

Czech University of Life Sciences Prague
Faculty of Economics and Management
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Diploma thesis

Diversification of Economic Activities in Rural Space

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CZECH UNIVERSITY OF LIFE SCIENCES PRAGUE

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Thesis title

Diversification of Economic Activities in Rural Space

Objectives of thesis

The main objective of this thesis is to conduct research and find out if there is a possibility to diversify the economic activity, simultaneously with respect to the requirements of sustainable development within the rural areas. It aims to answer the question: "what type of work could people do in rural areas besides the agriculture sector". Firstly, the characteristic problems with regards to this topic are presented. Secondly, the distinction between urban, peri-urban and rural area is given, as well as several definitions of various types of development. This thesis further elaborates on nowadays trends of urbanization and so related increase in the tertiary and quaternary sector of employment, lack of attractiveness and the issue of aging workers in agriculture, population increase and the associated increasing need for food. A narrower focus concerned the alternative approaches such as the idea of sustainable development, the concept of degrowth and localization that hold the view of supporting local community development cohesion and, local trade and solidarity, nature preservation and organic production and furthermore. Thirdly, it is deeply explained how the new jobs are created or diversified and what are the specific factors that influence its course and progress. Finally, many scientists advocate that the alternative approaches might have a high potential regarding the aim to become locally self-sufficient and independent. One possibility how to get closer to this accomplishment is in alternative living represented by several alternative settlements and ecovillages. We assumed that such settlement could provide sufficient and diversified amount of job opportunities. Therefore, in the main part of the research, we examined which sustainable dimension is the most important while planning and constructing such a settlement.

Methodology

This thesis is mainly based on the study of scientific articles and academic studies including Bachelor and Diploma thesis. Statistical data concerning the settlement structure and urbanization trend in each country, the population density and employment, availability of natural resources and possibilities of associated economic activities, etc. were retrieved from the statistical institution of each country. Another source of information represents qualitative research which was conducted in two mutually independent territories with comparable size and population, the Czech Republic as whole and Auvergne-Rhône-Alpes region in France (with one settlement at the border with Provence-Alpes-Côte d'Azur region).

In the first part, both territories were studied, four sites in each territory were visited and observed with one person interviewed and at the end, the results were compared and discussed. These eight cases were chosen for their similar aims (change towards more sustainable living focusing on the environmental preservation and eco-reversibility, the healthy lifestyle and the community re-development) but a diversification of attitudes for an action. They are of similar scale and levels of capacity in terms of motivation, experience, the municipality support, the technical and financial resources but their actions differ regarding the practices used and technologies implemented. It has to be mentioned, that the study includes alternative settlements of a similar size, of up to 500 inhabitants or participants but the type of settlements differs. E.g. ecovillages, alternative villages, eco-sites and cities in transition where a small group initiates similar projects. In each case the concrete location was observed in detail, before or after the semi-conducted interview was carried out. Each interview lasted between 2 and 4 hours and I was every time introduced to other inhabitants or members. The interview incorporated two types of questions. The first set of questions was supposed to answer if such a settlement can provide most inhabitants with sufficient and diversified amount of job opportunities, examine what is the role of rural/regional sustainable development, what influence has the given settlement or activities in the area on the outside, etc. And the second set of questions enabled the interviewees to tell us what factors and which sustainable dimension is the most important for the planning and construction part of the alternative settlement building.

The second part of the research was devoted to the development of modeling process indicating the changes in each phase, from the "normal life" period, through planning, construction and moving-in phase, to the "new normal life" period in each of the studied alternative settlement. Finally, this thesis endeavors to provide with a recommendation of the best practices used in these settlements in order to support and comply the goals of rural sustainable development. Considering the evident differences in the area's availability and necessity, as well as governmental support and local initiatives.

The proposed extent of the thesis

60-80 stran

Keywords

Rural area, Conventional development, Rural sustainable development, Degrowth, Migration, Job creation and diversification, Alternative settlements, Ecovillage

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Proclamation

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In Prague, 11/2017

Signature

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Aneta Fritscheová

Diversification of Economic Activities in Rural Space

Souhrn

Hlavním cílem této práce je, výzkumem zjistit, zda existuje možnost diverzifikace ekonomické aktivity současně s ohledem na požadavky udržitelného rozvoje ve venkovských oblastech. Následně odpovědět na otázku: "Jaký druh práce by lidé mohli dělat ve venkovských oblastech kromě profesí v zemědělském sektoru?". Za prvé bylo tedy třeba prezentovat charakteristické problémy týkající se tohoto tématu. Za druhé, uvést rozdíl mezi městskou, příměstskou a venkovskou oblastí a několik definic různých typů vývoje. Užší zaměření se týkalo alternativních přístupů, jako je myšlenka trvale udržitelného rozvoje, koncepce degrowth a lokalizace, která zastává názor, že podporuje soudržnost rozvoje místních komunit, místní obchod a solidaritu, ochranu přírody a ekologickou produkci a další. Zatřetí je do hloubky vysvětleno, jak jsou nové pracovní místa vytvořeny nebo diverzifikovány a jaké jsou specifické faktory, které ovlivňují její průběh a pokrok. A konečně, mnozí vědci se obávají, že alternativní přístupy mohou mít velký potenciál, pokud jde o cíl stát se soběstačný a nezávislý. Jednou z možností, jak se k tomu přiblížit je alternativní bydlení. Existuje několik typů alternativních osad a ekovesnic. Předpokládali jsme, že takové vypořádání by mohlo poskytnout dostatečné a rozmanité množství pracovních příležitostí. Proto jsme v hlavní části výzkumu zkoumali, který udržitelný rozměr je nejdůležitější při plánování a výstavbě takového či oného řešení.

Klíčová slova: Venkovská oblast, Konvenční rozvoj, Trvale udržitelný rozvoj venkova, Degrowth, Migrace, Tvorba a diverzifikace pracovních míst, Alternativní osídlení, Ekovesnice.

Diversification of Economic Activities in Rural Space

Summary

The main objective of this thesis is to conduct research and find out if there is a possibility to diversify the economic activity, simultaneously with respect to the requirements of sustainable development within the rural areas. It aims to answer the question: "what type of work could people do in rural areas besides the agriculture sector?". Firstly, the characteristic problems with regards to this topic are presented. Secondly, the distinction between urban, peri-urban and rural area is given, as well as several definitions of various types of development. A narrower focus concerned the alternative approaches such as the idea of sustainable development, the concept of degrowth and localization that hold the view of supporting local community development cohesion and, local trade and solidarity, nature preservation and organic production and furthermore. Thirdly, it is deeply explained how the new jobs are created or diversified and what are the specific factors that influence its course and progress. Finally, many scientists advocate that the alternative approaches might have a high potential regarding the aim to become locally self-sufficient and independent. One possibility how to get closer to this accomplishment is in alternative living represented by several alternative settlements and eco-villages. We assumed that such settlement could provide sufficient and diversified amount of job opportunities. Therefore, in the main part of the research we examined which sustainable dimension is the most important while planning and constructing such a settlement.

Keywords: Rural area, Conventional development, Rural sustainable development, Degrowth, Migration, Job creation and diversification, Alternative settlements, Eco-village.

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1 Introduction

Over the past two centuries, human kind has reached a long list of achievements: literacy and education have increased, poverty has decreased, mortality and child mortality radically decreased, as well as the industrial (economic) and social productivity. In general, living in developed countries became much more comfortable. However, all these achievements have also several negative impacts and consequently, they lead to many interrelated problems that will be one by one presented in a moment. This thesis is dealing with the issue of economic activity diversification in the rural area. But why the diversification of economic activity in the rural area is needed? But first, in order to answer this question, we need to go through a few definitions.

Since the industrial era, in 18th and 19th centuries, we were used to the conventional model of economic development determined by distribution and evolution of industrial sectors. This industrial production led to a quick development of many sectors, such as trade, finance, culture, education, infrastructure and transportation. It has been changing the structures and power of cities and further related to the migration of population to fastly developing cities until now (Cioban, 2014). Indian scientist Jagannath Mallick explains the three-sector theory says that the proportion of workforce among the three sectors progresses through different stages. While in the first phase when all the economic activity has risen, and detained in the rural space (representing mostly activities of the primary sector), in the second phase, the activities of secondary sector begins to predominate (Transitional period). People start to build and move to bigger towns and cities where the activities of tertiary sector start to develop such as provision, transportation and distribution of services. Today we know about the quaternary (and quinary) sectors which are knowledge-based IT sectors, including services such as sharing, media, education, designing, R&D and others. The tendency in the primary sector (mainly agriculture, still dominating to rural areas) is to leave all the work to machines, therefore there would be much less human workforce needed. The activities of secondary and tertiary as well as the quaternary sector are clustered in cities, subsequently forcing rural people to move to a city and find a job there (Mallick, 2015).

The Post-war era was characterized by the continuous urban population growth, predominantly in city centers and suburbs as well. This trend lasted until the twentieth century when the migration flow has changed slightly. There was a disruption of urban centers. The population living in the city centers is decreasing due to service and office's development which drove the prices of apartments very high. Additionally, certain properties were abandoned by people who left for cheaper living in suburbs. During the next century until now, the settlement of the city centers, but also of the suburbs, was accompanied by the development of housing in rural areas. This is mainly due to the rising cost of land and the search for a better quality of life. We can, therefore, see the first interrelated problem that is migration from rural to the urban area and its consequences of wide-spreading urbanization. Generally, the urban population share has only increased since the beginning of the capitalist era. Urbanization refers to the overall increase in the proportion of the population living in urban areas where people are concentrated in relatively small areas, forming cities. The link between industrialization and urbanization is traceable. Furthermore, urbanization became more rapid as globalization spreads industry and technology to all corners of the world. In contrast, rural populations will decline around the world during this same time frame (Bairoch, 1985).

According to World health organization (WHO), the share of urban population in 1960 reached 34%. In 2014, there was 54% of the total population living in an urban area and this proportion continues to grow. "It is estimated that by 2017, even in less developed countries, a majority of people will be living in urban areas. The global urban population is expected to grow approximately 1.84% per year between 2015 and 2020, 1.63% per year between 2020 and 2025, and 1.44% per year between 2025 and 2030." (WHO, 2016).

The degree of urbanization can primarily mean the process of concentrating urban life at the expense of the countryside, resulting in emerging differences in labor productivity and the population income. Not only we can observe this process between economically developed and underdeveloped countries, but also within homogeneous sets of countries with a similar economic level. However, it is necessary to emphasize that we can not draw such conclusions uniquely from the economic point of view. We find often overlooked differences in the very definition of cities in different countries. There is no doubt that there are number of other natural, historical, social, institutional, political and specific

factors, which are difficult to quantify. Thus, it is not often possible to incorporate these factors into mathematically-static models of economic development. Additionally, the results are also determined by the selection of relevant parameters and variables, entering the model). Finally, the type of production makes difference as well, i.g. if you succeed to develop, either internal or external (or both) economy of scale (Viturka et al., 2014).

As it has been already mentioned, it leads to lack of people in the rural area and therefore lack of education, jobs, services and investments which further results in less innovation, renovation, R&D, etc. This, even more, enhance the desire of rural people to move to the city. On the other hand, it is evident that urbanization, that's to say living in the city, brings to some extent comfort and a higher standard of living. However, despite their opportunities and benefits, many cities generate inequalities (regarding higher pressure on wage growth induced by rising costs of living, higher price of real estate), exclusion and marginalization (leading to higher criminality), impaired environmental quality (by higher traffic congestion, having a negative impact on the overall efficiency of localized firms as Henning, Moodysson and Nilsson claim (Viturka et al., 2014) and climate change as well. Too rapid and unplanned urbanization also contributes to urban poverty, one of the new feature of urban life. Not mentioning the damages to nature and the overall decrease of natural space including arable land, forest and water area due to the fast spread of build up area. Large cities, therefore, do not seem very beneficial from the social and environmental point of view. Some could argue that cities have mainly economic function, enabling trade and providing with jobs. On the contrary, their critics claim that in many middle-income, mostly developed countries, about 828 million people live in large-scale slums around the fastest-growing cities, representing around one-third of the world's urban population. The question is if jobs are shifted to the rural area, is there a chance that people living there would stay where they live and this idea of moving to the city would become a nonsense? (WHO, 2016).

The second issue is connected to agriculture. The farmers and workers in agriculture are aging and there is a very low interest of young people and absolvents in farming or food industry in general. Even the family farms have problems to keep up with the global demand, requirements and production. There is nobody who would substitute the old

generation. People are attracted by job positions in the tertiary and quaternary sector offering more comfort and higher wages (ČTK, 2017).

Thirdly, the term of “brain drain” doesn’t concern only the third-world countries anymore. It happens in developed countries as well but only on smaller scale. Young people do not want to stay in the countryside and keep moving into cities, looking for education, well-paid jobs and various services, entertainment and last but not least for the mentioned comfort. Later, these absolvents of diverse domains and professions aim to stay in the city since there is no job opportunity for them in the rural areas. Additionally, the concentration of economic activity in the cities is also more convenient for the firms too. We talk about internal or external types of savings which mean more innovation, higher availability of qualified workforce, talents, exchange of knowledge, material and services and further lower cost of transportation, production and cooperation (Bove et al. 2017).

Since there is a decreasing number of people working or desiring to work in the agricultural sector it poses another (fourth) interconnected problem that is the global increase in population and the future threat of lack of food. It is true that thanks to machines and assembly line, the industrial production we can produce a higher quantity of food and goods in much easier and quicker way. We are all dependent on the agricultural sector in general and mainly people in cities are highly dependent on food supply from the countryside. Luckily, there is still a positive view remaining that mentions the influence of changing technologies, market liberalization, improved communications, and the rise of population. Because as far as the population augments, the diversity of specialization and interchange grow. On the other hand, this almost inevitably leads to ‘economies of agglomeration’ dissemination, and further to urbanization. It seems we can not avoid both, there is always one or another remaining. Nevertheless, concerning the growing urbanization might also lead to diversification of employment, when urban people will have needed activities for their leisure time, tourism, recreation, as well as it is believed that environmental services will be much more needed, maintaining biosphere, climate, biodiversity, waste absorption, etc. Finally, urbanization, technologies and improved communication unease the access to knowledge and information (Wiggins, Proctor, 2001).

Besides, we must ask: What about the quality of the food that we consume? What about the production costs apart from money? What about the lost jobs and lastly the impact on the environment? The consequences are unknown or inauspicious. There are so many crises or natural disasters that we have had the chance to experience recently. And we are going through some of them right now. Cities, mainly in wealthier areas, have been significant contributors to climate change. They consume together about 75% of global energy and produce a similar proportion of waste. They also contribute directly to the majority of greenhouse gas emissions (about 60%). Therefore, we must also face and find solutions to several peaks of nonrenewable resources soon as well as find a solution to results of climate change (rising sea levels, occurring hurricanes, droughts). And it seems we need to look for some alternative solutions. Those are again cities that have the potential to change and renovate, that bring the opportunities for the future. “The most prosperous cities will be those that design sustained and comprehensive visions, and create new institutions, or strengthen existing ones, to implement this vision. This will bring them to look for new methods of close cooperation with regional and central governments and other actors such as the private sector, all the while ensuring an equitable distribution of opportunities and sustainable development.” (WHO, 2010, pp.3-10).

