects in the oil industry (Annex B).

Of the regions providing data on self-perceived health, Aberdeen City and Aberdeenshire reported the highest percentage of population in good or very good health.
4.6 Economic indicators

<table>
<thead>
<tr>
<th>Name of research region</th>
<th>GDP</th>
<th>Unemployment rate</th>
<th>Employment profile</th>
<th>Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aberdeen City and</td>
<td>GDP above country average</td>
<td>3.1%</td>
<td>Services: professional in Aberdeen City; Services: public sector and education in Aberdeenshire</td>
<td>above country average</td>
</tr>
<tr>
<td>Aberdeenshire</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Argyll and Bute</td>
<td>GDP below country average</td>
<td>5.5%</td>
<td>Services: public administration, education and health, tourism</td>
<td>below country average</td>
</tr>
<tr>
<td>Catalonia</td>
<td>GDP above country average</td>
<td>23.0%</td>
<td>Services: no detail</td>
<td>above country average</td>
</tr>
<tr>
<td>Comune di Roma Capitale</td>
<td>GDP above country average</td>
<td>11.3% (NUTS 3 level)</td>
<td>Services: professional and tourism</td>
<td>above country average</td>
</tr>
<tr>
<td>Helsinki City</td>
<td>GDP above country average</td>
<td>9.4%</td>
<td>Services: health, wholesale and retail trade, professional</td>
<td>above country average</td>
</tr>
<tr>
<td>Kreuzberg, Prenzlauer</td>
<td>GDP above country average</td>
<td>11.7%</td>
<td>Services: public sector and real estate</td>
<td>below country average</td>
</tr>
<tr>
<td>Berg, Friedrichshain, Mitte</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Center Region</td>
<td>GDP slightly below country average</td>
<td>5.95%</td>
<td>Wood processing, gas extraction, tourism, manufacturing industry, food industry, IT services</td>
<td>above country average</td>
</tr>
</tbody>
</table>

Table 5: Economic indicators by region. Source: Climate Futures based on data from partners.

Table 5 presents general characteristics related to regional economies reported in the latest available year. Economic crisis and high unemployment rates can be a motivation factor for CBI emergence (Seyfang and Smith, 2007).

All the regions apart from Argyll and Bute and Romania’s Center Region reported GDP levels to be higher than the national average. The selected regions are amongst the wealthiest regions in TESS partner countries. However, Catalonia reported the highest unemployment rate among all the regions, which reflects the current economic situation in Spain.

The economy of all the regions under analysis is based mainly on services, particularly public administration, health and professional services. All regions except from Argyll and Bute had higher incomes than the country average.
4.7 Motivation of partners for choosing region

<table>
<thead>
<tr>
<th>Name of research region</th>
<th>Motivation 1</th>
<th>Motivation 2</th>
<th>Motivation 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aberdeen City and Aberdeenshire</td>
<td>proximity of area</td>
<td>diversity urban/rural</td>
<td>the oil capital of Europe</td>
</tr>
<tr>
<td>Argyll and Bute</td>
<td>pioneering and most active initiatives</td>
<td>potential for sustainable development</td>
<td>inspired other communities</td>
</tr>
<tr>
<td>Catalonia</td>
<td>good connections</td>
<td>diversity of initiative types</td>
<td>established history of social movements</td>
</tr>
<tr>
<td>Comune di Roma Capitale</td>
<td>capital status and political importance</td>
<td>renewed interest in the implementation of sustainable practices</td>
<td>the largest municipality in Italy and among the largest in Europe</td>
</tr>
<tr>
<td>Helsinki City</td>
<td>most initiatives clustered in this region</td>
<td>initiatives had spin-off effects</td>
<td>bottom up and top down movement towards sustainability</td>
</tr>
<tr>
<td>Kreuzberg, Prenzlauer Berg, Friedrichshain, Mitte</td>
<td>representative</td>
<td>diversity of initiative types</td>
<td>cultural hotspot</td>
</tr>
<tr>
<td>Center Region</td>
<td>cultural diversity</td>
<td>civic responsibility (important catalyst for community based initiatives in Romania)</td>
<td>residents respect the historic and cultural heritage</td>
</tr>
</tbody>
</table>

Table 6: Motivation. Source: Climate Futures based on data from partners.

Diversity of the area and diversity of initiative types were the most common motivations for partners to choose their region(s). Representativeness, ‘inspiration’ ‘cultural hot spot’ and the creation of spin-off effects from the area were also cited.
### 4.8 Opportunities and barriers

<table>
<thead>
<tr>
<th>Name of research region</th>
<th>Opportunities</th>
<th>Barriers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aberdeen City and Aberdeenshire</td>
<td>High levels of land ownership enables private landowners to invest in renewable energy; Rich in renewable energy resources; Government supportive in development of renewable energy projects.</td>
<td>Affluent region: high levels of employment and good health therefore people not willing to volunteer; The professionalism of the energy sector and cultural homogeneity; Located away from the central belt.</td>
</tr>
<tr>
<td>Argyll and Bute</td>
<td>Rich in renewable resources; Relative remoteness of the region creates opportunities for local self-reliance and encouragement for economic relocalisation.</td>
<td>Lack of ownership or access to land and other resources; Lack of long-term funding, difficulty in raising finance; A shortage of engaged volunteers and of organisational and management skills; Lack of supportive policy and physical infrastructure, remote local government etc; There are also particular challenges arising from the scattered population, long distances between settlements and remoteness from the main centres of population.</td>
</tr>
<tr>
<td>Catalonia</td>
<td>Increasing demand for local and organic food; Economic crisis and decrease in opportunities for formal employment.</td>
<td>Distribution of land property; Land tenure; Competition with industrialized farms offering lower/more competitive prices; The new Spanish law on alternative sources of energy which places a prohibitive tax on solar and wind electricity production; Nature of initiatives’ governing structure.</td>
</tr>
<tr>
<td>Comune di Roma Capitale</td>
<td>Food culture in Italy creates opportunities for food initiatives to emerge; Agricultural production is relatively high in the surrounding areas; Solar power potential.</td>
<td>Difficult ground for grass-root initiatives to operate in because of its’ diversity and size; Lack of infrastructure for development of transport initiatives; Bureaucracy is considered to be one of the barriers for communities to grow; Monopolistic competition on the utilities market.</td>
</tr>
<tr>
<td>Helsinki City</td>
<td>Densely populated area compared to the rest of Finland; High level of education and environmental awareness in the area; The city is well connected to the countryside; Economic development capacity.</td>
<td>The region is centrally governed by the official municipality system which does not respond to local needs; Strict planning regulations on municipal level; Lack of financial support; High turnover rate of members within the communities.</td>
</tr>
<tr>
<td>Kreuzberg, Prenzlauer Berg, Friedrichshain, Mitte</td>
<td>The region is considered to be a dynamic and creative melting pot. Competitive energy market with variety of electric utilities. Decreasing pass through costs create opportunities for renewable energy initiatives.</td>
<td>Criticism towards the renewable energies act among citizens. Production costs for organic foods are typically higher.</td>
</tr>
<tr>
<td>Center Region</td>
<td>EU funds available for economic and social development; opportunities for online initiatives; highly urbanised region (59.4%) which is seen as opportunity.</td>
<td>Bureaucracy and corruption; average income lower than the EU average thus people not willing to volunteer.</td>
</tr>
</tbody>
</table>

Table 7: Opportunities and barriers: preliminary hypotheses. Source: Climate Futures based on data from partners.

Table 7 represents the views of partners on potential opportunities and barriers for CBIs offered by the chosen regions. Most commonly, partner organisations see opportunities for developments in the renewable energy domain. The potential of emergence of food initiatives were also widely mentioned by partners.

The barriers to development of CBIs are considered to be: uneven distribution of land and lack of land ownership; lack of supportive policy, infrastructure and
centralised or remote government. These views should be considered as preliminary hypotheses and will be further studied in TESS.
5 Findings: Country level indicators

5.1 Population: introduction

A changing population has implications for the use of land and resources as well as greenhouse gas emissions levels. In general, a rise in demand for land or resources could put up prices, drive the search for substitute alternatives (such as emigration to alternative countries) or encourage a shift to more efficient modes of production. Growing population can also have a direct effect on increased CO$_2$ emissions and depletion of natural resources. Given the lack of political agreement thus far on post Kyoto global emissions targets, the potential implications of a changing population are considered significant. The knock-on effects of a growing population will be very area specific - therefore the report analyses population data on a country level.

5.1.1 Population by country

The population of the EU28 was estimated at 507.4 million as of 1 January 2014, compared to 505.7 million on 1 January 2013 (EUROSTAT, 2014). The highest positive change in population within the TESS sample in 2013 was recorded in the UK (0.63%) and Italy (0.49%) closely followed by Finland (0.47%) (Figures 1, 2). In the UK the population increase resulted from relatively high birth rates as well as net migration. In Italy, the increase in population is attributed to a large increase in net migration only, as the natural change in population was negative. Growing population may have a direct effect on CBI emergence in cities. In densely populated areas, CBIs related to transport and food have been shown to emerge. Moreover, as people living in big cities tend to become socially isolated, volunteering or participation in CBIs becomes a way to maintain social cohesion. Subsequent TESS research will investigate this phenomenon, as well as the nature of CBIs emerging in populated areas (and CBI emergence in sparsely populated regions where it can be motivated by different factors such as a need for resilience).
5.1.2 Urbanisation

The most densely populated countries within the TESS sample are the UK, with 57% of population living in densely-populated areas\(^3\), and Spain with 50.4%. Finland has the lowest percentage of its population inhabiting densely populated areas (25.4%) (Figure 2). In areas characterised by high population density, CBIs may emerge in reaction to unsustainable food networks, unsustainable and expensive means of transport and opposition to a free market economy.

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\(^3\) Note: EU-SILC defines a “densely populated area” as an urban area where at least 50% of population lives in high-density clusters.
5.1.3 Private households

There has been a decline in the number of people living in private households in most countries analysed, since 2005. This trend can have an influence on CBI emergence in urban areas, where participation and volunteering for CBIs can be motivated by social needs.

The largest number of people living in private households was reported in Romania where the average was 2.9 in 2012, followed by Spain with 2.7 in 2012. The smallest households in 2012 were reported in Germany – 2.0 people on average and in Finland with 2.1 on average (Figure 3). In these areas, we might expect CBI’s goals and motivations to be related to building social capital, rather than achieving economic benefits.
5.1.4 Household type

Correspondingly, countries with the smallest number of people living in a household are also countries with the highest percentage of single person households. Germany has the highest percentage of single person households in the analysis, with 19.9% in 2012, closely followed by Finland with a single household percentage of 19.5%. Again, these are areas where CBI goals may be linked to building social bonds rather than financial benefits. Both Romania and Spain had the lowest percentage of single person households at 9% in 2012 (Figure 4).
5.2 Economy: introduction

Economic indicators give insight into the local economy and infrastructure. As the literature review has shown, CBIs often emerge in opposition to uneven wealth distribution in an area (Eames and Hunt 2013), or economic crisis (Seyfang and Smith, 2007). The economic factors analysed here will help show whether CBI emergence may be linked to economic standing. Furthermore, understanding regional variations is also important as they may influence the availability of credit and financial support where community initiatives emerge and develop.

5.2.1 GDP growth by country

Among the countries considered Romania (0.9%) and Germany (0.5%) recorded the highest growth in 2012 compared to the previous year. Italy (-2.8%) and Spain (-1.7%) registered the largest decreases (Figure 5). Subsequent research will reveal whether the economic situation in both Italy and Spain is a motivational factor for CBI emergence in these countries.

5.2.2 GDP per capita

Figure 6 shows GDP per capita in the countries under analysis. In 2013 the highest level of GDP per capita in absolute terms was recorded by the UK (30.5 thousand EUR) closely followed by Finland (30.3 thousand EUR) and Germany.
(30.2 thousand EUR). Romania recorded the lowest GDP per inhabitant in absolute terms (4.6 thousand EUR). Low GDP in Romania may influence the emergence of profit orientated CBIs.

Since 1995, the highest annual average growth rate in GDP per capita was recorded by Romania (3.27%), followed by Finland (2.01%). Italy recorded the lowest average growth in GDP per capita since 1995 (0.15%). Further research will show whether the economic downturn observed in Finland, Italy and Spain in recent years has influenced economically-orientated CBI emergence in those countries.

<table>
<thead>
<tr>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td>0.00%</td>
<td>-0.38%</td>
<td>1.13%</td>
<td>0.75%</td>
<td>3.70%</td>
<td>3.57%</td>
<td>1.03%</td>
<td>-4.78%</td>
<td>4.30%</td>
<td>3.09%</td>
<td>0.67%</td>
<td>0.00%</td>
</tr>
<tr>
<td>Spain</td>
<td>1.52%</td>
<td>1.00%</td>
<td>1.98%</td>
<td>1.94%</td>
<td>2.38%</td>
<td>1.40%</td>
<td>-0.46%</td>
<td>-4.61%</td>
<td>-0.48%</td>
<td>0.00%</td>
<td>-1.94%</td>
<td>-0.50%</td>
</tr>
<tr>
<td>Italy</td>
<td>0.00%</td>
<td>-0.82%</td>
<td>0.82%</td>
<td>0.00%</td>
<td>1.63%</td>
<td>0.80%</td>
<td>-1.59%</td>
<td>-6.07%</td>
<td>1.29%</td>
<td>0.00%</td>
<td>-2.98%</td>
<td>-1.75%</td>
</tr>
<tr>
<td>Romania</td>
<td>6.90%</td>
<td>6.45%</td>
<td>9.09%</td>
<td>2.78%</td>
<td>10.81%</td>
<td>7.32%</td>
<td>9.09%</td>
<td>-6.25%</td>
<td>0.00%</td>
<td>2.22%</td>
<td>0.00%</td>
<td></td>
</tr>
<tr>
<td>Finland</td>
<td>1.47%</td>
<td>1.81%</td>
<td>3.90%</td>
<td>2.39%</td>
<td>4.00%</td>
<td>4.81%</td>
<td>0.00%</td>
<td>-9.17%</td>
<td>3.03%</td>
<td>2.29%</td>
<td>-1.28%</td>
<td>-1.94%</td>
</tr>
<tr>
<td>UK</td>
<td>1.79%</td>
<td>3.52%</td>
<td>2.72%</td>
<td>2.65%</td>
<td>2.26%</td>
<td>2.52%</td>
<td>-1.23%</td>
<td>-5.92%</td>
<td>0.99%</td>
<td>0.33%</td>
<td>-1.31%</td>
<td>0.99%</td>
</tr>
</tbody>
</table>

**Figure 8: GDP per capita by country. Source: Climate Futures based on Eurostat 2014 data.**

### 5.2.3 Unemployment rate

Among the countries under consideration Germany recorded the lowest unemployment rate (5.4%) in 2013 for the 15 – 64 age group and Spain the highest (26.5%). In 2013 the unemployment rate increased respective to 2012 in 4 out of 6 countries covered by the analysis. The rising unemployment was
most apparent in Spain where the rate increased from 8.6% in 2006 to 26.5% in 2013 (Figure 7). Rising unemployment rates in Spain and Italy in recent years may have lead to emergence of CBI motivated by reaction to the economic crisis. CBIs emerging in these countries may also have social and political goals, for example job creation, or supporting the disadvantaged.

![Unemployment rate by country](https://example.com/unemployment-chart.png)

*Figure 9: Unemployment rate by country. Source: Eurostat 2014.*

### 5.2.4 Employment rate

In 2013, the highest employment rate for working age was recorded in Germany (76.7%), followed by the UK (74.2%) and Finland (74%). The lowest employment rate was in Spain (59.3%) (Figure 8). It is expected that that in countries not suffering from economic recession where employment rates are high CBI emergence is related to social factors as opposed to political.
Figure 10: Employment rate calculated by dividing the number of persons aged 20 to 64 in employment by the total population of the same age group. Source: Eurostat 2014.

### 5.3 Greenhouse Gas Emissions: Introduction

CBIs and their activities can influence GHG emission patterns and provide a contribution to a low carbon transition through infrastructure and behaviour change. GHG emission levels are indicative of the policy, technical and cultural environment which may also influence CBIs.

This section looks at trends in man-made emissions of the ‘Kyoto basket’ of greenhouse gas emissions. The basket includes carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and F-gases: hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF₆). These gases are aggregated into a single unit using gas-specific global warming potential (GWP) factors. The aggregated greenhouse gas emissions are expressed in units of CO₂ equivalents.

#### 5.3.1 GHG emissions by country

Global GHG emissions continued to increase in 2011, as they have since the beginning of the Industrial Revolution.

However, this was not the case in the Eurozone, EU 28 and EU15, with GHG emissions in most Member States falling over the past decade.

Countries with large economies and large populations tend to be the largest emitters in absolute terms (Figure 10), with Germany and the UK being the highest amongst those under analysis.
Research shows that per capita CO₂ emissions from fossil fuels exhibit an exponential correlation with the improvement of people’s lifestyles on a global scale (Costa et al. 2011). Emissions by country mirror their hierarchy of development at an international scale (Lamb et al., 2014). Economic and social inequalities are also reflected in global emissions patterns (Hornborg, 2009).

