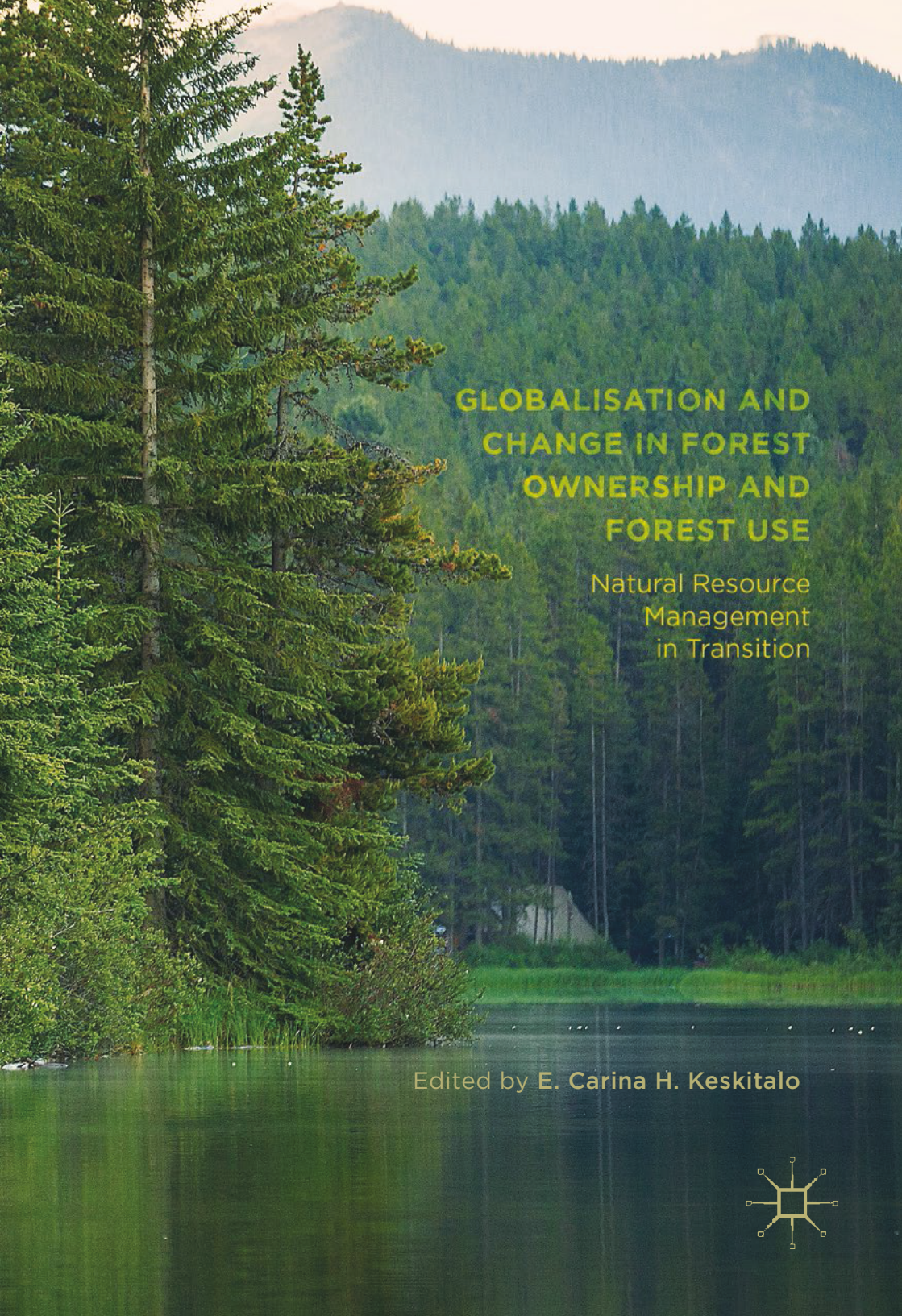
GLOBALISATION AND CHANGE IN FOREST OWNERSHIP AND FOREST USE
Natural Resource Management in Transition
Edited by E. Carina H. Keskitalo

Globalisation and Change in Forest Ownership and Forest Use

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Editor

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Introduction

E. Carina H. Keskitalo

Introduction: Understanding Rural—And Urban—Change Through Small-Scale Private Forest Ownership and Use

Land use is increasingly impacted by actors outside local, regional or even national spheres. Producers and suppliers are increasingly distanced from consumers of goods, goods that may be produced at great distances within large production networks, rather than where they are consumed (Horlings and Marsden 2014). Urbanisation is expanding and former countryside dwellers are changing occupations, moving, or in other ways changing their use of land.

This can be understood in terms of globalisation—the increasing development of economic, political and social linkages on an international and global scale (e.g. Keskitalo and Southcott 2015; Ravera et al.

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2014; Horlings and Marsden 2014) that affects what has earlier been regarded as rural, urban or even local. Thus, while the countryside or rural areas were previously often regarded as a space for agricultural production, some literature notes that this has increasingly become a space of consumption and commodification (e.g. for recreation and other amenities; Meijering et al. 2007).

However, at the same time, rural areas greatly remain sites of production with regard to number of activities and, particularly, financial outcome. Production thus remains relevant even if the replacement of labour by technology has limited local employment in resource industries and required a shift in occupational structure, particularly in advanced industrial states (e.g. Keskitalo 2008). In addition, while there have been changes in employment structure, these changes have not always resulted in a shift in rural identification or residence. Many people maintain both urban and rural habitations or linkages, even if cities and towns depend less on products from their surrounding countryside than before. Major differences may also exist between more sparsely populated areas and commuting zones around urban areas.

Both rural and urban areas are thus in change, economically as well as culturally. While local character may be retained in any specific area, this could shift further in the future as a result of, not least, increasing international migration flows including refugees, which are currently having an impact across Europe and which may change not only the relationships between rural and urban areas but also the understandings and compositions of localities (e.g. Milbourne 2007).[1] Such processes may be regarded as resulting in the "creation of 'new' forms of international rural spaces, characterised by multiple national identities and hybrid cultures" (Milbourne 2007: 384).

In relation to these many interlinking processes, it has been suggested that understanding the rural and urban should take place through the use of a "continuum … rather than a dualistic conception" centred on under-

[1] Milbourne (2007: 384), for example, notes that "very little critical attention has been given to processes of international migration impacting on rural areas" either to "movements of low-income migrants from other countries to work in low-wage sectors of the rural economy" or to lifestyle based migration, for instance "people purchasing properties—as permanent residences and second homes".

standing the diversity of ruralities, from remote to accessible, and their interlinkage with other countrysides, urbanities or other structures (Findlay and Sparks 2008: 88; cf. Meijering et al. 2007).

In trying to understand this change, traditional resource uses may be amongst the sectors impacted the most visibly—as relatively small-scale, locally situated practices, often with clear family linkages, are increasingly affected by larger scale, often global, networks and trends such as international economic linkages and demands for competitiveness, as well as by an urbanisation that changes traditional resource use structures and localisation.

Small-scale private forest owners, as part of a historically rural land ownership, constitute one component of this change. As a historically important resource, forest can be regarded as having been impacted by multiple areas of and objectives for use. Increasing urbanisation and changes in the economic role of forest ownership and employment patterns increasingly contribute to forest owners being urban residents, female, and less practically involved in the management of their forest (e.g. Follo et al. 2006; Mattila and Roos 2014). While such new forest owners often gain ownership by inheritance, there are also opposing trends whereby they are individuals with no previous connection to the area who may purchase forest for capital gains or other uses—for example, people from the Netherlands or Germany purchasing forest in northern Sweden or Finland (Ziegenspeck et al. 2004; cf. Müller 2002). All these new owner categories may think and act very differently with regard to their land than the previous generations of forest owners did. Rather than living on their land and being directly connected to the property through work and family, these categories of owners may exhibit more urban lifestyle values and act based on priorities and knowledge that are not the same as those of the earlier residential owners. Increased co-ownership (partly as a result of handing over forest holdings to, e.g. all siblings) has also contributed to parcelisation, that is, holdings being divided into smaller units (Mehmood and Zhang 2001). What could this mean for forest production and its relationship to the environment and urban-rural relations, and for local communities in these areas?

What Is Forest in Rural Studies—And Who Are the Changing Forest Owners in Europe?

Despite a considerable role in land use, in comparison with agriculture, forest has to date played a limited role in conceptualisations of new rural development (Elands and Praestholm 2008). Nevertheless, non-industrial private forest ownership is an important component of rural land ownership worldwide (Rodríguez-Vicente and Marey-Pérez 2009). In the EU, forests cover more than a third of the land surface area, of which between 40% to over half of the area, in varying estimates, is owned by non-industrial private forest owners (Howley 2013; Toivonen et al. 2005; Lähdesmäki and Matilainen 2014). Forest thus constitutes a large part of Europe and a significant portion of rural areas (rural areas in some estimates making up some 80% of EU territory; Elands and Praestholm 2008; cf. Wiersum and Elands 2002). This forest territory is also highly varied, ranging from remote mountain regions to periurban areas, and from Western European countries with more than half owned by private forest owners to often smaller percentages of around a fifth in Eastern Europe (Elands and Praestholm 2008; Toivonen et al. 2005).

The economic role of forests varies further, from considerable importance to GDP and the export value of forestry in forest-rich countries such as Sweden and Finland, to primarily non-wood production in areas in Southern Europe, with strong variation between very small (less than 5 ha) to very large (over 1000 ha) holdings (e.g. Harrison et al. 2002). Eastern Europe, on the other hand, is largely marked by the transition from communist regimes, with the restitution of land from state to private ownership a marked feature, and very small holding sizes (Harrison et al. 2002). The economic role of forests, as well as type of financial or other outcome, thus also varies greatly between countries and between individual small-scale private forest owners. Forest uses may, for example, encompass anything from wood production to conservation, recreation and local use in terms of firewood, berry and mushroom picking and hunting, amenity value and others, with multiple aims often highlighted at the same time (Rodríguez-Vicente and Marey-Pérez 2009; Domínguez

and Shannon 2011). In total, this contributes to a situation in which "[i]n Europe, small-scale forestry has perhaps the highest diversity in the World" (Harrison et al. 2002: 5).

This variation has made the values of non-industrial private forest owners in the field of forestry research per se the subject of much research—in Europe and elsewhere—as the objectives they have for their forest will affect how they manage it, as well as the timber production that may be available for industry (Lähdesmäki and Matilainen 2014). However, at present, the changing role of private forest owners may contribute to just as much confusion as the changing role of agriculture in rural areas (Elands and Praestholm 2008). For example, it has been noted that "[w]hile there is extensive international literature on private forest owners in general, only a minority of studies deal with structural changes in forest ownership and the emergence of some kind of 'new' forest owners" (Hogl et al. 2005: 327). However, a focus on change, like in agriculture, has been prevalent: initially from the 1960s in relation to values that limited timber production, to more recent attempts to understand differences between new and established forest owners in terms of period of ownership, the nature of the holding as either purchased or inherited, and forestry or forest knowledge and background (Karppinen 2012; Lähdesmäki and Matilainen 2014). Nevertheless, as Hogl et al. (2005) note, most research on small-scale private forest owners focuses on a limited number of characteristics and links these to specific behaviours, albeit to some extent describing a transition into non-agricultural forest owners or forest owners for whom ownership has to be increasingly understood in terms of lifestyle.

Descriptors of these new forest owners abound, ranging from *non-farm* or *non-agricultural* (in areas where combinations with agriculture have been common), to *passive* or *active* (in terms of acquisition of property or in terms of management, sometimes independent of residence), and to *non-resident*, *absentee* or *urban*, the last of these potentially referring to both their residence in urban environments and a more urban lifestyle (Hogl et al. 2005; Hujala et al. 2013; cf. Karppinen 2012; Nordlund and Westin 2010; see also Chap. 2 on the variety of terms used for private small-scale

forest owners in different contexts).[2] Toivonen et al. note as common features the ageing and urbanisation of owners, with increasingly less dependence on forest income and multiple forest ownership objectives. However, timber supply for industry has so far not been strongly impacted (Toivonen et al. 2005). In addition, a higher level of education and less practical experience of forestry have also been highlighted as features of this change (e.g. Follo et al. 2006). Many have also referred to the fact that small-scale private forest owners—perhaps similar to the case in agriculture—cannot always be conceived of on an individual basis but must rather be regarded in relation to their potential forest-related background, inheritance and thereby also family relations that may influence their values and decision-making (Lähdesmäki and Matilainen 2014; Domínguez and Shannon 2011). However, it is also important to understand that changing conditions overall may result in forest owners today—and perhaps even more tomorrow if urbanisation trends continue—not holding either the same values or attachment as previous forest owners. In particular, higher fragmentation as well as variation can be observed with owners of larger properties potentially more focused on timber production and practical forest knowledge, and greater variation in both values and aims amongst those with smaller holdings (e.g. Follo et al. 2006; Toivonen et al. 2005).

The Aims of This Book

In this book we aim to describe and analyse how private, non-industrial forest ownership is changing with regard to multiple characteristics, as a part of rural—and urban—change. We attempt to conceive of the great

[2] For example, Hogl presents "seven types of forest owners [who] form a kind of a sequence from owners who have a strong agricultural background to those who have no agricultural background at all. Types 1 and 2 are characterised by full-time and part-time farmers who represent the traditional image of agricultural forest owners. Types 3 and 4 also have a rather strong agricultural background, but are less actively involved in the agricultural and forestry sectors. These four groups constitute about two thirds of Austrian forest owners and could be named, in a broad sense, 'traditional forest owners'. The remaining third of the forest owners who form three more clusters (types 5 to 7) have almost no direct connection to agriculture and forestry; for them working in, and deriving income from, agriculture and forestry is of little importance. These groups of forest owners could—from this perspective—be summarised under the term 'new forest owners'" (Hogl et al. 2005: 336).

diversity of forest owners—which may not be simply "new", as many new patterns may have also existed historically but have merely increased in number (e.g. in terms of owners living away from their holdings and holding non-forest-related professions) (Ziegenspeck et al. 2004). We also try to place the change in small-scale private forest ownership within a broader context of rural change as well as forest use in Europe, thereby adding to what has so far been a relatively limited focus on forest within the broader rural literature and bringing together the two bodies of broader rural and forestry-specific research. Conceiving of a changing forest ownership, the owners' multiple aims and extensive diversity thus relate not only to developing a better understanding of rural—and its connected urban—change, but also to understanding the implications for forest and rural policy as an increased number of actors may pursue goals other than those related to timber production or acting as support to agriculture (Hogl et al. 2005). The book thereby speaks to a number of areas in relation to forests in rural studies, and in relation to broader population or globalisation studies.[3]

The patterns of fundamental change in the use of a basic resource—forest land—are described using contributions from an array of disciplines. The book focuses on cross-cutting themes and phenomena in the changing forest and small-scale forest ownership situation. It centres many of its examples on northern Europe, where forestry and forest use have traditionally been extensive, such as Fennoscandia (Sweden, Finland and Norway) and northern Europe in a broader sense (including Germany, Poland and the UK), but also includes examples from other areas of Europe.[4] In particular, Chap. 2 aims at systematising and providing in-depth descriptions of the differences in forest ownership across Europe at large, and Chap. 8 constitutes a comparison between forest commons in four European countries.

[3] Our aim is thus not to develop a typology or detailed definition of changing forest owners per se, although it has been noted that the specific typologies used often vary between authors and are seldom used in relation to other parallel typologies (Hujala et al. 2013).

[4] In this, the book draws on the Swedish PLURAL project (www.slu.se/plural), the EFINORD-SNS Forest in Urban and Rural Studies Network, and the European Union Cost-Action FACESMAP (facesmap.boku.ac.at/), all of which focus on the changing role of forest and forest ownership.

In particular, this book draws on Sweden as a case study in most chapters. To some extent, this is a result of outcomes during the writing of the book. While cooperating within Swedish and EU projects, we realised that the variation amongst forest owner systems, types and political preconditions across the EU was simply too large to cover in one volume—particularly given its little investigated nature as a part of rural development or rural studies, and the largely national focus that has been predominant so far. Thus, we have centred our analysis on one case, but also attempt to qualify it through multiple comparisons with other cases—only in Europe, however, as an ever-greater variation could potentially be found globally—to demonstrate the issues, relations and consequences and also potentially the methodology that could be used in comparative studies of other cases. The selection of Sweden as a case, however—and the focus on the role of forest in rural development in Sweden—is not coincidental. In some estimates, Sweden is one of the most rapidly urbanising countries in Europe (in the sense of increasing rates of migration to larger population concentrations, cf. Chap. 6). It is also one of the countries in Europe with the most private forest ownership, and includes a large proportion of land owned by small-scale forest owners; in fact half of the country's forest is owned by this, increasingly urbanised, forest owner group. Sweden also has a strong forestry focus: forest products here constitute some 3% of GDP and 10% of export value (Swedish Forest Agency 2013a, b; cf. Johansson 2013).[5] Sweden thus presents a puzzle regarding how a large small-scale forest owner group is integrated into a highly industrialised forestry production structure, and how the group retains its linkages to rural areas. However, Sweden also presents virtually unique opportunities for researching this puzzle: there is extremely good-quality data available both through population databases, whereby individuals can be followed over time, and through extremely well-developed forest data (see Chap. 4).

Sharing some of its characteristic features with Norway and Finland, Sweden is thus not taken as a case because it is typical—the descriptions above should already have made it clear that there is no such thing as a typical European forest owner. Instead, Sweden is taken as a case as it is equipped with a highly well-defined forest owner identity with a great

[5] For a discussion on the level of urbanisation in Sweden, see also DN (2015).

extent of forest, many small-scale forest owners (with large properties in international comparison), operating under a highly industrialised forestry model that includes some of the support structures named in other areas in literature, such as strong forest owner associations (e.g. Lönnstedt 2014; cf. Follo 2011). Sweden also has a large land area with a historically relatively decentralised and sparse population, which is part of the reason for its comparatively rapid rate of urbanisation but is also the background to the strong attachment to the countryside amongst much of the population. This is demonstrated in the fact that it is relatively common to maintain a second home (often a previous family farm house or residence) (cf. Rye and Gunnerud Berg 2011). This has meant that forest has had strong linkages to rural livelihoods in general. However, changes in the welfare state system, often as a result of global pressure, may result in difficulties in maintaining residence or linkages to the countryside if infrastructure, health and education services in sparsely populated areas are not sufficiently maintained (cf. Keskitalo and Southcott 2015).

Sweden may thus be relevant mainly as a case of observable change, whereby restructuring and dynamics that may relate to globalisation, and thus be possible to compare to other regions, can be observed. Changes in forest-related sectors/rural issues may also be relatively pronounced compared to other areas, as the transition to the urban is so pronounced in Sweden.

The chapters in this book aim to illustrate these multiple changes and shifts, drawing upon and departing from the Swedish case as well as comparing it to trends in other regions.

Chapter 2 discusses and outlines the institutional elements of forest ownership: it discusses the variation in forest ownership across Europe as well as the variation in support for small-scale private forest owners through, for example, forest owner associations. The chapter further discusses forest ownership changes across Europe, with examples from different countries, and also brings to the fore the context of multiple use, which then serves as a continuous theme in descriptions of the change in forest ownership and use in the book.

Chapter 3 illustrates the individual-level changes in forest ownership, including changes in values and attitudes to forest ownership when, due to increased mobility, economic restructuring and urbanisation, many forest owners reside in urban areas (urban forest owners), engaging in

urban lifestyles. Although lifestyle is a much-debated concept, recent research on forest owners and lifestyles has suggested that, in addition to the classical aspects of social situation (such as income, age, gender, residential region), there are also dimensions at the mental level (values and attitudes) and expressive behaviour (e.g. leisure time behaviour). Here, forestry has historically often been part of both a lifestyle and a livelihood or identity, something that may now be shifting, and such terms may also be under re-negotiation on an individual level. Along with potential changes in the forest owners' sense of identity and attachment to their forest, production is now only one of the many forest values the owners emphasise, and their objectives for owning forest tend to be multiple. One example of changing conditions for forest owners is that urban forest owners, as well as non-residential forest owners, are less dependent on forest revenues as they often have an income from off-farm work. This chapter covers changes on the macro level and relates them to the micro level, including values and attitudes, in order to improve the understanding of the ongoing changes amongst non-industrial private forest owners with important implications for forest management.

In Chapter 4, policy-related issues concerning the interaction between forest owners and their forest are addressed, including how it varies between regions and over time. The chapter focuses on the Swedish example in order to outline how new knowledge can be gained by combining different data sources and methods. For example, the chapter shows that the average distance between the forest owner's home and his/her forest property is likely to increase since new owners tend to reside further from their property than previous owners. Yet the pace of change is slow, one reason being that the average time of possession is around 20 years. The chapter also shows that neither the ongoing migration, urbanisation, ageing population nor increased proportion of women appears to reduce forest owners' willingness to manage and harvest their forest.

Chapter 5 then focuses on forest ownership through an economic lens. The chapter describes and analyses how economic globalisation and structural transformation exert a major impact on societal and employment restructuring, including in forest areas. It shows that rural restructuring does not take place as an isolated occurrence in rural areas, but is the consequence of economic and societal change at large. There is there-

fore reason to conceive of restructuring as a result of economic forces that affect, as well as create, distance and proximity. Literature in the last few decades has focused on the potential for economic development, especially in population-dense areas that, through interaction, potentially create opportunities for knowledge economies. Access to traditional production factors such as land consequently becomes less important per se than labour in knowledge-based production that depends on the ability to transfer knowledge between individuals for learning and innovation to take place. This change results in strong regional imparities as areas with large, well-educated populations as well as companies spanning a broad spectrum of professions will attract investment capital and other preconditions for growth. However, while this is often regarded as resulting in depopulation and decreasing employment in rural areas, studies of local companies, particularly those utilising forest resources, also show that innovation and the development of quick-growing gazelle companies are not necessarily dependent on geographical proximity to growth areas. While changes due to economic globalisation result in specific patterns, rural forest areas may thus enjoy specific advantages for economic growth if the preconditions for these—such as regional specialisation and access to various infrastructures—are supported. These potentials are discussed in relation to a variety of case studies of different rural structures and preconditions.

Chapter 6 places forest ownership and use within a broader context of rural change and rural policy. The chapter discusses different imaginings of the rural, for example, as amenity, decline or production region, highlighting that rural and forest areas are necessarily more complex than this. The chapter also highlights that even if areas may be regarded as attractive from a lifestyle perspective, they will not be viable growth areas if infrastructural and service support is not maintained. Consequently, amongst other factors, tax redistribution systems have been crucial for maintaining rural areas. The chapter thus shows that, fundamentally, the potential for new ruralities or rural-urban interlinkages in terms of multiple residency or rural growth is dependent on policy and broader depictions of the rural, including the ways in which policy and potential life choices are related to images of the rural and urban, as well as distance and proximity. If images of the rural are based on distance and on urban-based con-

ceptions amongst policymakers, can the rural potential as discussed in this and previous chapters be fulfilled?

Chapter 7 illustrates these multiple impacts on and values of land use under globalisation with a focus on conflicting interests between various planning aims and different forest uses. While forest areas may, to the casual observer, seem empty of human activity—particularly if human structures are not clearly visible in the landscape—in terms of social interest, forest as an arena involves multiple, and sometimes conflicting, interests. These dense interest and coordination structures may result in further conflict when established land use must relate to, for example, new development priorities such as mining or other new land uses that are developed on a specific site. Voluntary instruments have been identified in relation to means of managing such land use conflicts and support planning, for example, forest certification and multi-criteria decision analysis. However, there are also clear limitations to how far such processes can go within a set regulative structure and political will. Limitations in relation to changing forest ownership and policies also include the fact that not all actors who have an impact on a problem that manifests at the local level will be available at this level or participate in processes there, particularly given the changing ownership structures. Taken together, these factors thus result in additional considerations regarding how to manage planning in forest areas.

While previous chapters have often focused on more general use as well as individual private ownership, the focus in Chapter 8 is on the role a forest area held in common amongst owners (a forest common or common forest) may play in supporting local development and promoting the livelihood of the local community. To this end, four different cases are reviewed: they differ in terms of location (Italy, Sweden, Slovenia, UK), time since establishment (from very old to recent), geographical scale (700–70,000 ha), number of members (less than 100 to about 1500), and type of primary natural resource and type of governance arrangement. The chapter concludes by discussing an important role for forest commons. Despite the very different prerequisites and local conditions, all cases include rules for keeping natural assets functioning and preserved, and have contributed to the mobilisation of different types of capital locally.

Finally, Chapter 9 concludes the role of changing use and ownership in Europe, particularly in relation to the potential continuation of the different trends that have been identified in previous chapters. This chapter further discusses the ways in which "new" forest owners can be seen as being "new". The chapter—like the book at large—also discusses this group in relation to the varied characteristics in different countries, as well as in relation to what extent the further inclusion of forest in rural understandings could support a more complex understanding of the rural.

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2

Is There a New European Forest Owner? The Institutional Context

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Introduction: The Construction of Forest Ownership

Forest ownership can largely be seen as historically institutionalised and constructed, in the meaning that how it has developed in different areas is based on a number of underlying factors that vary between areas.

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Small-scale private forest ownership thus does not imply the same in all countries but has rather developed, or been constructed, differently based on different circumstances. Such circumstances may include whether it has been combined with agriculture and cattle breeding or may constitute a specific separate forest owner identity, the role forest owner associations have played or whether these have existed at all, or the ownership forms that may exist and the traditions these have. In some cases, new types of forest owners have also, to a large extent, been created through restitution after breaks in family ownership (e.g. Živojinović et al. 2015).

Much of forest ownership and what it means may thus be seen as having been developed through a number of organisational or more macro types of factors, such as the property regime, support for various types of land use, or similar factors that may exist in different contexts. These may be conceived at other levels of institutions of forest ownership: whether and how you use your forest, and for what purposes, may greatly depend on family tradition and schooling in forest ownership. It may depend on whether you are a man or a woman as well as on different types of assumptions, inheritance and marriage traditions, not to mention legal inheritance requirements, that have existed around concepts of gender. Understandings are often passed on and developed in communication, with people learning specific patterns of interpretation and assessment through social interaction (cf. Kühne 2012). As Hanley et al. note, the "meaning of landscape … incorporate[s] what people perceive about past, current and future uses of that environment, their attitudes and relationship with that area" (Hanley et al. 2009: 1405). Many of these factors are thus also developed and co-created with factors that manifest on an individual level, such as values, attitudes and lifestyles (covered in Chap. 3, this volume).

Thus, reference may be made to the ways in which different groupings, and the practices within them as constructed through, for example, interaction with others (ranging from public authorities to media, kin and others who may exert an influence on any subject). Rein and Schön (1996) use the term *framing* in order to highlight how an individual selects and organises an understanding into certain issues in order to make sense of a complex reality. By framing an issue, as related to either forest for timber production or agricultural land for crop production, we determine how we should think about it, and this also determines what

should be done about it. For example, should we retain agricultural land or abandon it? Is forest only for timber production or for, for example, recreational use as well? And who is to manage forestry or use forest? Is it the landowner, the purchaser of the products or the user of all ecosystem services—or is forest a focus in itself? The legislation that is made relevant and highlighted, and also whether this legislation or framing is contested, is largely dependent on these types of framing: Sweden, for example, has seen long-term conflict both between interest groups and policy and between a more use-focused understanding of forest regarding forestry as primarily for timber production and an understanding of it as multi-use forest with a focus on conservation (e.g. Ambjörnsson et al. 2016). Thus, the way in which forest is understood may differ greatly depending on a number of factors: the historical assumptions and the country- or region-specific context regarding the evolution and distribution of public and private ownership, whether the use and management of forest land are regarded as an independent business or an integrated/supplementary activity in small-scale family farming (agriculture and animal husbandry), or whether there is public access to forest land or the existing property rights exclude the public from any use of it.

The previous chapter indicated that changes in forest ownership and forest owner characteristics differ greatly across Europe. Acknowledging inherent differences in both data availability and the definition of core concepts, this chapter attempts to review and discuss forest ownership in Europe. The chapter focuses on institutional factors ranging from macro to micro level, from international to national policy level, and on the national construction of forest owners in forest owner associations as organisations often related to timber production and to inheritance as a factor on a micro level (followed up in the next chapter with a focus on factors manifested specifically on the individual level, such as values, attitudes and lifestyle choices).

Given that publications on small-scale private forest owners have generally taken a national perspective, we discuss different types of forest owner conceptualisations with examples across Europe and from different national contexts. Our broad categorisations do not claim to cover all aspects of forest ownership, but rather serve as an illustration in order to begin comprehending the great variety of how forest ownership has been

constructed in different areas, for instance, in the case of land restitution and the re-creation of new forest owners (in Eastern Europe since the fall of the Soviet Union); socio-demographic changes within established forest ownership (such as in Fennoscandia); or through shifts mainly from previous agricultural owners (in cases in Central and Southern Europe). In addition, the Anglo-Saxon forestry tradition is discussed as an example of a case in which small-scale forest ownership has historically been relatively limited, and forestry may thus have been given another meaning than in the other cases. Rather than hoping to illustrate any given strong similarity in all multiple aspects of forest ownership for each category, the aim in this chapter is thus to exemplify and illustrate the highly varying conditions, both of change and in relation to what exists when one aims to understand what a "new" forest owner and the role of forest for such an actor may be. Thus, this chapter contextualises the more specific Swedish case focus in other chapters of this book, and makes it possible to start understanding the varying role of forests for rural—as well as urban—contexts in different countries. Here, we also want to highlight that this is an area under development: forest ownership has often been discussed from a national focus, and comparing across such varying literature and shifting foci, we can necessarily only contribute one attempt at this systematisation.

Changes in Forest Ownership and Use: Who May the New Forest Owner Be, and Why Does It Matter?

"Private", "small-scale" forest owners can be understood in multiple ways. In many cases in this volume, the term *non-industrial private forest (NIPF) owners* is used, largely reflecting the book's European perspective. While the term has been criticised for highlighting what these forest owners are not, instead of what they are (Fischer et al. 2010, Harrison et al. 2002), it has been regarded as more accurate than the term *small-scale*, as some forest owners may own large holdings. However, the term small-scale can also be seen as implicitly placed in comparison with other, larger owners in each context. Alternative terms are *family* or *farm*

forestry, but these highlight either the linkage to agriculture or the linkage to family, which may be decreasing, or at least not cover all cases such as investment forest ownership, or purchase of forest for specific non-relation-related amenities, such as hunting rights, where this is prevalent. As a result, such terms may be used particularly when these linkages are emphasised. Finally, *non-industrial* in the term is used to distinguish this group from commercial or industrial private forestry (Harrison et al. 2002), which is often assumed to be conducted by large forest owners. Many of the terms used for small-scale forest owners thus betray their origins and are often used synonymously (to some extent in this volume as well).

As a result of variations in which terms are applied and how categories are assessed, a substantial variation can be found between countries in how the number of non-industrial private forest owners is calculated. Drawing on a large European project (COST Action FP1201 FACESMAP) and national statistics reported in FOREST EUROPE 2015,[1] Table 2.1 provides some basic figures on the socio-economic functions of forest and other wooded land in selected European countries, and also the extent of non-industrial private forest ownership. Yet, from the empty cells in the table we also see that many countries do not have official statistics on, for example, NIPF ownership. It should also be kept in mind that definitions in national statistics, or as used in specific surveys, may vary. For example, in Sweden forest land with a production capacity (site index) of less than 1 cubic metre per hectare and year is regarded as *non-productive* (Swe. "impediment") and is thus not considered forest land in many studies. However, in Table 2.1 the Swedish figures in the two left-hand columns also include non-productive forest land and productive, but protected, forest, while the right-hand figures on the mean size of an NIPF holding are based on productive forest land only, but also point to the fact that a forest holding (Swe. "brukningsenhet") in Sweden may consist of more

[1] *The State of Europe's Forests 2015* report was compiled using information relating to the pan-European Criteria and Indicators for Sustainable Forest Management endorsed at the fourth Ministerial Conference on the Protection of Forests in Europe in 2003. Most of the information was provided by the national correspondents (NCs) through two questionnaires. For further details, see the full report *FOREST EUROPE,* 2015*: State of Europe's Forests 2015*.

Table 2.1 Socio-economic profiles and functions of forest and forest ownership in some selected European countries

	Forest and other wooded land (OWL) per inhabitant, hectare	Area of forest and other wooded land where public has a right of access for recreational purposes, %	Contribution to GDP, %	Prop. of NIPF ownership, %	NIPF ownership: no. of holdings/no. of owners	Mean size of NIPF holding, hectare
Austria	0.47	94.0	1.9	55	–	–
Belgium	0.06	97.7	0.5	47.2	–	–
Bosnia and Herzeg.	0.73	100.0	–	–	–	–
Bulgaria	0.53	93.9	–	10.2	–/472,600	1.1
Croatia	0.59	99.0	–	22[a]	–	–
Czech Republic	0.25	100.0	1.7	19.3	–	–
Estonia	1.85	91.8	3.9	34	–/157,000	~9
Finland	4.23	99.7	4.5	61	347,000/632,000	36[b]
France	0.27	25.0	0.5	46.4	1,055,000/–	7
Germany	0.14	95.9	0.9	~45	–	–
Greece	0.59		–	22.5[c]	1265/–	344
Hungary	0.22	97.5	0.9	35.6		
Ireland	0.17	0.6	0.4	46.8		
Italy	0.19	–	0.8	66.4	–/–	–/–
Latvia	1.72	93.0	6.5	32	120,000[d]/138,000	8
Lithuania	0.77	99.0	2.0	39.2	–/247,000	3.3
Norway	2.78	100	0.6	71	116,002/139,047	49[e]

(*continued*)

Table 2.1 (continued)

	Forest and other wooded land (OWL) per inhabitant, hectare	Area of forest and other wooded land where public has a right of access for recreational purposes, %	Contribution to GDP, %	Prop. of NIPF ownership, %	NIPF ownership: no. of holdings/no. of owners	Mean size of NIPF holding, hectare
Poland	0.24	84.0	1.5	18	–/–	–/–
Portugal	0.47	–	1.6	88.0	–	61% < 5 ha
Romania	0.35	–	1.8	19.5	–	–
Serbia	0.45	100.0	–	44.7	–	–
Spain	0.59	–	0.7	~55	–	–
Slovakia	0.36	94.3	1.0	10.6	–	–
Slovenia	0.62	99.2	–	75	–	–
Sweden	3.18	100	3.2	51	222,129/327,727	50[f]
Switzerland	0.16	100.0	0.9	27	–/240,000	1.4
FYROM	0.54	–	–	–	–	–
Turkey	0.27	–	–	–	–	–
UK	0.05	45.0	0.4	43.6	–	–

Sources: FOREST EUROPE (2015) (column 2–4), FACESMAP Country Reports in Živojinović et al. (2015) (column 5–7)
[a]All private forest land
[b]Productive forest land only
[c]Individuals as well as monasteries and various groups and foundations
[d]Author's estimate based on figures given on hectares/owner respectively hectare/holding
[e]Productive forest land only
[f]Productive forest land only

than one property. Thus, the mean value of 50 ha corresponds to the sum of productive forest land held by the same constellation of owners in a specific municipality. This definition may seem confusing to an outsider, but is considered functional in a Swedish forestry governance and management context. Likewise, we can expect and understand that other countries have developed their own definitions and classification systems concerning, for example, when a certain piece of land is to be regarded as forest (minimum size and vegetation composition) property. Thus, any cross-country comparison of figures has to take into account the specific country context (see also Živojinović et al. 2015. FACESMAP Country Reports. Joint Volume) and may in itself make a classification of forest, even across Europe, difficult.

This makes the role of a "new" forest owner—or more broadly, change in forest ownership as a part of rural change—a moving target. Given the variation between countries, there is necessarily substantial variation in traditions and also in how "old" and "new" forest owners are defined. The extent and ways of describing a new forest owner may, to a high degree, be related to what a forest owner used to be—whether or not they used to be farmers, whether or not they operated within a forestry-centred tradition, or whether or not there was an imposed break in their forest ownership. However, as all these descriptions make clear, the forest owner cannot be examined outside the family context: while new forest owners may to an extent embody different characteristics, owners are often not wholly "new" as they often operate within a family tradition. While forest owners to a greater extent live in urban areas and may exhibit various characteristics and values (see Chap. 4, this volume), forest land is still mostly inherited (Živojinović et al. 2015). This means that while today's forest owners exhibit different characteristics, support and continuity in forest use may still exist through family bonds. For example, families (or earlier generations of forest owners, perhaps as in the case of restitution) may teach the new forest owner about forestry and provide support (Matilainen et al., manuscript), in addition to any formal support from forest owner associations or public policy support (Avdibegović and Pezdevšek Malovrh 2015; Forest Europe 2015). However, what defines a family in a European family farming tradition also varies. The nuclear family, as well as various forms of complex and composite family structures, can be found in different economic regions and epochs (see Box 2.1).

Box 2.1 The Concept of Family Forestry

The large historical and economic variations in preconditions across Europe create different conditions for what we now may perceive as traditional family forestry, and thus also new forest owners(hip). However, there are some basic characteristics to seize on, where lines of division may help us to better understand this variation as well as the change. At the core of a traditional family forestry there is a farmstead, meaning that the forestland (i.e. the unit of production) and its use are connected to the production of the farm as well as the household (i.e. the unit of consumption) and the family (i.e. the unit of kinship) (cf. Djurfeldt 1996). Thus, what distinguishes family forestry from non-family forestry is similar to what distinguishes family-based farming from non-family farming. The latter distinction can, according to Hill (1993), be based on whether the family provides almost all of the labour required as opposed to the domination of employed workers. Yet a substantial number of farms ("intermediate farms" in Hill's terminology) are operated by more than half using family labour and supplementing with hired labour. The need for labour at the farm as well as the presence, or lack of, supplementary or alternative means of income/livelihood seems also to have impacted the family/household and the farm structure. The observation that women and men marry much later in Western Europe than in Eastern Europe can be coupled to the Western practice in which marriage presupposes the ability to run and support a household (Hajnal 1965). In contrast to the Eastern practice characterised by early marriage and extended family, the appropriate age of marriage was guided by management maturity and the couple's capacity to accumulate enough capital to procure a farmstead and set up an independent nuclear household. Adult daughters and sons in farm households were either considered indispensable for operating the farm, and the payment for their labour may then be deducted from the purchase sum at the time of takeover, or left home in order to accumulate capital and experience as servants to other peasant families or as part of the proto-industrialisation of rural areas (Hartman 2004).

Given that forest is still transferred from parents to children to a great extent, one of the major impacts within this system may be a shift in inheritance practices. While forest ownership (like landownership at large) has historically been a male prerogative, today women are increasingly recognised as suitable heirs. Potentially also as forest land becomes less valued, women are perhaps able to access and change forest ownership. Changes in types of inheritance can thus be conceived of as one element of "new forest owners". Historically regarded as a restrictive feature, however, changes in forest ownership must also be discussed in regard to how much it results in ownership by groups without forest owner backgrounds,

as well as the groups it provides access to. One important feature has been that "new owners" in the increasingly globalised world may also include people living far away from the holding and having access to other traditions and values. For example, as people living in Germany, the Netherlands or Poland may buy forest holdings in Sweden or Finland, locals may fear that this causes a focus on short-term exploitation with more limited consideration of local use and traditions. However, studies in Sweden show that many of those who have purchased forest land may have some linkage to the area, and that the cases of entirely external investors are relatively few so far (Keskitalo et al. in prep; Lidestav and Nordfjell 2005). Nevertheless, there exist very few studies on these new forest owner types, as so far the national context has exerted the strongest influence on constructing who and what a forest owner may be.

Changes in Forest Owner Groups in Europe

Below we distinguish four broad characterisations of forest owners that relate to the multiple processes we have discussed here and that have been described for specific countries. We thus exemplify the processes and types of forest owners that are constructed through these processes in specific countries; however, the relationships noted between these types of forest owners and country examples are neither exhaustive nor comprehensive.

Forest Restitution: New Forest Owners in Eastern Europe After the Fall of the Soviet Union

With regard to a focus on the factors constructing a new type of forest owner in Europe, restitution needs to be named firstly as this is one of the major trends in Europe to have influenced the forest ownership structure (Živojinović et al. 2015). Since the 1990s, restitution has taken place in the Baltic, central-eastern European and the Western Balkan post-socialist countries as these countries have faced challenging transition processes and shifted from communistic one-party regimes to the pluralistic democratic system (FAO 2012; Weiland 2010). These political and economic reforms have also significantly influenced institutional reforms in forestry

(Bouriaud and Schmithusen 2005). Restitution processes were initiated with the aim of recognising private property rights, mainly through giving the forest to back its former owners or their descendants following the fall of the Soviet Union and the associated public ownership of land (Susi-cee 2011; PROFOR 2005). Restitution is not a simple legal problem that can be solved to the satisfaction of all actors involved. Policy choices related to restitution confront policy-makers with difficult trade-offs (Holmes 1993). The process involves changes to policies and regulations, and is influenced by many different forces and interests from within, as well as outside, the countries, mainly through harmonisation processes with international rules and regulations.

The restitution of forest land started in the early 1990s in most of the CEE and Baltic countries, and in the late 1990s and early 2000s in the Western Balkan countries (Živojinović et al. 2015). Serbia was the last country to begin the restitution process, in 2006 (Rokai 2015) (see Box 2.4). In some countries, restitution resulted in an increase in private forest owners, from 0 to 40–50% (e.g. Estonia, Lithuania, Romania) (Živojinović et al. 2015), while in other countries (e.g. Serbia, Croatia) this change was not as significant in terms of the area transferred to private owners (2–4%) (Nonić et al. 2015). Still, in all these countries this increase in new private forest owners was challenging for forest policy and management, mostly because of the inadequate policies and limited instruments in place for responding to this change. The process has been time-consuming, with countries often reporting that intended deadlines had to be postponed, or that claiming processes were too difficult and bureaucratic, thus preventing owners from finalising their claims. In addition, many countries limited restitution rights to nationals only. The restitution processes revealed many conflicting situations, which have resulted in unclear or disputed forest ownership (e.g. in Czech Republic, Romania) (Živojinović et al. 2015).

Many of the new owners who gained their land through restitution own small, fragmented properties. Further, they usually lack experience with and a tradition of forest management, and have different levels of interest in forest activities. A study by Matilainen et al. (2016) showed that many of the new owners found it important to own the land and to (again) have ultimate control over this resource. The feeling of having once lost the land strengthened the importance of forest ownership as a

link to one's heritage and family. Furthermore, forest is also seen by many new owners as investment for the future (Matilainen et al. 2016). Even though interest in managing the forest is generally high in all these countries, in some of them weak emotional ties of the owners to forestry are also visible. This resulted in sales of forest properties immediately after restitution, for example, in Latvia and Estonia (Živojinović et al. 2015). In many countries, such as Lithuania, Romania, Croatia and Serbia, the new forest owners also faced the problem of insufficient or late regulation, which affected the level of their actual involvement in forestry. In many cases, the state administration could not come up with or deliver suitable mechanisms for involving the new owners in sustainable management schemes (Živojinović et al. 2015). New owners also felt that their ownership was threatened or diminished by the public forest administration due to strict, binding regulations concerning forest management or timber sales (e.g. in Romania and Slovakia) (Matilainen et al. 2016).

With regard to production forestry, it has been noted that this has resulted in problems with enforcing a forestry focus, at the same time as the structures are not there to motivate private owners to manage forestry (Urbel-Piirsalu and Bäcklund 2009; cf. Nilsson 2005). While forestry is expanding in many of these countries (e.g. in Estonia, Urbel-Piirsalu and Bäcklund 2009), as is the proportion of land owned by the private sector, including the small-scale family forest owner segment, it has been noted that "[e]conomic problems among private owners, a liberal forestry policy, together with rapid land reform and weak enforcement of forestry legislation" (Urbel-Piirsalu and Bäcklund 2009: 101) limit sustainable forestry (Avdibegović et al. 2010; see also Abrudan 2012). Restitution is also still ongoing in many areas. In Estonia, for example, it was noted that some 15% of forest area was still undergoing privatisation in 2014 (Põllumäe et al. 2014b: 21; see also Põllumäe et al. 2014a)[2] (see further Box 2.2).

[2] While forestry has not been available to the local small-scale landowner, forest use may be another case. In many areas, a broader or multi-use of forest has also historically—including during the Soviet time—been pronounced, for example, in terms of berry and mushroom picking and other forest uses. These situations are widespread not least in Russia, which remains a case distinct from these examples, as forest is still owned by the state and mainly leased to industry; however, this is something that has meant that local communities using local forests, for example, for firewood, have sometimes turned to certification norms to support local forest use (Torniainen et al. 2006; Keskitalo et al. 2009). However, policies underpinning forest use may have varied greatly, and do so under current privatisation measures as well, which may also result in considerations with regard to broader public access to forest.

Box 2.2 Serbia as an Example of a Restitution Process

The Republic of Serbia was the last country to begin the process of restitution (Rokai 2015). In 2006, the Law on Restitution of Property to Churches and Religious Communities was adopted. It regulated only a part of the restitution process, dealing with one category of entities—church and religious communities, their foundations and societies (Nonić et al. 2015). In 2011, The Law on Property Restitution and Compensation was adopted, which regulates the part of restitution targeting individual people (Nonić et al. 2015). The process of restitution is managed and administered by the Agency for Restitution, which was formed under the restitution laws. This is the body that takes decisions on property claims, monetary compensation or redress. It also provides technical assistance to applicants (Susi-cee 2011).

The actors who had the greatest interest in initiation of the process were churches and religious communities, and the former owners. However, the decisive impact came from Serbia's EU accession process, according to which restitution is a necessary prerequisite for EU membership (Susi-cee 2011). Efficient and effective implementation of the restitution rules will have multidimensional effects including those of a legal, political and economic nature. The restitution process will also be one of the key issues to be assessed by the EU Commission in the course of the upcoming negotiation process (Stojanovic et al. 2012).

In the period 2006–2008, churches and religious communities submitted 3049 claims regarding the forest properties. The Serbian Orthodox Church claimed 33,798 ha (99%) of forests, while other religious communities claimed only 68 ha. By 2011, 23,195 ha of forests and forestland, and 10,028 ha of agricultural land were returned (Agency for Restitution, 2016). Submission of restitution claims by private individuals occurred in 2012–2014, and during this period, 1863 claims were received. By March 2016, 3489 claims had been submitted (Agency for Restitution 2016). Thirty-five hectares have been returned (Agency for Restitution 2016)—the further status of returned properties has not yet been determined and the analysis not yet completed.

The property claimed had been confiscated on the basis of regulations on agrarian reform (nationalisation) in 1945. Before WWII, these properties were located mainly in the vicinity of churches or the homes of individual people. In some respect, we can say that these owners are now becoming new forest owners, since they (or their heirs) got the land back after more than 50 years. These new private forest owners are very important, because some of them represent large-scale forest ownership (church), and it can be expected that their influence on forest policy will increase. Moreover, it is expected that these changes will lead to a greater diversity in terms of interests, values and demands imposed on different private forest owners, which will influence priorities in terms of their management (Nonić et al. 2015).

Change of ownership brought changes of management when it comes to forests owned by churches and religious communities. Some church forests are managed by public enterprises "Srbija šume", mainly in the areas where the restitution process started but has not been fully completed. In cases where cooperation with the public enterprise has been terminated, forestland is managed based on the owners' own management plan. Some dioceses (e.g. Diocese of Šabac) have formed their own companies for forest management (Monastery Forest), while others (e.g. Diocese of Braničevo) engage other legal entities in the management of their forests. Smaller forests complexes (e.g. Kaona Monastery) are managed by the monasteries themselves, with expertise provided by the private sector (Glavonjić et al. 2011).

With regard to a role for forest owner organisations in Eastern Europe, the Soviet influence and recent restitution have necessarily made these more recent and limited: thus far, forest owner associations have not been able to play a significant role in how the private forest owner group is constructed. In literature on cases in recent restitution processes, it is noted that these types of support structures are lacking or under development (Avdibegović et al. 2010; cf. Urbel-Piirsalu and Bäcklund 2009), as is a forestry tradition amongst private owners (see also Box 2.3). In Bosnia and Herzegovina, Croatia, Macedonia and Serbia, it has been noted that "[t]he assumed causes of the existing situation are manifold and rooted partly in forest history", including historically strong state administration, the changes in the process which new private owners are not fully used to, and the large number of very small-scale private owners with fragmented forest holdings, which may result in owners not recognising the potential value of such plots and the allocation of forest ownership not to individuals but to families (Glück et al. 2010: 251). All these factors may contribute to the use of wood to a large extent for fuel only (Glück et al. 2010; Halder et al. 2014).

Thus, for example, "[t]he private forest owners in Bosnia and Herzegovina, Croatia, Macedonia and Serbia are to a large extent not organised in interest organisations although their forests make up between 10 per cent (Macedonia) and 52 per cent (Serbia) of the total forest area" (Glück et al. 2010: 250; see also Nonić et al. 2011; Avdibegović et al. 2010). In the Estonian case, "only 6% of forest owners

have engaged themselves in [Forest Owner Associations] FOAs … [with] a remarkable number of forest owners either with a lack of information about FOAs or a lack of knowledge about forest management in general" (Põllumäe et al. 2014b: 31).

The role such associations could play in highlighting and developing a forest owner role and production forestry is thus often highlighted in literature. In Eastern European cases, it is typically noted that with "private ownership being relatively new … private forest owners need both information about economic issues and personal advice on how to manage forests with regard to their individual and multiple objectives" (Toivonen et al. 2005: 451, on an Estonian case).[3] Similarly, Glück et al. note with regard to the Western Balkans that "efficient forest management cannot be done without appropriate skills in silviculture, harvesting, marketing of forest products and services, social aspects etc. as well as cost-efficient utilisation of resources, such as forest roads, harvesting machines, hauling devices, transport facilities and information systems about product prices … What is needed is an organisation that takes care that the most urgent needs of private forest owners for sustainably managing their forests are satisfied" (Glück et al. 2010: 251).

However, as some note, the increase in marketisation may also have led to a greater awareness of the need to protect multi-use aims as well as local and regional interests. For example, Mantescu notes the risk that profits will be extracted from, rather than invested in, local communities as well as the risk of illegal logging due to dependence on employment in relation to trade: "[m]ost studies on Romanian post-socialism concern processes of decollectivisation, the emergence of the new rural elite, and the privatisation of land. What has been heavily neglected so far in the field of post-socialism studies is the penetration of multinational companies into rural areas and the resulting changes at local levels" (Mantescu 2009: 2). Many such risks, as well as consequences that may follow from less locally or regionally based forest ownership, may impact rural areas in

[3] The restitution process has in some cases thus also meant that "[m]any forest owners are urban citizens who obtained their forest as a result of expropriated land being returned in the land reform process. Often these owners live far away from their holdings and have no connection to rural areas. Urban forest owners often perceive the forest only as a source of income and lack the interest and knowledge about forestry processes. The result is poor regeneration and maintenance" (Urbel-Piirsalu and Bäcklund 2009: 107).

ways that may increasingly amplify the impact of urbanisation and globalisation (e.g. Urquhart and Courtney 2011).

Structural Change Within Established Forest Owner Traditions: The Example of New Owners in Fennoscandia

As opposed to developments in countries with forest restitution, in Fennoscandia (Norway, Sweden and Finland), the "new" forest owner is most often not new to forestry but is rather constituted by a shift within the characteristics of what has been a relatively strongly established category—politically and economically as well as socially. Swedish, Finnish and Norwegian owners stand out both by being a strong owner group (owning much of the productive forest in the countries) and by owning plots that are relatively large in an international context. In all three countries, there are more private small-scale forest owners in the southern than northern parts of the countries. Finland and Sweden also stand out by being amongst the most extensively forested countries in Europe (Mattila and Roos 2014; Follo 2011).[4]

Given the relatively great importance of forestry, non-industrial private forest owners in Fennoscandia have been extensively studied, and "trends such as the increasing number of urban owners, larger share of women, and ageing among forest owners have been recognized as the drivers of greater heterogeneity" (Mattila and Roos 2014: 10–11; see also Toivonen et al. 2005). However, other drivers of change are also a result of the fact that while earlier forest owners could make a living on smaller plots (similar to in agriculture), larger productive forest areas are now necessary (Follo 2011). On the whole, these drivers also seem to result in a largely urban—both by residence and lifestyle—forest owner (Follo et al. 2006). Nevertheless, these owners usually have strong cultural and family roots to the area, as much forest is still inherited or purchased within the family

[4] In Norway, the change from agricultural to forest owners seems to have been somewhat more marked, with a higher number of forest owners previously having cultivated land (thus making Norway potentially similar in some respects to a more Central or Southern Europe understanding of private forest owners, as discussed below) (Follo 2011, compare with Toivonen et al. 2005); however, a forest owner tradition is well established (e.g. Follo et al. 2006).

(Lähdesmäki and Matilainen 2014). Given the relatively sparse and historically strong rural population, forest ownership also often has multiple reasons (even if production forestry tends to be part of them). For instance, hunting for moose or small game is a valued right in larger forest holdings and can constitute a strong linkage to the locality even for those living away from their holdings. Similarly, the widespread cabin culture of these countries, where the majority of the population may have access to second homes (often historically family properties, or even purchased cabins), also provides a strong linkage whereby the focus in a property may not be on the land but rather on residence and associated activities such as relaxing, fishing, berry or mushroom picking, or other activities (e.g. Rye 2011).

Taken together, this strong forest-related development and connections in Fennoscandia have meant that not only do small-scale forest owners largely correspond with the category of non-industrial private forest owners (despite in many cases being relatively large-scale); this has also meant that a connection to forest may exist more widely in the population. Thus, the practices of berry and mushroom picking, as well as undertaking other leisure activities in forest on private land are customarily—but also legally—recognised as a Right of Public Access making forest and forest use, as well as logging that could impact such use, an interest far beyond the owners alone (e.g. Sandell and Fredman 2010). A forest owner in Fennoscandia may thus firstly be someone who owns forest but not necessarily someone involved in forestry. On the other hand, the strong forestry heritage (and in Sweden and Finland, the strong economic role of forestry on a national level) contributes to a plethora of organisations, including strong forest owner organisations, that make it possible for a non-industrial forest owner with little knowledge of forestry to purchase all the services necessary for forestry production (e.g. Toivonen et al. 2005).

Given the long-developed tradition of a small-scale forest owner category in the cases of Norway, Sweden and Finland, forest owner associations are also structures with a long history. It has been noted that Fennoscandian areas stand out in this regard in a broader European as well as international comparison as "countries with a long tradition of associations … in contrast to countries with relatively new associations, including the USA" (Schraml 2005: 252). However, the strength and expertise of forest owner organisations in Fennoscandia have also led to the situation that, while state legislation in all Fennoscandian cases constructs the forest owner as

the decision-maker with regard to their forest, the increasingly urban and non-forestry expert ownership may lead to a risk of forest owners becoming unable to assess and make independent choices based on forest owner associations' advice, and the strong and increasingly professionalised member organisations thereby, in practice, coming to influence decisions about private land (Follo 2011; Lönnstedt 2014). For example, in Sweden the four forest owner associations affiliated with the Federation of Swedish Family Forest Owners together cover the entire country, and are owned and managed by their members with the aim of acting as a stakeholder in forest policy. They also provide services such as harvesting, planting and the production of forest management plans, that is, primarily to support forestry (Lönnstedt 2014: 220) (see further Box 2.3).

Box 2.3 Forest Owner Associations: Examples from Fennoscandia and Eastern Europe

During the recession of the 1920s and 1930s, Swedish private forest owners began to organise themselves into forest owner cooperatives. By doing so, and through joint deliveries of timber, they were able to improve their bargaining position and gain better prices for their timber deliveries (Glete 1987). In the early 1940s, some of the cooperatives engaged in further processing of their timber and became owners of sawmills and other timber processing industries. Their primary motives were to keep up the demand for roundwood and also that members, by owning their own industry, could achieve surplus values (Gummesson 1993). Thus, the main function of a Swedish private forest owner cooperative is to work for an efficient timber market with the goal of optimising members' financial outcome from their forest property. In this respect, they have, generally speaking, been successful. Some cooperatives have indeed become insolvent and their members have lost their investments (Vänerskog, Mälarskog), but their fields of activity have been taken over by other cooperatives. Fusions of neighbouring cooperatives have also been a strategy adopted to meet competition from national industrial forest owners and their associated industries, as well as competition on the global market for timber-based products. The four major forest owner associations (FOA) in Sweden currently have 111,000 members with 6.15 million ha of forestland, that is, 53% of the NIPF. In order to carry out services for the members and to run their processing industries, they employ more than 4000 people. Aggregate turnover amounted to SEK 24 billion in 2014 (Kronholm 2015: 11). Thus, cooperation comprises business, with joint action between members, and a democratic association and an enterprise (corporation).