One paradox is that the today’s trend is moving out of the cities because of the negative externalities and so-called agglomeration losses that were mentioned before. Consequently, they found a solution, to move to suburb (Viturka et al., 2014). This theory is supported by analysis of urban decline (Fol, 2010, pp.359-383). This analysis poses two questions and therefore it gives two types of answers. Firstly, the question of size, because if there is an urban decline it may be because the cities have reached their limit and so the answer would be quantitative. Secondly, are cities the seeds of the civilizational crisis? Does a sustainable city exist? If so, is this sustainable city ecologically sustainable? Does sustainability also mean equitable, in economic, social and environmental view? Is it feasible? The answer to the second question is exceedingly difficult and qualitative too. If we look closer to the qualitative analysis of factors in the urban decline, there are three interpretations (Bairoch, 1985):

1. The optimal diversity of urban activities - if it is inadequate, the city will decline however, it is also true that if diversity is too large the city may lose its attractiveness because of public and private costs.

2. The most dynamic cities are those that are geared towards innovation. We can see two types of innovation, socially based. And technological innovation which is generally much more easily absorbed by cities and therefore the old cities will be less dynamic than the recent cities.
3. A few practical explanations for urban decline represent the degradation of city centers and living conditions in the city and also the departure of peripheral-rich classes (Bairoch, 1985).

Since the researched topic is a very complex issue there is a sum up of interrelated issues that have been presented in the part of the introduction:

- Industrialization
- Conventional/capitalist development
- Migration to the cities → Urbanization
- Agriculture
- Damage to Environment (natural disasters, the peak of nonrenewable resources, climate change, etc.)
- Social, migration and financial crises
- Increasing world population → Lack of food in the future
- Mounting trend of migration to suburbs

2 Aim and Methodology

The main objective of this thesis is to conduct research and find out if there is a possibility to diversify the economic activity, simultaneously with respect to the requirements of sustainable development within the rural areas. It aims to answer the question: "what type of work could people do in rural areas besides the agriculture sector". Firstly, the characteristic problems with regards to this topic are presented. Secondly, the distinction between urban, peri-urban and rural area is given, as well as several definitions of various types of development. This thesis further elaborates on nowadays trends of urbanization and so related increase in the tertiary and quaternary sector of employment, lack of attractiveness and the issue of aging workers in agriculture, population increase and the associated increasing need for food. A narrower focus concerned the alternative approaches such as the idea of sustainable development, the concept of degrowth and localization that hold the view of supporting local community development cohesion and, local trade and solidarity, nature preservation and organic production and furthermore. Thirdly, it is deeply explained how the new jobs are created or diversified and what are the specific factors that influence its course and progress. Finally, many scientists advocate that the alternative approaches might have a high potential regarding the aim to become locally self-sufficient and independent. One possibility how to get closer to this accomplishment is in alternative living represented by several alternative settlements and eco-villages. We assumed that such settlement could provide sufficient and diversified amount of job opportunities. Therefore, in the main part of the research, we examined which sustainable dimension is the most important while planning and constructing such a settlement.

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and Auvergne-Rhône-Alpes region in France (with one settlement at the border with Provence-Alpes-Côte d'Azur region).

In the first part, both territories were studied, four sites in each territory were visited and observed with one person interviewed and at the end, the results were compared and discussed. These eight cases were chosen for their similar aims (change towards more sustainable living focusing on the environmental preservation and eco-reversibility, the healthy lifestyle and the community re-development) but a diversification of attitudes for an action. They are of similar scale and levels of capacity in terms of motivation, experience, the municipality support, the technical and financial resources but their actions differ regarding the practices used and technologies implemented. It has to be mentioned, that the study includes alternative settlements of a similar size, of up to 500 inhabitants or participants but the type of settlements differs. E.g. eco-villages, alternative villages, eco-sites and cities in transition where a small group initiates similar projects. In each case the concrete location was observed in detail, before or after the semi-conducted interview was carried out. Each interview lasted between 2 and 4 hours and I was every time introduced to other inhabitants or members. The interview incorporated two types of questions. The first set of questions was supposed to answer if such a settlement can provide most inhabitants with sufficient and diversified amount of job opportunities, examine what is the role of rural/regional sustainable development, what influence has the given settlement or activities in the area on the outside, etc. And the second set of questions enabled the interviewees to tell us what factors and which sustainable dimension is the most important for the planning and construction part of the alternative settlement building.

The second part of the research was devoted to the development of modeling process indicating the changes in each phase, from the “normal life” period, through planning, construction and moving-in phase, to the “new normal life” period in each of the studied alternative settlement. Finally, this thesis endeavors to provide with a recommendation of the best practices used in these settlements in order to support and comply the goals of rural sustainable development. Considering the evident differences in the area's availability and necessity, as well as governmental support and local initiatives.

3 Literature Review

This thesis is mainly based on the study of scientific articles and academic studies including Bachelor and Diploma thesis. Statistical data concerning the settlement structure and urbanization trend in each country, the population density and employment, availability of natural resources and possibilities of associated economic activities, etc. were retrieved from the statistical institution of each country. Then several assumptions were elaborated and tested in the qualitative research which was conducted in two mutually independent territories with comparable size and population. In order to respond the research question, our assumptions and to reveal the limits of the study, we first need to go through the literature review.

3.1 Definitions

3.1.1 Rural area

According to Steve Wiggins and Sharon Proctor claim that there is no exact definition of the term 'rural'. However, rural areas are empirically clearly recognizable. It is a space where settlements and infrastructure occupy just little part of the landscape. The rests are fields and pastures, woods and forest, water, mountain and desert. There is potential in diversity and different possibilities for given area. They further present concept of landscape division (in Figure 1) into urban (built up area), peri-urban, (functional urban area and rural-urban-region) and the very rural area. The rural area conforms to poly-centric settlement pattern where multiple combinations of urban and peri-urban areas are situated. Generally, people could at the same time, live and work in the rural area, however, they do not have many opportunities and the choice among professions is not very diversified. The peri-urban areas, on the other hand, serve people as a residential area since the land is cheaper than in the city however it requires daily commuting to work which is much costlier. Some critics also remark it is an abundance of natural capital such as land and other natural resources, not mentioning the higher environmental impact. Additionally, the concentration of poor people is significantly higher in the peri-urban and

rural areas and “the average incomes are lower in the countryside than in the towns and cities. The proportions of people living below specified poverty lines are higher.” This applies to remote areas twice. The same difficulties impede the flows of information. (Wiggins, Proctor, 2001).

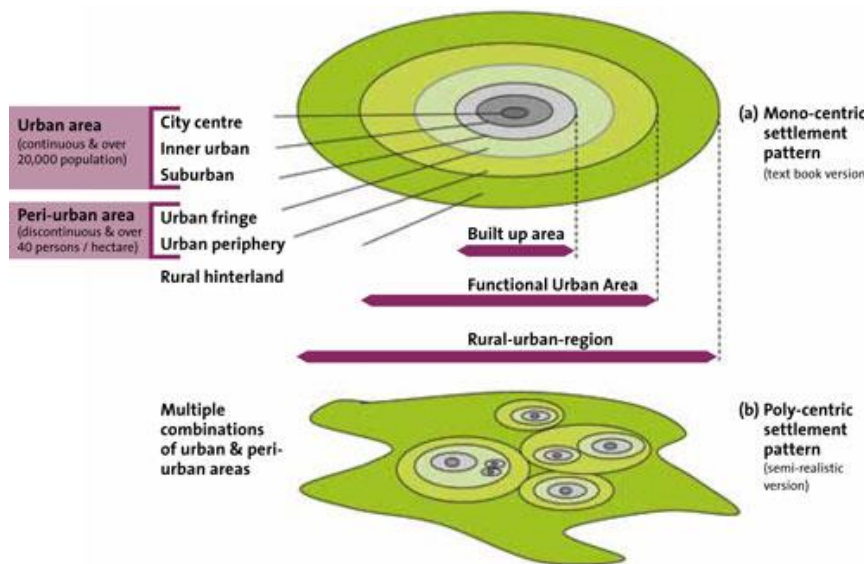


Figure 1 Division of Urban, Peri-urban and rural area

Another definition adopted by the ‘Rural Development Programmes 2007 – 2013’ is presented by OECD. It talks about the ‘Europe’s rural areas’ which are based on population density, accounts for 92 % of EU territory where 19 % of the EU’s population lives in predominantly rural areas and 37% in significantly rural regions. The rural areas are extremely diverse, from remote rural areas (suffering from depopulation and decline) and peri-urban areas (under increasing pressure from urban centers). The income per capita is around a third less compared to none rural areas and employment rates (especially for women) are lower. Among the various problems that the remote rural areas face, we can incorporate less developed service sector, leading to the lack of opportunities, training and infrastructure especially for women and young people. On the other hand, “rural areas offer real opportunities in terms of their potential for growth in new sectors, the provision of rural amenities and tourism, their attractiveness as a place in which to live and work and their role as a reservoir of natural resources and highly valued landscapes” (ENRD, 2014). The rural development policy is there to support these disadvantaged areas, enhance the diversification in employment possibilities. By diversification, this program aims to maintain or increase the income of the farm households. Finally, it also aims to support and

further promote all dimensions of sustainable development in rural areas, the environmental, economic and social dimension (ENRD, 2014).

3.1.2 Remote area

When talking about the remote areas we clearly observe the issue of isolation. According to OECD, “rural local units in Europe have a population density below 150 inhabitants/km² and the region is considered remote if it takes more than 45 minutes, to half of its residents, to drive to the centre of a city of at least 50 000 inhabitants” (Dijkstra, Poelman, 2008). The more the village is isolated, the higher transport costs are involved. Therefore, we need to support the diversity of village economies and economic activities. As demonstrated in Figure 2, the only conceivable job opportunity is in farming providing sufficient surplus, crafts and services required or needed in the local area which is highly dependent on good and specific natural resources or quality of the soil. Additionally, tourism and recreation represent a great potential but it is contingent on the variability of conditions. In case, the local production and trade are established, producing not only food and fibers from agriculture but also clothing, tools, implements, furniture, energy and water services, this given area would become less dependent and more self-sufficient. In the rest of countryside, the range of professions is wider, comprising livestock production, mining or other by-employment to remote area’s production and its further manufacturing. In the case of a specific conditions or surplus of natural resources, the closest village’s economies can become more specialized in one employment sector, giving it an exclusive advantage. Nevertheless, most of the natural resources are finite or even scares some of them nowadays. Usually the economic growth and technological advance take place and the production or extraction process gets quicker. Therefore, we can see the risk of fast depletion and the end of given economic activity (Wiggins, Proctor, 2001).

	Peri-urban zones	The (middle) countryside	Remote rural areas
Good natural resources	Market gardening & dairying Daily commuting to the city Weekend recreation activities Manufacturing industry may 'deconcentrate' from city proper into this space	Arable farming & livestock production, specialised, with capital investment, producing surpluses for the market [Same for forestry, fishing, mining, quarrying] Tourism & recreation Some crafts By-employment in rural industry? Migration	Subsistence farming, with only the production of surpluses of high-value items that can bear transport costs Crafts & services for local markets Tourism & recreation Migration
Poor natural resources	As above: NB: Quality of natural resources not so important since capital can be used to augment poor land – e.g. by irrigation, fertiliser – when needed for intensive farming	Probably lightly settled Extensive farming, probably livestock. Few jobs Tourism & recreation Some crafts Migration	Subsistence farming, low productivity. Surpluses very small or nil Crafts & services for local markets Tourism & recreation Migration

Figure 2 Rural diversity: a characterisation, with most likely activities

3.1.3 Peri-urban area

The peri-urban sprawl includes area and its population that is widely dispersed in low-density development characterized by pedestrian-unfriendly spaces. The residential and commercial area is separated, therefore, people commute every day to work, to go shopping, to access services and entertainment, etc. Since there is a lack of transport alternatives, they are highly dependent on their cars or public transport, spending up to four hours by commuting. In most cases, the costs of public infrastructure in these areas are much higher and consume much more energy than compact cities. They are also in danger of the transport cost decline which would give rise to attempts for imports from the urban economy. This would trickle away local manufactures and services. So it is worthwhile and recommended to intensify farming and other activities based on immobile resources and become as independent as possible. Every now and then, we can encounter shanty towns at the very end of a city which brings about another concern. These slums are distinguished from suburban areas by reduced access to safe food and water, poor sanitation and therefore by increased possibility of infectious diseases and by high

unemployment leading to crime. In slums, very often the traditional family structures are broken down (WHO, 2010, pp.3-10).

A newly established term of 'rurbanisation' originates from the application of the urban way of living to rural areas. We can see the fast development of commercial networks and mini-markets. Living in the countryside becomes easier every day and due to the development of all networks of audio visual equipment, hydraulic networks, etc. people can enjoy all advantages of the city. However, there is a potential of using those smart technologies and equipment in the rural area (Bairoch, 1985). If we could implement environment-friendly technologies that would help people and make their life in the countryside easier then why not? This approach corresponds to the worldwide spreading network of ecovillages and other alternative settlements, together with many green ideas and motivated people.

3.2 Characteristic problems in rural area

But firstly, we need to look at the characteristic problems in the rural area. Primarily we can only see so called uni-directional flow from rural to urban areas. In consequence, the rural areas suffer from lack of information and higher education which is important in order to access the current information. E.g. about the sustainable approaches, innovations and technologies and other technical information, important for the planning and implementation phase. Secondly, there is a lack of capacity in human capital, skills, knowledge and so on. There are many local initiatives situated in a big city, however, when comparing to the rural area there is not any. Additionally, it is certainly hard to pursue innovative practices and conserve the human-scale at the same time, what the eco-villages are trying to do. Lastly, the rural areas suffer from lack of diversified employment, services, education, etc. (Takeuchi, 1998).

The need is obvious, there must be a bi-directional flow set up between villages and cities so the initiatives from rural areas can also benefit from the knowledge and skills the cities possess. Followingly, without this exchange of information and continuous raising of public awareness the local grassroots initiatives, alternatively, the local planning authorities (coming with completely unknown prospects) won't be trusted (Takeuchi,

1998). The rural habitats but also the population living in the cities has traditionally deep-rooted habits, such as being skeptical about any new ideas, prospects and plans for using new practices, technologies, etc. Not to mention all the settlements in remote areas to which it applies twice. Additionally, they often struggle with abandoned or damaged soil (Tolle, 2011). Nevertheless, some rural dwellers “find themselves having more carbon-intensive lifestyles than their urban counterparts.” (The Rural Coalition, 2010). A new trend that has been occurring is the high-density communities and satellite towns built up right on the edge of the urban area, creating agglomeration and further leading to urbanization. These settlements are very poorly designed, creating social dislocation and environmental detriment (The Rural Coalition, 2010). Another typical characteristic of these settlements is the lack of empowerment and in some cases lack of interest in the community development. One of the reasons for such a disinterest is the fact that most inhabitants are commuters and spend the majority of the daytime in a city nearby. Some use their property as a holiday home coming only on weekends or holiday. This trend led to the local families’ displacement so mostly the aging population has remained (Tolle, 2011). In conclusion to the rural problems, we suggest obviating the spreading of satellite village, pretending to be rural settlements (The Rural Coalition, 2010). This speaks to the need for development and/or adaptation of existing models to be more sensitive to the rural context (Markley et al, 2010), and to unease the information flow in both directions, from and to the rural areas (Takeuchi, 1998).