For the purpose of this report analysis of the EU emissions pathway is considered. Figure 10 shows the total GHG emissions by country in the years 2002-2011. In general, there has been a decreasing trend in emissions, since 2002, in countries under consideration. In 2009 emissions fell in all of these countries, due predominantly to the global recession and a fall in manufacturing. This downward trend in GHGs in most of the EU Member States continues, and can be attributed to the following factors:

i. The EU commitment to reduce emissions by 20% compared to the 1990 baseline by 2020. The EU emissions target and renewable energy policy resulted in decoupling of emissions growth from economic growth in some countries, including Germany and the UK. Moreover, EU leaders have also agreed on a domestic 2030 target of at least 40% compared to 1990 (EC, 2014). There is however a strong divergence in climate policies among the EU Member States.

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4 Note: EEA and EUROSTAT data does not take into account emissions and removals related to land use, land-use change and forestry.
ii. In Europe, the relationship between GDP and GHG emissions has shown positive correlation in the past. The decoupling of emissions growth from GDP is likely to happen as a result of political decisions (for example a global deal on emissions targets, carbon tax and policy support for renewable energy). The economic recession which started in 2008 was certainly one of the key factors behind the GHG emissions reduction in Europe. However, emissions continued to decline in 2010-2012, which is due in part to a strong increase in the use of renewables in most European countries (Olivier J.G.J. et al., 2013). Emissions in the EU continue to decline for the same reason, along with a decrease in solid fuel consumption and cleaner transport and industry (EEA, 2014).

iii. Developed countries (Europe and the US in particular) tend to move their manufacturing plants to developing countries where labour is cheaper and carbon regulation is less stringent (and which may also be closer to emerging and growing markets). The emissions are then ‘outsourced’ and developing countries become net importers of emissions, while developing countries are net exporters of emissions embodied in trade (Carbon Trust, 2011). The delocalisation of emissions can also be associated with a production shift to emerging markets, which no longer only manufacture products but also rapidly increase their own consumption.

### 5.3.2 GHG emissions per capita

Considering GHG emissions per capita shows a different picture (Figure 12). Finland, the smallest country emitter, is nevertheless the most carbon intensive emitter per capita. This can be explained by factors including: Finland’s (northern, colder) geographical location generating a relatively higher demand for energy; sparse population (the most sparsely populated country in the European Union) hence its distribution losses and travel needs are relatively high; energy intensive industry.

GHG emissions per capita decreased in all of the target countries during 2000-2011, with the most significant reductions achieved in the UK since 2000 (2.6 tonnes of CO\textsubscript{2}e in total) (Figure 12).
5.3.3 GHG emissions by sector

The majority of GHG emissions in the TESS analysis come from energy industries, with Germany and the UK being the largest emitters in 2011 in absolute terms (Figure 13). 45.4% of GHG emissions in Germany and 40.3% of emissions in Finland originate from energy sectors. Spain has the lowest share of GHG emissions from energy industries (27.9%) and the second largest share of emissions from transport (28.2%) after Italy (30%) (Figure 14).
The EEA claims that one third of the fluctuation in absolute greenhouse gas emissions since 1990 can be attributed to changes in GDP (European Environment Agency, 2014). Although there is a positive correlation between GDP and GHGs (Costa et al., 2011), the emissions trends in the last few years show that the EU has been able to achieve emissions reduction regardless of economic growth. The decoupling of emissions reductions and GDP growth can be explained by factors such as improved efficiency in energy transformation from primary fuels into electricity, renewable energy policy, a shift from solid fuels to gas, improved efficiency in energy transmission and outsourcing of European manufacturing operations (predominantly to China).

5.4 Well being: introduction

This chapter presents a selection of social statistics referring to the levels of ‘well-being’. Economic growth and financial prosperity in developed countries do not always translate into better quality of life, higher level of happiness or better health. Indicators have been selected from literature analysing the indirect impact of CBIs on well-being (Bremer et al, 2003; SGS Economics and Planning, 2012; Bellows et al., 2003; NYCDCP 2009).
5.4.1 Population and employment profiles

Population ageing is considered to be one of the greatest challenges facing European countries, with many social, economic and political implications. However, CBI emergence has been shown as a counter reaction to unhappiness and social deprivation caused by economic crisis, particularly a need for meaningful activities in retirement (Seyfang and Smith, 2007).

Considering the individual employment profiles of TESS countries (Figures 15-20) in relation to population growth it is apparent that some countries are already facing the problem of an ageing population. The difference between the number of people in employment and dependents is increasing (Spain, Italy, UK, Finland). The growing gap is a sign of the ageing EU population, where regardless of the employment rate increasing in some cases, there are more professionally inactive individuals (65+ age group) to be supported by people of working age (20-65 age group). As a result, Spain, Italy, UK and Finland might see CBI emergence as a result of this trend.

Interestingly, this is not the case for Germany and Romania where the relative number of dependents is dropping.

Figure 15: Employment profile in Germany. Source: Eurostat 2014.
Figure 16: Employment profile in the UK. Source: Eurostat 2014.

Figure 17: Employment profile in Romania. Source: Eurostat 2014.

Figure 18: Employment profile in Spain. Source: Eurostat 2014.
The analysis of employment rates by gender in the years 2008-2013 has shown consistently higher rates among men compared to females. However, female employment rates, on average, have been growing faster than those for males (or declining at a slower pace). This has been the case for all TESS countries apart from Romania.

### 5.4.2 Self-perceived health

Self-perceived health status is one of the indicators used by the EU to understand the physical and psychological condition of populations, as part of overall well-being. Health improvement is also one of the objectives pursued by CBIs. Volunteering can have a positive effect on reducing stress levels and improving general health conditions (Borgonovi, 2008; Jenkinson et al., 2013).

In 2012 the self-perceived health status in all of the countries under consideration was very high. 65% or more reported to be in very good or good...
health. The UK reported the highest percentage of self perceived very good health (39.4%) and the highest percentage of very good and good health combined (74.7%). The good health trend in the UK has, however, been decreasing since 2007. The lowest percentage of very good self perceived health was reported in Italy (13.7%) and the very good and good status combined in Germany (65.3%).

The highest percentage of bad self-perceived health status in 2012 was reported in Italy (9.5%) and the lowest in Finland (5.9%). However, Finland reported the highest percentage of fair health status of all the TESS countries (26.1%).

Research conducted in WP2 and WP3 will show whether a correlation exists between the nature of CBI and countries performing well on this indicator.

Figure 21: Self-perceived health by country. Source: Eurostat 2014.
Figure 22: Self-perceived health by country. Source: Eurostat 2014.

Figure 22: Self-perceived health by country. Source: Eurostat 2014.
5.4.3 Housing cost overburden

The housing cost overburden rate refers to the proportion of households that spend more than 40% of their disposable income on housing. In countries where the rate is high, initiatives may emerge in response to a difficult housing situation. CBIs may therefore seek to develop alternative housing opportunities such as eco-villages or community housing schemes, which could potentially reduce the cost burden of housing costs.

In 2012, the highest housing cost overburden rate, 16.6% of the population, was reported in Germany (note that Germany also has a high percentage of single person households). This trend has been growing for the past three years in Germany as well as in Spain and Finland. The lowest percentage of housing overburden was reported in Finland at 4.5% (Figure 25). CBIs focused on reducing the housing cost overburden are expected to emerge in countries where a high percentage of population is facing this problem such as Germany and Romania.

Figure 23: Self-perceived health by country. Source: Eurostat 2014.
5.4.4 Poverty

In countries experiencing economic crisis, CBIs are expected to emerge in response to increasing unemployment and poverty rates. The initiatives are then motivated by a need of self-sufficiency and social cohesion in difficult times. The at-risk-of-poverty threshold indicator shows the percentage of population whose disposable income falls below 60% of the national median of disposable income (European Social Statistics, 2013). In 2012 the highest levels of at-risk-of-poverty threshold after social transfers were recorded in Romania (22.6%) and Spain (22.2%). Therefore it might be expected that CBIs in these countries would be motivated to act against deprivation. Analysis in WP2 and WP3 will test this hypothesis.

The lowest percentage of population at risk of poverty threshold was reported in Finland (13.2%).
5.5 Domain specific indicators: introduction

The TESS project focuses on four domains in which CBIs are active: energy, waste, transport and food. The selection of indicators is specifically related to areas of CBI interest, which, on one hand affect how they operate, and on the other hand are shaped by them.

This section will focus on the analysis of domain specific characteristics on a country level.

5.5.1 Energy

Figure 27 shows primary energy consumption in countries covered by the TESS analysis in years 1990-2010. ‘Primary energy consumption’ is defined as the Gross Inland Consumption excluding all non-energy use of energy carriers (e.g. natural gas used not for combustion but for producing chemicals) (EUROSTAT Database, 2014).

In countries under consideration the gross energy trend peaked in 2006 or 2007, which mirrors the general trend of energy consumption in the EU. Since then the amount of energy supplied, transformed and consumed has been falling, mainly due to economic recession, improvements in energy efficiency and the EU goal and policy to support renewable energy.

Since 1990, Germany recorded the highest energy consumption (311.1 million tonne of oil equivalent (Mtoe) in 2010), followed by the UK (203.3 Mtoe in 2010)
and Italy (165 Mtoe in 2012). Romania and Finland consumed the least primary energy, 34.3 Mtoe and 35.6 Mtoe in 2010 respectively. The absolute levels of primary energy consumption can be attributed to the number of citizens, their lifestyles as well as the structure of the economy.

Germany recorded a significant downward trend in gross energy consumption and, of all the TESS countries, made the most substantial reductions since 1990. This can be attributed to the breakdown of the economy of the former GDR as well as Germany’s ambitious CO₂ reduction target of 40% on 1990 levels by 2020. In consequence, Germany’s share of electricity produced from renewables increased from 7% in 1990 to over 25% in 2013. However, as a result of Germany’s post-Fukushima decision to phase out nuclear energy by 2022 the country is running the risk of not meeting its GHG reduction target (Gutmann K., 2014). Finland’s gross energy consumption showed least change. In 2012 gross inland energy consumption fell in Germany, Italy, Romania and the UK compared to 2000 levels (Figure 28).

In countries where a reduction in energy consumption has been significant, the TESS role is to establish if reductions have been facilitated by CBIs and if so if this model can be replicated in other countries. Further research will show the extent of impact CBIs have had on energy consumption patterns in countries where energy consumption has changed.
Analysing the energy consumption mix by fuel type shows diversity in energy consumption patterns by country. These are results of energy policies adopted on a country level and availability of resources. However, they might also indicate which countries should be analysed with a specific energy focus concentrated on CBIs.

Figure 29 shows the gross inland energy consumption mix by fuel type in 2012. Germany reported the largest share of energy generation from solid fuels (25% of total consumption in Germany), followed by Romania (21.5%). Spain had the largest share of total petroleum products in gross inland energy consumption (41.3%), followed by Italy (36.8%) and the UK (34%).

In 2012 Italy had the largest share of energy consumption from natural gas (36.7%) of all the countries covered by the TESS analysis. Finland led in gross energy consumption share from nuclear heat (17.4%), renewables (29.2%) and electrical energy (4.4%).
In 2012, the largest share of renewable energy in gross final energy consumption was estimated at 34.3% in Finland, followed by Romania at 22.9% and Spain at 14.3%. The share of renewable energy in countries included in TESS research has been increasing since 2004, with Finland and Germany increasing their shares the most (Figure 37). The smallest share of renewable energy in 2012 was recorded in the UK (4.2%). These numbers indicate that Finland, Romania and Germany are showing the highest share of renewable energy in gross consumption, and this should be further analysed in the context of CBIs operating in the energy domain in order to establish whether initiatives could potentially accelerate the transition into low carbon economy.

*Figure 28: National shares of fuels in gross inland energy consumption. Source: Eurostat 2014.*
5.5.2 Waste

This section analyses waste generation trends among TESS countries. It indicates what are the main sources of waste generation and which have been reducing waste in recent years. For those countries showing low waste production, TESS will investigate whether CBIs have been acting in this domain and whether the activities can be replicated in other countries.

Figure 38 shows waste generation per inhabitant trend in considered countries. This indicator is defined as all waste generated in a country per inhabitant and year, excluding major mineral wastes, dredging spoils and contaminated soils. This exclusion enhances comparability across countries as mineral waste accounts for high quantities in some countries and economic activities such as mining and construction (EUROSTAT, 2014). The analysis covers data from years 2004, 2006, 2008 and 2010 during which Finland generated most waste per capita of all the countries (4517 kg per capita in 2010). The second largest waste producer was the UK with 2,072 kg of waste generated per capita in 2010, whereas the lowest amount of waste per inhabitant (1,347 kg) in 2010 was generated in Spain.

The UK, Spain and Romania have been reducing the amount of waste generated per capita (Figure 31), whilst Germany and Italy have recorded a
rising trend in waste generation. CBIs operating in the waste domain should be examined further, and considered in the context of country level impact and potential replication.

![Generation of waste excluding major mineral wastes, kg per capita](image_url)

*Figure 30: Generation of waste excluding major mineral wastes. Source: Eurostat 2014.*

In absolute terms (Figure 32) Germany and the UK were the largest waste producers in 2010, and most of their waste was generated by the construction sector. Finland was the smallest waste producer in absolute terms, with most of its waste originating from mining and quarrying activities.
5.5.3 Transport

This section presents indicators, which constitute background data to the CBI activities operating in the transport domain. The analysis of transportation modes by country indicates passenger-kilometres patterns which are broadly similar. Figure 40 shows the percentage share of modes of transport in total inland transport, expressed in passenger-kilometres. Passenger cars are the most widely used means of transport, so CBIs engaged in stimulating reductions should be as analysed with regard to these data.

The UK’s share of passenger cars in 2011 was the highest (87.5%) and Spain recorded the lowest share (81%). The relatively low share of rail transport in Spain (5.5%) was compensated by the highest share of buses (13.5%) in inland passenger transport. Correspondingly, the UK had the lowest share of buses (5%).

Figure 31: General waste by country and sector in 2010. Source: Eurostat 2014.
The highest share of trains in inland transport was recorded in Germany (8.1%) and the lowest in Finland (5.0%).

![Figure 32: Modal split of passenger transport by country in 2011. Source: Eurostat 2014.](image)

Renewable energy use in the transport sector increased in Germany, Italy, Romania and the UK in 2012 compared to previous year (Figure 34). The highest share of renewable energy in fuel consumption of transport was recorded in Germany in the years covered by the analysis. In the latest available year its share amounted to 6.9% of all fuel consumed by the transport sector. This suggests that CBIs in Germany should be specifically analysed in terms of renewable transport and the solutions could be potentially replicated in other countries. Analysis of CBIs operating in the renewable transport should provide better understanding of the impact that such schemes could have on a global scale and conditions need for emergence and persistence of such CBI.

The lowest percentage of transport renewable energy in 2012 was recorded in Finland and Spain - both at 0.4%.
5.5.4 Food

This section compares shares of organic farming areas in countries covered by TESS. The data presented here serves as proxy for national attitudes to organic farming and should be analysed in the context of CBIs operating in the food domain in other WPs. For countries with a high percentage of area used for organic farming, one may expect to see CBIs activities focused on organically grown food.

Figure 42 represents the share of total agricultural area occupied by organic farming by country. In 2012, 8.9% of Italy’s agricultural area was given over to organic farming, followed by Finland (8.7%). Analysis of the number of CBIs dedicated to organic food in these countries will be worthy of further investigation. The lowest share of certified organic farming area was reported by Romania (3.4%).
Figure 34: Share of total utilised agricultural area (UAA) occupied by organic farming. Source: Eurostat 2014.
6 Conclusions

This report presents in depth analysis of regional data and country level data, across the six countries where case study initiatives are active.

The literature reports that a large proportion of these contextual factors could be significant when considering the emergence, persistence and replication of CBIs.

Not surprisingly, the information presented has shown a wide variation between the regions and countries under consideration, and also between characteristics within countries and their research regions. Initiatives are shown to emerge in varied environments ranging from urban to rural, also with large differences in population density. Motivational factors for emergence of CBIs include economic hardship, job creation and self-worth, self-sufficiency, environmental concerns and health. Common barriers are also faced, including official bureaucracy, unsupportive policies, restrictive regulations and issues of land ownership.

At this early stage of research it is not possible to conclude to what extent the emergence and development of the TESS case study initiatives has been influenced or shaped by their different contexts. However, it is believed that the indicators presented in this report will help with this analysis. WPs 2, 3 and 4 will further explore which causal links exist with case study CBIs. As the detailed research with the case studies progresses, it is likely that patterns will emerge and that it will become clearer what local, contextual factors influence whether and how initiatives emerge and develop. At that point, it is envisaged that supplementary research will be required, particularly to understand the local context in which case study initiatives operate.
References

[Journal]


[Reports]


[Books, monographs, theses]


[Online materials]


[Online databases]

Annexes

Annex A: Aberdeen City and Aberdeenshire

Please complete this form with summary qualitative and quantitative description of the region you have mapped for your key and supportive case studies. Provide requested information and fill in the blanks, specifying data sources, and state where information is not available.