This duality and the members' multiple needs have been addressed by introducing additional services such as management planning, harvesting and silviculture at the forest owner's request, providing information and advisory and social events. Additionally, employees at the cooperatives represent the private forest owners in dialogue with authorities and as an advocate for advantageous policies concerning business in the timber market and on various forest policy issues. However, lobbying of the government and other authorities is generally handled by an umbrella organisation *The Federation of Swedish Family Forest Owners* (Lidestav and Arvidsson 2012). To be able to promote the interest of NIPF owners at the EU level, the Swedish federation together with 23 other national forest owner organisations from 19 countries[5] have established CEPF. This non-profit organisation considers itself as representing nearly 16 million forest owners (http://www.cepf-eu.org/side.cfm?ID_kanal=2). With such numbers, it is obvious that there is great variety in ownership conditions and priorities. The size of the individual forest property ranges from 0.5 ha to more than 10,000 ha, but the majority of private owners' holdings are less than 3 ha. In this context, most Swedish NIPF holdings appear large and comparatively well integrated into industrial forestry logic. In particular, this applies to those who are associated to an FOA, and thereby also have a direct or indirect interest in supplying industry with timber. Still, members are mostly regarded as suppliers or customers and rarely think of themselves as cooperative joint owners (Lidestav and Arvidsson 2012). In comparison with non-members, members exhibit more traditional features. A significantly larger proportion of members consider themselves to be forest farmers, meaning that they also do more of the forestry operations and administration themselves. Further, they place different values on various types of forest benefits (Berlin et al. 2006). Forest income, firewood and timber for their own use, housing, keeping contact with the native locality and upkeep of a forest farmer tradition are benefits that are awarded higher values by members than by non-members (Lidestav and Nordfjell 2005).

Similarly, Norway has a long tradition of forest owner associations, and it may be claimed that their position and impact have been even more influential on domestic forestry. One reason is that the proportion of company-owned forest is small, while 80% of productive forestland is owned by NIPF (Follo 2015: 408). Those who are active are also often members either of one of the regional cooperatives of the Norwegian Forest Owners' Federation or of the country-wide Norskog and its separate timber purchasing firm Nortømmer. The regional associations trade timber for both members and non-members and, in 2013, two-thirds of the country's total harvest for sale was traded through them. Harvesting, and in some cases

[5] Austria, Germany, Slovenia, Croatia Greece Spain, Czech Republic, Hungary, Sweden, Denmark, Latvia Switzerland, Estonia Lithuania, Norway, Finland, Luxembourg, France, Portugal.

thinning and other forest management, is also organised via these associations (Nybakk and Talbot 2015: 417).

In contrast to the Swedish and Norwegian associations, the Forest Management Associations in Finland are not producers' cooperatives. Rather they are to be regarded as a top-down approach to the guaranteed implementation of forest policy on the grassroots level. However, they also secure services for forest owners as concerns practical forestry issues and look after their interests. Membership has not been compulsory, but up until 2014 it was obligatory to pay a forest management fee (some two to four €/ha per year), consequently most forest owners were members. From the beginning of 2015, the Forest Management Associations are private associations, funded by membership fees and business activities. Services can be offered without geographical limitations, and other enterprises are also prepared to win new customers. Yet there are concerns that only traditional profitable services will be offered and that a large share of new forest owners will be left without proper assistance (Karppinen et al. 2015: 197–198).

In the former communist countries in Central and Eastern Europe, associations based on private (individual or joint) forest ownership are, for obvious reasons, a recent phenomenon. Although born out of the same socio-political changes, that is, the restitution and re-privatisation of forestland, their organisational forms, scope and activities differ both between and within countries. In an overview, embracing seven CEE countries,[6] Sarvašová et al. (2015) identified two main reasons for their establishment: (1) to support the restitution and privatisation process and (2) to represent owners' interests as concerns the government. Further, some FOAs are basically framed by a top-down approach in which the government initiates their creation, while others are characterised by a bottom-up approach in which owners have united in order to become visible. It may also be concluded that they have not reached the same organisational maturity, range of activities or level of support amongst forest owners as their parallels in Fennoscandia have (Sarvašová et al. 2015).

The "New Forest Owner" as a Shift from an Agricultural Owner: New Owners in Examples in Central and Southern Europe

Following a conceptualisation of new forest owners as either re-created through restitution or as part of long-term forestry traditions, a third conceptualisation may be developed on the basis of forest ownership coming to be more pronounced based on an agricultural background

[6] Czech Republic, Estonia, Hungary, Latvia, Lithuania, Romania and Slovakia.

(e.g. Hogl et al. 2005). The understanding in which a forest owner has historically been a farmer, but whereby this identity is now changing, can be seen in examples in both Central and Southern Europe, but also in other areas, for instance parts of Fennoscandia, as the strength of agricultural identities has varied across areas. In some areas, such shifts have also taken place earlier. Amongst these types of owners, there is great variety indeed. There are large variations, for example, from multiple small or very small holdings to a small minority of large or very large holdings (see Schraml 2005; Hogl et al. 2005). However, farm succession, and thus the role of family, has thus often been pronounced (Schraml 2005; Hogl et al. 2005; although in this case it, as a rule, concerns agricultural farms more than forest farms). In the Austrian case, Hogl et al. note that the majority of forest properties are still owned by farmers, even if they are in many cases part-time farmers (Hogl et al. 2005). However, as properties are sold, a new forest owner class may be created in which forestry is not connected to agriculture (Hogl et al. 2005). In Spain, it has been noted that this phenomenon was boosted in the early 2000s with the housing market boom. At that time, many houses with farmland and forestland in the countryside were sold for recreational use to people without previous connections to the area or to farming or forestry. Together with the abandonment of crop land (i.e. passive afforestation), a new type of forest owner has appeared (Živojinović et al. 2015) who is not accustomed to forest management. It has been noted that in the Mediterranean region, which experiences extensive forest fire risks, non-resident owners may not consider forest management to be a pivotal measure in the prevention of wildfires. In contrast, resident forest owners in the same area are still active in the prevention of forest fire outbreaks. Some are also still interested in the traditional sale of wood energy for domestic or agro-pastoral uses, while many invest in silvo-tourism or mushroom harvest (truffles with mycorrhizal trees) (Živojinović et al. 2015).

Values with regard to forests may also differ significantly (e.g. in comparison with the Fennoscandian case, where forest is often regarded as a valuable commodity in its own right). There are several reasons for this value difference: forest may have been mainly regarded as playing a supporting role in agricultural holdings and agricultural activities, or even have been regarded as wasteland. Consequently, forestry-economic aspects

may be devalued, with no institutional infrastructure for maintaining and supporting forest management in place (Ziegenspeck et al. 2004).

In this understanding, the traditional owner may thus be connected to a family farming background with limited focus on how to manage forest per se. However, it has been noted that this may provide greater freedom to choose management methods and use (e.g. in contrast to what is sometimes seen as potentially restricting traditions in Fennoscandian cases, cf. Lähdesmäki and Matilainen 2014). On the other hand, limited institutional infrastructure and culture with regard to forestry may also mean that becoming an informed forest owner is difficult, particularly with regard to limited forest owner association structures. Forest use for multiple purposes (rather than explicitly focused on production forestry) may also become more of a given option in these cases. It is notable that management of forest in Central and Southern European countries has also historically focused on explicit goals other than production forestry (e.g. Moreira et al. 2011). "Non-agricultural forest owners" (Kvarda 2004) may thus be an even more diversified owner group than in Fennoscandia, as these forest owners may lack clear identities related specifically to forest. However, similar questions may arise in both the Fennoscandian and the Central and Southern European cases as to how values, identities and motivation for forest ownership change as the present generation, which has often had a linkage to the land (being the first generation of non-farmers or having parents living on the property, cf. Kvarda 2004), is replaced by a more urban generation. "The lifestyles of the new private forest owners have proven to be very heterogeneous in every respect" (Ziegenspeck et al. 2004: 451).

There is also great variation in terms of forest and forestry-related institutions. For example, in France the role of local forest communes is emphasised (Wightman 2012), while in Portugal the institutional infrastructure for supporting forest ownership is more limited (e.g. Soares 2013) and the role of forest owner associations varies in a similar manner. While looking at forest owner associations, it is worth noting that Germany, with its creation of forestry cooperatives after WWI, falls somewhere in the middle of this range. Schraml notes that German forestry associations are often criticised for their inadequate support of members (Schraml 2005). In Portugal it is similarly noted that, despite a

very high level of private ownership in the country, forest owner organisations only emerged in the early 1990s and are currently in "very different state[s] of evolution" (Feliciano and Mendes 2011: 1).[7]

The Anglo-Saxon Case: Emphasised in Rural Literature but a Very Special Case?

In the context of the considerable variations between forest owners in different countries described so far, it is relevant to highlight that one of the areas emphasised in rural literature is not typical of the wider rural cases of forest. Rather, the Anglo-Saxon or broader UK case stands out with regard to forest as a special case where agriculture and powerful landowning classes are dominant, as opposed to small-scale forest ownership. A large proportion of private ownership in Scotland is what Wightman calls "landed estates or (land owned) by investment owners … The big contrast with other European countries is the insignificant proportion owned here by individual resident owners, farmers, co-operatives, and municipalities" (Wightman 2012: 2); similarly, Wong et al. (2015) note that forestry across the UK traditionally took place on large and often aristocratic estates (cf. Nicholls and Young 2005). In relation to this, Wightman notes that "of all the European countries in a position to provide statistics, Scotland has the most concentrated pattern of private forest ownership and the lowest proportion of the population involved in owning forests in Europe" (Wightman 2012: 13; cf. Lawrence and Dandy 2014).

Thus, in the Scottish case as an extreme example, Wightman notes that "[t]he contrast between the pattern in continental Europe and in Scotland is a reflection of a number of historical and political factors", amongst which he notes: feudal tenure; the widespread rights of children to inherit land in most European countries; the historic prohibition on tenant farmers having rights to forest in Scotland; UK Government taxation policy and financial incentives; the fact that European revolutions, which transformed aristocratic

[7] Soares notes that the forest management problems related to "[s]mall ownership and landowners' absenteeism" (Soares 2013: 157–158) could potentially be supported through such cooperation; however, it has also been noted that there has been social resistance to some cooperation development approaches (Forest Intervention Areas) in Portugal, for instance related to financial constraints (Soares 2013: 158).

and ecclesiastical power, never took place in Scotland; a lack of national policy on ownership; poor integration of land use; and elite policy capture (Wightman 2012: 15). Similar differences between Anglo-Saxon and other European areas are also mirrored in the literature on, for example, second homes: they are widespread with regard to ownership and access in the Fennoscandian countries but are the privilege of only a small minority in the UK, resulting in corresponding local conflicts over second-home ownership (e.g. Rye and Gunnerud Berg 2011; see also Chap. 6, this volume).

These types of differences may suggest that UK experiences—while having played a large role in the theory development on rurality—may be less typical and may, at least, differ from other experiences or, at most, be more of an exception (e.g. Lawrence and Dandy 2014; Urquhart and Courtney 2011; see also Cruickshank 2009, noting the different understanding of rural in Fennoscandian cases from that in UK literature). These issues are further extended upon in Chap. 6.

The more limited role of the small-scale forest owner in these cases may also have resulted in limitations of data on forest owners in the UK, with authors noting that "[s]tudies of owners' attitudes and decisions in the UK are at a disadvantage as there is no complete database of land or forest ownership" (Lawrence and Dandy 2014: 351). It has also been noted that given the relative recency of development of small-scale ownership (related amongst other to government policy programmes allowing acquisition of public land to a variety of private owners, cf. Wong et al. 2015), support tools are also still limited. Forest owner associations of the types discussed earlier in this chapter are not prominent (Wong et al. 2015) and other measures, such as "[g]rant uptake across England, Wales and Scotland is not currently as high as governments would like. ... A focus on both content and process of interactions with advisors, knowledge exchange and application, and outcomes, is lacking" (Lawrence and Dandy 2014: 351).

This situation may have bearing on the circumstance that in the UK a "wide cultural gap between farming and forestry is often noted, in contrast to the international literature" and, somewhat similarly to cases in Central and Southern Europe, in "generally negative attitudes towards woodland creation" (Lawrence and Dandy 2014: 351). In Ireland, in comparison, low levels of forestation historically and a mainly public forest ownership coupled with the lack of a history of private commercial

forest management is cited as a reason for similar attitudes (Geoghegan et al. 2014). Thus, in Ireland, while there have been schemes since the early 1980s to encourage farmers to transfer land into forestry as agriculture has decreased, this development has been resisted due to a perception that afforestation was a "shame to plant land used for food production, even if this returns a greater profit" (Duesberg et al. 2013: 155). Nevertheless, in Ireland it was observed that as a result of these policy initiatives, private forest ownership has now increased to approximately a tenth of farmers, an "unprecedented recent growth in the number of private forest owners" (Howley 2013: 106) and in the development of forest owner associations (Geoghegan et al. 2014).

Forest Owners in Further Transition?

While forest ownership has often been described in a national context, this context is also influenced by international policy. This increasing international context of forest use policy—which is already subject to great variation in national governance, not least as there is no international forest convention—illustrates the increasingly varied used of instruments and degrees of regulation. International influences on policy processes can be considered to exert influence via several channels (Bernstein and Cashore 2000). Pathways of international influence include international rules, international norms such as non-legally binding international agreements, instruments and international discourses affecting forestry, and the role of markets. International rules include legally binding agreements such as the United Nations Framework Convention on Climate Change (UNFCCC), the Convention on Biological Diversity (CBD), the General Agreement on Tariffs and Trade (GATT), the Convention on International Trade in Endangered Species (CITES), and the International Tropical Timber Agreement (ITTA) (Glück 2000; Humphreys 2006; cf. Harrinkari et al. 2016). Non-legally binding elements include, for example, on the global level, the UNCED Forest Principles and the United Nations Forum on Forests (UNFF) resolutions, and at the European level the Forest Europe Process and, specifically at the EU level, the EU Forest Strategy (Glück 2000; European

Commission 2013; Winkel et al. 2013). In relation to these, Pülzl et al. (2014) note that the sustainable development discourse is currently the prevailing environmental meta-discourse, with the most important current forest discourses being forest biodiversity, illegal logging, forest and climate change, and sustainable forest management (Arts and Buizer 2009). Finally, market dependence and voluntary market-driven actions, for example, certification schemes and boycotts (Bengston 1994), may play an important role in national forest policy systems. In addition, direct access to policy-making could in some cases take place through direct funding, education and assistance by international actors (Bernstein and Cashore 2000) (see Box 2.4).

Box 2.4 Example of Forest-Related Legislation: The Finnish Case

In Finland, forest-related legislation has recently been revised. Perhaps the most important law, the Finnish Forest Act, was revised during the period 2010–2013. In addition to domestic drivers to the change, international influences including EU regulations can also be detected. According to officials at the Ministry of Agriculture and Forestry, among the main reasons for revision were changes in the operating environment of forestry and the forest industry, for example, changes in NIPF owners' demographics and their ownership objectives. The new law would increase forest owners' freedom of choice, as well as allow uneven aged forest management, and improve forest biodiversity protection (Ojala and Mäkelä 2013).

Harrinkari et al. (2016) analysed the influences of global and European Union forest and environmental policies on the revision of the Finnish Forest Act by applying the pathway model of Bernstein and Cashore (2000) combined with the Advocacy Coalition Framework (ACF) (Sabatier and Weible 2007). It appeared that the pathways of international rules and international norms and discourses were considered equally important. This is probably due to the Finnish forest industries' dependence on exports to environmentally conscious markets. Environmental (actor) coalitions emphasised international, legally binding rules and non-legally binding initiatives, which mostly deal with environmental issues. All actors assessed the market for forest industry products as being the most influential pathway due to the export market dependence of the entire national economy. However, no evidence was found of foreign actors having direct access to policy-making.

In the EU, forest is covered at EU level as well as national and subnational levels where existing, and by voluntary market-based instruments such as forest certification (see also Chap. 7, this volume, for an illustration). However, despite this variety of international initiatives, "[t]here is no coherent legal instrument covering the forest sector at the international or EU level—as it is one of the sectors in which the national level has retained the legislative authority … The international and, particularly, the EU role in the context of forest is thus to provide guidelines for national forest policies, rather than creating a legal basis for forestry issues in the Union" (Keskitalo and Pettersson 2016: 54; cf. Pülzl and Hogl 2013; Winkel et al. 2013). In addition, forest within a rural context is also largely impacted by broader rural policies, including EU rural policy (see Chap. 6, this volume).

The question of whether forest use and forest management should be carried out in relation to forest production (a historical focus in some areas) or in relation to multiple objectives (as more recently emphasised in policy) may, through the emphasis on sustainable development, be regarded as having come full circle. For example, in Fennoscandia, the production orientation in forest policy has been dominant, while increasing recognition is currently awarded to the multiple use of forests. However, in terms of local practice, multiple use is not new but has rather been common in most countries. In many areas it has constituted the most important use of forests, with forest management potentially supporting the production of berries, mushrooms or other non-wood forest products such as forest fruit, chestnuts, truffles or firewood, or the provision of hunting opportunities (e.g. Samils et al. 2008; de Aragón et al. 2011; Abrudan 2012). Today, however, this kind of focus, together with nature-based recreation and tourism, has gained increasing formal acceptance in policy as well. Increasingly, formal nature protection and the mainstreaming of nature protection in the production landscape have also been highlighted, for example, through both formal initiatives such as the EU Natura 2000 network of protected sites, and voluntary processes towards nature protection in production forests (see e.g. Schulz et al. 2014). In 2001, for example, French forest law was amended to

support free-access recreational use of private forests "so that it now departs from the tradition of a separation between the productive function and the other functions of forests … France is not an isolated case in this respect, since the trend concerns most European countries" (Gadaud and Rambonilaza 2010: 298; cf. e.g. Janse and Ottitsch 2005).[8]

In the same way that changing forest ownership is a result of emergent trends in developed countries, policies aiming to include both production (e.g. forestry) and environmental protection can be observed as a result both of the increasing awareness of pressures on the environment and potentially also of changing production patterns (e.g. Fischer et al. 2010; Gadaud and Rambonilaza 2010; Nordlund and Westin 2010). However, such diversification in the understanding of land use may also result in increasing levels of conflict (Gómez-Vázquez et al. 2009). Multiple-use forest may increasingly open up the issue of landowner rights versus public access, tourism and recreational use and other uses, as well as the issue of funding or compensation (such as in Fennoscandian examples with regard to commercial berry picking, e.g. la Mela 2014; cf. Gómez-Vázquez et al. 2009; Urquhart and Courtney 2011).

In relation to the factors above, extensive literature underlines, particularly, the need for the development of support structures to help forest owners manage forests. Beyond forest policy, historically one means of developing such support—or of providing a support structure and additional income or resources to forestry—has been the establishment of forest commons (treated in depth in a separate chapter) as well as forest owner associations. While varying substantially between countries, forest owner associations have historically often supported the forestry production paradigm and are therefore, as illustrated in previous sections, most emphasised and prevalent in countries where production

[8] As in most other areas concerning forests, there are extensive variations in the recognition of multiple use or multiple priorities for forest. Gadaud and Rambonilaza note: "In the countries of southern Europe, such as France, where this legislation is based on Roman law, priority is given to the right of ownership to land, whereas the northern European countries acknowledge also the right to exploit the natural resources. In Germany, Norway and Finland, forest legislation authorizes access to private forests for walkers. In contrast, in Holland and France, access to private property is prohibited. In the case of France, even though the law recognizes a right of way for other users, it stipulates that landowners have an exclusive right on non-timber forest products and services" (Gadaud and Rambonilaza 2010: 298; see also Lankia et al. 2014).

traditions have been strong. However, ownership changes—for example, favouring more non-economic interests—may also result in shifts for forest owner organisations. They may increasingly have to manage multiple information, knowledge and support needs related to changes in forest ownership across Europe, but also need to relate to multiple interests and aims, including, for example, the increasing development of "forest and environmental policies and the associated attitudes that owners have towards set-aside areas for nature conservation" (Fischer et al. 2010: 394; see also e.g. Gadaud and Rambonilaza 2010). In order to cope with this type of situation, studies suggest developing varying services for different forest owners, including "educative, interactive decision support service for multiobjective forest ownership … includ[ing], for example, forest visits, calculative comparisons of alternatives, optimization and internet-based service components. It is also relevant to design information packages for self-reliant owners and ready-made services for delegators" (Hujala et al. 2013: 346).

The interface between forest owners, policy and the forestry industry can thus be seen as another evolving relationship, in relation to changing forest ownership and changes in the forest industry as well as in relation to globalisation. Perhaps similarly to forest owner associations becoming more professionalised organisations with an increasing distance to forest owners (e.g. Lönnstedt 2014), not only the state but also the forest industries, forest owner associations and commons have to deal with a new understanding of changing landownership.

Conclusions

This chapter has highlighted how the forestry component of forest ownership is constructed in different ways in different areas. In this, there often remains a consistency within the specific forest owner systems: forests are still often inherited, and the new forest owner may be regarded as part of a potentially continued tradition, despite their more urban residential location and other shifting characteristics, including the increasing role of female forest owners. However, the number of entirely "new" owners, in the meaning of originating from outside forest ownership

traditions, remains relatively limited, although the spread of forest ownership beyond national borders may be increasing.

Largely, the case of European forest owners in transition may thus be seen as indicating the extent to which forest use, and indeed the construction of the forest owner, may be an issue of the extent of the organisation and embedding of forest practices in inheritance and tradition. Eastern European forest owners, in many cases, have to invent traditions not based on a distinction from agriculture or other private forms, but in relation to now-obsolete Communist land use as well as potential family histories in forest management. Taking into account the great variation in not only what a small-scale forest owner is and what kind of support structures (e.g. through forest owner associations) are available, but also the differences between national policies and economic development challenges, it is likely that policy mixes, as well as methods of governance, that work in one country will not be directly applicable in another.[9] Historically developed governance forms within the state, including the distribution and power of interest groups, will likely make for very strong variations, sometimes linked to general principles of organisation on a national scale (e.g. Von Arb and Zimmermann 2004: 6). There are considerable differences between countries in how policies affecting forests are integrated into the political system, for example, in Sweden, where forest planning is a parallel system to the dominant, comprehensive planning system with a large element of decentralised authority at the municipal/local government level (with forest and municipal planning operating parallel as a result, e.g. Stjernström et al. 2013). In their Swiss case, Von Arb and Zimmermann (2004) note that forest policy, similar to the Swiss political system at large, is built on the principle of distributed authority (under federalism). Forests may also be the formal responsibility of either the state or the federal level, with governance systems varying between countries and potentially in relation to overarching principles or planning systems (e.g. Giannakourou 2005). Complicating this situation fur-

[9] Important differences affecting forest ownership and management are also present in taxation systems: for example, Swedish forest landownership is not taxed, as opposed to forest properties in Estonia (Urbel-Piirsalu and Bäcklund 2009; see also an example in Chap. 6, this volume).

ther, common influences in many states in existing political systems have risen from the New Public Management paradigm, including an increased deregulation and privatisation of services which potentially increases the number of actors, levels and decision-making organs that formally or informally exert an influence on forests (Von Arb and Zimmermann 2004; cf. Holmgren et al. 2010).

Who the new forest owner is can thus be defined as an example of both the continuity and change in the rural, and a "rural-urban continuum" (e.g. Findlay and Sparks 2008) whereby forest owners are not only rural (residing on their property) but also urban: not either-or but both-and. Potential shifts in the characteristics of forest owners, however, may also mean that they hold other and more diverse values than was previously the case. The review suggests, however, that owners may maintain a linkage to their areas of origin or to their forest even if their permanent or primary residence is elsewhere. It also illustrates that, in some cases where production forestry has been prevalent, forest owners "may live happily with their forest without any forestry activity: It is not the forest that they may move away from, but forestry" (Follo 2011: 391).

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3

Individual Forest Owners in Context

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Introduction

Society is always in a process of change, including the institutional and policy shifts described in Chap. 2 in this volume. However, population characteristics also change over time. With these overarching changes in society come changes in people's prerequisites, values and attitudes. This also works the other way around: people change, and this leads to changes

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on a macro level. This chapter focuses on the individual level, considered in a context of demographic and socioeconomic transformation. Changes usually mean going from a familiar to an unknown state. Current changes are unique in the sense that they are new to us, but are merely another change in the course of history. However, they pose challenges and raise questions about how we will adapt and whether we can foresee some of their effects, and perhaps how we can counteract at least some of the potentially negative ones.

One major transition today that affects forest owners and the preconditions for forest ownership is continued urbanisation, which is evident across Europe. Another change is economic restructuring, which has resulted in less financial dependence on agriculture and forestry, with employment now found in the cities in sectors such as industry, service and administration. A third major issue in Europe, as in most industrialised countries, is demographic change: ageing populations, lower birth rates and changing family structures. Despite low birth rates, Europe's population is projected to increase by 5 per cent between 2013 and 2050 as a result of inward migration (EU 2015). Fourth, the political landscape of Europe, and particularly Eastern Europe, has changed over the past 25 years. Formerly state-owned land has been transferred back to its previous owners (restitution) or sold on the market (privatisation).

Forest ownership and forestry are affected by these changes as well as changes in institutional frameworks, not least connected to the EU as a supranational level of policy and governance. In several countries in Europe, restrictions on buying or selling forest land (e.g. Austria, France, Lithuania) and processes such as restitution (primarily in Central East Europe and the Baltic states) are important for the composition of forest owner groups as well as for the conditions for forest ownership (see Chap. 2, this volume). Due to increased mobility, economic restructuring with fewer job opportunities in the countryside and urbanisation, many forest owners reside in urban areas, engaging in urban lifestyles. Linked to this, many people's identity is connected not only to their place of residence (being a rural or an urban resident) but also to their social situation, attitudes and behaviour. As urbanisation has been an

ongoing process for decades (albeit for more decades in the northern and western parts of Europe than the eastern and southern parts), more citizens are born and raised in cities and have less connection to the countryside. Decreased connection to the rural is likely to affect their attachment to these areas, and people will instead be attached to another (urban) place or several places (e.g. Lewicka 2011). Lifestyle, identity, place attachment and social influences, such as norms and social networks, interact with the individual's values and attitudes. In a broad sense, values and attitudes can be argued to be a primary key to understanding the micro perspective since they reflect, express and constitute a core part of the forest owner's point of view (cf. Ziegenspeck et al. 2004; Lewicka 2011; Cialdini et al. 1990; Lähdesmäki and Matilainen 2014).

In several European countries—for example, Finland, Sweden, Germany and Serbia—but also the USA, where the term *family forest owner* is commonly used, non-industrial private forest (NIPF) owners hold a large share of the forest land (Schmithüsen and Hirsch 2010). Although frameworks of laws and regulations set the boundaries for the management of forests, NIPF owners play a vital role in the forest sector. The management decisions made by this group of individuals will shape the forest, determining what kinds of services it can provide and what it will look like in the future.

Forest ownership and the composition of NIPF owners are changing in Europe. A new forest owner group has entered the arena, and they are new in the sense that their features differ from those of the previous (old) owners. The new owners have been categorised according to the objectives of their ownership, their socioeconomic characteristics, their management strategies, their farming experience, and so on. The new characteristics of forest owners have contributed to increased co-ownership (through, e.g. inheritance or marriage, or in forest commons), parcelisation (dividing a holding into separate smaller holdings) and fragmentation (carving up land into habitat islands). In addition, and as described in Chap. 2 in this volume, legislation and forest policies have partially adapted to these changes, but also form the preconditions for, and constraints on, ownership and management (Živojinović et al. 2015).

As these developments cannot be considered in isolation from each other, the interaction of processes between and within the macro and micro levels is problematised in this chapter. We outline and discuss changes in society with implications for private forest ownership, and subsequently introduce relevant theoretical concepts to be used when discussing potential future trajectories of change. The section "Forest Ownership in a Changing World" introduces some of the major changes occurring on a macro level in society that provide a framework within which to understand changes in NIPF ownership, including urbanisation and land use. These demographic and socioeconomic changes are also mirrored by the NIPF owners and, although they still differ in many respects from the general public, their composition is actually moving closer, as also described in section "Demographic and Socioeconomic Changes". In the section on co-ownership, parcelisation and fragmentation, we highlight how earlier and current regulations and practices in different countries create preconditions for forest ownership today and in the future. The changes on a macro level have implications on the micro level for forest owners. In order to understand the behaviour of NIPF owners, it is essential to also take into account their subjective characteristics. Hence, in section "The Owner's Perspective on Forest Ownership" we outline the concepts necessary for understanding the forest owners from their perspective, including lifestyles, social influences such as norms, place attachment and identity. In addition, we describe the cognitive hierarchy of values and attitudes, also highlighting the role of forest values and management objectives, as key determinants of management behaviour. In the section Discussion, the impact of the macro-level changes on forest owners is discussed and potential future developments outlined.

The geographical focus is primarily Europe, excluding Russia. The data we need for a comprehensive description, however, are not always available for all countries (e.g. Eurostat data exclude some countries). Furthermore, in this chapter we refer exclusively to NIPF owners; hence private companies, forest commons, public forests, and so on are not included. Detailed data on the characteristics of Swedish and Finnish

NIPF owners serve as an illustration of the changes within the forest owner group.

Forest Ownership in a Changing World

Urbanisation and Land Use

In Europe, 738.4 million people (in 2015) populate an area of 10.2 million km^2. However, like most of the industrialised world, the majority of European countries have a high level of urbanisation.[1] Urbanisation is closely related to industrialisation and economic development, and the differences in urbanisation between different parts of Europe can, to a considerable degree, be explained by the later economic restructuring process in eastern and southern parts of Europe compared to the northern and western parts. Among the most urbanised countries are Belgium, Malta, The Netherlands and Luxembourg, and also geographically large countries like Sweden, Finland and the UK, while Romania, Slovakia and Slovenia have the lowest degree of urbanisation at around 50 per cent. The rate of urban, however, shows a somewhat different pattern. Luxembourg and Norway with 80 per cent or higher urbanisation have also had a high annual urbanisation growth of 1 per cent, while Ireland with a lower degree of urbanisation shows the highest annual change. However, five countries have experienced a negative rate of urbanisation, which could almost be termed ruralisation: Latvia −0.67 per cent, Lithuania −0.53 per cent, Estonia −0.45 per cent, and Bulgaria and Slovakia −0.31 per cent each (see Fig. 3.1). One explanation for this

[1] Urbanisation: "the process of the formation and growth of cities", and "The change in a country or region when its population migrates from rural to urban areas." Ruralisation: "The process of making rural" (http://www.wordsense.eu/ruralization/, accessed 8 August 2016).

The Eurostat classification of areas into urban versus rural is based on a classification of grid cells of 1 km. To be labelled urban the cells should fulfil two conditions: a population density of at least 300 inhabitants per km2 and a minimum population of 5000 inhabitants in contiguous cells above the density threshold. The other cells are considered as rural. A further distinction is made between predominantly urban areas and intermediate urban areas, where the former refers to a city of more than 500,000 inhabitants representing at least 25 per cent of the regional population (Eurostat 2017).

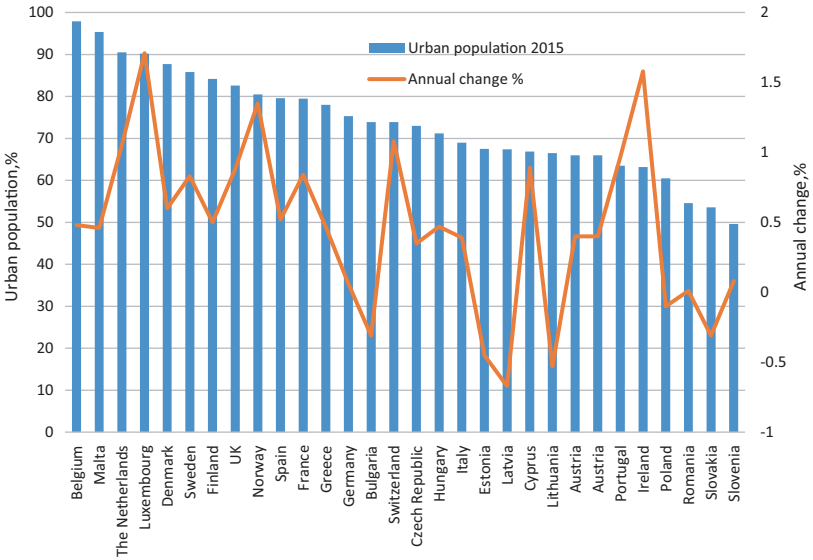


Fig. 3.1 Urban populations in 2015 and rate of urbanisation (annual rate of change 2010–2015 estimated) in the EU, Norway and Switzerland. *Source:* The World Fact Book 2016

negative trend is a national and international out-migration from the cities. It is worth noting, though, that these are the statistics according to the Eurostat definition. Different countries have different definitions of *urban* and *rural*; for example, in the Finnish case, Eurostat reports an 84.2 per cent urban population while Statistics Finland reports 69 per cent (Statistics Finland 2014: 692).

To summarise, most people in Europe live in urban areas. Most of the thinking and planning regarding land use, it can be argued, is done by urbanites. The concept, vision, values and utility of forests and the countryside today are largely defined by people living and working in the city.

Demographic and Socioeconomic Changes

Changes in the composition of the NIPF owner group in Europe reflect various broader processes of change. Population ageing is a key societal challenge in Europe, and this trend is also present among NIPF owners

(e.g. Schmithüsen and Hirsch 2010); increased longevity contributes to a later transfer of holdings to the next generation. In France and Romania, for example, the majority of NIPF owners are near retirement age (60 years old), and only a small share are younger than 30 years old (Zhang et al. 2004). The gender balance has also improved, although women are still in the minority in all countries except Lithuania and Slovenia (Follo et al. 2016). It should be noted, however, that the availability and quality of gender-disaggregated data vary and are, in general, poor across Europe. Due to restitution and privatisation, the highest proportion of female forest owners can be found in Lithuania (51 per cent), Slovenia (48 per cent), Latvia (44 per cent) and Estonia (44 per cent). However, in these countries, and in Sweden, Norway and Finland as well as France and Austria, forest estates owned by women are generally smaller than those owned by men. Data also indicate that female forest owners tend to be older than male owners, and that in Finland, Norway and Sweden female forest owners are less likely to live on or near their holdings. This may be due to differences in educational level and an existing virilocal praxis in Scandinavia whereby female forest owners are better educated than male forest owners, and may have had to move to find a suitable job (ibid.).

Previous studies have also suggested that NIPF owners' financial situation has developed towards reduced dependence on forest income and forest-based livelihoods (Boon et al. 2004; Ziegenspeck et al. 2004; Wiersum et al. 2005; Lien et al. 2007; Urquhart and Courtney 2011). In Sweden, for example, NIPF ownership has undergone various compositional changes over the 20-year period 1990–2010. For an in-depth description of these changes, see Box 3.1. Although these figures apply to Sweden, they serve as example of the composition of NIPF owners in many European countries.

Box 3.1 Demographic and Socioeconomic Changes of Forest Owners in Sweden

The table provides information on the key demographic and socioeconomic characteristics of NIPF owners in general, as well as for the resident and non-resident subgroups. The share of female NIPF owners has grown over

time, from a quarter in 1990 to nearly 40 per cent in 2010. Nevertheless, the gender structure remains uneven. This is particularly the case among residential NIPF owners, whereby men constituted around two-thirds of the group in 2010. It is only among non-resident owners that the gender structure is similar to that of the general Swedish population. However, it should be noted that the trend towards a higher level of female forest ownership has not brought about a concurrent increase in the size or value of forest properties owned by women. A comparison of the characteristics of forest properties owned by women and men reveals that, on average, the size and value of female-owned forest holdings were lower than those owned by men. This pattern was largely unaffected by the numerical increase in female NIPF owners. In 1990, the average value of women's forest properties was 80 per cent of the corresponding figure for men. This ratio had risen only slightly to 82 per cent by 2010. The proportion of female NIPF owners' average forest property size was stable over the study period, at 84 per cent compared to male owners.

As is the case for the general population of Sweden, and as a general trend in Western societies, NIPF owners are ageing (from a relatively mature baseline). This may be the result of a combination of increased longevity and the age structure of NIPF owners who enter or exit forest ownership, respectively. Over the 1990–2010 study period, the average age increased from 54 to around 58 years. In terms of the composition across age groups, the share of younger NIPF owners (age 40 and younger) declined from 19.7 per cent to 12.1 per cent, while the share of NIPF owners of retirement age (age 65 and upwards) rose from 24.6 per cent to 29.4 per cent. The age profile of resident and non-resident NIPF owners converged over the study period, presumably as a result of older people entering forest ownership (and/or younger people exiting forest ownership), particularly among the non-resident NIPF owners.

Changes in the occupational status and income structure of NIPF owners partially reflect their ageing. Over the course of the 1990–2010 period, the share of NIPF owners—both resident and non-resident—who were retired or had other occupations grew, while the share of employed individuals declined. Among both residential and non-residential NIPF owners, the average wage income as well as the pension income rose substantially over the period. However, non-residential NIPF owners nevertheless had higher incomes, at least partially a likely result of their higher level of education on the group level. The educational profile of NIPF owners has changed radically over the 20-year period 1990–2020, with a doubling of the share who had completed tertiary education. While the increase in level of education is observed among both residential and non-residential NIPF owners, there were still clear differences across the groups. For example, the share of NIPF

owners with only compulsory education was notably higher in the resident subgroup compared to the non-resident owners.

Table. Demographic and socioeconomic characteristics of NIPF owners in Sweden, in 2010 and 1990

	1990			2010		
	Non-residential	Residential	Total	Non-residential	Residential	Total
Sex						
Men	62%	79%	75%	55%	64%	61%
Women	38%	21%	25%	45%	36%	39%
Age (mean)	51.5	54.5	54.0	57.5	57.5	57.6
Occupation						
Work	78%	73%	74%	67%	68%	68%
Other	22%	27%	26%	33%	32%	32%
Wage income (in SEK 1000, mean)	239	162	183	359	264	293
Pension income (in SEK 1000, mean)	116	90	93	216	158	174
Level of education						
Primary/ compulsory	27%	54%	48.%	13%	29%	25%
Secondary	38%	36%	36%	37%	48%	45%
Tertiary	35%	10%	16%	50%	23%	30%

Source: ASTRID database

Note: Age in years, wage income and pension income are calculated for those with wage income >0 and pension income >0, respectively. Wage income and pension income for 1990 have been recalculated to constant prices based on the price level in 2010

Co-ownership

Co-ownership (not including commons), in the sense of a holding being owned by more than one person, is not unusual. In Finland there were 347,000 NIPF-owned holdings in 2014, while the corresponding num-

ber of NIPF owners was estimated at 632,000. In Sweden there has been a significant increase in co-ownership: between 1990 and 2010 the number of NIPF owners increased by 54 per cent, while the number of privately owned properties decreased by 3 per cent (ASTRID database). From the NIPF owner's perspective, co-ownership is common, as two of three owners own their forest property together with someone else—often spouses or other family member/s (Živojinović et al. 2015: 597). In cases of inheritance, which is the most common way of becoming a forest owner, men are more likely to share ownership with their wives, while women are more likely to co-own with their siblings (Lidestav 2010).

When a property is owned by two or more people, there is a risk that the owners do not have the same objectives for ownership or the same management strategies, or that decisions regarding forest management are blocked by one owner. In order to limit increased co-ownership, some countries have instituted regulations, either more recently or traditionally: in Austria, traditional farm holdings (*Erbhöfe*) cannot be divided but are instead handed over as a whole to a single heir. In Norway, out of 116,002 estates there are 10,358 with joint ownership, and 139,047 NIPF owners. To regulate the growth of co-ownership, the Norwegian Land Act Section 12 states: "Property that is used or may be used for agriculture or forestry may not be divided without the consent of the Ministry" (Živojinović et al. 2015: 412). However, in most countries general inheritance laws take precedence, thereby contributing to an increase in the number of small properties. In Spain, the common law for private properties stipulates that the land be split in equal parts among the heirs. However, there are specific inheritance regulations in some regions where ancient civil laws have survived (Živojinović et al. 2015: 582). In the Spanish province of Catalonia, most families respect the old rule of *El hereu*, the informal institution that establishes inheritance rights for the eldest son in order to avoid the division of the property. Finnish legislation supports the equal rights of all siblings to inherit forest land, and over the years this has resulted in its division into smaller holdings. There is no lower limit regarding the size of holdings. Further, taxation laws have led to a situation whereby the presumptive heir has not been able to buy out siblings and consequently the holding has been split. General inheritance laws, supporting equal rights for all siblings, also apply in Sweden. However, the common practice in most parts of the

country has been to prioritise to the eldest son, and despite an ongoing shift towards more gender-equal rights, the patrilineal structures are still apparent (Lidestav 2010). When one buys forest land in Sweden, two legal restrictions apply. The first aims to support employment opportunities and living in rural areas, and the second to maintain balance in ownership proportion between private individuals and legal entities (companies, the Church, municipalities, associations and foundations). However, a private person can obtain an exemption from these rules if there is no other buyer who meets these criteria (Živojinović et al. 2015: 598).

Co-ownership is related to parcelisation. Parcelisation, evident in Europe as well as the USA, involves a significant shift from a few landowners with large holdings to many landowners with smaller holdings. Parcelisation is often the result of generational shifts by which the original owners hand down the holding to all their heirs instead of only one (often the oldest), or the heirs sell part of the land to pay the inheritance taxes. As there is support for a positive relationship between the size of holding and harvesting, concern over timber supply has been raised, not least connected to higher costs for harvesting (Suuriniemi et al. 2012). In order to counteract the anticipated negative effects of parcelisation several countries, including Sweden, have introduced different policies and measures. In Finland, for example, parcelisation and the increase in the number of small forest holdings took place especially during the latter half of the twentieth century (see Box 3.2). Now, national policy aims to prevent further parcelisation and enhance the formation of larger holdings (Živojinović et al. 2015). In Greece, the division of a forest holding is prohibited without permission from the Ministry of Agriculture. In Germany there are also restrictions on parcelisation, that is, selling forestry holdings, or parts of them, is only legal with an administrative permit. Although there are no specific rules regarding the inheritance of forests in Germany, regional-level courts can decide whether a holding must remain undivided and who will inherit it in cases involving more than one heir (Živojinović et al. 2015). A more open policy is found in Slovakia, for example, where existing forest land can be divided into several parcels between heirs. If the area of a new plot is less than two hectares, the heir is obligated to pay a fee of 10 per cent of the value of the land. If the area is less than 1 hectare, the fee is 20 per cent of the value of the forest land (Ambrušová et al. 2015).

The Owner's Perspective on Forest Ownership

Societal changes in urbanisation, as well as ongoing demographic and socioeconomic changes within the private forest owners' corps, illustrate how the owners' situation has changed rather rapidly in recent decades. However, a closer look at the forest owners from their perspective is necessary in order to understand how they are interpreting and responding to these new conditions. Hence, in this section we attempt to understand the owners not based on external circumstances, but rather focusing on them as individuals and as part of a local social context.

Through the use of concepts such as lifestyle, and the consideration of different social influences (e.g. norms), the interaction between the societal and social contexts and the individual owner becomes evident. In addition, we draw on place attachment and identity to stress the owner's perspective on relationships with places and owning land, both keys to an understanding of forest owners. The cognitive hierarchy of values and attitudes can explain management behaviour and, as part of this hierarchy, the importance of both the more general forest values and the more specific management objectives is considered. These concepts are relevant for understanding people in general, as part of a physical, societal and social context; and in relation to forest owners, a nuanced portrayal including potential interactions between the macro and micro levels is made evident.

Lifestyle

The concept of *lifestyle* encompasses a bridge between the external context and the individual level, describing different categories of people based on resources. These include not only demographics but also, for example, as concerns life goals, value orientations and attitudes (Ziegenspeck et al. 2004). Non-residential forest owners—that is, being a forest owner but not living on the property or in the same municipality where the property is located—constitute an increasing share of forest owners in Europe (Ziegenspeck et al. 2004). For example, in Sweden the share of non-residential forest owners increased from 21.3 per cent in

1990 to 27.9 per cent in 2010. The average distance between forest owner and property increased from 37.1 to 58.3 km over the same period. The social change and the modernisation of social structures that have taken place are linked to changes in lifestyle. But the term *lifestyle* is also useful in describing the traditional forest owners who reside on their property and manage their forest (Ziegenspeck et al. 2004).

Box 3.2 Parcelisation of Forest Holdings: The Finnish Case

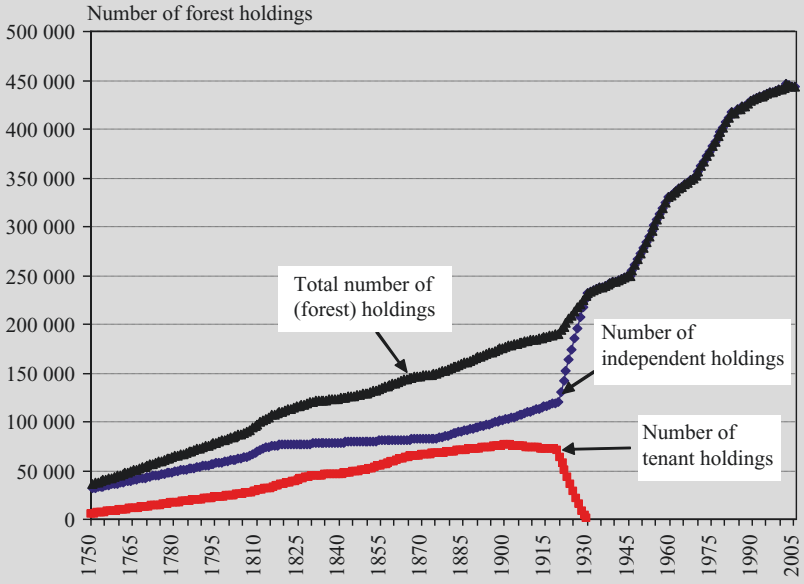
Private forest ownership was established in Finland via the Great Partition legislation of 1757 and 1775 (Karppinen 1988a), in which village forests were divided between the houses in a village. The redemption of leasehold properties after the Civil War in 1918 gave tenant farmers, leaseholders and other landless people the right to buy their land or dwelling sites. The increase in the number of independent holdings due to this division can be noted in the figure below. During the period between the world wars, two settlement acts were launched (1922 and 1936), accelerating, to some extent, the parcelisation development of forest holdings. After the Winter War (1939–1940), Finland had to cede large territories to the Soviet Union and the resultant refugees were given land under the Emergency Refugee Resettlement Act of 1940. Soon another war broke out, interrupting the implementation of these settlement activities. In 1944, Finland again had to cede large areas; land was distributed to refugees, war veterans or their widows, as well as war invalids, based on the Land Acquisition Act of 1945. The implementation of the act resulted in the establishment of some 140,000 new farms or other holdings, and implementation went on well into the 1950s.

The inheritance system, throughout history, has been the primary vehicle of landownership change. However, wars and their consequences have been the dominating cause of the parcelisation of forest holdings up to the 1960s. Currently, some 85 per cent of ownership changes take place via the inheritance system: 45 per cent of the holdings are inherited or donated, and 40 per cent are purchased from parents or relatives, or both. Only 15 per cent of forest holdings change owners on the free market (Hänninen et al. 2011). Usually, these changes mean further parcelisation of the holdings because there is no preventive legislation as concerns land division. The statistical evidence suggests that the size distribution of forest holdings is becoming polarised (Leppänen and Torvelainen 2015). In addition to parcelisation development, enlargements of forest holdings are also underway. However, the mean size of the holdings has been diminishing (Ripatti 1996; Hänninen et al. 2011; Leppänen and Torvelainen 2015). The number of forest holdings exceeding 2 hectares of forest land, including all ownership types regardless of location, is currently 347,000; the corresponding

number of forest owners is 632,000, mean size being 30 hectares (Leppänen and Torvelainen 2015).

Parcelisation of forest holdings is considered a threat to the timber supply from private forests and effective timber production on private holdings (Hänninen and Karppinen 2010). Several policy measures have been planned to mitigate this development and to enhance entrepreneurship in private forestry, such as changes in taxation, enhancing generational changes and forest land renting (Metsätilakoon 2012). The forest holding size problem has also been mentioned in the National Forest Strategy 2025 (Kansallinen 2015). To date, however, few measures aimed at preventing parcelisation have been implemented.

Parcelisation of forest holdings can also be seen from a different perspective. Social sustainability concerns the social welfare of people. The more smallholdings there are, the more forest owners. These owners can enjoy many kinds of economic, social, ecological and cultural benefits from their *petit* forests: for instance, they can have access to firewood for domestic use, they can enjoy outdoor recreation and scenery, they can feel their roots to their native locality via forest ownership, or they may be bird-watchers.



The number of forest holdings in Finland 1750–2005. *Source:* Leppänen and Hänninen (2008)

A more recent trend in lifestyle and forests is moving in the opposite direction—urban people buying residential properties beyond the metropolitan fringe, with some of these properties including forest. Thus, a group of new forest owners is emerging whose primary reason for forest ownership is to acquire a place of residence. There is also evidence that some leave the urban environment in favour of living on their forest holding. The appeal of the rural lifestyle is clear. For these exurban migrants, owning forest is motivated by more lifestyle-oriented aspects such as privacy, protecting nature, pride, personal identity and preserving family traditions, objectives that can be perceived as more important than timber production and economic concerns (Kendra and Hull 2005). This shift in reasons for ownership has been noted and studied particularly in the USA, where stressed urbanites may be attracted to the belief in a slower, simpler and saner lifestyle in rural environments. For example, Mehmood and Zhang (2001) argue that lifestyle changes and urbanisation can contribute to parcelisation. A desire to live close to nature and the woods encourages the sale of forest lands for residential purposes, and as holdings are usually larger than house owners want, this leads to their subdivision into several residential holdings.

This exurban lifestyle has raised concerns as an increasing number of forest owners, through exurban migration, are contributing to parcelisation. From a forest management view, a rural lifestyle and residence in combination with an urban-oriented work life can jeopardise forest production. Rather, "forests tend to be perceived primarily as decorations, a view that diminishes the value of traditional forestry" (DeCoster 1998: 26).

Social Influences

Even if the individual forest owner is legally ultimately responsible for the management of the forest, influences from the social setting are important to consider. Social influences come in different forms. For example, social support includes help from exchanges in interpersonal transactions (Heany and Israel 2002). Different forms of social support have been identified, including, for example, informational support such as advice and information from others, and instrumental support that others can

provide as well as assistance in the form of appraisal (e.g. feedback) and emotional support (Stroebe and Stroebe 1996). The social setting, including perceived social support, was found to be important for a more positive view of coping with forest threats (e.g. storms) among private forest owners (Eriksson 2016). The social setting may furthermore exert impact through normative influences. Externally originated norms, or social norms, depict what is appropriate and refer to the influence that important others have on us, be they family members, friends or others whose opinions we consider important. For example, it has been shown that communities or social groups may successfully discourage the overharvesting of a resource when social norms are established and manifested in commonly held rules or standards of behavioural conduct (Ostrom 1990; Jansen et al. 2010). Social norms may be conveyed either in terms of subjective norms capturing the perception of what is expected of us by important others or through others' behaviours, referred to as descriptive norms (Ajzen 1991; Cialdini et al. 1990). Breaking social norms can lead to punishment by the people around you. Furthermore, social norms can become internalised personal norms and as such influence thoughts, feelings and behaviours independent of the social context (Manstead 2000). Social influences, and particularly local social norms, have been found to be important for forest owners' decision-making (Lind-Riehl et al. 2015). For example, Domínguez and Shannon (2011) suggest that a social norm about the importance of caring for inherited forest can be internalised into a personal norm and motivate active forest management among forest owners. Cooperative forest management can thus foster a sense of neighbourly stewardship, which may provide a starting point for the development of social and personal norms (Meadows et al. 2013).

Formal and informal forest networks are important social settings for forest owners. Sagor and Becker (2014) revealed that owners who had larger networks and were more satisfied with their information network were also more active in managing their forest (see also Kittredge et al. 2013). More specifically, Ruseva et al. (2014) found that social ties providing learning and service were important to being an active forest owner. This is also evident in participatory approaches to forest planning, whereby a multitude of interests and actors have the opportunity to have their input recognised in the planning process (Kangas et al. 2001, 2006).

Paletto et al. (2015) identified key actors, and the social networks between them, in this participatory planning process as belonging to the following categories: municipalities, public administrations in the given province or region, associations (e.g. NGOs, environmental and local), and actors in the forest-wood chain. In addition, it has been shown that cooperative forest management among small-scale private forest owners that crosses boundaries between public and private interests may facilitate restorative actions and plans, especially in peri-urban forests (Meadows et al. 2013). Forest networks may thus include close ties with, for example, family, friends and perhaps neighbouring forest owners, but also weaker ties and temporary contacts with, for example, forestry advisors, governmental agencies and others.

Place Attachment

Generally, the bond people develop with places is referred to as place attachment (Altman and Low 1992). The concept is not clear-cut, however, with the definition and not least the measurement of attachment varying between disciplines. Earlier studies saw attachment as a two-dimensional concept—place identity and place dependence—whereby the former referred to the *self* and feelings about a special setting while the latter related to how, for example, a physical setting enables its intended use. The environment was added later as a dimension, including the natural environment and recreation setting (e.g. Kaltenborn 1997), and social connection through belongingness and social bonding (Hidalgo and Hernandez 2001). A more integrated approach was introduced by Raymond et al. (2010), who suggested five dimensions: place identity, dependence, nature bonding, family bonding and friend bonding (Westin 2015). People can be attached to several places simultaneously, for example, their present place of residence and their forest holding (if these are not the same). As studies on attachment to forest holdings are scarce, parallels can be drawn to studies on second homes, natural environments and recreational areas. For example, in a study of second-home owners in southeast Norway, Kaltenborn (1997) found that intensity of use rather than length of tenure affected attachment positively. Transferred to forest

holdings, it could be hypothesised that forest owners who are more active in management are more attached—although the causality is not clear. Perhaps owners who are more attached are also more apt to take an active part in management. In a study on youth who had participated in natural resource-based programmes, Vaske and Korbin (2001) found a relationship between place attachment (measured in the two dimensions, place dependence and place identity) and environmentally responsible behaviour. With respect to forest ownership in change, and particularly the increased number of non-residential owners, a relevant question is whether attachment to the forest estate will become weaker among some owners, or change in some manner (e.g. the bond with the forest remains strong but the social bonds weaken). This may in turn influence management, time spent on the holding, propensity to migrate to the holding, and so on.

Identity

Identity refers to the sense of who we are, our name, our qualities, and so on that make us—as individuals or a group—different from others. Identity constitutes the core of a person's being. It is also connected to places, and people can identify with places—one or more of them. Place identity has to do with emotions and relationships that give meaning and purpose to life. It heightens self-esteem, increases the feeling of belonging to a community or a group and has been shown to be an important part of communications about environmental values (Williams and Vaske 2003). Forest ownership and management contribute to, and are influenced by, owner identity (Bliss and Martin 2008; Follo 2008). Ownership can be a way to express or maintain your identity in relation to others, and a person can identify as a forest owner (Lähdesmäki and Matilainen 2014).

Ownership, of course, also has a legal reality; for example, what someone's forest property is, as ownership is recognised by society through regulations and laws. But there is also a psychological ownership, which relates to the feeling of "it's mine" and is recognised primarily by an individual who holds this feeling and manifests the rights felt to be associated

with psychological ownership (Pierce and Rodgers 2004). In a study of Finnish forest owners who had inherited their holdings, Lähdesmäki and Matilainen (2014) addressed psychological ownership and argued that sense of identity and perceived control can influence whether forest management decisions are guided by tradition, economic incentives or responsibility for the holding. By combining the degree of forest owner identity and control, they could classify forest owners into four types: restricted, indifferent, detached and informed. It could be argued that new NIPF owners (non-residential, not financially dependent on forest revenues, etc.) might experience a weaker sense of identity, which could have different implications for management depending on perceived sense of control.