3.3 Rural development policy

In the previous chapters on Rural and Peri-urban areas, the Rural Development Programme was mentioned which represents one of the main European policies for rural development. It covers three sections: Food production, Environmental function and Rural function. The main objectives for the period between 2007 and 2013 were to improve the quality of life in rural areas and encourage diversification of the rural economy. A secondary objective was to identify the needs and other challenges that the rural areas face. One of the main challenges that have already been mentioned is the migration and the phenomenon of basically just spending nights in the rural settlements. The reason is very low employment together with no alternative job opportunities. Consequently, this undermines the force and potential of the sustainable development which would be in otherwise well suitable for

rural areas (ENRD, 2014). According to Global Ecological Network (GEN), talking about the development of rural area, villages and towns, they divide three approaches or rather possibilities we have. Firstly, the conservation means to keep all the rural settlements alive, the same way they are now. Secondly, continue with urbanization without change which would inevitably lead to perishing of the rural settlements and the rural area slowly as well. Third, we could try to maintain the rural areas by implementing alternative development concepts and approaches that do not aim only to benefit from the rural area and our nature but also give back and protect it (us). The GEN organization supports and promotes the idea of eco-villages. We can establish a new settlement in the ecological and environment-friendly way but there is also the possibility to undergo a transition of a conventional village into an eco-village (Joubert, 2017).

The European Union via Rural Development Programme gives advice how to develop the rural area and what must be supported/subsidized in order to make the rural area more attractive. They list several options that the rural population could focus on:

- service activities such as bed and breakfast; education and social activities on farms
- craft activities pottery, basketry and diversified production of local products
- trade activities, to attach stores at an immediate distance from the farm, where artisan products are sold directly to the customer
- active tourism activities including small-scale infrastructure which must be subsidized, such as information centers, recreational infrastructure (offering access to natural areas with marked trails and signs indicating natural, alternatively historical site) and small capacity accommodation
- adapted training to new skills according to the needs (especially for the non-agricultural activities) including ICT skills, village renewal or eco-transition, conservation and upgrading of the rural heritage (natural and cultural)
- training and coaching focusing on the upswing of start-ups and micro-businesses which would lead to motivate new and/or young entrepreneurs and economic structure development.
- training concentrated primarily on young people and graduates in traditional rural skills as well as other activities they are interested in.
- management training for farmers to invite them to diversify their activities into non-agricultural sectors (ENRD, 2014).

All the mentioned options have the power and potential to contribute to the creation of employment opportunities. One of the tools for the diversification of the rural economy within the Rural Development Programme is the ‘Leader’ initiatives (in English means Links between the rural economy and development actions). It forms one of the four axes of Rural Development Policy 2007–2013 and primarily contributes to the diversification of the rural economy. The main bottom-up priorities represent projects enhancing business competitiveness, environmental sustainability, economic diversification and quality of life. This initiative targets small farms and micro enterprises of less than 10 workers and less than €2 million of turnover. The principal strategy to boost new job creation in the non-agricultural sector. In the consecutive period between 2007 – 2012 about 24,400 people benefited from the EU subsidies related to diversification in non-agricultural activities. With regard to the most important investment areas, the renewable energy production, tourism or childcare provision are mentioned in the ENRD information sheet (ENRD, 2014).

3.4 Job creation and its diversification

The purpose of this chapter is to answer who and how to create a job. Is there a possibility for job diversification, especially in rural area and how? In 2009, the president of United States, Barack Obama, released some thoughts for the business magazine Forbes, talking about the economic situation and generally how the businesses and economy work. Already at that time, he openly said that the highest potential in the future has the small business, businesses building up infrastructure and those producing clean energy. “These are areas where jobs should be created in order to achieve sustainable economic growth.” Seemingly, it is businesses, not the government that plays the main role in new job creation. Nonetheless, the government has some commitments and competencies. Even though it should be ensuring the strong and sustained development, very often it has to choose between paying down deficits or investing in job creation and economic growth. Mutual action should be guaranteed, however, in case the second option has been chosen, then the government is there to support, direct or limit the private sector so it generates jobs, increases growth and enhances innovation. What can do both, businesses and government in order to boost the economy in a sustainable way are:

- to help startups to grow and consequently hire new staff
- to boost investment in the nation's infrastructure such as roads, rails, bridges, water and waste systems, broadband networks and other clean energy projects
- to continue modernizing our transportation and communications networks
- to provide incentives for consumers who retrofit their homes to become more energy efficient, which we know creates jobs, saves money for families, and reduces the pollution that threatens our environment

All these new jobs should take into consideration the energy, water and waste efficiency and clean energy usage should be environment-friendly which have proven to be particularly popular and effective. At the same time, as the government proves to be committed and fiscally prudent, it gives the private sector the confidence to make long-term investments in our people and our land. (Obama, 2009).

Another potential for the existing jobs would be its modernization or extension according to current trends and drive. Again, the thoughts and mind turn to need the economic development that is sustainable at the same time, taking into account the other two dimensions of social and environmental factors. Thus, the most important investment in rural areas must be green and sustainable. While we would invest into renewable energy production and new technology development, the implementation of green technologies in rural areas would give a new job opportunity for local people. With regard to professions in the field of environmental protection, there is an augmenting necessity to protect, preserve or even improve the environment in the rural area but also globally all around the world. Which implies that jobs will be needed to preserve biodiversity, to clean rivers and streams, to plant trees and continue developing the recycling systems. There will be also needed such professions promoting and educating in such topics and issues (why and how to be environment-friendly). Tourism and specifically rural tourism is increasingly viewed as a panacea. Profiting from unexploited natural and cultural riches, the rural tourism presents opportunities for the development of small-scale indigenous tourism projects and further increases the economic viability especially in marginalized areas of less developed countries. It seems that it also boosts the local trade, stimulates cooperation and partnerships between local areas. (Briedenhann, Wickens, 2004, pp.71-79).

3.5 Theory of migration

According to the neoclassical theory that assumes a gradual shift of labor from a lower wage region to a higher wage region, the migration continues until the wages in both regions are equal. The price level in the market for the final consumption of products and services in both regions plays a role as well as the distance from and to a large city. Viturka and his collaborators found out in their research that people consider commuting to work as economically advantageous when $Mm > 1 = \text{revenues} > \text{marginal costs}$. If the Mm is $< 0,8-0,9$ then it is not worth to move out and commute every day or to change job for a higher wage. Finally, there is, so called, border zone ($Mm = 0,9-1$), where other factors lead to a decision since the economic surplus is not significant. It means that the willingness to commute to work correlates with the level of salary. When the salary increases of 6% (the increase in income is calculated from the difference between the median and the average wage) generally mean the willingness to commute about 10 km to work (that is the marginal rate of mobility). In case the salary increase is 12% then people are willing to travel even 20 km to work. When 17%, then about 30 – 40 km and if the salary an increase of 48% then the person commutes anywhere within the borders of the Czech Republic but maybe even to our neighbor countries (Viturka et al., 2014). Nevertheless, when deciding whether to migrate, individuals are evaluating a number of other related factors, rather than just potential gains in nominal and real wages. Significant determinants in addition to the already mentioned price level can be the accessibility of housing, the capacity of amenities, language barriers, education, distance from the original region. Viturka et al. also mention the demand for migration. Whether full migration (moving closer to the workplace) or partial migration when commuting to work is required. If the individual lives in one region and works in the other, then he or she does not move his entire consumption to another region, but rather, he realizes a substantial part of it in the region where he lives (Viturka et al., 2014). We distinguish emigration regions which can be considered as those parts of the territory that do not have good future long-term prospects for their development. It loses people in productive age, and thus they undertake their further economic development. The second region is logically immigration region that has much better prerequisites for future growth and improves its demographic structure at the same time (Viturka et al., 2014). Now several questions arise. “How to

keep people in the countryside?” or “What could be offered to them, so they stay in the countryside or they return after studies?”

3.6 Localization theories

The proponents of localization such as Johannisova (2004), Berry (2003), Gandhi (1995), Shuman (1998) and Illich (1971-1981), all emphasize the increasing need for a sustainable economic and community relationships based on trust, cooperation and solidarity. The local community attempts to achieve an environmental-friendly, economically healthy and autonomous society, by putting emphasis on human activity and creativity, has always been generating social capital. In terms of agricultural activities, there is space for diversity in the rural area (especially in richer area or area with good climate conditions and high-quality soil). Besides growing crops and other plants, there is a need for prompt processing, conservation and packaging. This represents an opportunity for diversification in rural industries. Rural areas can also benefit from the low opportunity cost of farm labor for manufacturing in the off seasons that is impracticable in the cities. And at the same time, the rural labor force can take advantage of having special industrial skills that can not be found in towns. These skills and activities (depending on natural resources and the landscape opportunities) include any kind of craft and artisan production, organic production or alternative, not manufactured production such as handmade (basketry), environmental-friendly and eco-products. Further, the rural people can address lectures of horseback riding or kayaking, become a guide in the mountains or natural sites, manage an equestrian and climbing center. Another possibility is consulting in the field of eco-(re)construction, production and protection. Finally, whatever they would produce locally, that is unique and purely produced in some remote rural location, gives the product special attractivity. In addition, the trend nowadays is that the attractivity of uniqueness is, and will be, augmenting due to globalization when there is a possibility to buy practically anything (Wiggins, Proctor, 2001).

In spite the fact, these communities are oriented towards sustainable development, the variety of studies show that there is still a high desirability of uncontrolled transportation, the mobility of commodities, and diversity of labor opportunities. In the past, similar decentralization approaches were on the rise. There were many supporting people who

would appreciate deeper contact with nature and life in a human-scale settlement aiming to reach certain self-sufficiency and independence. The idea to replicate this kind of life model sought to be ideal. However, it's been argued that it can't work on larger scale. Johannisova then concludes that: "This may be one reason why this important strand of thinking has not yet been adequately acknowledged by the mainstream" (Johannisova, 2007:47). Concerning the topic of this thesis that is to find working possibilities in the rural area but non-farm sector, the literature on location such as 'Commercialization, Nonagricultural Production, Agricultural Innovation, and Economic Development' by Grabowski (1995) or 'The von Thunen Model and the New Economic Geography as a Paradigm for Rural Development Policy' by Hite (1997) seems rather pessimistic (Wiggins, Proctor, 2001).

3.6.1 Central Place Theory

In the Christaller's Central Place Theory most activities will be centered on a town, in the evenly spaced circle of a landscape. He assumed that the pattern of settlement locations could be replicated according to a model of geometric shapes. The centrality of enterprise's hierarchy would correspond to its size. Based on several assumptions, all areas have in Christaller' model has a flat surface, evenly distributed population and resources and similar purchasing power of all consumers going to the nearest market. Additionally, the rule of perfect competition is applied and the transportation costs are equal in all directions and proportional to distance. In Figure 3 we can see that every city, town and village has access to either other town and city, or to a market and other services. In this model as well as in reality, farming and other agricultural activities represent an exception in its need for land. However, it is a source of food since the surplus is sold to the towns. Unfortunately, this idea is a pure theory and can not be found in the real world (Christaller, 1933).

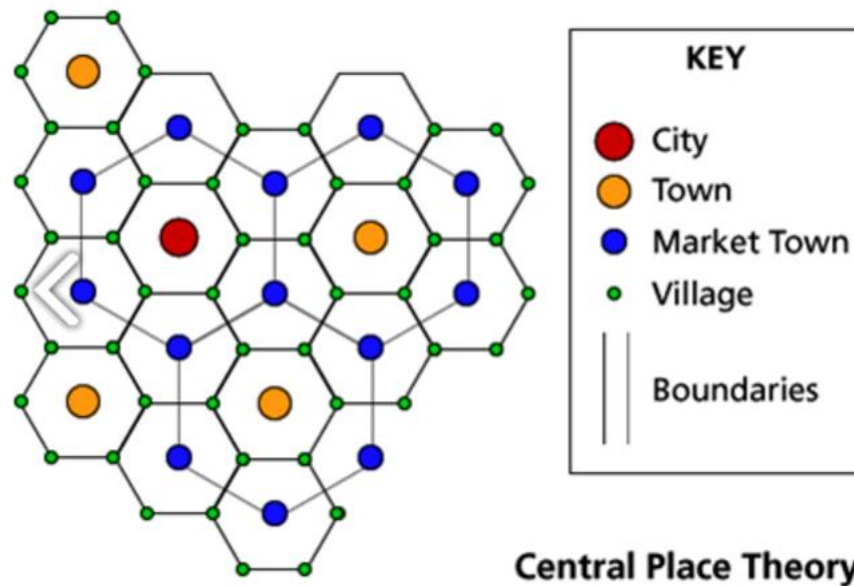


Figure 3 Christaller's Central Place Theory

3.6.2 Empirical localization analysis

In their book “Urban and regional economics”, Polèse and Shearmur determine that region can be studied as an object of economic analysis. They present models of regional economic development, polarized development and regional disparities. They further show the importance of migration, analyze the main characteristics and examine the diversity of regional and local development policies. Finally, the main part is devoted to the analysis of the locations of economic activity where they focus on the location of economic activities in the national space and the spatial dynamics of modern economies in general. However, they found out that there are statistical problems related to inference. These problems are reinforced by the spatial nature of the survey they conducted. Several questions were asked and a theoretical answer was given (Polèse, 2009):

- What is the spatial scale used?
- In terms of spatial scale, there would exist the new local scale (below the region, commune), regional, national and international scale.
- Which activity is the most important and which one is necessary?
- What should be the size of the companies like?

Either we can have large companies in the model or small and medium companies. In the case of large companies, the localization process is mostly rationalized, thought out and modeled. These rational factors are included: the possibility to increase profit or decrease

costs, the presence of the sales market, sufficient qualified workforce, good infrastructure, capital market volatility, available space and land, the presence of an industrial environment and attractive taxes. For some of these reasons, the large companies are more likely to find more lucrative and prosperous location and move there. However, when it comes to the small companies most of the processes (i.e. localization process) they are much less rational. The prevailing factors are often personal and other subjective locational factors, such as attachment to their family, to the place and area, ancestral history, etc. But still, in both cases, there are also irrational factors that play role in the decision of localization and negotiation too (Polèse, 2009).