Your Details:
Name: Simon Heslop
Name of Institution: The James Hutton Institute
Date completed: 17.07.2014

1. Summary Characteristics

<table>
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<th>Name of research region</th>
<th>Aberdeen City and Aberdeenshire</th>
<th>Sources</th>
</tr>
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<tr>
<td>Is your Research Region the same as NL</td>
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<td></td>
</tr>
<tr>
<td>Population</td>
<td>Aberdeen City = 222,793; Aberdeenshire = 252,973</td>
<td><a href="http://www.scotlandscensus.gov.uk/ods-web/standard-outputs.html">http://www.scotlandscensus.gov.uk/ods-web/standard-outputs.html</a></td>
</tr>
<tr>
<td>Area</td>
<td>Aberdeen City = 186.8; Aberdeenshire = 6,319.6</td>
<td><a href="http://www.sns.gov.uk/default.aspx">http://www.sns.gov.uk/default.aspx</a></td>
</tr>
<tr>
<td>Number of initiatives</td>
<td>67</td>
<td></td>
</tr>
</tbody>
</table>

Table 1: Summary characteristics. Source: JHI

2. Introduction to the Research Region

What characterises the area in terms of geography, climate, urban/rural, government, languages (please fill in where capitals are shown)

Geography
The region being investigated – Aberdeen City and Aberdeenshire – is in North East Scotland. The North Sea bounds the region to the North and East. Moray and Highland bound the region to the West. Perth & Kinross and Angus bound the region to the South. Aberdeenshire extends into the Cairngorms National Park. The landscape is diverse comprising sand beaches, fertile valleys, heather moors, and rugged mountains. There are numerous rivers and streams in Aberdeenshire, including the River Dee, the River Don, the River Ury, and the River Ythan. The River Dee lies to the South of Aberdeen city and the River Don lies to the North. A long sand beach bounds the city to the East. The city is built on many hills.
Climate
The region has a temperate climate with Koppen climate classification Cfb.

Settlement – urban/rural
Aberdeenshire covers 8% of Scotland’s territory. The region is predominantly rural but does contain 12 large settlements. The capital/main city in the region is Aberdeen City, and other major conurbations in the area include Peterhead, Fraserburgh, Inverurie, Westhill, Stonehaven, Ellon, Portlethen, and Banchory.

Population
The total population for Aberdeen City and Shire was 484,870 in 2013, which represents 9% of Scotland’s population.

The 2013 population for Aberdeenshire is 257,740; an increase of 0.9% from 255,540 in 2012. This accounts for 4.8% of Scotland’s population. Population density was 41 per km² in 2012.

The 2013 population for Aberdeen City is 227,130; an increase of 1% from 224,970 in 2012. The population of Aberdeen City accounts for 4.3% of the total population of Scotland and makes it the third most populous city in Scotland. Population Density is 1,211 people per km², which is lower than for Edinburgh, Glasgow and Dundee.

Population growth
Since 1987, Aberdeenshire's total population has risen overall and since 2001 Census increased by 11.5%, the highest population growth experienced by any Scottish local authority over this period. Scotland’s population grew by 4.6% over the same period.

Between June 2011 and June 2012, Aberdeen’s population grew by 2,510. Most of that change was accounted for by overseas migration.

By 2037 the population of Aberdeenshire is projected to be 299,813, an increase of 17.3% compared to the population in 2012 and the population of Aberdeen City is projected to be 288,788, an increase of 28% compared to the population in 2012. The population of Scotland is projected to increase by 8.8% between 2012 and 2037. Over the 25 year period, the age group that is projected to increase the most in size in Aberdeen City and Shire is the 75+ age group. This is the same as for Scotland as a whole.

Governance
Aberdeen City is governed by Aberdeen City Council whilst Aberdeenshire is governed by Aberdeenshire Council.

Aberdeenshire Council has devolved local decision making to six Area Committees: Banff and Buchan; Buchan; Formartine; Garioch; Marr; Kincardine and Mearns. Each Area has a Community Action Plan.

Aberdeen ranked lowest of Scotland’s 32 Local Authorities in receiving finances from the Scottish Government’s through the Total Government Fund for spending in 2014/15. Aberdeenshire ranked 30th.

Languages
English is the official language in both regions. 36% in Aberdeen City speak Scots (Germanic language variety of English). After English, Polish is the most common home language of school pupils in Aberdeen, followed by Arabic and Malayalam.

Data sources:
- General Register office for Scotland http://www.groscotland.gov.uk/statistics/theme
- Aberdeen City council http://www.aberdeencity.gov.uk/nmsruntime/saveasdialog.asp?llID=55074&sID=332
3. Motivation

Tell us about the motivation, which led you to select this particular region (for example is it known for its sustainable communities, fertility, wind resource etc).

We selected this region as it is proximal to the James Hutton Institute, Aberdeen. JHI staff who are working on TESS thus know the area well and can access initiatives relatively easily for data gathering. In addition, the region houses a range of committed and enterprising low carbon community initiatives that we feel will be useful TESS key and supportive case studies.

Together the city and shire comprise a city-region including both rural and urban initiatives. This region allows us to investigate success factors and challenges for community-based initiatives in both rural and urban areas and at a range of scales (city, small town, and village).

Since the 1970s Aberdeen has promoted itself as the oil capital of Europe and has developed significant infrastructure and related expertise in oil-related energy. More recently there has been a shift to using this energy expertise to develop and promote renewable technology through, for example, the siting of an offshore wind farm to the north of the city. Regular conferences on energy are held in the city; increasingly these include stands on renewables.

Given the history of (high carbon) energy and employment in this area in Aberdeen city and Shire we thought it would be interesting to investigate how local and small-scale initiatives to a low-carbon society fare in this environment.

4. Economic indicators

Describe the economy of the region.

Industry
Traditionally, Aberdeenshire has been economically dependent upon the primary sector (agriculture, fishing, and forestry) and related processing industries. Over the last 40 years, the development of the oil and gas industry and associated service sector has broadened Aberdeenshire’s economic base, and contributed to a rapid population growth of some 50% since 1975. The oil industry and Aberdeen’s seaport have displaced fishing, paper-making, shipbuilding, and textile industries. The region is now characterised by energy related infrastructure, fishing, agriculture, tourism, and whiskey distilling.

Energy sector
Over the past 35 years, the Aberdeen City and Shire area has played a key role in the emergence and development of a dynamic energy sector, predominantly based around North Sea oil and gas. Since the first fields came on stream in the mid-1970s, around 38 billion barrels of oil equivalent (boe) have been produced from the UK Continental Shelf (UKCS) with the prospect of a further 15-25 billion boe still to be extracted (data 2010).
Fishing
In 2011, Aberdeenshire accounted for over half of all fish landings into Scotland and 49% of landings into the UK. Together with Aberdeen it provided 25% of Scotland’s regular fishing employment (Sea Fisheries Statistics 2011).

Agriculture
In 2009, 2% of people were employed in agriculture in Aberdeenshire.

Education
Aberdeen city has two universities – the University of Aberdeen (founded 1495) and Robert Gordon University (which received university status in 1992). The University of Aberdeen has an annual turnover in excess of £220 million, and 16,500 students. It has over 3,000 staff, of whom 1,400 are academic. There is a strong record in commercial research (and close links with the oil industry). The Robert Gordon University has over 16,000 students and one of the best track records for graduate employment in the UK.

GDP
The total GDP of Aberdeen City was €9,040 million (£8,083 million) in 2011 whilst the total GDP of Aberdeenshire was €3,998 million (£3,575 million). The per capita GDP of Aberdeen City was €40,576 (£36,280) in 2011 whilst the per capita GDP of Aberdeenshire was €15,805 (£14,132).

Aberdeenshire’s GDP in 2013 has been estimated at €4,134 million (£3,698million), representing 3.6% of the Scottish total. Aberdeenshire’s economy is closely linked to Aberdeen City’s where in 2013 GDP was estimated at 9,392 million (£8,401 million). In 2011 the region as a whole was calculated to contribute 11.6% of Scotland’s GDP. Between 2011 and 2013 the combined Aberdeenshire and Aberdeen City economic forecast GDP growth rate is 3.8%, the highest growth rate of any local authority area and above the Scottish rate of 1.3%.

Employment
Economic activity rates 2012/2013 were 80% in Aberdeen and 82% in Aberdeenshire. The average monthly unemployment (claimant count) rate was quite low at 1.1% in Aberdeenshire and 1.8% in Aberdeen City. This is lower than the Scottish average at 3.8%.

Compared to Scotland and United Kingdom, Aberdeen City and Shire has a higher representation of employment in Professional, Elementary and Process, Plant & Machine Operatives occupations. In Aberdeenshire the majority of employees work within the service sector, predominately in public administration, education and health. Almost 17% of employment is within the public sector.

Figures produced by Experian for Oil & Gas UK indicate that well over 100,000 jobs in the Aberdeen City and Shire area are provided by the oil and gas industry’s expenditure in the UK Continental Shelf (UKCS). This figure consists of (a) people employed directly by oil and gas companies and their major contractors, (b) jobs in the wider supply chain and (c)
jobs supported by economic activity induced by employees' spending in the local economy.

**Income**
The mean average annual income for employees living in Aberdeen City in 2012 was €32,716 (£29,272). For employees living in Aberdeenshire, the mean annual average income in 2012 was €30,598 (£27,358).

In 2012, the earnings gap between overall male and female employees in Aberdeen City was £3.33 per hour and in Aberdeenshire was £2.85 per hour. These were higher than the Scottish average of £2.17 per hour and were the 5th and 9th highest gender pay gaps in the country respectively.

Aberdeen City (19%) and Aberdeenshire (22%) have significantly higher proportions of households with income over £40,000 compared to the other key cities in Scotland and the Scottish average (14%).

**Data sources:**
- [http://www.acsef.co.uk/key_statistics_/unemployment/](http://www.acsef.co.uk/key_statistics_/unemployment/)
- [http://www.rgu.ac.uk/about/about-robert-gordon-university/facts-and-figures](http://www.rgu.ac.uk/about/about-robert-gordon-university/facts-and-figures)
- [http://www.abdn.ac.uk/about/history/index.php](http://www.abdn.ac.uk/about/history/index.php)
- Mackay Consultants' North East Scotland Economic Report

5. **Social indicators**

*Describe the social characteristics of the region.*

**Ethnic background**
The population of Aberdeen City is 92% white whilst the population of Aberdeenshire is 98% white.

**Religion**
The majority of people in Aberdeen City (48%) and Aberdeenshire (43%) stated no religion. Second most numerous religious affiliation is to the Church of
Scotland, with 25% for Aberdeen City and 36% for Aberdeenshire (Census data 2011).

Age
In Aberdeenshire, 15% of the population are aged 16 to 29 years (Scotland 18%), and persons aged 60 and over make up 24% (Scotland 24%). In Aberdeen City, 25% of the population are aged 16 to 29 years and 20% are 60 or over.

Life expectancy
Female life expectancy at birth is 82 years in Aberdeenshire and 81 in Aberdeen city, which is greater than male life expectancy that is 79 years in Aberdeenshire and 77 year in Aberdeen city. For both sexes the numbers were greater than the Scottish average. Male life expectancy at birth in Aberdeen City and shire is improving more rapidly than female life expectancy.

Health
In Aberdeen City, 86% of the population is in good or very good health whilst in Aberdeenshire 87% of the population is in good or very good health. In Aberdeen City, 4% of the population is in bad or very bad health whilst in Aberdeenshire 3% of the population is in bad or very bad health.

Households
In Aberdeen City in 2011, 32% of households were owned with a mortgage; 25% were owned outright; 20% were rented from the council; and 15% were rented privately. In Aberdeenshire in 2011, 37% of households were owned with a mortgage; 35% were owned outright; 12% were rented from the council; and 8% were rented privately.

In Aberdeen City in 2011, 48% of households were in whole houses or bungalows whilst 52% were in flats, maisonettes, or apartments. In Aberdeenshire in 2011, 88% of households were in whole houses or bungalows whilst 12% were in flats, maisonettes, or apartments.

Crime
In Aberdeen City in the period 2011-2012 17,877 crimes and 26,254 offences were recorded. In contrast, 7,513 crimes and 21,548 offences were recorded in Aberdeenshire in the same period.

Data sources:
• http://www.scotlandscensus.gov.uk/ods-web/standard-outputs.html
• http://www.sns.gov.uk/default.aspx
• http://www.aberdeencity.gov.uk/nmsruntime/saveasdialog.asp?lID=53346&sID=3365
6. Domains

JHI has sampled 67 community initiatives in Aberdeen City and Aberdeenshire. Amongst these initiatives, 33 are active in the area of energy, 30 are active in the area of food, 23 are active in the area of transport, and 25 are active in the area of waste. The number of initiatives active in food, energy, transport, and waste total more than 67 because many of the initiatives we sampled are operating in more than one of these areas.

Community initiatives active in the area of energy in Aberdeen City and Aberdeenshire include Huntly Development Trust; Neither Loirston Growers Association; and Cults Parish Church. Huntly Development Trust has run a home insulation scheme in the region it operates within and it is pursuing several renewable energy projects. Neither Loirston Growers Association is saving energy by growing food locally and hence reducing food miles. It is also saving energy by using harvested rainwater for irrigation purposes rather than carbon intensive mains water. Cults Parish Church have made efforts to save energy by converting the heating system within the church and are also actively raising awareness about how to save household energy in the community.

Community initiatives active in the area of food in Aberdeen City and Aberdeenshire include Community Food Initiative North East; Greener Kemnay; and PUT Community Co-op. Community Food Initiative North East provides fruit and vegetables to low income individuals and families and encourages increased consumption of the same amongst this group of people. They save energy in this respect by using fruit and vegetables that would otherwise go to landfill. Greener Kemnay is developing new community allotments where members of the community can grow their own vegetables and hence reduce the carbon footprint associated with their diets. This initiative has also planted fruit trees around the village. PUT Community Co-op is another community initiative that aims to reduce carbon dioxide emissions by providing allotments for and encouraging members of the community to grow their own vegetables.

Community initiatives active in the area of transport in Aberdeen City and Aberdeenshire include BeCyCle(within SHIFT); Greener Kemnay; and Moss of Cruden Community Association. BeCyCle repair used bicycles and lend them out to members of the community for free. GreenerKemnayencourage cycling and walking within the community. They are also campaigning for development of a new train station in nearby Kintore, and development of a new cycle path between Kemnay and the new train station.

Community initiatives active in the area of waste in Aberdeen City and Aberdeenshire include Pitcaple Environmental Project Ltd.; Magpie; and Neither Loirston Growers’ Association. Pitcaple Environmental Project Ltd. have composting toilets, are engaged in recycling, and sell reclaimed goods that would have otherwise gone to waste. Magpie directly reduce the amount of
waste going to landfill by selling on waste household goods in the community. Neither Loirston Growers’ Association compost all the garden waste on their allotments. In addition they consume composted waste locally from Aberdeen City Council.

7. Opportunities and Barriers

What are the main opportunities and barriers for initiatives in the region?

The main opportunities for community-led initiatives in the regions are in the area of energy and food. High levels of land ownership (especially in the Shire) enable private landowners as well as communities (often through development trusts) to purchase renewable technology (such as solar PV panels or wind turbines) to generate their own energy. The climate is enabling of wind, hydro and solar energy generation although I am not aware of any community-owned hydro schemes in this region. Energy has a high profile within the region thanks to the oil industry; increasingly this is moving towards the renewables sector. Scottish Government is supportive of the development of renewable energy and there are many grants available for private households/landowners, community groups and social enterprises to invest in technology for locally generated electricity. Energy is also important because of the climate. The region is one of the coldest places in Scotland with low mean temperatures and short winter daylight hours.

The history of farming and agriculture in the Shire, and the pattern of small, relatively homogenous settlement throughout the rural part of the region makes food-growing initiatives popular. Access to suitable land for growing fruit and veg is relatively forthcoming; poly tunnels are popular for extending the growing season.

The main barriers to the take up of community-led initiatives are the affluent nature of the region, high levels of employment and health (meaning people are busy and don’t want to volunteer); the professionalism of the energy sector and the cultural homogeneity. The location of the region in the north east means it is away from the central belt where most of the population live, where government sits and where any networking events take place. There might thus be travel disadvantages for some small groups.

Data sources:

8. Additional information
Annex B: Argyll and Bute

Please complete this form with summary qualitative and quantitative description of the region you have mapped for your key and supportive case studies. Provide requested information and fill in the blanks, specifying data sources, and state where information is not available.

Your Details:
Name: Iga and Philip
Name of Institution: Climate Futures
Date completed:

1. Summary Characteristics

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<th>Sources</th>
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<td>Number of initiatives</td>
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Table 1: Summary characteristics. Source: Climate Futures

2. Introduction to the Research Region

What characterises the area in terms of geography, climate, urban/rural, government, languages (please fill in where capitals are shown)

Geography

The region being investigated - Argyll and Bute – is in South West Scotland. The region is bounded by the urban areas of Helensburgh and Dunoon along the Clyde, Loch Lomond to the East, the Mull of Kintyre to the south, Atlantic Islands to the west, and the Sound of Mull and Appin to the north.

Argyle and Bute covers an area of 690,899 hectares, which corresponds to almost 9% of the total Scottish land (Census 2001).

The average population density in Argyll and Bute is 13 persons per square kilometre, which makes is the third sparsest population density of the 32 Scottish local authority areas.
According to the Census 2011, approximately 17.4% of the population of Argyll and Bute live on islands. Almost 79.7% of the Argyll and Bute population live within one kilometre of the coast and 96.5% between 0 and 10 km from the coast (Scottish Coastal Forum, 2002). Moreover, the area is characterised by its long coastline and several long lochs, which makes its population reliant on transport by ferry. The area has also 23 inhabited islands – more than any other local authority in Scotland (Census 2011).