Values and Attitudes in a Hierarchical Model

Values and attitudes are the basic building blocks that form people's views and actions in any given situation. Taking the form of a cognitive hierarchy, these concepts can be used to explain forest owners' intentions and behaviour. Values are defined as core aspects of our self-concept (Sherif and Cantril 1947; Rokeach 1968) and form the basic truth about ourselves, thus relating to a more abstract evaluation. Values are indeed said to transcend situations, and as such are used as guiding principles in all that everyday life entails (Schwartz 1994). One common definition of value types are the two dimensions of values (Schwartz 1992, 1994), one reflecting the tension between the wish to act independently and the unwillingness to change (openness vs. conservation), and the other between the pursuit of self-interest and pursuit of the welfare of others (individualism vs. collectivism). Values, not only social norms (see section "Social Influences"), can furthermore lead to the activation of a personal norm, representing a personal opinion about what is right and wrong in a specific situation (Schwartz and Tessler 1972). An attitude, on the other hand, is defined as an internal psychological tendency to evaluate some entity (e.g. attitude object) with some degree of favour or disfavour (Eagly and Chaiken 1993, 1998). In contrast to values, attitudes are thus more specific in the sense that they concern specific objects.

Attitudes are manifested as thoughts and beliefs about an attitude object (e.g. cognition), emotions evoked by the attitude object (e.g. affect), and intentions and actions relevant for the attitude (e.g. behaviour).

Values and attitudes can be arranged hierarchically as part of a cognitive hierarchical model in which more general cognitions, such as values, form the basis for more specific cognitions such as beliefs (in terms of the thoughts associated with an object) and personal norms, but also attitudes and behaviours (cf. Fulton et al. 1996; Eagly and Kulesa 1997; McFarlane and Boxall 2003). Personal norms, as well as core values, are said to be of importance in the process of deriving attitudes on specific issues (Stern et al. 1995), and others even pinpoint the personal norm as vital for forming intentions and engaging in behaviour, as seen in the norm-activation theory when explaining pro-social behaviours, including pro-environmental behaviours, for example (Schwartz 1977).

Forest Values

In forest research, the reasons why humans value forests—called *forest values*—have been highlighted as part of the cognitive hierarchy (Manning et al. 1999; McFarlane and Boxall 2003). People may, for example, value the forest for its intrinsic values (called ecocentric or biocentric values) or for how it is used to satisfy human interests (called anthropocentric, use or instrumental values) (e.g. Bengston 1994; Thompson and Barton 1994; McFarlane and Boxall 2003). Anthropocentric values may furthermore be divided into, for example, economic, aesthetic, recreation and cultural values (e.g. Manning et al. 1999; Kant and Lee 2004; Li et al. 2010).

Consistent with a cognitive hierarchal structure, in the Swedish context Nordlund and Westin (2011) revealed that the stronger the collective values (e.g. social justice, loyalty, broad-mindedness) were, the more positive these forest owners' attitudes were towards an environmental management focus in forestry; this is in comparison to the result indicating that conservative values (e.g. social order, respect of tradition, self-discipline) were linked to a more positive view of forest management that promotes economic values (e.g. production of timber, etc.). However, forest values reflecting the extent to which production, ecology and recreation were

valued in the forest were even more important for management attitudes. It was evident that forest values guide private forest owners' attitudes towards forest management. The stronger the ecological forest values, the stronger the environmental management attitudes; and similar links were found between recreational forest values and human-centred management attitudes, as well as production forest values and economic management attitudes. Notably, it is entirely possible to endorse, for example, ecological and production values at the same time as indicating that owners may not perceive these to be in conflict (Nordlund and Westin 2011). Hence, the links between forest values and forest management are likely to be complex. The owners' management is presumably the result of a set of forest values (e.g. production and ecology, or production only), and owners may incorporate values into their management choices in different ways (e.g. taking into consideration nature values by avoiding clear cuts altogether or using a tree retention scheme).

In relation to the ongoing sociodemographic changes among forest owners it is noteworthy that demographic differences in, for example, forest values and attitudes have been found. In their study from Sweden, Nordlund and Westin (2011) found that women owning forests emphasised the importance of ecology and recreation more than men did, and that men attached greater value to timber production than women did. Furthermore, resident owners valued production more than non-resident owners did. However, differences were generally minor and rarely significant in explaining management attitudes. Compared to forest owners, the general public has been found to emphasise ecological and recreational forest values to a greater extent (e.g. Haugen 2015), thus suggesting that there are somewhat different opinions concerning how forest should be used among the general public versus the forest owner group.

Objectives of Forest Ownership

Along with the demographic transition of forest owners, their needs and objectives concerning their forest property have also become more versatile. Long-term objectives of forest ownership are based on owners' interests concerning their forest property, such as the provision of monetary,

recreational, emotional, ecological or aesthetic benefits. One objective of forest ownership is a value-type concept, which can be defined as follows: "rather permanent conception of a desire concerning one's own forest property and influencing forestry behaviour" (Karppinen 2000).

Objectives of forest ownership are sometimes called landowner objectives, or reasons for owning forest land (see Butler 2008). Objectives are often described by creating typologies of forest owners based on their stated objectives (e.g. Karppinen 1998b; Kline et al. 2000; Boon et al. 2004; Salmon et al. 2006; Ingemarson et al. 2006; Majumdar et al. 2008; Favada et al. 2009). According to Ní Dhubáin et al. (2007), forest owners' objectives can be basically divided into those related to timber production and timber sales on the one hand, and those related to consumption, of either non-timber products and services or household timber, on the other. For example, in the Danish typology (Boon et al. 2004) *classic forest owners* emphasised income generation and *hobby owners* valued aesthetics and biodiversity benefits. Owners with *multiple objectives*, both monetary- and amenity-related, have also been identified in several studies (Karppinen 1998b; Kline et al. 2000; Majumdar et al. 2008). *Indifferent and passive owners* have also been identified (Boon et al. 2004; Salmon et al. 2006; Favada et al. 2009). These forest owners may have some kinds of amenity objectives, but do not have a strong interest in their forests.

In Finland, several studies have shown that objectives of forest ownership do affect forest owners' behaviour. Kuuluvainen et al. (1996) established a link between ownership objectives and harvesting behaviour; the owners with multiple objectives seemed to be the most active in their timber sales. Another study by Favada et al. (2009) confirmed this V, and further found that owners with solely non-timber objectives or those with no stated objectives at all were the most passive in their timber sales activities. The most recent study by Kuuluvainen et al. (2014), inter alia, confirmed that multi-objective owners cut clearly more per hectare and per year than recreationists or indifferent owners did.

As regards silviculture, Ovaskainen et al. (2006) found that amenity objectives explained both the probability and the relative extent of timber stand improvements. It seems that forest owners believe that stand improvement enhances such amenity values as accessibility and within-

stand visibility, which increases the recreational value of the stand. As a consequence, a change in ownership objectives among forest owners could thus lead to changes in forest management.

Objectives of forest ownership are more concrete than values, and can be regarded as subordinate to values in mental hierarchies (Karppinen 2000). Karppinen and Korhonen (2013) studied the relationships between the values and objectives of forest ownership using Finnish forest owner data and applying Schwartz's value theory. The value profiles of recreationists and multi-objective owners appeared to be rather similar. However, as Kuuluvainen et al. (2014) found, there were considerable differences in the harvesting behaviour between these objective groups. The relationship between values and forestry behaviour remained ambiguous.

Box 3.3 provides an example of a typical Swedish forest owner and how his/her typical forest property can yield financial revenue—income as well as capital. It also illustrates the need to consider both tangible and intangible aspects connected to forest and forestry in order to understand forest owners.

Box 3.3 Material Conditions, the Importance of Forest Income and Capital

Forest land is a highly material thing; even though, as reported in previous sections, there are also many, less tangible, aspects and assets connected to forest and its ownership. In this section the focus will be on the material side of what forest land and ownership imply to an individual forest owner. To this end, a typical Swedish forest owner with a typical forest property will be the unit of our report. We will call him Lars, which is the most common name for Swedish men around the age of 60, that is, the typical age and gender of a forest owner. The forest property consists of 50 hectares of productive forest land and 11 hectares of non-productive forest land.[2] The standing volume of timber is 7540 cubic metres, and the annual increment is 225 cubic metres. Every year, Lars carries out a small amount of harvesting

[2] As there are 329,541 individual owners but 229,802 forest estates, the average owner can be regarded as the owner of 35 hectares of productive forest land and 8 hectares of non-productive forest land (Swedish Forest Agency 2014, pp. 31–33).

Forest land, according to established criteria, can produce an average of 1 cubic metre of timber per hectare per year (Swedish Forest Agency 2014, p. 341).

himself for his own consumption, primarily fuelwood (25 m³). He harvests for sale only every five years. Consequently, during his custody of 20 years (cf. Chap. 4.6, this volume) he will likely carry out final felling on 10 hectares and thinning on 20 hectares. Altogether, this amounts to 4000 cubic metres (i.e. 90 per cent of the increment), of which 3500 cubic metres are sold to the forest owner association he is a member of (cf. Box 2.1 in Chap. 2, this volume). The sales will provide a revenue of approximately of SEK 1 million (EUR 111,000), from which costs for harvesting operations, reforestation and other maintenance must be deducted. As Lars is a residential forest owner, he does much of the maintenance himself, including planting, cleaning and some thinning. He also invests in some equipment, which, in line with results from a sales survey by Lindroos et al. (2005), can be estimated at SEK 50 per hectare per year, or in Lars' case SEK 2500 per year. Further, when all deductible expenses are combined, that is, investment and operating costs, it can be assumed that 95 per cent of sales are ploughed back into the forest property (cf. Holmgren et al. 2005). Or, to quote Holmgren (2006), "few forest owners can depend on forestry for a living, which suggests they must enjoy and benefit from other values of the forest property. Re-investment may well add to such values, perhaps especially for resident forest owners" (Holmgren 2006: 24). If Lars wished to regard his forest property as an investment, he would first note that its taxation value amounts to SEK 1.5 million. However, if he puts it up for sale, he may expect a bid that exceeds not only the taxation value but also the value of the standing timber and forest land. According to the statistics on recent sales, such a forest property might be sold at a price of SEK 2.8 million (Swedish Forest Agency 2014: 267). In 2012, the sales value, on average, exceeded the value of standing timber and forest land by 86 per cent, which in a certain sense indicates the extent of the other values a forest property represents to its owner.

Intentions and Behaviour

In order to understand the management choices of private forest owners, it is important to consider various factors related to, for example, demographics, the forest, the owner and the owner's immediate social setting (Jacobson 2002; Follo 2008; Nordlund and Westin 2011; Eggers et al. 2014). However, when attempting to predict specific management choices, the best determinant is likely the intention to act (Ajzen and Fishbein 1980). So even if there is no one-to-one relationship between

intention and behaviour, forming an intention is a very good starting point for a behaviour to occur. The intention reflects a readiness or motivation to act, and can be depicted as a factor that intervenes between the formation, or activation, of an attitude and a behavioural response (Eagly and Chaiken 1993). This is described in the theory of planned behaviour (TPB) (Ajzen 1991). This theory states that the extent to which an intention to perform a behaviour can be carried out is the result of three factors: attitude, subjective norm and perceived behavioural control. In addition, a direct relationship is stipulated between perceived behavioural control and behaviour. This way, the individual's internal cognitions, perceptions of social norms and perceptions of the opportunities to act are all important for intentions. According to the TPB, factors such as education, gender, knowledge and values are believed to be more distal predictors of behaviours through the individual's beliefs, which in turn are important for the key concepts of subjective norm, attitude and perceived behavioural control.

In the forest context the TPB has, for example, been applied to understand forest owners' decisions regarding timber stand improvements (and tending of juvenile stands) (Karppinen and Berghäll 2015), the supply of woody biomass for bioenergy production (Leitch et al. 2013; Becker et al. 2013) and participation in carbon sequestration and trading (Thompson and Hansen 2013). Whereas these studies generally support the importance of attitudes, subjective norms and perceived behavioural control for owners' forest management decisions, attitudes may be more important in certain contexts (e.g., Karppinen 2005) while, for example, social factors more important in others (e.g., Karppinen and Berghäll 2015). The conclusion to be drawn, however, is that psychological factors such as attitudes, norms and beliefs about behavioural control are, alongside other factors (e.g. political and economic), of importance to forest owners in their decision-making on the management of their forests. A change in these psychological factors among forest owners, not only as a result of new conditions in a changing society but also following socioeconomic changes among forest owners, would thus likely lead to a change in management practices. As such, these factors should be considered when developing policies and political governance systems.

Discussion

Forest owners are part of a changing society and a changing forest sector. However, they also constitute a large group of people who, despite sharing many experiences with other owners, are individuals with unique experiences and perspectives on what is important in their forest ownership. The portrayal of forest owners in this chapter has stressed the links between changes in society and demographic and socioeconomic changes among forest owners, as well as a closer focus on the individual owner's perspective, in order to understand their management choices and the reasoning behind them.

Globalisation, economic restructuring and the fall of the Iron Curtain in 1989, which opened up for private ownership and demographic change (i.e. ageing), are some of the major drivers behind the changing conditions for private forest ownership in Europe. Further, in most European countries the urbanisation process continues, and the non-industrial private forest owners are, to an increasing degree, urban residents employed in sectors other than forestry. Increased co-ownership, taken together with trends towards fragmentation and parcelisation with decreased profitability from harvesting, contributes to less financial dependence on forest revenues. Although forest ownership is associated with economic value, private forest owners recognise other values—values stressing environmental and social aspects.

Since clear links have been established between sociodemographic changes and changes in values, socialisation and subsequently behaviour (Greenfield 2016), we would expect to see a similar pattern among forest owners including, for example, changes in value priorities in the social setting in which forest management occurs. Notably, though, potential changes in management choices not only result from changes in external conditions and values, but are also influenced by the individual owner's financial needs and experiences and are filtered through more specific cognitions such as beliefs, attitudes and subjective norms (Ajzen 1991; McFarlane and Boxall 2003). Hence, there are no straightforward paths between the changes described and changes in the management choices of forest owners. At present, we are already in the middle of several parallel processes of change, for example, an urbanisation and ageing of the

forest owners' corps, and while it is possible that some processes may endorse each other it is also possible that these changes may have opposing impacts on attitudes and behaviour. Furthermore, forest owners are heterogeneous, often adopting different forest values and objectives for their forest. All in all, this makes it difficult to estimate a simple trajectory for future changes in the management choices of forest owners.

A Pattern of Change

When discussing potential future change, it is possible to depart from the fact that certain differences are evident as a result of demographics (e.g. differences in forest values between men and women), and the changing demographic profile of forest owners would then lead to changes in values and management reflecting these. However, the pattern is complex, probably because of the parallel, and often interwoven, processes of change referred to earlier. For example, studies suggest that women emphasise self-transcendence values (i.e. collective values) more than men, while the reverse has been found for self-enhancement values (i.e. individualistic values) (Robinson 2013). Furthermore, a stronger emphasis on production values and a more positive attitude towards economic management have been revealed among more men owning forest as compared to women (Nordlund and Westin 2011). However, there is no coherent pattern for gender differences in management preferences (Eggers et al. 2014; Blennow et al. 2012). Additionally, even though older people have been found to display stronger economic management attitudes (Nordlund and Westin 2011), other studies have found that younger owners harvest more frequently than older owners (Kuuluvainen et al. 2014; Petucco et al. 2015), or that no significant effect of age has been confirmed (Blennow et al. 2012; Eggers et al. 2014). In sum, interpretations of the importance of the owner's age are manifold. Obviously, there is a lifecycle effect present: that is, like consumption patterns, cuttings also vary during the various life stages, and a young owner's need for funds is different from that of an older owner. At the same time, there is cohort effect, as values tend to be generation-bound. And then, of course, market fluctuations varying in time also affect timber harvests.

Another way of illuminating how societal changes can play a role in a forest context may be to consider how values have changed over longer time periods. A change towards a greater emphasis on environmental values has been revealed from the 1970s onward (e.g. Dunlap et al. 2000). A similar trend has been evident in a forest context, moving from an emphasis on more anthropocentric/utilitarian values to ecological values (Bengston 1994; Xu and Bengston 1997; Bengston et al. 1999). Even when considering shorter time periods, however, it is possible to identify societal changes in values. For example, Robinson (2013) found a value change in Europe over a period of six years, with a stronger emphasis on self-transcendence values in 2008 compared to 2002. Evidence further confirms that changes in people's values exert an impact on natural resource management. For example, studies have revealed that, over a 50-year period, changes in societal values led to obvious changes in park management (Eagles 2010). Even though a major change in values is not to be expected on an individual level, since values tend to be rather stable over time as a result of their being a central component of our self and personality (Schwartz 2012), changes do occur. These may, for example, be particularly evident during life transition events (e.g. moving to a new place) and when the social setting supports such a change (Lönnqvist et al. 2011; Axen and Kurani 2013). A gradual change in values on different levels in society, in the general public and also among professionals may thus lead to shifts in priorities over time (Xu and Bengston 1997). All in all, it is necessary to connect gradual value changes in society with the sociodemographic transformation of the forest owner group in order to understand changes in the owners' values, attitudes and behaviours.

Forest Owners Today and in the Future

The changes in the composition of the forest owner group have already commenced. This is evident from the studies projecting the new forest owner landscape, classifying owners according to their management objectives and strategies, dependence on forest revenues, entrepreneurship, and so on. As described earlier, these typologies have identified, for example, forest owners whose primary objective is production (cf. the

classic forest owner) and those whose primary goal is consumption (e.g. the environmentalist, recreationist, multi-objective owner, the indifferent owner) (Ní Dhubáin et al. 2007). Despite the diversity of objectives for forest ownership, different degrees of involvement in forest activities and different ways of acquiring their forest holdings, forest owners may still be regarded as a single group as their common denominator is that they own forest. However, although they in reality (in an objective description) are forest owners, this does not necessarily mean that they identify as forest owners. This diversification regarding, for example, objectives for ownership is likely a result of ongoing societal changes.

According to Karppinen and Tiainen (2010) (see also Karppinen 2012), future owners may be described using a typology based on forest ownership objectives, which is similar to that presented in earlier literature (Favada et al. 2009; Kuuluvainen et al. 2014). Although the objectives of future forest owners may be rather similar to those of current owners, some changes may also occur. Bioenergy production or carbon sequestration may receive more attention in the future, and major changes may occur in the relative importance of the various objectives. The relative proportion of recreationists and indifferent owners may also increase (Karppinen 2012). Further, the new forest owners who have acquired properties as a result of restitution may have different objectives from those of forest owners who have possessed the property through family ties over a long period. If these future owner groups' timber sales behaviour resembles that of the equivalent current owner groups (Kuuluvainen et al. 2014), timber supply from private forests could diminish. Also, the decreasing use of family labour force in silvicultural activities may lead to a greater demand for planning and operational services.

In a way, the forest owners' forest values and attitudes may converge with those of members of the public who do not own forest, as noted by Bliss et al. (1994), who questioned whether US forest owners' forestry knowledge and attitudes were distinguishable from those of the general public. A larger share of forest owners live away from the forest, emphasise ecological and social (recreational) values more, and perhaps do not identify as forest owners at all—although they de facto are. Even though this applies only to some forest owners, it may push for a change in forest management from within the forest sector. However, even the public,

with a somewhat less positive view on the production of forest biomass for industrial use, believe it is important to use the forest in a variety of different ways (Eriksson et al. 2015). This indicates that the focus may be on finding ways to balance production with, for example, conservation and recreation. In the long term, whereas the basis for controversies in the forest sector is likely to remain in some examples (e.g. in relation to forests high in biodiversity), these ongoing changes may lead to less conflicts between private forest owners and the public as a whole.

In the future, the decisions of private forest owners will collectively influence national forest revenues, the level of biodiversity in forests, and the appearance (e.g. aesthetics) of forests. Even though changes in the forest owner group point in potentially different directions, it is necessary to monitor these processes closely in order to be ready to meet possible new requirements. Adaptations of forest policy may be essential, and government-owner interaction will likely develop in various ways. With more absentee forest owners, close local interaction with government representatives in the forest will not be possible and information needs (as well as means of reaching forest owners) will likely change. Consequently, it is possible to conclude that the heterogeneity of private forest owners makes any attempt to implement a one-size-fits-all solution impossible.

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4

Interactions Between Forest Owners and Their Forests

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Introduction

Since the establishment of the Ministerial Conference for the Protection of Forests in Europe (now FOREST EUROPE) in 1990, forests have been identified as a key to fulfilling long-term objectives of sustainability in European societies. In the context of the green economy, the enhancement of the sustainable management of the ecological, economic and social

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functions served by forests is regarded as crucial. Thus reliable, continuous information about the status of European forest and its multi-functionality, management and use, including ownership, is necessary. However, it has to be acknowledged that most countries have their own more or less comprehensive system for data collection and reporting (Tomppo et al. 2010) and that the information in the *State of Europe's Forests 2015* is mostly provided by national correspondents through questionnaires (extracted from national reports, organised and converted into output tables). From this overview we learn that in 2015, 33 per cent of Europe's total land area, or 215 million ha, was covered by forest and that this forest area had increased from 198 million ha since 1990. In particular, this increment in area as well as number of holdings is taking place on privately owned land. Yet the differences in forest cover, ownership and forest use between countries are significant (see Chap. 2), as is the availability of data. Thirty-one countries have public access to forest inventory data (FOREST EUROPE 2015). However, one general observation is that there is more—and better—information about the forest than the owners and the different kinds of uses. Ownership is basically reported as area of public or private ownership, with no subdivision into types of public (e.g. state, municipal) or private (e.g. individuals or companies). Information on number of holdings is lacking in some countries. More than half of the forest land in Europe is privately owned, and ownership structure is known to have implications for management, production of timber and other forest products and services (see, e.g. Holmgren et al. 2004; Krott 2008; Whiteman et al. 2015). Hence, it is remarkable that information on non-industrial private forest (NIPF) ownership is so scarce.

What information and knowledge would policymakers, authorities and other stakeholders at different levels of society benefit from? How can such data be attained? In this chapter, a number of questions about the interaction between forest owners and their forest are addressed. Some of these may be answered with the help of existing monitoring systems, while others require innovative combinations of spatial and demographic data. We use Sweden as our case, in order to show a number of different approaches for learning more about the forest and forest owner/user relationship from a structural point of view, as it constitutes a national case with highly developed data on forest conditions, ownership

and demographic data. This chapter thus exemplifies the types of issues we could know about forest owners and forests that may vary across different contexts. More precisely, the perspectives are national or local, corresponding to the two main political and administrative levels also responsible for spatial planning. The following questions are addressed:

- How do contemporary trends in forest ownership relate to environmental goals and forestry production/silviculture goals?
- What does the ownership structure look like in terms of spatial and temporal distance between the owner and his/her forest holding?
- Are forest owners motivated to invest work and financing in silviculture intended for timber production, and to what extent do they have the capacity to do it themselves?
- Further, considering environmental goals, including recreational aspects, is there enough old growth forest and forest accessible for recreation?

On a local level, these questions also open up for site-specific questions about which parts (parcels) of the forest land are owned by different owner categories, and how forest conditions and management behaviour differ between them. For example, where are the forest owners located in relation to their forest holdings, and what are the characteristics of resident owners compared to those who live at a distance? The preconditions and requirements for the achievement of local development goals and planning call for data/information with a higher resolution (spatial and temporal).

We start off this chapter by looking into some established monitoring systems and survey methods used in Europe. Then we describe a number of new approaches to surveying forest and forest owner interaction, followed by empirical examples based on Swedish data. Different data sources for charting forest conditions and private forest owners have been used, including satellite data, global forest resource assessments, regional and national forest inventories, cadastral registers and census data and surveys. By combining data from different sources and from a micro level (characteristics of individual forest owners combined with their respective forest holdings) to high-resolution information about forest stands, we illustrate how the questions posed above can be answered.

Existing Monitoring of Forest and Forest Owners

Different countries have different methods for assessing and monitoring their forest resources (Tomppo et al. 2010). In Sweden, Norway and Finland, for example, recurrent sample plot-based, multi-purpose inventories (usually denoted National Forest Inventory [NFI]) are applied, providing regional- and national-level statistics and national full-coverage forest maps by combining field and remote sensing data. Since the end of the previous century, the previously narrow focus on timber resources has broadened to cover information on land use, vegetation, soils, forest health and other parameters found to be important in connection with biodiversity assessments and the estimation of greenhouse gas emissions (Fridman et al. 2014). Combining information on ownership from the National Property Board of Sweden with sample plot data from the Swedish NFI makes it possible to calculate estimates of both forest characteristics and forestry management practices for different ownership categories (Skogsdata 2015).

In order to elucidate the relationship between forest and its ownership or management regimes, specific analysis can also be carried out. For example, comparing the forest conditions in forest commons with other types of property regimes in the same regions reported in NFI allows for an analysis of the relative impact of introducing this specific property regime in terms of both timber resources and harvesting (Holmgren et al. 2004). In order to examine whether forest certification has contributed to the enhancement of environmental protection in Swedish forestry, the NFI data on biodiversity indicators are combined with information on the involvement of owners or owner categories in such schemes (Johansson and Lidestav 2011; Lidestav and Berg Lejon 2011).

The most comprehensive monitoring of private forestry, developed in the US, is called the National Woodland Owner Survey (Butler 2008). It produces information continuously, and is closely connected to the NFI. In Finland, data collection occurs more infrequently, at ten-year intervals, but uses basically the same sampling principle and questions (for details, see Box 4.1). Ad hoc surveys on forest owners and their objec-

tives and behaviour have been carried out in many countries, either to provide overall information about them or with a more specific purpose, for example, to identify subgroups who are less active in harvesting or silviculture. Generally speaking, surveys have been designed based on the perception or entertained apprehensions of NIPF owners lacking the capacity or inclination to follow an industrial commodity production model (Fisher et al. 2010). In Sweden, nationwide mail or telephone surveys have been commonly used, with sets of questions capturing standard parameters related to reasons for ownership and management practice (see, e.g. Lönnstedt 1974; Sennblad 1988; Lidestav and Nordfjell 2005). Later, the developing typologies approach became common in Sweden (see, e.g. Lönnstedt 1989; Carlén 1990; Ingemarson et al. 2006), as well as in several other countries (Ní Dhubháin et al. 2007). The unit of analysis in these studies was usually the individual owners' households. More recently, the cultural and demographic diversity of family forest owners as well as environmental aspects of forestry, and how they may impact on its management, have been recognised in several studies (Fisher et al. 2010; Lidestav and Berg Lejon 2013; Nordlund and Westin 2011; Eriksson 2012; Eggers et al. 2014).

For the purpose of the long-term monitoring of the economic situation in NIPF, an accountancy network of a relatively small but stable sample of forest farm enterprises has been established, for example, in Baden-Württemberg, Germany (Brandl 2002). Such a network can be justified for several reasons, among other things guiding: (1) forest advisory and extension organisations on how to work in relation to financial issues from these results and the additional information; (2) policymakers and the state administration in their decisions on financial subsidies for woodland owners; and (3) researchers in developing secondary research (ibid).

In addition to different accountancy data networks for small-scale forestry enterprises and systematic recurrent surveys of individuals or families, information on private forests and their owners can be obtained by centralised forest planning for the entire forest area, irrespective of ownership and property boundaries. Such forest planning is characterised by a rather strict hierarchical structure of planning levels, whereby forest owners enter the levels in various ways. One of the good points of this

Box 4.1 The Finnish Private Forestry Monitoring System

The first step in creating a permanent monitoring system of private forestry was taken in 1975 (Järveläinen 1978), and the first round of data collection in the current form was conducted in 1990 (Ovaskainen and Kuuluvainen 1994). Since then two surveys have been carried out: one in 1999 (Karppinen et al. 2002) and the most recent in 2009 (Hänninen et al. 2011). Based on these data, several studies on Finnish forest owners and their forestry behaviour have been carried out, and have been useful in the planning and implementation of forestry programmes and policies.

In 2009, systematic sampling by regions from the population of Finnish NIPF holdings exceeding 5 ha of forest area was carried out, producing regionally representative forest holding size distributions. In total, 13,000 NIPF holdings (owners) were sent a mail survey. With a response rate of 49 per cent, the effective sample size was 6318 forest owners (Hänninen et al. 2011). The owners were asked for demographic information, characteristics of their holdings and their ownership objectives, as well as silvicultural activities and timber sales carried out during the five-year period preceding the survey. Respondents were also asked about their connections to extension organisations and their information sources on forestry issues. The 2009 survey was based on three subsamples with specifically designed questionnaires providing data for several studies. The basic items were the same in each questionnaire type, resulting in both countrywide and regionally representative basic monitoring information (Hänninen et al. 2011).

The most recent monitoring information from 2009 has been used in the study by Kuuluvainen et al. (2014) on timber supply. The effects of gender structure and the length of land tenure were especially examined. The study revealed that forest owners' timber supply was negatively related to non-forest income and that the effect of the owners' age was negative. Women sold one cubic metre per hectare per year less than men did, and sold less frequently but in larger quantities per sale than male owners did. Full-time farmers sold one cubic metre per hectare per year more than other owners did. The study results suggested that women may be more price-responsive than men as timber suppliers; however, the timber price data were not truly comprehensive. Regarding the objectives of forest ownership, the study confirmed an earlier notion that owners with non-timber objectives or no stated objectives at all for their ownership sell two cubic metres per hectare per year less than multi-objective owners, ceteris paribus.

Karppinen and Berghäll (2015) studied forest owners' timber stand improvement decisions applying the theory of planned behaviour. According to the results, the most influential factors affecting the intention to conduct stand improvement were norm pressures. Attitudes and perceived controlling factors played smaller roles in explaining stand improvement intention. The most important belief-evaluation items explaining the overall attitude were financial profitability, accelerated forest growth, forest scenery, within-stand accessibility and the individual's own fitness level (healthy exercise), in that order. The extension officers at local forest management associations, local wood purchasers and family members were the most significant sources of norm pressures. The study further revealed that female owners' intentions were more influenced by norm pressures and less by attitudes than male owners' intentions were. The more urban the residential area of the owner, the more important norm pressures from outside were.

system is that harvesting behaviour of NIPF owners can be tracked on the individual property or even forest parcel level as every tree to be cut has to be marked by a public forest service forester. This approach has been in practice in many Central and East European countries in transition, although there are considerable differences between countries with respect to the number of planning levels, the availability of the plans and responsibility for preparing them, the content of the plans, forest owner obligations, and state support and financing (see Box 4.2).

One important source of information on the state and development of the forest resources, but not ownership, in Europe is the NFI, which are conducted in most countries (Tomppo et al. 2010). The design of these inventories varies considerably, as does their regularity. For most countries, aggregated data on, for example, state, growth, management activities and tree species distribution can be reported by owner groups, but not directly connected to the characteristics of the single forest owner. Generally, results from the NFI are used to follow up on the development of the forest resources for different purposes, such as timber production, greenhouse gas reporting and biodiversity, as well as an instrument for following up on forest policy.

Box 4.2 The Slovenian System of Forest Planning and Data Acquisition from Private Forests

Current legislation in Slovenia does not carry an obligation for private forest owners to establish a private forest property plan. Instead, owners' objectives are integrated into forest planning undertaken by the Slovenia Forest Service (SFS) at different levels. Forest owners can participate in the preparation of forest management region (FMR) plans and forest management unit (FMU) plans, provide comments and suggestions concerning the silvicultural plans, and together with the district forester make decisions on the trees to be cut. While forest owners should not manage their forest contrary to forest management plans, they are not obliged to realise all the measures envisioned in them.

Planning is traditionally arranged by forest stand, compartment, FMU and FMR, and represents a combination of bottom-up and top-down approaches. As a result, forest management goals, allowable cut, prioritised areas for particular management objectives, silvicultural goals and measures are defined for the entire forest area, with no distinction between private and public forest land. Ownership objectives are indirectly considered in plans in various ways; for example, allowable cut in the FMU and FMR plans is usually specified by ownership category, silvicultural plans may be co-produced by the district foresters and the owners, and trees to be cut are marked individually together with the owner.

The public institution in charge of strategic and operational forest management planning, silvicultural planning, forest protection, forestry engineering, wildlife and hunting management planning is the SFS. The central system the SFS uses in planning is the Forest Information System (FIS). The FIS is a computerised system consisting of databases and knowledge management tools at different spatial scales (stand, landscape and regional levels), for private and public ownership and for different fields of forest management. The most important sources of information on forests and past management are permanent sample plots (>100,000, re-measured at ten-year intervals), combined remote sensing and terrestrial stand descriptions, and logging registers. Using digital cadastre and the FIS, the SFS is able to identify an individual forest owner and estimate the approximate allowable cut for his property in the next decade. The SFS communicates with owners mostly through district foresters. Recently, forest owners (and the general public as well) gained access to information on forest through the online Forest Data Viewer (http://prostor.zgs.gov.si/pregledovalnik/?locale=en).

FIS and different forest management and silvicultural plans mainly provide ecological information on forests; socio-demographic and economic data are often scarce. Such data were collected in the censuses of family farms in 1990, 1995, 2000 and 2003, but not after this. National representa-

tive or regional surveys of private forest owners (e.g. Ficko 2016) partially fill the gap. There have also been efforts to adapt the current planning system to make it more owner-oriented. A study on the attitudes of private forest owners towards the new forest property plan (Ficko and Bončina 2015) estimated that more than half of owners with forest properties larger than 1 ha would consider the forest property plan usable, and approximately every third owner would be willing to pay for the plan. The calculation also showed that a considerable amount of the current public budget expenditures for private forest planning-related tasks could be saved annually while the applicability of the forest management plans could be enhanced.

New Approaches to Surveying Forest and Forest Owner Interaction

One approach to assessing forest conditions and change over time is through spatial analysis. The main benefit of spatial analysis is the relative freedom with which the user can study how different events unfold at varying levels of scale (see, e.g. Lillesand et al. 2008; Olsson 2014; Reese et al. 2003). At the most detailed scale in terms of human life—the individual level—spatial analysis enables studying relationships between human-specific characteristics and the forest. This relates to parts of this chapter in which we study how different forest owners harvest their forest over time. In order to discern such potential relationships at the individual level, access to detailed spatial information is required. To this end, a micro database covering the entire Swedish population, geo-referenced at 100-metre resolution (ASTRID, located at the Department of Geography and Economic History at Umeå University), is used. This database, acquired from Statistics Sweden, contains longitudinal, individual observables regarding socio-demographic characteristics (e.g. age; gender; education; profession; place of birth, work, study and residence, respectively; family structure; and change). Connected to individual NIPF owners there are data on, for example, property size, location and taxation value. However, no attitudinal data are recorded in this database. ASTRID data can be related to spatial forest data on, for example, property forest cover and harvesting intensity over time. In order to assess

differences in final felling between different forest owners, we include every forest property, person and owner in Sweden in an intricate merge of spatial forest and property data with register data. This analysis is conducted in a geographic information system (GIS). First, we relate spatial information on the productive forest cover to each property. This part of the analysis is based on the zonal statistics of a nationwide raster dataset at a spatial resolution of 25 metres, compiled through a combination of satellite data analysis and information from the Swedish National Forest Inventory (Department of Forest Resource Management 2016). Second, we spatially relate polygons for all harvested areas in Sweden in 2008–2012 to the properties (Swedish Forest Agency 2016a).

In total, 920,109 ha of forest, distributed over 106,329 (38 per cent) unique properties, was subject to final felling during the period studied. The majority of private forest properties (60 per cent) have only one owner. In these cases, the total area of harvested forests was aggregated for each property and then this value was assigned to the property owner, identified through a spatial join on the owner coordinates from register data. Through this analysis, 564,304 ha (61 per cent) of the total amount of final felling during the period studied was obtained, which means that a rather large share (39 per cent) of the harvested forest can be traced to jointly owned properties. This led to the third step in the analysis, in which the location of each harvested forest polygon was iteratively related to its owner (or in the case of multiple owners, the closest one within the same property) by means of a Euclidean distance analysis. Ultimately, this allowed for the inclusion of the previously missing 355,805 ha of harvested forest in the analyses.

Forest Change Analysis

Another method of mapping the final felling of forest stands and analysing harvest rates and stand age at local level, for example per municipality, for larger regions or an entire country, is to carry out a *forest change analysis* by applying change detection methods on satellite images. This method and its results can be useful to the local governmental body (in Sweden, the municipality) responsible for overall land-use and landscape (spatial) planning within its territory. In practice, this responsibility

implies planning for the management and development of the municipal landscape from social and cultural, as well as ecological and economic, perspectives. However, the legislation regulating municipal planning is separate from that governing land ownership and forestry. Furthermore, municipal plans are required to safeguard various national and regional general interests and objectives concerning land use and societal development. Forestry is considered to be 'of national importance' (SFS 2010). To make this type of planning possible at the municipality level and successful at both the municipal and national levels, there is a need for a large amount of detailed landscape data at different geographical scales. Today, data describing forest ownership and forestry information on municipal level are scarce. Combining official property data and results from *forest change analysis* makes it possible to match final felling from different time periods, and hence the age of the productive forest today for different ownership categories.

Satellite image data have proven to be a useful source for forest resource assessment in general (Lillesand et al. 2008), and archives of satellite imagery provide a permanent record of changes over time. We used a time series of Landsat images and change detection methods to map and date final felling events for the image pairs 1972–1990, 1990–2000 and 2000–2013. We supplement this analysis with other satellite image-based information (SLU Forest Map 2016; Reese et al. 2003), data from the NFI (Fridman et al. 2014), and the supervised maximum likelihood classification of the 1973 satellite image to map final felling back to the 1950s. This provides the basis for calculating final felling rates for each time period for the entire study area, unlike sample-based information. Furthermore, this process allows us to evaluate the spatial distribution and connectivity of remaining uncut patches. By overlaying information on forest cover, land ownership and the changes in forest cover from the *forest change analysis*, we can refine our analysis by individual forest owner as well as by forest owner category. This approach was tested in the Swedish example. The method (summary presented in Fig. 4.1 and results in section "How Much Do Different Forest Owners Harvest Their Forests at Municipal Level?") is based on a pilot study from a municipality in the inland of northern Sweden. The case study takes a municipality perspective, due to the need for forest ownership and forestry data in municipal land-use and development planning, but the type of data used makes it

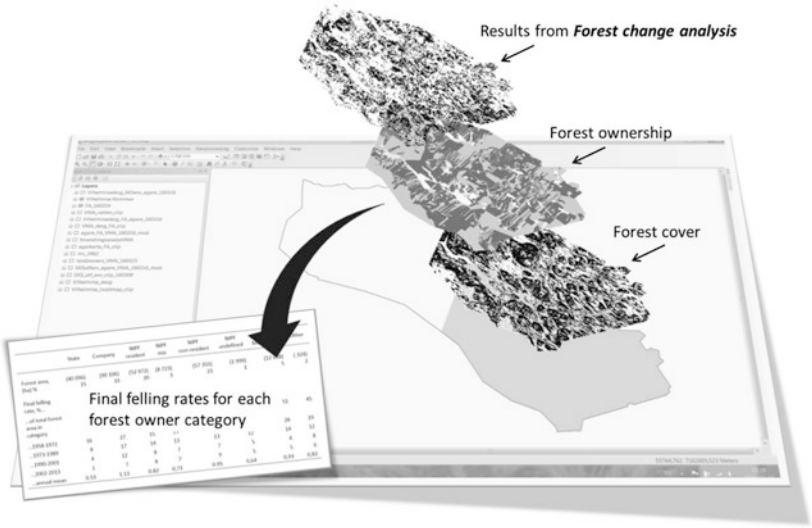

Fig. 4.1 Information overlay; results from *Forest change analysis* are combined with information on forest ownership and forest cover to calculate final felling rates for each individual owner and/or for each ownership category

possible to carry out the corresponding analyses at the regional or national level and to zoom virtually between the levels.

Database for Forest Owner Analysis

In order to be able to assess not only final felling on NIPF land but also other management activities, including how they may change over time, a database has been developed by the Swedish University of Agricultural Sciences (Berg Lejon et al. 2011). The *Data Base for Forest Owner Analysis* (DBFOA) combines existing forest measurement statistics, gathered on a regular basis by the Swedish Forest Agency since 1992, with records of the individual forest owners. The database consists of self-reported activity in terms of final felling, thinning, cleaning, soil scarification and planting from about 30,000 forest management units. It also contains information on the owner age, gender, residential proximity to the management unit (since 2003), the extent of work undertaken by the owner, and whether or not the forest is certified. This makes it possible to com-

pare NIPF owner categories and activities based on properties and over a time span of more than 20 years.

Using the DBFOA, many different types of questions could be analysed when it comes to forest management and the potential impact on, for example, local development. One question could be whether non-resident forest owners act differently from resident owners, which is an issue connected to urbanisation. Other questions could be whether age of forest owner, size of holdings, gender, single or joint ownership, or combinations of some of these properties have an impact on harvesting and silviculture activities and thus an effect from forestry on economic, environmental or social values. It is also possible to identify and explore trends over time regarding level of self-employment, as the DBFOA has data going back almost 25 years. New results of an analysis based on the DBFOA are presented in section "Did Forestry Activity Among NIPF Owners Change from 1992 to 2013?".

How Forest Owners Interact with Their Forests

As argued in Chap. 2, urbanisation, globalisation, political and economic transformation, and other general trends have changed the conditions of forest ownership. This section illustrates how these changes have altered the composition of Swedish private forest owners.

Where Is the Forest in Sweden, and Where Is the Population to Be Found?

Forests cover 75.6 per cent of Sweden (Eurostat 2016), but less than 2 per cent of the 100 metre squares are populated (ASTRID database). This means that forests within sight of any home form a small fraction of all forest land. In Sweden, for example, half of the forests owned by NIPF owners is located in municipalities with 6 per cent of the population and, at the other end, half the population lives in municipalities with 4 per cent of the private-owned forests. Measured with the larger range of a municipality as the unit, people and forests are essentially located in different municipalities in different corners of the country (see Box 4.3;

Box 4.3 Population density, forest owner density and density of productive forest cover. Source: ASTRID database and SLU Forest Map (2016)

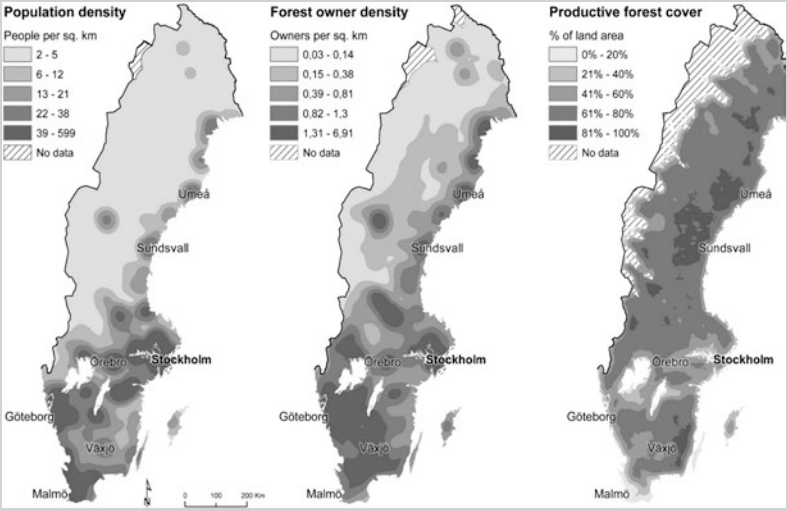

Fig. 4.2). Two-thirds of NIPF owners reside in metropolitan or large urban areas (Haugen et al. 2016).

Does this mismatch of forests and people matter? Can it affect the realisation of, for example, the tangible wish to have access to forests close to home for recreational and social reasons? In all but the densest city core municipalities, there is enough forest to realise the desire to have permanent access to it, but forests that offer more varied activities (e.g. hunting and fishing) are generally located further from where people live (Olsson 2014). The remaining bulk of forests all over the country will rarely be needed or used for this purpose. If a person realises that the choice of a city core location was a mistake due to a lack of forest access, the obvious remedy is to relocate to the urban fringe, getting closer to the forest while maintaining reasonable access to all other city amenities. One answer to the question is that the dissimilar locations of people and forest do not matter for access to forests close to home for recreational and emotional purposes. A major dimension in the difference between

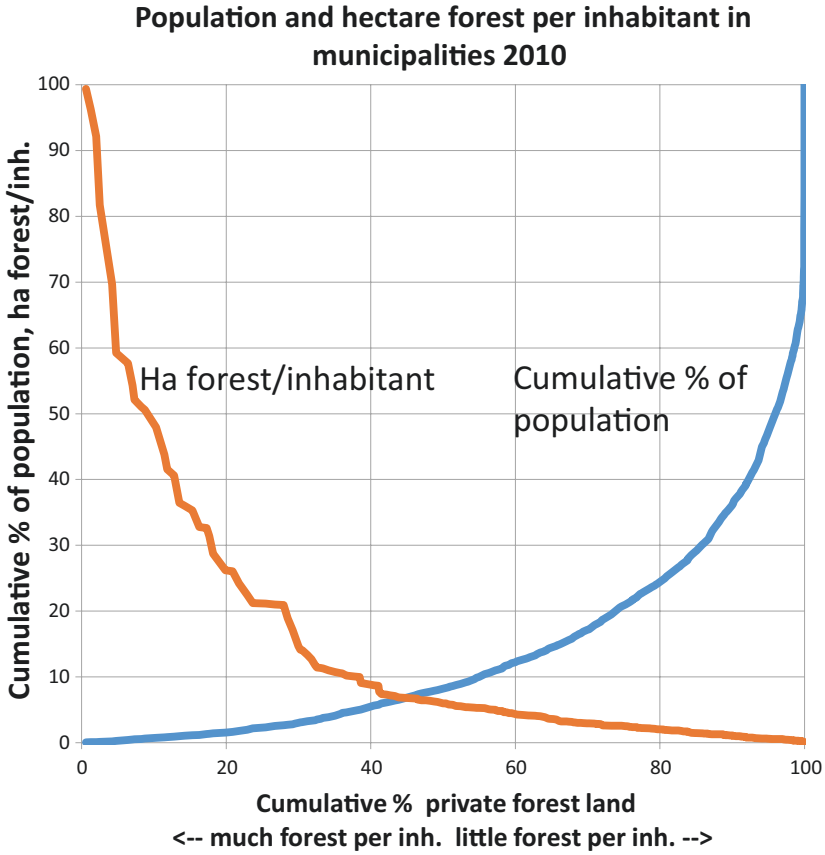

Fig. 4.2 Population and hectare (ha) forest per inhabitant in Swedish municipalities 2010, cumulative. Source: ASTRID database

people and forests concerning location is the one between municipalities with lower or higher population densities. The 36 municipalities in the least dense group (north inland), each with less than 50,000 inhabitants within 50 km of the municipal core, contain 34 per cent of total privately owned forest land but merely 4 per cent of the domestic population and 14 per cent of all private forest owners. The 19 municipalities (Stockholm + suburbs) in the densest group, with more than two million people within 50 km, contain only 0.4 per cent forest land but 18 per cent of the population and 6 per cent of the forest owners. Obviously, most forest

properties owned by people living in the densest regions are located elsewhere. There has been a process of change, shown by comparing the population density groups. The two least dense groups contain a larger share of forest land than of forest owners, while the opposite holds for all municipality groups with more than 100,000 inhabitants within 50 km. Many owners, as well as their children and future owners, have already moved to more densely populated places.

How Far from the Owned Property Does the Forest Owner Live?

As a result of inheritance, mobility and property market outcome, some people own forest in municipalities where they do not live, even when corresponding properties are available where they live. So again, how many owners own forest properties in the municipality they live in?

Based on the ASTRID database, the answer for Sweden in 2012 is 225,000 forest owners, or 71 per cent of all the 318,000 private forest owners, lived in the same municipality as their property. The average size of the forest property for all owners was 34 ha. Within this, the average property size for the resident (local) owners as well as non-resident (remote) owners was also 34 ha. As a percentage of total privately owned forest land, the resident owners' share was similar, 70 per cent. Corresponding figures 5 years earlier (in 2007) were 236,000 forest owners, or 72 per cent of all 328,000 private forest owners at that time. The average size of the forest property for all owners was slightly smaller, at 33 ha. Within this, the average for the resident owners was 35 ha and for the non-resident owners 27 ha. Of the total privately owned forest land, the resident owners' share was 77 per cent.

The urbanisation of forest ownership is a relatively slow process; the non-residential owners' share of total private forest land is increasing by around one percentage point annually. Figure 4.3 gives a more detailed view of the distance distribution between private forest owners' homes and their forest properties in the entire country in 2010. In the graph, the owners of a property, if more than one, are represented by the one who is designated as representative of the property. Corresponding data are also

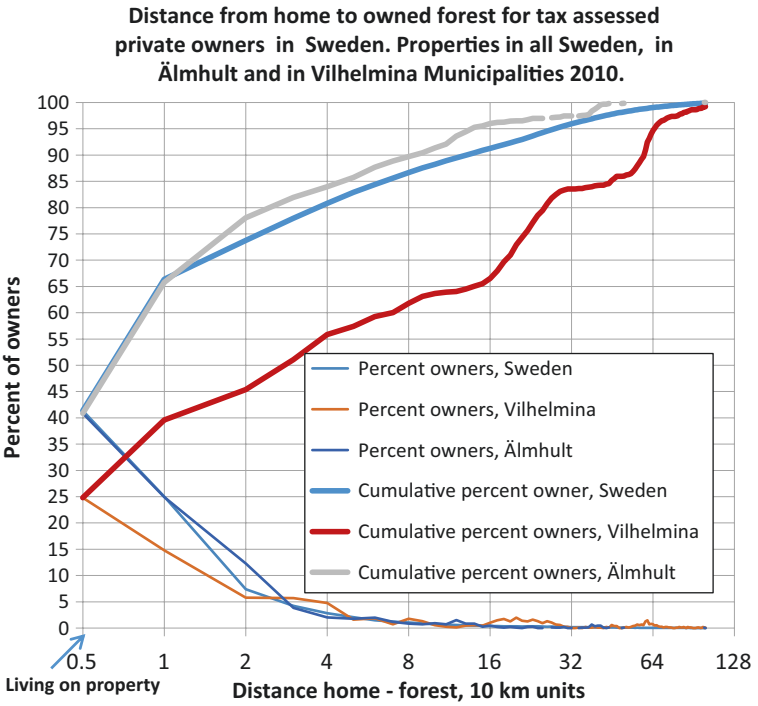

Fig. 4.3 Distance from home to forest owned for tax-assessed owners in Sweden. Source: ASTRID database

presented separately for two example municipalities, Vilhelmina (located in the northern inland) and Älmhult (in the south).

The graph reveals that 42 per cent of the representative owners (i.e. one per property) live on their forest property while 65 per cent live less than 10 km from their forests, 83 per cent live less than 50 km from their forests, and 5 per cent live more than 300 km from their forests. A comparison with the municipality data presented earlier, covering all owners, hints at the difference that the representative owners seem to be somewhat more local compared to other owners of the same forest property.

The example municipality Vilhelmina, located in the sparsely populated northern interior of Sweden, has many of the remote owners living in the larger coastal cities of northern Sweden and in the capital, Stockholm. Compared to the average for Sweden, Vilhelmina property

owners are less local: 25 per cent live on their property, 40 per cent within 10 km and 57 per cent within 50 km. Close to 20 per cent live more than 300 km away. This north-south line of demarcation in the share of local owners is demonstrated by the other example municipality, Älmhult in the south of Sweden, with a large share of local owners and the remaining remote ones often living in the larger southern cities of Malmö and Helsingborg, as well as in Stockholm. The two example municipalities mirror the general migration pattern from rural areas.

Who Is the Forest Owner?

There are more differences between NIPF owners and the population at large than merely the forest owners living closer to the forest. Such differences help us understand current and future patterns of forest use and significance. How different are forest owners in terms of age, gender structure, family, education, labour force participation and earnings? How is this related to the characteristics of the forest property (its size, location, whether or not it is co-owned) and to the characteristics of the forest owner (whether or not they are the representative of a property in cases of co-ownership, whether or not they acquired the property recently, whether they inherited or bought it)?

First, how common and persistent is it to own private forest in Sweden? Of all the people living in the country in 2007 and/or 2012, 96.3 per cent did not own forest in either of the years (according to the ASTRID database). Of the remaining 372,000 people owning forest either or both years, 75 per cent owned forest both years, 12 per cent became new forest owners (because of inheritance or purchase) and 13 per cent ceased owning forest (because of death or sale). The annual ownership volatility of private forest property (parts) concerns roughly 9000 properties and 18,000 + owners (buyer + seller). This corresponds to around 5 per cent of the owners.

When properties are co-owned by two or more individuals, all co-owners have decision rights and financial responsibility according to the size of their share. However, authorities such as Statistics Sweden and the Swedish Forest Agency communicate with only one representative of the

property. One reason for this is to avoid properties being counted several times in statistics (8 per cent of the holdings have more than one owner); it also facilitates the contact with forest owners. A second question is therefore whether the representatives differ from the co-owners with whom they share property. Table 4.1 combines the residential–non-residential dimensions with the owners' position of being a representative or not.

The main distinction revealed in Table 4.1 is associated with the owners' status as representative or not. Each property has one, and only one, representative owner. If there are several owners, the remaining ones are not representatives. Each representative owner owns, on average, more than twice as much forest land as each of the remaining owners does; they constitute two-thirds of the NIPF owners, but together own more than four-fifths of private forest land. It should be noted that a shared property is not physically divided. If two owners each own 50 per cent of a 10-ha property, then they are here assigned 5 ha each, although the ownership for each of them refers to an abstract (ideal) share of the undivided 10-ha property. In addition, an owner, whether representative or not, might own several parts of several properties. In such case, this owner is assigned the sum of his/her owned shares. Almost half the NIPF owners are local representatives, owning more than half of all private forest land. The non-residential owners amount to a third of the local owners among the

Table 4.1 Forest characteristics for representatives and non-representatives

	Resident owner	Non-resident owner	Total
Private forest owners, %			
Representative	49	16	66
Non-representative	21	13	34
Total	71	29	100
Private forest land, %			
Representative	59	23	82
Non-representative	11	7	18
Total	70	30	100
Average property size, ha			
Representative	40.6	47.7	42.4
Non-representative	18.3	18.0	18.2
Total	33.9	34.4	34.1

Source: ASTRID database

representatives. Among the remaining non-representative forest owners, the non-residential owners are relatively more frequent. So, the representative forest owners dominate ownership and are still more local than other owners.

One core characteristic of forest owners is their high age compared to the population in general. This, and the fact that the majority of the population in general does not own forest, is demonstrated in Fig. 4.4. The age of forest owners peaks at 64. Between the ages of 40 and 80 there are, relatively speaking, almost twice as many people among the forest owners as among the rest of the population. In the general population 51 per cent are younger than 40, while among forest owners 11 per cent are younger than 40. So, the private forest owners acquire (primarily through inheritance) their forest property at a relatively high age (when their parents die), and keep it until they are quite old. Above the age of 85 there are comparatively more people in the general population (2.3 per cent of all) than among the forest owners (1.9 per cent of all). From the peak age, the gradient in the age distribution of forest owners falls much

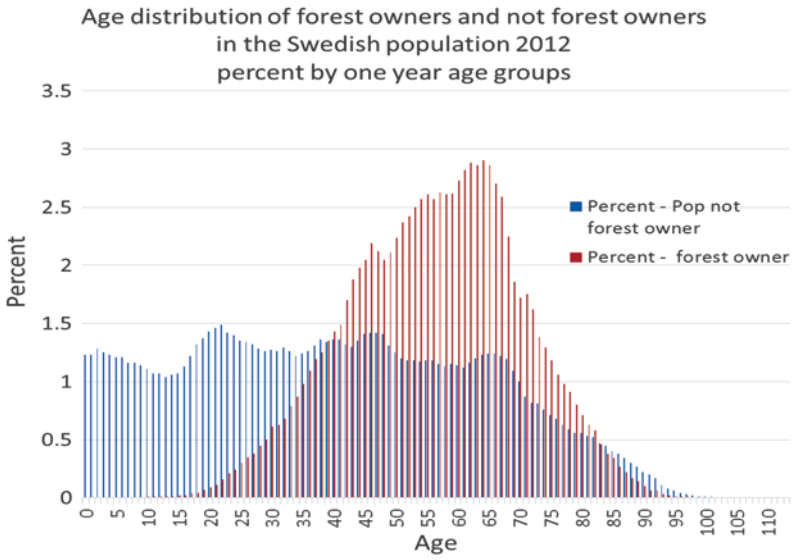

Fig. 4.4 Age distribution of private forest owners and non-forest owners in Sweden 2012. Source: ASTRID database

more rapidly than among the rest of the population, indicating that a substantial share of the older owners sell their property before their decease.