The main locational issue is the amount and quality of natural resources when some areas are well endowed and enjoy the advantage. However, in many remote areas, even the agricultural potential is low. One would think that these areas that are not endowed with any particular natural resources or high-quality soil should be proclaimed as a natural reservation. The government would invest in protection and eco-reversibility in order to improve the quality of the soil and it would also create job opportunities for people with environmental background or locals. This area could serve as a touristy place or residential area for those who are against the conventional living in the city and who dream of living in harmony with nature (Wiggins, Proctor, 2001).

3.7 Theories of development

Firstly, there are several types of development. We can distinguish between economic development (the most renowned), then social and environmental development, rural, endogenous and exogenous development, conventional (mostly reputed as economic or industrial) and many alternative types of development. Secondly, based on the essay of Kenneth E. Boulding (1966) 'The Economics of the Coming Spaceship Earth', we assume that even such a variable process which is dependent on many factors, succumb to certain evolution. We confront a logic of interaction with the logic of learning. If there is no interaction between the actors of the territory and the dynamics of learning, there will be no innovative environment. If there is innovative environment and interaction between the actors of the territory and dynamics in learning, it leads then to high-tech innovations. Potentially innovative environment means that there are interactions between actors but the

dynamics allowing the actors to diffuse and absorb innovation have not been developed. Finally, only innovation without convenient environment can not appear. This evolution should occur in all areas of human's life. However, this thesis will be focusing on three main areas: economic, social and environmental, as they represent the three pillars of sustainable development. Last but not least, some of the alternative approaches, such as the concept of degrowth, heterodox economics (f.e. ecological economics) or the sustainable development (if we can still consider this concept as an alternative), are mainly emphasized in this work (Maillat, 2000, pp.1-11).

3.7.1 Conventional development

Conventional development is traditionally and widely understood as economic/ industrial/ capitalist/ Western development, sometimes being mistaken with the term 'human development'. Although, the term 'development' can be applied to political, social, and technological progress as well. If we look at the meaning of conventionalism cited by Blackburn in 'The Oxford Dictionary of Philosophy', it is a decision about or free selection out of equal alternatives that are objectively the best. It is very often fixed by nature as an artifact of the human convention (tradition and morals). A human creates such conventions (of etiquette, grammar or law) in order to be capable of judging and deciding what is wrong or right. By this, we substantially limit the range of selection and therefore the decision about it. French scientist Poincaré was known for his reflections, claiming that all scientific theory must not be conventional and that there must be some space left for genuinely experimental laws. "His conventionalism is in practice modified by recognition that one choice of description may be more convenient than another." (Blackburn, 2016, pp.68). Therein is the disadvantage of conventionalism, that it does not always show the alternative or any other workable convention which could have been adopted. Therefore, people do not even think of another possibility or even possibilities. It would be hard to believe, for example, that some ethical norm such as promise-keeping or no lying wouldn't be conventional and applied (Blackburn, 2016, pp.68).

It is also very important to make distinction between economic growth and economic development. While in the economic growth is based on market productivity and rise in GDP, the economic development endeavors to reach both, economic and social well-being. Since the economic development is a term that was adopted centuries ago and since the

20th century, it is noticeably more often pronounced and promoted, and people take it as a convention, as a fact. The Indian economist Sen further explains that the economic growth represents only one dimension within the development process, being of equal importance to any other dimension included. Therefore, there is no reason, why it has been so widely demonstrated by traditional proponents of development economics (Sen et al., 2010). Subsequently, the historical evolution and many alternative researchers (Day, 1998; Williams and Millington, 2004; Hamstead and Quinn, 2005; Burch, 2009; D'Alisa, Demaria, et al., 2014) showed that purely economic development might be unfavourable or even disadvantageous, leading to crisis as its functionality and advancement is dependent on physical resources that have inherent limits.

3.7.2 Rural development

The rural development is determined by each country alone. Each member state of the EU or even individual regions has its own program for the rural development which must be approved. The main objective is to restore, conserve and improve farming dependent ecosystems. The focus should be on rural diversification that would ensure the price risk reduction or even elimination of agricultural production and therefore, the subsidies from EU into agricultural sector would be less needed. Through agri-environmental measures, investment in competitiveness and innovation of agricultural holdings, the rural areas should thrive. It also aims to support young people's access to agriculture, the diversification of economic activities in rural areas and to improve landscape infrastructure in order to boost the local development. It helps the rural areas of the EU to meet the wide range of economic, environmental and social challenges of the 21st century. Mainly community-led local development is supported through the LEADER initiative, which contributes to better targeting support to the local needs of the given rural area and developing local actors' cooperation. High priority is given to the transfer of knowledge and innovation through training activities (EC, 2017).

3.7.3 Towards sustainable development

According to Burch and several other scientists the public awareness about climate change, the economic crisis and sustainable development are very low (Burch, 2009). Therefore, it allows governments to pass policies that are unsustainable, damaging for our environment, for the economy in the upshot and for the society as such. These policies further impede

the local and/or rural initiatives aiming to satisfy the local needs and requirements, to maintain the rural development as well as to preserve the nature which is an essential source for the rural areas. In addition, these policies stimulate competition between rural and urban areas too, instead of enhancing its collaboration. The imperative clearly articulated suggestion of R. Douthwaite is to balance the competition and cooperation at both levels, at the global as well as local level (Douthwaite 1996: 341–343). Added to this, Burch notes: “the irony is that the current way of designing and managing our cities and villages has produced a deeply unsustainable pattern of development.” (Burch, 2009:8). The call for a change in the global capitalism and for the rise of environmental consciousness comes from different fields of science nowadays. From the economic point of view, there is a desire to achieve sustainable growth of GDP, that everyone in the world reaches a dignified standard of living, that has access to education, healthcare, water, food and is well secured (from the social point of view) and from the environmental point of view, that we must respect the fauna and flora, the natural resources that our planet is given, etc. According to A. Giddens, urbanization leads to rural degradation and separation from the natural environment. “This manufactured space, as he calls urbanization, removes the natural environment from the everyday lives of people.” (Gesota, 2008:3). People no more perceive where the natural limits are and what constraints we might be experiencing soon. On the other hand, Forrest and Wiek mention the growing interest in community-based sustainability transitions (Forrest, Wiek, 2015).

3.7.4 Definition of the rural sustainable development

The first definition of sustainable development was formulated in early 70’s. Later the International Union for Conservation of Nature (IUCN) strengthened its proclamation that there is a close interconnection between economic development and environment. And since 80’s, as the environmental questions were rising among industrial countries, the theory of sustainable development was becoming more accepted and even very popular at the same time. There is a wide range of definitions aiming to specify the term sustainable development. From weak to strong sustainable development interpreted by Williams and Millington (2004) or by Hamstead and Quinn (2005) to more holistic worldviews. We can observe the potential importance of new models for local and regional development emerging in the pursuit of sustainable rural development (Day, 1998) since it is based on certain principles of economic and market qualitative recovery and boost, ensuring

sustainable level of population, its needs and security, environmental protection and preservation, resilience and international relation's improvement, and many more. Further, there are three main pillars of sustainable development related to different views. The balance between those pillars is indeed essential. Only a uniform development of all three areas can lead to sustainable development. Preferring or neglecting one pillar would lead to inequality and disruption of balanced sustainable development with all the negative consequences (Sen et al., 2010).

The first pillar, or dimension, represents economics. Widely renowned economist and proponent of development economics is Amartya Sen, who won the Nobel prize in 1998. He has claimed that economics and economic growth, as well as respect for human rights, was important however he was considerably skeptical about the validity and against pure rational assumptions of the neoclassical theory as he mentions in the book 'Mismeasuring our lives: why GDP doesn't add up' (Sen et al., 2010).

The second pillar represents the social view on development. As Jacobs and his colleagues mention, the priority given to only economic development is nonsense. They distinguish two social processes, survival and growth. While we can observe the economic growth overall does not seem beneficial for us, our nature and society, we do not want to come back to the 'survival society' that was characterised by the community level of living kept at the minimum without producing any surplus in order to get better off, to achieve something more. On the other hand, such society remains organized and highly functional with a very slow progress, and that is dependent on the society's capacity to manage and direct complex systems and activities, knowledge, information and technology that are mental resources, and lastly their energy, skills and capacities known as human resources. Unluckily for us and our today's society, except the physical resources, those remaining are not subject to inherent limits. But human is born to achieve success, to drive development and to increase its possession. Nevertheless, humanity and nature can not be sidelined (Jacobs et al., 1999). During centuries, human society achieved many social advancements, however, most of them are induced artificially, in favor of the economic growth. It seems such advancement generates new problems that are often greater than those that it overcomes. E.g. manufacturing technologies augmenting pollution and having a social impact, depletion and contamination of soil and water resources due to increasing food production by using new agricultural technologies, or the medical advances reducing

infant mortality and increasing life expectancy, however leading to the population overgrowth. The physical pressure of a degraded environment, the increasing economic pressure along with all the social pressures have given rise to greater awareness and growing concern, on the other hand, they are the catalysts for the intellectual, organizational and technological innovations, promising alterations and advancement that is needed in the future. Similarly, to the philosophy of the Indian spiritual leader and activist M.K. Gandhi that viewed the wide-spreading technological development very skeptically. He was calling for caution as he considered the industrialization and mass production of cheap goods as a way to inequality, unemployment and indirect exclusion of rural people from the system. Thus, he claimed that technology might be useful however it causes economic polarization and, paradoxically, creates more scarcity rather than less (Johanisova, 2007).

The last pillar concerns the environment which becomes more and more important issue and touchy for a great deal of people. This dimension is very often omitted from conventional measures and calculus. Fortunately, there are some indicators that have qualitative character and proved its value added with regards to successful job creation (Toll, 2011). In spite the fact, the most cited interpretation is the one of Brundtland Commission (Gesota, 2008; Robert et al, 2011; Martinez-Alier, 2015), there are also approaches including the Personal dimension into the model as well (Tolle, 2011). Therefore, factors such as the individual visions, ideas, ideologies and alternative lifestyles are embodied in the sustainable development model too. Another part of proponents dealing with sustainable development think that good functioning of state and territorial government leads to a good societal development and therefore they add as the fourth dimension the administration of public affairs so called “Governance” (Třebický et al., 2010). In addition, the environmental dimension has been further argued. Alfredo Camozzi, the former president of RIVA insists that only the nature preserve is not enough at this stage of continuous development and presents a new term of eco-reversibility (Losardo, 2016). The eco-reversibility permits to not only protect and conserve our nature but also reverse its degradation and further enhance its quality by following the natural cycles and keeping it in balance.

3.7.5 The concept of degrowth

This recently recalled economic concept, so called ‘degrowth’, was very detailly described in the book ‘Degrowth: A vocabulary for a new era’. Many authors, no matter it is ecological economist, political ecologist, sociologist, teacher or urbanist, have contributed with different ideas from all corners of the economic, social, environmental and other fields. In the introduction of this book, the author joins the point of views of diversity of scientists and questions the possibility of continuous material growth and points out the unsustainable dependency on “cheap oil”, of which we reached the peak in 2011 (D’Alisa, 2015). They present the concept of degrowth as an exploratory avenue rather than a new economic movement giving a set of rules that has not been a priori completed and sealed. Based on the concept of sharing, frugality and conviviality, degrowth aims to change the society, however, not only by simple greening of existing techniques or a democratization. This new concept puts together several ideas bringing up a holistic critique of the current societal system and calling for reflection, change in action and its legitimate control. Ideas such as dematerialization, sharing, autonomy, different capitalism, politics, happiness and growth, etc. make the content. It also includes many initiatives and new alternative ways of living, producing, consuming and so on that are on upswing. Likewise, the definition of sustainable development, the concept of degrowth has multiple faces that can be interpreted by weak to strong conception of the natural resources’ peaks and limits. Several scientists note that the global discussions about sustainable development do not consider the problem of oil depletion or it is often neglected. However, according to Fleming and Kunstler, the run out of oil or other nonrenewable resources could lead to a blunt decrease in international trade, as it has already happened in Cuba in 1992, regardless of policies recently adopted (Johanisova, 2007). They came up with this concept since they are of the opinion, that any of the conventional approaches or technological innovation could solve the issue of depletion. D’Alisa, Demaria and Kallis say “There is a failure, even by radical thinkers, to come up with new responses that are not articulated around the twin imperatives of growth and development. If the desire for growth causes economic, social, and environmental crises, as the authors in this volume argue it does, then growth cannot be the solution” (D’Alisa, 2015). From the opposite point of view this concept taken as a humorous attempt to go back to ancient times, suggesting austerity which would solve all our problems. However, the idea goes far away behind. Another critique concerns the fact

this concept “fails to analyze the qualitative aspects of economic growth and its emphasis on the local economy without recognizing the urgency to address global anthropogenic change from a transnational political perspective” (Schwartzman, 2012).

3.7.6 Endogenous & exogenous development

When talking about development, there is indeed a kind of convergence between reactive models caused by exogenous factors and proactive models of development that are generated by endogenous factors. Today we are witnessing the emergence of endogenous development that is instigated by local communities and initiatives since it corresponds to a set of values shared by certain territory. It is a development oriented towards basic needs of local people (could be generalized to, predominantly rural population) as well as towards local resources usage and development. It is essentially based on small businesses, small scale communities, integrating socio-cultural, economic and nowadays also environmental aspects. All these characteristics correspond to the aims of today’s regional rural development programs which are concentrated on the satisfaction of local supply and demand, considering only the micro economic factors. One example could be the local development approach LEADER, creating links between the rural economy and development actions. The idea of sustainable endogenous local development further brings us to the concept of eco-village's expansion and eco-transition of other rural settlements. This concept seems to have potential to positively influence the economic activity within a local area in the rural space. The exogenous factors have an impact on the outside of a model, considering only macro economic aspects. It goes hand in hand with the global economic growth and development. Although these factors also have the power to influence the diversity of the economic activities, the individual economies are not capable of controlling its impact. The more a country is tied to the global economy, the less control it has over exogenous influences that can cause an economic downturn. Additionally, there are examples of certain exogenous factors that have almost always a negative impact, such as wars and natural disasters (Thirlwall, A., P., et al., 2017, 124-133pp.). The question that comes to one’s mind is whether there is a possibility to generate new jobs in order to prevent wars, avoid natural disasters, reduce resource depletion as much as possible, enhance natural and health protection?

4 Practical part

4.1 The concept of ecovillages

Previously, there were many types of development mentioned. However, this work is based on the sustainable development and inspired by the concepts of degrowth, localization and endogenous development as they are overlapping to some extent. It also takes into consideration the ‘Directive of the European Parliament and of the Council on Sustainable Development’. This directive says that our priority is diversification of economic activities BUT in sustainable way, mainly in the poor and remote areas (meaning rural areas). We can see alternative ways in promotion and support of:

- the local initiatives aiming to establish an eco-village or to transform a conventional village into an alternative village or even eco-village. Such initiatives are already known and many eco-villages have already been established. The ‘Global Ecovillage Network’ is the proof.
- creating and building a new types of house construction or doing reconstructions in order to achieve a low-energy houses or even so called ‘passive’ houses. These are as less dependent on nonrenewable resources as possible or not dependent at all. Thankfully, our skills and knowledge of technologies give such possibilities.
- the local production since it has the power to decrease the environmental impact caused by extensive production, transportation, consumption and noneffective energy, water and waste management. This might be well proven by this relatively new epoch designated as the Anthropocene (Garavan, 2015).