Despite its low overall population density, this is not evenly dispersed. The largest settlements are located mainly on the mainland coast. 48% of the population live in settlements of 3,000 or more people and 52% live in smaller settlements or outside of settlements (NRS 2011 Mid-Year Estimates; SG Urban-Rural Classification 2011-2012).


### Population changes

The Scottish Census registered 88,166 people in Argyll and Bute in 2011 compared to 91,306 in 2001 (Scotland Census, 2011, 2001).

The population is ageing and declining. The National Records of Scotland predict that the population of Argyll and Bute will fall by 13.5% by 2037. This is the second largest decline in Scotland. The working age population is predicted to fall by almost 22%.

Source:
- [http://www.sns.gov.uk](http://www.sns.gov.uk)
- [http://www.scotlandscensus.gov.uk/ods-web/area.html](http://www.scotlandscensus.gov.uk/ods-web/area.html)

### Urbanisation

The largest settlement in the area is Helensburgh, with a population of 14,626 (Census 2011).

52% of Argyll and Bute’s population live in areas classified as ‘rural’ whereas 45% of population live in ‘remote rural’ and 7% in ‘accessible rural’ areas (Scottish Government Urban-Rural Classification 2009-2010; 2010-based Small Area Population Estimates).

Over 96% of Argyll and Bute total land area has been classified by the Scottish Government as ‘remote rural’ (Scottish Government Urban-Rural Classification 2009-2010; 2001 Census).

Climate
The region has a temperate climate with Koppen climate classification Cfb.

Landscape
Argyll and Bute is considered to be one of the most biodiverse areas in the UK. The landscape types comprise coastal plains, rocky mosaics, low coastal hills, coastal parallel ridges, rocky moorland, slate islands, sand dunes and machair. The area is rich in lochs (Loch Awe, Loch Eck, Loch Avich) and rivers.

Argyll and Bute contributes to 20% of the broad-leaved forest cover of Scotland, and this accounts for 2.6% of Scotland’s land mass cover. It contains a significant proportion (16%) of Scotland’s total commercial forestry, which accounts for 21% of regional land-use. Over 50% of the remaining land comprises of heather moor/peatland, rough grassland and bracken scrub. Is this used for hill farming i.e. sheep?

Source:
Argyll and Bute Biodiversity Action Plan 2010-2015
http://www.argyll-bute.gov.uk/planning-and-environment/biodiversity

Land-use
The local economy relies on, predominantly, agriculture, renewable energy and forestry. The agricultural forms include crafting, farming and estate. There is a small amount of arable land throughout the area. The land suitable for agriculture is located mainly in Kintyre (peninsula in the southwest of Argyll and Bute) whereas the land in the islands and coastal areas is of poorer quality. Rough grazing is the dominant form of land-use in Argyll and Bute. Grassland is significant across the whole region with particular focus on the main dairy producing areas such as Kintyre, Bute and Cowal, Helensburgh and Lomond. Beef and sheep farming are dominant in areas of poor soil quality.

How about renewables and forestry?

Source:
Argyll and Bute Council, 2004
http://www.argyll-bute.gov.uk/moderngov/mgConvert2PDF.aspx?ID=11249
Municipal administration
The area is administered by the Argyll and Bute Council, which covers the largest local authority area in Scotland. The administrative centre is located in Lochgilphead.

Ethnicity
According to Scotland’s Census in 2011 78.8% of population in Argyll and Bute was Scottish, 16.6% British, 0.8% Irish, 0.6% Polish, 1.9% other white, 0.6% Asian, Asian Scottish or Asian British and 0.6% represented other ethnic group (Scotland’s Census, 2011).

14.5% of households have reported that not all persons are in the same ethnic group category.
Source: http://www.scotlandscensus.gov.uk/ods-web/area.html

Religion
In 2011 40% of population of Argyll and Bute were members of Church of Scotland, 11.3% were Roman Catholic, 7.7% other Christian, 0.25% were Muslim and 0.7% belonged to other religions. (Scotland’s Census, 2011).
Others did not classify?
Source: http://www.scotlandscensus.gov.uk/ods-web/area.html

Language
In 2011 99.2% of population (all people aged 3 and over included) of Argyll and Bute spoke English well or very well. According to the Census in 2011, 0.7% of population did not speak English well and 0.1% of population did not speak English at all. 4% of population was able to speak Gaelic and 21.7% was able to speak Scots. 3.5% of population reported the use of other than English language at home (Scotland’s Census 2011).

3. Motivation

Tell us about the motivation, which led you to select this particular region (for example is it known for its sustainable communities, fertility, wind resource etc).

Argyll and Bute is one region within the wider area of Highland and South and East Scotland that was mapped by Climate Futures. It contains some particularly active and pioneering initiatives that are working to regenerate their communities by taking a strategic approach and gaining community control over land and energy resources. The region is particularly rich in energy resources whilst also suffering from being relatively remote, with a declining population and fragile economy. The initiatives in the region are all starting to demonstrate the potential for creating a viable, resilient, low-carbon future economic model for rural areas across Scotland --where communities become empowered by gaining control of local natural resources.
The Isle of Gigha, for example, was a very early example of a community land buy-out in Scotland. Moving from having an absentee landlord to community ownership has reversed a long economic decline and enabled a range of new initiatives that are creating a sustainable, low-carbon future for the island, which now has a growing population. This has inspired numerous other community land buy-outs in the Highlands and Islands of Scotland which are starting to demonstrate the value of community control of assets and to call further into question the extraordinarily skewed pattern of land ownership across Scotland, in which more than half Scotland’s land area is owned by fewer than 500 people. Mull and Iona Community Trust has similarly pioneered numerous community development projects including community owned hydro-power, the development of which is being crowd funded by a community share issue.

http://www.theguardian.com/uk-news/2013/aug/10/scotland-land-rights#start-of-comments
http://www.andywightman.com/?page_id=1027
http://www.communitylandtrusts.org.uk/See-it-and-Believe-it/International-inspiration/gigha

4. Economic indicators

Describe the economy of the region.

The closest area to Argyll and Bute for which Gross Value Added (GVA) data is available is ‘Lochaber, Skye and Lochalsh, Arran and Cumbrae and Argyll and Bute’.

In 2011 total GVA (workplace based GVA NUTS3 at current basic prices) in Lochaber, Skye & Lochalsh, Arran & Cumbrae and Argyll & Bute was 1,591 million GBP and 1496 million GBP in 2010. GVP per capita was 15,694 GBP in 2011 and increased from 14,734 GBP in 2010. It was lower compared to the Scottish average GVA per capita recorded at 19,989 GBP in 2011.

Source:
* The long-established headline measure of economic growth produced by the Scottish Government is GDP at basic prices, also known as total Gross Value Added (GVA), which is based on the output of all industries in the economy.

Source:
http://www.argyll-bute.gov.uk/info/economy

Notes on GDP and GVA in Scotland:
http://scotland.gov.uk/Topics/Statistics/Browse/Economy/GDP
Employment

The unemployment rate in Argyll and Bute is below the national average. In March 2014 the unemployment rate was 5.5% compared to 7.3% across Scotland and 7.2% in the UK. The unemployment rate in Argyll and Bute varies depending on the season (ONS Annual Population Survey, 2014).

The economy of Argyll and Bute is based on services. Service sector jobs accounted for 88.6% in 2012. This compares to 84% across Scotland and 85.5% in Great Britain (ONS Annual Business Register and Employment Survey, 2012).

Approximately 13% of jobs in Argyll and Bute were related to accommodation and food services in 2012. This compares to 7.0% of Scottish jobs and 6.9% of British jobs (ONS Annual Business Register and Employment Survey, 2012).

39.8% of total employee jobs in Argyll and Bute in 2012 were in public administration, education and health sector. This compares to 30.5% for Scotland and 28.1% for Great Britain (ONS Annual Business Register and Employment Survey, 2012).

Source: 
http://www.nomisweb.co.uk/reports/lmp/la/1946157408/report.aspx#tabempune mp

Income

Average gross weekly pay for full-time workers in Argyll and Bute was 463 GBP in 2013. This compares to a Scottish average of 508 GBP and a British average of 518.1 GBP per week (Office for National Statistics Annual Survey of Hours and Earnings, 2013).

In 2013, the earnings by workplace gap between overall male and female employees in Argyll and Bute was 2.36 GBP per hour. These were higher than the Scottish average gap of 1.01 GBP per hour recorded in 2013. The average hourly rate (excluding overtime) was 12.17 GBP in 2013. That is lower than the Scottish hourly average (12.87 GBP per hour) and the British average (13.07 GBP per hour). (ONS Annual Survey of Hours and Earnings, 2013)

Resources

Argyll and Bute area is rich in renewable resources and has a track record of developing renewable energy projects which as of March 2013 include:

- **wind** – 128.9 MW installed capacity
- **hydro schemes** – 687.6 MW installed capacity
- **wave** – 0.1 MW installed capacity
- **wood fuel** – 4.8 MW installed capacity.

The area has also another 191.8 MW of renewable capacity approved or under construction.

5. **Social indicators**

Tenure

In 2011 there were 40,125 households in Argyll and Bute area, which comprises 2% of total number of households in Scotland. (Scotland’s Census 2011)

66.5% of houses were owned by the residents, 18.9% were social rented, 12.5% were private rented and 2.1% were classified as living rent free. The level of ownership is higher than the Scottish average (62%). (Scotland’s Census 2011).

Source:

http://www.scotl

Household size

In 2011, 36.4% of population in Argyll and Bute lived in 2 people household and 35.6% in 1 person household. In Scotland, 1 person households are now the most common household type – and account for 35% of all households. 13% of people in Argyll and Bute lived in 3 people household, 10.3% in 4 people household, 3.6% in 5 people household and 1.1% in 6 people household. (Scotland’s Census 2011).

Source:

http://www.scotl

Source:
Type of housing
In 2011 97.2% of Argyll and Bute population lived in a household and the remaining 2.8% in a communal establishment.
70% of households of Argyll and Bute in 2011 were houses or bungalows, 35.8% were detached houses, 21.5% were semi-detached, 12.8% were terraced houses, 29.6% were flats, maisonettes or apartments, 0.4% were caravans or other mobile or temporary structures. (Scotland’s Census 2011).

Source:
http://www.scotlandscensus.gov.uk/ods-web/area.html

Crime
The total number of crime and offences recorded by the police in Argyll and Bute in 2012-2013 was 11,073 compared to 11,935 in 2011-2012. The total number of crimes recorded was 3,121 in 2012-2013 compared to 3,821 in 2011-2012 and the total number of offences was 7,952 in 2012-2013 compared to 8,114 in 2011-2012.

Source:
http://www.sns.gov.uk

Health
In 2011 the majority of population in Argyll and Bute reported to be in very good (51.6%) or good health (30.8%). 12.7% of population reported fair health condition, 3.8% in bad health and 1.1% in very bad. (Scotland’s Census 2011).

Source:
http://www.scotlandscensus.gov.uk/ods-web/area.html

Life expectancy, births and deaths registered
Female life expectancy in Argyll and Bute increased to 80.9 in years 2008 – 2010 from 80.4 in years 2007 – 2009. Male life expectancy in Argyll and Bute was 77 years in 2008 – 2010 and also increased compared to 76.5 in years 2007 – 2009.
There were 765 births and 1093 deaths registered in 2012.
6. Domains

Which TESS domains (i.e. energy, food, transport, waste) are predominant in the region, and which have you chosen, and why?

The 5 initiatives that we mapped in this region are active across all domains of food, energy, transport and waste. All initiatives are active across several domains with energy being particularly important. Energy projects include wind, hydro and biomass. The region is mountainous with high rainfall, a good wind regime and extensive forest cover. Opportunities for community owned renewable energy generation projects have opened up in recent years with Scottish Government support for community land buy-outs and support from organisations such as Community Energy Scotland.

Food is also an important domain, with CBI’s working to rebalance local food economies and make locally grown and produced food available locally. In common with Scotland in general, the connection between local food producers and local consumers has been lost, and in Argyll and Bute, farming is dominated by livestock production (and some dairy) with produce sold as a commodity into national markets.

Our key initiative, Colintraive and Glendaruel Development Trust is a very active organisation with a strategic vision. It is well on the way to becoming carbon neutral as a community, and financially self-supporting as an organisation, thanks to community owned wind and hydro projects and having recently acquired a large area of forestry land. It also has active food and waste projects and other projects to create local economic opportunities and livelihoods.


7. Opportunities and Barriers

What are the main opportunities and barriers for initiatives in the region?

There are good opportunities for community led initiatives in Argyll and Bute across all domains, particularly where communities are empowered to take control over local resources. There are good examples of pioneering initiatives within the region that can act as inspiration and sources of learning for others. The region is rich in natural resources with many opportunities for renewable energy generation, delocalisation of food supply and processing, fishing, adding value to local timber etc. In common with the rest of Scotland, the housing stock is generally of poor quality and there is great potential for upgrading housing and reducing energy consumption. The relative remoteness of the region creates opportunities for local self-reliance and encouragement for economic relocalisation.
In common with other areas of Scotland, community led initiatives in Argyll and Bute face many barriers and challenges. These include lack of ownership of, or access to, land and other resources, lack of long-term funding, difficulty in raising finance, shortage of engaged volunteers and of organisational and management skills, lack of supportive policy and physical infrastructure, remote local government etc. There are also particular challenges arising from the scattered population, long distances between settlements and remoteness from the main centres of population.

8. Additional information

Please provide any additional information, which you think is relevant to the region and your characterisation.
Annex C: Helsinki City

Please complete this form with summary qualitative and quantitative description of the region you have mapped for your key and supportive case studies. Provide requested information and fill in the blanks, specifying data sources, and state where information is not available.

Your Details:
Name: Arto Haara, Outi Virkkula
Name of Institution: OUAS
Date completed: 2.9.2014

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Table 1: Summary characteristics. Source: Climate Futures

2. Introduction to the Research Region

The region being investigated is the capital of Finland. It is located in the South coast of Finland. The region is bounded on its south boarder by Baltic Sea and from other directions by cities of Vantaa, Espoo and Sipoo, on which Vantaa and Espoo together with municipality Kauniainen form a Helsinki Metropolitan area. It is characterised by the typical geological features of the southern Finnish coastal areas: there is an abundance of rocky hills partially covered by thin layers of moraine, and there are valleys and flat terrain in which the top soil consists of clay or silt.

Geobotanically Helsinki is situated in an oak zone between the Central European deciduous forest and the northern coniferous forest zones. Helsinki nature displays features of both forest zones. Biodiversity in Helsinki relies on versatile rock and soil formations as well as the city’s situation on the coast. There are about 8,500 hectares of green areas in Helsinki. This is about 40 percent of the Helsinki land area. The main crops are rye, barley, oat, wheat, grass, potato and turnip mustard with other oil plants. It has one bigger river, namely Vantaanjoki, some smaller rivers and ponds, but has a long coast line and a lot of islands in Baltic Sea.

The region is mostly urban, but besides, there are 22% urban forests, 6% fields and meadows and 3% natural protection areas from the total area of Helsinki.
Helsinki has a humid continental climate with severe winters, no dry season, warm summers and strong seasonality (Köppen-Geiger classification: Dfb).

The region is governed by a council-manager government, i.e. it is governed by an elected council, which is legally autonomous and answers only to the voters. The size of the council is proportional to the population, being 85 in City Council of Helsinki. A subsection of the council, the municipal executive board controls the municipal government and monitors the implementation of decisions of the council. Its decisions must be prepared by the council. Unlike national cabinets, its composition is derived from the composition of the council, not along government-opposition lines. Furthermore, individual decisions are prepared in specialized municipal boards for a council meeting; these include e.g. zoning, social assistance, and education boards. The city manager of Helsinki is a civil servant named by the council. The city manager acts as municipal manager and as a speaker of municipal council.

In general, the ethnicity of local people was 91.6% Finnish, 1.8% Estonian, 1.0% Russian, 0.5% Somalia, 0.3% China, 0.2% India, 0.2%, Irak and others 0.8% in 2013.

Population of Helsinki in 2013 by language is 81.9% Finnish, 5.9% Swedish, 2.5% Russian, 1.7% Estonian, 1.2% Somali, 0.8% English, 0.6% Arabian and other and unknown 5.4%. Finnish and Swedish are official languages of Helsinki (and of Finland).

Educational structure of Helsinki on 31st December 2012

% of 15 years old and older with
- Basic education or education unknown 28 %
- Secondary education total 33 %
  - Baccalaureate-level 13 %
  - Vocational secondary 20 %
- Tertiary education total 39 %
  - Lowest tertiary 9 %
  - Lower tertiary 12 %
  - Higher tertiary 16 %
  - Researcher education 2 %

Population growth in Helsinki.

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Population by religious affiliation in 2013.