Age is an important, but not exclusive, characteristic of NIPF owners that is relevant for the outcome of the interaction between forest owners and the non-forest-owning population ("Never owner" in Table 4.2). The two Tables 4.2 and 4.3 summarise the mean value of many other different individual attributes for different kinds of NIPF owners, and illustrate the heterogeneity within the group.

In 2012 the average age of NIPF owners is 58, almost 18 years older than the total population. Within this average there are some differences between owner types. The most obvious is that the new owners—those who became owners sometime between 2007 and 2012—are ten years younger than the persistent owners, on average 48 and 60 years old, respectively. Those leaving forest ownership are ten years older than the persistent owners, on average 69 years (including some 30 per cent of those who died in the meantime). There are only small differences in average age between NIPF owners residing in different parts of Sweden, on or off their forest property, and with a small or large holding.

Women account for 37 per cent of all NIPF owners, but are more evenly represented among new owners: 46 per cent of those who came into possession of a forest holding after 2007 are women, which could indicate that forest ownership in the future will mirror the gender structure of the population as a whole. Women are also more common among non-residential owners compared to those living on or close to their property. The most gendered division among those presented in the table is between representative owners: only 28 per cent of the female NIPF owners are representatives. The difference between large and small owners is almost as great. Large properties are the domain of men. If a woman owns a forest property it is often modest in size, located far from her current home, and administered by another owner.

The size of all NIPF properties is smaller among new and former owners compared to persistent ones. The properties of representative owners are more than twice as large compared to those of other owners, which may be an indication of their stronger commitment compared to their counterparts. The average property size of residential and non-residential

Table 4.2 Private forest owner characteristics by groups of forest owners, 2012

Forest owner characteristics in Sweden 2012 (and 2007) owner type	No. of people	Mean age 2012	Female (%)	Mean hectare owned properties	Tax value of prop. (kkr/hect.)	Dist. home forest (km)	Parent died in the period 2008–2012 (%)	Gave birth[c] (%)	Married (%)	Empl. rate[d] (%)	Earnings[d] (kkr)	Educ. level[e]
Never owner (2007 or 2012)	9,770,246	41.8	50.6	0.0	0.0		7.0	35.9	31.0	83.1	241.4	3.94
New owner (2012, not 2007)	43,506	48.2	46.1	20.0	31.2	73.3	20.6	45.0	48.8	91.6	312.8	4.20
Ex. owner (2007, not 2012)	49,531	69.0	43.6	23.3	24.1	65.2	10.6	34.8	36.6	83.7	230.8	3.58
Persistent owner (2007 and 2012)	279,305	60.1	37.2	36.3	31.9	57.9	15.1	30.8	58.5	88.1	282.7	3.83
In situ owner (living on property)	110,830	57.4	37.4	33.2	30.3	0.0	14.2	48.6	57.4	87.9	258.8	3.34
Residential owner[a]	225,314	58.2	36.2	33.9	32.6	5.8	15.4	41.3	57.7	88.4	264.1	3.31
Non-residential owner[b]	93,221	58.4	43.9	34.4	30.0	191.1	16.6	31.0	58.7	89.2	350.4	4.28
Representative owner 2012	209,236	59.8	28.3	42.4	31.8	45.9	15.6	30.6	55.7	88.0	285.4	3.44
Non-representative owner 2012	109,301	55.3	57.9	18.2	32.1	87.1	16.1	36.9	62.4	89.6	295.4	3.90
Living north of Stockholm 2012	80,133	58.5	39.4	40.1	20.5	45.9	16.3	37.8	57.0	88.2	320.8	3.88

(*continued*)

Table 4.2 (continued)

Forest owner characteristics in Sweden 2012 (and 2007) owner type	No. of people	Mean age 2012	Female (%)	Mean hectare owned properties	Tax value of prop. (kkr/hect.)	Dist. home forest (km)	Parent died in the period 2008–2012 (%)	Gave birth[c] (%)	Married (%)	Empl. rate[d] (%)	Earnings[d] (kkr)	Educ. level[e]
Living south of Stockholm 2012	238,402	58.2	38.1	32.0	36.7	87.1	15.6	37.4	58.3	88.7	278.6	3.50
Living in Stockholm, Göteborg or Malmö 2012	13,700	56.2	46.2	31.0	33.9	276.6	17.4	30.6	50.7	89.4	418.3	4.92
Large owner (>100 ha) 2012	23,086	58.9	24.3	221.3	27.0	62.7	16.9	22.0	55.8	89.0	279.9	3.68
Small owner (<10 ha) 2012	141,349	57.0	43.7	3.7	41.2	63.2	15.2	40.7	57.9	88.3	294.8	3.66
All owners 2012	318,535	58.2	38.4	34.2	31.7	60.0	15.9	37.5	58.0	88.6	289.1	3.60
Total Swedish population 2012	9,555,892	40.7	50.1	1.1	31.7		7.6	37.0	33.8	82.8	250.2	3.19

Source: ASTRID database

[a]Living in the same municipality as the forest property in 2012

[b]Not living in the same municipality as the forest property in 2012

[c]In the cohort 20–40-year-olds

[d]Among 20–67-year-olds

[e]Among 20–67-year-olds. 3 = compulsory education, 4 = upper secondary education, 5 = <3 yrs university, 6 = bachelor's degree

owners does not differ much. Owners living north of Stockholm have larger forest properties than those living in the south, which has a historical explanation. As the site productivity was (and is) lower in the north, larger holdings were necessary to make a livelihood from farming and forestry. The market value of forest properties, as reflected in taxation values, is lower for exiting owners compared to new and persistent ones. The market value of small forest properties is on average considerably larger compared to the hectare value of large properties. This may be a consequence of smaller holdings, primarily near larger cities, being valued by the buyer as a residential opportunity. A small forest holding with a house on it is often cheaper than a house in a city. Finally, the taxation value of in situ, resident and non-resident NIPF owners' properties is very similar; and actually, it is not the non-residential owners who have the highest value holdings but rather the residential owners.

On average in 2012, there is a distance of 60 km between home and forest properties in Sweden. The new owners reside further from their property than do persistent owners and former owners. The longest distance between an NIPF owner and his/her property is found among those residing in the metropolitan areas of Stockholm, Göteborg and Malmö. NIPF owners in the three metropolitan areas have, on average, six times farther to go to their forest than their counterparts living north of Stockholm. In line with the definition of remote owners, the average distance to their holdings is 191 km, compared to 6 km for local owners.

NIPF owners are older than the population as a whole. A large share of the new owners have a parent who died during the period, which is expected as many of the new owners have become forest owners through inheritance. There are very small differences in this respect between owners in different regions, with small or large holdings, or whether or not they are representative owners.

Childbearing (measured for those aged 20–40 years in 2007) is on average in line with that of the total population. However, new owners, in situ owners, and owners of small properties have a higher rate of having given birth. A larger share of the NIPF owners are married compared to the total population. New owners and former owners are underrepre-

sented in this respect, as are NIPF owners residing in the metropolitan areas.

The employment rate is high among NIPF owners in the 20–67 age group; 89 per cent of the NIPF owners are employed compared to 83 per cent among the total population. Employment was highest among new owners—presumably as they are younger than former and persistent owners. New owners earned more (also measured for the 20–67 age group) than former, persistent and never owners, and former owners was the group with the lowest earnings. Remote owners had earned much more than local and in situ owners, and owners of smaller holdings enjoyed higher earnings than those with larger holdings. NIPF owners residing in the metropolitan areas had the overall highest earnings, at SEK 418,000 annually—44 per cent higher than the entire group of NIPF owners. Earnings are closely correlated to educational level, and highly paid and highly qualified jobs are more abundant in the three major city regions than in other regions. The NIPF owners residing in metropolitan areas also have a higher education level.

Table 4.2 may also be interpreted horizontally, by characterising the new owner, the former owner, the in situ owner and so on. The new NIPF owner is younger than other groups, is more often a woman, lives further from the holding, is more often employed than other groups, and has higher earnings and a higher education level than other owners. Prominent features of NIPF owners with small holdings are that they are more often women and that the holding has a higher tax value per hectare.

How Different Forest Owners Manage Their Forest

The way NIPF owners manage their forest has a considerable impact on economic, environmental and social values. From previous research, it is known that the economic man concept is not sufficient for understanding and predicting small-scale forest owners' behaviour. This is because a variety of management goals and concepts prevail among owners regard-

ing how to maintain and increase the benefits from their forests (Törnqvist 1995; Ingemarsson 2004; Lidestav and Nordfjell 2005). Consequently, a number of studies have been carried out, as interview or postal surveys, and only occasionally have two or more data sources been combined. One weakness of these studies has been found when comparing their results with those of field studies. For example, the owners' belief in the need for proper activities such as cleaning and regeneration may be correct, but their capacity to perform or evaluate the results of these activities tends to be exaggerated (Lundqvist 2003). Therefore, methods for monitoring management behaviour among different categories of NIPF owners are desirable. In the following sections, results from analyses using three different methods will be presented.

How Much Do Different Forest Owners Harvest Their Forests?

Generally speaking, harvesting intensity is higher on company-owned forest land than on NIPF-owned land. While companies conduct final felling on 0.95 per cent of their forest land annually, the corresponding figure for NIPF is 0.88 per cent, although site productivity in general is somewhat higher on NIPF land than company-owned land. Regarding thinning, NIPF shows a higher rate: 1.95 per cent, compared to 1.64 per cent on company land (Swedish Forest Agency 2014: 169). This is interpreted as a reflection of different management strategies involving three thinnings per rotation period on NIPF instead of two on company-owned land. While the latter has a direct interest in pulpwood production, the former profits more from saw log production and sale.

Aggregating final felling intensity to municipal level allows us to decipher spatial patterns in harvesting intensity in Sweden in 2008–2012 (Fig. 4.4). Although the map gives the initial impression of scattered municipal islands with high harvesting intensity, it is evident that these municipalities are often surrounded by other municipalities with relatively similar values. The highest values of harvesting intensity are found in the southern inland municipalities, and to some extent among inland municipalities in the north. Comparing these patterns to the second map

in Fig. 4.5, a more general pattern emerges with distinctive geographical differences between the northern and southern regions of the country. It is thus apparent that the ability of the local climate and soil conditions to produce timber alone cannot be responsible for the geographical differences in harvesting intensity shown in Fig. 4.5. Hence, it is relevant to examine how harvesting intensity differs at the individual level; that is, between forest owners with, for example, different socio-economic and demographic attributes.

Comparing the two maps in Fig. 4.5 also indicates that, on an aggregate level and like municipalities, many factors besides growth potential determine the level of harvesting intensity. Some traces of these determinants

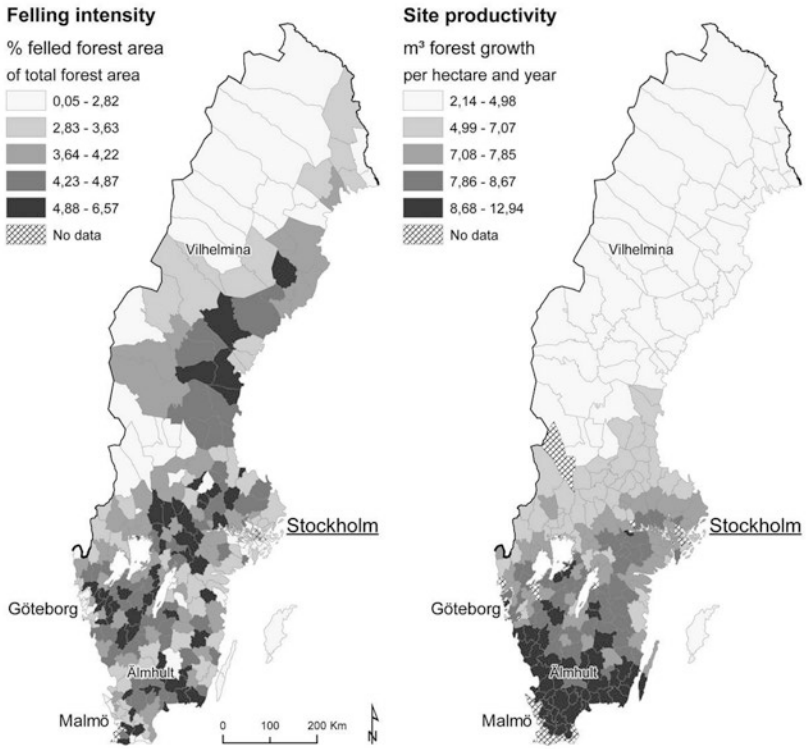

Fig. 4.5 Harvesting intensity and forest growth potential on the municipality level in Sweden. Source: Swedish Forest Agency (2016a)

appear with the help of individual-level analysis (logistic regression) of characteristics of (almost) all private forest owners in 2007 who did (or did not) more or less harvest their holdings at least once in 2008–2012.

As expected, of 15 socio-economic and forest indicators (as based on their estimated partial variance contribution), the size of the individual holding turns out to be most positively related to the probability of harvesting, but each additional hectare of forest owned merely increases harvesting probability by 1 per cent (so, an additional km^2 increases harvesting probability by 10 per cent). The marginal effect of this and all other covariates in the table deviates significantly from odds ratio 1.0, but often the effect is quite small as measured on the individual level. Next in importance is growth potential (+4 per cent per unit; i.e. +25 per cent between the extremes, from furthest north to furthest south in the country) followed by the number of co-owners of the property, negatively related (10 per cent lower probability for each additional owner). The number of properties owned (given their total size and all other characteristics) comes next (7 per cent higher probability for each additional owned property part). Being a persistent owner decreases odds for harvesting probability by 17 per cent; being married increases it by 12 per cent; living north of Stockholm decreases it by 11 per cent. The remaining marginal effects are even smaller. Age has a positive (but age square a negative) effect, indicating that average-age forest owners harvest more than younger and older ones do. If a parent dies, harvesting probability on the margin increases by 3 per cent. Higher educational level increases harvesting probability to some degree. Being a female has a small negative marginal effect, as do income and the distance between the home and the property. Although partial effects exist and are significant, together they explain only a small fraction of the total individual variation of final felling. Hence, most of the individual variation is either random or contingent on other factors.

How Much Do Different Forest Owners Harvest Their Forests at Municipal Level?

As presented in section "How Much Do Different Forest Owners Harvest Their Forests?", the amount of final felling varies between ownership

categories and municipalities. There is likely a covariance, but to the individual municipal planner and politician, the local conditions and outcomes are what matter. In order to meet the municipal need for accessible and useful data, we applied the *forest change analysis* method (see section "Forest Change Analysis") to Vilhelmina municipality. Based on the forest cover map from the Swedish National Land Survey (2016b), the entire forested area of the municipality is about 406,000 ha, of which 23 per cent is owned by the state, 24 per cent by forest companies and 13 per cent by commons and the municipality, while 38 per cent is in NIPF ownership. NIPF-owned land is distributed among resident owners (16 per cent), non-resident owners (17 per cent) and mixed resident/non-resident owners (4 per cent). For the *forest change analysis* method, cloud-free satellite image was not available for the westernmost part of the municipality and was consequently not covered in our analysis. However, in these parts of Vilhelmina the state owns the main portion of land and the majority of this state-owned land, including forests, has been legally protected in nature reserves since the late 1980s and is thus not available for forestry today. For the eastern two-thirds of the forested land within the municipality, we present results for rates of final felling representing the ownership situation in January 2016 (Table 4.3; Swedish Forest Agency 2016b; Swedish National Land Survey 2016a, b). Changes in the ownership pattern during the period 1958–2014 vary by landowner category. Due to Swedish acquisition laws, companies and the state may not increase their possession of forest land, but may buy new land if, at the same time, another piece of land of equal size is sold. Consequently, changes of ownership in the state and company categories are diminutive. Hence, we can assume that the land recorded as state-owned and company-owned in 2016 was also state- and company-owned in 1958. A similar stable ownership pattern applies to the combined NIPF landowner category. But, as shown in section "How Forest Owners Interact with Their Forests", the proportion of forest land owned by local residents is constantly decreasing. We therefore assume that a substantial proportion of the forest land owned by non-residents today was owned by resident owners in 1958, while the forest land owned by resident owners today was also owned by resident owners in 1958. Considering the results from the ownership and migration studies presented in section

Table 4.3 Distribution of forest area and areas of final felling between 1958 and 2013 among owner categories owning forest in Vilhelmina Municipality

	State	Company	NIPF resident	NIPF mix[a]	NIPF non-resident	NIPF undefined	Commons and municipality	Other
Forest area, (ha) %	(40,096) 15	(90,106) 33	(52,972) 20	(8723) 3	(57,355) 21	(1999) 1	(12,638) 5	(324) 2
Final felling, % of total forest area in owner category annual mean in;	29	62	45	40	52	35	51	45
1958–1972	1.10%	1.78%	0.99%	0.83%	1.50%	0.92%	1.85%	1.24%
1973–1989	0.47%	0.99%	0.82%	0.79%	0.79%	0.69%	0.81%	0.73%
1990–2001	0.32%	0.96%	0.70%	0.60%	0.58%	0.38%	0.37%	0.65%
2002–2013	0.06%	0.61%	0.69%	0.55%	0.76%	0.38%	0.43%	0.51%
Total	0.53	1.13	0.82	0.73	0.95	0.64	0.93	0.82

Note that data on ownership category refers to the situation in January 2016

[a]Mix of resident and non-resident owners

"How Forest Owners Interact with Their Forests", we did not expect to find that only 3 per cent of the forest land is owned by a mix of residents and non-residents. This calls for an additional study regarding the ownership history of the individual NIPF holdings.

Prior to 1958, selective harvest of the largest and most valuable trees was the general practice in Vilhelmina, as indicated by the fact that the first application for final felling was submitted to the Swedish Forest Agency that year (Svensson et al. 2012). Due to this practice, large parts of company- and state-owned forest land in particular exhibited a low and not very vigorous timber stock. Extensive restoration of these low stocked stands was therefore introduced, which is reflected in the high final felling rates for 1958–1972 (Table 4.3). To stimulate NIPF owners to phase out their low stocked stands and establish new ones, a subsidy was paid until the 1980s (Enander 2003).

Analysing rates of final felling for the period 1958–2013 reveals some interesting results, in terms of both the amount and the variation of properties affected by final felling for different landowner categories. Overall, 53.5 per cent of the total productive forest land within the study area has been subject to final felling. In the company ownership category, 62 per cent of the forest area has been exposed to final felling, and consequently 62 per cent of their forest land today is less than 55 years old. In contrast, only 29 per cent of state-owned forests within our study area have been subject to final felling during the same period. NIPF lands show an intermediate final felling rate, of which non-resident owners show a higher total proportion (52 per cent) than resident owners (45 per cent). We found surprisingly great variation in final felling rates among the different NIPF owner categories.

With an assumed rotation period of 100 years, the final felling rate per year should not exceed 1 per cent; however, company-owned land has exceeded this rate (1.13 per cent during the entire study period and 1.3 per cent up to 2001). As a consequence of high rates of final felling between 1958 and 1989, the rates have decreased in all owner categories, but most substantially on company-owned land. During the last recorded period (2002–2013), the proportion of final felling was rather even, except in state forest, which remained low. This is likely because the forest companies have had to approach NIPF owners to supply their industry with saw timber and pulp wood. Based on our analysis, non-resident owners are just

as prepared to conduct final felling as resident owners are. The asserted argument that non-resident forest owners have more of a forest conservation-oriented focus than resident owners do (compare with Nordlund and Westin 2011) appears not to affect their inclination for final felling.

Apart from knowing where the forest land is situated, land-use/landscape planners on the municipal level usually possess limited knowledge about who owns the forest and where and what the owners are doing with it. Such a lack of knowledge can create holes in the plan map. The approach presented through the *forest change analysis* provides opportunities to view individual landowner activity in a landscape perspective and to analyse the collective activity of owner categories in relation both to each other and to the natural preconditions for forestry. The approach offers opportunities for holistic land-use and landscape planning.

The use of detailed data with full areal coverage about forest ownership and forestry, in terms of final felling mapped through *forest change analysis* on property level over large areas—a region or an entire country—makes it possible to scale up and down both geographically and in level of detail. This can provide government agencies and other actors on different levels of society and in different parts of a country with the same knowledge. It ensures that they refer to facts from the same source, even when presented at different scales. Applying *forest change analysis* to identifying forestry activities also provides a time perspective, which can be matched with information on forest owners and ownership for each time period. Consequently, this method provides the prerequisites for understanding and communicating changes in forest ownership and forestry activities in time and space. This is vital to landscape planning, in which one important objective is to make way for, and balance, different land-use interests in a given landscape in a sustainable manner.

Did Forestry Activity Among NIPF Owners Change from 1992 to 2013?

There are many questions related to NIPF owner activities, not only connected to final felling, that may be analysed using the DBFOA. The forest resource is local, and one measure of how locally attached the forest own-

ers are might be the extent of self-activity. Self-activity is defined as forestry work performed by owners on their own properties or by a member of the family of, or someone directly employed by, the forest owner. The total amount of harvested volumes (final felling, thinning and other felling) increased considerably between 1992 and 2013, but not as much in 2003–2013. Silviculture activities, such as cleaning and planting, increased considerably since 1992 (see Table 4.4). Table 4.5 shows the self-activity trends for the different management activities linked to the residence of the forest owner for 2003 and 2013. Data on owner residency before 2002 are not available. The share of self-activity decreased for all activities compared to 1992, but increased for final felling from 2003 to 2013. Thinning and cleaning are on the same levels in 2003 and 2013. Even if self-activity decreased for all activities, the decrease in total volume or area is less, due to increased management activities.

Table 4.4 Total volume and area for management activities

	Year			
Activity	1992	2003	2013	Change 2003–2013, %
Final felling, m³	17,451,930	27,087,574	27,060,725	0
Thinning, m³	8,934,252	14,475,329	13,462,579	–8
Other felling, m³	4,934,798	3,107,318	3,368,896	8
Cleaning, ha	154,161	203,455	281,524	28
Planting, ha	72,568	71,817	88,741	19

Source: DBFOA

Table 4.5 Self-activity among NIPF owners for 2003 and 2013

Share of self-activity percentage of volume or area										
	All owners				Resident			Non-resident		
Activity	1992	2003	2013	Change	2003	2013	Change	2003	2013	Change
Final felling	11.6	3.6	9.8	6.2	4.5	9.2	4.7	2.1	10.9	8.9
Thinning	43.4	18.3	18.4	0.1	23.0	21.6	–1.5	7.6	9.4	1.7
Other felling	66.2	61.6	50.9	–10.8	68.7	59.3	–9.4	44.9	24.8	–20.0
Cleaning	77.1	64.9	63.1	–1.8	73.9	68.2	–5.7	41.1	49.4	8.2
Planting	69.8	46.7	36.5	–10.2	57.4	39.0	–18.4	30.4	26.8	–3.6

Share of self-activity and change between 2003 and 2013, %. Source: DBFOA

Concluding Discussion

The availability of reliable, disaggregated and up-to-date data is a prerequisite for answering questions similar to those in this chapter. Not only are disaggregated data on forest owners and forests on the property level useful for describing a prevailing situation, they serve as a powerful tool for analysing change and predicting the outcomes of different policy measures. Thus, we need historical data and longitudinal survey or monitoring systems that can not only inform us about change, but also tell us about the processes and their causes and effects. With regard to the changes in forest cover and condition, Sweden, like many other European countries, can rely on NFI, but the NFI does not incorporate data on owners of the forest. At present there are limited possibilities in Sweden to access data on ownership history, for example, which restricts opportunities for more long-term, detailed analysis with regard to forest and forest owner interaction. With DBFOA we are indeed able to show how the numbers of different types of harvesting and silvicultural operations have developed in NIPF categories since 1992, but we do not know the underlying causes of their actions or non-actions. Such information can only be gained through questionnaires or interviews with a combination of topics covering attitudes, ownership objectives and actual management behaviour, as in the Finnish monitoring system (see Box 4.1) or the National Woodland Owner Survey in the US (cf. Butler 2008). Forest farm (owner) accountancy networks similar to the one in Baden-Württemberg (cf. Brandl 2002) or any similar cohort-based approach are other interesting options, particularly if such a network of forest farms (owners) is connected to forest management plans.

However, when studying the relationship between categories of NIPF and forestry activities expressed in the rate of final felling at the landscape level, two information sources are necessary:

1. Final felling information in both space and time, as we have demonstrated in the *Forest change analysis* section.
2. Ownership history information describing changes in boundaries as well as in landowner category, and changes regarding owners.

Forest change analysis could be carried out for any place on earth thanks to the global coverage of satellite images since 1972, while accurate historical records on landowners and ownership can be harder to come by depending on the records and the purpose of use. With both pieces in place, the preconditions for learning from the past to predict the future would be good. Reliable data sources form the basis of land-use and development planning on the municipal, regional and even national levels.

We believe that the Swedish case—where the individual landowner is responsible for land-use planning and operations based on the rules and guidelines in the Forestry Act and with the Swedish Forest Agency as an advisory and supervisory authority—provides a suitable example of how increased knowledge of the forest and forest owner interaction, including ongoing changes, can be attained.

How, then, can we interpret the situation and particularly the changes? Let us return to the questions presented in the *Introduction*, starting with whether contemporary trends in forest ownership are able to support both environmental and forest production/silviculture goals. The changes in forest ownership and forest conditions that can be revealed by our analyses, since 1993 when the new Swedish forest policy focused on both these goals was established, have been affirmative in terms of timber production. The ongoing migration, urbanisation, ageing population and increased proportion of women do not appear to have reduced the willingness to harvest. In general, NIPF owners are not only harvesting more now than in 1992; cleaning and planting have also increased. This indicates that forest owners, for market or legal reasons, are motivated to increase timber production in the future, which largely complies with the first part of the forest policy goal in the Swedish Forestry Act. The first paragraph of the Act states that the forest is a national asset and a renewable resource that should be managed to sustainably yield a good return. So, from both an authority and a timber production perspective, we can conclude that even though the share of self-activity has somewhat decreased, it is still very common for forest owners themselves to work with forest management activities and especially with other types of felling, cleaning and planting. The contemporary changes in the forest owner groups are slow but, it seems, are not a threat to forest production, and

even if the non-resident owners show lower self-activity, their management activities are almost at the same level. This means that management activities are carried out by some external entrepreneur in cooperation with the forest owner, and shows that forest owners are highly motivated to manage their forest.

From a recreation and nature conservation perspective, we initially asked where forests accessible for recreation, and old growth forests, can be found. As observed in section "Where is the Forest in Sweden and Where is the Population to Be Found?", from a European perspective Sweden is sparsely populated with a great deal of accessible forest close to where people live. Even in larger cities, residents have access to forests relatively nearby, for example urban fringe forests. The vast majority of forest land is too far away for the regular forest visitor, as forests inevitably grow outside urban areas where people do not live. In many sparsely populated municipalities, not least the northwest, the inhabitants also, to a higher extent, own forest where they can spend time carrying out different recreational activities, which may include forest management activities. That resident forest owners in Vilhelmina have more old growth forest than non-resident owners do (as shown in Table 4.3) may indicate that they apply somewhat different management practices. However, we need more detailed data on their actual management behaviour to be able to determine whether this is the case.

From a local and regional planning and development perspective, up-to-date and detailed information is necessary concerning which parts (parcels) of the forest land are owned by different owner categories and, among these, who resides in the municipality. The characteristics of private forest owners are changing: the new owners who have recently come into possession of a property are generally younger than the persistent owners, are more often female than previous owners, live further from the forest property, and show a higher employment rate, higher income and higher educational level than former and persistent owners. However, this change is not as rapid as is sometimes believed. Private forest owners keep their properties for some 20 years, and only 4 per cent (9000 properties of 229,000) change owner every year. This also means that the changes we see now are likely to continue, perhaps even at the same pace. Forest ownership and forest income can, theoretically, be a means of live-

lihood in sparsely populated areas, but our data show that forest owners only migrate to a slightly lesser extent than non-forest owners. Migration has many motives, employment being one of them but not the most important; education, social networks and a diversified labour market all work in favour of larger cities.

From a local and regional perspective, it may be important to know not only about the interaction between forest owners and their forests in terms of owner categories, but more precisely about parts or parcels of the forest that possess certain characteristics or contain specific values. From a conservation as well as a land-use and societal development perspective, this information is crucial. As the *forest change analysis* approach can place the forest owner and forestry on the map in time and space, it provides a direct link from the individual forest owner's activity to the planning and decision-making bodies of society at different levels. With this picture of development regarding the forest landscape and the changes in land ownership structure, the preconditions for assessing how the landscape is affected improve. Consequently, it also provides a stronger basis for dialogue about forest ownership and the role of forestry in the landscape.

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5

Is There an End to the Concentration of Businesses and People?

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Introduction

In his book *The New Geography of Jobs*, Enrico Moretti (2013) predicts that the importance of geography and the forces of agglomeration will continue to grow throughout the twenty-first century. Whether a nation, region or city will prosper or decline will be determined by its ability to attract human capital and innovative companies as the good jobs are found in the production of new ideas, new knowledge and new technologies (2013: 215). Thus, and as will be argued throughout this chapter, rural regions in market-liberal economies

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face enormous challenges given that virtually all economic activity has a tendency to gravitate towards population centres or islands of interconnected economic activities (Scott 1998). This chapter will proceed by outlining a number of these contemporary centripetal forces, which all work to push people, companies and investments towards metropolitan areas whilst simultaneously draining the periphery of all types of potential growth resources. The forest industry is no exception to these developments, having been heavily rationalised through technological improvements in forestry equipment, resulting in forest-industry downsizing, and through the use of non-local and flexible labour. These forces are, in a sense, socioeconomic ones—for example, urbanisation trends and the various benefits and opportunities derived from urbanisation economies that are found all over the world—and resonate particularly well within deregulated market economies. As a result of this, we are now faced with the challenge of increasing income inequalities within countries (e.g. Dicken 2015) and the threat of substantiated socioeconomic divisions between a rural population with low income, together with pockets of poor populations in the deprived areas of the metropolitan regions on the one side and the growing income and influence of the top end on the other (Beaverstock et al. 2004; Hay 2013). The fact that this development is underway is not illogical, given the advantages of agglomeration economies and clusters found in a globalised economy (e.g. reduced transaction costs, economies of specialisation, externalities), and consequently, a strong argument can be made for the co-location of economic activities and thus for the continuation of the concentration of companies and people. Against the background of these developments, we discuss whether populations in rural areas have a future in this scenario and enquire into what, if any, the comparative advantages of sparsely populated areas are. Based on a number of examples concerning natural resource processing as well as the forest industry and related mechanical industries, special attention is paid to how we can understand exceptions to the centripetal forces using new theories and observed phenomena (e.g. path dependency, diseconomies of agglomeration, niche production and decreased pricing power).

The reason for studying these industries is their long-term rural location patterns, local embeddedness and future prospects (Diesen 1998; Larsson and Malmberg 1999; Wastensson and Nilsson 1990; Beland Lindahl and Westholm 2011).

Centripetal Forces: Agglomeration Economies and Population Dynamics

From a historical point of view, today's population distribution stems from a time when trade and industry were dominated by agriculture. Before the industrialisation of the Swedish economy in the nineteenth century, the vast majority of people of working age were employed in agriculture, which took place in more or less all parts of the country. However, changes brought by technological innovations both domestically and overseas provided the basis for the industrialisation of the economy, which gradually generated a shift from employment in geographically dispersed agriculture to employment in localised production units (e.g. factories, mills). This structural change in the economy went hand in hand with a population redistribution trend towards the concentration of people into urban centres of varying sizes. Based on data from the early nineteenth century and onwards, Håkansson (2000) showed that urbanisation has been the dominating population redistribution trend over the last 200 years. The concentration of people is not a recent phenomenon that can easily be attributed to behavioural changes or shifts in attitudes by today's generation. In parallel to the general trend of concentration, there have been shorter periods of population dispersion during the post-war period. The 1970s, commonly referred to as the green wave period, were characterised by de-concentration as a consequence of out-migration to nearby villages and suburbs (Lindgren 2003). During the late 1990s, the urbanisation trend picked up momentum once again, revealed by the fact that more than two-thirds of municipalities showed decreasing population numbers. In a few decades, the emerging hourglass-shaped population pyramids will reflect a situation in which some of these municipalities will have two to three times more

people in their 60s and 70s than young adults (Amcoff and Westholm 2007). This development will bring about serious challenges for many rural areas.

The demise of the Fordist production system has brought about uneven geographies of labour and growth (Massey 1984; Dicken 2015; Harvey 2011), often resulting in high levels of unemployment and out-migration from peripheral areas previously dominated by a single, large-scale workplace. The textbook example of this is perhaps the spatial separation of research and development from production, which in turn generates a division of labour that characterises certain regions/countries as requiring low-skilled labour and others as attracting high-skilled workers (Massey 2004). In essence, this is the same turn of events as described by Hymer (1972), when predicting the spatial concentration of high-order functions in the developed North in a strict hierarchical global economy. Thus, structural economic change in the developed countries has meant a turn away from a manufacturing economy towards a learning economy (Lundvall and Johnson 1994) whereby all their industries, to an increasing extent, rely on learning as a means of increasing competitiveness and innovative skills. At the same time, this is a process that is problematic in rural areas given the difficulties associated with attracting predominately urban human capital. For example, it has been demonstrated that the younger cohorts migrate towards larger metropolitan areas, pursuing higher education and a better supply of job opportunities (Fransson 1997; Stjernström 1998; Lundholm 2007b; Niedomysl 2011). Thus, innovative and growing rural companies constantly run the risk of encountering a shortage in the supply of skilled labour.

The execution of policy responses to out-migration and uneven regional development post-1960 has, interestingly, been similar irrespective of political era (Amin 2004). The Keynesian welfare state as well as the later neoliberal pro-market economies responded using the same top-down principles in their separate ways. In essence, these policies boil down to the belief that the solution to the imbalance of growing urban regions and shrinking rural regions will be found in universally applied top-down practices irrespective of potential inter- or intra-regional differences. According to Krugman (1991), this is an idea that runs parallel with neo-classical economic thinking, which also tends to ignore spatial

explanations. In both Sweden and the UK, Keynesian regional policies succeeded for a time in generating employment and stimulating income levels in rural regions. However, the level of population growth notable in urban regions was not matched in the periphery, which ultimately generated imbalances in the economic outcomes of each region. This is a problem that very much remains today, and therefore a key issue in securing future regional employment will be the ability of each region to foster growing companies that will demand labour and rural residents with a variety of skills. Given increased productivity through, for example, the implementation of automated processes (Frey and Osborne 2013), we may also assume that rural labour demand will be limited. Framing this development is competition between companies and regions for investments, resources, labour and market shares, resulting in creative destruction, a term coined by Schumpeter (1942). This is a development that has won various degrees of success in Sweden depending on spatial location and urban/rural setting. For example, several urban regions, including Göteborg (Borggren 2011), have seen continuous population and economic output growth since the early 1980s, including an in-migration of human capital, with the exception of a few years in the early 1990s. Nonetheless, employment remains the dominant present and future challenge for rural regions in Sweden. As economic restructuring leads to the downsizing and closure of manufacturing plants combined with increased mechanisation in the primary sectors, rural regions in Sweden are left with fewer and fewer employment options. According to Jonsson et al. (2011), globalisation is expected to shift the production and consumption of pulp and paper to the southern hemisphere, which will result in the continued downsizing of forest-industry jobs in Sweden. The Swedish forest industry is the world's second largest exporter of paper, pulp and sawn timber and the employer of approximately 180,000 workers, including indirect sectors such as service and goods suppliers (Swedish Forest Industries Federation 2008). Given the rural location of forests and forest industries, the Swedish forest industry plays an important role in determining the rural or urban location of people, jobs and investments.

The shape and effect of globalisation is well debated and remains one of the key research areas in contemporary social science (e.g. Williamson

1996; Dicken 2015)—for example, whether the interconnectedness of states and multinational corporations through the increased trade we are seeing now is indeed unprecedented or whether earlier periods in history, most notably the golden age of 1870–1913, have witnessed the same extent of globalisation. Globalisation, in the eyes of the British geographer Peter Dicken (2015), is very much about the circulation of labour, capital and businesses through interconnected networks. Framing these events in the presence of both domestic and foreign competition imposes pressure on companies to cut costs, remain innovative and constantly look for less expensive alternatives in, for example, manufacturing. According to Dicken (2004), globalisation is also a highly problematic concept that generates different material outcomes on the ground. These outcomes are translated into, for example, social inequalities as companies constantly scan the world for new markets and new sites for locating production facilities. The Swedish forest industry is no exception to these processes, and the projected move of pulp and paper production to the southern hemisphere can be explained using globalisation mechanisms.

The benefits of locating a business in proximity to other economic activities—to agglomerate—were initially observed by Marshall (1890), who pointed to the increased competitiveness and improved performance of these companies vis-à-vis isolated companies outside the agglomeration. According to Marshall (1890), there are important aspects of agglomeration economies that, taken together, will stimulate innovation and innovation diffusion among companies in industrial districts. These aspects are the trinity of learning, sharing and matching. Put in other words, the crucial advantage of locating in close proximity to intra- or inter-industry companies is access to knowledge spillovers. For example, intra-industry knowledge spillover is said to facilitate improved innovative capabilities as well as economic performance for the companies involved (Marshall 1890; Arrow 1962; Romer 1986), as enterprises benefit from a pool of available labour with similar, or closely related, skills and experience as well as from the interaction between these workers. At the same time, this pool is highly unlikely to be found in the rural regions, which ultimately supports the regional specialisation concerning economic activities. This specialisation, in turn, will contribute to a path-dependent evolution

of the economic landscape whereby companies that are technologically related to the already-established companies will be more likely to enter a region than technologically unrelated companies (Neffke et al. 2011). In contrast to the notion that companies will benefit most from knowledge spillovers deriving from labour with similar skills, Jacobs (1969) argued that it is the diversity, that is, the unrelated skills, of the available labour that forms the basis of company competitiveness and regional economic growth. Nonetheless, agglomeration economies—being, as they are, dependent on proximity to labour and companies primarily found in urban areas and metropolitan regions—constitute an important centripetal force. To use Moretti's words when describing future growth poles: "…but her [Jacobs] vision of what makes a society vital and prosperous still rings true today: innovation happens when people interact in a fertile urban environment and their ideas unexpectedly collide to create something that did not exist before" (2013: 248). Perhaps the urban economic growth advantage vis-à-vis rural regions cannot be expressed more clearly than above, leaving virtually no opportunities for the cross-fertilisation of ideas or innovative behaviour outside the urban metropolitan areas given the sheer lack of population.

However, there are more benefits to co-locating companies than simply access to knowledge spillovers. At the same time, these benefits are additional centripetal forces, which further stimulate concentrations of companies and people. These fundamental advantages of agglomerations include the reduction of costs for storage facilities (due to proximity to suppliers), the opportunity to share certain collective costs (e.g. infrastructure), efficient and less costly communication with market actors, a shared pool of labour (as briefly mentioned above) and, finally, access to a local milieu in which learning and innovation are spread through social relations. Given that specific hot spots in economic space are blessed with all the criteria mentioned above, we arrive at the rather contradictory statement that the local has become more, rather than less, important following the globalisation of production and consumption. In other words, it appears that the more globalised the economy, the more local preconditions matter in the process of company growth. For example, it has been estimated that global (most notably European) developments in the use of wood resources and products will have far-reaching implications

for the Swedish forest industry and various aspects of the local milieu. Innovativeness, production costs, product quality and infrastructure will significantly determine whether or not actors in the forest-industry sector in Sweden remain competitive. This is, of course, given the heavily export-oriented nature of the Swedish forest industry (Jonsson et al. 2011).

There is a contemporary notion that the problem of population decline and economic stagnation in rural areas would simply go away if people stopped migrating to larger metropolitan areas. Indeed, Westerlund (2001) finds that increased job opportunities also increase migration, indicating that employment could turn the tide of rural-to-urban migration. Meanwhile, the preconditions for jobs and incomes would improve if the young workforce population refrained from moving and therefore strengthened local demand. This, in turn, would lead to improved opportunities for rural companies to find labour suitable to their needs and for the establishment of new companies by entrepreneurial individuals. Thus, an obvious solution to the problem of urban growth, also described as the most complex enigma of contemporary social science (Storper and Scott 2009), would be to stem the tide of young and talented labour moving from their native rural towns to the big city in pursuit of (depending on who you ask) jobs, amenities, a partner, freedom of expression or simply a change of milieu. Given that, this chapter has until now been concerned with the centripetal forces of agglomeration economies, that is, the traditional view of urban growth as an outcome of industrialisation and local economic processes of development (Weber 1899). However, there is an alternative centripetal force that deserves equal attention in addressing the issue of increased company, population and capital concentration. In this chapter, we refer to this alternative force as population dynamics, and by this we mean the contemporary flow of people from periphery to centre, which can be explained using a number of different approaches (e.g. Storper and Scott 2009; Florida 2004; Niedomysl 2008). Given our earlier highlighting of agglomeration economies, one explanation for our migratory behaviour can be found in the access to jobs and thick labour markets (Gordon et al. 1982). In other words, the dominating explanation for especially long-distance migration has been work-related, whereas household changes explain short-distance migration (Fransson

1997; Mulder 2007). However, the contemporary literature on population dynamics and migration has begun to highlight a different body of research, resulting in the acknowledgement of mixed motives for long-distance migration (Lundholm 2007a). In addition, proponents of amenity-driven growth (Clark et al. 2002; Clark 2003; Glaeser et al. 1992; Glaeser 2000; Florida 2004) also emphasise motives other than job opportunities, such as lifestyle choices and amenities, behind decisions to migrate. Studies in Sweden (Hansen and Niedomysl 2009) have shown that the mobility of the "creative class", a term coined by Florida (2004), is only marginally higher than that of the general population and that work-related decisions outweigh non-work-related ones. Despite the diverging reasons behind the decision to migrate found within the various strands of literature depicted above, it is possible to discern a specific type of favoured destination given that it contains both jobs and a variety of amenities. It is within the metropolitan areas that we find thick labour markets, a multitude of leisure activities, communities that welcome various expressions of political, ethnic or sexual freedom and upper-level education, among other assets. Thus, population dynamics also works as a centripetal force exercising tremendous influence on the continued concentration of companies, people and capital to metropolitan areas.

The influence of policy on urban and rural growth, and the various national contexts in which preconditions for growth are either reinforced or hampered depending on the political agenda (Amin 2004), must also be kept in mind. As depicted above, market forces strongly contribute to the continued concentration of labour and companies, which in turn exerts significant influence on national growth policy. Market forces and policy in combination, therefore, set the stage for much of the preconditions for urban and rural growth. In the case of an interventionist government, national policies may include regional redistribution programmes or subsidies and tax reliefs granted to companies that locate in peripheral regions (see Infobox 5.1 on the Swedish Transport Supplementary Grant). On the other hand, a more market-liberal, laissez-faire government would perhaps resonate with the idea that more or less profitable markets tend to change over time and space, allowing for increased mobility. In the meantime, we should sit back and let innovative abilities paired with resilience to external shocks determine the future fate of each

Infobox 5.1 The Swedish Transport Supplementary Grant

Within the framework of regional policy there is a support system compensating for distance disadvantages facing companies in the northern parts of Sweden. Since 1971, companies have been able to apply for a transport supplementary grant provided that they meet certain criteria. Besides compensating companies for costs related to long transports, the government-financed grant aims at stimulating improved processing within the trade and industry of Norrland, and some of the industries utilise semi-products of wood from forests in the region. This support is only available to companies located in one of the four northernmost counties, that is, Norrbotten, Västerbotten, Jämtland and Västernorrland. As from 1 October 2015, companies registered in this region must also show that their production takes place here. Furthermore, in the new regulations, it is stated that companies facing economic difficulties (e.g. having been declared bankrupt or undergoing debt restructuring) will not be granted support.

In regard to the basic conditions for eligibility, transport distance has to exceed 401 kilometres and the companies have to be registered in manufacturing industries related to, for example, textiles, pharmaceuticals, rubber, plastics or engineering. Industries and goods exempted from transport grants include iron ore, roundwood, pulp, paper, board, steel products from steel plants, alloys, used goods and scrap. For companies selling their products abroad (except to Norway and Finland), the transport grant is only calculated based on the distance covered in Sweden. Thus, transport costs overseas are not covered.

The amounts paid vary according to transport distance and grant percentage, which relates to the municipality where the production plant is located and varies between 10 and 45 per cent of transportation costs. These figures refer to transports from the four counties to elsewhere. Grants for transports into the region are basically five percentage points lower, that is, 5–40 per cent depending on the municipality of destination. In general, the distribution of grant levels follows a north-to-south and a west-to-east axis. Companies operating in municipalities located in the north receive a higher grant percentage than those operating in the south, and municipalities located close to the Norwegian border receive a higher grant than their Bothnian counterparts on the same latitude. This implies that Sundsvall and Timrå in the southwest have the lowest grant level (10 per cent), whereas Arjeplog, Jokkmokk, Gällivare, Kiruna and Pajala in the north and the northwest have the highest (45 per cent). The maximum amount to be granted annually to one production unit is MSEK 15. Companies with more than one production unit (workplace) may thus be eligible for more support.

The Swedish Agency for Economic and Regional Growth (Tillväxtverket) is responsible for administering the transport supplementary grant and for examining applications submitted by companies operating within the relevant area. In 2012, the Agency received approximately 1200 applications, of which 600 were approved. Over the period 2002–2012, approximately MSEK 400 was paid annually to applicant companies. Two-thirds of the companies receiving grants are SMEs (small and medium-sized companies). In 2012, nearly half the grant was paid to companies located in Västerbotten and one-third to companies in Norrbotten. Companies located in Jämtland and Västernorrland obtained approximately 10 per cent each. The skewed distribution across counties is partly explained by the regional differences in grant percentage, but also by the fact that Västerbotten hosts a relatively large number of companies eligible to apply for the transport grant.

In 2012, applications approved included transports of 3.3 million tonnes of cargo. Most were road transport (2.25 million tonnes), whereas approximately 0.6 million tonnes were maritime transport and 0.35 million tonnes were rail transport. Transport grants were awarded to a total of 450,000 shipments.

company. On a more fundamental level, it has been acknowledged that various levels of social security may strongly effect decisions to migrate (Asheim 2009). This is the case when we compare Sweden and the USA, whereby the former offers various forms of social security in the event of unemployment, resulting in a stronger incentive to stay when falling on hard times, as compared to the USA where the response to financial crisis is to move, resonating with the idea that migration motives depend on whether they are related to residence or employment (Clark and Huang 2003; Niedomysl 2008). Another important difference between the USA and Sweden (as well as several countries in Europe, including the Netherlands, Denmark, Italy and the UK) concerns the jobs-follow-people debate (Asheim and Hansen 2009) initially raised by Florida (2004). This debate also connects to the mixed migration motives raised earlier in this chapter. Given that people will migrate, for example, following graduation from university, the debate concerns whether they will move to a destination where they are likely to be hired by a company already located there or to a destination that offers amenities that are

attractive to the individual. In a later stage, the company will relocate to the amenity-rich location, and according to Florida (cf. 2004), this is in fact a development that has already taken place in the USA. However, various studies carried out in Europe (cf. Asheim and Hansen 2009) have contradicted this rather remarkable statement. Jobs remain a very important factor when people migrate.

Before we proceed with a closer examination of the effects of market forces on the ground using a number of examples, the concept of regional economic development needs to be nuanced, given our knowledge of inter-industry relatedness. However strong the case for continued concentration may be, not least as argued above, studies (Boschma et al. 2009; Eriksson 2011; Borggren and Eriksson 2014) show that it is the relatedness between industries, the prevalence of human capital and the internal composition of skills on the labour market rather than diversity per se or urbanisation that powers regional economic growth and resilience (Eriksson and Hane Weijman 2015). It must therefore be noted that, however strong the forces of urbanisation and agglomeration economies are, other aspects such as the composition of the regional industrial portfolio and proximity to related industries will exert influence on regional economic growth irrespective of whether the setting is urban or rural. A growing body of research has identified the importance of related variety for company performance and future destiny throughout economic space (e.g. Boschma et al. 2014; Borggren et al. 2016). Related variety or relatedness—be it companies co-locating with companies in related industries, companies benefiting from a local/regional pool of related labour or companies diversifying into related activities—does not necessarily have to depend on large metropolitan areas, although several of the characteristics associated with relatedness are likely to be found in proximity to significant population concentrations. However, it is important to acknowledge that the relatedness that drives the growth of companies, plants and regions through increased innovation may also be found outside population growth zones.

To summarise, this initial section has highlighted some of the major centripetal forces operating in contemporary society. These forces combine to pull companies, individuals and capital away from rural regions

and towards metropolitan areas. However, it is important to view these events in the light of an increasingly globalised economy, where rationalised processes of production, increasingly powerful corporations and harmonised demand (Dicken 2015) force companies to be ever more competitive. A case in point is the developments over the past 60 years in the Swedish forestry industry, which has seen substantial processes of cost rationalisation, mergers and product development in order to remain competitive. Jonsson et al. (2011) argue that the most important aspect of globalisation in the forest industry has been reduced transportation costs, which in turn have generated more trade in forest products. As will be demonstrated in the next section, there are examples of rural entrepreneurs in various sectors of the economy that are capable of resisting the ever-present centripetal forces.

Further, from a regional development point of view, entrepreneurship is increasingly ascribed an important role in the creation of new jobs, the improvement of productivity and the generation of welfare (Acs and Storey 2004). This is particularly so in rural, or stagnating, regions subject to restructuring and perhaps even job destruction (Brown and Mason 2012; Essletzbichler 2004). However, despite being a priority issue on policy agendas, studies also highlight that the long-term positive impact of entrepreneurship on employment is rather limited and that only a few extremely successful companies actually contribute to employment growth (Mayer and Baumgartner 2014; Nightingale and Coad 2014). This further emphasises the importance of acknowledging the rural entrepreneur and the effect a few driven individuals and the surrounding milieu may have on rural growth. In a study conducted in the Netherlands, Stam (2005) concludes that gazelles are as likely to be found in accessible rural areas as in urban areas. In line with this result, Hart and McGuiness (2003) show that there is an overrepresentation of manufacturing gazelles in peripheral areas of Scotland. These are just a few examples of how and where rural entrepreneurship may work to counter these centripetal forces and serve to introduce the next section of this chapter in which we will describe and analyse some of these companies.

Examples of Successful Companies in Rural Settings

This section is based on documents and information from company websites. The information was supplemented with four semi-structured interviews (approximately 60 minutes each) conducted in 2015. The informants were selected based on the personal knowledge of the interviewer, and should be regarded as illustrative rather than representative of the entire industry. The informants do, however, represent well-known companies with a strong position in the region. Before we turn to the presentation of these companies, a short background on the Swedish forest industry and its related mechanical engineering industry is provided.

In Sweden and the other Nordic countries, the settlement structure is scattered, basically reflecting the localisation patterns of early industrialisation, which in Sweden generally appeared in rather rural settings. The reason for this was the physical realities of a widely distributed network of rivers, waterfalls and lakes in combination with good supply of raw materials such as white water, ore or timber, and—in many cases—good transport facilities on waterways connecting inland areas to the coasts and further on to markets overseas (for a Norwegian example, see Infobox 5.2).

From the mid-1900s and onwards, the development of rural outmigration was mainly driven by young people who left the countryside for jobs and education in cities (Wallander 1948). This process was partly triggered by growing industries and their need for more labour. These new jobs were also relatively well paid, and played an important role in releasing labour from inefficient small businesses, often located in rural areas, thus ensuring competence in the growing export-oriented companies in the cities. The agglomeration economy exerted a great centralising power that made many jobs disappear from rural areas, or at least not increase in the same way as in urban areas (Törnqvist 1963).

In the 1950s, forestry gradually became more important as a livelihood strategy for the male rural population due to a great expansion of the export-oriented pulp and paper sector and formed a welcome alternative to unprofitable farming. The sawmills also created increased demand

Infobox 5.2 Establishing a Cornerstone Company: Aluminium Production in Norway

Different aspects of forest use are discussed throughout this book, and localised forest assets have provided the basis for many economic activities in rural Sweden. The locational advantage of having access to vast quantities of raw materials does not make the Swedish case unique by any means. For example, the geographical features of Norway, with its many steep rivers and embankment dams, mean that it is able to produce hydroelectric power easily, and consequently relatively cheaply. These resources may provide an important basis for many different economic activities that support local communities in various ways, for example, job opportunities and long-term income for people living in rural areas.

In Norway, over 96 per cent of the electricity is produced by hydroelectric power stations, which tend to be located in rural areas. Energy-intensive industries are often located in the close vicinity of these hydroelectric power stations to benefit from cheap access to the much-needed electricity for their chemical processes. The energy-intensive industry that is the largest processor of hydropower is the Norwegian aluminium industry. Overall, Norway is the largest producer in Europe of primary aluminium, that is, aluminium tapped from electrolytic cells or pots during the electrolytic reduction of metallurgical alumina. This is a position it has reached over a more than 100-year history involving radical innovation in energy-generating technologies, close location to the European market, and dedicated policy initiatives and legislation which have made it attractive for foreign players to assist in establishing the industry in Norway, as well as close collaboration with research institutes and universities (Sæther et al. 2011).

Currently, Hydro, Alcoa and Rio Tinto Alcan own a total of seven aluminium production facilities in Norway. These production facilities are located in Farsund, Mosjøen, Årdal, Sunndal, Høyanger, Husnes and Karmøy, which are municipalities located in peripheral areas along the coast or on a fjord. The production of primary aluminium is energy-intensive (12–15 MWh per tonne) and, not surprisingly, each of these aluminium plants is located near a hydroelectric power station. Some of these companies were even established at the same time the hydroelectric power stations were built (www.norskindustri.no). The aluminium plants possess world-class research expertise, which can be attributed to the above-mentioned strong innovation system that facilitates close collaboration with technical universities and other research institutes in Norway (Sæther et al. 2011), and is responsible for many of the jobs in rural areas contributing to wealth creation and social welfare. It is for this reason that these companies are referred to as *hjørnesteinsbedrifter* (cornerstone companies). This

strong link between the rural locations of hydroelectric power plants, the subsequent decision to establish an aluminium plant and rural development and employment is presented in the following case description.

The aluminium plant in question was established in the 1970s. Prior to this, the area where the plant is now located was characterised as a region in decline. Young people left the region to study and only seldom returned, and a high unemployment rate forced workers to find jobs elsewhere, which resulted in a steadily decreasing population. Regional and national policy-makers recognised that what was missing was an industrial structure of a relatively large size that could play a central role in regional employment and subsequent development. The national government had already decided that such an industry would be established in this region to counter the outflow, although the details of what industry this would be were yet undetermined.

Simultaneously with the region's interest in attracting industrial activities, a large industrial player was studying opportunities to start a primary aluminium plant in this part of Norway. The area was an interesting candidate for two reasons: (1) its proximity to the European market and (2) the Parliamentary guarantee of electric power. In this case, access to energy was secured by the decision of the national Parliament to establish a hydroelectric power plant in the area only months prior to the decision to locate the aluminium plant in that region. Construction started, and a month before the melting ovens started up, the hydroelectric power station was completed.

The aluminium plant had the intended effects, decreasing the outflow of workers and leading to an inflow of qualified labour, partly due to close collaboration with an aluminium plant in another part of Norway. In its heyday, 600–700 workers were employed at the aluminium plant, meaning that one in four households in the region had a job related to the company. Indirect effects through municipal tax and local purchasing were also visible. The demand for qualified labour made the aluminium plant an active player at regional institutes of upper secondary education, but also at the Process Metallurgy Department of the Technical University College at Trondheim (now part of University College Sør-Trøndelag).

Today the aluminium production plant, now part of a large international concern, remains among the largest employers in the municipality, with close to 300 employees. They work in five shifts seven days a week, resulting in 24/7 operation. Given the nature of production, mainly high labour and energy costs, the production facility has emphasised production efficiency. This plays a more important role as the plant is among the smallest aluminium production plants in the world, mainly operating on 1970s infrastructure. This imposes demands on management to be technologically and organisationally at the forefront to keep operations going and not be outcompeted on price and quality. This ability to be at the

organisational forefront can be demonstrated by the production plant's ability to decrease its staff from 600 to less than 300 employees while maintaining the same level of production. One important reason was the introduction of LEAN into their production process as early as the mid-1990s, indicating management openness, as they were unfamiliar with the concept at the time. This organisational change, which resulted in a more team-based structure including more automation, created a slimmer and more agile organisation.