Now to the term of eco-village. Not only that the concept of eco-villages and eco-transitions complies to all previous points but also it has a great potential in terms of sustainable development. There is no single best practice for an eco-village that would propose a one-size-fits-all solution. It is territorially sensitive, based on the needs and potentials of the respective territory and strategy-led, supported by new or existing territorial strategies (Hall, 2013).

4.1.1 Existing alternative settlements

At the beginning of this study, we were only focusing on eco-villages as we considered this settlement as the most efficient and the most influential since there is nowadays a dense network of ecovillages. And it also turned out that most of the recent literature on sustainability is oriented towards this specific settlement (Kirby, 2003; Gesota, 2008; Hall, 2015; Losardo, 2016). Nevertheless, we couldn't build up our study entirely on eco-villages for two reasons; due to (1) territorial limitations and (2) discrepancy in its definition. We have therefore decided to comprise any alternative settlement that meets certain requirements. Therefore, this chapter brings forward the idea of an eco-village as the main representative for alternative settlements although we know it's not the only possibility. Many types of alternative settlements already exist. We can name just a few alternative settlements, from small-scale community initiatives including transitions, low carbon communities and community land trusts to eco-villages and eco-sites construction (Forrest, Wiek, 2014). They differ in origin, vision, motives, resources, etc. however, we can observe several features that are common to most of them. E.g. they are human-scale settlements: can be a small village but also a small town or neighborhood. Good location or well-chosen place (for new settlements) plays an important role since the accessibility of diverse natural resources is crucial. They are oriented towards at least one sustainability dimension, seeking self-sufficiency and independence. These settlements are generally community driven (Forrest, Wiek, 2014), however, it is still not proved and therefore, it became one of the research sub-questions. We sought to find out if the community and generally the social sustainability is crucial for the further successful development of the alternative settlement and if not, which of the sustainable dimensions it is? Towards which dimension the alternative settlements tend to orient the most?

We still needed to define what are the requirements for, features and characteristics of the alternative settlement which we could include into our study. We got inspired by the definition of the eco-village nevertheless, there is no definite and clear definition. As Losardo mentions, the concrete definition of an eco-village is still forming (Losardo, 2016). And Gilman further adds: "There are yet no communities that fully express the eco-village ideal." (Gilman, 1996a:6). We then decided to create our own definition. We certainly knew that these settlements must follow the goals of all four dimensions for sustainable development. Derived from the interpretation of an eco-village by Robert

Gilman: “An ecovillage is a human scale, full-featured settlement, in which human activities are harmlessly integrated into the natural world in a way that is supportive of healthy human development and that can be continued into the indefinite future” (Gilman, 1996a:1). And at the end, we have included four different alternative settlements into our study, comprising one eco-village, one eco-site, one alternative village (as the interviewee claimed that it is how they define themselves) and one village in the initial phase of transition. All settlements are aiming to fully achieve the sustainability in all dimensions.

4.1.2 Why to choose living in an alternative settlement?

In the article elaborating on the eco-village challenge of community development, Gilman gives argumentation to a prompting question: “If eco-villages are such a great idea, why don’t we already live in them?” (Gilman, 1996a:2). Speaking of which, we could also easily argue as Greenberg highlights, that many farms, associations or cooperatives which follow the same values and sustainable goals prove its higher efficiency. However, the singularity of eco-villages is in the method how they pursue the values of sustainability and how they incorporate all the sustainable dimensions into practice (Losardo, 2016). What the eco-villagers have in common is a different vision of modern life in comparison to their urban counterparts. It is based on practices and innovative technologies, combining personal, social and environmental goals of sustainability. Kirby further explains, for what reasons the eco-villagers have decided to change completely their lifestyle and move to such an alternative settlement: “At the same time there has been an increasing sense of the community principles breakdown as the modern life in the city has become even more segmented. This has resulted in feelings of isolation and disconnectedness.” (Kirby, 2003:324). In addition, we shall not be mistaken by the rumored interpretations that the sustainable communities are “romantic escapes from modern society”. Oppositely, they thrive to live in a new relationship with the surrounding human and natural environment, respecting different values and ideas of well-being. Though, it is well known that they neglect or even reject the contemporary unsustainable development. That is most probably the reason, why they believe in the power of grassroots initiatives and try to give concrete examples of good life. Furthermore, they aim to enhance the awareness of sustainability issues and to raise inspiration and motivation to others.

4.1.3 Grassroots' niches and transition towards the alternative settlements

In the study of Forrest and Wiek, they claim that 'grassroots' niches, how they call the small community initiatives, play certainly an important role in sustainability transition on the local level. Their previous study already confirmed the potential of the small-scale community sustainability transitions as it shows several improvements, in the reduction of CO₂, accessibility and civic engagement and social cohesion. However, they bring up the work's limitations at the same time. That is the little empirical evidence about the transitions' effectiveness (Forrest, Wiek, 2014). Therefore, they believe that through replication of these small changes and improvements, new social practices come out and will lead to wider societal change. Further, they identified and put together a bunch of successful recommendations for those small community initiatives that decide to undergo the sustainability transition process (Forrest, Wiek, 2015). These recommendations could be also adopted, with minor changes, for the construction of a new sustainable alternative settlement.

Although we can see high potential of all the different kinds of alternative settlements, the aim is not to move everyone in one of them. Not only that most people are not aware of this issue and a need for sustainable development, they do not know that this kind of initiatives exists. And even if some are aware, they would be strictly against the idea of changing their lifestyle anyway. All sympathizers of localization such as Robertson, Pretty and Berry underline the nonviolent, restrained and step-by-step approach, to achieve the sustainable goals leading to the whole societal change. As Johanisova further mentions, the government do not give enough attention and its support to the sustainability issues, it is by too far beyond their scope. Therefore, drawing on Korten and Robertson, she says there is a need for an economic subsidiarity. Driven by this thought, they presented a multi-level economic system, composed of six levels where the first level represents the locality, then it grows from a district (city, county, etc.), through a region, nation and continent to the global level. They also mention that the sustainable transition really is in hands of the local grassroots initiatives or any organization at the local level. By encompassing the main objectives (of sustainable development) we should inherently become more, if not fully, self-sufficient and independent. (Hall, 2015; Johanisova, 2007).

4.1.4 When it comes to grassroots initiative's inception

The previous text has proved that many scientists believe in the potential of grassroots initiatives and see the eco-villages as well as other alternative settlements as a mean for revitalizing the rural and/or local areas. Hargreaves and his colleagues comment that in the case of starting such a project an emphasis must be put on local external context. In spite the internal similarities among the alternative settlements, not many practices might be easily replicable because of the inconsistency and dissimilarity in the external context (Hargreaves et al, 2013). I can identify a wide range of implemented practices and technologies within only 8 case studies, notwithstanding the initial similarities regarding the vision and aims. It is obvious that there are several factors playing an important role such as location, the decisions taken individually or collectively and much more. These factors consequently generate different combinations of concrete practices and technologies, resulting in impossibility to utterly replicate the elaborated guidelines (and there is known existence of many, e.g. A practical toolkit for communities aiming to carbon neutrality by Charnock (2006/7), 'The enterprising eco-villager: Achieving Community Development through Innovative Green Entrepreneurship' by Hall (2013), the Hopkins' 'Transition-handbook: From oil dependency to local resilience', 'The Rural Transportation Planning Guidebook' developed by Texas Transportation Institute (2004) or 'The rural challenge achieving sustainable rural communities for the 21st century' by The rural coalition in England (2010)) for the construction of alternative settlements or a transition into one. As Hargreaves et al. further explain: "On the one hand, the lessons learnt are so diverse that it is neither obvious nor automatic for other local projects to identify which ones might be applicable to them, whilst on the other hand, some lessons can be so locally-specific that they may have little wider applicability." (Hargreaves, 2013:5). Additionally, they arrived at the similar conclusion in their research, claiming that there is a diversity of potential routes for achieving the single sustainable aims. Sometimes there are hesitations about which direction to take because the aims or vision aren't strictly defined and it can also happen that the chosen route changes due to a later modification of defined aims (Hargreaves et al, 2013). These findings also changed our minds and led to a modification of our main research question. Originally, the idea was to elaborate on the best practices and technologies that would be recommended when a new initiative would emerge to construct a new alternative settlement or to a transition. And at the end, we determined our final research question, asking: How strong importance is given to the four

dimensions of sustainability in the different phase of the alternative settlement's construction or transition?

4.2 Research area

The qualitative research was conducted in two mutually independent territories with comparable size and population, the Czech Republic as whole (see the Figure 4) and Auvergne-Rhône-Alpes region in France (see the Figure 5). In the first part, both territories were studied, four sites in each territory were visited and observed with one person interviewed and at the end, the results were compared and discussed. These eight cases were chosen for their similar aims (change towards more sustainable living focusing on the environmental preservation and eco-reversibility, the healthy lifestyle and the community re-development) but a diversification of attitudes for an action. They are of similar scale and levels of capacity in terms of motivation, experience, the municipality support, the technical and financial resources but their actions differ regarding the practices used and technologies implemented. It must be mentioned, that the study includes alternative settlements of a similar size, of up to 500 inhabitants or participants but the type of settlements differs. E.g. eco-villages, alternative villages, eco-sites and cities in transition where a small group initiates similar projects. In each case the concrete location was observed in detail, before or after the semi-conducted interview was carried out.

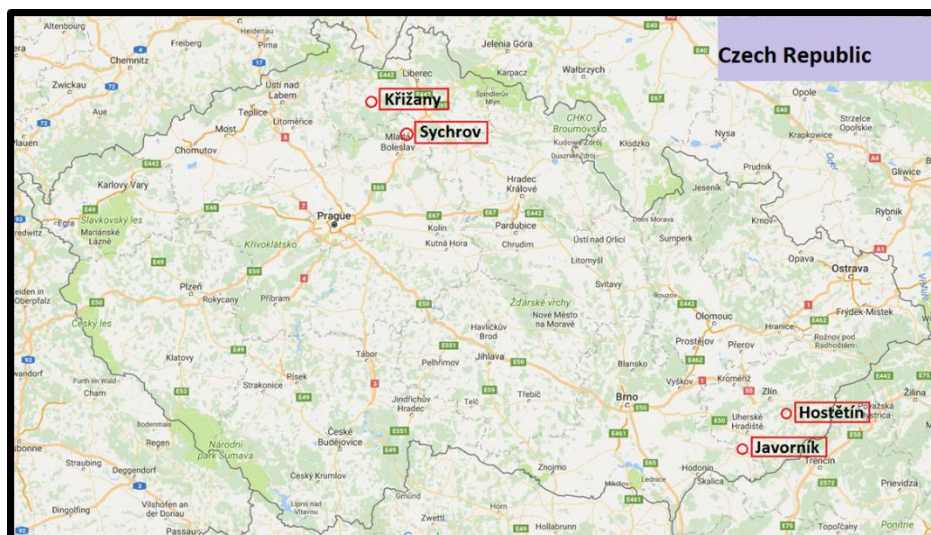


Figure 4 The settlements included in the study from the Czech Republic

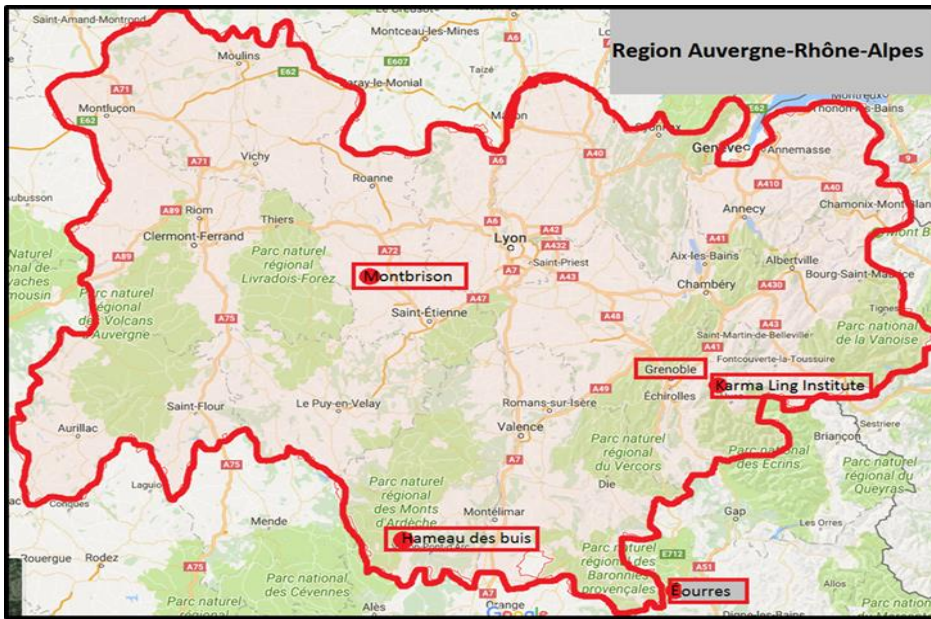


Figure 5 The included settlements from the Auvergne-Rhône-Alpes region

4.3 Settlement structure in the Czech Republic

The settlement structure of the Czech Republic has been influenced by the historical development of Czech lands during the last hundred years. It is characterized by some distinctive features, including a high degree of fragmentation in the rural area relatively low representation of large cities and agglomerations and the important role of small and medium-sized towns, as illustrated in Figure 6. It is highly related to the land fragmentation, in consequence, there is a large number of relatively small municipalities. Statistically, in 2011, there were 4,856 municipalities, representing almost 78% of the total, each having the population of fewer than 1,000 habitants. In the sum, it is nearly 1,8 million inhabitants living in the small municipalities (or 17% of the population of the CR) but they stretch over 57% of the total area. The overall number of rural settlements of up to 3000 inhabitants is estimated at about 40 thousand, with an average residence distance of about 1.5 kilometers (Svobodová et al., 2013).