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<td>200</td>
<td>0.0</td>
</tr>
<tr>
<td>Jewish congregations</td>
<td>629</td>
<td>0.1</td>
</tr>
<tr>
<td>Islamic congregations</td>
<td>4241</td>
<td>0.7</td>
</tr>
<tr>
<td>Other</td>
<td>1071</td>
<td>0.2</td>
</tr>
<tr>
<td>No religious affiliation</td>
<td>219861</td>
<td>36.4</td>
</tr>
</tbody>
</table>

Data sources:
- [http://en.wikipedia.org/wiki/K%C3%B6ppen_climate_classification](http://en.wikipedia.org/wiki/K%C3%B6ppen_climate_classification)
- [http://www.helsinginseutu.fi/hki/hs/The+Region+of+Helsinki/Home_1](http://www.helsinginseutu.fi/hki/hs/The+Region+of+Helsinki/Home_1)

3. Motivation

As a capital city of Finland the population density is high and because of the high level of education in the area there live more people with an orientation towards sustainable development than elsewhere in Finland in general. This can be seen e.g. from the political power relations. Most of the snowball
sampling seeds were located in the north Finland (around Oulu region), but the sampling concentrated towards the Helsinki region in domains Food, Transport and Waste. It turned out that many of the mapped initiatives from other parts of the country were motivated by the examples from the Helsinki region (so called spin-offs). Especially the criteria community baseness and environmental motivation supported initiatives from Helsinki region.

We selected Helsinki region for regional characterisation because 28% of mapped initiatives are located in Helsinki. Next biggest region focus would be Northern Karelia where most of the energy initiatives are located (and were found). As bio-economy and forests in general are typical characteristics of Finland, these energy co-operatives using wood/forests as their energy source is regarded as important from the variety of the initiatives point of view.

*Data sources: ArtoHaara and OutiVirkkula, firstname.surname@oamk.fi*

### 4. Economic indicators

GDP of Helsinki region per capita was 46 517€ in 2010 and total €27,125 million. GNP per capita 2011 (PPS, EU27=100) was 158.5 in Helsinki region and 114.0 in whole Finland. The median income of a private person was 26 300€ in 2012.

Major sources of employment include (2013):
- Human health and social work activities 13.4%
- Wholesale and retail trade; repair of motor vehicles and motorcycles 12.8%
- Professional, scientific and technical activities 9.3 %
- Administrative and support service activities 8.1%
- Information and communication 7.7%
- Education 7.5%
- Transportation and storage 6.2%
- Public administration and defence; compulsory social security 6.0%
- Manufacturing 6.0%
- Accommodation and food service activities 4.5%
- Construction 4.2%
- Financial and insurance activities 3.8%

Unemployment was 10.3 % in 31.3.2014 (10.1 % 31.12.2003, average in 2013: 9.4%).

**Unemployment rate % by gender in 2000-2011**

<table>
<thead>
<tr>
<th>Year</th>
<th>Men</th>
<th>Women</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>9.6</td>
<td>7.1</td>
<td>8.3</td>
</tr>
<tr>
<td>2005</td>
<td>10.8</td>
<td>7.5</td>
<td>9.1</td>
</tr>
<tr>
<td>2009</td>
<td>10.1</td>
<td>6.6</td>
<td>8.4</td>
</tr>
<tr>
<td>2010</td>
<td>9.5</td>
<td>6.3</td>
<td>7.8</td>
</tr>
<tr>
<td>2011</td>
<td>8.9</td>
<td>6.2</td>
<td>7.5</td>
</tr>
</tbody>
</table>

The average annual income was in 2011 32 321€ (men 37654 €, women 27 737 €). There are several reasons for the big gap between men and women. For example, women usually work in professions, like in health care, cleaning,
grocery stores etc., in which salaries are lower than in those in which majority of workers are men. In addition, social security system of Finland permits mothers to take care of their babies at home for long times. And in predominantly female branch of sector employments are often part-time jobs.

Data sources:
- **Statistical Yearbook of Helsinki 2013**

Salary comparison:
- Helsinki vs. Finland

5. Social indicators

Income recipients by income bracket in Helsinki 2011

<table>
<thead>
<tr>
<th>Income bracket, €</th>
<th>Persons</th>
<th>%</th>
<th>Accumulation %</th>
</tr>
</thead>
<tbody>
<tr>
<td>–2,500</td>
<td>29845</td>
<td>5.9</td>
<td>5.9</td>
</tr>
<tr>
<td>2,500–5,000</td>
<td>17398</td>
<td>3.5</td>
<td>9.4</td>
</tr>
<tr>
<td>5,000–10,000</td>
<td>51633</td>
<td>10.3</td>
<td>19.7</td>
</tr>
<tr>
<td>10,000–15,000</td>
<td>52182</td>
<td>10.4</td>
<td>30.1</td>
</tr>
<tr>
<td>15,000–20,000</td>
<td>50128</td>
<td>10.0</td>
<td>40.0</td>
</tr>
<tr>
<td>20,000–25,000</td>
<td>46448</td>
<td>9.2</td>
<td>49.2</td>
</tr>
<tr>
<td>25,000–30,000</td>
<td>48453</td>
<td>9.6</td>
<td>58.8</td>
</tr>
<tr>
<td>30,000–35,000</td>
<td>44402</td>
<td>8.8</td>
<td>67.6</td>
</tr>
<tr>
<td>35,000–40,000</td>
<td>36219</td>
<td>7.2</td>
<td>74.8</td>
</tr>
<tr>
<td>40,000–50,000</td>
<td>48753</td>
<td>9.7</td>
<td>84.5</td>
</tr>
<tr>
<td>50,000–60,000</td>
<td>27501</td>
<td>5.5</td>
<td>90.0</td>
</tr>
<tr>
<td>60,000–80,000</td>
<td>26436</td>
<td>5.3</td>
<td>95.3</td>
</tr>
<tr>
<td>80,000–</td>
<td>23979</td>
<td>4.8</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>503377</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Health care services in Finland are funded mainly with taxes, whereas the right to health care is determined on basis of domicile. Service providers operate both in the public and private sector. Health care services are generally included in the scope of responsibility of the municipalities and they are provided via local health centres. Each municipality has its health centre, although as an exception some minor municipalities can share their resources with a neighbour district. Health centres offer physician, dentist, laboratory and X-ray services. The municipalities own and are in charge of almost all hospitals. Besides, there are a few private and state owned hospitals. The private sector services complement the public ones. Actors of the private sector are, among other, few hospitals, rehabilitation centres and all pharmacies excluding the ones operating within hospitals.
In Helsinki, 46% of the population self-perceived their health good, and 34% quite good, whereas 5% was in bad or very bad heath.

Live birth rate was 11.3 per 1000 persons in 2012.

Life expectancy in Helsinki (2008-2012)
- Total 79.9
- Men 76.5
- Women 82.7

Average age in 2013 was 40.4 years.

Dwellings by type of building 2012:
- Detached houses 7.6%
- Terraced houses 5.5%
- Blocks of flats 85.8
- Other 1.1%

Dwellings by tenure status (2012):
- Owner occupied 44.0%
- Rented 44.7% of which
  - of which arava social housing 20.5 %
  - other rented dwelling 24.2%
- Tenant-owned dwelling status 2.3%
- Other or unknown tenure 9.0%

Average crime offenses known to the police of Helsinki per 1000 citizens in 2009-2012. (Averages of Finland in brackets)

- Crime against property 91.6 (46.1)
- Crime against life and health 11.9 (7.2)
- Sexual offences 0.7 (0.5)
- Crimes against justice, authorities and public order 5.0 (2.6)
- Certain traffic offences 9.2 (9.8)
- Other crimes 19.1 (14.8)

6. Domains

The region is characterised by CBI projects in Food domain. This sector is characterised by small-size Community Support Agriculture (CSA), of which most have been set up by local residents, and management of these is done cooperatively between local residents or local residents and farmers. The products of these initiatives are often organic or biodynamic, too. Nowadays the idea of CSAs is rapidly and spontaneously spreading in Finland as new CSAs are established constantly, and CBIs of Helsinki have acted as stimulators and catalysts of this kind of action. There are a lot of CSAs in Helsinki and in Finland, thus we selected only some of them to be our CBIs since they are very alike in structure.

Another domain selected is waste, because Helsinki Metropolitan Area Reuse Centre has been a pioneer, a root-based actor on recycling in Finland, and its success story has generated similar centres elsewhere in Finland. Its' operation is very professional, e.g. year reports, openness, providing data for CO2/greenhouse gas accounting, and yet underlining that the profit made will be utilised entirely to the Centre’s benefit.

7. Opportunities and Barriers

What are the main opportunities and barriers for the region?

The main opportunities for community-led initiatives in the region are:

- Amount of population. The metropolitan region covers around 1, 4 million residents, providing a good starting point for all kinds of initiatives to occur and prompt as spin-offs.
- Positive attitudes among the majority of the population. In metropolitan area people have become accustomed to live close(r) to one another consisting e.g. of various cultures, languages and minorities. In fact, multiculturalism and density are known beneficial for innovative city regions, such as cities of Helsinki, Vantaa and Espoo together establish.
- High educational level. Typical for the metropolitan area is also the fact that is lures well educated people to move from elsewhere, since it has more jobs and opportunities to offer (economic zone of 740 000 employments). The current migration trend in Finland is that big cities grow while the countryside loses. High education level does not necessarily mean a boost or a necessity for a CBI to arise, but it has been found beneficial for various third sector activities.
- Short distances to the countryside. The metropolitan region is actually a huge green belt. Only the very core of the city centre is straight urban. The closeness of the green space, countryside and nature provides a richer bedrock for livelihood, recreational use, and also for CBIs to emerge.

- Short distances within Helsinki. Characteristic to the metropolitan area is easy access to services, people and goods. Well organised public transport (underground, tram, bus, train) enables effortless mobility even to the margin zones of the regions, where e.g. food and energy co-operatives and urban farming could operate.
- positive economic development capacity

The main barriers to prevent take up of these community-led initiatives are
- High level of officials’ action (i.e. bureaucracy) could perform a barrier to a CBI to evolve and grow. Depending on the context and scope not all CBIs see their form of activity well recognized by the city/municipal officials, which means weaker funding programmes or support. For some CBIs all goes well, if it is based purely on voluntary work and is interfaced with the location of the activity. E.g. to set up a pop-up shop for instance to a city centre requires same licenses and authorization as a standard business.
- Planning regulations are very strict in Finland, and in most cases slow down the establishment of a CBI. Particularly this applies to those CBIs wishes to use the land for a new purpose.
- High turnover rate of members in CSAs can cause unsteadiness and therefore challenges to keep the initiative alive, let alone develop the operations. High turnover could also lead to personification of matters, which eventually follows as uneven division of resources contributed to the initiative making the initiative more vulnerable.


8. Additional information
Annex D: Berlin inner-city

Please complete this form with summary qualitative and quantitative description of the region you have mapped for your key and supportive case studies. Provide requested information and fill in the blanks, specifying data sources, and state where information is not available.

Your Details:
Name: Theresa Rauch/Dominik Reusser/ Helge Groß
Name of Institution: Potsdam Institute for Climate Impact Research (PIK)
Date completed: 31.07.2014

1. Summary Characteristics

<table>
<thead>
<tr>
<th>Name of research region</th>
<th>Berlin innercity: Kreuzberg, Prenzlauer Berg, Friedrichshain, Mitte</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUTS 2 Level</td>
<td>DE30</td>
</tr>
<tr>
<td>Is your Research Region the same as NUTS 2 region?</td>
<td>N</td>
</tr>
<tr>
<td>Population</td>
<td>2013: 513.386</td>
</tr>
<tr>
<td>Area</td>
<td>41,88 km²</td>
</tr>
<tr>
<td>Number of initiatives</td>
<td>26</td>
</tr>
</tbody>
</table>

Table 1: Summary characteristics. Source: Climate Futures

Map of the city of Berlin. The blue area is the case study region selected.
2. Introduction to the Research Region

What characterises the area in terms of geography, climate, urban/rural, government, languages (please fill in where capitals are shown)

Location
The study region is located in the inner city of Berlin, Germany’s capital in the north-eastern part of the country. It is surrounded by the districts Wedding, Moabit, TiergartenSchöneberg, Tempelhof, Neukölln, Lichtenberg, Weißensee, Pankow which compose an urban surrounding. The area therefore is 100% urban.

Climate
The climate is temperate with mean annual temperatures around 10°C and mean annual precipitation ranging from 500 to 600 mm.

Governance
The governance structure of the study region comprises the local district level on the one hand and the city's senate on the other. Currently the district of Friedrichshain-Kreuzberg is governed by a mayor of the green party, the district of Mitte is governed by a mayor of the social democrats as well as the district of Prenzlauer Berg.

Population
With 513.000 inhabitants, the study region makes up about 15% of Berlin’s population. Due to the central location, the population density of around 14 per km² is significantly above the mean average of the city.

<table>
<thead>
<tr>
<th>Age</th>
<th>Percentage of the population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 18</td>
<td>15,3%</td>
</tr>
<tr>
<td>18-30</td>
<td>22,3 %</td>
</tr>
<tr>
<td>30-50</td>
<td>38,6 %</td>
</tr>
<tr>
<td>50-65</td>
<td>13,7%</td>
</tr>
<tr>
<td>65 and older</td>
<td>10,2%</td>
</tr>
</tbody>
</table>


Between 2003 and 2013, the city of Berlin recorded a very slight overall increase in the number of inhabitants of about 0.8%, while the recent past shows a strong incline with 47.800 newly arrived inhabitants in 2013.

A total of 21% of inhabitants in the research region has a migratory background. In Berlin as total, the largest fraction of immigrants is Turkish (101.975), followed by Polish with 44.838 people. Migratory
background from Italy, Serbia, the Russian Federation, Bulgaria, France, USA, Vietnam and Great Britain including Northern Ireland is represented by numbers between 18.261 to 10.911 people, in decreasing order. A total of 486709 immigrants from 84 countries were registered (status as of June 2012).

Languages

German is the official language.

Data sources:

- [http://www.dwd.de](http://www.dwd.de)
- [https://www.berlin.de/rbmskzl/rbm/rdb/](https://www.berlin.de/rbmskzl/rbm/rdb/)
- [https://www.statistik-berlin-brandenburg.de/Publikationen/OTab/2013/OT_A08_02_00_192_201301_BE.pdf](https://www.statistik-berlin-brandenburg.de/Publikationen/OTab/2013/OT_A08_02_00_192_201301_BE.pdf)
- [http://www.berlin.de/lb/intmig/statistik/demografie/einwohner_staatangehoerigkeit.html](http://www.berlin.de/lb/intmig/statistik/demografie/einwohner_staatangehoerigkeit.html)

3. Motivation

The City of Berlin has experienced a strong change since the fall of the Berlin wall in 1989. The region of interest comprises both former parts of the GDR and FRG and is therefore a good representative of the city's history. A large number of local initiatives have evolved in this socio-cultural hotspot. The initiatives cover all domains and offer a broad scenario of the whole panorama of initiatives active in Berlin. The districts in the study area have a large history of alternative movements such as the squatter-movement in the 1980s. Even though the income and population structure is changing recently, the districts in the study area are still home to many students and artists and are considered to be one of the creative centres of the city.

Data sources:

- [https://www.berlin.de/rbmskzl/rbm/rdb/](https://www.berlin.de/rbmskzl/rbm/rdb/)

4. Economic indicators

Economic indicators for the study region are hard to find, because official statistics always consider the whole city of Berlin. Berlin’s GDP amounts to 15,55 billion euro (2013).
Due to the urban characteristics, no natural resources are exploited. The service sector provides the largest numbers of employees. Unemployment (Berlin total) is high with 203,929 people without work in July 2014 equalling to 11.7% of members of the working population (2013), but due to the current economic growth in Germany, unemployment is decreasing.

### Employees divided by sectors (2010)

<table>
<thead>
<tr>
<th>Sector</th>
<th>Employees in %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public or private service</td>
<td>40.4</td>
</tr>
<tr>
<td>Real estate, renting and service provision for companies</td>
<td>21.3</td>
</tr>
<tr>
<td>Credit- and insurance</td>
<td>2.2</td>
</tr>
<tr>
<td>transport</td>
<td>5.4</td>
</tr>
<tr>
<td>Hotel and restaurant industry</td>
<td>6.0</td>
</tr>
<tr>
<td>commerce</td>
<td>11.7</td>
</tr>
<tr>
<td>construction</td>
<td>4.4</td>
</tr>
<tr>
<td>Industry and manufacturing (without construction)</td>
<td>8.3</td>
</tr>
<tr>
<td>Agriculture and forestry</td>
<td>0.3</td>
</tr>
</tbody>
</table>


### Data sources:
- [https://www.statistik-berlin-brandenburg.de/](https://www.statistik-berlin-brandenburg.de/)
- [https://www.statistik-berlin-](https://www.statistik-berlin-)

### Income in Berlin

Average monthly gross income amounted to 3,321 € in 2013.

### Health

81 hospitals coincide with 3.5 million inhabitants. 75% of inhabitants in Germany perceive their health status as “very good” or “good”, while no specific data was found for the study area or Berlin as total. Life expectancy at birth in Berlin is 77.60 (males) and 82.55 (females) while life expectancy at the age of 60 is 21.36 (males) and 24.78 (females). In 2011, 9.51 newborn babies were recorded per 1000 inhabitants.

### Households

In the study area, around 60% of households are inhabited by 1 person, 23% are inhabited by 2 persons and 17% are inhabited by 3 or more
persons. Of inhabited housing units, 14.9% are homestead while 85.1% are rented. The average living space is 41.4 m².