Being part of a large multinational concern is crucial for the regional production plant, as it provides a backbone of knowledge and competences that are shared across the organisation at large, for example, via the parent company centres of excellence within the different technology domains in which the regional production plant can actively participate. The backing of the parent company also resulted in the establishment of a research centre focusing on new aluminium production techniques. The introduction of this technology would result in higher efficacy, reduced CO_2 emissions and lower investment, and, because of the need to use smaller production space, make it easier to set up small-scale production. Over the years, there has also been skill upgrading at the production plant; previously, almost anyone could work at the plant, while today 80 per cent of its employees have a certificate and some even a PhD. The company also employs apprentices, including the use of summer interns, to secure future recruitment.

This will contribute to more sustainable production processes. Sustainability is also one of the main challenges this industry faces—other aluminium production plants have been closed down because they could not live up to standards and environmental conditions. These also threaten the activities of the local production plant. Since the mid-1980s the plant has worked actively, through trial and error, to create technologies that reduce environmental waste—technologies they have implemented at other aluminium production facilities in Spain, Brazil and Canada.

This case illustrates how regional factors, that is, geographic location and access to regional resources such as hydroelectric power, have provided attractive preconditions for establishing a company that, in its first decades, would play an important role for a region and halt decreasing population rates, as well as offering relevant job opportunities for people in the region. However, it also demonstrates that, in order to compete internationally and stay operational (in the last two decades, several Norwegian aluminium plants have had to close), management has to operate at the forefront to tackle challenges concerning efficiency and effectiveness, particularly when confronted with relatively high labour costs. Having access to relatively cheap electricity, provided by the hydroelectric power plant that was established simultaneously with the founding of the aluminium plant, as well as the backing of a large international group, is crucial.

for timber at this time, which was reflected in the number of workers in the forest sector. The increasing demand for timber contributed to a delay in the urbanisation process—and in fact a lack of labour in rural areas—which enforced remarkably extensive mechanisation within forestry. However, the small-scale nature of forestry and forest properties initially resisted the use of wood extraction and harvesting technologies (Antonsson and Jansson 2011; Törnqvist 1996).

The emergence of the industrial society undoubtedly led to enhanced prosperity and an extended welfare state, not only in urban areas but also in the countryside, particularly in the years after 1970. However, one apparent spatial outcome of the welfare state was urbanisation at the same time as rural areas lagged behind, particularly in agriculture (Pettersson and Jansson 2011). Many small businesses in rural areas were left behind and could not always meet the new requirements in a number of policy sectors such as work environment and salaries (which demanded equal pay for equal work) (Schön 2007). As a result, many small companies in rural areas were shut down, while others managed to rationalise and grow, but generally, there was no corresponding growth in employment in new industries in rural areas (Flygare and Isacson 2003; Tillväxtanalys 2012).

Dominant companies with their roots in early industrialisation do remain in a few rural places, but many of these companies have shut down their operations in rural areas and small towns. However, Sweden still plays an important role for processing natural resources, not least in regard to Europe's cellulose fibre chain via its predominantly fresh fibre-based pulp production. Pulp exports are also vital for raw material provision for paper manufacturing in several European countries, and as much as one-fifth of the consumption of sawn wood products in the EU countries is produced in Sweden (Skogsindustrierna 2016).

In 2015, the Swedish forest industry accounted for slightly over 10 per cent of the Swedish industry's total employment, exports, sales and added value (Skogsindustrierna 2016). The Swedish forest industry is strongly export-oriented, and since raw materials are primarily collected domestically (only a small portion originates from imports), the forest industry makes a significant contribution to the national trade balance. Approximately 85 per cent of pulp and paper production is exported.

The corresponding figure for sawn wood products is close to 70 per cent, which means that Sweden is one of the largest exporting countries of the combined products of paper, pulp and sawn wood in the world (Skogsindustrierna 2016). As the Swedish pulp and paper industry is the third largest in Europe, a notably strong cluster has been identified in Sweden (Porter 1990). The industry plays a major role in the Swedish economy, although it should be noted that the spatial distribution of production units is geographically uneven. Today, most plants are located close to urban areas, predominantly on the coast of Norrland and around Lake Vänern, where large multinational companies such as BillerudKorsnäs, Metsä Board and Stora Enso are located. Thus, it can be concluded that the forest industry is important to the national economy, but its location patterns also reveal a relatively weak association to the rural areas of Sweden.

When examining the forest industry and related sectors in more detail, it turns out that old-school localisation and agglomeration theories cannot grasp some of the emerging patterns. In particular, this becomes clear when one considers the forested inlands far from growing cities and up-scaled agglomeration economies. Long-term population decline has undoubtedly changed the preconditions for many rural municipalities, but these areas still have relatively well-functioning labour markets. From an urban point of view, there are also competitive companies and industries located in small towns and rural settings. The simple answer is evidently related to the fact that someone has to harvest and transport lumber from the woods to the industry. People in these occupations have usually lived near forestlands. Forest companies have apparently also demanded access to workshops, engineering and other services, because proximity has played an important role for efficiency in the production chain from wood to industry.

During the early stage of forestry industrialisation, lumberjacks used saws and axes, but in the 1950s a tremendous mechanisation began taking place. The introduction of the chainsaw was the starting point of a comprehensive change in the methods and organisation of forestry, and exerted a vast influence on productivity. A distinctive characteristic of the mechanisation process was that the new products and methods emerged in close cooperation between local workshops and forest companies.

Proximity was very important and contributed to the vitality of rural areas during these periods. However, the mechanisation of forestry activities was far from a spatially even process, implying that innovations and new technology developed from local hot spots into certain regions. In many forested counties, not least Hälsingland, Västerbotten, Värmland and Småland, several such hot spots emerged and developed into successful companies and clusters of companies. Many of these companies are still active and, for example, run operations focusing on forestry mechanisation and advanced material handling for demanding situations. Many of the companies originate from the forestry mechanisation wave that took off during the 1950s. Places such as Filipstad in Värmland, Alfta in Hälsingland and Vindeln in Västerbotten were particularly important for this development. In Filipstad and Alfta, most of the companies related to forest mechanisation have shut down, but in Vindeln and some other villages in Västerbotten, businesses are still up and running with continued vigour.

Attempts have been made to explain the success of forest machine suppliers in Vindeln and elsewhere in Västerbotten by applying cluster theories. Perhaps there are some good points to this; however, the basic requirement of proximity cannot be fulfilled in such a sparsely populated region. The explanation lies elsewhere, but before we look for it, it may be fruitful to take a closer look at some of the companies that have contributed to the mechanisation process and still run their operations in some of the sparsely populated parts of Västerbotten. The centre of gravity of the inland forest mechanical milieu is the small town of Vindeln, which hosts the neighbouring companies Cranab, Indexator and Vimek. Further to the north in Västerbotten, the headquarters and production unit of Hultdins are located in the small town of Malå. Another example of a successful company in this sector is Bracke Forest, located in Jämtland. Natural resource orientation seems to continue, but today, it is also supplemented with small-scale tourism and many SMEs in the manufacturing sector whose localisations cannot immediately be explained by cluster theories. In line with the theoretical point of departure presented above, there is no ambiguity in this spatial pattern and development over time. In order to bring clarity to some contemporary trends within

inland trade and industry, some examples of local companies have been chosen for a more detailed presentation.

Indexator Rotator Systems AB is a world-leading manufacturer with products characterised by leading-edge expertise within design as well as material engineering and the manufacturing of rotators, swivels for forest machines and other vehicles used in material handling (Indexator 2016). Its headquarters and production plant are located in Vindeln, approximately 50 kilometres northwest of the regional centre of Umeå. In 2015, Indexator had 130 employees and a turnover of approximately SEK 230 million. A significant part of its sales was for export—approximately 80 per cent of the production was sold to countries overseas. The company operates on about 40 regional markets, offering high-end rotators and swivels developed in close collaboration with leading manufacturers of base machines and equipment such as John Deere and Komatsu. Indexator rotators are original equipment on the world's leading logging machine brands but are also sold on the global forestry aftermarket (Indexator 2016).

Indexator's history goes back to the 1930s and the achievements of one motivated and driven contractor (Indexator 2016). From the early 1950s, the company operated in the forest sector as a manufacturer of cranes for forest tractors and as a seller of excavators. In the late 1950s, Cranab was established (Indexator 2016), and it has continued to work successfully on developing and selling hydraulic timber cranes and taking advantage of the great interest in forestry mechanisation. For example, the Cranab cranes were often factory-mounted on many of the new forest machines that appeared on the market in the 1960s and 1970s. Other companies soon began to take notice of the industrial progress occurring in the small town of Vindeln. At the time, Hydraulik Indexator AB was manufacturing hydraulic valves in southern Sweden and was a sub-supplier of Cranab. The company struggled financially for some time, but towards the end of the 1960s, the owners decided to move operations to Vindeln in order to move closer to Cranab (Indexator 2016). Hydraulik Indexator AB gradually increased its competitiveness, and Cranab decided to buy the company and make it a subsidiary (Indexator 2016). When the man who would become the founder of Indexator decided to sell his shares in Cranab to a leading manufacturer of forestry and sawmill equipment, he

was ready to take on other business opportunities. This was realised by retaining ownership of Cranab's small subsidiary, Indexator (2016). The business is still run by his family.

The origins of Hultdin System AB in Malå go back to 1928 (Hultdins 2016). Initially, furniture and other wooden objects were manufactured, but when all the village households had been provided with such goods, Hultdin took the strategic decision to start a smithy in order to move into the growing market of forest equipment. A business was started for horse equipment suitable for forestry activities within the home region, and over time was extended into a family business. In 1963, the company had grown to 30 employees and had a turnover of SEK 2 million (Hultdins 2016). At the same time, a large order including 45 complete tractors equipped with three-quarter ties and crane assembly became an important step in the company's development, as it required the company to expand and move to larger (but still local) facilities (Hultdins 2016). In 1965, the company started a project together with the local dealer of Nuffield engines, building combined farming and forestry tractors. Since 1970, the company has grown as a subcontractor in the engineering industry. Hultdins manufactured everything from mining carts to painting robots but from time to time also offered their own products. During the mid-1970s, Hultdins had as many as a 100 employees in the plant (Hultdins 2016). In the early 1980s, Hultdins defined the strategy that led to today's world-leading products in the mechanisation of forestry; currently, the company's product portfolio consists of grapples, grapple saws and damping systems for cranes.

Martinsons is one of the largest family-owned wood-processing and sawmill companies in Sweden. The company has its roots in the county of Västerbotten and still has its headquarters in the small town where it originally started (Martinsons 2016). In 2015, the Martinson Group employed around 400 people and had a turnover of approximately SEK 1 billion, and is currently recognised as one of Sweden's most expansive companies within the rural parts of the country (Martinsons 2016). The company has three sawmills located in Västerbotten. Martinsons processes pine and spruce into high-quality wood goods for construction purposes, and is considered one of the market leaders in glulam products,

especially wooden bridges and glulam framework systems. Most of the company's production goes to export markets.

The history of the company begins in Bygdsiljum in 1929. Glulam manufacture began in 1965, and five years later the first specialised glulam factory was built in Bygdsiljum. In 1989, the company built its first wooden bridge—a branch of production that blossomed and led to a partial expansion and, finally, the full purchase of an existing wooden bridge company. Sales of glulam to Japan began in 1992 and have grown to such an extent that Japan is currently the company's largest export market, followed by the Nordic countries (Martinsons 2016). In the last few years, the company has made great investments in order to stay competitive on the global market for glulam and high-quality wood goods.

To sum up, the examples of companies presented here have shown that it is possible to run companies successfully in rural areas. These companies have been able to develop their businesses through stepwise innovation, which has made their products competitive on the global market. The companies are good examples of economic activities that have been able to withstand the widespread centripetal forces of agglomeration economies. There are certainly many different reasons for their success, but one factor they all have in common is their regional embeddedness and historical linkages to a dominating trade and industry. Some of these companies also run their operations in close geographical proximity to other related companies, which may facilitate information exchange and learning opportunities. In the next section, some of these aspects are discussed more thoroughly.

Challenging the Urban Assumption

This chapter began with a number of compelling arguments concerning the ongoing urban concentration of companies, capital and individuals. At first glance, the future scenario depicted for rural areas appeared to be revolving solely around tourism, second-home settlements and primary-sector economic activity. However, as we have seen in Examples of Successful Companies in Rural Settings of this chapter, there are comparative advantages in sparsely populated areas and prosperous businesses

operating in manufacturing. The final part of this chapter will focus on how these comparative advantages, as well as being exceptions to the centripetal forces, can be understood using theories on pipelines, seasonal buzz, path dependency, diseconomies of agglomeration and niche production. Framing these theories is the specialisation-diversity debate (Glaeser et al. 1992; Henderson et al. 1995) that significantly influences contemporary economic geography and essentially poses the question of whether Marshall or Jacobs was right concerning the occurrence of optimal settings for various externalities, that is, external positive effects on company performance (e.g. Desrochers and Leppälä 2011). We will argue here, illustrated very roughly in Table 5.1, that the buzz versus pipeline discussion, as well as the conflicting ideas of urbanisation versus localisation economies and the discussion on population dynamics introduced in Centripetal Forces: Agglomeration Economies and Population Dynamics, can be fitted within this tension field and also be used to better understand the successful rural businesses depicted in Examples of Successful Companies in Rural Settings of this chapter.

Illustrating urban-rural tension fields is treacherous, given that it is bound to oversimplify a complicated issue. We do not claim that we have involved all areas or fields of conflict related to urban and rural issues of growth; rather, Table 5.1 is intended to position a few of the topics addressed in this chapter in order to give the reader a sense of what is at stake and who is playing on what side. Further, each of the fields of tension in Table 5.1 can (and will) also be countered. For example, the benefits of agglomeration economies can be questioned using findings on agglomeration diseconomies (e.g. Camagni and Capello 2015), and the urbanisation economies heralded by Jacobs (1969) run a constant risk

Table 5.1 Tension fields between urban and rural regions

Rural	Urban
Thinning out/ dispersion	Concentration
Regional specialisation	Urbanisation economies
Pipelines	Buzz
Out-migration	In-migration
Labour shortage	Labour abundance
Population decline	Population growth

of exposure to the negative effects of urban growth, for example, rising housing prices, malfunctioning infrastructure and mental stress. Further, the buzz-pipeline dichotomy illustrates flows of people and information through pipelines that can be targeted towards rural areas given the lack of existing buzz. Thus, buzz is a predominately urban phenomenon, as illustrated by Jacobs (1969). Table 5.1 also serves as a guide to the content of the final section of this chapter, as we will proceed by addressing this tension field through our findings in Sect. 2.

The geographical variations of population dynamics focus on some of the challenges for economic growth in regions outside metropolitan areas and regional centres. One obvious factor is, of course, that labour supply will decrease in absolute numbers, making it more difficult for companies not only to hire but also to find people with the right training and skills. Moreover, the diversification of skills and educational background will suffer as the working-age population sharply diminishes. In this way, the foundation for regional specialisation erodes, since the potential for having local trade and industry that are related and complementary becomes weaker. Nonetheless, it has to be kept in mind that these population dynamics do not apply to all regions outside the densely populated parts of Sweden. There are numerous strongholds where demographic conditions are beneficial to successful economic activities. Another aspect is related to the potential spillover effects of being located close to a large functionality-rich municipality. Such small municipalities may borrow size from the larger adjacent municipality in terms of various agglomeration benefits (Alonzo 1973; Burger et al. 2015). For example, the large pool of labour in the large municipality may be an important resource for companies operating in the small municipality. Having access to the skills of in-commuters may be crucial for the future operations of the company. The urban functions (e.g. attractive housing, services, shopping, education, culture) demanded by the families of in-commuters would never be attainable in the small municipality, which implies that migration would never be an option for many of these families. On the other hand, expanding large municipalities may create opportunities for smaller neighbouring ones. Skyrocketing housing prices tend to gradually increase housing demand farther away from the municipality centre, which may also affect the housing market in the nearby small municipality. Increased in-migration of families with children from their larger

neighbour may serve as a vital injection for a municipality suffering from demographic imbalances.

The importance of agglomeration economies has been attested by the works of several generations of economic geographers, and addresses labour, business transactions and technologies that all work to improve innovativeness, competitiveness and ultimately regional development chiefly in densely populated locations (Marshall 1890). Based on these centripetal forces, the urban assumption of ever-increasing economic growth in cities and metropolitan areas has grown stronger over the years (Jacobs 1969; Glaeser et al. 1992). Even though this is a major trend in the theorisation of the economic landscape, there are theoretical strains of thought that point in other directions. Localisation economies associated with Marshall's industrial districts indicate that successful companies may be located outside metropolitan areas in regions where related companies in the same industry benefit from ample access to employees with specific occupational skills, lower costs for input and output transactions and higher availability of information about products. Localisation economies may take place in small regions of a pronounced rural character. This brings us back to the question of Jacobs versus Marshall and, given the lack of externalities associated with urbanisation economies, whether it is solely regional specialisation that is the way forward in rural areas. Building on this, Van Oort et al. (2015) set out to study the effects of related and unrelated sector variety on employment and productivity growth across European NUTS2 regions. They found that a regional industrial portfolio characterised by a related variety and employment growth is a "particular feature of small medium-sized urban regions" (2015: 1124). However, generating the industry mix required in order to reach sufficient complementarity in rural regions is often a challenge, given the influence of regional specialisation and the lack of a critical mass of companies and labour. As we have seen in the forestry technology cluster in Vindeln in Sweden, it is also the case that related and unrelated sector variety is a typical feature of large metropolitan regions and therefore an integral part of the urban assumption stating that all economic activity gravitates towards urban cores. Arguably, the first pan-European regional study of the relationship between productivity and employment growth and industrial variety complicates the picture and

highlights the fact that the question of who is right (Marshall or Jacobs) needs to be nuanced. The successful rural businesses introduced in the previous section operate in local milieus characterised by various levels of regional specialisation; that is, there are other actors in close proximity belonging to the same industry.

From another strand of thought, it has been argued that the primary mechanism making it beneficial for a company to locate in proximity to similar companies is access to tacit knowledge. This would partially explain why companies choose to agglomerate. Subtle forms of information can only be exchanged successfully by people meeting repeatedly in person and being in the same local environment (Maskell and Malmberg 1999). To some extent, this would explain the spatial concentration of forest-related companies in Vindeln and other places in northern Sweden, where local actors benefit from proximity to a tacit knowledge pool. Bathelt et al. (2004) attest that it is the combination of tacit local knowledge and codified global knowledge that creates new knowledge and innovations. Consequently, the forest cluster would need access to global knowledge pipelines in order to remain competitive. However, given the proven immobility of many of these plants and the unattractiveness of their activity from an urban development point of view, it should be noted that several other aspects come into play when we consider the mechanisms that make it beneficial to locate in sparsely populated areas. Another aspect that must be acknowledged is the advantages gained by information on the characteristics of their competitors' products and on the quality and cost of the production factors they use, which become available to companies located in clusters (Porter 1998). Given the both urban and rural location of clusters, theories on clusters cannot fully explain the comparative advantages of rural companies vis-à-vis urban companies. There must be more precise values and resources which urban economic activities are unable to put to use.

In a sense, the place-specific knowledge derived from the global pipelines as well as the codified knowledge tapped into and the local tacit knowledge found among the employees within the company work together to form a unique place and time-specific asset. However, the theory of a local buzz and the global pipelines that stimulate company performance and innovative behaviour is highly grounded in an urban

setting where face-to-face contact is most likely to happen, given the population density (Storper and Venables 2004). Professionals meet at workplaces, conferences, trade shows and their respective residences or at any of the venues offered by the multitude of amenities within a large city (Bathelt et al. 2004). Meanwhile, the global pipelines between companies in different metropolitan areas function as bridges connecting the local buzz. On the contrary, a sparsely populated milieu is often deprived of these facilities, instead having to rely on longer travel or the use of Information and communication technology (ICT) when communicating with external actors. Against this background, what if there is a local buzz in rural areas characterised by regional specialisation, as we have seen in the case of the forestry machinery cluster in Vindeln and Västerbotten? There may be a local buzz that connects through global pipelines to other sparsely located clusters and/or to the companies in metropolitan regions. These pipelines also facilitate the much-needed nourishment, for example, cooperation, joint ventures and knowledge exchanges with other companies, for the successful rural businesses. In the literature, global pipelines are usually viewed as functioning as communication paths between metropolitan areas, but we suggest that the pipeline concept may also reflect knowledge flows between rural and urban settings. The flows of knowledge spillovers go in both directions, but it seems likely that companies in rural areas connected to these pipelines may particularly benefit from vital inputs that help them stay competitive over longer periods of time. In this way, having access to global pipelines may compensate for weak local buzz.

In addition, Robertsson and Marjavaara (2015) identified a seasonal buzz found in a temporary setting such as a second home, where there is a heterogeneous composition of individuals. In their study, which looks specifically at the impact on local development created by second-home owners at a Swedish ski resort, Robertsson and Marjavaara (2015) found that peripheral locations may become a lively location for knowledge exchange and that this needs to be utilised in a better manner in order to move beyond the limited use of second-home owners as simply consumption-enhancers. It may be argued that in the context of networking and the seasonal buzz, the local seasonal destination such as a ski resort or summer vacation residence has a competitive advantage compared to other remote

or rural destinations, given the existence of a seasonal knowledge base. As concluded by Fountain and Hall (2002), who studied the purchases of second homes in the New Zealand countryside, the concerned individuals did belong to the more affluent cohort of society. These individuals brought professional and entrepreneurial skills, giving a depth and richness to the place that was disproportionate to its size. The influential key individuals, who populate the second-home destinations for some time, combine their leisure activities with other business endeavours. Technological advances in communication mean that people can move more freely if they have jobs that are possible to perform from a distance. This creates a crucial and competitive resource base for the local community, which has the potential to become vital and innovative. Although second-home owners have been a source of conflict in their destinations (Marjavaara 2008), in some cases, they also represent substantial economic opportunities for areas which have otherwise undergone considerable restructuring and often have only a limited number of economic opportunities available to them. Opportunities also arise for the owners of second homes, as they are present in an environment composed of influential key individuals who are willing to interact. Mobility and knowledge transfer are important aspects in the process of creating innovations. These processes are carried out by humans who extend the meaning of a primary location.

Forests have been, and still are, an important asset to rural areas. This is also the case for Sweden as a whole. Nearly 55 per cent of the country's land is covered by productive forests, amounting to 23 million hectares (Skogsstyrelsen 2015), which means that forestry and economic activities related to forests are scattered all over the country and play an important role for rural Sweden. The economic effects of forestry in these regions used to be considerable in terms of employment, local tax revenues and enhanced basis for local retailers. However, during the last few decades, employment in forest-related sectors in rural areas has decreased substantially (Lindgren et al. 2000), and the number of forest owners living far from their forest properties has gradually increased (Haugen et al. 2015). As a consequence, local income generated by forestry-related employment has dropped, as has income tax paid to the municipalities. The tendency of greater shares of forest owners residing in metropolitan areas and regional centres has also

likely implied reduced levels of forest payment spending in local retail business. From this point of departure, Haugen and Lindgren (2013) suggested that the local economic benefits of forest assets might be channelled through other processes. They hypothesised that there is a link between the performance of local companies and forest ownership; that is, companies whose owners also possess forest holdings are more viable, thanks to different resources in the form of capital from logging or mortgaging or other non-pecuniary values. The results of the empirical analyses of Swedish register data indicated that forest assets have a positive effect on micro-company profitability. This suggests that there are resource transfers from the forest estate to the micro-company and that these transfers elevate the financial performance of the company in non-forestry lines of business. Moreover, the outcomes of this study revealed that micro-companies located in rural areas do relatively better than those in metropolitan regions and that forests as a non-urban asset appear to be contributing to the better performance of the micro-companies in rural areas. If these results were to be confirmed by other studies, there would be even stronger reason to believe that company bonds between local forest ownership and local trade and industry are of strategic importance for strengthening employment and earnings in the sparsely populated parts of the country. This would point towards the importance of place-specific assets for rural entrepreneurship.

One indicator of entrepreneurship is the prevalence of rapidly growing small companies, or gazelles (Birch 1981). So far, research on the location of these companies shows that the geographical distribution of high-impact companies tends to be uneven, which casts some doubt on their potential as rural job creators (Lyons 1995). However, Stam (2005) found that rapidly growing companies in the Netherlands are present in both rural and urban areas, depending on the type of sector the high-impact company operates in. The Swedish context is different, especially because its population density is much lower than that of the Netherlands, which may generate some interesting deviations.

Borggren et al. (2016) observed that non-metropolitan regions host rapidly growing companies despite the fact that these localities lack factors such as urbanisation economies and vast supplies of services.

They conclude that the survival of high-impact companies in rural areas is based on their ability to recruit labour with experience from sectors that are related (i.e. where human capital is easily transferable) rather than on their proximity to companies in similar and related sectors. However, there are most likely other factors that also contribute to the fact that high-impact companies emerge in sparsely populated regions. Early writers within the literature on industrial locations, for example, Weber (1899), argued that different types of raw materials form important factors for determining the optimal location of production units. For example, proximity to forests and transport routes could be of decisive importance for the location of sawmills and other production units within the forest industry. Overarching the assumption that company performance in a rural context is dependent on the prevalence of forest assets is the notion that entrepreneurship and economic growth are somehow connected (Wennekers and Thurik 1999). Although there is a risk of decreased productivity in companies having easy access to credits or easily retrieved resources (de Meza 2002), Haugen and Lindgren (2013) assert that forest ownership entails important benefits.

Following Penrose (1959), we may also argue that there are other resources available for driving rural company growth, thus perhaps partially explaining the successful businesses introduced in the previous section. More specifically, these additional resources refer to their employees. Much empirical research has focused on the importance of individual resources as preconditions for company growth, and thus also on the specific characteristics required when running a growing business. Given the different preconditions for rural company growth vis-à-vis urban company growth and the centripetal forces affecting the labour market, it may be concluded that a rural entrepreneur faces substantial challenges in finding employees (see Infobox 5.3 on Norwegian and Danish attempts to move public jobs to non-core areas). In fact, studies show that a significant share of profitable Swedish companies appear to be reluctant to hire employees at all (Bornhäll et al. 2015). Given the positive impact forest assets seem to have on rural company performance, this factor may have a positive influence on employment patterns.

Infobox 5.3 Norwegian and Danish Decentralisation Policies: Moving Public Jobs to Non-core Areas

Forest-dense rural areas often fall victim to forces of centralisation, causing them to lose economic activities to nearby urban areas or national centres. Once this is initiated, these areas are trapped in a downward spiral as the departure of economic activity leads to fewer employment options, and particularly young and highly skilled individuals leave the region, hampering the establishment of new companies and causing existing businesses to exit due to lack of access to qualified labour. These effects are even more pervasive in countries such as Norway, which has not only a population of 5.5 million scattered over a geographical area slightly larger than that of Germany (population of 80 million) but also the greatest length of any European nation at 1752 km. In order to counter the negative downward spiral of centralisation, the Norwegian government has implemented an active regional policy whose primary goal is to preserve the main features of the Norwegian settlement pattern while at the same time ensuring good living conditions.

One of the political measures to have received the most attention in the Norwegian media was the decision in the early 2000s to actively move 900 government jobs out of Oslo to other areas of the country. In line with this decision, the government also set up guidelines on the distribution of government jobs in future re-organisation processes and the creation of new government functions. The purpose of this action, in addition to adhering to the goals set by the active regional policy, was to achieve a more even regional distribution of government jobs, provide the population in all parts of the country with good access to government services, establish professional academic environments outside the larger populated areas and locate national operations outside the Oslo area through the creation of new units or the strengthening of existing regional offices. When all this is done, it will ensure overall access to the government by the population at large (i.e. taking into account whether people have to meet in person or whether communication with the government agency can be organised via telephone or mail); maintain skill requirements for those who perform the tasks; ensure availability of the necessary infrastructure and proximity to (relevant) agencies; remain cost-effective and follow regional development plans.

The announcement concerning moving these jobs led to a great deal of resistance from Oslo, not least from the affected employees, who understandably feared for their jobs, although the growth of government jobs in Oslo heavily outweighs the loss of jobs due to this measure. All employees were offered a move to the new location, but many were unwilling to relocate. Other complaints raised about the move dealt with the cost-effectiveness

of the decision, it was indeed an expensive operation, and difficulties in recruiting competent employees were expected. Other parts of the country were more positive about the move, as for the first time jobs were being moved away from the capital.

The move of these government jobs led to the establishment of competent government agencies outside Oslo. These agencies have also proven to attract the necessary employees. The final conclusion as to whether the move was a success is still under study, while the government continues to discuss moving more government jobs out of Oslo.

Measures to move government jobs outside the capital city are not confined to Norway. Currently, similar decisions have been made in Denmark, where close to 4000 public-sector jobs are to be moved from Copenhagen to other parts of the country. Similar to Norway, this decision was met with a great deal of criticism, mainly concerning the same parameters. The first moves will occur within the next three years.

Another important aspect that relates to the employment process is the role of opportunity costs, which are vital in the decision-making process of all jobseekers (Pissarides 1994). Following the idea of lower opportunity costs and empirical research comparing the propensity to set up business among the employed and unemployed workforce (Ritsilä and Tervo 2002), a distinction can be made between opportunity-driven and necessity-driven entrepreneurs that could assess the potential difference for job creation (Acs 2006; Amoros and Bosma 2014). In this respect, the regional context, apart from mere agglomeration, is essential since different types of regional endowment may support entrepreneurship at different stages of development (Feldman 2001). For example, Audretsch and Fritsch (2002) identified different regional growth regimes in relation to entrepreneurship that may be associated with either employment growth or decline (entrepreneurial regime vs. revolving door). Their findings do, however, suggest that in the long run both regimes tend to be better for employment, since small companies are the seeds of future growth as compared to the more vulnerable regimes characterised by large incumbents, which may face significant downsizing. This is basically because regions with many small companies may be better at absorbing labour from declining companies and industries. Therefore, it is not only the

background of the entrepreneur that is likely to influence the potential growth of small rural companies but also the regional context, since this influences the local supply of skills that could potentially be employed. Coad et al. (2014) find that high-impact companies, that is, gazelles, tend to hire more marginalised workers due to the speedy recruitment processes that are necessary. As shown by Borggren et al. (2016), this may thus influence the subsequent growth of the company if recruitment during the growth phase is based on sub-optimal matching. Thus, it is reasonable to expect that sleeping gazelles in rural areas could be slumbering due to the fact that the current supply of labour is scarce and that their growth potential will be unleashed as other regional actors decline.

Concluding Discussion

This chapter has been concerned with contemporary rural challenges in the fields of population, entrepreneurship and employment. More specifically, it raises the question as to whether there is an end to the ongoing concentration of people, capital, companies and knowledge to the metropolitan areas. This is important if, for example, we consider the statement by Kenichi Ohmae in 1995 heralding the death of both distance and nation states: *"Today's global economy is genuinely borderless. Information, capital and innovation flow over the world at top speed, enabled by technology and fuelled by consumers' desires for access to the best and least expensive products"* (1995). In contrast, the global economy of today has proved that location is essential in the competition for labour and capital (Dicken 2015). Where you live and work is extremely important. According to Hoogvelt (1997), the once-colonial core-periphery relationship that divided nation states into suppliers of resources and producers or manufacturers has reconfigured itself into a new global social order whereby some states, regions, cities and societies are becoming more and more enmeshed whereas others are left marginalised. This chapter departed from this ongoing concentration trend and sought to find examples and theories that could counter it. Further, it can be concluded that certain geographical factors may be used to explain regional differences in economic growth. Despite the overwhelming evidence presented above,

there is no deterministic principle saying that this will always favour metropolitan regions, since sparsely populated areas may be endowed with some of the traits mentioned above. Although sparsely populated areas by definition do not host large populations and therefore cannot come up with diversity, buzz, urbanisation economies or dense labour markets through sheer size, this chapter has demonstrated that the sparsely populated regions may have a local economy characterised by regional specialisation and clusters of related economic activities that enhance social capital and trust (Maskell and Malmberg 1999). The industrial history of many rural regions, for example, the forestry cluster in Vindeln, shows a path-dependent economic evolution and successful recursive interactions (Scott 2006). Despite the thin local trade and industry, their companies often have a local background, providing important network externalities, they have a business concept that is related to other economic activities in the region, and there are learning economies via spillovers and variety that enhance the development of new products and companies contributing to further variety (e.g. Boschma et al. 2014).

The importance of forests should not be underestimated, given the prevalence of rapidly growing companies in rural regions highlighted in this chapter. However, from a rural development perspective, it should be noted that, the impact of, for example, forest properties and incomes from logging should be considered from several different angles. As shown in this chapter, forest assets can work both directly (through rapidly growing companies in the primary or secondary sector) and indirectly as collateral and safety nets when negotiating bank loans. Rural development may therefore benefit from forests and other examples of place-specific assets in several different ways, and not only through directly derived incomes and dividends. Further, given the path-dependent nature of the forest machinery cluster in Vindeln, forests should also be considered using a historical perspective whereby primary-sector activities gradually evolve into a knowledge- and capital-intensive manufacturing operation. The time frame may be extended to several decades and span multiple product lifecycles while the location of the plant, and thus the proximity to forest properties, remains the same. As shown in this chapter, a rural location may benefit from this proximity given that the operation is adaptable to changes in demand.

Finally, incorporating a more holistic perspective makes it evident that the ongoing concentration of people and companies (i.e. the centripetal forces) operates through tension fields of urban-rural interaction and contestation. Future uses of forests are one example of how these tensions will be re-evaluated and re-tested as we see new ways of working and living in rural regions. Several of the operations depicted in this chapter have endured and grown despite a rural location, which again speaks for a continued reappraisal of the effects of distance to urban centres on company performance. With a re-evaluation of the urban-rural divide, there must also be a widened understanding of both the negative and positive effects of regional specialisation. Companies operating in the forest industry have historically followed a path-dependent process resulting in access to, and use of, high-tech machinery and tools requiring a skill upgrade of the labour force that remains. It is therefore important to bear in mind the constant investments in human capital required not only in urban but also in rural regions, which include improvements in competitiveness. Thus, we find skilled labour in rural regions; however, keeping rural regions intact and experiencing in-migration instead of out-migration remain a challenge for the future.

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6

Rural-Urban Policies: Changing Conceptions of the Human-Environment Relationship

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Introduction

The changes described in preceding chapters illustrate that rural areas may to an increasing extent include urban ownership and non-rural occupations. This population might not be actively involved in forest management and may increasingly need to relate to, or be part of, urban networks in order to be able to retain either their properties or residence

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in rural areas. However, linkages to the rural environment may remain through attachments to particular places or, for example, activities such as berry and mushroom picking or hunting that is dependent on access to forest land. Taken together, however, differences between rural and urban populations may be increasing, perhaps especially in cases where such strong connectivities through existing family or residential networks (such as second homes) do not exist, related to the shifts in values and attitudes described in previous chapters.

One consideration in recent ruralities literature has regarded political support for providing the infrastructural preconditions for rural growth. This literature notes that even if areas are regarded as attractive from a lifestyle perspective, they may well not be viable growth areas if infrastructural and service support is not maintained. For example, for people with nature-based, new, rural gazelle industries (see Chap. 5, this volume), or mobile businesses, migration to, or living in, rural areas will not be attractive if health care, schools and connectivity are diminished. Fundamentally, thus, the potential for new ruralities or rural-urban interlinkages in terms of multiple residency or rural growth is dependent on policy, including the ways in which policy and potential life choices are related to perceptions of the rural and the urban, as well as distance and proximity. If perceptions of the rural are based on distance and on urban-based conceptions amongst policy-makers, can then rural potential as discussed in this and earlier chapters be fulfilled? In addition, is it possible to know enough about landscape and environment uses to relate to resource issues in a way that remains locally sensitive on a political level? Or, in the broadest sense, to what extent can an increasingly urban decision-making context take into account multiple rural and natural resource considerations?

This chapter discusses both the changing role of the welfare state, particularly in Nordic welfare societies, and how the hollowing-out of the state may result in changing opportunities for rural infrastructure development and maintenance. To this end, the chapter offers not only examples of conceptions of the rural from varying bodies of literature but also emphasises how historical developments of both rural infrastructures and national tax systems may play important roles in supporting rural areas. In this, it particularly utilises the Swedish case to illustrate the role of

policy orientation and state context for rural development over time. In relation to this, the chapter problematises how changing forestry and broader rural employment structures may play a role in systems of support for rural land uses.

The Concept of the Rural and Rural Change

The concepts of rural and rurality have been discussed over a long period of time. Even though most people have some kind of common understanding of these concepts and frequently use them, many scholars have pointed out the difficulties in establishing definitions that can be agreed upon once and for all (Hoggart 1990; Halfacree 1993; Ilbery 1998; Woods 2011). Based on Halfacree (1993), Woods (2005) presents four broad approaches to the concept of rural but also illustrates some of the difficulties the various definitions entail. *Descriptive definitions* derive from an assumption that rural areas can be distinguished from urban areas based on their spatial and socio-demographic characteristics, for example, population density, size of settlement or occupational structure, or combinations thereof. One obvious problem is the arbitrariness of such crude measurements, that is, where to draw the line between urban and rural. *Socio-cultural definitions* attempt to identify the characteristics of rural societies and how they are different from urban ones, based on the behaviour and attitudes of people living in these societies. These kinds of views, however, are strongly challenged by the tendency of life and livelihood in rural areas to become more urbanised or at least more mixed/blended and thus not easily distinguished from each other. A third approach departs from arguments about *locality, production* and *consumption*. Whereas many rural areas have throughout history been dominated by primary production sectors—for instance, agriculture, forestry and fishing—which have also impacted the landscape, settlement structure and so on, more recent research on rural areas has emphasised aspects of post-production and consumption in terms of tourism, recreation, nature conservation, heritage and gentrification. Although such tendencies have been observed, at least in some parts of the countryside, others have questioned the magnitude of these changes (e.g. Rye 2011).

A final approach is to understand rural as *social representation* or discourses. This view focuses on how people use the concept of rural and peoples' association of rurality. Our understanding of the rural could be based on our own experiences but might also increasingly be formed by representations in the media and popular culture such as journals, movies and novels. British literature often highlights the concept of the rural idyll, stressing the positive aspects of the countryside. This concept has a long history, and there are many examples from different parts of the world (Boyle et al. 1998). Naturally, this has also been contested, both because most places are rarely as idyllic as presented and as this is a highly subjective assessment (e.g. Woods 2005, 2011).

What rural is, and has been considered to be, can thus be defined differently. One example of this is the various definitions based on population statistics in different countries (Woods 2005). In the Nordic countries, settlements with up to a few hundred inhabitants have been defined as rural, whereas in other countries communities of several thousand inhabitants can still be categorised as rural (see also Box 6.1). Furthermore, definitions of rural have also changed over time. It has historically been defined as a counter-position to the urban; while living in rural areas has historically been a relatively natural context of life for most people, its understanding as rural largely took place in relation to the development of cities and towns. Hidle et al. note that "[r]urality as a distinct category and rural identity grew out of a widespread mobilization of rural issues in the 1960s and 1970s" (Hidle et al. 2006: 189). In European countries, the international context of rural change can be seen as relating to a globalised food system that makes European agriculture less competitive but whereby money flows instead increase the role of consumption in rural areas, thereby creating new rural markets and economic opportunities (Hidle et al. 2006). This is enabled by the mechanisation of resource-based industries that has decreased requirements for rural labour in these occupations in heavily mechanised countries, thus influencing global competitive dynamics as above.

Thus, it is commonly stated that one major reason behind the shift in population from rural to urban areas has been the relative decline in the economic importance, particularly of agriculture but also of other primary sectors across OECD countries (Ward and Brown 2009). These

changes have resulted in rural areas being "three-quarters of the land area and one-quarter of the population in OECD countries" (Ward and Brown 2009: 1238), with less than 20 per cent of the rural workforce employed in agriculture. It has also meant, however, that agricultural policies become more limited in their broader role of supporting wider rural economic development, although rural development programmes do ostensibly have a wider remit. For rural areas, a stronger focus has thus also developed on natural and cultural amenities, as well as on regional policy development to cover both rural and urban areas (Ward and Brown 2009). However, strong variations in how rural areas are described still remain, which could largely be regarded as framings, discourses or differently chosen perspectives on how rural areas are perceived. The following sections describe two of these potentially contrasting perspectives: rural as decline and rural as amenity. Given the strong variation in the areas and countries that can be seen as rural, none of these perspectives can present a full picture (see Box 6.1). Rather, as argued below, it may be necessary to recognise this broad context and instead regard rural areas as characterised by multiple and varying features and interconnected to urban areas.

Box 6.1 What Is the Rural?

Spatial typologies offer a potential to enhance understanding by foregrounding the significance of place within a broader geographic context beyond regional or urban/rural stereotypes. A well-constructed typology can offer the potential to identify what is particular about a region and highlights spatial similarities and differences compared to other regions. Whilst this has led to the creation of a wide range of spatial typologies, some have been widely adopted, not least the OECD typology (urban > 150 inhabitants/km^2 and rural < 150 inhabitants/km^2) (according to the OECD definition of rural areas, approximately 70 per cent of the Swedish population live in rural areas as compared to 55 per cent in Europe). There are, however, numerous typologies that have been exclusively applied to the specific purpose for which they were created. For instance, within the 2013 programmes, there are more than 40 different typologies of European regions, so it is clear that there is no widely accepted standard in use. The OECD and European Observation Network for Territorial Development and Cohesion typologies cover a wide range of issues, for example, migration, population density, proximity, demography, economic performance, vulnerability to climate change and territorial sensitivity to the EU policies.

However, one fundamental criticism of these types of spatial typologies is their reductionist quality, that is, their overdependence on single indicators to categorise space. This results in a failure to consider the complexity or diversity of interaction between social, economic and environmental drivers of change and their implications (see, e.g. Copus et al. 2008).

While the differences in what is considered rural and urban will be extensive between countries, considerable differences may also be identified within a single country.

In Sweden, there is considerable variation between areas: the peri-urban countryside in the metropolitan areas differs from the remote rural areas, for example, in the interior of northern Sweden. In several respects, many rural areas in Sweden, as well as in other Nordic countries, differ quite a bit from the British countryside often mirrored in academic journals and books, even though the British countryside is also heterogeneous (Marsden et al. 1993; Marsden 1998; Woods 2005).

Hedlund (2016) made an effort to categorise all Swedish areas outside communities of at least 2000 inhabitants based on their populations' socio-economic characteristics. Using cluster methods, he identified five major groups with 16 subgroups. This illustrates that the Swedish countryside is heterogeneous. Some of the clusters are relatively prosperous countryside areas within daily commuting distance of large towns, whereas others are remote and very sparsely populated areas located in forest-dominated landscapes. From this perspective, many types of rural areas could be placed on a continuum of population density, accessibility and basic material living conditions. There are, however, also rural areas that are not easily placed on such a continuum, for example, tourist resorts in the mountains or along the coast. Similar findings have been presented by Pettersson and Westholm (1998) and Pettersson (2001). Generally, rural areas close to major towns and in the three metropolitan areas (Gothenburg, Malmö and the capital region of Stockholm) have managed better in terms of population growth, property values and so on whereas the more remote rural areas are characterised by out-migration, depopulation and ageing inhabitants.

The definition of rural areas is also a question of scale. In Sweden, there are several definitions of rural. A classical definition was developed as early as the 1950s, where rural areas were categorised by Statistics Sweden as all areas *outside localities* (i.e. urban areas) of a minimum of 200 inhabitants. This low threshold means that even fairly small villages could be defined as urban. Sometimes all areas outside the capital region or the metropolitan areas are presented as "the provinces" or "sparsely populated counties". From this perspective, small- and medium-sized towns and cities are regarded as part of rural Sweden. For a discussion on the terminology regarding rural areas in Sweden, see, for example, Pettersson (2002) and Forsberg (2005).

Rural as Decline?

Understandings of economic development have largely focused on cities and towns as growth areas. In comparison, for example, Ward and Brown note that "[i]n aggregate terms, rural areas are found to be lagging behind national average economic growth rates" (Ward and Brown 2009: 1238). Such lower growth rates in rural areas are often seen as linked to an out-migration of the young, coupled with lower levels of provision of skilled jobs with stronger job security, more limited infrastructure such as cutting-edge telecommunications and limitations in public service, "often working as a vicious circle of rural decline" (Ward and Brown 2009: 1238). In literature, defining rural areas as linked to agriculture and defined in opposition to the urban—with a role dependent on economic driving forces that are now situated in urban areas—the rural was thus often seen as the "urban's poor political relation" (Neal 2013: 60). However, in this, "rural geography has tended to focus more on the processes of rural repopulation and mobility of the population, than on the permanence of local populations in remote rural areas in decline" (Paniagua 2014: 49). Hidle et al. argue that this understanding of the rural and urban can be seen as a structural metaphor (Lakoff and Johnson 1980), whereby a specific definition of the rural is used to reduce it to a mere resource for the urban rather than seeing it as a valued area in itself, which should be accepted "only if we let the logic of market structure rurality as a political and academic field" (Hidle et al. 2006: 195). The reasons such metaphors have developed may be multiple: as more people live in cities, such arguments become more easily accepted; there are specific historical reasons (similar to these) in the development of rural policy; and the rural is today, as well as historically, limited in, generally, not being the site of economic and political power, which means that the sites of residence of financial and political resources may not be situated in rural areas. The understanding of rural and urban can thus be seen as a battleground of interests, not least in relation to the conditions that influence livelihood—with the role of rural areas shifting accordingly.

Rural as Amenity: Continued Production and Part-Time Residence?

Although rural areas may be regarded as places with more limited employment and career opportunities, they can also simultaneously be seen as desirable places for residence, especially if employment is not necessary. As a result, "[w]hereas the countryside traditionally relied on exports of commodities by the primary industries (agriculture, fisheries, and extractive industries) to urban markets, it has become increasingly characterised by its role as producer of rural services, experiences, and quality of life" (Rye 2011: 263). The role of rural areas may thus be seen as shifting from a focus on production to more of a focus on amenity: as areas often seen as desirable locations to live but dependent either on access to markets that are not in need of employment, or on closeness to urbanurban centres providing employment, in order to assure continuous access to the requisite public services for supporting residence. In areas in France, England and the Netherlands where transport links and infrastructure have been improved, the out-migration from rural to urban centres has been reversed in what is sometimes seen as "counter-urbanisation" (Ward and Brown 2009); in other areas, similar "green waves" of people moving back to countryside areas have been observed because the jobs, lifestyle or housing are considered to be advantageous there (e.g. Eskilsson 2009).

Thus, rhetorically and in literature, the rural has increasingly gained a role as a leisure or amenity location, potentially also for residence. For example, Ward and Brown note that while material conditions vary substantially between rural and urban environments in less developed nations, there was little evidence of such differences in wealthier countries and no urban advantage in subjective well-being (Ward and Brown 2009). Paniagua argues that this has "result[ed] in rurality being viewed through counter-urbanisation, gentrification, lifestyle migration and rural place marketing" (Paniagua 2014: 49). These changes may also be related to arguments citing an increasingly differentiated countryside. Based on experience from the UK, Marsden et al. (1993) presented four ideal types of rural areas, two of which are particularly relevant in this context. The *preserved countryside* consists of accessible rural areas with high landscape and amenity values, where new social groups, mainly the

middle class, move in and exert considerable influence over development and decision-making, often in order to preserve the countryside as it has been or in line with their ideas about a rural idyll. Another category, usually located outside the main commuting zone, is the *contested countryside*, where the interests of similar groups of newcomers come into more open conflict with ambitions among landowners, farmers and developers to find new ways to make a living.

However, in Fennoscandian literature, it is also noted that a productive role for the countryside is largely retained (e.g. Brouder et al. 2015) and that any increasing political focus—for example on the EU level—on post-productive values may thus mean that policies relate more to an assumption on areas (or on a similarity of areas across Europe) than to actual conditions (for a Swedish context, see Almstedt et al. 2014, 2016). At the least, however, these types of considerations do mean that we no longer speak of any one kind of rural but rather of a rural that is connected to urban areas in multiple ways, potentially even so far-reaching that a dichotomisation into rural and urban would not actually be relevant.

A potentially similar case can be found in literature on gentrification. In line with a focus on amenities, literature on rural gentrification emphasises that older individuals may move to rural locations, bringing accumulated wealth (home equity and pension) in order to be able to spend their leisure time in outdoor recreation, dependent on the recreational and amenity resources and markets (such as for second homes) at locations (Nelson et al. 2010, cf. Chap. 2, this volume).[1] It has been noted that such migration may be both internal and international, including a broad range of other personal services that accompany it, such as con-

[1] Rural gentrification is often seen as "tied to economic restructuring and the creation of footloose service workers, declining employment in the traditionally resource based sectors, an aging population with loosening ties to the labor market, the rise of leisure and concurrent proliferation of second homes, dissatisfaction with suburban living, and the pursuit of a perceived higher quality of life available in the countryside" (Nelson et al. 2010). Thus, for instance, "[c]ounter-urbanization, net in-migration from urban to rural areas, has characterized the UK for over forty years and is a feature of an increasing number of OECD countries. While young adults continue to leave rural areas for enhanced opportunities in urban labour markets, rural areas have been the net recipients of persons in their mid-to-late forties, pre-retirement aged persons, and retirees" (Ward and Brown 2009: 1242).

struction, food and others, adding multiplier effects and also contributing to a wide range of employment as well as pensioned groups residing in areas (Nelson et al. 2010; Hedberg and Haandrikman 2014). However, there are also counter-trends and variations to the trends identified based on Anglo-Saxon literature. Thus, from a Nordic point of view, rural gentrification does not seem to be a widespread phenomenon. In a study on Swedish data, Hjort (2009) concluded that high-income earners and well-qualified people do not move to rural areas to any large extent. Apart from countryside areas within the Stockholm metropolitan region, she found no evidence of rural gentrification.

While the characteristic of gentrification does not manifest in the same ways in Fennoscandia as in the UK, numerous factors impacting this may be in play. While this is little researched, another example of a potential impacting factor that also illustrates the variation in what is seen as characteristic of the rural and an urban-rural linkage is the issue of second homes. This case, again, provides an additional example of the difference between conceptions and linkages with the countryside in Fennoscandia and the UK. In Fennoscandian countries, the second home is an almost taken-for-granted phenomenon of rural-urban interaction and multiple residence and lifestyle, providing a linkage to rural areas' amenities for those working in urban areas, a linkage to heritage in many situations and a potential connector that may influence residence choices in old age (provided services exist). Norway, Sweden and Finland, as countries, are relatively sparsely populated with a historically relatively rural population, so many maintain linkages through rural lifestyle components or family homes or residences in rural areas, even if they have moved for employment. This historical situation, coupled with the view of second-home ownership as a contemporary cultural feature, has resulted in second-home ownership becoming common in all layers of society (e.g. Rye 2011). Rye notes that in Norway, "[i]n population surveys, 25.5–32.4 per cent of the national population claim to own a second home while another 15.1–19.3 per cent state that they have a second home at their disposal" (Rye 2011: 266).[2] Similarly, it has been noted in national

[2] There is thus a clear family connection. Rye and Gunnerud Berg note: "Often the second home is also a place for spending time with relatives, since the second home may represent long term ties to

surveys in Norway that one-tenth of the sample reported having regularly worked or studied at their second home and that one-third reported an interest in working at their second home (Rye and Gunnerud Berg 2011), thus resulting in a further mixing of rural and urban activities—and for those spending a great deal of time at their second homes, also a mixing of what should be regarded as the primary residence. As a phenomenon, widespread second-home ownership and access could thus also potentially mean that gentrification with regard to primary residence is not similarly necessary or is simply occurring in a different guise. This constitutes a considerable difference to the UK, where a relatively limited and "elitist character" of second-home ownership has been observed (Rye and Gunnerud Berg 2011: 131). These factors may indicate not only that the UK buyers are more easily described in terms of the location of their primary (sole) residence but also that while the widespread character of second-home ownership in Fennoscandia has made it relatively unproblematic and non-conflictual, in the UK, second-home owners' contribution to local society and competition with local buyers has been regarded as more conflicted (Rye 2011).

These different types of organisations are necessarily underpinned by different policies. In Sweden, the fact that legal arrangements allow foreign ownership has resulted in permanent houses in rural areas being converted to summer houses. This is contrary to some Norwegian regulations, varying between counties, that include "boplikt", that is, required residence for most of the year to prevent purchase solely as a second home (Rye and Gunnerud Berg 2011). In the UK, on the other hand, factors such as the very high property prices and a densely populated country, as well as countryside, limit such considerations: the cost of purchasing a second home may mean this option is restricted to very few (see Box 6.2).

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places and the use of it is a way of preserving these ties. More than a half of the informants in [a] … survey reported that their second home was located in a municipality where other members of their family resided. Further, most Norwegian second homes have been in family ownership for years, if not generations.… Thus, for many their second home may represent more permanence in their family history than their first home" (Rye and Gunnerud Berg 2011: 134–135). Nevertheless, they note, the "second home phenomenon has been largely neglected within rural studies" (Rye and Gunnerud Berg 2011: 135).

Box 6.2 Gentrification, Second Homes and Land Ownership in Estates—Rather than as Family Smallholder Owners—in the UK

In European terms, the UK has a relatively distinctive rural land use structure dominated by relatively large, mostly owner-occupied, farms. There is wide regional variation in the structure and composition of rural land ownership and use, conditioned by the geographies of opportunity created by soil and climatic differences. Within this predominantly agricultural rural land use structure, forestry has almost always been a secondary player. With its wealth built initially on coal and iron, and with its rapidly growing population on a limited land area, Britain was the first industrial nation to adapt its patterns and practices of rural land use in response to the demands of a growing industrial population, starting in the mid-eighteenth century. Food production was the emphasis. Wood products had long been imported especially from the Baltic region, and with the exception of large land holdings (the landed estates), woodland management entered a process of decline starting in the mid-nineteenth century, when the multiplicity of products derived from woodland was increasingly replaced by new manufactured goods (see Edlin 1949, for a compendium of the legacy of woodland crafts in the mid-twentieth century). Wartime shortages of timber in the early and mid-twentieth century challenged import dependency and led to public support for new afforestation starting in 1919, which was reinforced after the WWII.

Rural policy in the UK has struggled to find a balance between the desire to conserve and protect and the desire to ensure equitable development. For many decades after WWII, it was assumed that a strong farm sector would support a vibrant rural economy. But Wibberley (1981) contentiously argued that strong agricultures were often associated with weak rural economies. Slee (2005) subsequently noted that, for some more attractive areas, consumption of countryside amenity had supplanted landscapes of production in terms of economic importance. Slee et al. (2004) looked at this phenomenon explicitly in relation to forests and woodland and found that their amenity function was overwhelmingly more important than their production value in terms of economic, social or cultural significance. A high degree of dependency on the primary sector had become a liability and not an asset in terms of regional growth potential. As farming intensified, it brought in its wake problems of landscape dilution, water pollution and biodiversity losses.

However, rural areas have long been sought-after places to live. Extensive land ownership has survived rather effectively in some parts of

the UK, as a result of a mix of inheritance laws, the legacy of feudalism and an aristocracy that did not suffer the fate of aristocrats in France. Starting in the nineteenth century, the supplanting of production values in many upland areas with hunting for deer and grouse and fishing for salmon, together with a structure of game laws that was also a feudal legacy, created a new style of land ownership associated with conspicuous consumption. In the 1940s, George Orwell noted just how compelling the countryside and rural land ownership were to English people (Orwell 1947). And ever since that time (and indeed earlier), there has been a struggle between landed interests and a strong protectionist streak and a more emancipatory set of values that emerged during the post-WWII period, evidenced by the National Parks and Access to the Countryside Act 1949.

Where land ownership was economically weak, new developments occurred especially during the deep recession of the 1930s, much to the horror of environmental protection interests. Along coastlines and Scottish lochs and more generally in attractive landscapes where planning regulation was weak, people built holiday cottages, some little more than shacks. Designations from the late 1940s reduced opportunities for newly built developments and placed enormous pressure on housing markets in places like the Lake District or North Norfolk, where second-home ownership began to push up the price of homes and deny local people housing opportunities. In some ways, this late twentieth-century search for rural amenities is no more than a reflection of the inclusion of the middle classes in the wider aspiration of enjoying the countryside. They may not own an estate such as the nineteenth-century industrialists had acquired with full hunting rights but they bought into rural Britain, often to the detriment of those with low wages and limited mobility. And unlike in countries where space was at less of a premium, the poor were those who suffered, benefitting to a degree from seasonal work but often caught in a trap of low wages and high housing costs.