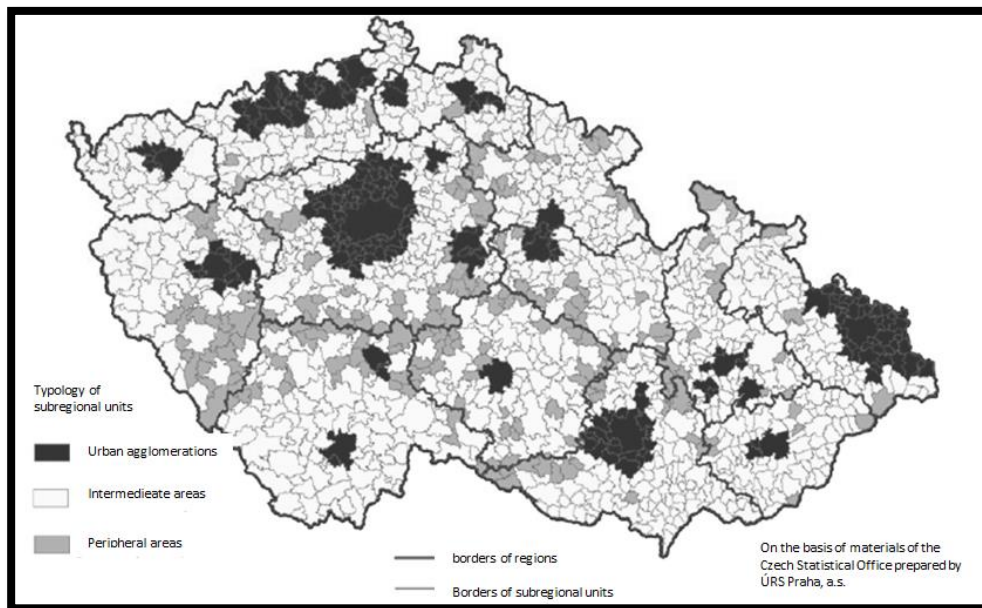


Figure 6 Typology of subregional units of the Czech Republic

4.3.1 The urbanization trend in CR

In the early twentieth century, most of the districts in the Czech Republic witnessed a decrease in the number of the population except the capital city Prague and other large cities such as České Budějovice, Hradec Králové, Zlín, Olomouc, Brno and Ostrava. That is to say, all the cities having above 10 thousand inhabitants. The population in the villages were decreasing, with about 400 thousand people emigrating every year. After the Second World War, the urbanization trend is continuing, predominantly in the cities and borderlands, including Kladno and Mladá Boleslav (at the time close to the German border), most cities in Moravia and Sudetenland. Prague, oppositely to Brno was significantly depopulated and replaced by Germans. The mass industrialization in the 50's was characterized by controlled migration inhabitants to cities. Urbanization also continued during the 60's – 70's when the population growth was estimated at 20% and the total urban population represented 67%. The largest development occurred in the towns of southern Bohemia where many new houses were constructed, then in northern Moravia and northern Bohemia. Some cities even doubled their population during this era. On the other hand, the smallest increases were registered in Prague and Brno caused by the slow pace of housing construction. In addition, several cities in central Bohemia region, the district of Opava and Karviná have already experienced the first depopulation wave. Rural villages lost around 400 thousand inhabitants. Since the 80's, this new trend of

suburbanization is on the rise, however, the total population growth stagnates. The situation is changing between the years of 1990 and 1995 when urbanization is somewhat suspended and the population has dropped by 0.3%. This significant decline could be assigned to mass emigration after the Velvet revolution. And due to lack of housing construction in the cities, a large number of people left to the countryside where the population is growing for the first time in a very long time. In the Czech Republic, 75% of the population lives in cities, compared to France where this share is 80%? (Hampl, 1989).

4.3.2 Sustainable development in CR

In our country, the Act No. 17/1992, collection about the environment treats the definition and all aspects of the sustainable development in the Czech Republic. This law refers to documents such as National Sustainable Development Strategy and defines sustainable development as "development that preserves the present and future generations of the opportunity to meet their basic needs while not reducing the diversity of nature and preserving the natural functions of ecosystems." However, the concept of sustainable development is burdened by several myths that result from differences in the perception of its content, according to Slavo Czeladny (2007). It is believed that sustainable development does not have operable frameworks and that they are not useful for identifying the benefits of development programs. Even though several international institutions offer three concepts of sustainable development, containing sets of sustainability criteria for development. As mentioned in the chapter 3.7.4 the sustainability of development is conceived as balance of development between the three main pillars (economic, social and environmental). The current development, nevertheless, is based only on the economy's performance, the living standard of the population and the burden on the environment which is not from the long-term point of view supportable. Such development of one pillar should not evolve at the expense or account of another pillar. The United Nations World Commission for Environment and Development concept evolved from the denial of economic growth to the environmentally friendly type of development process. It is an environmental concept that relies primarily on the criteria of air, water and soil pollution in relation to the population or gross domestic product, but also on the objectives of international commitments and international comparison (Uhlířová, 2008).

Sustainability elements are not so precisely formulated, measurable and verifiable as indicators of sustainable development. Contrary to general macro-level indicators, sustainability elements are more specific and can be related to micro level. However, they are formulated as easily and comprehensibly as possible, and are divided into three economic, social and environmental elements according to the three basic pillars of sustainable development. Some elements of sustainability of third aspects of sustainability elements of individual projects may not always be considered as sustainable sustainability, for example in the case of the "minimization of waste production and its shortcomings" in the analysis of the mustard (Uhlířová, 2008).

4.4 The characteristics of the Czech Republic

4.4.1 Location and expanse

The expanse of the Czech Republic is slightly over 78,8 km², comprising 14 regions where the capital city of Prague represents one of them. The biggest region by its size is the Central Bohemian (CB) region which surrounds the capital city and it mostly benefits from its proximity, dense transport network (as it is a significant source of labor). On the contrary, this region complements the industrial sector of Prague, supplies it with food and provides it with its recreational potential. The main railway, road transit and water networks pass through the territory of Prague and the Central Bohemian region.

4.4.2 Population and employment¹

The number of population recently exceeded 10,5 million. Only in Prague, there is 1,2 million inhabitants and another 1,26 million lives in the CB region. Other regions over passing 1 million are the Moravian-Silesian and south Moravian regions where the second and third biggest cities are situated. Over 5 million out of the total number of inhabitants are employed (ČSÚ, 2017a). The number of economically active inhabitants in the Czech Republic stagnated in 2009-2011, respectively. It declined slightly. This tendency is evident in the majority of regions, except for the Central Bohemian Region, where the number of economically active ones has increased. Average nominal wages over time grow regardless of economic fluctuations, as confirmed by regional data (Viturka, 2014).

¹ All statistical information refers to the year 2015, unless otherwise indicated.

The share of employment is the highest again in the capital city and CB region. This region is characterized by developed agricultural (share over 11%) and industrial production (share over 11%). The agricultural production benefits from excellent natural conditions in the northeastern part of the region. The region excels mainly in plant production, wheat, barley, sugar beet cultivation and in growing fruit, vegetables and flowers in suburban areas. The key industries are engineering, chemistry and food industry with ŠKODA AUTO a.s. Mladá Boleslav being an enterprise of national importance. Several major companies are represented by glass, ceramics and polygraphy. Compared to the sectoral structure of employment in the Czech Republic, industrial and agricultural production is above average in the region, while the share of construction and services in total employment is lower, but the service sector has been showing progressive growth in recent years (ČSÚ, 2017b). In Prague, the market and non-market services dominate with almost 18% share of employment. Other regions operating mainly in the agriculture sector is the south Bohemian and Highlands Region. The lowest employment is registered in Moravian-Silesian (but still holding a share of employment in industrial sector) and Aussig region (ČSÚ, 2017a).

From a long-term point of view, the unemployment rates were fluctuating around the national average (6,26 %) between years 2006 – 2015 but we observed a significant decrease in unemployment (Figure 7) in the last two years when it has decreased to 5,5 % in 2016 and about 3 % in 2017 (ČSÚ, 2017c). There are significant differences in unemployment within and between the regions and the main influencer is the capital city. The highest unemployment is in Moravian-Silesian, South Moravian, Aussig region and surprisingly the CB region as well, all of them over passing the share of 10 % from the national total (ČSÚ, 2017a).



Figure 7 Unemployment rate evolution in the Czech Republic within period 2006 – 2017 (Husna, 2017a)

Specifically, to the Moravian-Silesian region, it is predominantly occupied by agricultural land, while more than 35% is covered by forest. This region is rich in natural wealth as well as in mineral reserves, including crucial domestic reserves of hard coal, natural gas deposits and other raw materials such as limestone, granite, marble, slate, gypsum, gravel, sands and brick clay. Since the 19th century, the region has been one of the most important industrial regions of Central Europe, particularly in the development of heavy industry and metallurgy. The Region is thus a nationwide center of metallurgical production, at the same time there is also concentrated the mining of almost all production of Czech Black coal, even though the quantity of the mined is decreasing. However, its focus on economic activity - the sectoral structure - brought considerable problems related to the restructuring of the region today, addressing social problems, particularly those linked to the level of unemployment. In addition to these traditional industries, the region also promotes the production and distribution of electricity, gas and water, the production of transport equipment and the chemical and pharmaceutical industries. Since the beginning of the nineties, there has been a significant improvement in the state of the environment due to the decline in industrial production, the use of more technology and considerable investment in environmental measures. Despite these improvements, the region continues to be among the most heavily affected areas in the Czech Republic, as all environmental components have been polluted in the past. Today, as a result of the industrial activity, our planet suffers from contamination of soil and groundwater, as well as, mine drops and pollution of surface water and air. Towns and villages, as well as the nearby mountains and

rivers, offer a wide range of sports activities, countless possibilities for recreation, exploring cultural monuments, spas and medical cures. The region's specificity is the conditions for industrial tourism Economic situation and natural conditions (ČSÚ, 2016).

In 2015, the GDP in the Czech Republic reached over 4,5 million CZK (about 170 thousand euros). The highest GDP is produced in Prague (share of 24,4%), followed by CB region (share of 11,6%), South Moravian region reaching the share of 11% and Moravian-Silesian with 9,6%. The production of GDP in the rest of regions ranges between 1,9 – 6% (ČSÚ, 2017a).

4.4.3 Geography and natural conditions

The Czech Republic lies in the very center of Europe, at the border of the Hercynian Mesoeurope with Neoeurope. There are very few national territories, if any, with such a varied geological structure on such a small area and with such a complex geological development. There are virtually all known rocks in this country and the vast majority of geological formations as well as the large majority of the known types of ore and non-bearing deposits. Deposits of black coal deposits are mainly in the CB and Moravian-Silesian regions. And the brown coal deposits were found in the Carlsbad and Assig region. Deposits of crude oil are in the south Moravian and Zlín region. The uranium that is obtained as a side effect of groundwater treatment and technological solutions in the field of liquidation and reclamation after in situ leaching of uranium ores is extracted in many parts of the Czech Republic. The natural gas is predominantly found in the Moravian-Silesian region. The mining areas of clay, lime and cement and brick raw materials are widely spread in all regions as well as rather small deposits of dolomite, gemstones and decorative stones (such as granite slate, marble and cobblestones, curbs and paving stones made of natural stone), feldspar, industrial sand (used in glass and foundry industry). Further, there is a large number of building stone pits (MŽP, 2016).

4.4.4 Tourism

Tourism is an integral part of the Czech economy. In 2015, tourism accounted for 2.8 % of gross domestic product and employed 228 thousand people. The total volume of tourism expenditure in our country reached 250 billion crowns. International tourists accounted for 59 % of total consumption. The remaining two-fifths, namely CZK 102 billion, were

generated by domestic visitors through domestic tourism. In catering and hospitality facilities work 67 thousand people, 39 thousand in accommodation, and 13 thousand employees work in tourist offices and agencies. Another nearly 60,000 people were employed in the tourism-related industries. These include, for example, making maps, souvenirs or souvenirs, business activities, communications and telecommunications or real estate activities (ČSÚ, 2017d). Czech Republic benefits from the diversity of natural landscape, many natural reserve and national parks as well as many important historical and cultural monuments that are included in the UNESCO World Natural and Cultural Heritage List. The largest concentration of monuments is in Kutná Hora (St. Barbara's Cathedral, Vlašský Dvůr, Hrádek with Silver Mines, Constance). Close to Beroun, there is the most famous castle Karlstejn. One of the most valuable natural areas is Křivoklátsko PLA, which is on the list of biosphere reserves, Kokořínsko PLA, Český Kras and Bohemian Paradise (ČSÚ, 2017b). The highest number of collective accommodation facilities is in the South Bohemian region (share of 13,2%), followed by Hradec Králové region with the share of 10,5 %. The total number of all collective accommodation facilities is 9.163, such as pensions, hotels, etc. (ČSÚ, 2017a).

4.5 Settlement structure in France

The largest part of the territory of France (metropolitan France) is located in western Europe. The French Republic is also formed by the so-called Overseas France, which consists of territories in North and South America (French Guyana), in the Indian Ocean and the Caribbean (the island of Saint Martin) and Antarctica since the sovereignty declared in Antarctica was not recognized by most other countries. The European part of France occupies an area of 544 thousand km². In the north and west, the landscape is flat with moderate waves but the rest of the territory is predominantly hilly and mountainous. In the French Alps, there is the highest point of western Europe Mont Blanc (4 810 m). Other mountain regions of the country include the Pyrenees, the Central Massif, the Jura, the Vosges, the Armory Massif and the Ardennes. The largest French rivers are Loire, Rhône (springing in Switzerland), Garonna (in Spain), the Seine and part of the Rhine. There are 34,672 communes that have less than 5.000 inhabitants, representing 94.5 % and oppositely, the number of communes having more than 10.000 inhabitants is 947, aka 2.3 % of the total population (Pôle Emploi Auvergne-Rhône-Alpes, 2016).

4.5.1 The urbanization trend in France

France has 64.5 million inhabitants divided into 36,681 municipalities, 101 departments, and 26 regions. The urbanization trend is increasing every single year as reviewed in the Figure 8. For the past ten years the increase reached almost 2,4 %. The average urbanization trend within those ten years was 78,29% and in 2015 it reached its maximum of 79,52 % of urbanized area. Although the population growth has dropped down significantly in the period between 2006 and 2012, the total French population has annually increased, primarily due to France’s fertility rate which remained relatively steady over the past decade (statista, 2017).