**Voting behaviour in the districts:**

<table>
<thead>
<tr>
<th>District</th>
<th>General election 2013</th>
<th>General election 2009</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Votes</td>
<td>Votes</td>
</tr>
<tr>
<td></td>
<td>number %</td>
<td>number %</td>
</tr>
<tr>
<td>Friedrichshain-Kreuzberg</td>
<td>226.240</td>
<td>222.647</td>
</tr>
<tr>
<td>Eligible voters</td>
<td>168.048</td>
<td>160.861</td>
</tr>
<tr>
<td>Voter turnout</td>
<td>74.3</td>
<td>72.2</td>
</tr>
<tr>
<td>Mitte</td>
<td>Votes</td>
<td>Votes</td>
</tr>
<tr>
<td></td>
<td>number %</td>
<td>number %</td>
</tr>
<tr>
<td>Eligible voters</td>
<td>204.085</td>
<td>197.252</td>
</tr>
<tr>
<td>Voters</td>
<td>141.574</td>
<td>133.355</td>
</tr>
<tr>
<td>Voter turnout</td>
<td>69.4</td>
<td>67.6</td>
</tr>
</tbody>
</table>

Voter turnout is high in the study region. The majority of voters in Friedrichshain-Kreuzberg are voting the German Green Party (39.9% in the 2013 general election), making it the only district with a green direct mandate for Bundestag in Germany. The newly founded Pirates-Party also found quite some followers in the district (9.6%), significantly above the German average.

**Data sources:**

[brandenburg.de/gender/kapitel2012/einkom_1.htm](http://brandenburg.de/gender/kapitel2012/einkom_1.htm)

[https://www.regionalstatistik.de/genesis/online;jsessionid=7920C7F4D5AC14EFD7BE26A9A18AC89D?Menu=Willkommen](https://www.regionalstatistik.de/genesis/online;jsessionid=7920C7F4D5AC14EFD7BE26A9A18AC89D?Menu=Willkommen)

[https://www.wahlen-berlin.de/wahlen/BU2013/Ergebnis/ergebwk83.asp?sel1=2155&sel2=0655](https://www.wahlen-berlin.de/wahlen/BU2013/Ergebnis/ergebwk83.asp?sel1=2155&sel2=0655)

[http://edoc.rki.de/documents/rki_fv/reIXEvoVYRBk/PDF/29CTdE8YupMbw75.pdf](http://edoc.rki.de/documents/rki_fv/reIXEvoVYRBk/PDF/29CTdE8YupMbw75.pdf)

[https://www.statistik-berlin-brandenburg.de/Publikationen/Stat_Berichte/2012/SB_F01-02-00_2010j04_BE.pdf](https://www.statistik-berlin-brandenburg.de/Publikationen/Stat_Berichte/2012/SB_F01-02-00_2010j04_BE.pdf)

[https://www.destatis.de/DE/ZahlenFakten/GesellschaftStaat/Bevoelkerung/Tabellen/LebenserwartungBundeslaenderWeiblich.html](https://www.destatis.de/DE/ZahlenFakten/GesellschaftStaat/Bevoelkerung/Tabellen/LebenserwartungBundeslaenderWeiblich.html)

- 97 -
**Religion**

In the district of Friedrichshain-Kreuzberg the population is affiliated to the following religions (2011):

<table>
<thead>
<tr>
<th>Religion</th>
<th>Affiliation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roman Catholic Church</td>
<td>9.9%</td>
</tr>
<tr>
<td>Protestant church</td>
<td>17.2%</td>
</tr>
<tr>
<td>Orthodox church</td>
<td>1.5%</td>
</tr>
<tr>
<td>Jewish communities</td>
<td>0.5%</td>
</tr>
<tr>
<td>other</td>
<td>4.5%</td>
</tr>
<tr>
<td>No religion</td>
<td>65.9%</td>
</tr>
</tbody>
</table>


**6. Domains**

PIK has identified 26 initiatives in the case study region. Amongst these initiatives 5 are active in the area of energy, 12 are active in the area of food, 9 are active in the area of transport and 13 are active in the area of waste. Initiatives may be active in more than one area.

The domain of waste is dominated by activities on upcycling of materials and repairing and reusing of goods. Recycling is generally not a topic for community based initiatives because recycling rates are high already in Germany and there exists a very widespread and accessible recycling system which entails collection stations for scrap metal or old furniture or broken electronic devices as well as containers for waste separation in (almost) every household. The study area as a major city with high density population poses special requirements to the disposal, recycling and reuse of goods which may therefore enhance local awareness towards the waste sector.

In the domain of food, a large number of initiatives is about urban and community gardening. Some are concerned with food supply from more sustainable and local sources. Avoiding food waste and changing dietary habits is also addressed by some initiatives. A trend towards local and organic food had been observed in the study area and several initiatives, e.g. of the csa-type promote alternatives to the classical pathways of commercialisation.

In the domain of transport, initiatives are concerned with sharing cars and shifting the mode of transportation to bicycles. For example initiatives help with constructing bikes for transporting goods or offering. Together with the energy sector, moving towards
sustainability in the transport sector has received much attention in public climate related debates in Germany.

In the domain of energy, there are two main activities to observe. On the one hand, initiatives raise the awareness for higher energy efficiency, mainly in the domestic sector. Others try to support the shift in the German energy system towards sustainable energy supply through attempting to make the energy grid for the city community-owned and by informing people about purely sustainable energy suppliers. Although comparably few initiatives in the study region have been found that operate in the energy-domain, the topic receives widespread political and public attention. In 2013 there was a strong community based movement towards the communalization of electricity in Berlin (http://www.energie-in-buergerhand.de/).

7. Opportunities and Barriers

What are the main opportunities and barriers for initiatives in the region?

The main opportunities for community-led initiatives in the region are a thriving environment in the young, dynamic and creative melting-pot of the city of Berlin, where ideas spread quickly and are shared among people. There is a long history of young adults moving to the city who make use and nurture the existing (social) infrastructure for sustainability innovations. The three universities in the area of Berlin attract a high number of well-educated young people with a relatively high flexibility in their time invested in various activities. The topic of urban agriculture and urban gardening has attracted a lot of interest recently, and in the urban context of the region, this is of great interest. Also upcycling and reuse reflect the creative culture of the post-wall city Berlin.

The renewable energies act (Erneuerbare-Energien-Gesetz - EEG) subsidizes the feed-in of renewable energy, passing the costs to consumers. This creates favourable conditions for the promotion of renewables while also fuelling a controversial public debate.

A high number of electricity providers (more than 1000) is existing, while 5 major companies control 80% of the market. Pass through costs have decreased by more than 20% since 2006 and amount to about 25% of the total electricity costs. Still, with 12.4% of the gross energy consumption, renewable energy in Germany ranges in the lower part of the middle range of EU countries. 50% of the renewable energy generated is citizen owned. Also, about one fourth of the population lives in regions with 100% renewable energy.

Therefore, diversity and competition on the energy market as well as the renewable energies act create favourable conditions for the generation of renewable energy. An ongoing political debate on developing network capacity required for the promotion of renewable energy can be noted, while the outcome is not yet identifiable.

Germany plays a pioneer role in the development of renewable energy techniques, producing high profits. This may facilitate the access to and
application of technologies and know-how from the perspective of initiatives in the energy sector.

The main barriers to prevent take up of energy related community-led initiatives may be a partially critical attitude of citizens towards the renewable energies act due to higher costs and conflictive interests of energy producers. With the high density and the fairly advanced public transport system in Berlin, mobility needs can generally be met without a car. Still, partially high traffic in the city creates a need for alternative modes of transportation.

A potential barrier for initiatives operating in the food domain is the relatively low willingness to spend money on food in Germany. However, a high density of small grocery stores offering local and organic food and a significant number of participants in community supported agriculture represents a high potential for food related initiatives.

Although not in other districts of Berlin, in the study area there prevails a relatively high willingness for the sharing of used goods and it is common practice to leave used goods like furniture on the streets which may pose opportunities to initiatives in the waste sector.

Data sources: Please state where possible

Energy:
https://de.wikipedia.org/wiki/Elektrizit%C3%A4tsversorgungsunternehmen
https://de.wikipedia.org/wiki/Netznutzungsentgelt
https://www.bundesnetzagentur.de/SharedDocs/Downloads/DE/Allgemeines/Bundesnetzagentur/Publikationen/MarktWettbewerb/Brosch%C3%BCreMarktWettbewerbEnergieKennzahlen2010pdf.pdf?__blob=publicationFile&v=2
https://en.wikipedia.org/wiki/Renewable_energy_in_Germany

Food:
http://www.vox.com/2014/7/6/5874499/map-heres-how-much-every-country-spends-on-food

8. Additional information

Please provide any additional information, which you think is relevant to the region and your characterisation.
Annex E: Catalonia

Please complete this form with summary qualitative and quantitative description of the region you have mapped for your key and supportive case studies. Provide requested information and fill in the blanks, specifying data sources, and state where information is not available.

Your Details:
Name: Filka Sekulova
Name of Institution: UAB
Date completed: 16/07/14
Date updated: 07/08/2014

1. Summary Characteristics

<table>
<thead>
<tr>
<th>Name of research region</th>
<th>Catalonia</th>
<th>Sources</th>
</tr>
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<tbody>
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<td>Is your Research Region the same as NUTS 2 region?</td>
<td>Yes</td>
<td></td>
</tr>
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<td>Number of initiatives</td>
<td>104 initiatives were collected in total, 70% of which are located in Barcelona province and the remaining 30% in Catalonia. The information below is representative for Catalonia, with Barcelona being a subset of the data.</td>
<td></td>
</tr>
</tbody>
</table>

Table 1: Summary characteristics. Source: Climate Futures

2. Introduction to the Research Region

What characterises the area in terms of geography, climate, urban/rural, government, languages (please fill in where capitals are shown)

Geography

The investigated region consists of Barcelona province and its conjunct territories (the provinces of Girona and Tarragona), located in North-East Spain. The region is bounded by the mountain of the Pyrenees to the North, and the Mediterranean Sea to the West. The biggest rivers passing through the territory of Catalonia are Ter, Llobregat, and Ebro. The river of Llobregat and Besos bound
metropolitan Barcelona on the South and North sides, providing fertile land for agriculture in close vicinity to the city. The rivers also restrict the further growth of city. Barcelona is also situated between the mountain of Collserola to the East and the Mediterranean Sea to the west. The landscape of Catalonia is diverse, with large fractions of forested areas and many mountains. The Mediterranean coast in the west consists of sandy beaches and rocky cliffs and is highly urbanized because of the rapid expansion of the tourist industry (along the Costa Brava, for example, with mass tourism resorts such as Blanes or Lloret de Mar).

**Climate**

The region has a Mediterranean csa climate following the Koppen climate classification.

**Settlement and production**

Barcelona is the capital of Catalonia, consisting of four main provinces: Barcelona, Girona, Tarragona and Lleida. About 95% of the population live in settlements larger than 2000 inhabitants, and is therefore considered urban (as of 2012). About 67% of the population of Catalonia is concentrated in Barcelona metropolitan area.

**Population**

The total population of Catalonia is 7.5 million as of 2014 (or 16% of the overall Spanish population), and its population growth over the last year has been 3.4 thousand per million. The growth rate of the population has been estimated at 1.9 % in 2012, with a visible decline in the trend over the last years. Migration has made a particular impact on the metropolitan area of Barcelona, which has a population of nearly five million people. Catalonia has a population density of 235 people per km2 and for Barcelona province density is 717 people per km2 which is highest among all provinces (as of 2013). Density in Barcelona metropolitan area goes up to 15 366 inhabitants per km2 (for the same year).

**Governance**

The region of Catalonia has its own public administration and government (with ministries and general secretary elected every four years). Taxation and legislation is, however, administered by the Spanish State. According to Spanish official statistics 85% of the population is of Spanish origin, 4% of the rest of EU, 0.8% is of non-EU Europe, 4.2% is with African origin, 1% is from Central and North America, and 3.5% - from Latin America (as of 2013). Since approximately 2008 and the start of the economic crisis, Catalonia has seen the rise of a nationalist movement claiming the independence of Catalonia. Statistics on the number of people favouring the independence of Catalonia range between 52% (from
pro-independence Catalan sources) to 33.7% (from more conservative sources).

**Languages**

Catalan and Spanish are the two official languages of Catalonia. Both the local government and public institutions use Catalan as the main language. Spanish language is used for communication with Spanish public institutions. The majority of public schools are Catalan-speaking with Spanish only being officially introduced in first grade. As of 2013, 35.6% of the population habitually spoke Spanish, 46% - Catalan and 12% used either languages habitually. Arab is spoken by 1.88% of the population and Aranese by 0.03% of the population. The use of Catalan language is actively promoted. Foreigners are provided free courses via publicly supported social centers. While in metropolitan area of Barcelona, only 27.77% of the population speaks Catalan habitually, statistics show that 93% understand it perfectly.

**Data sources:**

http://www.gencat.cat/catalunya/eng
http://www.idescat.cat/pub/?id=aec&n=245&lang=es
http://www.gencat.cat/catalunya/cas/coneixer-poblacio.htm
http://www.idescat.cat/pub/?id=aec&n=249&lang=es
http://www.gencat.cat/generalitat/eng/guia/estructura.htm
http://www.gencat.cat/generalitat/eng/guia/estructura.htm
http://www.idescat.cat/pub/?id=aec&n=258&lang=es
http://www.idescat.cat/dequavi/?TC=444&V0=15&V1=2&VA=2008&VOK=Confirmar

**3. Motivation**

Firstly, ICTA/UAB is based in Barcelona is very well connected with the world of alternative and local community practices that promote more sustainable behaviours. Secondly, as visible above, the Barcelona province clusters the majority of the population of Catalonia, giving rise to a wide diversity of initiatives, cultures and opportunities for non-market exchanges. Thirdly, and probably most importantly, social movements in Barcelona province have a long history, dating already from the 70s and earlier. Social mobilization has created an accumulation of experiences and practices which have gradually grown in various forms of grass-root organizing and
resulted in formation of numerous work- and food cooperatives that directly connect consumers to nearby producers and often promote low-impact or organic agriculture. The region also features an extensive squat scene and community organization towards the Right to Housing and a long tradition of social centres around which neighbourhoods have been thriving. Collaborative practices and cooperation, such as collective management of scarce waters and energy cooperatives, are also strong. The combination of historical knowledge and experience with the recent surge in social mobilization around the Indignados movement has resulted in new forms of organization and new community-based structures (for exchange of services, or production of goods) which are not only environmentally sound but also socially appealing in terms of resulting in higher social capital. In sum the region offers a lot of material for historical analysis, as well as in terms of diversity of social organizing.

4. Economic indicators

**Macroeconomic indicators and main economic sectors**
The GDP of Catalonia as of 2013 was 192.545 million € (26.666 thousand € per capita). This is higher than the average for Spain (22.300 € per capita). For the Barcelona metropolitan area, the household income is estimated at 38 500 € per capita.

About 64.8% of the economic value for 2013 came from services (trade, tourism, finances) and 1.18% from agriculture. Furthermore oil refining, chemical and pharmaceutics products are the sector with highest volume of sales, making a total of 26.8%, followed by food, beverages and tobacco with 20.95% (for 2012).

Today, the main agriculture sectors are crops and livestock, making respectively 35.9 and 61.5% of the sector economic value (for 2013). The main crops in terms of volumes of sales are fresh fruit (apples, peaches, nectarines, vegetables and fodder) as well as plants and flowers. In terms of land use, olive plantations take about 12.7% of the total area used for agriculture, and fruit trees – 12.6%. 46.7% of the agriculture land is used for cereals (2013 data).

**Employment distribution and unemployment rates**

About 74% of the working population are employed in the services sector, while agriculture occupies a mere 1.5%. The remaining part of the working population is distributed among construction sector (5.8%) and industry sector (18.5%) (data as of 2014). Work is primary concentrated in the Barcelona province, making 73.4% of the employment location for Catalan work force for 2013.

Since the beginning of the economic crisis, Spain and Catalonia have been characterized by very high rates of unemployment for people in the age bracket 16-25, which for 2013 was 50.2 % (in Catalonia). With shrinking employment possibilities, priority for new job entrants have mostly been given to senior individuals with a certain level of
working experience. This has resulted in many young people starting alternative non-market initiatives, often communally organized (food cooperatives, ecological gardens and villages), swap markets, and time banks. There is also a growing trend of younger people returning to the land.
In 2013, the unemployment rate for Catalonia was 23%. This is somewhat lower than the average for Spain (26.1%). Unemployment among women in Catalonia is 22.4%, while for men it is slightly higher (23.8%).

Data sources:
http://www.datosmacro.com/pib/espana-comunidades-autonomas/cataluna
http://www.datosmacro.com/pib/espana
http://www.idescat.cat/dev/api/emex/giny/indicadors/?id=080193
http://www.idescat.cat/pub/?id=aec&n=354&lang=es
http://www.idescat.cat/pub/?id=aec&n=414&lang=en
http://www.idescat.cat/pub/?id=aec&n=306&lang=en
http://www.idescat.cat/pub/?id=aec&n=945&lang=en

5. Social indicators

Income distribution
The income distribution for Catalonia as of 2012 is shown below. The vertical axis represents the percentages of the population and the horizontal axis the respective income bracket.

Income vs. Spain
http://www.idescat.cat/pub/?id=aec&n=414&lang=en

**Ethnic background**
A little more than 60% of the Catalans were born in Catalonia, approximately 20% were born in other communities in Spain and approximately 15% are of foreign origin. From these 40% are from South America, 20.9 from the rest of the EU, and 21.9 from Africa.

**Religion**
The population is mostly Catholic, with highest concentration of Islam, Buddhist and Hindus religious centres of worship being in Barcelona, where ethnic diversity is highest among the rest of the municipalities in Catalonia.