Forests and woodlands add diversity, variety and attractiveness to the countryside, though some argue that commercial monocultures of exotic conifers comprise an intrusion into the British landscape. However, tree-rich locations in peri-urban and rural areas almost always generate higher house prices. The land managers who provide the woodland and forest resource can, but often choose not to, gain from its beneficial economic impacts. Instead, benefits may well pass to entrepreneurial tourist businesses drawing upon the surrounding landscape.

Relational Ways of Viewing the Rural: Rural as Interconnection

As the variation in descriptions above shows, rural areas are likely to be extremely diverse and will vary with national and sub-national characteristics and policies—at least to the same extent that the characteristics of forest owners and forest use discussed in Chaps. 1 and 2 (this volume) can be seen to vary. It may thus be crucial to understand the ways in which rural areas are seen by the population living there, rather than only understanding the ways in which areas are conceived of from outside. Also, it is important to understand the trends that impact urban and rural areas alike whilst contributing to different impacts at different locations. All the above-described processes of gentrification or multiple residences, migration, labour mobility and the second-home phenomenon blur rural-urban distinctions. Regarding the second-home case in Fennoscandia, Rye and Gunnerud Berg note, for example, that:

> [i]n the most popular second home municipalities, and in the high seasons, the average person present not only looks like an urbanite but actually *is* an urbanite in terms of his or her *permanent* place of residence. *Where* one is does not determine *who* one is. The result is that rural space is domesticated as an integral part of urban ways of life … [thus] it has become increasingly difficult to uphold the analytical divide between first and second homes and identities. (Rye and Gunnerud Berg 2011: 134, italics in original)

As a result, it has been argued that rural areas should be recognised as "shaping and influencing urbanism and producing 'new hybrid sociospatial forms that blur the rural and the urban'" (Neal 2013: 60, with internal quote from Woods 2009: 853) or as "fluid and dynamic space, which is continuously materially and culturally restructured … a process produced by different practices and interests, so it is inconsistent and becoming" (Kay et al. 2012: 60). These changes, it is argued, cannot be conceived of outside large international processes of change. For example, whilst the historical linkage to strong agricultural

production may be decreasing throughout Europe's rural areas, and urbanisation results in declining populations in more rural areas (with particularly more women than men leaving rural areas), Wiest argues that none of these developments can be observed without reference to, amongst other aspects, "the changes in the working world over the course of the transition from industrial to post-industrial societies in conjunction with increasing female educational orientation and labour participation" as well as "changing gender roles" (Wiest 2016: 280). In general, and particularly during the current refugee crisis (2016), rural areas are also influenced by a large number of broader migration processes that vary in size and scope, creating various and new population patterns. Examples include "flows of Thai women who move to rural Sweden to marry Swedish men", Thai as well as Eastern European berry pickers as migratory workers in Sweden, and refugees to Europe, thus creating what could be called "*translocal ruralism*, emphasizing how both short-distance everyday relations and distant relations to areas on national and global scales are producing translocal rural spaces" (Hedberg and Haandrikman 2014: 129, 130, italics in original). Such processes may thus also transform the social composition of the countryside, with potential effects on the "sense of belonging and identity of rural migrants" (Hedberg and Haandrikman 2014: 128). Here, it has been noted, "[s]ocial scientists are only just beginning to think about what increasing personal mobility and interconnectedness means for processes of socio-economic change in localities" (Ward and Brown 2009: 1241).

As has been widely recognised (e.g. Marsden et al. 1993), there are now substantial variations in the nature and levels of demographic and socio-economic development. The old binaries of urban and rural have broken down, and in retrospect, they probably always possessed only limited validity, except perhaps at a particular stage in the maturation of advanced industrial capitalism. In the early stages of industrialisation, rural areas were heavily involved in the manufacturing industry, and this has survived into the present, with some natural resource-based processing remaining in some rural areas. At its peak, the factory system exerted a strong centripetal pull on manufacturing, but from the late nineteenth

century, there was evidence of a decline in such concentration (Fothergill and Gudgin 1982; Hodge and Monk 2004).

What may also have happened (although this could be a function of a better understanding of the present and better socio-economic datasets) is that the micro-differentiation of areas has deepened. Neighbouring communities may adapt differentially to the opportunities and pressures shaped partly by land ownership and attitudes, partly by the nature of the natural resource base (nature recreation vs., say, iron ore mining) and partly by the serendipitous presence of dynamic individuals whose actions can, under more devolved rural development policies, coalesce into coherent locally based development.

Perspectives on Regional and Rural Development Policy

On this basis, and also on the largely varying basis of who can be regarded as a forest owner, and to what extent these are rural (Chaps. 1 and 2, this volume), there may thus be reason to dispute the extent to which coherent rural policies can actually accommodate highly varied rural areas and multiple interests within these, even within one single country—and much less the EU. Morrison et al. (2015: 1602, italics in original), for example, note that "[r]egional development planning is widely taken to mean *rural* regional development" but that this term itself can be seen as originating in contested beginnings, largely connected to organising Western settlement on the Australian and American frontiers from the 1880s onwards. Morrison et al. note that "rural regional planning pioneers were concerned with the 'vast and under-populated regions in obvious need of development' in both countries" (Morrison et al. 2015: 1603, with internal quote by Auster 1987: 29). Paradigms of rural regional development planning were thus developed in a very specific manner and for very specific purposes, which means that as they spread to other areas they may still have carried some of these assumptions. Thus when, in the 1970s, changes in agriculture in Western societies began to become evident in changing population structures, "productivist aspects of rural

regional planning" were highlighted "while turning away from settlement goals" (Morrison et al. 2015: 1604). As "the original concept of rural regional planning was to fill in the blank canvas of newly acquired landscapes, not the business of adapting to existing contingencies or coping with the uncertainties and contestability of knowledge" (Morrison et al. 2015: 1605), regional policy may thus carry some baggage similar to that within conceptualisations of urban and rural as counterpoints. Ward and Brown (2009: 1237) note, for example, that "[u]rban and regional development studies tend to focus on the urban as driving innovation and growth, with surrounding areas cast in a passive, residual role. As a result, rural and urban development debates are often conducted separately".

The development of spatial strategies for territorial development in the EU in recent years, for example, in the European Spatial Development Perspective, and its focus on competitiveness and positioning regions in a European and global economic space, has been criticised by Nordic observers for constructing:

> cities … as the sole driving forces and motors of regional development, which could lead to further agglomeration and a widening gap between urban and rural areas. This raises questions relating to the future of rural territory and space, particularly for population movement, if non-urban areas are constructed as areas of agriculture, green tourism and environmental protection … [and on a European level] marginalizes rural and peripheral geography such as south-eastern Europe and Nordic countries. (Scott 2006: 815)

Criticism has also been levelled against European policies such as the Common Agricultural Policy (CAP) directives or the Leader Programme strongly emphasising post-productivism rather than recognising a number of various initiatives as well as rural-urban linkages (e.g. Scott 2006; del Mármol and Vaccaro 2015). Similarly, some observers have also noted that the Natura 2000 Network, defining important natural areas within the EU (drawing upon e.g. 92/43/EEG, Birds Directive, and Ramsar Declaration), is based on a centralistic view of planning, with decisions made on the EU level, inhibiting long-term change in land use (e.g. Stjernström and Lundmark 2009, cf. Chap. 7, this volume).

Criticisms have also highlighted the risk of defining rural areas through broad blanket definitions, rather than recognising the variety between different rural regions across a number of perspectives such as connectivity, varying social and economic challenges and different resources (Scott 2006), including the need not to lock in land use defined elsewhere without considering local requirements. However, it has also been noted that recognition of area specificity may be challenging, as "structural reforms have led to larger administrative units that have less experience-based knowledge about the individual rural communities within a municipality than do local authorities" (Johansen and Nielsen 2012: 781). The authors thus note, for example, that simplified descriptions, employed for instance in Irish rural discourses focused on "uncompromising and unfertile lands, wave-lashed coastlines, remote expanses of bog, signs of struggle, of famine, and of poverty" (McDonagh 2001: 61, quoted in Scott 2008: 11), may to a greater extent be taken as shorthand for extremely varying, and perhaps even contradictory, situations compared to descriptions (not dissimilar to descriptions created, for example, in Arctic discourses applied to northernmost Norway, Sweden and Finland, e.g. Keskitalo 2004). For example, it has been noted that without in-depth knowledge of local conditions, "[p]lanners favoured residential development in towns rather than rural areas, due to economic efficiencies of concentrating development … lacked understanding of local needs and issues" and "viewed [urban centres] … as the sole development motors for the local economy" (Scott 2008: 26–27). Similarly, in these cases, landscape protection policies were seen as "aimed at visitors and tourists with little consideration of local people" (Scott 2008: 27).

With regard to this focus on resources and where they are concentrated in rural or urban areas—through, for example, discourse and the ways in which rural or urban privilege is constructed by viewing rural areas through blanket understandings—there may be reason to instead review the ways in which resources are (or are not) taxed or redistributed at different locations by the state, as well as to review policies within the state context. With regard to Fennoscandian examples, such an analysis of policies must necessarily include the specific development of the Scandinavian welfare states with fairly far-reaching policies for growth and redistribution across the countries, however, with gains from large

typically rural activities such as mining taxed at the location of headquarters and then redistributed. Changes in rural policies today must also be observed in relation to similar large-scale policy system changes, such as the hollowing-out of the welfare state in relation to increasing globalisation with, amongst other aspects, the tax base decreasing as companies move abroad. In this respect, larger-scale, global and state system changes thus need to be seen as exerting major impacts on rural areas (e.g. Horlings and Marsden 2014).[3]

Here, Fennoscandian examples have often been seen as providing illustrations of more rural-inclusive policy development than in many other countries and as potentially being able to, to some extent, manage large-scale, urbanising trends, at least in certain areas. For example, Hidle et al. note: "Despite the mentioned megatrends, the Norwegian rural space is not left behind as a space for only free market forces.… Regional policy in Norway has strong elements of social policy, of giving people adequate service opportunities, and in this respect metaphors of equity, equality and spatial justice structure much of this policy" (Hidle et al. 2006: 189). Thus, "[t]he goal of maintaining the settlement pattern has gained a distinguished position in Norway, compared to most European countries where rural policies are occupied with industrial and commercial development … The logic here is that the State should work to uphold rural places so that people who want to live there are not forced to live in a city" (Hidle et al. 2006: 190–191).

To some extent, both the megatrends defined above and the specific situations discussed by Hidle et al. for Norway are applicable also to Sweden and Finland, with the Swedish example highlighted below. However, compared to agriculture, so far, "forestry plays a marginal role in the conceptualisation of … the new rural development paradigm … despite the fact that forests cover extensive areas in the European countries" (Elands and Praestholm 2008: 74). While an increasing emphasis on bioeconomy including bioenergy from forest may, over time, come to change this, such a shift has not yet taken place. Below, we attempt to

[3] Reterritorialisation processes (e.g. Horlings and Marsden 2014) aiming to create more regional or local systems to counteract trends may constitute potential counterweights to such processes but are ultimately also affected by larger frameworks.

include forest in a description of rural change and a broad array of rural and other policies affecting the countryside, in the example of Sweden.

Rural Change and Policy in a Swedish Context

In order to understand transformations in forestry and rural areas, it is necessary to broaden the perspective and consider changes in an economic, political and social context. The latter half of the 1900s constituted a period of major change (Antonsson and Jansson 2011), in which forestry and rural areas in Sweden cannot be studied separately. Well into the 1950s, the Swedish countryside was characterised by small-scale, family-owned farms and forests alongside upcoming, growth-oriented, natural resource-based industries. This was especially true in terms of rural livelihood strategies that were primarily dominated by agriculture with forestry as a side business, although a shift towards employment in industry occurred gradually (Antonsson and Jansson 2011; Morell 1997). Most farm properties during the 1800s and 1900s consisted of both cultivated land and woodland, and many farmers owned their homestead, although there were tenant farmers too. Worth noting in the Swedish case is the fact that land was generally locally and privately owned and the rural proletariat were relatively few in number, a situation that distinguishes Sweden from many other European countries. For a long period, forestry and handicrafts tended to be seen as a kind of supplementary business activity to agriculture, generally more highly prioritised by both individuals and society (Törnqvist 1963; Morell 1997).

During the post-war period, a thoroughgoing structural rationalisation of the Swedish agricultural sector began. This was driven by different forces, ranging from political to economic and individual. From the political point of view, it was important to ensure that competitive and growing companies in urban areas could satisfy their demand for labour. It was therefore important for the government to release manpower from unprofitable companies in the rural agricultural sector in favour of jobs in urban industry. This was effected by a wide range of laws and political measures related to the concept of the Swedish model of the welfare state. Most important in this regard was the egalitarian wage policy that in

short meant that all workers with similar tasks would receive the same pay regardless of sector affiliation or geography. One notable outcome of this, perhaps to some extent undesirable but not entirely unexpected, was the difficulty for small family farms to pay the same wages as the growing and export-oriented industries. The state-initiated solution was thus to stimulate rationalisation in agriculture production, for example, mechanisation, using policy instruments (Antonsson and Jansson 2011).

In general, developments in the agricultural sector also meant a radical but still relatively slow, transformation of the ownership structure in small-scale agriculture and forestry (Törnqvist 1963). Many farms were discontinued when their owners retired or changed to jobs in the expanding industry sector but were later often taken over by the children or grandchildren of the former farmers (Flygare and Isacson 2003). The new owners were not necessarily interested in farming, forestry or rural livelihoods, as they came to reside in urban areas far away and to work in typical urban jobs. One result of this was that small-scale forestry failed to rationalise holding size, which meant that the property structure of many small units was preserved (Antonsson and Jansson 2011; Törnqvist 1963). The average area of forest today is little more than 40 acres per property, close to the situation in the early 1900s.

In order to reduce the negative effects of this structural change, rural and regional policy emerged as a policy area in the late 1940s and early 1950s and a series of measures targeting rural areas was introduced (e.g. active localisation policy; cf. Wallander 1948). Main targets for redistribution measures were the sparsely populated areas of northern Sweden, as a way of creating new employment opportunities to compensate for the restructuring of traditional rural sectors such as agriculture and forestry, out-migration and depopulation, long distances to markets and a less developed transport infrastructure. The forest industry and the well-developed forest owner association structure further supported the development of the forest owner, including forestry production—identities we see today (cf. Chap. 2, this volume).

In comparison with this policy direction, the radical change in Swedish regional policy occurred in the 1990s when Sweden, as a new member of the EU from 1995, chose to adapt to the EU cohesion policy (Forsberg 2005). The addition of funding from the European Regional Development

Fund and the European Social Fund made it profitable to promote national regional policy (Tillväxtanalys 2012). Economic resources made available from the EU structural funds meant an increase in the amount of money available for specific regional policy measures. Ideas about partnerships between numerous actors—public and private as well as organisations—also began to strongly influence Swedish regional policy. Regional development strategies are nowadays formulated in these partnerships, and match funding is necessary in order to obtain financial resources from EU structural funds. Whereas the traditional Swedish regional policy was top-down, these changes increased the regions' own responsibility and opportunities to formulate how they wanted to promote local and regional development by making use of the financial resources available from different levels: local/regional, national and the EU. Decision-making thus became more decentralised but also more generally focused on the EU goals and policies.

This meant that the early Swedish regional policy, based on attempts to balance development in different parts of the county particularly by supporting less developed areas, was replaced by a growth policy whereby the regions themselves were made responsible for formulating regional growth strategies, partially financed by funding from the EU and central government but also through regional partnerships. After about the year 2000, this policy has been even more focused on developing what has already been competitive rather than reducing spatial disparities (Tillväxtanalys 2012). In this way, Swedish regional policy became more clearly growth-oriented (as compared to the more compensation-oriented concept of the past) and comprised a concern for all parts of the country rather than only the sparsely populated areas. Furthermore, cross-border integration through the Interreg programmes became a novelty for Sweden.

Contemporary Swedish regional policy is thus largely coordinated with the EU cohesion policy as well as the other EU policies regarding rural development, agriculture and so on. The goals of the current EU programme period 2014–2020 are in line with the overall Europe 2020 strategy of "smart, sustainable and inclusive growth". Primary targets include increasing employment levels, promoting renewable energy, increasing research and development efforts, raising the educational levels and reducing poverty. Swedish regional policy basically adheres to

these goals. Whereas regional policy mainly targets general regional development issues, rural development often refers to measures more directly connected to the countryside and the primary sectors. Nowadays, Swedish rural development policy is almost exclusively coordinated with similar EU policies and funding (Almstedt et al. 2016). The Swedish Rural Development Programme for 2014–2020 focuses on the environment, sustainable development and innovation; however, criticism on these types of measures has included that they to some extent echo a rural-urban bias as previously described. (see Box 6.3 for a comparison with Norway.)

Box 6.3 Rural Challenges in Norway

As is the case in Sweden and Finland, constraints on economic activity due to remoteness, cold climate and sparse population characterise the peripheral regions of Norway. Norway is one of the most sparsely populated countries in Europe, with much of the country dominated by mountainous areas and 20 per cent of the population living in such areas.

Norwegian agriculture has been perceived as distinctive in an international context, due to both its natural conditions and its agricultural policy. It has been given priority in order to counteract centralising market forces, regulate land ownership and farm turnover. Norwegian agricultural policy also emphasises the evening out of production types, farm sizes and regions in order to strengthen small and medium-sized farms and maintain farming all across the country. However, the Norwegian agricultural model is under pressure from neo-liberalistic policy, especially from the current government that aims to deregulate such arrangements. About 3 per cent of the land area is arable and 38 per cent is forest. Over the past few decades, the agricultural sector has witnessed significant structural changes towards fewer, but larger and more specialised, holdings, and the numbers employed in agriculture and forestry decreased by 2.9 per cent per year over the period 2003–2013. Approximately 2.7 per cent of the country's workforce is employed in agriculture and forestry, and the average age of farmers is around 50 years, which indicates generational challenges. Most farmers also earn additional income from other sectors. A national survey found that farmers, from 2002 to 2014, have become more pessimistic about the future economic development of their farms. Downscaling of arable land in favour of housing and infrastructure, farm income and food security is an important sector-related debate that contests the value of farming. Farming has developed from a labour-intensive to a capital and knowledge-intensive sector, and milk production on dairy farms is the primary activity. Today

there are somewhat fewer than 42,000 farm entities in Norway, and about 15 per cent of farmers are women. Even though the Norwegian allodial law equalises men and women's rights to inherit farmland, there are challenges related to encouraging female farmers. Services and public sector are the largest employment sectors for women and in rural areas in general. Of special concern with respect to employment is the current crisis in the oil industry as regions in western Norway especially are experiencing major challenges due to subsequent unemployment.

Norway's population is among the fastest growing of the European countries. The most important driver in population growth is in-migration from abroad. In 2012, net in-migration constituted 72 per cent of population growth, and in-migrants and people with in-migrated parents accounted for more than 16 per cent of the population in 2016. In-migration has become more regionally scattered since 2000 and is the reason for population growth in many rural and coastal communities. Employment immigration is important for sectors that need a workforce, sectors such as construction, welfare and fisheries. Norway is the sixth largest fish farming nation in the world, and coastal communities in mid-Norway are examples of an expanding fishery sector and growing population due to the immigrant labour force. Integration and participation of these immigrants in local activities might still prove to be challenges for such local communities.

The overall migration trend throughout the country has increased centralisation, though population development differs between regions. There is also some out-migration from lager city municipalities in favour of the surrounding municipalities. This might be explained by a satisfactory labour market in the region, lower housing prices, commuting opportunities to larger cities as well as proximity to nature and outdoor activities. The development of regional centres is strategic in regional policy, aimed at maintaining rural settlement. However, the least central municipalities have experienced more or less negative population development since 1980.

Rural districts are also facing challenges due to the ageing wave that is fast approaching. An increasingly ageing population will especially challenge the supply of welfare services in rural areas, which are already struggling with recruitment of a competent workforce for the social service sectors. Centralisation processes are also reflected in local service provision such as schools. As municipalities centralise and merge, increasingly larger schools develop, even though there is very little research on the consequences of school closure for local communities.

An ongoing reform to achieve larger and more robust municipalities requires that all municipalities explore the potential for mergers with

neighbours, and these processes are expected to last until the end of 2016. It is believed that a structure with fewer, but larger, municipalities will solve problems experienced by smaller municipalities, such as vulnerability in high-competence services, service provision, planning, finances and people's everyday life. However, Norway's dispersed settlements, significant distances, distinct topography and climate raise important challenges, and local resistance to these mergers has erupted all over the country. Especially small peripheral and island municipalities, the latter also absent from the government's municipality reform agenda, fear losing local democratic rights, disappearing as local communities, becoming depopulated and ending up as holiday home areas if they are merged with other municipalities. In April 2016, a decision was taken to reduce the number of municipalities from 428 to 422, which is a far more modest reform than suggested by the expert report and might be partially explained by the resistance to this reform expressed throughout the country.

Sources: Almås (2016), Frisvoll et al. (2015), Knutsen (2014), Statistics Norway (2013), (2015), Storstad and Rønning (2014)

Consequently, with regard to forest land, Sweden has largely adopted a forestry focus including protection and multi-use perspectives, and has in fact disjointed an earlier inclusion of forest land in rural conceptions. Forest policy in Sweden is largely focused on forestry per se and its interaction with other industries, and is often discussed in terms of a production-protection nexus (e.g. Lazlo Ambjörnsson et al. 2016). As a result of this disjoint, the current systems governing rural areas lie largely within regular municipal planning (see also Chap. 7, this volume). They are situated within a framework that is the same for each municipality, and whereby forestry and forest planning form a separate issue that does not lie within the remit of municipal planning (as in many cases in Europe, cf. Blunden and Curry 1993) and the resources for rural development are otherwise largely related to the EU and rural development conceptions as above. The most important part with regard to the resources available to rural municipalities, however, is the tax redistribution system whereby resources are provided to enable the distribution of services that each municipality is required to supply by law.

The Redistributive Tax System at Municipal Level

In addition to regional and rural policies, in a Swedish context, it is also relevant to comment on the redistributive tax system.[4] This is an important part of the country's overall welfare system and transfers substantial financial resources between different parts of Sweden. In some cases it has been labelled the "big" regional policy as compared to the "small" regional policy (mainly consisting of the direct regional policy measures presented in the previous section), simply due to the fact that the redistributive tax system involves much larger amounts of money. The far more extensive big regional policy pertains to efforts made within the communication, culture and educational policy areas. Moreover, state funding and redistribution systems within the municipal sector also belong to this category (Ds 1999: 50). Large-scale investments in infrastructure (e.g. roads, railway, airports, etc.) and education (e.g. the establishment and operation of universities and university colleges) located outside metropolitan areas have certainly contributed substantially to regional development in regions lacking strong urbanisation economies (e.g. Westlund 2004).

The municipal tax equalisation system, implemented between 1993 and 1996, redistributes tens of billion SEK every year between municipalities

[4] Some local voices claim that it would be better for the sparsely populated, but often large by land area, municipalities mainly located in northern Sweden to receive, for example, company taxes, preferably as a supplement to today's equalisation system. These considerations highlight the fact that tax systems are based on the residence or registered location of companies, so businesses owned by people registered outside the municipality or in-commuters do not generate municipal tax and that company tax is not paid to the government. Similar considerations exist with regard to second homes, where one proposal is that taxes should be split between first (where all municipal tax is currently paid) and second homes due to the fact that many people spend substantial amounts of time in their second homes (cf. e.g. Rye 2011). This has also been underpinned by the situation that second homes require service provision, and the second-home population may outnumber local population in peak season and impose requirements for services to cope with this demand. Although localities may benefit greatly from the associated purchases of local municipal and business products and services "the costs of adjusting the infrastructure of public services to meet the demands of the second home populations may exceed these income sources" (Rye 2011: 264). Issues of local funds or mineral tax (and distribution) to manage or compensate municipal investment in cases of bankruptcy or environmental restoration in cases of abandonment or environmental risks are also other issues of potential increased funding at municipal levels that have been discussed. However (as illustrated above), national redistribution in these cases is substantial and cannot be replaced—only potentially added to—by changes in company taxation and second-home taxation to better approximate the potentially larger share of rural-urban habitation.

and from the state to the municipalities. There are 290 municipalities, and their main tasks are within the fields of basic health care, schools and elderly care. The 20 county councils—primarily responsible for advanced health care services—are also included in the redistribution system. The municipalities as well as the county councils collect taxes on earned income—on average 32 per cent (Statistics Sweden 2016a, b). The tax rates vary across municipalities and county councils by more than 7.5 percentage points.

The entire tax redistributive system thus involves many aspects, but here the focus is on the redistribution between rich and poor municipalities in order to support the basic welfare functions performed by the municipalities. However, increasingly in the last few decades, this situation has become constrained by the fact that while municipalities are still required to live up to this general competence, funding, especially in low-population municipalities, is increasingly scarce due to the high rates of urbanisation and thereby limited local tax base. The case of Sweden can be used to illustrate these types of considerations, also showing the effects of current redistribution that would be difficult to counterbalance through other means (even if, e.g. increasing company taxes at site of development were to be initiated). The redistributive tax system can consequently be regarded as an example of how Fennoscandian systems retain a focus on the country at large and more inclusive rural development rather than focusing on urbanities only (cf. Hidle et al. 2006).

Table 6.1 shows the tax equalisation system for the municipalities that receive the most (SEK/inhabitant) and the nine municipalities that input resources into the equalisation system. All the municipalities among the top ten net gainers are located in the peripheral parts of northern Sweden, and all are characterised by low population density. The nine municipalities that pay into this system are all located in one of the three largest metropolitan regions of Sweden (Stockholm, Gothenburg and Malmö). The difference in population density between the two groups of municipalities reveals some of the structural differences in terms of infrastructure, labour market and so on. The small municipality of Bjurholm receives SEK 26,975 per inhabitant, which amounts to SEK 66.2 million per year. The total tax revenues in 2015 amounted to SEK 151 million, which implies that approximately 43 per cent of municipality revenues in Bjurholm come from the national municipality tax equalisation system. The municipalities of Dorotea and

Table 6.1 The municipality tax equalisation system (income equalisation, cost equalisation and structural grants included), SEK per inhabitant in 2015 and amounts received/given

Top ten net gainers in the cost equalisation system municipalities	Classification	Population density (Inh/km²)	SEK per inhabitant	Amount received (SEK)
Bjurholm	Rural	1.88	26,975	66,223,000
Dorotea	Rural	1.00	26,805	73,579,000
Vilhelmina	Rural	0.85	26,202	179,431,000
Åsele	Rural	0.67	25,718	72,807,000
Sorsele	Rural	0.34	25,375	63,513,000
Övertorneå	Rural	1.94	23,432	107,576,000
Pajala	Rural	0.80	22,535	139,897,000
Bräcke	Rural	1.90	22,366	144,551,000
Berg	Rural	1.24	21,964	154,648,000
Storuman	Rural	0.81	21,031	124,776,000
Top ten net givers in the cost equalisation system municipalities	Classification	Population density (Inh/km²)	SEK per inhabitant	Amount given (SEK)
Danderyd	Urban	1228	14,379	466,871,000
Solna	Urban	3914	6057	460,713,000
Lidingö	Urban	1499	5792	267,851,000
Täby	Urban	1119	4865	330,892,000
Stockholm	Urban	4923	1730	1,597,063,000
Vellinge	Urban	241	1267	43,845,000
Nacka	Urban	1025	1054	103,089,000
Lomma	Urban	418	689	16,059,000
Tjörn	Urban	91	288	4,407,000

Source: Statistics Sweden 2016a, b

Vilhelmina show similar percentages, which thus contribute to continued public services in rural areas and the potential for people to maintain linked urban and rural residences and roles.

Managing the Challenges of Globalisation: A Role for Forest?

Even though the tax system has substantial redistributive power, it cannot compensate for the multiple trends included in the economic, political and cultural components of globalisation that may together contribute to urbanisation (e.g. Keskitalo and Southcott 2015). Challenges remain for rural areas, particularly the least populated parts of the country. Considerations like these, as discussed above, are exacerbated by an increasingly sparse population with great distances between, for example, schoolchildren, health care patients and other subjects that all give rise to cost increases. The ageing population also results in many people with extensive care needs. This pattern of ageing populations residing in large, but sparsely populated, municipalities coincides with the municipalities where natural resource use such as forestry has been historically widespread. In many of the most rural net gainer municipalities in the table above, forestry has been a historically large employer but, due to technological development and rationalisation, generally no longer contributes much to local employment (e.g. Keskitalo et al. 2013). Some of these areas remain important production areas (e.g. Kiruna, with the world's largest modern underground iron ore mine). However, others have become more like amenity areas, with their population largely outmigrating for work and contributing to the shift in the forest owner group (e.g. Keskitalo et al. manuscript).

For these areas, throughout Fennoscandia and more broadly, retaining service and infrastructure provision is a crucial part of being able to retain those in the population who wish to maintain residences locally, including those who start businesses. Without service provision, attractiveness inherently decreases. For example, in the Finnish case, it is noted that:

> [t]he practical consequences of the continued depopulation of rural areas are the degradation of the existing services and infrastructure and the deterioration of living conditions for those remaining. This erodes both quality

> of life and the basic prerequisites for entrepreneurship. Migration increases economic activity in the growth centers and thus accentuates the disparity between remote areas and centers of growth. (Risku-Norja et al. 2010: 76)

With regard to the role of forest and forest ownership supporting rural areas, the picture is mixed. While, for example, Swedish state policy during one period focused on freeing up state forest company land for local purchase with the aim of supporting income in sparsely populated areas, this policy eventually had to be abandoned and purchase opened to non-local groups with the funding to purchase the land (Keskitalo et al. manuscript). While in this case the forest was often purchased by those with linkages to the areas, neither local tax nor forestry income necessarily resulted from it (ibid.). However, as other chapters in this book illustrate, forest ownership may also potentially provide capital to borrow against or supply underlying resources in other ways for local owners, and forest management services may be sourced locally, thus providing rural benefits (see Chap. 5, this volume). In line with the amenities concept, it is also likely that forest areas, like other amenity-rich natural environments, with greater natural and cultural attraction than other places, may support increased in-migration (if possible, in accordance with employment and other requirements) and improve economic growth.

Thus, apart from offering a traditional output in the form of logged trees, forests may provide attraction for inhabitants, tourists and companies and, as such, may contribute to opportunities to live and work in sparsely populated areas. With increasing affluence in society, travel opportunities (being temporarily mobile) or amenity-led migration (permanent relocation) are made easier. Although amenity mobility and relocation may largely be an upper-/middle-class phenomenon, it has been shown that some people find the amenities of certain regions so attractive that they are willing to decrease their income to access them. For rural areas, any such inflow of new populations and competences could potentially create opportunities to enter the new economy and create a more diverse and modern labour market, and provided planning and management in the receiving area, positive impacts may be legion—including a larger, and in some cases younger, population base and thereby better schools and business climate (e.g. Bliss 2008; Bliss and Kelly 2008). In-comers often have higher education levels and may

bring with them business development, which could mean that the recipient communities develop a more diversified labour market. However, these impacts are not easily generalised since the complex interaction between place and people differs from time to time and place to place. Large variations in in-migration may occur, not least related to economic or employment opportunities elsewhere, and in certain cases may also a rural linkage prove crucial (see Box 6.4).

Box 6.4 An Example of Forest Product Use: Portugal During the Recent Economic Downturn

In 2011, Portugal was struck by an economic crisis that was responsible for an unemployment rate of 40 per cent among the younger segment of the population (15–24 years). As a reaction to this situation, several entrepreneurial initiatives emerged in rural areas, especially in the agricultural sector. This sector and the food sector were the only sectors that grew in Portugal in 2012, at the peak of the crisis. These new entrants are usually university graduates or professionals in several fields, from management to engineering, law as well as trained carpenters and electricians. Their agricultural products vary from livestock production, namely sheep and goat milk, local pig and cattle breeds for meat, to a range of fruit such as melon, watermelon, cantaloupe, sweet potato, ground cherry, goji berries, grapes, apples, snails, asparagus, strawberries, raspberries and blueberries. Production of the three last-mentioned crops (strawberries, blueberries and raspberries) has increased enormously during the past ten years. In the forest sector, non-wood products such as shitake mushrooms and rural tourism are the obvious options. Some of these young entrepreneurs have left the city to manage inherited, purchased or rented forest and agricultural land in order to establish themselves as forest or agricultural producers, estimated to be using some of the 2000 hectares of abandoned land available.

In some cases, young farmers have benefited from the *Bolsa de Terras* Programme, which reunites available public and private forest and agricultural land and allocates it to those who wish to manage it. In order to acquire the knowledge necessary to establish a rural business, the new entrants take part in training courses arranged by local agricultural cooperatives and by development agencies. These also provide further technical assistance as well as that provided by local councils, governmental agricultural extension services and private organisations. Funding has been provided by several sources including the Portuguese Rural Development Programme, which pays 60 per cent of the total investment cost—a sum that can range from EUR 60,000 to 400,000 and, in some

cases, loans from family members. In the first half of 2013, about 7300 projects by young farmers were approved, the majority located in the north of Portugal. With almost 50 per cent of Portuguese farmers older than 65 and only 2.5 per cent younger than 35, these projects have contributed to the rejuvenation of Portuguese agriculture (Madureira et al. 2014). Here, it may be important to follow these young farmers in order to better understand the constraints and opportunities associated with setting up their rural businesses as well as to evaluate their contribution to rural economies.

Tourism may also be important as the increasingly urban populations may require the services offered by commercial operations rather than travelling on their own and as interest in nature sports or ecotourism aimed at more than just relaxation may continue to rise. Northern Europe is also sometimes perceived of as one of the last remaining wildernesses available to tourists. Tourism, however, while currently increasing strongly in Sweden as well as many other areas, will not itself be able to replace the volume of employment in earlier sectors such as forestry and agriculture. Policy changes that also take into account how agriculture and forestry are linked to urban activities, such as commuting between rural and urban locations, may be necessary. It may also be essential to broaden the focus of agricultural and rural policy from agricultural production in rural areas only to broader, rural-urban linkages (Slätmo 2014).

In addition, researchers have noted the need to expand the focus in a modernisation discourse, whereby the focus has previously been placed purely on the urban without recognising these linkages. Hidle et al., for example, note that while such a discourse has not had the same strong impact in Norway as in many other examples, there is "widespread agreement about the decrease during the 1990s in governmental efforts towards counter-centralisation and the shift from a focus on the rural maintenance towards regional growth … In addition, many observers point to the fact that there seems to have been a shift from governmental sharing with the rural in the 1970s, towards stimulating the competitive ability of regions through governance" (Hidle et al. 2006: 196). In Sweden, a concurrent trend could be identified as the regional policy changes in the 1980s whereby local and regional mobilisation were emphasised and, later, the

national governmental role in Sweden regarding regional policy became more restricted due to Swedish membership in the EU.

As a result, Slätmo notes, for example, that rural actors in both Sweden and Norway could be better integrated into comprehensive planning by basing it less on different sectoral interests in different areas and instead on support to local landowners and their interests and their own definitions of land use, for example, in order to facilitate the development of new activities in specific areas (Slätmo 2014). One step towards this, Slätmo argues, would be to better integrate the production value of agricultural land into municipal physical planning (similar to Stjernström et al. 2013, who argue for integrating forest and physical planning). However, "the process of strengthening the role of forests in rural development in Europe is not as straightforward as presently promoted in the second pillar of CAP, in which economic measures prevail, for example, the provision of subsidy schemes for private afforestation of farmland" (Elands and Praestholm 2008: 83). Altogether, these considerations illustrate the need "to elaborate a more nuanced European policy perspective on forestry and rural development" (Elands and Praestholm 2008: 83).

Conclusion

This chapter has highlighted the multiple understandings of the rural, ranging from a focus on economic decline to amenity, and illustrating the considerable variation across rural areas by contrasting UK and Fennoscandian conceptions, indicating a continued role for production, multiple residence and related rural-urban linkages in Fennoscandia. The chapter has also illustrated the fact that the EU-level conceptions of the urban have largely taken on a post-productive focus and some of the criticism concerning this. The chapter thus suggests that it is not only post-productive but also the change in production—including primary production such as agriculture, food, and forestry, as well as mining—landscapes that need to be taken into account. It is also necessary to problematise whether such broad concepts such as post-productivism—developed to capture broad changes that may, to a greater or lesser extent, be relevant in specific areas—are actually relevant to a better understanding of highly complex changes, including the displacement of

production to other sites and the new types of relationships that result from them. As Hidle et al. express it:

> [G]eographical imaginations as representations of space and place mean that place and space become processes, and that they must be perceived as polyphonic voices, as ambiguous and as part of power relations. This means that place and space are not a set of relations outside society and lived life, but instead part of the production of social relations. In such perspectives, rural policy and the scientific and bureaucratic discourse of rurality are important in transforming the local and the regional geographical imagination. (Hidle et al. 2006: 190)

Rural policies today may thus need to question both who rural people are and, subsequently, what rurality is. When traditional rural interest groups such as agriculture diminish in size and in their ability to speak for non-urban areas, and an increasingly international, competition-focused forestry sector limits its focus, perhaps municipal government and its planning organisation will become an increasingly important local factor. Important considerations may exist here as concerns a review of the assumptions on, or ways in which, urban and rural planning have diverged and whether such divergence remains relevant today. What opportunities are there to open up for new land uses and to take into account the forest and not only the agricultural characteristics of rural areas? On an overarching level, developing such newer rural considerations within the scope of major pressures such as globalisation, urbanisation and the potential, continuous impact on state resources in more sparsely populated areas remains a challenge, even within redistributive or less historically urban-focused systems.

Given the necessary shift towards decarbonising the world economy, the natural resource base may also be revalorised, offering an opportunity for a renewal of food, fibre and energy production from green sources. Areas earlier regarded as representing post-productivism may thus come to be seen as manifestations of neoproductivism that will help address the challenges presented by the impending crisis in the global food-water-energy nexus. What may be challenging in the revalorisation of rural space is the extent to which new demands (such as large-scale wind energy or forest-based biorefinery) are regarded as intrusions into a landscape

that some value more for its amenity than its production potential (e.g. Slee 2015). The manifestations of socio-economic change—the mix of old productivism and neoproductivism, of consumption versus production generally—in commuter-dense rural areas or more remote areas will differ enormously. These forces may play out under a peculiar mix of neoliberalism at a macro-level and more partnership-based approaches at the meso- and local levels, which may provide the capacity, when functioning well, to offer a counterpoint to some of the excesses of neoliberalism.

It is interesting to reflect on how the Leader Model at the EU level was first presented as a form of counterpoint to the classical top-down interventionism often associated with supporting inward investment. It was applied to the most disadvantaged and remote rural areas where, at its best, it had some success in community-led local development and was widely imitated as an approach to development in some of the most challenged areas. Its subsequent mainstreaming suggests that at least some policy-makers argue its salience beyond those difficult and disadvantaged regions. This implies a leavening of the neoliberal approach by something more collaborative, locally grounded and partnership-based. Still, however, we should not expect equality of opportunity or evenness of development outcomes. We can and should expect diversity, regional and local specificities of response and highly differentiated development, beyond the four ideal types identified by Marsden and others and reflecting new forms of hybridity of outcome. The diverse forms in which rural areas and policies may change, for instance through forest-based bioeconomy, and the implications for traditional and new forest owners remain, at this stage, speculative and uncertain.

Appendix: The Municipality Tax Equalisation System

The municipality tax equalisation system in Sweden consists of three parts, denoted as income equalisation, cost equalisation and structural grants. There are also two other posts (Swedish: “införandebidrag”, “regleringsbidrag”), but these are relatively insignificant in monetary terms.

Before 2005, the income equalisation system was based on the redistribution of tax revenues between municipalities. This was a zero-sum game to which the government made no additional contributions. Since 2005, the government contributes the main part of the redistributed sum while a minor part of the redistribution is financed by the municipalities with the highest tax capacity. The income equalisation system is based on the national average taxable income per inhabitant. The government then adds another 15 per cent, which means that the basis for the realignment of taxes (Swedish: skatteutjämningsunderlaget) amounts to 115 per cent of the average tax capacity. For each municipality, the basis for the realignment of taxes is subtracted from the municipality tax capacity. A grant is given to municipalities where the difference is positive, while municipalities showing a negative difference have to pay a fee (Statskontoret 2014). The amount of money the municipalities pay or receive is determined by a tax rate defined by the county. For 2015, municipalities received SEK 64.6 billion and paid SEK 4.2 billion. This implies that the government paid approximately SEK 60 billion to the municipalities within the income equalisation system (SOU 2015: 101). The municipalities of Årjäng, Eda and Bjurholm received the most from this system, collecting SEK 16,600, SEK 16,100 and SEK 15,600 per inhabitant, respectively. The municipality of Vilhelmina received SEK 14,200 per inhabitant. Fifteen municipalities paid fees to the income equalisation system (SCB 2016a, b).

The aim of the cost equalisation system is to take into account structural differences between municipalities. Cost differences may vary due to municipal needs and costs for producing services. Municipalities with a large share of children and adolescents have higher costs for childcare and schools, and those with small populations located in rural areas also face higher costs for schools since, for example, teaching has to be carried out in smaller classes. The fundamental idea behind the cost equalisation system is that it will compensate municipalities for costs they cannot control.

The cost equalisation system constitutes ten sub-models that take into account many differences between municipalities. The most important parts refer to childcare, elderly care, the nine-year compulsory school, upper secondary school, and individual and family social care. In each of the sub-models, a standard cost (SEK per inhabitant) is calculated. If the standard cost of a municipality exceeds the weighted average cost (taking

into consideration population numbers) across all municipalities, the municipality receives additional funds, whereas there will be a deduction if it is the other way round. On the basis of all the calculated standard costs within each of the ten sub-models, a total structural cost (Swedish: strukturkostnad) is obtained (SEK per inhabitant). Municipalities ending up with a structural cost that is higher than the average structural cost across municipalities receive a cost equalisation contribution from the government, corresponding to the difference between the two factors. If the municipality structural cost is less than the average structural cost, the municipality has to pay the difference to the government. This is a zero-sum game, to which the state makes no additional contributions (Statskontoret 2014). Data collected in 2015 show that the municipalities of Dorotea, Åsele and Bjurholm receive the highest amount of cost equalisation—SEK 11,400, SEK 11,200 and SEK 10,700 per inhabitant, respectively. The amount per inhabitant received by Vilhelmina amounts to SEK 9527 (SCB 2016a, b).

Structural grants are given to municipalities as compensation for changes that occurred during the shift to the new tax equalisation system in 2005. In broad terms, it can be concluded that municipalities receiving structural grants have small populations. They also belong to a group of municipalities that, in 2013, were given support to strengthen their local employment situations and local trade and industry. The grant, expressed as SEK per inhabitant, is not adjusted for inflation, but population changes influence the amount received (Statskontoret 2014). For 2015, the municipalities of Gällivare (5000 per inhabitant), Kiruna (SEK 4800) and Övertorneå (SEK 4800) received the highest structural grants. Vilhelmina's structural grant amounted to SEK 2500 per inhabitant (SCB 2016a, b).

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7

Multi-level Planning and Conflicting Interests in the Forest Landscape

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Introduction

Forests are the arena for many activities. For centuries, the European forest landscape has been productive, contributing to the economic development. Forest-industry production contributes substantially in

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many European countries, for example, Finland, Sweden, Austria, Slovenia, and Estonia. This illustrates the importance of forest in terms of producing raw materials for the forestry industry in general. Today, intensive forestry exists alongside other land-use interests in the forest landscape. Forestry is still one of the most prominent land uses affecting forest landscapes in many European countries with huge forest areas; however, other activities and interests include nature protection, wind farms, tourism and recreation, urban development, and the land-use rights of indigenous populations. Productive forests see a conflict or trade-off between production and biodiversity, and in forests not used for timber production, there are conflicting land-use interests, mainly related to environmental protection and recreation or other kinds of exploitation. The divergent uses of the forest landscape have been, and continue to be, a potential source of conflict (Eriksson et al. 2012; Sandström et al. 2003), particularly since large-scale forestry has drastically altered the structure, composition, and function of forests in the twentieth century (Esseen et al. 1997). As requirements concerning forests increase and diversify both globally and locally, and as this leads to increased competition between different forest functions, forest-related conflicts can be expected to escalate in the future (Sandström et al. 2003).

Activities in the forest today relate in one way or another to the three pillars of sustainable development: balanced economic development, secure biological diversity, and social sustainability (Brundtland et al. 1987). The social values, defined as goods, services, and/or ideals related to the forest land that many individuals "will make sacrifices to achieve" (Koch and Kennedy 1991: 3), have been somewhat neglected. In recent years, however, the social values of forests have moved more into focus. Some of these interests relate to the changed population pattern and the urbanisation process. Understanding urban fringe forests as forests with great social potential for the urban population has recently gained more interest (Olsson 2014). However, the major conflict in the forest landscape is still the multifaceted land-use conflict between, amongst others, forest production, nature protection, recreation, nature resource exploitation, and urban sprawl. It all comes

down to land use and the related policies and planning. Forest as a resource for forest industries must therefore be placed in relation to other demands and activities in the forest landscape. The incentive for an overarching planning policy that includes forestry planning and municipal planning, as well as considering other land-use interests, is motivated especially in order to understand and deal with conflicts related to the forest landscape (Stjernström et al. 2013; Andersson et al. 2013).

In this chapter, the competing or conflicting land-use or planning interests in the forest landscape are understood, described, and analysed from four different angles or arenas. Firstly, the planning issues in the forest landscape can be understood as a conflict between territorial demands and planning, on the one hand, and the sector planning of a specific interest, on the other (Friedmann and Weaver 1979). The local or regional comprehensive spatial planning embracing all actors and land-use interests could potentially be in conflict with a sector interest crossing the spatial borders (Stjernström et al. 2013; Andersson et al. 2013). The first part of this chapter will focus on the relationship between spatial/territorial planning and sector interest planning.

Secondly, the relationship between the property rights and the public interest is always an influential part of the public planning process. Public recreational use of private forest land interferes with the property rights, and this relationship varies between different national systems. The right of public access to private forest land as well as customary land-use rights for indigenous populations are discussed. The third issue regards the impact of voluntary forest certification and its implication on indigenous rights, nature considerations, and recreational use. These issues are exemplified in private forest owners' perception of the general public's access to their forest land and the importance of forest certification for indigenous rights, by analysing the consultation process between forestry and reindeer-herding interests in northern Sweden (Sandström et al. 2011; Sandström 2015).

Finally, there is the relationship between national planning frameworks and how international conventions such as Natura 2000 are implemented in the existing national context. This could also be understood in

terms of planning challenges or conflicting interests. The relationship between national legal frameworks and international conventions normally involves the protection of the environment and indigenous populations.

The aim of this chapter is to describe and analyse overlapping planning structures, legal frameworks, customs, policy frameworks, and networks, and how they affect current land use and management in the forest landscape in Sweden. We address the following research questions:

- What are the consequences of overlapping legal systems for the land use and planning of the forest landscape in Sweden?
- How do the overlapping governance processes of EU, market, and consultative processes impact the formal planning system?
- How is the public interest considered in the multi-level planning process?
- What are the consequences of the overlapping processes for how all interests and activities in the forest landscape are coordinated and managed?

The Junction of Property Rights, Municipal Planning, and Forest Management: A Planning Dilemma

In Sweden, as in many other countries, private property rights regarding land ownership form a basic attribute in terms of influencing all social and economic undertakings (Blücher 2013). Property ownership regimes vary between different national contexts but, in general, property rights form the fundamental cornerstone of democratic capitalistic systems. Forest landscapes, however, also illustrate a multi-level governance system. National legal frameworks and international conventions and agreements interfere in property rights and restrict owner action. In the Scandinavian countries, public access to forests is a historical right, which to some extent has been challenged by increased multi-use and the increasing number of actors in the forest landscape. The circum-

stance that about 50 per cent of Swedish forest land is owned by non-industrial private forest owners (NIPF) and another 25 per cent is owned by private forest companies emphasises the importance of property rights in planning and management processes. Property rights form the foundation of the planning and management of forest land. Economic transactions and economic rationality must be understood in relation to social rationality, expressed as the public interest. Swedish property rights are negatively defined in Swedish legislation, which implies that the property owner has the full right as a point of departure in legislation. The legislative body can then decide to restrict property rights by implementing regulations considering, for example, the public interest or the environment.

Property rights do not only provide property owners with certain rights; they also include obligations such as paying taxes and complying with existing legislation. In most democratic states, the formal planning system is a balancing act between the two major land-use interests: property rights and public interest. In northern Fennoscandia, grazing rights should be added as an interest that has to be balanced in relation to the private and public interests. Originally, this relationship can be identified in the ancient village organisation on a very local level. The Swedish Right of Public Access (*Allemansrätten*) is usually perceived as beneficial for a non-owner in terms of being allowed access but at the same time is considered negative for an owner in terms of invasion of privacy. Thus, in a Swedish context, broader stakeholders beyond the forest owners include the general public and representatives of various special interests such as the environment, industrial timber production, tourism, and so on (Lundmark and Stjernström 2009).

The most fundamental jurisdiction relates to the negatively formulated property rights. A number of restrictions are also implemented in the Forest Act, the Environmental Code, and other environmentally orientated legislation. Swedish common law, the Right of Public Access, is mentioned in the Swedish constitution and deeply rooted in Swedish tradition. However, the Swedish Right of Public Access is under discussion. This historic convention was added to the Swedish constitution in 1994 (Regeringsformen Kungörelse 1974: 152). Large-scale commercial

leisure activities have led to discussions on whether or not they should be allowed according to the Right of Public Access or if the landowner should have the right to refuse such arrangements or claim financial compensation (Lundmark and Stjernström 2009).

Forest land and forestry are key factors in understanding the evolution of physical planning in Sweden. Current forest policy clearly states the need for a balance between the production target and the environmental target. This important principle was established in the revised Forestry Act in 1993. These two targets do, however, conflict with each other somewhat. The relationship between the Environmental Code and the Forestry Act (SFS 1979: 429) is rather weak. The fact that forestry has specially designed legislation with an unclear relationship to the Environmental Code is in itself a legal manifestation of the importance of forestry. For example, in the Environmental Code, it is stated that forest land of importance to forestry must, as far as possible, be protected against acts that damage its rational use for producing timber (SFS 1998: 808 Ch. 3, p. 4, EC). The Swedish Forest Agency has a responsibility to implement the intentions of the Forest Act and other legislation, strategies, and policies. Practical forest planning is carried out by the individual forest owner, monitored by regional officers working for the Forest Agency and to some extent also by the county administrative boards and certification organisations. The argument for including, or at least relating to, forest issues in municipal planning in general, and in comprehensive municipal planning in particular, is the importance of a localised resource that could, to a greater degree, be understood as a resource of not only national importance but also contributing to regional and local development. Another argument is the understanding and land use of urban fringe forests (Olsson 2013). In Swedish media, there have been reports on the problem of clear cuts in the close proximity of settlements which have impacted the landscape and important recreational areas used by locals (Zaremba 2012). Despite local protests, the Forest Agency declares that they are only obliged to consider the production and the conservation targets in the Forest Act (ibid.). However, the Agency has recently initiated a study on the importance of social values within the current legal framework.

The Environmental Code contains the concept of "ongoing land use" (*pågående markanvändning*). Ongoing land use is not to be affected by other interests, such as various national interests. This means that if an area is of interest for its natural environment (conservation and/or outdoor recreation), this should not affect the current land use, and forestry is usually regarded as a current land use. It also means that fundamental land-use regulations are not applicable in relation to changes in land use that are connected to forestry and forest production, such as clear cutting, soil scarification, choice of tree species. It is only when it comes to water issues such as ditches, the draining of wetlands, and the protection of some deciduous forests (oak and beech forests, etc.) that land-use changes must be approved according to the Environmental Code. The fact that issues related to forests and forestry in many respects have been, and still are, kept away from local municipal planning and the influence of the county administration can be explained at least partially by the economic importance of the forestry sector in Sweden.

Forest management plans for small-scale forestry serve a number of different functions, first of all as decision-making help for the forest owner. Management plans also serve as a link in the communication between the forest owner and other actors such as forest owner associations, other timber procurement organisations, and the Forest Agency. These plans also act as (informal) instruments for the implementation of forest policies (Brukas and Sallnäs 2012), as forest owners who have an up-to-date management plan have shown a higher level of forestry activity compared to owners who do not have a plan (Eriksson 2008). A small-scale forest management plan in Sweden typically consists of a map showing the estate divided into land-use classes and the productive forest land divided into individual forest stands (polygons on the map, stand area typically 1–5 ha). A description of each stand is given in a stand register in terms of stand age, site productivity, timber volume, tree species distribution, and so on. The estate-level report, in terms of timber volumes, age classes, tree species composition, and so on, is also presented. Management proposals for the first ten-year period are given, as are the subsequent harvest volumes and the projected forest condition after this ten-year period. According to current forest legislation, a management plan is not mandatory (it was, however, mandatory until 1993).

Since the 1990s, forest management plans have become an important component within environmental certification schemes according to the Forest Stewardship Council (FSC) and the Programme for Endorsement of Forest Certification (PEFC). Such a plan, typically called a Green Forest Management Plan, is mandatory for certified forest estates larger than 20 ha. A number of certification measures have to be stated, for example, the management goal for each individual stand, set aside without management, set aside with management, and production with enforced environmental consideration or production with general environmental consideration, respectively. A minimum of 5 per cent of productive forest land has to be set aside, and there are also targets for, for example, areas of forest rich in deciduous trees. NIPF owners are typically certified via an umbrella organisation, such as a forest owner organisation. The forest owner organisations, as well as other actors, produce green management plans when commissioned by the NIPF owner. The number of small-scale forest estates with green forest management plans is uncertain; a rough estimate is 30 per cent (2013), based on the Swedish University of Agricultural Sciences (SLU) and Forest Agency Data Base of Forest Owner Analysis (survey responses in which the forest owner has stated whether or not his/her forest is certified; cf. Lidestav and Berg Lejon (2011)).

In order to understand this rather complex situation, Stjernström et al. (forthcoming) studied the background of the present Swedish planning legislation and policies. One central concept was, and still is, the idea of ongoing land use. The study reveals that forest sector representatives were very concerned as early as the discussions in the 1960s. Reformed planning legislation could possibly endanger forestry interests and negatively affect major economic players. The forests never became a national interest as compared with, for example, energy production, mining, recreation, or reindeer husbandry. One argument for this was that state intervention in local planning would then be too strong, and another issue was that national interests could endanger timber production and thereby the export-orientated forest industry. Instead, the forestry and landowner representatives introduced the concept of current land use which, in legal terms today, means that ongoing land use should not be affected by other interests (such as national interests) in the planning process (Stjernström et al. forthcoming). By not declaring forests and

forestry as a national interest, the Swedish Forest Agency could maintain its responsibility and influence as a strong sectoral interest in the national planning system.

Even though the implementation of the 1987 Planning and Building Act gave Swedish municipalities increased rights of self-determination regarding land-use planning, forest lands and forestry, as well as agriculture, were left outside the local planning domain. Planning systems in the Nordic countries are based on strong relationships between local and central levels. Swedish municipalities are comparatively independent and occupy a strong position in the national planning system in terms of both practising planning and their formal power to control local resources such as land and water, finances. In this sense, the Swedish municipalities' planning bears a resemblance to territorial spatial planning. General land-use planning in Sweden is normally covered in the mandatory municipal comprehensive plan (*översiktsplan*), which should encompass the entire area of the municipality and be kept up to date. This plan is not legally binding; however, the decisions made should be regarded as guidelines for further planning.

Nevertheless, the municipality is obliged to consider various state interests, known as national interests (*riksintressen*), within their boundaries (Blücher 2013; Thune Hedström and Lundström 2013). These areas are considered to be of public interest and national importance and hence should be reflected in comprehensive municipal plans. National interests could concern, for example, nature qualities, cultural heritage, or outdoor recreation. Other purposes could be certain economic sectors (i.e. energy production, mineral extraction, fishing, and reindeer husbandry) or important infrastructure. In this manner, the municipalities maintain their planning authority, but at the same time, the state, through the county administrative boards, maintains some control over certain aspects of physical planning. The comprehensive municipal plan is an instrument of dialogue between municipality and state but with the municipalities responsible for considering and implementing national interests at the local level.