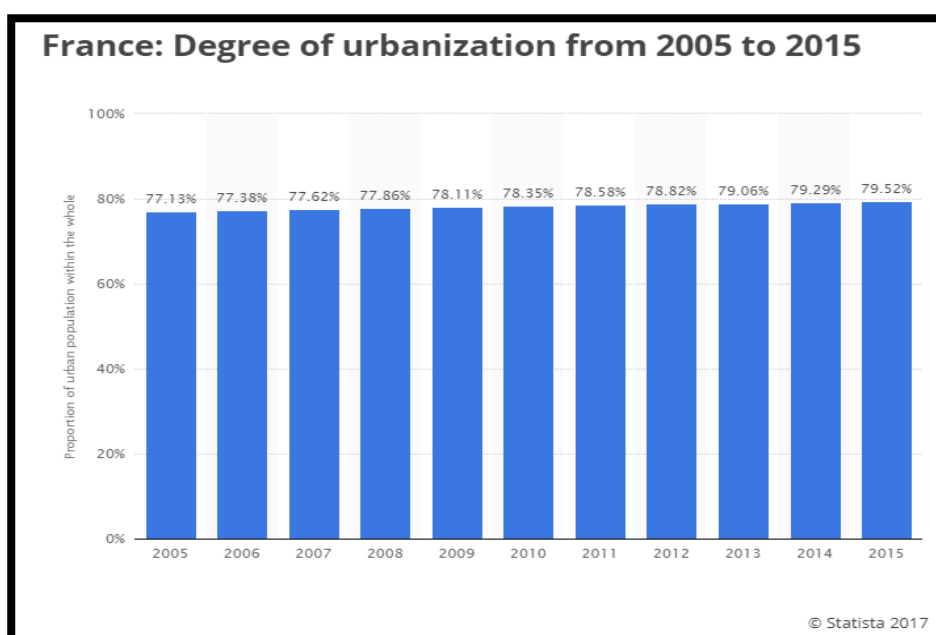


Figure 8 Urbanization trend between 2005 and 2015

The following graphic (Figure 9) shows the total population of France from 2010 to 2016, with projections up until 2020. In 2015, the total population of France amounted to 64.34 million people. “From an economic standpoint, France has remained stable, despite several complications within the European Union. Since the 2008 financial crisis, France’s unemployment rate has increased and has experienced several swings year-to-year up until 2014. However, despite fluctuating unemployment rates, GDP growth has very slightly been on the rise on a yearly basis, ever since experiencing a dramatic drop in 2009. Additionally, the GDP itself has continuously been fluctuating since 2008), after enduring a continuous increase in the years prior” (statista, 2017).

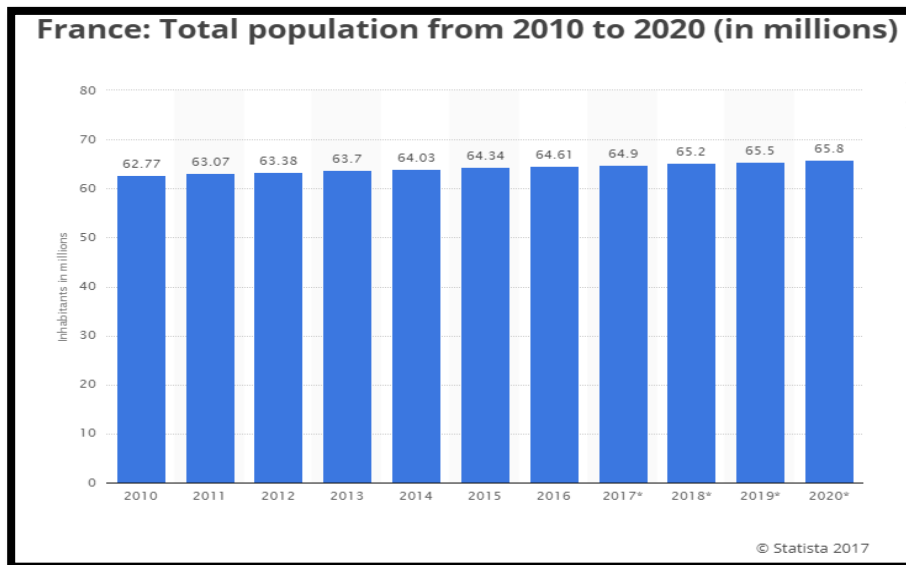


Figure 9 Total population projection between 2010 and 2020

4.5.2 Sustainable development in France

A new concept of connecting the proximity between environment and development started to evolve in 1997 (dissolved in 2002) by a newly created Ministry of Spatial Planning and the Environment. Few years later it definitively endorsed with the law of orientation for the development (Voynet Act of 25 June 1999), which has substantially reformed the spatial planning policy by assigning the central objective of sustainable development. Organizing intercommunality (countries in rural areas, agglomerations in urban areas), this act formalized the role of communities in the process of concrete application of the principles of sustainable development. According to Article 22, groups of communes will have to draw up a charter of countries or agglomeration, followed by common development project for sustainable development of the territory as the international commitments has finalized at the summit of Rio de Janeiro. The charter must therefore reflect the global sustainable development objectives of social equity, economic efficiency and environmental improvement; the principles of subsidiarity and transversality; to a quest for citizen participation, transparency of decisions; to the challenges of long-term and short-term reconciliation. As a result of the Voynet Act, the Act on Strengthening and Simplifying Cooperation (Chevènement law of 12 July 1999) allows the organization of agglomerations in providing a consolidated institutional framework, a compulsory tax integration tool (tax or TPU), as well as strategic economic development and spatial planning (Bertrand et al., 2005).

Within this framework ("A territory, a project, a strategy, a contract"), the territory project becomes the keyword of national planning policies; so there seems to be no local project. The multiplication of contractual procedures then provides a rational response to the impossibility of national planning of the territory. The intractable difficulties of thinking together about the competitiveness and solidarity of the territories can occur, then solution for contractual growth and the reign of the project must be found. By fragmenting public action, the question of its overall effectiveness is circumvented. The focus must be directed only on the concrete location (Bertrand et al., 2005).

The structuring of the national territory in France into "project territories" is extremely flexible, contrasting with other times when the territories had to adapt to the national development project. It also contains a dynamic idea of development ascending, relying on wills and local forces. But it carries a serious risk fragmentation of spatial planning policies. For the "all project" and the "contractual whole" can not suffice if no one evokes the idea of a common project, bringing together the whole country, and even Europe, with the risk of competition among territories, those who "win" and those who "lose" have only to repair the damage and to fill the delays. It is therefore necessary to question the logic of the territorial project and to observe the limits of this form "multi-unit" development. While the mirage of the division of competences between the different territorial levels fades, each territorial level intervenes on many particular developmental tasks of a "global territory project", at the same time no level is to act alone. This obligation to spread the development to several levels generalizes the partnership for action, territorial co-operation and creates situation which would allow better communication between pooling of resources on shared and coherent objectives. If the approach of the shared project appears as a good method to associate and make work the actors of the territories, it also has its own limits. In the face of the implementation the variable and temporary scales of the project, which often overlap without matching each other, do not guarantee the necessary coherence between the various initiatives. The fragmentation dominates. The principle of the territorial project presents several incompatibilities with the complex vision opened by the sustainable development, recognizing the multiple interdependencies involved in territorial phenomena. Then, the global vision, both in time and space, does not suit to the goals of sustainable development (Bertrand et al., 2005).

4.6 The characteristic of the region Auvergne-Rhône-Alpes

4.6.1 Location and expanse

The Auvergne-Rhône-Alpes region occupies a central position within France and the European area. It extends on 69 700 km² and consists of 4,181 municipalities in 13 départements, including the metropolitan area of Lyon. This region offers a great diversity of landscapes, from volcanic craters and massifs in the west, over the vast plains such as Limagne or Forez, to the high mountains of the Alps. Two-thirds of the surface area represent mountains of the Saône-Rhône axis: The Massif Central on one side, Jura, and The Alps on the other. The northwest and north part is mostly forested but the southeast is rich in vineyards, fields of lavender and olive trees. This diversity of landscapes illustrates the great climate and ecological diversity of the region, shared between continental, alpine and Mediterranean bioclimatic influences. The region also contains the largest freshwater lakes and freshwater areas in France. This impressive natural heritage can be illustrated by the overrepresentation of forests, permanent grasslands and other natural areas, which occupy 73% of the region (compared with an average of 51% in France). It is not by accident that there are 2 national parks and 8 regional natural parks. However, the eastern part of the region is significantly disadvantaged due to its high-mountainous landscape (Pôle Emploi Auvergne-Rhône-Alpes, 2016).

4.6.2 Population and employment

The population of the Auvergne-Rhône-Alpes region is 7,7 hundred thousand inhabitants, representing about 12% of the metropolitan population and ranks the region on the second place. About 47% of the territory is peri-urban nevertheless, 95% of the population lives in the urban area. As Figure 10 illustrates, the areas of large agglomerations are highlighted in the red color, the reach of suburban territories in orange with multipolar communities in yellow. The violet colored spots represent medium sized settlements and the green small ones. Anything left is in white color, meaning remote or rather isolated, mostly mountainous areas (Pôle Emploi Auvergne-Rhône-Alpes, 2016).

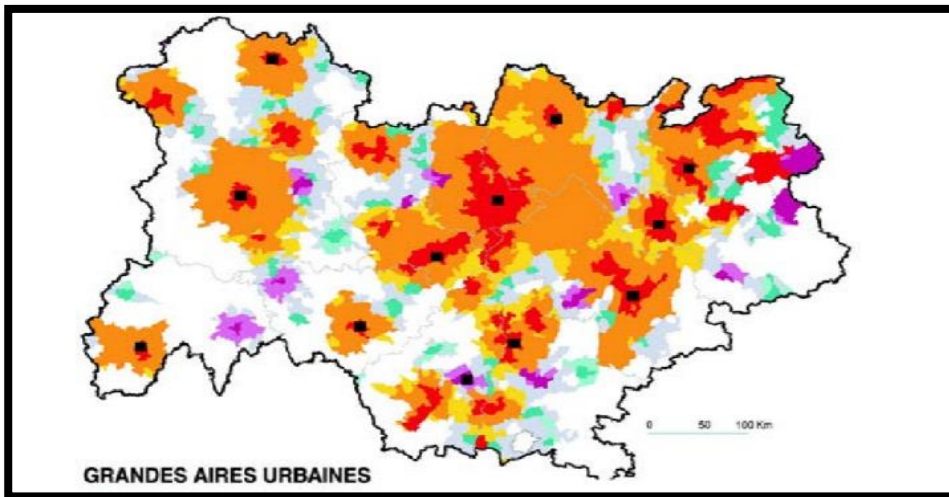


Figure 10 Zoning in urban areas

In 2016, the employment rate at 71% for the people aged at 20 to 64 is little higher, compared with 69% in metropolitan France and well above the European average (68%). However, this rate was little lower compared to the Czech Republic with the employment rate of 71,2% and other northern European countries such as Sweden, Germany and the United Kingdom where the employment rates often reach above 80%. Among these workers, 88% have a status of an employee and 12% are self-employed (Agence d'urbanisme de l'aire métropolitaine lyonnaise, 2016). The unemployment rate remained stable in the region compared with 2014 (8.9% of the active population) as illustrated in the Figure 11. Behind this stability, the number of job seekers continued to grow (+ 6.2%), at the same time as the active population. People over the age of 50 remain the most affected, in front of young people. Long-term unemployment, which often affects the oldest, has further increased in 2015. In 2016, in the Auvergne-Rhône-Alpes, the economic recovery begun in 2015 is confirmed. Unemployment is declining slightly, especially among young people. In addition, employment is dynamic, particularly in merchant services and temporary employment. Business start-ups are also growing and there are fewer failures than in the previous year. Exports are increasing but slower than imports. Unlike in previous years, the construction sector is showing signs of recovery. On the other hand, for agriculture, once again 2016 is a difficult year (INSEE, 2016a).

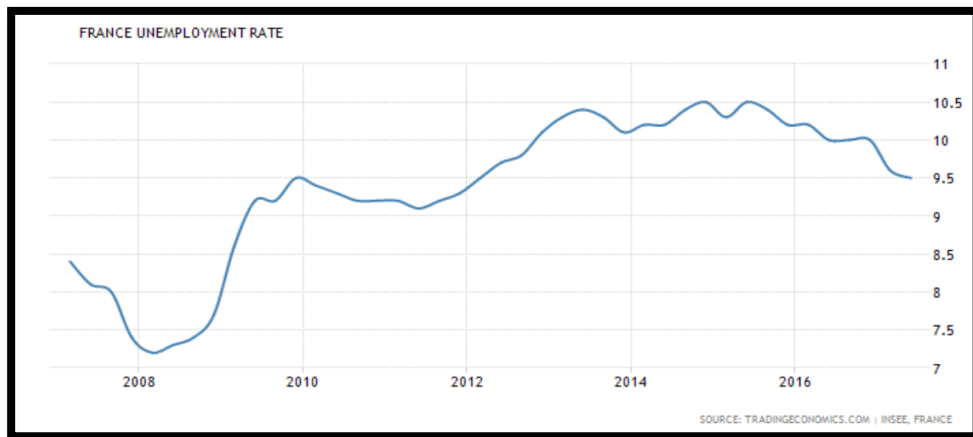


Figure 11 The unemployment rate evolution in France within the period 2006 – 2017 (Husna, 2017b)

Some spaces attract particularly active people. These are for example territories that offer many seasonal jobs, or those located close to a large employment cluster. For example, the employment rate is particularly high in the major metropolises since there are often young families living in the peri-urban areas but commuting to work. The unemployment in these areas are scarce and women's activity is high. The employment in the industrial sector is represented by 18 % with the part of agriculture by 2,6 %. The principal groups in Auvergne-Rhône-Alpes are very famous tire producer Michelin, Limagrain (cooperative group created and led by farmers), Renault Trucks, Casino supermarkets, Sanofi Pasteur (working in vaccine innovation and R&D), Keolis Lyon (start-up in the field of public transportation service, a regional pioneer of e-commerce in France and entrepreneur of the Year 2015 in Auvergne-Rhône-Alpes). Roughly 7,8 % of employees work in the construction sector and about 16 % in the fields of the tertiary sector such as trade, transportation, accommodation and catering, IT services and information. Most industrial activities, as well as construction, are experiencing a smaller decline than previously. The tertiary sector is characterized by its vitality. All merchant services earn employees. Trade is less dynamic than last year, but temporary employment is up sharply (INSEE, 2016b). Another constraint that poses a problem is border employment which became to be particularly dynamic since the entry into force of the free movement of persons within the European Union in 2002. Most affected is the border area with Switzerland where the number of cross-border commuters working in the canton of Geneva has doubled in fifteen years. It has increased by 3.4% from 2014 to 20 (Pôle Emploi Auvergne-Rhône-Alpes, 2016).

Comparison of the unemployment rate of all the member states in the EU, including the Czech Republic on the first place (the lowest rate of 3,7 % in september 2016 and the trend is still decreasing as we could notice in the chapter 4.4.2 and the (Figure 12) and France in the second half of the graphic with the rate about 9,5 %, even behind the EU average reaching 8,3 % of unemployment.