**Age**
The age structure of the population (as of 2012) is as follows: 20.5% are below the age of 20, 27.1% - between 20 and 39, 29.11 - between the age of 40 and 59, 17.6% between the age of 60 and 70 and 5.71% above 80.

**Life-expectancy and population growth**
Life expectancy for men is 79 years, while for women it is 85 years (as of 2012). In 2012 10.3 babies are born per 1000 inhabitants. The population of Catalonia, estimated on December 31, 2012, was 7,478,968. The total annual population growth was −4.9%, as a result of the combination of natural growth of 1.9% and negative migratory growth of −6.8%. Many Latin American and African immigrants have started returning to their country of origin. Statistical offices also note a 6.8% decrease in immigration in 2012.

**Health**
As of 2010, 51.9% of the population was in good health (as defined by statistical offices), 23.4% was in very good health, about 5.7% had health problems and 2.2% suffered from severe health problems.

**Housing**
As of 2011 a total 73% of total housing stock was owned, and 20% - rented out. For the same year 76.2% of the houses were for primary residence, 12.2 - secondary residence and 11.6 - empty. Furthermore, in 2011, 21 % of the households were on-person, 22% were made of couples without children, 41% of couples with children, 9.5% of a single mother or father, 4% of groups of friends and 2% of more than one family.
Crime

A total of 531,195 crimes and legal offences were reported in Catalonia in 2011. As of 2013 Catalan statistical office reported 22,661 court cases, which makes 19.5% of all Spanish crimes. Among all Catalan provinces Barcelona is the one with the highest rate of crimes (6360 penalties) out of 8226 for the entire region in 2013.

Data sources:

http://www.gencat.cat/catalunya/eng/coneixer-poblacio.htm
http://www.idescat.cat/pub/?id=aec&n=936&lang=en
http://www.idescat.cat/emex/?id=080193&lang=en#hf80000
http://www.idescat.cat/dequavi/Dequavi?TC=444&V0=7&V1=4
http://www.idescat.cat/pub/?id=aec&n=879&lang=en
http://www.idescat.cat/pub/?id=aec&n=880

6. Domains

Which TESS domains (i.e. energy, food, transport, waste) are predominant in the region, and which have you chosen, and why?

The region is characterised by a large number of community initiatives in the domain of food, about 80% of the selected sample are exclusively engaged with it, or have activities related to it. This can be explained by the search for autonomy and self-sufficiency among the social movements from the 90s, as well as by the relatively high price of certified organic produce sold in mainstream market chains. Furthermore, projects have emerged in areas where conventional agriculture workers were willing to sell or cease their land at low price upon retirement or as a way to offset other expenses, which makes access to land easier for environmentally minded citizens. As the cooperative movement has been traditionally strong in Catalonia, food cooperatives emerged firstly as a mechanism to restore social relations and neighbourhood cohesion. Urban gardens are also becoming increasingly popular as a social integration and educational tool, especially after the economic crisis.
Moreover, while the mainstream agriculture sector in Catalonia is characterised by high level of mechanization, and low level of employment, the alternative, small-scale, organic farms is a large provider of employment. While a 3 hectare organic vegetable farm needs about 10 people full time and 10 more helping sporadically or on voluntary basis, the same size field, cultivated mechanically requires 2 employees (a report from an organic vegetables producer in Maresma, Barcelona). In sum organic farms are highly labour-intensive, and low in energy intensity (use of fossil fuels is relatively low in terms of pesticides, transport, and mechanisation).

Barcelona is furthermore known as the city with the highest rate of self-managed food cooperatives, some of which have existed over the last fifteen years. Their history offers a rich material for studying the factors of success of community initiatives over a long time period.

Another factor which created a surge in community-based initiatives in the food domain was the economic crisis starting in 2008-09, accompanied by a high rate of youth unemployment. Social movement experience over the last twenty years, coupled with the motivation for a social change (or transition) and the availability of free time as well as existence of abandoned spaces, houses and land resulted in increasing number of food initiatives. The domain is finally considered closest to humans and human nature and a vital part of life by activists (see Conill, J., Castells, M., Cardenas, A., Servon, L., (2012). Beyond the Crisis: The Emergence of Alternative Economic Practices. In: M. Castells, J. Caraça, and G. Cardoso, eds. 2012. Aftermath: The Cultures of the Economic Crisis. Oxford: Oxford University Press. Ch.9)

A fewer number of initiatives have been found in the domains of transport and even fewer in the domains of energy and waste. In the transportation domain, quite a few initiatives are meant to help urban residents in the Barcelona metropolitan area reduce the use of private cars by offering car rental between residents by hour, day, or week and by making the use of bicycling more attractive and widespread as a commuting option – through, for example, the collection, repair, and resale of second hand bicycles. That said, many initiatives are advocacy and education based. The car rental initiatives are in general businesses without a community-based management and community revenue sharing system. In the waste domain, there is a number of initiatives that are second-hand markets and promote the re-use of clothes and household items. In the energy domain, there are only a few initiatives, but some of them are very visible and have a widespread environmental impact, such as the alternative energy coop Som Energia.

7. Opportunities and Barriers
What are the main opportunities and barriers for initiatives in the region?

The main opportunities for community-led initiatives in the region are something which TESS is expected to study under WP3 in terms of success factors. One of them is the history of social movements and cooperation, and the mounting experience with various cooperative projects such as social centres in big cities or community-managed rural houses. Increasing demand for local and organic food is certainly one condition for the growth of the initiatives in the sector. Another is the economic crisis and the decrease in opportunities for formal employment, coupled with the increasing search for “meaningful work”.

Some of the barriers to the growth, establishment and replication of community-led initiatives can be defined as the distribution of land property, land tenure, competition with industrialized farms offering lower/more competitive prices, the new Spanish law on alternative sources of energy which places a prohibitive tax on solar and wind electricity production.

Another barrier, this time related to the very nature of initiatives’ governing structure, is the overwhelming burden of work for the individuals leading the projects. While initiatives tend to start with a wide group of volunteers, teams quickly boil down to a few committed individuals who often burn out after dedicating an extraordinary number of hours to the project, be it voluntary or not. Projects often emerge and die quickly, transforming themselves in new ones and replicating some of their initial elements, depending on the administrative and political framework.

8. Additional information

Please provide any additional information, which you think is relevant to the region and your characterisation.
Annex F: Metropolitan Rome

Please complete this form with summary qualitative and quantitative description of the region you have mapped for your key and supportive case studies. Provide requested information and fill in the blanks, specifying data sources, and state where information is not available.

Your Details:
Name: Federico Martellozzo
Name of Institution: Sapienza
Date completed: 2014/07/

1. Summary characteristics

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<th>Sources</th>
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<td>Number of initiatives</td>
<td>Potential TESS CBIs: 45, Interviewed: 47, Total Mapped (including &quot;snowballing&quot;): 141</td>
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</tbody>
</table>

Table 1: Summary characteristics. Source: Climate Futures

2. Introduction to the Research Region

What characterises the area in terms of geography, climate, urban/rural, government, languages (please fill in where capitals are shown)

The region being investigated is located in central Italy, belongs to the Lazio region and it is centered on the city of Rome; it surrounds the enclave of the Vatican City, while an exclave of roughly 10 Km² on the Bracciano Lake also belong to its territory. Its official name is “Comune di Roma Capitale” (Municipality of Capital Rome). It stretches west to the coast on the Tirranean Sea (facing south-west); southward is bounded by Pomezia and south-east by the hilly fertile and former-volcanic region of the “Castelli Romani” (literally Castles of Rome). On the east side it is surrounded by the pre-Appenine hills around Tivoli.

Its landscape features few hills within which the city of Rome was founded, the rest of the territory is somewhat a mix of dense urban areas followed by a substantial part of agriculture and few highlands and volcanic lakes. The city of Rome contains many open green areas characterized by the presence of cluster and stone pines. Vegetated open wild areas outside the city of Rome are mainly covered by maquis shrubland. Circa 51 thousands Km² are devoted to agriculture.
use, the most of which are are pastures, there is also a substantial presence of olive trees and viticulture. The city of Rome is crossed by the Tiber River, while north of the main urban core also the Aniene River passes through it. The municipality of Roma Capitale is very particular, in fact in spite of hosting the capital of Italy – the fourth most populous city in the European Union – which is a highly-dense populated urban area, it hosts also many agricultural and open areas.

The main and only city of the region is Rome. Its climate is “Mediterranean”. The region is administered by the Comune of Roma Capitale. Local population is mostly Italian, only about one tenth of total residents was represented by foreigners in 2013.

Data sources:
National Institute of Statistics
Geographic Military Institute
Ministry of Agricultural Food and Forestry Policies

3. Motivation

Tell us about the motivation, which led you to select this particular region (for example is it known for its sustainable communities, fertility, wind resource etc).

We selected this region because of its’ capital status and political importance. In recent years the area has shown growth in social movements (i.e. SPG) compared to other parts of Italy.

Recently the Municipality of Rome has shown a renewed interest in the implementation of sustainable practices, hence the public administration is now ready to grasp, adopt, foster, and promote particularly sustainable community initiatives. Furthermore, the City is home to 3 large Public Universities which offer a great platform for research and development on these topics.

Moreover, Roma Capitale is the most populated municipality in Italy and the second most densely populated in Regione Lazio (hierarchically overordinated NUTS2 level) (2,882,250 in 2014 with 2,053.1 people/kmq). It is also the largest municipality in Italy and one of the largest in municipalities in Europe (1,285.30 kmq).

Data sources: Eurostat, CorineLCC
4. Economic indicators

Describe the economy of the region.

The Region where Rome is located is a major EU international financial, cultural and business centre. The GDP of the region (hierarchically overodinated, NUTS 3 level) was 100 Bl Euro in 2003, while the GDP per capita in the municipality of Rome was ~ 26,000 euro in 2009. It occupies the second place in Italian ranking and contributes to the Italian GDP a little less than 7%. Rome, as a city, hosts the main international airport hub in Italy, besides, most of national and many international companies set their head offices within the municipality limits.

Several global political and cultural organizations have their head quarters in Rome, for example: the Food and Agriculture Organization of the United Nations (FAO), the International Fund for Agricultural Development (IFAD), the World Food Programme (WFT), and the NATO Defence College. Rome is currently a beta+ world city, along with other metropolis such as Berlin and Montreal.

Although the economy of Rome is characterized by the absence of heavy industry and it is largely dominated by services, high-technology companies (IT, aerospace, defence, telecommunications), research, construction and commercial activities (especially banking), and the huge development of tourism are very dynamic and extremely important to its economy. Furthermore, construction is a very important part of the economy of the city, although it contributes for only about 3.5% of total GDP (in 2007) it accounts for a much larger share of total employers.

Rome has also developed its industrial compact, mainly in the technology sector, telecommunications, pharmaceutical and food industries. Most factories are located in an area called Tiburtina Valley in the east of the city.

Data sources:
National Institute of Statistic
Province of Rome
Municipality of Rome
Ministry of Agricultural Food and Forestry Policies

Salary Rome vs. Italy


5. Social indicators

Describe the social characteristics of the region.
The demographic distribution of the area in 2010 is described in the following table, while birth rate in 2012 increased up to 9.4.

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<thead>
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<tr>
<td>Total</td>
<td>2,882,250</td>
</tr>
</tbody>
</table>

Fertility rate of the area was ~1.2 in 2010. In the same year life expectancy for women was 83.7 whereas for men was 78.4.

The region has an average income of roughly 16,000 euro.

In the area the total number of houses was 101,599,5 in 2001, of which 287,284 were on rent and 656,599 owned, whereas 715,72 devoted to other uses.

Data sources: National Institute of Statistics - Demoisstat

6. Domains

Which TESS domains (i.e. energy, food, transport, waste) are predominant in the region, and which have you chosen, and why?

The region is characterised by projects in the Food domain. The Food sector is characterised by the presence of both CBIs focusing on distribution (i.e. Solidarity Purchasing Group) and CBIs focusing on production (urban farms); the former are substantially more numerous than the latter. Solidarity Purchasing Groups in Rome are all connected through a network, which does not necessarily imply that they all know each other or that they all share practices or
scope. Although, is possible to speculate that some sort of communication flows within them.

7. Opportunities and Barriers

Opportunities

In recent time the Municipality of Rome has shown a renewed interest in sustainable practices and in grass roots initiatives. In fact a bureau in charge of mapping/regulating urban gardening initiatives has been operating since 2011, moreover at the NUTS3 level (Province of Rome) a service promoting at-home-composting has been activated in some municipalities of the Province, although not for the municipality of Rome itself.

Food: Food culture in Italy creates opportunities for food initiatives to emerge. Rome is a cultural and political capital of Italy as well as one of world's top tourist destinations.

Agricultural production is relatively high in the surrounding areas, hence on the one hand it can represent that there is the know how necessary to run agricultural activities. Besides the Italian network of the Solidarity Purchasing Groups is quite large and in Rome there are many SPG each one operating more or less within its borough's limits.

Transport: In 2012 the public transport company carried more than 945 million passengers on a network that covers about 3,636 km; hence there is a strong demand for transport else from private car usage which represent a great potential for the implementation of sustainable-transport-oriented-CBI's.

Waste: On the one hand the municipality has started and implemented new ways to recycle garbage in Rome since 2014; also the diffusion of composting is promoted by public administration.

Energy: Generally speaking climate in Italy represents a great advantage for the implementation of solar based energy practices, and if this is coupled also with an economic saving, Rome offers a fertile stratum for the implementation of such activities; in fact, there are some quite popular movements aiming at obtaining energy bill reduction through communal action.

Barriers

In recent years the public interest on sustainable development has grown, but the weight of Italian bureaucracy is so overwhelming that many associations and communities do not have the man labour and the strength to cope with it. Hence, their activity remains marginal and their potential gets lost.
Food: Difficult ground for grass-root initiatives to operate in because of its' diversity and size. Lack of infrastructure for development of transport initiatives.

On the other hand this also means that the offer is really high, hence competition is quite strong and it might be difficult to create/find a safe operating space within this domain.

Transport: The company offering public transit service is not financially really stable. Bike paths are not so many, although a network of about 150km of bike-friendly infrastructures is being implemented since 2001.

Waste: On the other hand, municipalities’ budget cuts are not helping in this way, in fact it appears that there is not enough personnel to clean up Rome and recycling at the same time. That hit the news several times: people do use different waste bins for recycling but the trash collection service mix it up again because they do not have enough personnel. Hence a sense of discouragement pervade citizens "If who is paid to correctly trash garbage and recycle precious materials do not do it, why should I do it for free?" this is a quite common statement.

Energy: The energy market in Italy has been a government monopoly for a very long time (since 1962). The liberalization process started in 1991, and in 1995 the Authority for the regulation of the Energy market has been created. However in many places the energy providers operate in a condition of quasi-monopoly, hence competition and alternative resources energy practices are not incentivised.

Data sources: Please state where possible

8. Additional information

Rome is characterized by being the political core of the Italian system, a world top tourist destination and a cultural hub in Europe. If on the one hand these features increase the complexity of the system hence making it more difficult for a grass-roots initiative to increase its popularity, on the other hand it also represent a vibrant environment that offers a lot of possibilities for an initiative to reach great performance level.

Annex F: Centre Region
Please complete this form with summary qualitative and quantitative description of the region you have mapped for your key and supportive case studies. Provide requested information and fill in the blanks, specifying data sources, and state where information is not available.

**Your Details:**
Name: Nastase Carmen
Name of Institution: USV
Date completed: 2015

**1. Summary Characteristics**

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Table 1: Summary characteristics. Source: Climate Futures

**2. Introduction to the Research Region**

Centre region is situated in the centre of Romania, within the greater curvature of the Carpathian Mountains. By its geographical position, it makes connections with six of the other seven development regions, registering approximately equal distances from its central zone to the border crossing points. Centre Development Region has total surface of 34,100 sqkm (14.31% of the country’s surface), and is formed by Alba, Brașov, Covasna, Harghita, Mureș and Sibiu counties.

**TYPE OF LANDSCAPE** - Lacking proper plains, the relief of Centre Region includes significant parts of the three branches of the Romanian Carpathians(almost half the area of the region), hilly area of the Transylvanian Plateau and depression area of contact between the hills and the mountains.
Figure 1 – General map of the Region

Source: http://www.adrcentru.ro/

TYPE OF VEGETATION - The vegetation areas in Centre region are the forest zone and the steppe zone. The latter can be subdivided (depending on soil, climate, and altitude)

MAIN WATERCOURSES - Mureș and Olt,

The region is urban and rural. The region has among the highest (compared to other regions) rate of urbanization 59.4%

LIST OF CITIES - Brașov, Sibiu, TârguMureș, Alba Iulia, Sfântu Gheorghe, MiercureaCiuc

The climate of the region is temperate continental, varying by altitude. In the intra-mountain depressions of eastern region, temperature inversions are frequent, cold air can station here for long periods. From the perspective of the Koppen climate classification, the region is predominantly classified as Dfb, but also has some small areas that are classified as Dfc and ET.

ETHNICITY MIX - The census of 2011, identified following ethnic structure: Romanians 61,25%, Hungarians 28,41%, Romas 4,90%, Germans 0,41%, Other5,03%.