In this context, the municipal planning monopoly is a truth with some modification, not least in sparsely populated municipalities with extensive natural resources and related industries. For example, there are some

sectors—such as mineral extraction, forestry, and to some extent energy production—in which the municipalities in reality exert limited influence (Stjernström et al. 2013). These interests or sectors relate to specially designated legislation with an unclear or weak connection to the Swedish Environmental Code and the Planning and Building Act. Forest and forestry are examples of cases in which the municipalities lack a clear mandate in relation to how the resources in the forest landscape are planned and used (Berge and Adolfson 2011). The concepts of municipal planning and forest planning are, in the Swedish case, difficult to compare since *planning* has quite different meanings in these contexts. Municipal planning relates to the local level in Sweden, and this level is given most authority concerning planning rights and land-use decisions. Local forest planning, however, primarily relates to the forest property holders' planning efforts with the help of a forest management plan. This plan relates to the individual property, and is made in accordance with the national forest policy and legal framework. However, it is important to understand that there is no such thing as local forest planning; it is more about the sum of all the forest property owners' activities locally and the local outcome of the national forest policy. This is also the case in other national contexts, such as the USA and Canada (McPherson et al. 2005), whereas developments in, for example, Bolivia show quite the opposite pattern (Kaimovitz et al. 1998).

The Planning and Building Act has been revised, though not regarding aspects that are relevant here. Whereas the forestry sector appears to inhabit a strong position in terms of opportunities to influence regulations and land use in forests, its role in local and regional development is much less clear. For example, the Forest Agency does not have a clearly stated role when it comes to formulating regional development strategies as compared to municipalities, county administrative boards, county councils, and other kinds of regional associations. These circumstances are somewhat contradictory since forest constitutes an important resource, often mentioned in regional development programmes and similar strategic documents. On the other hand, it has to be stated that forest practice is slightly more market orientated and influenced by more modern approaches to governing forest resources. The forest certification process and the implementation of green forest management plans are

two important examples of how the shift from governing to governance influences the planning process in the forest landscape.

Based on this understanding of the development of spatial planning and forest planning, two distinct planning discourses can be identified: the planning discourse and the industrial discourse (Stjernström et al. forthcoming-b).

The planning discourse is based on the Swedish planning tradition of municipal self-determination. The reformed planning legislation was partly aimed at securing and reinforcing municipal self-determination. The new planning legislation in Sweden, in the late 1980s, marked a shift in the national view of important natural resources. Handing over more political power to local authorities was an ambitious idea. In order to maintain central or national control, the concept of national interest was introduced, with the county administrative board as the mediator between local/municipal interests and planning efforts on the one hand and national interests on the other.

The industrial discourse relates to the strong influence of existing economic and administrative structures manifested by property rights, the forest industry, the Swedish Forest Agency, and the farmers' organisation (LRF), representing many of the small private forest owners around the country. Strong lobbying groups exerted considerable impact on decision-making in the Swedish Parliament when the new planning legislation was introduced in the late 1980s. The issue of compensation for landowners resulted in a compromise emphasising the concept of current land use, which basically left the forestry sector untouched and outside the jurisdiction of municipal planning.

The Private Forest Owner's Perception of, and Relationship to, Public Planning

Most forest planning takes place parallel to municipal planning and there are only minor incentives in the planning legislation, as well as in the forest legislation, to coordinate the different activities. One general dilemma of two parallel planning/management systems is relations with the general

public, and how public interest and participation are considered in the planning processes. Public participation in Swedish municipal planning is well defined and mandatory. Forest management in Sweden has recently identified the social values of forests as a vital part of forest planning in order for it to gain a higher level of legitimacy (Olsson 2013).

Given the multiple influences on and interests in forest land, it cannot be assumed that forest owners are a homogenous group. Rather, it should be expected that they represent a great variety of understandings and interests—and conflicting perceptions—with regard to forest. In this section, private forest owners' approaches to and relationships with municipal planning efforts, other land-use interests, and social values are described and analysed in the two Swedish municipalities of Hässleholm and Vilhelmina, in southern and northern Sweden, respectively (Stjernström et al. forthcoming-a). The primary target here is to understand how private forest owners relate to municipal (local) and regional planning and the forest owner's perception of the relationship between their own property rights and the public interest.

While one of the key features, as stated in the introduction of this chapter, is property rights, it is important to understand how property rights develop in relation to the public interest and the custom of public access to private land. There is a long tradition of close relations between the owner and the public; the vast forest areas, the traditional land use, and the fact that Sweden has always been a sparsely populated country contribute to this rather frictionless custom. In times of increasing urbanisation, market demands, and the economisation of forest products, however, relations between forest owners and the public interest have become more complex. For example, in forests close to urban areas, more people are visiting or using the nearby forest landscape for recreation, berry picking, hiking, and so on. Public recreational interest in forests is thus unevenly distributed. In the municipal planning process, the municipality is to map and plan the entire municipal area, including forest land. The latter calls for a close relationship between municipal planning, on the one hand, and forest owners, forest associations, and the regional Forest Agency offices, on the other.

In general, there are few conflicts between property rights/private forest owners and the custom of the Right of Public Access to private forest

land. Nevertheless, the custom of public access has been challenged. One major controversy has involved commercial outdoor activities on private land. Basically, commercial activities need the approval of the landowner (Bengtsson 2004). However, in the survey carried out in 2012, a representative sample of forest owners in Sweden expressed their attitudes concerning the Right of Public Access. The results indicate that most forest owners do not see the Right of Public Access as a threat to the forest and forestry, even though the responses are somewhat mixed. This could probably be explained by the simple fact that most forest owners have their forests in areas that are used very little by others. There is also a difference between resident forest owners (i.e. residing in the same municipality as the forest property) and non-resident forest owners (i.e. residing outside the municipality where the forest property is located). Non-resident forest owners seem to be less worried about the Right of Public Access.

It is possible, however, that future conflicts between property rights and the Right of Public Access will increase, not least since the forest owners express that they expect numbers of visitors to the forest and commercial tourism activities to increase. However, this does not necessarily imply that there will always be a conflict between forestry and recreation.

The forest owners expressed a diversified view concerning their influence on policy-making in relation to planning and the Right of Public Access (Bergstén et al. forthcoming). Many forest owners agreed with the statement that private forest owners should have the opportunity to limit the Right of Public Access. Most likely, they were referring to commercial activities (Lundmark and Stjernström 2009). On the other hand, the forest owners do not at all agree with the statement that the Right of Public Access should only be permitted in state-owned forests.

Forest landowners expressed approval regarding the general public using their forest land properties for walks, running, berry and mushroom picking, having picnics, and other recreation activities. This implies that the forest owners generally agree with the basic principles of the Right of Public Access (Bergstén et al. forthcoming). Other activities on their land include hunting, fishing, riding horses, driving snowmobiles, and so on. These forest owners pointed out that they welcome others to

use their forests, with many adding that this was as long as the visitors did not destroy anything, leave litter, or in other ways damage their properties. Only a few of the forest owners directly voiced ambivalence or were negative towards other people's activities on their land, as will be further elaborated below. The Right of Public Access is also closely connected to the forest owners' overall positive views on other people's access to, and use of, their forests. Especially since the forest owners themselves also use other landowners' forests for picking berries, going for walks, and so on, they are largely pragmatic about other people's use of their own forest land. This implies that forest owners generally agree with the basic principles of the Right of Public Access.

Few find visitors on their land intrusive. A couple of owners in Vilhelmina municipality were concerned about reindeer that are left behind on their land; they try to chase them away or contact the herders in order to get the reindeer off their properties. Also, from many forest owners' perspective, their role is as managers or custodians of the forest land for future generations or as a link in the chain between previous and new generations of forest landowners. Some of them therefore interpret their ownership of forest as the land being on loan to them.

In the study by Stjernström et al. (forthcoming-a), it also becomes obvious that forest owner relationships with municipal and regional planning are limited. Living in the countryside might be one explanation for this. Some of the forest owners referred to wind power exploitation, and said they had been in touch with the municipality concerning the planning process regarding these turbines. Several forest owners also maintained a relationship with the county administrative board since the boards have the regional responsibility for nature protection and nature reserves.

In the interview study (Bergstén et al. forthcoming), the forest owners were asked a hypothetical question about how they would react if the municipal or state authorities (i.e. the county administrative boards) were interested in using, exchanging, or buying their forest land for recreation or conservation. While the question sparked off a multitude of responses, showing that this is a complex and multi-layered issue for forest owners, three main types of answers crystallised.

First, there was the large group of forest owners who were ambivalent as to how to answer the question; many indicated that it would depend

on the specific situation in which they were approached by the municipality or state. One important concern was the type and level of reimbursement they would receive for their land. The lines of argument were also often constructed around what the forest land would be used for (recreation or biodiversity) or the basis on which the municipality or state would like to take possession of their land (use, exchange, or appropriation of land). As for whether it would be the municipality that required the forest owner's land for the general public's recreational activities or the state which would transform it into a nature reserve, some claimed that they preferred that their forest land would come to be protected by the state than that the municipality would gain access to it. The reason for this was that they would like to conserve their forests, rather than having a desire to increase the number of people and recreational activities on their forest land. Others considered it acceptable, even satisfactory, to have other people spending time on or using their land but were not willing to consider selling or exchanging it. To a certain degree, this is what the Right of Public Access permits anyhow. Others declared themselves happy to exchange part of their forest holding for other land that was either connected to their property or located somewhere else.

Second, there were those who gave clear affirmative responses to the hypothetical question. These were mostly forest owners who lived at a distance from their forest, for example, in regional or national centres. These positive views towards the involvement of the municipality or county administration were mainly associated with a general appreciation of the forest being used for something, and particularly for forest conservation. Some other forest owners were interested in their forests becoming a place for excursions and possibly guided tours to historically and culturally interesting spots.

Third, there was the group of forest respondents who were more sceptical of the municipality or state using, exchanging, or buying their properties. For those owning forest land in Hässleholm, their concern was often linked to the threat of more exploitation, such as more building taking place near their forest and more litter and vandalism of their properties due to an increasing number of people on their land. They considered that the tranquillity found in their forests would be at risk if more people visited them. It was also apparent that a number of forest owners

in both Hässleholm and Vilhelmina were apprehensive about losing their ownership rights and were very reluctant regarding increased restrictions on their own use and control of their properties. To conclude, the above findings from the survey and the interview study demonstrate that there are diversified perceptions among private forest owners related to the general public and public planning, but still relatively strong approval of the main principles of public access to private forest land. In particular, the forest owners identified that it was important to maintain the non-commercial social values of forest.

Including Interests Beyond Forestry and Forest Owners Through Consultation: The Examples of Reindeer-Husbandry Planning and Forest Certification

Forest use and land-use planning are also influenced by international conventions such as the Aarhus Convention. A crucial development in this regard has been the increasing focus on consultation on forest land. One important case involving a group that constitutes an interest on almost half the Swedish forest land is that of reindeer husbandry, which due to its nature constitutes a specific challenge to planning and has been managed in specific ways with regard to integration with planning. The reindeer-husbandry system constitutes a unique, extensive, and complex land-use form, implemented mainly by the indigenous Sami people but also by local groups in exception areas in Sweden and by right to all those living in the reindeer-husbandry area in Finland. Reindeer husbandry is carried out in much of northern Sweden, Norway, Finland, and Northwestern Russia on the same lands as forestry, wind- and hydro-power development, mining, and other infrastructure developments. In 1886, the Reindeer Grazing Act permanently acknowledged the rights of the Sami to graze their reindeer on all private and public lands. According to most legal scholars, this right is considered equal to an easement and is as strong as the landowner's user rights (Allard 2006; Hahn 2000). Accordingly, the landowner does not have the right to negatively affect

the conditions of the land for the easement holder, that is, the reindeer-herding community (Allard 2006; Hahn 2000). In terms of legal protection, the Reindeer Grazing Act makes the grazing right as strong as the right to carry out forestry and equal to land ownership rights, thus much stronger than the Right of Public Access (Hahn 2000). In addition, according to the Reindeer Grazing Act, it is not possible for the landowner or land user to buy out these grazing rights (Hahn 2000).

Consequently, the only solution is to identify ways for mutually beneficial coexistence and commonly accepted land-use practices on all land in the reindeer-husbandry area. Dialogue between forestry and reindeer husbandry has a long history, with many attempts and initiatives aimed at reducing conflict. Such initiatives were established quite early. A governmental group called the Central Advisory Group for Reindeer Husbandry and Forestry, consisting of representatives from both reindeer husbandry and forestry, was assembled in 1971, and is still in place today (Jougda et al. 2011; Sandström and Widmark 2007; Hemberg 2001). In a further attempt to find solutions and balance between the two land-use forms, in 1979, the Swedish Parliament made consultation procedures between the two sectors compulsory for all lands above the "year-round boundary" (Sandström and Widmark 2007; The Swedish Forest Act 1979: 429). Furthermore, general recommendations for considerations to be taken by forestry as regards reindeer husbandry were included in the Swedish Forest Act in 1982 (Jougda et al. 2011). In 1993, the Swedish Parliament passed its new forest policy, which put production and environmental concerns on equal ground. The new policy also stated that forestry had to be conducted without causing harm to reindeer husbandry (Hemberg 2001). Throughout these processes, the goal has been to find forms for an impartial and effective consultation procedure (Sandström and Widmark 2007).

In this case, one crucial influence that has added to forest planning both in the case of reindeer husbandry and through including broader environmental considerations in forestry has been that of forest certification. Developed as a market-based third-party certification system—that is, a system whereby companies themselves voluntarily decide to join and live up to certain environmental and social goals, as controlled by an independent third party—FSC system, established in 1993,

has been important for highlighting a wide range of concerns in forestry, mirroring its setup of boards with representation from actors including the forest industry and environmental NGOs. Since the Council's establishment, FSC-certified forest area has been steadily increasing globally, as has the number of FSC-certified supply chain companies. As of 29 February 2016, the total FSC-certified forest area was 187.6 million ha, and more than 30,000 FSC chain of custody certificates have been issued (according to FSC homepage www.fsc.org).[1] One important feature of the FSC community, which repeatedly manifests itself in FSC decision-making and deliberations, is the inclusion of international, national, and regional stakeholders in planning and decision-making related to forest management. Stakeholder consultation requirements are built into FSC systems on all levels, including defining the principles for responsible forest management, the process of certifying forest managers by certification bodies, and forest management operations and decision-making by forest management organisations (Rusli and Nabilah 2009; Hain and Ahas 2008; Miteva et al. 2015). A competing organisation, presently called the Programme for Endorsement of Forest Certification (PEFC), emerged in the late 1990s to take into account forest-industry interests in particular: while the FSC is thus usually regarded as the more transparent and sectorally inclusive of these organisations, the distance between the FSC as a frontrunner and the PEFC has decreased more recently (Newsome et al. 2006; Johansson and Lidestav 2011; Kalonga et al. 2015). The functional mechanism of forest certification in general is partly designed to help solve conflicts between various parties and stakeholders (Overdevest and Rickenbach 2006).

While the certification model alone cannot solve forest or land-use conflicts, it can support the process through dialogue between different interest groups and stakeholders on the international level. On the national and sub-national levels, similar processes are followed with local stakeholders in the adaptation of the globally applicable forest certification programme. Within the context of single forest management opera-

[1] The PEFC system, in turn, consists of many different national or regional forest certification schemes, including the Canadian Standards Association, American Tree Farm System, Malaysian Timber Certification System, and several others.

tions, certification helps in solving (or at least identifying) conflicts through the public consultation in the certification process itself, as well as through the various requirements in both FSC and PEFC standards. All these processes are, of course, subject to several important limitations and thus fail to offer complete solutions; most obviously, not all stakeholders choose to participate in the voluntary processes related to forest certification for various reasons. The driving force, however, is the certification process as part of a better market orientation and a method of channelling market-driven requirements for forestry.

In Sweden, the FSC has been important not least through the consultation procedures with reindeer husbandry being extended to include winter grazing lands all the way to the coast (FSC 2013; Johansson 2013), as well as in it resulting in improved environmental consideration. However, reindeer husbandry has throughout noted that forest certification has only extended the consultation procedures in the relatively limited form it already had. The Sami reindeer herders felt that the consultations were mostly limited to notification of management decisions that had already been made (SFA 2001); the herders appeared to have no effective ways to express their concerns, partly because of a communication channel that appeared to be unidirectional, with the forest sector holding and presenting all the information. This is due partly to unequal power structures, but also to a limited use and ineffective communication of already existing knowledge.

In addition, perhaps one of the most important considerations, both through the certification system and through an increasing consideration of reindeer husbandry as part of multiple aims at the time, was that in an attempt to overcome these problems, reindeer-herding communities took the initiative and contacted researchers as well as regional and state agencies. This initiative instigated the process of developing reindeer-husbandry plans (RHP), beginning in 2000 and still ongoing today (Sandström et al. 2003; Sandström 2015). The process incorporates reindeer-herding communities' work in compiling and digitalising traditional knowledge, as well as the development and use of a custom-made geographic information systems (GIS) toolbox for communication.

The work to develop RHP was partly inspired by forestry's long history of advanced, operative, and strategic planning (Wikström et al. 2011). A

private forest company's forest plan is a tool for the strategic and operational planning of forestry activities with short- and long-term management guidelines and financial consequences of future planning scenarios (Brukas and Sallnäs 2012). This example is built on a 15-year project, still underway, entitled Reindeer Husbandry Plans (*Renbruksplan*), in which the ability of the participatory GIS (pGIS) to compile and communicate land-use issues was developed in relation to RHPs for all 51 reindeer-herding communities in Sweden (e.g. Sandström et al. 2003; Sandström 2015). This example represents a bottom-up approach to a large area problem by using localised mapping of traditional knowledge combined with extensive data on other land-use forms. This provides the foundation for addressing both individual and local issues, as well as the capacity to zoom out and give an overview in order to address cumulative impact. The reindeer herders themselves use the pGIS for visualisation, assessment, and support for communication as their contribution to the land-use planning process with both a local and a landscape perspective. The system has been used in consultation with forest companies for harvest planning and in environmental impact assessments with mining and wind power companies, as well as in other planning processes. Furthermore, the reindeer-husbandry planning process and associated results are utilised in numerous governmental and non-governmental reports and strategies. With relatively advanced technical tools such as GIS, satellite images, and GPS positioning successfully introduced to, and used by, previous non-expert users, indigenous and scientific knowledge was successfully combined in the planning process. The use of pGIS has empowered the reindeer-herding communities by improving their knowledge base and their dialogue with other land users. It has also improved the understanding of how sectors affect each other and has provided prerequisites for integrating new knowledge and tools for communication.

On the side of certification, however, different expectations as concerns what certification can or cannot deliver may be another source of conflict. Due to the nature of its chamber-balanced governance, environmental, social, and economic interests should be equally represented in the FSC. Consequently, the goal is forest management that takes into account all three aspects. For stakeholders not willing to compromise

between these three aspects, or in whose opinion the compromise should be more skewed towards one of them, participation in a certification system may be less meaningful (http://fsc-watch.com/). In Sweden, similar to reindeer-husbandry systems, some environmental interests have not seen the system as sufficient in supporting environmental aims and consider it too incremental and limited; forestry interests, however, instead, often consider it a large step, not least given the changes to their internal planning system it has required (Keskitalo and Liljenfeldt 2014). While the potential for FSC certification to promote and enforce sustainable forest management among some managers has been demonstrated, there are thus limitations, as there also are with dialogical or consultation processes, to including considerations in forest planning.

The Impact of EU Regulation on the Swedish Planning System: The Example of Natura 2000

Adding to the complexity in Sweden as well as other countries, these mainly national, regional, and local processes with overlapping land-use systems and traditions described so far are not only influenced by market-based but also international—and across Europe, EU—systems. While the EU system does not hold formal competence in forestry, it does in a large number of areas that influence forest. Examples of EU Directives that have gained the status of law in member countries and that influence forest include the EU Habitat Directive, Natura 2000, and the Water Directive (e.g. Keskitalo and Pettersson 2012). Overlapping jurisdictions, legal frameworks, and directives can sometimes be conflicting and can also contribute to confusion in relation to how the forest landscape may be used and understood. The different legal standards can also possibly be a source of divergent perceptions.

A case in point is Natura 2000, which represents a network of important natural areas within the EU. Natura 2000 thus constitutes an example of multi-level governance involving a level of governance outside or above the national level but with clear implications at the local and regional levels. The multi-level governance results in even more land-use interests

that have to be considered in the local and regional planning efforts. As one of the cornerstones of the EU environmental policy and their efforts to preserve biological diversity and achieve sustainable ecological development (Evans 2012; Westfahl Backlund 2008), Natura 2000 is an EU contribution to a number of international declarations, such as the Rio Declaration concerning biological diversity, the Bern Declaration related to the protection of wild animals and plants, and the Ramsar Declaration, which aims to protect marshlands. The establishment of Natura 2000 has been achieved with the support of Directive 92/43/EEG, which aims to protect and preserve nature and environments for wild animals and plants (the Species and Habitat Directive). The Birds Directive, which originates from 1979, has also been added to Natura 2000.

The national process of identifying and proposing areas to the Commission to be preserved as Natura 2000 areas highlights a number of central problems common to the social and regional planning processes. They are linked in several ways. Firstly, it can be claimed that Natura 2000 is based on a centralistic view of planning that may in part conflict with the earlier identified systems. While planning in the Nordic countries is based on well-established decentralised planning systems, mainly manifested in the municipal land and planning monopolies in Sweden, decisions about the EU Directive Natura 2000 are made on the EU level, recognised by the individual member states and put into action on a regional/local level. Also, the Natura 2000 process of inventory, proposal and establishment of Natura 2000 areas is not consistent with the Swedish planning tradition, which is more orientated towards a bottom-up perspective. The governmental county administrative boards in Sweden are responsible for the inventory, delimitation, and descriptions of proposed Natura 2000 areas on a regional basis. These proposed areas are examined by the Swedish Environmental Protection Agency (*Naturvårdsverket*), after which the Swedish government proposes to the Commission the areas in Sweden to be included in the European Natura 2000 network. This procedure differs considerably from the normal planning process, in which the bottom-up perspective and local initiative and participation are more prominent. The establishment of Natura 2000 areas also involves conflicts concerning land use, which in turn may contribute to problems related to social and economic issues, as socially

and economically sustainable development will be awarded a less prominent position in the planning process as a whole. Welfare is risked through an exaggerated emphasis on ecological aspects in planning (Radetzki 1991). Furthermore, it is rather unclear how issues related to Natura 2000 should be considered in comprehensive municipal plans. The municipalities' opportunities to influence delimitation, conservation plans, and so on are formulated rather vaguely in the Natura 2000 Directives. In addition, the conservation of land in Natura 2000 network inhibits long-term change in land use. This results in land-use restrictions and can contribute to difficulties in the planning process. One of the main purposes of Natura 2000 and the Species and Habitat Directive is to promote the conservation of biological diversity by maintaining natural environments. The intention is to attain favourable conservation status by securing or re-establishing important environments. This has resulted in a rather strong legal position for the Natura 2000 network in national legislation in Sweden.

However, one crucial point of departure in all kinds of planning consists of property rights. Natura 2000 constitutes an infringement on property rights, in the sense that landowners will have new obligations towards the nation and legislation in the shape of restricted land use, compulsory reports, licensing demands, and so on. From a planning perspective, the Natura 2000 areas are regarded as areas of national interest and, according to the Planning and Building Act, should be considered and planned by the local municipality and monitored by the county administrative board, which means that the everyday life of a Natura 2000 area corresponds to the status of area of national interest. The process of identifying Natura 2000 areas, however, is rather top-down. Another important instrument is the management plan. All Natura 2000 areas must have an action plan developed by the county administration. Change of land use should also, in the normal case, be compensated for if it relates to a Natura 2000 area.

Consequently, the rapid implementation of Natura 2000 in Sweden since its membership in the EU in 1995 and the top-down planning perspective that has characterised the Natura 2000 process partially conflict with the Swedish Planning System. For forest owners, as about 15 per cent of Swedish territory is defined as Natura 2000 areas, this

results in some restrictions to their forest-related activities such as logging, clear cutting, plantation, and so on. In planned forest management activities, the forest owner needs permission from the county administration to carry out activities in Natura 2000 areas (Swedish Forest Agency 2017). If the core values in the actual Natura 2000 area are threatened, the application for permission can be restricted or denied. In cases of restriction, the forest property owner will be economically compensated.

Discussion: Understanding Land-Use Claims: Scenario Methodology as an Approach

There are thus significant varying land-use claims and unclear ways of resolving them. One way of reconciling conflicts in the forest landscape can be to highlight different ways of using it, by carrying out scenario analysis consisting of a quantitative analysis of future forest development. One scenario is a description of possible future forest development and ecosystem services, given a number of assumptions. These scenarios are often developed with the help of a decision support system, consisting of models for describing different ecosystem processes based on current forest conditions and various management measures. Often, a number of different scenarios are compared, in order to get an idea of possible future forest conditions given different assumptions regarding, for example, environmental and social drivers such as growth impact due to environmental changes, policy changes, or changes in management (e.g. Eggers et al. 2008; Frank et al. 2015; Hengeveld et al. 2014; Pussinen et al. 2009; Verkerk et al. 2014). Scenario analysis does not try to predict the future but rather describes a range of alternative futures based on different choice pathways. In this context, a scenario can help in answering what-if questions, for example:

- What would the financial consequences be if grazing resources for reindeer were prioritised in forest management practices in northern Sweden? (Horstkotte et al. 2015; Korosuo et al. 2014)

- What are the long-term effects of set-asides and tree retention on key forest biodiversity structures? (Roberge et al. 2015)
- Which strategies could be profitable when forest management regimes are adapted to increased disturbance risk under climate change? (Subramanian et al. 2015)
- What is the effect of alternative forest management regimes on sustainability objectives and ecosystem service provision? (Nordström et al. 2013; Triviño et al. 2015)

Scenario analysis in forestry has been conducted on different scales—from global to local—and has included a number of important forest ecosystem services such as timber supply, habitat for different species, recreation, carbon sequestration, water use and quality, and reindeer pasture availability (e.g. Biber et al. 2015; Claesson et al. 2015; Eggers et al. 2008, 2015; Horstkotte et al. 2015; Jonsson 2011; Korosuo et al. 2014; Lundmark et al. 2016; Nordström et al. 2015; Verkerk et al. 2011; Zanchi et al. 2014).

The various scenarios will have different outcomes with respect to each of the ecosystem services considered. In planning situations in which the objective is to find optimal/favourable/viable strategies considering several objectives, it is necessary to prioritise and make trade-offs between several objectives as it is usually not possible to maximise all objectives simultaneously. The optimal scenario in any given case will thus be partially determined by the performance of each objective in any given scenario, but also by which objectives or ecosystem services are considered to be the most important. Furthermore, in many cases, there are several decision-makers involved in the planning process, and multiple values often require that stakeholders, experts, or decision-makers are involved in the planning process (Mermet and Farcy 2011). This is especially true for the municipalities in Sweden, given their responsibility to provide a good living environment for their inhabitants, their commitment to environmental objectives, financial requirements, and the number of stakeholders involved.

A planning situation with multiple objectives and stakeholders requires a process whereby (1) stakeholders are identified, (2) objectives are identified, and (3) alternative forest strategies are defined or developed, to be

followed by phases in which (4) stakeholder preferences for objectives and alternatives are elicited, and (5) strategies are evaluated using this preference information. In addition, this process must be flexible and, if necessary, iterative. Tools and approaches for handling complex forest planning situations are necessary to support this process. One fundamental problem is the multiple-objective character of these situations and the fact that the objectives are generally incommensurable; that is, they are not measured with, or compared on, the same scale. Basically, there are two ways of handling the incommensurability: (1) all objectives are converted so they can be measured on the same scale, or (2) methods that allow for the comparison of objectives despite different units and scales are used. For the first approach, cost-benefit analysis is frequently used for monetary valuation by comparing the expected costs to the expected benefits of a set of alternatives in order to choose the best or most profitable alternative from a societal perspective (Field 2001). However, converting other types of values into monetary terms may not always be feasible or appropriate (Martinez-Alier et al. 1998). The alternative approach is then to use methods that enable a comparison of values measured by different scales, such as multiple criteria decision analysis (MCDA). MCDA is a set of decision analysis methods that can be used to address problems that are characterised by multiple and conflicting objectives. MCDA was originally developed as a tool for a single decision-maker, but the multi-objective character also makes it very useful in participatory planning and group decision-making when the opinions of several stakeholders are to be included. Through a structured process, MCDA will support the decision-makers and stakeholders in making trade-offs between objectives in order to identify alternative solutions that fulfil the objectives in the best possible manner. Assuming that the objectives have been identified and arranged in a hierarchical structure and that a number of alternatives have been identified or created, MCDA is usually implemented in three steps: (1) a weighting of objectives and attributes[2] according to relative importance, (2) an evaluation of the outcome for each alternative with respect to each attribute, and finally (3) a ranking of alternatives and sensitivity

[2] Here, the lowest-level objectives at the end of each branch in the hierarchy are called attributes and are used to measure how well different strategies perform in terms of a certain objective.

analysis of results. Various MCDA methods have been used in scientific studies of real planning cases on local and regional levels in Finland and Sweden (e.g. Nordström et al. 2010, 2013; Kangas and Kangas 2005) and for company land in Lycksele (Nordström et al. 2010).

In one example, a case study in Lycksele in northern Sweden, results indicated that the integration of MCDA and participatory planning is a promising approach for managing complex forest planning situations with multiple stakeholders and conflicting objectives (Nordström et al. 2010). One advantage is that this kind of process includes stakeholder values in a structured manner that ensures a certain degree of transparency in the decision-making process. In addition, the MCDA process has the potential to increase the substantive quality of decisions by balancing interests against each other, which may produce solutions with higher overall stakeholder satisfaction. Further, the integrated process could be used for improving understanding and relations between stakeholders in order to prevent conflicts and for including multiple perspectives to improve planning from a social point of view. However, this type of process does not necessarily take into account or address the impacts of broader changes in either market-based or EU governance of forest and the planning considerations this results in. Scenario techniques imply the understanding of different scenarios from a certain point of view, or in other words, the consequences for forest production, nature preservation, global climate, or other important point of departures. As a tool for understanding and estimating impacts of other interests or developments, the scenario technique may be helpful.

Concluding Remarks

The ambition of this chapter was to illustrate the complexity in the forest arena. As a geographical landscape, the forest represents the intersection of or the collaborative arena for private and public interests, for production, and environmental and recreational concerns, on the local as well as the national and global levels. The forest also includes issues related to indigenous rights. All these interests and concerns are more or less considered on different levels, emphasised differently from time to time

(Stjernström et al. 2013; Andersson et al. 2013). At the core of this complexity stand the forest owner representing the property rights and the local community representing the public interest. The short- and long-term economic outputs from the forest illustrate the different and sometimes conflicting land-use activities. Timber production, recreation, biodiversity, and social values (Olsson 2014; Andersson et al. 2013) are examples of exchange values from the forest. The forest arena then also illustrates the multifaceted governing or steering amongst various interests in the forest landscape (e.g. Keskitalo and Pettersson 2012). Through mapping the different spatial interests and the complex pattern of different governing and governance authorities and interests and different geographical domains of governing, the multifaceted structure of multi-level governance appears. This is as essential as the aim or the point of departure in understanding and analysing the land-use interests in the forest landscape (Stjernström et al. forthcoming-b). This mosaic of governance domains refers not only to the formal system of local, national, and supra-national frameworks but also to the market-driven institutions such as the two different forest certification systems discussed in the text (Hain and Ahas 2001, 2008).

Depending on who you are or what interest you represent, the governance structure has different meanings and implications. As a municipal planner, the consultation process is very much about the balancing act between property rights and public interests. As a private forest owner (NIPF), there are many legal and regulatory frameworks to consider at the same time, as you are an actor in a market governed by both market-driven institutions and formal regulations. As a citizen, you have certain rights, but also obligations. Indigenous populations are increasingly important as actors in many forested areas (Sandström et al. 2011).

The spatial mapping of different influential interests in the forest landscape could be followed by an analysis of spatial power. The present legal framework to some extent reflects the values and traditions of its society, but as mentioned before, legal institutions such as property rights constitute a cornerstone in a capitalistic democracy. How formal power is represented locally and how these institutions interact is a key factor in understanding the overlay meaning and consequences of authority. The chapter exemplifies the complexity of legality and authority (Hägerstrand

1984) and also emphasises the importance of consultation and problem-solving planning. Reindeer husbandry and indigenous rights sometimes conflict with forestry, infrastructure, energy production, recreation, and tourism development. The consultation process between the forest interests and the Sami villages illustrates an attempt to overcome these difficulties and establish a process of mutual understanding and information, partly driven by the forest certification process. The rights of indigenous populations are emphasised in both forest certification processes (FSC and PEFC). The green forest plan is also an example of the influence of the certification process.

Overlapping jurisdictions, legal frameworks, and directives can sometimes conflict and can also contribute to confusion in relation to how the forest landscape can be used and understood. Different legal standards are also a possible source of divergent perceptions. Property rights must be placed in relation to common practice or law, the Right of Public Access, environmental regulations, and certification agreements. This could be an argument for an improved planning process that embraces all these jurisdictions and regulations and how they interact with each other as well as with current and future land use. To understand the future, it is necessary to understand the present and the past. From a forest production point of view, it is important to forecast future production under different restrictions. The scenario techniques in forestry serve as one example of this. Municipal spatial planning is yet another example of the importance of planning the future in order to achieve the intended future society. The plans and visions concerning the future all rely on the past, path dependency, and visions about the future. History and the future are manifested in the public plan.

The examples in this chapter illustrate that the logics of public planning and the logics of forestry policies exhibit some complications but, on the other hand, many of the planning issues are considered on a constructive basis on local and regional levels. The overarching dilemma is on the central level and involves the different legal frameworks that do not relate to each other as well as a lack of legal umbrella or common targets. Another dilemma is how the central ideas of governance should or could be implemented in the municipal planning process and how the public interest is considered in the various governance processes.

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8

Forests in Common and Their Contribution to Local Development

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Introduction

In order to meet the needs of the local people, different collective arrangements have developed around access to forest resources over the centuries, sometimes as a way of enabling the management and extraction of wood and other resources, sometimes in response to external forces. While previous chapters have dealt with ownership and use of forest resources more generally, or with a focus on individual private ownership, this chapter looks into the *role that forest held in common by local communities can play in supporting local development and promoting the livelihoods of the inhabitants*. In this context we understand "the forest" to be a local natural asset, which may also include pastures, wetlands and water, and together with human, social, financial and physical assets can be used to create livelihood outcomes. To put it differently, the forest held and/or managed in common is an accessible natural resource which the local community can exploit to achieve a desired development. In our examination of the competences and room for action (discretion) that a forest in common may mobilise, we apply a local self-reliance development perspective. This represents a place-based natural resource logic that, to some extent, differs from capitalistic logic characterised by profit maximisation, where space or distance becomes irrelevant. In contrast, forest-in-common represents local ownership and local management, sometimes acting as part of the global market, sometimes not. Further, as put forward by McKean (2000), forest-in-common may be an appropriate response when resource systems are under environmental or population pressure. Forest held in common, along with private forests, can be managed sustainably. However, community management also offers self-regulatory mechanisms in favour of preserving resources to achieve long-term development for the entire community.

The ability to set common goals and the success of joint actions depends, according to Lundberg and Karlsson (2002), on four interdependent and supporting components: (1) an awareness of what defines local living conditions and their development, (2) the degree of mobilisation around common affairs, (3) the degree of solidarity and trust and (4) the existence of joint activities. Moreover, the livelihood of communities is also dependent on the external world. The room for action depends on

the overall legitimacy that local goals and local actions have, and the acceptance "local" representatives and agents enjoy regarding their professed goals and actions. Strong legitimacy for the justness of local goals, claims and actions is more likely to be met with sympathy and support, and thereby increase acceptance by, for example, authorities. Yet, local action also depends on how valuable or important the local resources are to actors on national and global levels, and the role that local actors play regarding access to these resources (Lundberg and Karlsson 2002).

Through history we also find many examples of political influence subordinating local forest to the benefit of the state or the ruler of the country. Forest-in-common is not immune from these pressures as we will see in the following sections. We begin with an outline of the history of forest resources in Europe (see section "Forest: For Centuries a Contested Resource") followed by an overview of the many different legal forms and practices that exist in different parts of Europe (see section "Forest Held in Common"). As our interest is primarily in the role that forest held and/or managed in common can play in supporting local development and sustainable livelihood, four examples that we believe can advance our understanding in this respect are presented (see section "Cases Analysed Using the Sustainable Livelihood Framework"). From the basic assumption that forest in the hands of local communities represents a particular type of relationship between natural and social assets, we will, through our cases, explore in how this contributes to the overall sustainability of a community. To this end we will apply an adapted version of the well-established Sustainable Livelihood Framework (see section "Material and Method"). Our examples are presented separately (see sections "Regole d'Ampezzo" to "North West Mull Community Woodland Company") and later on discussed in relation to local development promoting sustainability in the local community.

Forest: For Centuries a Contested Resource

Forests once covered between 80 and 90 per cent of the land in Europe (Delcourt and Delcourt 1987). They have provided essential resources for the transformation of European societies throughout history. Up to

the industrial revolution, the relationship between deforestation and population density and growth is most evident (Kaplan et al. 2009). When the Roman Empire ran short of timber in Italy, Spain, Gaul and Britain became the providers, and by the fall of the Roman Empire, only 15 per cent of the land in Britain was forested (Westoby 1989). After the decline of Rome, forest regenerated, but with renewed economic growth and expansion of distant trade, the demand for high-quality ship building timber increased in the fourteenth century (Navone and Shepherd 1998). Two centuries later, the expansion of mining, the metallurgical industry and salt and glass works all required wood and caused forest products to become subordinated to the needs of large-scale industry and, in many cases, the state itself (see, e.g. Kardell 2003). The prospect of profit from timber and forest products made regulation of forest resources difficult to achieve. By the time charcoal and fuelwood were replaced by oil and gas in the late nineteenth century, the forests in most parts of Europe were devastated (Jeanrenaud 2001; Sands 2005). Yet, forests continued to play a central role in many rural economies, providing building materials, fuelwood, animal fodder, pasture, chestnuts, berries and mushrooms. Also, in some rural areas, different types of wood processing such as production of potash and tar provided substantial incomes for local farmers and also to landless people (Jeanrenaud 2001; Kardell 2003). Today, European forests are vital parts of the global forest industry but also subject to environmental concerns. The European integration process has, from an environmental point of view, been rather successful. One example of the environmental and sustainable forest paradigm is the establishment of Natura 2000 (Evans 2012; Winkel et al. 2015). The Natura 2000 implementation process has not been straightforward, as previously discussed in Chap. 7 in this volume, but together with processes such as forest certification and changes to legislation, this has exerted a major impact on the forest resources of Europe.

Prior to the Middle Ages, local people living in or on the fringe of forested land considered the surrounding forest as communal property to be used for the provision of fuel, building material, forest meat, grazing and other non-wood forest products. Consequently, they developed a strong conviction, which in the case of England was protected by law, that they had customary rights to use the forest (Nylund and Ingemarsson

2007). In, for example, England, France, Germany and Sweden, attempts to repress or cancel these rights often caused great dissent until the rural culture was replace by an urban culture. Yet, the feudal power structure that evolved in Medieval Europe, paired with the recognition that forest had a value, resulted in much of the forest ending up in the hands of the aristocracy and the church (Sands 2005). However, there are many examples of community ownership, rights and responsibilities in early European forest management (Jeanrenaud 2001; Bravo and de Moor, 2008). Without romanticising these institutions, it can be said that they provided access to resources for many rural people (Jeanrenaud 2001). The forces of modernisation that swept through Europe from the seventeenth century gradually undermined these institutions, as the commons were regarded as an obstacle to progress. Privatisation of the commons and liquidation of customary rights meant a major interruption of traditional forms of community-based forest management. In some areas, they were replaced by newly formed commune or municipal forests. However, as the direct decision-making was taken away from villagers, this was frequently met with resistance. In other areas, loss of access to forest resources was somehow, in the material sense, compensated for by employment in industries and the rise of the modern welfare state, which provided material benefits in exchange for loss of local control (Nylund and Ingemarsson 2007; Jeanrenaud 2001).

Forest Held in Common

Forests held in common are essentially parcels of wooded land which are collectively managed by a group of people for their own benefit and there is a long and rich tradition of different management arrangements in Europe (see, e.g. Anon 2012; Bravo and de Moor 2008; Carlsson 1999; Gatto and Bogataj 2015; Holmgren 2009; Lawrence and Ambrose-Oji 2015; Pollard and Tidey 2009). Yet, there is little comparative research on these arrangements, and in terms of statistics there are many gaps and inconsistencies. One reason for this is probably the sheer diversity of forms; another is they get lost in the gap between the polarisation of forms into “public” and “private” property regimes. While broadly speaking we

can talk in terms of "old commons" and "new commons" or "forest commons" and "community forests", the distinction is by no means plain and distinct (Lawrence et al. 2016). In the ancient commons, membership benefits were access to the food and materials necessary for subsistence. In new commons, benefits are more varied and often prioritise provision of public benefits, with the individual benefit accruing to volunteer members being largely personal wellbeing. These new commons generally also fit the conceptualisation of the "Third sector" (Salamon and Sokolowski 2016).[1] We can hypothesise that many old commons have had to evolve and reinvent themselves. Indeed, at the present time, forest commons are threatened by a new set of vulnerabilities so that survival depends on their institutional capacity to learn and adapt to ongoing changes (Kluvánková and Gežík 2016). We can also hypothesise that new commons differ according to their milieu and context. Sands (2005), for example, considers urban forestry as an urbanised variation of community forestry.

The FACESMAP[2] COST Action (Živojinović et al. 2015) collected data from 28 European countries regarding the representation of various types of co-ownership of forests (see Fig. 8.1). Note that some of the terms reported in Fig. 8.1 are not mutually exclusive; for example, a social enterprise may have the legal form of a cooperative. What is represented here is the number of countries that recognise these differing forms of organisation and purpose. The focus of our interest in this chapter is the sub-sets termed *Common property regimes (CPR)* for older commons and newer ones termed *Self-organised community group*. Taken together, these are recognised in 24 of the 28 countries (86 per cent). Closer examination of the function of each category of group ownership revealed that

[1] Salamon and Sokolowski (2016) found a general consensus on the conceptual features of the third sector across Europe. These features are (1) privateness—action that is outside the sphere and control of government, (2) public purpose—serving the broader community and not just for the personal benefit of those undertaking the activity and (3) free choice—activities pursued without compulsion. Most new commons exhibit these three features as do many evolved old commons. Nevertheless, old commons would more often fail one or more of these tests; membership is inherited and so not a choice or activities are at least partially prescribed by legislation and government.

[2] A COST Action on forest land ownership changes in Europe with specific focus on the significance for management and policy (FACESMAP) see also http://facesmap.boku.ac.at/.

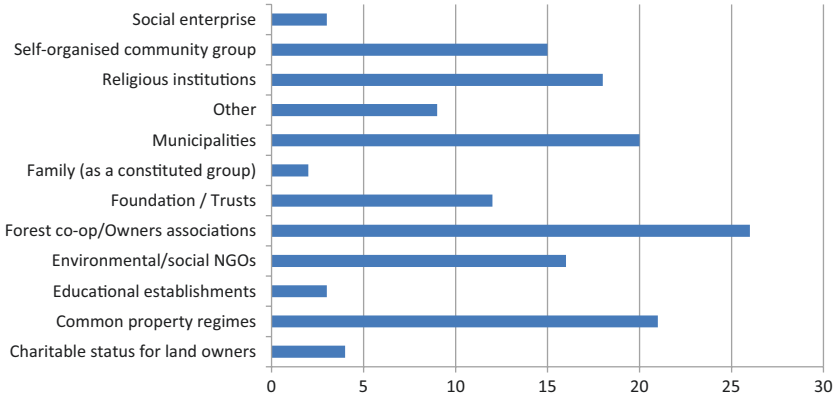

Fig. 8.1 Representation of forms of co-ownership/co-management contained within the FACESMAP country reports (*n* = 28). Source: Živojinović et al. (2015)

there was considerable overlap between forms of governance categorised under municipal ownership and CPR. This is most evident in the Tyrol where forest is technically owned by the municipality but managed by the community. In other cases, such as in Switzerland, the municipality itself traditionally holds competence for managing common resources. In other cases, it appears that municipalities have taken over the commons as representatives of the local community. Taking all these forms together as constituting community control of forest, then some form of community management of forest occurs in all 28 countries. The extent of such community-managed forest within a country varies from less than 1 per cent of the total forest area of the country (Finland and Serbia) to 35 per cent, as in Switzerland.

Generally speaking, old commons are usually connected to land which is marginal for agriculture, for example, mountain regions. Some forest held in common has a more or less unbroken history/tradition of 500 years or more (with examples in Austria, France, Switzerland, Italy, Romania, Slovenia and Spain). Others were formalised as part of the land reforms that took place during the break-up of feudal systems in the eighteenth and nineteenth centuries (Hungary, Poland and Slovakia). In Sweden, the "new" forest commons, established in 1861–1918, were also connected to

major land reform. During the communist regime, most of this common land was nationalised, partly transformed into Soviet-style cooperatives, and is now in a process of restitution and revitalisation (in, e.g. Slovenia, Slovakia). In contrast, the new commons of the Vaasa Archipelago (Finland) were formed on land emerging from the sea due to the land rise process. Recent examples of new community forests are to be found in Scotland, where sales of public forest land has made it possible for community groups in different legal forms to purchase and manage commercial plantations or to engage in afforestation (Živojinović et al. 2015).

Both old and new commons are characterised by high heterogeneity of legal and governance forms, as well as management practices, within a country. In Portugal, for example, the communal forests (baldios) are forests that belong to a community of people that live in a certain place and where all members share ownership rights. Two management arrangements are possible: (1) direct management by the members of the baldios, for example; decisions are made by a democratic Assembly of Commoners ("Assembleia de Compartes") or (2) co-management with the public administration, with the latter being more common of the two approaches. In Austria and Sweden, membership of a common is connected to the farmstead, not the individuals. It seems that similar property-related assignments of rights were at least partly dissolved in other countries by translation into Roman law which gives precedence to familial ownership.

Material and Method

In order to explore different models of forest held in common in more detail, we examine four case studies from different contexts and ask what role forest held in common by local communities can play in supporting local development and promoting the livelihood of their inhabitants. The selection of cases, Regole d'Ampezzo in Italy, Älvdalens Besparingsskog (ÄBS) in Sweden, Meščanska Korporacija Kamnik (MKK) in Slovenia and North West Mull Community Woodland Company (NWMCWC) in the UK, has been guided by several considerations. We have stressed the *can* notion, meaning that we have deliberately searched for examples

of success but also of diversity. For example, as three cases represented the conditions of distant rural areas, we added one urban area. The cases were purposefully selected and we have no ambition to form conclusions about the impact that European forests held in common have in general or on average. However, by selecting four dissimilar examples in terms of location (Italy, Sweden, Slovenia and the UK), time since establishment (from very old to recent), geographical scale (from 700 to 70,000 hectares) and number of members (from fewer than 100 to about 1500), type of forest and available natural resources and type of governance arrangement, we expect to explore the added value and potential of communal property regimes and management practices. From the diversity of experience and achievements, we assume that new insights and knowledge can also be gained regarding the complex relationship between people and the different assets that a forest represents.

In order to analyse our cases, we selected the Sustainable Livelihood Framework (Chambers and Conway 1992; DFID 1999). This framework was originally developed to improve the understanding of the livelihoods of particularly the poor in developing countries, while lately its application has extended to developed countries and different domains, for example, the analysis of fisheries (Allison and Ellis 2001), forest commons governance (Chen et al. 2013) and rural development (Mikulcak et al. 2015). The framework assumes that livelihood outcomes—such as increased wellbeing, food security or more sustainable use of natural resources—of communities (or individuals) depend on their access to crucial resources, or assets (c.f. Lundberg and Karlsson 2002). Five distinct categories of assets are recognised: human, natural, financial, physical and social, often visualised as an asset pentagon (DFID 1999). In response to external shocks and pressures of various types (the vulnerability context), communities engage in activities and elaborate different livelihood strategies within the constraints imposed by the availability of the five assets in the pentagon. The framework also emphasises interaction among the assets and underlines the role of the governance context—that is transforming structures and processes—in reinforcing, or even undermining, livelihood strategies.

In our analysis, we have adapted the framework slightly to fit better for our purpose and context. We preferred to focus more on the liveli-

hood assets and the livelihood outcomes in terms of increased income, enhanced wellbeing and more sustainable use of the natural resource base. When applicable, transforming structures and processes are emphasised, while the vulnerability context is paid less attention. Further, for the description and analysis of the assets pentagon, we have chosen natural capital, followed by physical capital, financial capital, human capital and social capital. For our purposes, they are defined as (DFID 1999, adapted):

- Natural capital—natural resource stocks from which resources flow and services are derived.
- Physical capital—basic infrastructure, tools and equipment.
- Financial capital—financial resources that people use to achieve their livelihood objectives. The definition used here is not economically robust in that it includes flows as well as stocks and it contributes to consumption as well as production. Here we also considered savings, grants, credits and regular inflows of money.
- Social capital—social resources to support development. May be bonding (within groups) or bridging (between groups), for example, network and connectedness; membership of more formalised groups, which often entails adherence to mutually agreed or commonly accepted rules; norms and sanctions; relationship of trust; reciprocity and exchanges.
- Human capital—skills, knowledge, ability to work and good health at an individual or household level.

Different sources of information have been consulted in order to describe and analyse the four cases. In comparison to many other forests held in common, our cases are relatively well-documented in published as well as grey literature. However, as an analysis along the lines of the livelihood framework has not been attempted before, it has been necessary to collect additional data by reviewing magazines/newsletters, web-sites and annual operational and financial reports. Further, the authors' personal experience gained from several years of informal meetings and discussions with the representatives of the groups has provided additional insights, not always transferrable to specific references.

Cases Analysed Using the Sustainable Livelihood Framework

Regole d'Ampezzo

In Italian, the word *regola* (plural *regole*) literally means rule. However, regola also indicates both a village community and a form of self-governed local institution collectively owning and managing forests and pastures. Throughout this text, Regole d'Ampezzo will refer to a group of 11 village communities located within the administrative area of the municipality of Cortina d'Ampezzo that own and manage common land under the same governance system.

The Story

Several forms and cases of community forest are found in the Italian Alps (Tagliapietra 2011; Gatto and Bogataj 2015), yet the Regole d'Ampezzo stand out in a local development context for several reasons. Formally established since 1225, according to the date of the earliest written record (Regole d'Ampezzo 2011), but informally even before then (Sereni 1955), Regole remained the sole local institution in Ampezzo for more than six centuries. During this period, they acted as regulator of political, social and financial issues, managing common resources including forests, distributing local wealth and functioning as a safety net in times of famine (Merlo et al. 1989). The Regole thrived thanks to the sales of timber to the Republic of Venice (Celetti 2008), and it is no surprise that they survived the serious political changes affecting Northern Italy between 1800–1950 (including a fascist takeover attempt in 1923), when many other similar community institutions disappeared. Just after the end of WWII, the Regole d'Ampezzo were among the first local institutions to obtain legal recognition and restitution of their land by the new Italian state, while others followed only 20 years later (Zanderigo Rosolo 1982). Today, the Regole d'Ampezzo are powerful institutions—with a private personality but acknowledged public role—representing a community of 770 families and 1185 members (Ciasa de ra Regola N. 154),

about one-third of the resident families in Cortina d'Ampezzo. Regole d'Ampezzo as a whole own over 16,000 hectares of forest and pastures in an outstanding Dolomite landscape, which is also a fragile environment. Sustainable resource management and bequest values are in Regole's gene. When under pressure from development interests in 1990, they asked the regional authorities to grant protected area designation to their forests. Today, they are one of the few—if not the only—examples of a collective forest landowner/manager, a local institution and a natural park authority (Lorenzi and Borrini-Feyerabend 2010) all in one. This makes Regole d'Ampezzo an interesting case study, from southern Europe, in understanding how and why such a local institution has played the role of catalyst in local development.

Five Capitals

The *natural capital* of Regole d'Ampezzo consists of Alpine, continuous-cover, uneven-aged coniferous forest, typical of the inner Alps area in both management regime and parameters (growing stock 95 cum/ha; MAI 2–4 cum/ha). According to the Regole d'Ampezzo Forest Management Plan, 54 per cent of forestland is classified as productive, 35 per cent is protective against soil erosion and the rest has environmental or touristic functions. The Regole d'Ampezzo regularly harvest their timber (about one-third of MAI, in line with the Italian average) according to Management Plan prescriptions. This active forest management attitude is not widespread all over the Alps, where indeed inaction and abandonment characterise many other situations (Cocca et al. 2012). Pastures are rich in biodiversity and essential elements of alpine landscapes, and nowadays some are used as ski-slopes. Water is strategic for hydropower generation and artificial snowmaking. Although water rights belong to the State and not to landowners, Regole d'Ampezzo can affect water quality, quantity and regimes through their land management choices.

The heritage of Regole includes *physical capital*: residential and public buildings, several summer farms, stables and related road network. A few buildings are still used for dairy farming; many are used for agro-tourism, restaurants or skiing facilities. Hence, the Regole have good *financial*

capital as they generate income. In the last two years, the Regole's annual turnover ranged between EUR 3 and EUR 5 million, mostly from the sale of gravel and timber, rent of land and buildings and museum entry fees (Ciasa de ra Regola N. 148). Members are entitled to individual use rights for grazing and firewood and to receive benefits (e.g. scholarships for their children). Yet, according to the Regole's Statutes, the overall community's welfare and the sustainable management of resources have priority, so individual benefits are distributed only when the public necessities have been fulfilled and in case of proven need.

Human capital has always been very important in the development of the Regole. In the past, when municipalities did not yet exist, stipends for school teachers were paid directly by the Regole thanks to the income generated by the forest (Merlo et al. 1989). Today education is provided by the state, but the Regole still care about the perpetuation of skills and local traditional knowledge; every year, the community's elders gather for a few days with young members to work together in pastures and forests, for generational transmission of skills and values. This is a crucial activity, as the young generations are becoming detached from the forest and increasing numbers of members do not personally harvest firewood any more but ask for ready-made home delivery (Ciasa de ra Regola, N. 157).

Although all the dimensions of the livelihood asset pentagon are important, *social capital* (bonding and bridging) is without doubt the core strength of Regole d'Ampezzo. The communities' internal life is regulated by written Statute (the Laudo), a set of self-crafted rules inspired by a highly democratic and solidaristic model. Membership is given only to families whose surnames are listed on a specific register (Anagrafe dei Regolieri) as descendants of the original founders and transmitted through family inheritance. Members must also reside in the municipality; members who emigrate do not lose their status, but their rights are temporarily suspended (Laudo delle Regole d'Ampezzo, Art. 6). The perpetuation of the core principles is ensured by the Statutes, where changes are possible, but require considerable majority of favourable votes. Members must provide services to the community, such as working a number of days in the forest and possibly serving as managers for a year at least once in their lifetimes. All these norms are regarded as a way to perpetuate the communities' bonds and their values. Vertically,

Regole nest into a higher hierarchical structure, the Comunanza, representing the plenary assembly of all the members of the 11 individual Regole. This complex and mature organisation allows effective application of the subsidiarity principle, where decisions on land and forest management are taken on the institutional level with closest proximity to the resource.

Flows and Transformations

By Statute (backed by Italian law), the Regole d'Ampezzo's property cannot be divided, nor sold, so its size has not decreased over time. On the contrary, new land has been bought from small private landowners and taken out of development speculation. In addition, any change away from traditional land uses (i.e. pasture and forestry) is subjected to complex internal authorisation procedures and must be compensated for by other land of similar size and use. Stocks also increase through donations by community members at their death, a sign that can be interpreted as both a willingness to share with others and a sign of trust in the institution (social capital). Regole are non-profit organisations, hence revenue is not divided amongst members but must be reinvested, saved or used for community welfare. Operations as concerns maintenance of forest and pastures buildings, forest roads and footpaths, town decor, restoration of public spaces and buildings are remarkable. In 2013, for example, nearly EUR 3 million were spent, especially on environmental maintenance, backed up by additional EU and regional funding (Ciasa de ra Regola N. 148). Given the vulnerability of the local environment, it is evident that the Regole's actions overcome the boundaries of property or membership and produce spillovers enjoyed by the whole resident community. Regole also invest in cultural activities (museums, conferences) and communication to the general public about their material and symbolic values, with the ultimate end of maintaining community cohesion and increasing its visibility and social acceptability. Hence, a virtuous circle has been established where the use of physical and natural capital (sales of timber and other products, rent from buildings and land) generates flows of financial capital (revenues). These return to the assets by reinvestment

in maintenance and improvement of physical, natural, human and social capitals. This dynamic is not, however, completely free from challenges. The financial situation of Regole d'Ampezzo is generally healthy and sustainable; however, in 2014 they registered a loss for the first time. This was linked to the decrease in demand for gravel as a building material (Ciasa de ra Regola, N. 148). Furthermore, the number of members is decreasing due to falling birth rates and emigration (Ciasa de ra Regola, N. 114). Exclusive rules regarding the role of women and younger generations are bringing about disaffection and criticism from local society, with the risk of deterioration of both bonding and bridging social capital. The current internal debate, which is quite heated, focuses on the need for a more inclusive membership, implying a redesign of the rules to admit new families, give earlier access to the younger generations and achieve a more gender-balanced rights distribution. Changes to the Statutes were proposed by a group of members to the Comunanza's Assembly in 2014 and again in 2016, but did not pass as there were not enough votes (Corriere delle Alpi 2016).