SOCIAL DEMOGRAPHIC - 25.6 (Euro/inhabitant), 52.9 (Purchasing Power Standard per inhabitant) (2012)

POPULATION GROWTH - With a population 2,251,268(in 2013) inhabitants the Region concentrate 11.7% of the country’s population. The average regional density is of 74.2 inhab/sqkm, below the national average value. Population has decreased lately, for example 2010-2009 (-0,07%), 2011-2010 (-0,07%), 2012-2011 (-6,43%)(according to EUROSTAT). By 2025 it is expected that the population will decrease by 219.200, and by 2050 the population will decrease by 617.800 reaching 1.906.800inhabitants.

OFFICIAL LANGUAGE/S–The official language is Romanian, but at the community level and other languages are spoken: Romanian 73,50%, Hungarian 24,89%, Roma 0,79%, German 0,43%, Other 0,39% (Census 2011).

RELIGION/S - The main religious affiliation is Orthodox. Bun in the region there are significant communities of other religious affiliations: Orthodox 55,29%, Roman Catholic 19,25%, Reformed 14,75%, Pentecostal 2,51%, Greek Catholic 1,23%, Seventh-day Adventists 0,93%, Baptist 0,42%, Other 5,62% (Census 2011).

In the Centre Region there is a high level of employed population that graduated from apprenticeship and vocational education. Also, the
region ranks third for the ratio of employed population that graduated higher education

UNEMPLOYMENT - Lately unemployment fell, but remains above the national average:
- 2009 Romania 7.8%; Central Region 9.6%;
- 2012 Romania 5.05%; Central Region 5.95%.

Data sources: Please state
EUROSTAT
ECA&D: http://www.ecad.eu
Ministry of Labour –
http://www.adrcentru.ro/

3. Motivation

The Central Region differs from the other regions of Romania. First, in this region there are many ethnic groups that live together (Hungarians, Roma population, Germans - in the other regions, the population is more homogeneous - ethnic groups have a small share. This cultural diversity has had a profound impact on the socio-economic development of the region.

In this region we can identify very important elements that were achieved through the active involvement of citizens and also through social responsibility (in this region there are many medieval towns/medieval neighbourhoods that were maintained at their historical appearance, and currently are tourists attractions - Brasov, Sibiu, Sighisoara, another achievement for the region is that in 2007, it hosted the European Capital of Culture - Sibiu).

Another important aspect is the economic potential of the region in this area are many large enterprises and corporations.

Also one aspect that motivated us in choosing this region was the high degree of urbanization (59.4%).

A final aspect that determined us to choose this region was the fact that there are several universities in the area, and we believe that they have a catalytic effect on the development of local community based initiatives.

We selected this region because it is complex economic structure with a significant professional capital, highly recognised, especially in the technical field. The reduction of the industrial activity determined the migration of specialists to other fields of activity or abroad, affecting thus future increases of the traditional economic activities.
Through governmental programmes in Centre Region there have been financed areas affected by the restructuring of the mining industry which led to the increase of unemployment and the worsen of the socio-economic situation. These programmes concentrated in Harghita, Covasna, Alba şi Sibiu. The region was facing problems linked to industrial restructuring in the field of mining, metallurgy, car construction, arms, etc.

Data sources: Please state
http://www.undp.ro/environment/
http://www.adrcentru.ro/

4. Economic indicators

Describe the economy of the region.
The GDP of the region was 14.498 mln EUR in 2011 (EUROSTAT), and the GDP per capita was 6.141 EUR (2011). The GDP per capita in PPS, for 2011 was 11.400 (above most of the other regions of Romania).
Major resources located in this region are: natural gas, coal, non-ferrous ores, construction stone (basalt, andesite, marble, travertine), mineral water.
Major sources of employment include wood processing, gas extraction, tourism, manufacturing industry, food industry, IT services.
Lately UNEMPLOYMENT fell, but remains above the national average:
- 2009 Romania 7.8%; Central Region 9.6%;
- 2012 Romania 5.05%; Central Region 5.95%.

The employment structure for the three sectors is: Agriculture 24,2%, Industry 26,6% and services 42,6% (for 2009).
Employment rate in age group 20-64- 56,3% (for 2009).
The average income level for this region, according to EUROSTAT, in PPS is 5.200 per inhabitant and in EUR 3.000 per inhabitant (2011).
The income is above country level (this region is the third – out of seven) but, compared to the EU average, the income is low.
The Centre Region potential is diversified as it has natural, human, social and economic resources. The university network is very well developed. Three institutes acting in the field of wood processing develop research activities in the Region, as it has tradition in the industry in the field.
The touristic potential of Centre Region is diverse due to the historical and cultural heritage and the mountain ranges, which offer many hiking trails. There is a number of 17 resorts where winter sports can be practiced, many of them recognized internationally (Predeal,
Poiana Brașov, Paltinis). Important treatment bases are located in this region, four of them of national interest (Covasna county, Predeal- Brașov county, BăileTușnad- Harghita county, Sovata- Mureș county) and 11 are considered of local interest. The development potential of the business infrastructure in this region in significant and is due to the presence of unvalorised industrial locations, resulted from industrial restructuring. Many of these sites were arranged and transformed in industrial parks that currently receive investments. The main agricultural activity is livestock farming, this activity offers a lot of jobs for people in rural areas (Land use: arable 22.6%, pastures18.8%, hayfields 14%, vineyards and orchards0.7%, forests 36.5%, water and other surfaces7.4%).

Data sources:
EUROSTAT
http://www.worldbank.org
http://www.adrcentru.ro/
EUROSTAT

5. Social indicators

As a result of the multiculturalism in the region, due to the presence of three nationalities: Romanians, Germans, Hungarians, a regional profile cultivating local traditions has emerged. These characteristics are also present in their determination to keep traditions and crafts conservated along history.

Health profile

The region has among the lowest death rates 11‰ (for 2010) (compared with other regions of Romania); main causes of death are cardiovascular disease, smoking related causes, and cancer. The birth rate for 2009 was 43,4‰. The average life expectancy is 71,2 for men and 78,6 for women.

Centre region of Romania has achieved progress in health systems improvement but is still facing several challenges. In terms of health outcomes, the health system is below EU standards. Romania has the highest infant mortality rate in the EU (9.8 per 1,000 live births, more than twice the EU rate of 4.1 per 1,000); a life expectancy of 73.8 years, which is about six years lower than the EU average; and one of the highest standardized death rates (SDRs) from cardiovascular disease, smoking related causes, and cervical cancer (WorldBank 2014).

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5 Balvanyos- county Covasna, Bazna- Sibiu county, Băile Homorod, Borsec, Harghita- Băi, Izvorul Mureșului, Lacu Roșu și Praid – Harghita county, Păltinis- Sibiu county, Pârâul Rece și Timișu de Sus - Brașov county
While most crimes in Romania are non-violent and non-confrontational, there has been an increase in the number of crimes in which the victim suffers personal harm.

- Crime rates in Romania - Level of crime 25.94
- Problem corruption and bribery - 75.83
- Safety walking alone during daylight - 90.84
- Safety walking alone during night - 64.66

Data sources: Please state

EUROSTAT
World Bank Report 2014
http://romania.usembassy.gov/acs/crime.html
EUROSTAT

6. Domains

The community based initiatives we identified in this region are relatively diverse. We have identified initiatives in transport, promoting clean sustainable transport, (especially with bicycles) and lobbying to improve the necessary infrastructure.

In this region we identified a food initiative which aims to promote a healthy lifestyle based on traditional products.

We also identified initiatives which promoted the reduction and recycling of waste generated.

We were unable to identify community based initiatives that address energy issues.

The region is characterised by CBI projects in Food domain. Romania’s agricultural land and waters remain a vastly under-exploited resource. Agriculture, forestry, fisheries and aquaculture account for almost 30% of employment, almost five times the average for the EU and its contribution to GDP is almost 7%, but is nevertheless three times the EU27 average. Labour productivity in agriculture is less than a quarter of the average for all sectors in Romania and a quarter of the European average in agriculture (4,328.5 euro/AWU, respectively 14,967.0 euro/AWU, 2012). The indicator displayed one of the lowest growth rates as compared to the rest of European countries (of only 0.1%).
Romania has a diverse rural environment and an abundance of natural resources, organic farming has expanded and is highly export oriented. Climate change is a huge challenge for the agriculture and rural development sector in Romania and in Centre region of Romania. On the one hand, agriculture is a source of greenhouse gas (GHG) emissions and must therefore be expected to contribute towards the climate change mitigation goals of the Europe 2020 Strategy. On the other hand agriculture and rural development sector is highly vulnerable to the impacts of climate change since the capacity of the “rural space” to provide adequate food supply, deliver ecosystem services, support economic growth, and provide a safe living environment for rural communities is directly dependent upon favourable climatic conditions. Data sources: Please state where possible

Romania Climate Change and Low Carbon Green Growth Program, Component B Synthesis Report (2014) wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2014/03/06/000333037_20140306142729/Rendered/PDF/857660WP0P146600Box382162B00PUBLIC0.pdf


7. Opportunities and Barriers

Opportunities

We identified several opportunities for the CBI’s from the Central Region:

Romania benefits from EU funds for economic and social development; funds that could be accessed by CBI’s;

Social Media is a very important source of information for younger generations of Romania (as evidenced by recent events - elections, protests, environmental causes, etc.), this facilitated the development of several NGOs and CBI’s. This is an opportunity for online initiatives/sharing platforms to emerge (particularly those that would address young people).

Civic responsibility and community involvement in certain actions.

The region has among the highest (compared to other regions) rate of urbanization 59.4%. We consider that in Romania the urban environment is more suitable for the development of CBI’s. We believe that urban areas are more suitable for the development of
CBI's, because: information is more accessible, information travels faster, funding is more accessible, the level of culture is higher, the level of education is higher and the young population is increasingly concentrated in urban areas.

**Barriers**

The main barriers to prevent take up of these community-led initiatives are:

- The administrative systems (public authorities) are bureaucratic and in some cases corrupt. The bureaucracy and corruption from public institutions discourage citizens initiatives, they discourage the civic spirit and they can disrupt funding (in some cases funding (from public money) for initiatives may be granted preferential, on political principles).

- Income level is much lower than the EU average, and thus people are more concerned about getting additional income than volunteering for NGO's or CBI's.

- Regarding the CBIs and the context of Romania: the cooperation within the communities is mainly initiated by a leader or by an NGO. The cases where the individuals of communities are emulated by an idea and are starting a common project/common actions are not so often to find. After the communist period, when the work to/in a cooperative was compulsive in all villages of Romania, the people are reluctant the start such initiatives.

- Expensive – in order to initiate a CBI you need some funds (raising awareness, mobilizing people, procurement of necessary materials, professional help – experts/consultant, etc.) or some of your personal time (that you could use for other income generating activities), corroborating this with the relatively low income of the local population, and we can appreciate that this is a barrier.

**Data sources: Please state where possible**


http://www.anpm.ro/articole/avizul_de_medi

**8. Additional information**

Please provide any additional information, which you think is relevant to the region and your characterisation.
### Table F1: Population by country. Source: Eurostat 2014.

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<th>Country/Year</th>
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### Table F3: Distribution of population by degree of urbanisation. Source: Eurostat/SILC 2014.

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### Table F4: The average number of persons living in private households. Source: Eurostat 2014.

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### Table F6: GDP growth by country. Source: Eurostat 2014.

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### Table F7: GDP per capita by country. Source: Eurostat 2014.
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Table F9: Unemployment rate by country. Source: Eurostat 2014 data.

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Table F10: Employment rate calculated by dividing the number of persons aged 20 to 64 in employment by the total population of the same age group. Source: Eurostat 2014.

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Table F11: GHG emissions by country, thousands of tonnes CO₂ e. Source: European Environment Agency 2014.

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Table F12: GHGs per capita by country, tonnes of CO₂ e. Source: European Environment Agency 2014.

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### Table F19: GHGs by sector in 2011, %. Source: European Environment Agency, 2014.

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### Table F21: Self-perceived health by country, very good, % of total population. Source: Eurostat, 2014.

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### Table F22: Self-perceived health by country, good, % of total population. Source: Eurostat, 2014.

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### Table F23: Self-perceived health by country, fair, % of total population. Source: Eurostat, 2014.

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### Table F24: Self-perceived health by country, bad, % of total population. Source: Eurostat 2014.
**Table F25: Housing cost overburden rate by country, % of total population. Source: Eurostat 2014.**

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**Table F26: Percentage of total population at risk of poverty rate, % of total population. Source: Eurostat, 2014.**

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**Table F27: Primary energy consumption by country, million toe. Source: Eurostat, 2014.**

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<td>320.1</td>
<td>318.2</td>
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<td>63.9</td>
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<td>27.9</td>
<td>27.4</td>
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<td>28.2</td>
<td>30.7</td>
<td>31.9</td>
<td>32.1</td>
<td>32.0</td>
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<td>203.3</td>
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**Table F28: Gross inland consumption trend of all energy products: solid fuels, total petroleum products, natural gas, nuclear heat, electrical energy, renewable energies and other. Source: Eurostat, 2014.**

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<tbody>
<tr>
<td>Germany</td>
<td>14,917,066</td>
<td>14,332,812</td>
<td>13,374,791</td>
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<tr>
<td>UK</td>
<td>8,619,045</td>
<td>9,653,081</td>
<td>8,469,649</td>
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<tr>
<td>Italy</td>
<td>6,422,170</td>
<td>7,287,140</td>
<td>6,828,709</td>
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<tr>
<td>Spain</td>
<td>5,770,914</td>
<td>5,176,626</td>
<td>5,328,584</td>
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<tr>
<td>Romania</td>
<td>2,431,867</td>
<td>1,534,437</td>
<td>1,480,882</td>
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<tr>
<td>Finland</td>
<td>1,207,511</td>
<td>1,361,809</td>
<td>1,426,922</td>
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**Table F29: National shares of fuels in gross inland energy consumption, % of fuel in 2012. Source: Eurostat 2014.**
Table F30: Share of renewable energy in gross final energy consumption, %. Source: Eurostat 2014.

<table>
<thead>
<tr>
<th>Country</th>
<th>Solid fuels</th>
<th>Total petroleum products</th>
<th>Natural gas</th>
<th>Nuclear heat</th>
<th>Renewable energies</th>
<th>Electrical energy</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>UK</td>
<td>19.2</td>
<td>34.0</td>
<td>32.8</td>
<td>9.0</td>
<td>4.1</td>
<td>0.5</td>
<td>0.4</td>
</tr>
<tr>
<td>Finland</td>
<td>13.4</td>
<td>26.3</td>
<td>8.6</td>
<td>17.4</td>
<td>29.2</td>
<td>4.4</td>
<td>0.5</td>
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<tr>
<td>Romania</td>
<td>10.0</td>
<td>24.8</td>
<td>21.8</td>
<td>30.6</td>
<td>14.8</td>
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<tr>
<td>Italy</td>
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<td>41.3</td>
<td>22.0</td>
<td>12.4</td>
<td>12.5</td>
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<td>Spain</td>
<td>25.0</td>
<td>33.7</td>
<td>21.7</td>
<td>8.0</td>
<td>10.3</td>
<td>0.0</td>
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Table F31: Generation of waste excluding major mineral wastes. Source: Eurostat 2014.

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</thead>
<tbody>
<tr>
<td>Finland</td>
<td>1,862</td>
<td>2,269</td>
<td>2,188</td>
<td>1,937</td>
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<tr>
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<td>1,473</td>
<td>1,466</td>
<td>1,577</td>
<td>1,713</td>
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<tr>
<td>Romania</td>
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<td>1,512</td>
<td>1,564</td>
<td>1,641</td>
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<tr>
<td>Spain</td>
<td>1,917</td>
<td>1,729</td>
<td>1,551</td>
<td>1,347</td>
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Table F32: General waste by country and sector in 2010, thousand tonnes. Source: Eurostat 2014.

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<tr>
<th>Country/Sector</th>
<th>Agriculture, forestry and fishing</th>
<th>Mining and quarrying</th>
<th>Manufacturing</th>
<th>Electricity, gas, steam and air conditioning supply</th>
<th>Water supply, sewerage, waste management and remediation activities</th>
<th>Construction</th>
<th>Services (except wholesale of waste and scrap)</th>
<th>Wholesale of waste and scrap</th>
<th>Households</th>
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<tr>
<td>Germany</td>
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<td>24,493</td>
<td>48,981</td>
<td>9,087</td>
<td>34,822</td>
<td>190,990</td>
<td>18,320</td>
<td>284</td>
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<tr>
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<td>19,970</td>
<td>6,239</td>
<td>25,983</td>
<td>105,560</td>
<td>31,648</td>
<td>17,134</td>
<td>28,949</td>
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<td>18,353</td>
<td>177,404</td>
<td>7,862</td>
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<td>2,660</td>
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<td>59,340</td>
<td>4,664</td>
<td>1,678</td>
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<td>31,732</td>
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<td>310</td>
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<td>24,645</td>
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Table F34: Share of renewable energy in fuel consumption in transport, %. Source: Eurostat 2014.

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</thead>
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<td>4.9</td>
<td>5.1</td>
<td>5.4</td>
<td>5.6</td>
<td>5.9</td>
<td>6.1</td>
<td>5.8</td>
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<tr>
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<td>3.7</td>
<td>4.0</td>
<td>5.3</td>
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<td>7.5</td>
<td>7.5</td>
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<td>7.9</td>
<td>7.5</td>
<td>8.1</td>
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