Outcomes on Different Scales

The Regole d'Ampezzo have been proposed as a positive example of a local institution promoting local development. From their past and current story, we can see how they have catered for local livelihood and development for centuries. Initially, they supported livelihoods directly by provision of goods—firewood, timber and pasture. Today, they continue to support livelihood but in a wider variety of forms; job opportunities (not only in maintenance of forests, pastures and buildings but also in tourism), social benefits (education, support for needy and elderly people, social spaces, maintenance of cultural values and tradition), environmental safety (sustainable natural resource management, reduced vulnerability) and wellbeing (landscape beauty and recreation). When asking what their key factors for success are, we may argue for a particular combination of different elements; high endowment of natural capital with unique features and relatively large size, strict rules for the use of financial capital to increase community welfare and a rich social capital

patiently built up over generations thanks to which Regole have been able to resist change while also continuously reinvent and modernise.

The past role of the Regole as a provider of social security is performed today by the municipality. However, public recognition is provided by the state, which protects the Regole as "another way of owning" (Grossi 1977). Regional and national forest policies specifically address the function of Regole d'Ampezzo in their role as manager of local resources, granting them a formal capacity and responsibility to support the municipality in promoting local socio-economic development (Favaro et al. 2016). Clearly, Regole are only one of the actors in local development together with several others, and their role must not be idealised. They are now facing complex and unprecedented internal and external challenges, perhaps a turning point in their life. However, history shows that past challenges have so far not represented a constraint, but instead a chance to evolve.

Älvdalens Besparingsskog

The Story

Historically, the vast forests and bogs surrounding the scattered villages in northern Sweden were used intensively for domestic animal grazing and hay-making, as the population relied on cattle farming as their main source of support. However, in the nineteenth century traditional stock farming, in combination with limited agriculture, could no longer support the increasing population. The forest as a grazing resource had then reached the limit of its capacity, and in terms of timber it is reported that the forest surrounding the villages was devastated. As the situation was similar in many parts of Sweden, land reforms were introduced by the authorities as the primary means of improving the productivity of farming as well as forest condition. However, the Great Redistribution of Land and the delimitation process[3] did not reach Älvdalen until 1870, and was not finalised until 1888. It was during this land redistribution

[3] That is, fixing of boundaries between Crown land and private land.

process that ÄBS was established by delimiting and setting aside parts of the forest land (Solder 1938; Ds Jo 1983: 15; Aldemark 1988). This move was introduced and motivated by the authority in response to concerns regarding the farmers' ability to carry out proper forest management and to protect their interests against forestry companies' purchase of forest land (Ds Jo 1983: 15). This could have been perceived as an act of distrust; however, the farmers in the area actually welcomed the procedure (Solder 1938).

According to the current by-law (Act and by-law of ÄBS 2010),[4] the yield from ÄBS will primarily be used to cover the costs of the management and use of the forest commons, secondly for purchase of land, thirdly for a loan fund and finally paid as dividend to support farming and forestry, including ancillary industry in the parish, construction and maintenance of roads, or for other purposes for the benefit of the shareholders or the entire population of the parish.

For the 1490 shareholders in ÄBS, dividends are distributed as grants for investments in forest and farming on their individually managed land, creating support and incentives for local land use development. Apart from the shares in ÄBS, the shareholders possess another 100,000 hectares of (forest) which are managed individually. These estates are owned by 1866 natural persons and a few legal entities (companies). The former has 71 per cent of the shares in ÄBS and the latter 29 per cent. About half of the natural persons are not residents in the municipality, and including the shares owned by companies, two-thirds of the shares can be regarded as controlled by non-residents. Yet, as the distribution of dividend is connected to activities and investments on the properties in the parish, the money stays local.

Five Capitals

Since the establishment of ÄBS in 1888, its area has expanded by 17,972 hectares of land and 954 hectares of water, such that the *natural capital* presently constitutes of 72,372 hectares of land and 2406 hectares of

[4] The by-laws have been revised several times (1954, 1974 and 2010), but with regard to the yield and other income, the current by-law essentially follows the same principles and priorities as the original.

water. Of that, 78 per cent of the forest land is classified as productive forest land, and the total growing stock amounts to 5.2 million m^3 (92 m^3/ha), of which 79 per cent is pine trees and 16 per cent is spruce trees. The forest is, generally speaking, rather ordinary but 688 hectares are classified as protected areas. With the forest management system practised (even-aged forestry), these forests are a fine grazing resource for large herbivores, in particular the moose which is an important game animal. It can be estimated that the ÄBS supports a moose population of around 400 animals that provides an annual hunting quota of about 90 adult moose and 70 calves per year. Furthermore, with the forest land comes the right to running water resources in the Österdalälven and Rotälven Rivers.

Through the expansion of hydroelectric power, waterways have become increasingly important. This has also increased the *physical capital* (infrastructure) in the community. The ÄBS and its shareholders will receive compensation in the form of electric power from the owner of the Trängslet Hydroelectric Power Plant forever (presently owned by Fortum), and as part-owner of three other plants in the parish (50 per cent in Väsa and Rot, and 33 per cent in the Blyberg Power Station). All together the three plants have during the period 2010–2014 delivered 60,000 MWh/year for sale by ÄBS. Recently they have also engaged in wind power production. They own 10.6 per cent of the shares in Dala Vind AB. Since establishment 125 years ago, road construction and maintenance has been one of the major purposes of the FC and today their gravel road network measures 1500 km. To maintain this, they have purchased a truck and some lighter machinery, but with regard to heavy machinery for road construction and maintenance, as well as harvesting and site preparation, operations are carried out by local contractors.

Their tangible assets are valued at SEK 231 million[5] of which the forest and corresponding structures represent SEK 180 million. In a way, part of this value is fictitious because the forest land from the original ÄBS (55,000 hectares) cannot be sold. However, since the establishment there is a significant increase in financial capital both due to the extension of forest land by almost 18,000 hectares and the increment in standing tim-

[5] SEK 100 is approximately EUR 11.

Table 8.1 Dividend (SEK million) distribution from Älvdalen forest commons 1958–2007 in 2006 prices (Holmgren 2009, p. 45)

	1958–1967	1968–1977	1978–1987	1988–1997	1998–2007	1958–2007
Common good	70.1	88.0	57.6	43.0	93.5	352.1
Agriculture	14.2	9.7	11.3	16.5	20.8	72.6
Forestry	4.2	4.6	21.4	48.3	111.8	190.3
Total	88.5	102.3	90.3	107.8	226.1	615.0

ber volumes; from 74 cubic metres per hectare to 92 cubic metres per hectare. Moreover, the increase in financial capital may be used for lending and investing in other activities. Financial assets amount to SEK 74 million and current assets to SEK 71 million, for a total *financial capital* of SEK 376 million.

Since its establishment, the ÄBS has been regarded as an institution by the local community (parish/municipality) and thus embodies both bonding and bridging *social capital* (Lidestav et al. 2013). The Assembly of Shareholders, held twice annually, determines how to use the yield, decides on overall management and elects the Board and the Committee of Landowners. The Board is responsible for management while the Committee is responsible for the distribution of the dividend to shareholders, as well as the support for common goods. Shareholders may receive subsidies for forestry and agriculture activities on their individually managed lands. Over the years, more funds have been allocated to support activities and investments in the larger community (Table 8.1) (Lundqvist and Dahlgren 2011). When resident shareholders were asked, through a mail survey, about their opinion on ÄBS management and their satisfaction with being a shareholder, their social capital appeared to be strong (Lidestav et al. 2013). A further indication of the strength of attachment to the ABS is that a substantial proportion of the increase in ÄBS forest area is due to shareholders offering their forest property to ÄBS instead of selling it on the open market, which most likely would have given a higher price.

For the management of ÄBS, including communications with shareholders and the wider society, *human capital* is needed and developed. Skills, knowledge and abilities of 26 men and 8 women who are employed

by ÄBS are at present required, which makes it well staffed in comparison with a company- or a state-owned forest district of similar size. In addition, local contractors are hired for harvesting and soil scarification. The costs of employed staff, contractors and other resources necessary for the management and maintenance of ÄBS amount to SEK 73 million. To manage the moose population, the skills of several local hunters are put to use, and for small game hunting, a number of licences are issued.

Flows and Transformation

With its basis in the land and water, that is the natural capital that currently constitutes the ÄBS, other types of capital have been derived and distributed to the forest community of shareholders and to a broader group of beneficiaries (the inhabitants of the parish/municipality). The timber resource has also increased, from 73.5 m^3/ha to currently 92 m^3/ha and, according to plan, and 77 per cent of the annual increment is harvested. For the period 2010–2014, the turnover from forestry amounted on average to SEK 47 million per year and for power production to SEK 23 million per year. The Income Statement, after deductions for management costs for 2014, showed plus SEK 19.8 million and, together with financial posts, the overall profit amounted to SEK 29.1 million. Divided by the total land and water area this gives a yield of SEK 398 per ha.

In 2014, the dividend distributed by the Board to the Committee of Landowners (shareholders) amounted to SEK 25 million, which appears to be a typical dividend for the period since 1998 (c.f. Table 8.1). During the same period, 59 per cent of dividends were distributed to subsidise expenses incurred in shareholder's forestry and agriculture. This means that they have made some investment in their individually managed property, for example, management plans, forest plants, pre-commercial thinning or ditching. The remaining 31 per cent was distributed for the common good of the entire local community, for example, for maintenance of local public roads, preservation of cultural heritage (including cultivated landscape), the Homestead Museum and scholarships to young students who learn and use the local Old Scandinavian language

(Älvdalska or Elfdalian), financial support to build a new schoolhouse and support for different projects developed by the villages.

For the previous periods (1958–1997) distribution priority was the opposite (67 per cent for common goods). The huge increment of subsidies to forestry is likely an effect of the abolishment of state subsidies for silviculture with the introduction of a new Forest Policy in 1993.

Outcome on Different Scale

ÄBS land holding amounts to 28 per cent of the total area of Älvdalen parish. Shareholders possess another 40 per cent of the area as privately managed property, while the remaining 31 per cent is in hands of private companies or the state. In 2000, the parish population was 5276, meaning that about 17 per cent of the actual inhabitants are FC shareholders. Fifty-two per cent of the shareholders (natural persons) live outside the parish, and they can, the same as the residents, benefit from financial support to cover costs and for investments in their Älvdalen forest and agriculture land. Also, forest companies that have shares in the FC can benefit from these subsidies to silviculture. Yet, the financial capital generated by forestry, hydroelectric power production and so on stays local, converted into new natural capital (land and forest) and physical capital (e.g. roads). In the local community at large, non-shareholders represent 83 per cent of the local inhabitants, who also benefit from excellent road infrastructure as well as from other investments in common goods. Over the years, considerable financial support has been distributed to, for example, music classes for students, sport facilities, maintenance of village halls, landscape protection and cultural heritage. Some years ago, when one of the school buildings had to close because of mould, the General Assembly decided to donate SEK 10 million to the municipality for reconstruction. This, however, caused a protest from one of the larger non-resident shareholders, who claimed that such action was beyond what the common was intended for. The issue triggered a lively discussion and increased shareholder attendance at consecutive assembles. The appeal was later on determined by the Administrative Court in favour of the General Assembly, meaning that they also have the right to use the

dividend for common goods that may be considered a municipal responsibility.

In terms of forest management, the ÄBS applies very similar practice to any other large-scale enterprise. However, being a large local enterprise with a well-staffed organisation, they offer a local alternative for dissemination of forestry knowledge and advice to individual forest owners. Considerable information on when and how to carry out silviculture, harvesting, planning and, of course, the subsidies shareholders/members may apply for, is provided through the ÄBS website and the magazine (two issues a year). Advisory services are also offered by large, timber-purchasing organisations (companies and forest owner associations), and in this respect, individual forest owners, without shares in a common, can obtain similar attention or service but not the subsidies. It can also be argued that if the 55,000 hectares originally allocated as a common had been distributed to farmers, the present forest owner's estates in Älvdalen would, on average, have been some 37 hectares larger. From that additional forest land, they may have received a similar yield as they do from forest land held in common. We have no management data for individually or company-managed forest land but, based on regional estimates on management practice, we can assume that the timber yields are quite similar between the three (Holmgren 2009). Further, harvesting costs are also similar while costs for planting and cleaning may be reduced if the individual forest owners do the work themselves. For resident forest owners, this may be a reasonable alternative and from other studies we know that self-activity is quite comprehensive in this ownership segment (see section "How Much Do Different Forest Owners Harvest Their Forests at Municipal Level" in Chap. 4). On company-owned land, planting and cleaning have lately been outsourced to contractors that, in many cases, employ people from low-income countries. Concerning the utilisation of water, we find it rather unlikely that individual forest owners along a river would have been able to negotiate with large hydroelectric power companies to become part-owners of hydropower plants. In sum, it can therefore be claimed that ÄBS plays a quite significant role in supporting local development and promoting the livelihood of the local community.

Meščanska Korporacija Kamnik

The Story

Kamnik is an old, small town on the Central Plain of Slovenia, some ten kilometres from the capital, Ljubljana. Its strategic position has always been defined by transport lines, changing national authorities and the growth of the nearby city. A constitutional part of this town is its commons, entitled Meščanska Korporacija Kamnik (MKK, in English Civic Corporation Kamnik).

By evolution and model, MKK is similar to over 600 Slovenian commons but unique for being relatively well documented, quite large, urban and still in the process of denationalisation. Archives provide information on self-sustained, free peasants with house-based user rights and certain modes of functioning as early as the twelfth century. Formal establishment, on the basis of 150–200 houses, dates back to 1866. Recent MKK public status is not really visible due to changed demography and production modes that are not wood-based. We address motives for the revival of MKK after decades of abolition and exposure to the interplay of internal and external changes of diverse origins. Its structure and functioning has changed, but its members still adhere to the basic norm of this institution that "they received it as a gift and have an obligation of its transfer to future generations without losses".

Local natural resources are rich and various (Valenčič 1957). Forests played a prominent role throughout history because of their large share of the property, rich resource base, location of interlocking interests and the recent argument for a new Act on Slovenian commons—"a need for more active forest management" (Act 2015). Forty per cent of MKK valley forests were denationalised in 2007, while the rest of the property is still under consideration. Benefits derived from natural resources changed throughout history and were not always distributed only locally or according the decisions of MKK. Inflow and immigration during the industrial period were substantial and complicate clear conclusions on the role of MKK for local development. Additionally, data on financial flows or internal membership structure are not available due to the sensitivity of

the ongoing legal processes and anticipated state taxation. However, at least MKK investments in city centre buildings and rural infrastructure in the past, all serving public purposes today, are obvious. We argue that MKK potential is still high and promising. Old citizens and private landowners in the municipality respect the persistency of its recent members, heirs of former inhabitants, who pass norms and knowledge to future generations and promote the institution of commons in urban areas.

Five Capitals

Over 5000 hectares of the property consist of forests (58.4 per cent);[6] unproductive and inaccessible slopes up to the tree line account for 33 per cent; pastures organised as separate commons on 9 per cent; and fields, gardens or infrastructure in the form of buildings and roads on 1 per cent. Mixed alpine forests are located from 500 m up to 1500 m above sea level. As much as possible of MKK, land is kept in a natural state and is characterised by natural beauty. Timber was important when it was established and represents the main cause of most historical conflicts. Past production of charcoal has turned into the lime business, and hydroelectric power is limited by the typical alpine water regime. Data on game hunted is not the task of MKK as hunting is a state-led service. MKK visions depend on incomes from the wood chain, local energy base, mineral extraction and many services (hunting, dairy production, recreation, seasonal tourism and park maintenance).

Physical capital was created by two waves of technical and organisational development: one in the eighteenth century under the Austro-Hungarian Empire and the second under the Yugoslav monarchy (1929–1941). Investments in roads and educational and communal infrastructure are recorded which in turn stimulate civil society institutions into action. The second wave—"the golden era of MKK"—resulted in a sawmill, a small hydroelectric power plant, road construction and new town buildings, all based on the sale of approximately 6000 m^3 of logs, 8500 m^3 fuelwood, an additional 1000 m^3 wood used in lime production, meat and dairy prod-

[6] According to cadastral data from 1946. (Unpublished material.)

ucts of 100 cattle, 350 sheep, hunting rights and town infrastructure rents. This meant approximately 100 jobs in 1941 (Deisinger 2012). After WWII, MKK resources were nationalised. Recently infrastructure serves public purposes and is far from being denationalised.

Financial capital is poorly documented, or not at all, particularly regarding sensitive issues due to the context of revival, raised expectation of members, incomplete denationalisation, expected impositions of land taxation and negative experience of large investment in road construction after the first part of denationalisation when members had to cover costs from their own savings. Possible project funding is hampered, as legal procedures are the primary focus, and because the age structure of members is unfavourable and public recognition relatively poor. The non-material roles of MKK are underlined, while direct involvement in the economy is avoided due to experience of its negative impact on bridging social capital.

Social capital has been important throughout the existence of MKK. Regular waves of conflicts are reported from the historical process of property rights establishment; initially with landlords, then with towns and finally with states and their administrative reorganisations that did not recognise the particular form of MKK ownership. Social capital in the local community was also constantly challenged by extensive political changes; for example, the end of the feudal order in 1848, resulting in the attribution of ownership to an urban community of corporate nature and the formal establishment of MKK with leadership given to the Mayor of Kamnik. Bridging social capital was high then, so a period of high-level recognition, visibility and investments is not a surprise. National awareness increased at the very beginning of twentieth century. Social differentiation eroded horizontal social capital resulting in a political divide between liberals (circa 30 per cent) and conservatives. Nevertheless, strong relationships to the area prevented a conflict (Klobčar 2001).

Further administrative reorganisations, including further agrarian reforms, followed. The avoidance of property losses by registering as "agrarian commons" and lobbying Belgrade authorities were not successful except for hunting rights. Traditional rural-urban tensions continued with an intergenerational conflict until WWII when both bonding and bridging social capital declined. External pressure (German nationalisa-

tion) initiated its revival but Kamnik citizens became squeezed between national emotions and class affiliation. During and after WWII, MKK members were faced with all the characteristics of this period; violence, expatriations, social deterioration, expropriations and other types of humiliation. In 1946, surviving MKK members applied for property title and managed to register facilities. But in less than a decade they lost their property rights again due to socialist state reforms in 1949 and 1957 which nationalised large properties, suppressed tradition and any form of elitism. The land and the sawmill became property of the Forest Faculty but within a decade, they were included in the official regional forest district. Infrastructure became municipal; hunting was ceded to a company, which still runs the business. Post-war welfare rises brought substantial changes in population structure and functioning. MKK revival started with Slovenian independence in 1991 on the basis of female members' initiative. Data collection started and internal rules were changed due to the new circumstances in 2010. Team work and information flow (website, local newspaper contributions and so on) have started and provided for the re-creation of both bonding and bridging social capital.

Human capital: after 1991 the restitution process began with only 62 members, later joined by an additional 25. The literature reports on a particular urban reputation which declined after WWII (Klobčar 2001). Recently most of the members have retired, less than half are active. Formal educational level of members is unknown; however, the leadership is well educated and attached to the local identity evolved through history. Forest management and extraction are carried out by professionals.

Flows and Transformation

Forest is a constitutive element of MKK, a source of subsistence at the time of establishment (above all for firewood and timber). The interests of feudal lords and subsequent foreign authorities in hunting, the towns for timber and firewood, and the different states for earnings from natural resources (also meat and dairy products) caused an outflow of benefits to non-local subjects. A substantial inflow took place in the post-WWII era of industrial development, tourist facility operators and summer

house investors. So—in contrast to rural commons—MKK's natural resource-based flow can hardly be distinguished from those based on non-MKK resources. Landscape-based services (non-timber products, park maintenance, mountaineering, cycling, skiing, spa) became more important but were provided by a variety of entrepreneurs. Timber-based income in the last two decades was contracted out to non-locals.

The primary transformation of natural resources into other types of capital is therefore found in buildings and road infrastructure built in the second part of the nineteenth century, a period of high social capital which is not in MKK ownership today. Investments of that period enabled a shift of human capital (school building) and social capital (e.g. a new NGO reading club). Later the construction of a skiing cable crane was outsourced and enabled seasonal tourism and regional brand evolution on pastures owned by MKK members, so their local visibility rose. Recent MKK members value the natural resources are the most important feature, regardless of their owner or manager, a view which has also gained support among more recent Kamnik citizens. Multifunctional understanding and the use of natural capital enabled its enrichment and its transformation into finances. MKK members were excluded from this process for decades. Distribution of welfare, based on MKK property, extended from MKK to the local municipality and to the regional area if ecological service of water is, for example, considered. MKK members, overtaken by urban growth, were victims of development; losing their rights, role and visibility. However, their natural resource remained naturally regenerated and relatively well preserved despite open access, changed uses and ownership. This seems crucial, as there were initiatives and plans for unsustainable changes, prevented not only by local awareness of natural importance but also by MKK membership activity and their human and social capital.

Lack of detailed data on quantities and distribution of benefits prevents us from drawing clear conclusions. State interest in commons is increasing now, as commons in general are the largest forest owner category in Slovenia. Within the framework of completing the long denationalisation process and consequent increase of private forests in Slovenia, MKK is completing legal procedures and trying to revive their local recognition. It frames its vision in a less excludable social climate ("… accelerate regional development as poor cooperation blocks it") (Deisinger 2012).

Outcomes on Different Scale

High-level, sustainable natural capital and strong social capital seem to characterise MKK for the entire period of its existence. It was still alive while suffering constant and extreme external impacts, while flows of other capitals became hidden. MKK prevented investments into unsustainable uses of fragile alpine landscape and maintained both: its self-regenerated natural capital and its internal functioning norms. The direct MKK role in local development has two peaks, both reached in past centuries, leading to investments in local infrastructure. Large buildings in Kamnik town, infrastructure projects and periods of lively NGO activity characterise MKK outcomes. However, even if later development cut MKK members off from impact and benefits, we can attribute achievements in this period to MKK, their presence in the form of human, social and natural capital enabled synergies, regardless of the distribution of material benefits. Ecological services were provided for the whole society and are now gaining weight, while traditional sustainable agrarian use of pastures has been upgraded with social services and technical improvements. Roads built are now widely used for access to amenities, maintained, and occasionally exposed to conflicting interests among stakeholders. Buildings serve public purposes. Social capital, based on ancient town rights and periodically empowered (or suppressed), enabled common goals not only among shareholders but in the community as a whole, also involving non-members. This seems comparable with reports on past relative patience among conflicting social strata in the period when Kamnik was regarded as a closed and self-centred town. MKK insists on completing the legal procedures, even if this takes more than two decades. We argue that patience and persistence are typical not only for MKK but also for other Slovenian commoners. However, long procedures may empower ties among those most attached to the land and at the same time dissolve ties among those least attached. This endangers internal ties as do social filters evolved in periods of social stratification and undemocratic regimes.

Currently, MKK is fighting not only for denationalisation of property but also for public recognition of their ownership model and achievements. It intends to re-create economic activity but in agreement with

the municipality and other external partners. Its key principle is the preservation of self-regenerated natural forests. When the urban character of MKK is taken into account as well as unlimited accessibility to (their) property, the capacity of MKK is still high presumably because of high levels of human capital in its leadership and the strategic importance of natural resources. Maintenance of past norms, their transfer to wider society and future generations ("it is not for us") is in line with the integration of private benefits into broader (albeit local) society. We argue that the commons entitled Meščanska Korporacija Kamnik presents a case of recognition of historical interdependency among social strata and between society and nature.

North West Mull Community Woodland Company

The Story

The NWMCWC is a highly regarded example of a new phenomenon in Scotland: the establishment of community enterprises to purchase (mainly from the public sector) and manage commercially planted forest. As their own website says "Two landlocked, commercially challenging, plantations have been turned into a significant asset for the community". This success in commercial production has made good use of legislative changes and funding opportunities, and an innovative partnership with big forestry businesses. Currently the company employs three people, provides a fully accredited local source of quality firewood, is the sole supplier of government-accredited woodchip, supports a Forest School (whereby children are taught a wide range of classes in the forest environment), hosts tree planting events to increase the percentage of native broadleaves, facilitates annual archaeological training courses and studies by two universities which are attended by many overseas students, and raises local tourist values and pride in place. The community company has also established new woodland crofts (again through opportunities generated by new legislation), is working with both the Scottish Government and a Local Housing Association to deliver affordable housing,

and has a FITS pre-accredited Micro Hydro project which will be partially funded by an innovative Community Debenture scheme; both housing and income from sustainable renewable power generation are important goals for the community.

Community forestry is relatively new in Scotland. Over the last 25 years, changing social priorities and increasing commitment from the forestry profession and policy have enabled the emergence of at least 200 community woodland groups (Stewart and Edwards 2013; Lawrence and Ambrose-Oji 2015). Members of Dervaig community established NWMCWC in July 2005 to purchase and manage, in the interest of the local community, Langamull and West Ardhu. They were the first to purchase state forest land through the National Forest Land Scheme (NFLS). This new programme was developed in the wake of the Land Reform (Scotland) Act (2003), to provide opportunities for communities to buy public forestland even if it was not on the market (Forestry Commission Scotland 2013). The Scottish Executive (the devolved government) had designed the programme and provided the opportunity; it also provided constraints in the form of rules about the type of institution that could purchase such land, and the definition of geographical and political boundaries for eligible communities. Applications for Community Acquisition under the NFLS must demonstrate that there will be benefits to the entire local community rather than only to some individuals, and that benefits for the immediate community are not outweighed by disbenefits to the wider community, environment or economy.

The NWMCWC describes its purpose as "to purchase and manage, in the interest of the local community", specifically "to maintain and improve the amenity, recreational access and biodiversity value of the woodlands". Although the commercial production of timber was not one of the original objectives of community acquisition, it is a significant achievement. The forests were formerly considered unharvestable by the Forestry Commission because of the remote location, weight restrictions on the narrow public roads and technical difficulties with a floating pier. Instead the community company planned and built a partnership to fund and construct a new long-distance haul road (16.5 km) through forests and across moorland to the public road and ferry terminal. This was the first application from a community company, and the scale, complexity

and social negotiations required took four years and doubled the initial expected cost. But by 2011 the road was open, and in 2014 the company annual reports record that one of the forests has been harvested.

The Five Capitals

The two forests consist mainly of plantations of exotic conifers (Langamull 251 ha and West Ardhu 421 ha), predominantly Sitka spruce planted in the 1960s on wet peaty soils where the natural forest cover would consist of low oak and birch forest as this part of Scotland is very exposed to wind. When the community company NWMCWC bought Langamull and Ardhu forests, there were concerns that the forests were rapidly reaching economic maturity and at increasing risk of windthrow, which would drastically reduce both their natural capital and financial value. An NWMCWC director described the forests as 'neglected' in 2009.

The move to community ownership has achieved an increase in *natural capital* in two ways: the forests have been brought into silvicultural management, because they are now regarded as harvestable, and a wider range of species has been established, thereby diversifying the biological resource. In addition, planned restructuring of the forest will bring stand diversity. While these "increases" would not be valued in the same way by all stakeholders, it is likely that the forests can and will provide a greater range of ecosystem services as a result of these changes.

Community ownership has also contributed to an increase in *physical capital* (infrastructure) through the construction or upgrading of 16.5 km of forest road and four bridges, including improved access to two farms plus an upgrade of 3 km of public road. The upgrade of the public road completed the North West Mull Timber Extraction route servicing Forest Enterprise Scotland (FES) and private woodlands which, over a 20-year period, will bring 600,000 tonnes of previously landlocked timber to market. In addition, the NWMCWC has led a participatory approach to designing a new path network. The new access road has helped to provide recreational access, and the planned footpaths will further add to this physical asset.

Financial capital has also been accumulated. The land was purchased in 2006 at a price of GBP 343,000, using a range of public funding

awards, trust funds, local fundraising activities and an interest-free loan. The 2014 company accounts note "a recent valuation of the land at £1,000,000 despite the extraction [of timber]", indicating a tripling of asset worth. Furthermore, the community company put together a successful plan to finance the new haul road at a total cost of GBP 2.3 million, of which 36 per cent was funded through a grant from the EU Strategic Timber Transport Scheme (STTS), 23 per cent from local and national government agencies, 11 per cent from contributions in kind from local landowners, and 29 per cent through an innovative arrangement with an international forest management company, UPM Tilhill. This community-private finance initiative is the first of its kind in Scottish forestry, and has attracted considerable attention. The investment from Tilhill was fully repaid through the sale of timber by January 2015.

Financial capital, especially in the form of credit, brings its own stresses, sometimes creating pressure to clear-fell large areas for income generation (McIntyre and Frost 2011). But in this case the combination of community ownership (which allowed access to the STTS) and commercial investment does appear to have enabled the harvesting of timber which was at risk of loss from windthrow.

The North West Mull case illustrates development of both bonding and bridging *social capital*, as well as less tangible aspects such as community commitment, trust and confidence. Community assets must be purchased by a legal entity, often a "company limited by guarantee" which is a British legal form without shareholders but instead has members who act as guarantors. NCMCWC is also a charity (with specific tax benefits) and non-profit. It has 12 directors, each with a three-year term after which they must stand down or stand for re-election. Membership, at 165 in July 2014 (the latest published data) is over 50 per cent of the electoral register for the eligible areas. High numbers turn out at legally required meetings such as Annual General Meetings. All of these indicators point to an increase in community organisation and hence social capital.

However, it is important not to look back on the last 10 years with undue euphoria. Extraordinary things have been achieved but as a result of great efforts on the part of a small number of people, and considerable frustration and disenchantment with bureaucratic process, and difficulty finding candidates willing to act as directors. While community support

for the project has been high, evaluations have identified a component of the community which did not feel involved nor informed. Both NWMCWC and the community have been disappointed that contracts for road construction and part of the timber harvesting were not awarded to local business, but instead to mainland businesses which were found to be more competitive.

Nevertheless, the story of the development of the North West Mull Timber Haulage Route reflects ambition and illustrates real social capital established through agreements with big business, EU funding mechanisms and complex social negotiations with landowners to secure their agreement to have the timber route across their land.

This growth of social capital has been accompanied by increased *human capital* (skills and knowledge). From "knowing nothing" (in the words of one director), much experience has been gained in managing forests, projects and business, and in accessing funding and support. Achievements include the long-term management plan, Forest Stewardship Council (FSC) certification, production of a director's information pack with information on the roles and responsibilities of a company director and charity trustee, recruitment training, presentation skills, wood-fuel training for four people, chainsaw use for 32 participants including commercial operators, logistics equipment training (tractor and tele-handler driving, timber loading crane operations and delivery vehicle training) for six and mobile sawmill use for eight participants. Knowledge has also grown in other parts of the community, for example, through the involvement of schoolchildren.

Flows and Transformations

Because of the community's ability to access funding, and the work dedicated to generating social capital particularly in the form of partnerships, social capital has grown, has created access to financial capital which in turn has been transformed into physical capital (the improved access via roads and bridges) and natural capital (the enhanced management status of the forests). As a government body, the Forestry Commission was not eligible for funding from the STTS so the change in ownership has

intrinsic potential for these increases in capital. However, they would not have happened without a lot of work from a few dedicated members of the community company. As natural and physical capital, the forest land provides the basis for new forms of physical and human capital in the form of forest crofts which create forest-based farms.

From these new and enhanced forms of capital, significant income streams are now beginning to flow. The most recently published company accounts report GBP 1,564,289 income from timber sales in 2012–2013; and GBP 1,249,696 in 2013–2014. Of this a significant proportion contributed to repayment of Tilhill, and another significant proportion was set aside to fund the statutory restocking of the felled forest. Knowledge has also been transferred from the project to other existing and aspiring community woodland groups, and to policy stakeholders, through many invitations to contribute to training and case studies.

Outcomes at Different Scales

The acquisition of the forests, and the growth of NWMCWC on the basis of forest ownership, has clearly contributed to local development, but also to outcomes at wider scales. At the local level, the company and community have gained skills and experience; paths, Forest School, local firewood, forest crofts as a step towards affordable housing, timber, woodchip, firewood; and micro-hydro businesses as steps towards significant income generation for the community. Now that the debt to Tilhill is paid off, timber harvest and the renewable energy businesses along with the sale of small areas of non-productive land as housing plots will bring in significant amounts of money into Dervaig, empowering the community to develop housing and tourism.

Benefits for the wider island community include improved access, both for hill farms and for potential tourism; and both on and beyond the island, jobs and contracts for road building and forest harvesting. These impacts contribute to the regional economy, in addition to timber entering the market and additions to the UK productive timber resource.

While these regional contributions are modest in themselves, the example set of innovative business partnerships and governance arrange-

ments has not only enhanced the reputations and standing of the stakeholders, but provides models for wider adoption and significant national impact in the future.

Concluding Discussion

Considering the choice of cases, it is almost self-evident that they provide proof that forests held in common take on different roles and contributions to local development. What is surprising is rather that very different pre-requisites and local conditions can produce similar outcomes. At varying speeds in different parts of Europe, the role of a forest held in common has been changing. However, all four cases, explicitly or implicitly, contain rules to keep the natural assets functioning and preserved. The groups actively manage their forests and other natural resources to generate income and jobs with a clear emphasis on local workforce and human capital. Moreover, investment in physical infrastructure required for resource extraction (e.g. the construction and maintenance of forest roads) extends access and therefore mobilises new uses (such as recreation, tourism) which in turn creates new users. Benefits and services are thereby also distributed to the wider (non-member) local community, for example, through infrastructure (roads and buildings), training and educational opportunities and landscape conservation. Our cases show that investment in human and social capital is necessary in order to maintain self-regulatory processes including the balance between room for action and resource conservation. This balance is locally specific, but dependent on the ability to stay local and maintain supra-local legitimacy. Usually following egalitarian principles, income is invested in broader social and cultural activities such as museums and recreational facilities. In Regole, MKK and ÄBS, these broader developmental investments correspond to their historical experience of dependence on the forest and each other. The comparatively recent case from Scotland also aims to maintain and improve the amenity, and recreational and biodiversity values of the forests and provide income that can be used to address local social development issues.

Generally speaking, the market has proved to be important for the historical and current dynamic. The Italian and Slovenian examples were

historically impacted by the demands of The Republic of Venice. In the Swedish case, the twentieth-century expansion of sawmills and other wood processing industries created a timber market, and timber sales are also significant in the Scottish case. However, the geographical isolation of these cases provides a rationale to our assumption that they are somewhat on the margin of big market interests, and this provides room for multiple uses to evolve (timber, fuelwood, buildings, food extraction and recreation) along with a heavy emphasis on social capital. Recent cases of forest held in common seldom evolve in the absence of alternative incomes. Hence, we argue that extraction of resources shows a pattern of multiple uses, although some of our cases may show the prevalence of one product-stream today (e.g. timber-based income). Further, intact and well-managed natural resources and landscape beauty are valued highly by current residents, and they also boost touristic attraction which can benefit the entire community through new jobs and income opportunities.

Because of the fact that natural resources have a strong identity value, there is a common acceptance and adherence to rules aimed at their conservation and sustainable use. A strong vision of the local identity is a catalyst for local initiatives, and also for community cohesion. Thus, ownership of the land resource has been crucial for the conservation of natural capital, its improvement through pro-active management and transformation to other capitals. However, this is only one pre-condition for social capital to evolve. The fight by the "old" commons (Regole, ÄBS, MKK) to preserve or win back their ownership is a sign of the importance of place-based identity, while the members' sale of their individually-held forests to the ÄBS speaks of evolving interaction between natural, social and human capital. At the time of establishment, all four cases were rural. However, our Slovenian case (MKK) now has a largely urban membership within a rural environment characterised by traditional land use albeit, more recently, engaged in tourism. Similar to commons where members reside in the area, the leading members of MKK exhibited a strong attachment to local territory and local community, a norm of intergenerational transmission of common institutions, and self-subsistence for food and fuel in case of need, as the benefits of being a member. This means that rural norms did not erode over centuries of transition into industrial and later service-based production.

Somehow age does not matter, but even the oldest forests held in common have experienced multiple difficulties in adapting to changing external and internal conditions due to complex, multi-level governance. In the Regole case, we consider the biggest challenge at present to be the unprecedented speed and intensity of global and local changes as traditional governance mechanisms which were developed to guarantee decisions according to strong egalitarian criteria with an emphasis on consensus, require long periods of time to achieve change. However, the efforts under way to change and adapt are notable. The decision-making principle in ÄBS is more in agreement with mainstream business rules, differentiated voting power according to shares, which may offer more flexibility. Yet, none of our examples would have been able to become what they are without the forest land as a generator of financial capital. Those that have a longer history have been more exposed to the risk of the erosion of such capital (forest). Depletion of forest has been avoided because of their emphasis on conservation and by-laws (Älvdalen) and on perpetuation for future generations (common interests above individual). In Italy, private owners and sometime municipalities do not have long-developed negotiated governance structures and have often not been very successful at forest management.

Not all forms of forest held in common are characterised by complex rules; however, it seems that the model of dividend distribution is an important element of any community-forest relationship, but the form (money, in kind, benefit) is context-specific. In Regole and MKK, only social profit was allowed while personal profit was limited to personal involvement and heavily controlled by social control mechanisms. Recent distribution of dividends is a result of the adaptation of old forms to new circumstances, and this process has resulted in social innovation and new forms all over Europe.

A forest held in common can be self-organised and self-governed; however, government intervention can be helpful or sometimes even a pre-requisite in the creation of the basic institutions. If the community then has strong social capital, or the ability for joint action, it may also be able to exploit these opportunities to achieve common goals (compare with Lundberg and Karlsson 2002). The opportunity structure permits and presupposes that the members of the commons and their staff possess

sufficient knowledge on the local as well as external conditions regarding policy and market in order to adjust. This implies that survival and success also is about considered and/or adaptive integration rather than separation from the logic of a capitalistic and industrialised society.

Our case studies provide further support for the value of a local model of governance of natural resources such as that outlined by McKean (2000: 42). In our cases, we see that local governance (social capital) has contributed to the mobilisation of natural capital, both by activating more complex relationships among different capitals and, over time, by increasing the amount or value of the different capitals. This seems to include the capacity to interact with higher governance levels, and thereby protect their room for action (compare with Lundberg and Karlsson 2002) although increasingly impacted by external dynamics and demands (compare with Sands 2005). The orientation towards the public good (although "public" is a local public) confirms what has been stated by Jeanrenaud (2001), that they provide access to natural and physical resources to rural people in a broad sense. However, to what extent forest held in common, generally speaking, is able to provide a wider range of ecosystem services compared with other governance models remains to be explored.

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9

Conclusions: New Forest Owners Under Globalised, Rural-Urban Relations

E. Carina H. Keskitalo

Introduction

This book has discussed changes in forest ownership, drawing upon European examples. Sweden has been highlighted in the volume as an example of both one of the most rapidly urbanising areas in Europe and a country with well-developed statistics and databases on forest and population alike. It has one of the largest areas of forest, and is thus potentially one of the cases where changes can be identified most clearly. However, the studies have generally also illustrated that the results of changes in forest ownership in each country will largely depend on national factors: history of ownership, forest owner traditions, support systems such as forest owner associations, and the like, and with significant variation on country and regional basis. The role that forest owners and forests should play in conceptions of the rural—and the urban—may

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thus be significant, but will also vary greatly. More than any other factors, the change in forest ownership and where forest owners are located must also be regarded in the context of these institutions under modification due to globalisation and urbanisation.

Forest owners, thus, are perhaps not only rural but also urban: in cases in this volume from many countries, they can be seen inheriting forest, making their living in occupations that are not related to their forest ownership, and also undertaking a (sometimes completed) shift from forest owner identities to other identities. As a chapter in this volume notes, "To summarise, most people in Europe live in urban areas. Most of the thinking and planning regarding land use, it can be argued, is done by urbanites. The concept, vision, values and utility of forests and the countryside today are largely defined by people living and working in the city" (Westin et al., Chap. 3, this volume).

This final chapter summarises and discusses the constituent chapters of the book: what can we learn from an understanding of forest owners in the broad definition applied here? It also discusses the role of the Swedish case as concerns the numerous variations in type of forest owner that have been examined in the book, concluding that just as there is no single, specific "new" type of Swedish forest owner, there is definitely no single, specific type of European or any other type of "new" forest owner; instead, increasing variation within the group of forest owners at large is perhaps the most notable result.

Change Over Time as a Theme

Globalisation has exerted a major impact on the areas covered in this book, and is visible throughout the case studies and examples in the volume. The world as a whole and subsequently also more specifically Europe and our Swedish cases have gone through massive shifts in agricultural and forest production, with small-scale agriculture in Europe decreasing in importance whilst forestry management measures such as final felling—important in earlier times in particular for local employment—is now undertaken by external, mobile entrepreneur teams working three-shift schedules to make the most use of expensive machinery (cf. Dicken 2004, 2015;

Williamson 1996). In line with this process, urbanisation has resulted in a considerable proportion of forest owners, many of whom may also have inherited their forest, now residing in urban areas and making their livings there, perhaps retaining a forest property but no longer dependent on the income from it. The role of small-scale forest use in a living countryside—and a countryside where people can make their livings—may thus have decreased to some extent. On the other hand, other aspects have become more strongly emphasised and in some cases commodified: family farms become second homes; fishing, hunting and berry-picking become hobbies. While properties and practices still link considerable parts of the Swedish population to the countryside this may now, to some extent, be a lifestyle choice rather than a livelihood. These linkages, however, do indicate that we are dealing with neither a fully urban nor a totally non-rural population—if these terms are even applicable—but rather with a population that may be both urban and rural: a rural-urban continuum.

Throughout this book we have echoed the considerations found in current literature that these terms may, per se, often be filled with inaccurate content: rural areas may also be economic growth areas, and rural policies may not as much respond to the demands of sparsely populated areas but actually work to create specific conceptions of the rural. Such policies may even lock rural populations into less infrastructure support and weaker growth options. This book thus echoes and emphasises the consideration that *rural* and *urban* are not relevant terms for anything other than perhaps describing population density: they should not come with assumptions on attached content, or be used to manage areas that vary enormously (between as well as within areas) through the application of blanket terms. Rural, like urban, is not just one thing: it is a multiplicity of things, conceived of differently by different groups, down to the individual level on the rural-urban continuum.

In a similar manner, *forest* in rural studies does not have only one meaning. Forest, this volume has shown, is used for many purposes, whichever of these is emphasised or recognised at the time, or even given preference in policy. It constitutes a large part of the European land area, and its uses vary—like the conception of the rural—between countries and regions, in various historically developed practices, down to the

individual user level. These users are also multiple: ranging from the highly varying forest owners to a highly varied public.

The forest owner, then, to the extent that there are "new" types, is largely not possible to pin down or describe simply by use of the term *forest owner*. The "new" considerations about them relate largely to the types of changing circumstances this book has focused on: the fact that it is no longer possible to conceive of them through a local focus only, or as living on their properties, or as earning specific types of livelihoods. Rather, the small-scale private forest owner may, to some extent, be the part of the general population that also owns forest but may, aside from this, reside in any area, have any occupation, and show any level or focus of interest in his/her holdings.

This, of course, poses wholly new considerations for both forestry and environmental protection, or any type of localised practice, including local consultations on land use (such as those carried out by municipalities). How do you get hold of these actors and, on the part of forest owner associations, involve them in forestry? Or, on the part of municipalities, how may forest areas within the municipality be included or integrated within a larger planning framework (Stjernström et al., Chap. 7, this volume)? Or, how do you make sure that any management is undertaken that considers those who live at, and use, local amenities if owners become increasingly distanced from their forest not only geographically but also mentally (with perhaps more limited consideration for the local situation over time)?

Many of these questions are interlinked with issues of organisation, including in the areas where organisation concerning such issues has been limited. How do forest owner associations in restitution areas develop, and with what aims and target groups? How do forest owner associations identify and speak to members? Engaging "new" forest owners in their areas of activity may be even more difficult if they do not regard themselves as forest owners (on the other hand, having land returned to them could, in some areas, lead to more pronounced forest owner identities). Other considerations relate to forests held in common: while case studies here (Lidestav et al., Chap. 8, this volume) have targeted the development of highly successful commons, including those that have existed over a long period of time and are well institutionalised, there are also

areas with less successful and less well-institutionalised commons. How do these maintain interest in local governance over time?

Some considerations of this type also have implications for how forests are managed and for how forest owners may be able to deal with large overarching challenges over time, such as climate change. This book has shown that forest owners vary greatly, with some potentially not even regarding themselves as forest owners or seeking information on forest management—something that may make it difficult to access forest owners with information, for example, concerning broader initiatives such as on climate change-related measures or other developing issue areas. For the increasingly emphasised policy area of climate change, this is something that has made supporting documents to the EU climate change adaptation strategy note that: "a number of barriers to adaptation in forestry … are potentially related both to differences between states, in terms of forest owners as a group as well as other forestry interests, and to the competing and multiple jurisdictions over the forestry sector and difficulty with which policy decisions reach individual forest owners" (SWD (2013) 132 final, cf. Keskitalo and Pettersson 2016). The diversity of forest owners, as well as the changing nature of forest ownership, may thus over time come to constitute an impediment to delivering forest management support, and may require changes not only to forest owner associations and their communication strategies, but also to the ways in which governmental and broader advice and information campaigns are oriented.

Chapters in Context

Understanding changes in forest ownership as part of the rural can provide us with further components towards understanding rural development, the literature having so far focused more on agriculture (cf. e.g. Eland and Praestholm 2008). However, changes in agriculture have had many and varied impacts on agricultural production, as well as effecting shifts of earlier primary accommodation into second homes, corresponding to changes related to urbanisation and in types of employment. The same can be said of the forest owner, who perhaps has the benefit of being

able to retain and manage forest through professional networks even at a distance and may in many cases be regarded as part of the general population, with the added feature of a partial forest owner identity (cf. Bergstén and Keskitalo in preparation). As Chap. 2 demonstrates, forest owner contexts and backgrounds in a variety of European cases are highly varied (and far beyond what any summary descriptions can show): from forest ownership having been more linked to agriculture, to forest ownership perhaps in its own right, or to forest ownership reclaimed through restitution. In many countries, the role forest has played in general livelihoods is now formally recognised through multi-use forest principles. However, it is also noted that forest use amongst groups including forest owners and others varies (manifested differently in legislation, in different countries, and with the public right to forest use perhaps most visible in areas with Right of Public Access). There is also considerable variation in how small-scale private forest ownership is arranged in different countries, as well as the extent to which free, small-scale landholding has existed historically. The valuation of forest per se also differs: from a focus on agriculture in some countries that may see lands under forest as less valuable, to a total focus on forest in others. In addition, support structures in terms of forest owner associations differ widely between countries, from very well established in the Fennoscandian cases to relatively novel or unusual in a number of others (differing perhaps more per country than per region).

As a result, perhaps of these variations and of the varying contributions of forest to GDP in different countries, it may not be surprising—even based on the purely European focus in this volume—that it has not been possible to establish an overarching international forest convention (cf. Keskitalo et al., Chap. 6, this volume). While forest, due to its character, is also part of wildlife areas in a way that agriculture perhaps cannot be, perspectives here show how forest is first and foremost used: even if the forest may seem natural, it is—perhaps particularly in Fennoscandian areas—virtually all managed and planted. While ownership and use interests may be either physically present in the area or not, the level of interest is not necessarily possible to discern from physical presence alone: forests are, and remain part of, a dense interest structure—perhaps even more so under global changes.

In Chap. 3, issues of larger institutional changes are illustrated on the individual level, in the role of changing values, attitudes and lifestyles. These can be regarded as the individual face of the institutional coin: they are concurrent, resultant of and creating many of the differences we see in Chap. 2 regarding the changing forest owner in different ways in different areas of Europe, supported by and to some extent supporting different types of forest owner associations as well as policies and policy development. Together, all of these make for the institutionalisation, or perhaps the construction, of the forest owner in the different guises in which s/he is portrayed throughout the book. In Chap. 3, it is noted that "A larger share of forest owners live away from the forest, emphasise ecological and social (recreational) values more, and perhaps do not identify as forest owners at all—although they de facto are" (Westin et al., this volume). The role of changing values and attitudes, as well as changes over time in place attachment (which may be particularly relevant if you live far from your forest land), may become significant but are as yet difficult to trace to specific decisions about the forest.

Chapter 4 illustrates how data on individual holdings linked to individual owners can be used to map how different owner groups manage their forest. In the case of Sweden, and from the available statistical data, it is clear that "the new forest owners who have recently come into possession of a property are generally younger than the persistent owners, are more often female than previous owners, live further from the forest property, and show a higher employment rate, higher income and higher educational level than the former and the persistent owners" (Lidestav et al., Chap. 4, this volume). However, also in this case, changing forest ownership has thus far not resulted in decreased forestry production (in this highly forestry-production-focused system), and neither have changes been rapid. However, forest ownership does not seem to result in forest owners staying in rural areas to a greater extent than non-owners. As the authors conclude: "Forest owners only migrate to a slightly lesser extent than non-forest owners. Migration has many motives, employment being one of them but not the most important; education, social networks and a diversified labour market all work in favour of larger cities" (Lidestav et al., Chap. 4, this volume).

However, one area where it is possible to trace specific decisions in the forest to direct outcomes at the local level is the case of individual entrepreneurs. In Chap. 5, structured around the key question of whether there is "an end to the concentration of businesses and people", Lindgren et al. illustrate that forest can—depending on the orientation of the individual entrepreneur—constitute a resource that allows for the growth of strong companies in rural areas as well, something that could be called "forest gazelles" (fast-growing small- and medium-sized companies) (cf. Haugen and Lindgren 2013). Lindgren et al. show that while the financial performance of companies has become more dependent on knowledge diffusion, amongst other factors, such transfers do not necessarily need to take place in urban regions. These are good examples of companies that have succeeded in rural or sparsely populated regions, and are often related to their historical linkages within the region. Regional specialisations that may occur in specific areas may thus, in effect, constitute economic clusters—even if they are less focused in any one single location than is often highlighted in literature. Such "rural economic clusters" may thus support the development of new products and companies—rural rather than urban-only growth (cf. Lindgren et al., Chap. 5, this volume).

Other ways of elaborating counter-patterns to developments—even if on highly local scales—are examined in Chaps. 7 and 8. Chapter 7 illustrates some of the emerging and recently established decision and decision-support processes by which interests within forest areas may gain entry, including consultation processes required under forest certification or legislation. This chapter also illustrates that while residence in forest areas may decrease, user interest has not; on the contrary, use conflicts are more pronounced (Stjernström et al., Chap. 7, this volume). Chapter 8 explicitly asks questions concerning the "role that forest held in common by local communities can play in supporting local development and promoting the livelihoods of the inhabitants" (Lidestav et al., Chap. 8, this volume). Drawing upon cases of forest commons in Italy, Sweden, Slovenia and the UK, and thus from a broad range of different forest owner situations, the chapter concludes that local governance has contributed to the mobilisation of a broad range of capitals including social and economic, "both by activating more complex relationships among different capitals and, over time, by increasing the amount or

value of the different capitals". Further, "[t]he orientation towards the public good (although 'public' is a local public) confirms … that they provide access to natural and physical resources to rural people in a broad sense" (Lidestav et al., Chap. 8, this volume).

Several of the chapters thus illustrate that the dichotomies between urban growth and rural decline that are sometimes posed are not a given, and also that forest may contribute to specific companies and local economies, drawing on examples in both areas. Chapter 6 focuses on the issue of definitions of the rural and the discussion of the role of forest in this. It highlights the insufficiency of drawing up dichotomies between the rural and the urban: while the rural has often been dichotomised into either descriptions of decline or descriptions as an amenity for an outside (urban) population, such a basis for rural policy can actually be seen to create the trends it aims to counteract. For example, EU rural policy has thus been criticised for focusing on the urban as growth clusters, de-emphasising the growth potential in rural areas and overlooking the great variation of rural areas (often instead seen as the surroundings of larger cities, but described with regard to the city's specific characteristics) (Keskitalo et al., Chap. 6, this volume). Interestingly, forest has largely fallen by the wayside in these types of discussions of the rural: although forest constitutes a large part of Europe's rural areas, discussions perhaps based on experiences other than those in highly forest-dense countries have been primarily focused on agriculture.

In addition, forest has also either fallen away or been explicitly excluded from the planning focus, as the Swedish case in Chap. 7 on multi-level planning illustrates. Here, forest has been regulated through forestry planning systems and special legislation (the Forest Act) rather than through the municipal planning systems or environmental law (the other two alternatives). Forestry has also been given preference as a specific, ongoing land use and in this has been made primary to many other uses of land. Having specifically been awarded a privileged legal and use position, forestry has thus become almost invisible within the general planning system. Even though it covers land use at large, no planning or specific discussion processes are in place, apart from the more novel examples taken up in the chapter focused on integration of planning for

forestry land (including logging and other forestry measures) within overarching planning frameworks (Stjernström et al., Chap. 7, this volume). Thus, while a forestry interest has been made primary for forest land, forest per se has been limited due to the operational focus within the rural (expressed in Sweden perhaps through a large but specialised body of literature on forest that, to a great extent, is separate from literature on rural development despite the fact that these often focus on the same areas). While the chapter does not cover the processes that may have led to the separation of forest and rurality that can be generally observed in literature, it does open an entry point into how forest has come to be regarded from such a limited perspective within the rural context and within rural studies literature.

Another entry point into explaining this situation may be gleaned from the origins of dominating rural studies literature. Overall, this book, through its focus on the Swedish experience and contrasting it with other cases, illustrates the limited nature of what have often been Anglo-Saxon-based descriptions of the rural. It illustrates that a focus on a separated rural-urban identity, as well as the connotation of the rural with specific features, does not fit with Fennoscandian cases where linkages to the rural are greater and perhaps in some cases more unproblematised as a rural-urban linkage, small-scale forest ownership plays a larger role, second-home ownership is extensive, and settlement patterns and associated processes (such as gentrification) differ from those described in mainly UK-based literature (cf. Chaps. 2, 5 and 6, this volume). Much of what is often described as inherent or given in rural processes is thus actually created through policy and, in Fennoscandia, is perhaps limited in its extent through policy, legal or financial arrangements such as redistributive tax systems (Keskitalo et al., Chap. 6, this volume). In this, however, this book also illustrates the extremely strong and far-reaching impact of globalisation and urbanisation trends, especially those by which the mass of employment is moved from a more dispersed settlement pattern to one focused on urbanities. It also illustrates the role of the nation state and national policy, as well as other influences on some supporting counter-patterns, in elaborating "a more nuanced European policy perspective on forestry and rural development" (Eland and Praestholm 2008: 83).

Concluding Thoughts

Overall, while this book clarifies that while any single "new" forest owner identity, just like any single forest owner identity (even in a single country), cannot be clearly defined, it does show that an understanding of forest ownership, as well as of forest, has a strong role to play in the understanding of rural and related urban change. Forest owners are not only rural; they are also urban, and may hold multiple values related to senses of place and other characteristics related to these, as well as other identities. As forest makes up a significant portion of rural areas in many European countries, small-scale forest owners also make up a significant portion of rural interests in many countries and may play a large role—related to forest or not, and as part of broader public and broader public interests in forest or not—in forest use. Much of this role depends on the country and broader context, such as whether mechanisms are in place for public involvement in forest and forest use, and whether employment (such as through companies drawing on forest use or municipalities being able to continue to offer services through redistributive systems) is available. The role of forest in rural studies—and also in planning for rural areas—should perhaps therefore be more pronounced in order to provide a better reflection of this situation.

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