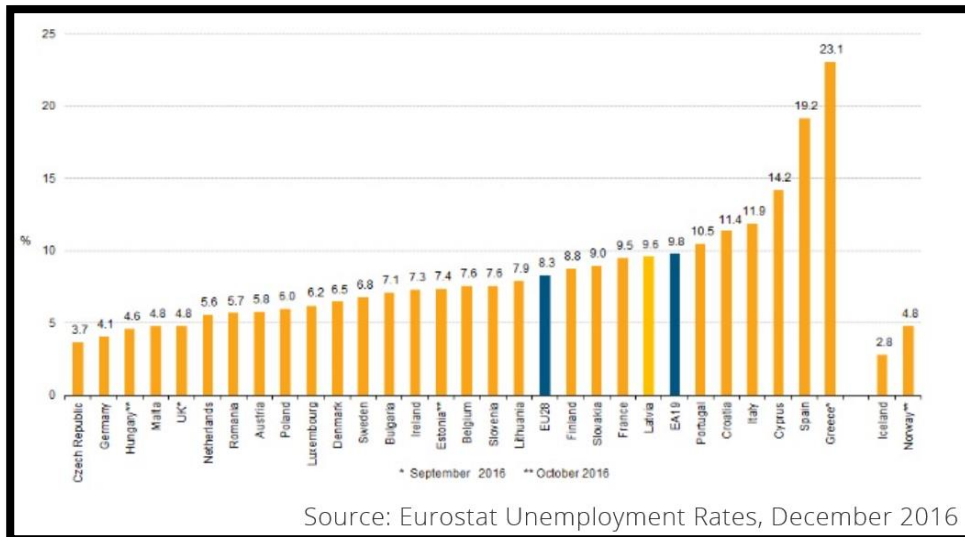


Figure 12 The comparison of unemployment rate within the member states in the EU (Expats.cz, 2017)

4.6.3 Geography and natural conditions

France enjoys its privileged geographical location, at the junction between northern and southern Europe, with a double opening on the Atlantic and the Mediterranean. It also benefits from a favorable physical environment (climate, forest, soil, natural accessibility). Aeration of the relief by vast expanses of plains and low plateaus to the west, and the existence of large corridors of penetration (wide river valleys, tectonic ditches) inside mountainous reliefs, in the center and western part (Buchot, 2017). In the western part of the region where the Alps are situated, the territory is predominantly rural, where agriculture is firmly established. The local population is more likely to be employed, either having a seasonal or full-time job. However, the non-wage earners are an essential component of the economy in this mainly rural and tourist area. The share of retirees rose in this area from 18% in 1982 to 26% in 2012 and the overall population remarks its aging

and the decline in the number of post-war farmers continues (Agence d'urbanisme de l'aire métropolitaine lyonnaise, 2016). The living conditions are sometimes constraining, the cost of living and traveling do not favor a facility if you do not have a job on the site. It is then obvious that the standard of living in rural areas far lower than in the main urban centers. One of six lives below the poverty line. These territories are located to the west of the region, in Cantal, Haute-Loire, Ardèche, Allier and part of the Drôme. Despite their scarce resources, they sometimes have a patrimony, in the form of housing, land or savings, which can provide them with some income. For these reasons, the region has a developed tourist vocation, linked to the presence of the Alpine mountains in its eastern facade and to the Mediterranean climate in its southern part. Tradesmen are over-represented in the southern half of France and particularly in the tourist regions. To these physical and human influences is added an urban component with the presence of large agglomerations that structure the activity of the territory.

With regards to the employment structure, Auvergne-Rhône-Alpes is at the crossroads of various influences. Like the other regions of eastern France, the region has a strong industrial tradition, linked to the development of energy (white and black coal) and textiles in the 19th century. Some departments with little urbanization are characterized by a relatively low proportion of people in employment, linked to a high unemployment rate and a lower level of female activity. Additionally, to 10% of the most remote inhabitants, it takes at least nine minutes to reach all the facilities of everyday life and 17 minutes in very dense rural areas. Auvergne-Rhône-Alpes is characterized by its strong urbanization but the importance of its very rural areas representing about 35% of its territory. It is distinguished from other regions by strong inequalities mainly due to the mountainous character of the region. Because of constraining landscape, the access times within the mountain communes are higher than those of other communes of equivalent density. In the low and very dense areas of the Auvergne-Rhône-Alpes mountains, the most isolated populations have a travel time of 50% higher than the most remote populations in non-mountain areas. These communes are considered as highly isolated, covering 30% of the territory and having 239 000 inhabitants, or 3% of the regional population (Agence d'urbanisme de l'aire métropolitaine lyonnaise, 2016). In terms of natural reserves and deposits, the French subsoil contains few mineral raw materials such as iron ore, potash, bauxite, nickel and fossil fuels including coal, hydrocarbons and uranium. Coal has long

been the main French mineral resource, but exploitation is doomed to term. Coal reserves are estimated to be between 500 and 600 million tons, but profitability is undermined by poor quality and difficult operating conditions, since its deposits are situated deep underground. The main deposits currently in operation are the coal basins of Lorraine (Forbach) and Provence (the Gardanne lignite deposit). On the other hand, some of the largest coal mines in the northern part of France ceased all activity in 1991 (Buchot, 2017).

4.6.4 Tourism

The tourists visiting this region can choose from nearly 900 establishments that offer a range of possibilities in terms of accommodation comprising hotels, holiday villages, youth hostels and other collective accommodation. In 2013, the region recorded 32,500,000 tourist nights. About 30% of this attendance comes from foreign countries, especially from Netherlands (representing more than half of the overnight stays in the region), the United Kingdom, Germany and Belgium. The region benefits from its great location, weather conditions and various landscape offering many possibilities for all kind of tourists. We can find there ten Natural parks, a hundred ski resorts, numerous spa towns, highly ranked cities and sites). In terms of hotels, the Auvergne-Rhône-Alpes region offers almost 85,000 rooms, thanks to the 2,600 hotel establishments in the region. Should anybody prefer, there are more than 1,100 campsites with 92,000 pitches, representing 15% of the total number of campsites in France (Pôle Emploi Auvergne-Rhône-Alpes, 2016). Ski resorts account for almost a quarter of winter overnight stays, however, the winter 2015/2016 experienced an appreciable drop in overnight stays of 1.2 %. There is a significant contrast in the number of stays between other collective accommodation (AHCT) that dropped by 3.8 % and hotels that shot up by 7.2 %. In the case of the Auvergne-Rhône-Alpes region, where the ski resorts account for 70 % of overnight stays, it suffered from the least turnout of the previous years. Compared to Burgundy-Franche-Comté, the overnight stays increased in all areas, including the ski resorts of the Jura (INSEE, 2016c).

5 Cases

In the first part of qualitative research, both territories Czech Republic as whole (Table 1) and Auvergne-Rhône-Alpes region in France (Table 2) were studied. Four sites in each territory were visited and observed with one person interviewed. You can find detailed information of all settlements in the tables below:

	Osada Bílé Karpaty	Křižany	Sychrov	Hostětín
Departement	Jihomoravský kraj	Liberecký kraj	Středočeský kraj	Zlínský kraj
City/village	Javorník	Křižany	Sychrov	Hostětín
Size	24,43 km ²	28,55 km ²	3,89 km ²	3,63 km ²
Population	716	859	159	231
Status	Eco-village	Eco-village	Association	Village in transition
Foundation	2012	2011	2002	1991
Number of participants	50	240	60	211

Table 1 Detailed information about the Czech settlements included into the study

	Hameau des Buis	Éourres	Karma Ling Institute	Montbrison-Forez
Departement	Ardèche	Hautes-Alpes	Savoie	Loire
City/village	Berrias-et-Casteljau	Éourres	Arvillard	Montbrison
Size	26,42km ²	26,47km ²	29,28km ²	16,33km ²
Population	724	131	842	15010
Status	Eco-village	Alternative village	Institute/Eco-site	Association
Foundation	2007	1977	1984	2012
Number of participants	80	120	90	(9) - 500

Table 2 Detailed information about the French settlements included into the study

At the end, the results were compared and discussed. These eight cases of an alternative settlement were chosen for their similar aims (change towards more sustainable living focusing on the environmental preservation and eco-reversibility, the healthy lifestyle and the community re-development) but also for the diversification of attitudes in certain action. All settlements correspond with the propositions of the Degrowth concept for sustainable development (elaborated in the chapter 3.7.5) and aim to fully achieve the sustainability in all dimensions. They are of similar scale and supposed to reach similar

levels of capacity in terms of motivation, experience, the municipality support, the technical and financial resources however, their actions are expected to differ with regards to the practices used and technologies implemented. It must be mentioned, that the study includes alternative settlements of a similar size, of up to 500 inhabitants or participants but the type of settlements differs. E.g. we studied eco-villages, alternative villages, eco-sites and cities in transition where a small group initiates similar projects. In each case the concrete location was observed in detail, before or after the semi-conducted interview was carried out. Each interview lasted between 2 and 4 hours and I was every time introduced to other inhabitants or members. The interview incorporated two types of questions. The first set of questions was supposed to answer if such a settlement can provide most inhabitants with sufficient and diversified amount of job opportunities, examine what is the role of rural/regional sustainable development, what influence has the given settlement or activities in the area on the outside, etc. And the second set of questions enabled the interviewees to tell us what factors and which sustainable dimension is the most important for the planning and construction part of the alternative settlement building.

5.1 Towards the Social sustainability

The social sustainability is the most often related to the community cohesion, cooperation in terms of having and achieving the same community vision. The social dimension and particularly the importance of community for the local development projects are stressed in many studies and information sources. After all, the human beings were meant to interact and cooperate within a group, a local group (Johanisova, 2007). Finally, it is very important to make the local community understand all attributes of the social dimension, its importance and to get them involved. In our research, we examined six attributes in each settlement and their attitude towards each attribute was summarized in the table below (Table 3).

Towards social sustainability	Hameau des buis	Éourres	Karma Ling	Montbrison en Forez	Sychrov	Osada Bílé Karpaty	Křížany	Hostětín
Importance of the community initiatives for local development	√	√	√	√	√	√	√	√
Decreasing importance of the community initiatives	×	√	×	×	√	×	×	×
Importance of the government support	×	×	×	×	√	√	√	√
Necessity of the community-based sustainable development	×	×	/	√	√	/	/	×
Barriers due to the rural positioning	×	×	√	×	√	√	√	√
Impact on the outside world	√	×	√	√	×	√	×	√
	√	Agreed						
	×	Rejected or neglected						
	/	Accepted but not necessary						

Table 3 Towards social sustainability

5.1.1 Importance of the community initiatives for the local development

A growing interest in community-based sustainability transitions has been observed by Forrest and Wiek so they investigated in community initiatives. They were attempting to find possible factors for the higher effectiveness of community initiatives when trying to achieve sustainability goals? In their research, they proposed three research questions to determine such effectiveness. “What was done?” “Was it successful?” and “How was it done?” Although the results show the community initiatives to be rather beneficial for the wider community unit its limited outreach is constraining (Forrest, Wiek, 2015). We could also observe very significant interest in the community-based initiatives from the beginning of each project. However, further discussion circles around the core principles of such an effective community development. This topic seems to be much more important in our research as we recorded changes and fluctuation in the community sustainability and trust in the community’s potential through time (different phases of the projects). The community initiative faded in the case of Éourres and seems like to be fading in Sychrov (which is still in construction phase though).

5.1.2 Importance of government for the local development

If a sustainable community suffers from economic and/or social problems the local government should apply measures to enhance local involvement. However, due to the regulations of the higher-level government, certain measures in transport, housing policy, planning, and training can’t be implemented (Day, 1998). Different studies, as well as Markey, support the claim about “the importance of local government leadership”

(Markey, 2010). Similarly, G. Day notes in his article on sustainable rural and community development, that the interactions between local and regional government very often play a key role. From our research, we can see some contradictory attitudes in all cases. Although municipality and/or regional support was claimed to be convenient but unnecessary in all french cases, the opposite attitude of denial would lead to discontinuity of the project no matter how great the potential it may have held. In all the czech cases, the municipality support was considered as necessary and certain proximity to a larger village or city was required. On the other hand, three out of four french settlements were situated in remote areas where the proximity did not play such a role. However, they would claim (except for a direct confirmation of the Karma Ling Institute) that proximity to a supporting community /municipality or region, offering property at a low price, and offering loans, microcredit, etc. would be among the requirements when searching for the right place (that is, these aspects would be preferred though not necessary).

5.1.3 Necessity of the community-based sustainable development

In the Ithaca case study, most future residents were looking for a connection to other like-minded individuals in order to set up a strong relation-based community where the sense of trust and reciprocity is essential. In this spirit, the decision concerning the extent of community involvement was left to individual determination. Nevertheless, this conviction from the period before moving changed over the course of time. When later asked, what were the reasons for moving into an eco-village, the environmental considerations outweighed the community reasons. Additionally, the analysis of results in my research led to similar conclusions. It seems that people are happy to become a part of a like-minded community. They are happy since they feel connected to those that respect the same values and to some extent have similar opinions. However, it doesn't mean they act or even think in the same way. And after a while, it might become displeasing, corresponding to the sense of shell shock. Yet all respondents have concluded that the benefits outweigh the drawbacks when it comes to the challenges of living in such sustainable community (Kirby, 2003).

As it was previously indicated, the role of community and the evidence of its importance hasn't been adequately proved. In my research, the acceptance of community differs. In three cases, it has been either rejected (in Éourres) or neglected (in Hameau des Buis,

Hostětín). In other three cases, it is respected, though it is not given much importance (in Karma Ling, Křižany and Osada Bílé Karpaty). In the last two, still evolving projects, the community represents an important factor for the sustainable development (in Montbrison-Forez and Sychrov). Nevertheless, some of the projects are still in the process of construction and therefore, many things might change, as it happened in Éourres.

In the case of Éourres, the transition started with a small group of motivated and desirous people having the vision of building a place that integrates social, environmental and personal ideal. Over time, the main community members left (for various reasons) and since then the community's appreciation weakened and eventually disappeared completely. In spite of the current community rejection, certain indications of community cooperation and solidarity are still evident. After all, they are still people respecting similar values and living in the same place. From the interview, we could infer that, at the time of major transition activities, the settlers attributed great importance to community support and cooperation. Nevertheless, when the core members left and the community almost disappeared we could no longer see a collective implementation of new technologies or substantial improvement of the practices used. Nowadays, the technologies and practices differ from house to house, from one family to another. There is no conformity and interoperability. The overall effect, therefore, remains relatively low.

We could observe and further assume from the eco-village effectiveness in Hameau des Buis, that the collective decisive power, together with a coherent vision in the planning phase and during the construction contributed to more efficient and more complex implementation of technologies and practices. And it seems that they will remain more efficient. Simultaneously, the evidence regarding the full support of the right to independently decide on the practices and/or technologies used by individuals is not clear. From the interviews and simple observation, it seems that in all french cases (except in Montbrison-Forez which is in the process of transition and so there is no evidence of the change in community support for now) this strong relationship and community power admiration began to fade when the major work was done, the settlers moved in and got on their own path. On the other hand, there is still clear evidence of a coherent vision that is collectively followed and high motivation shared within the community so we can see that the community always represents certain significance. Moreover, since no written values and rules are enforced, the relation to the community coherence and importance is even

more required (since the functionality is based on trust and common sense). However, this rule of “laissez-faire” is changing. Nowadays, the general information is given and common-sense moral’s must be respected, as well as certain common rules.

The attitude towards community necessity differs in the czech settlements as it was already mentioned. We assume that the reason is related to the evolution, the french settlements are evolutionary older and further in the process. The czech settlements seem to go in the same direction although the initial attitude towards community necessity was different, it was not given much importance or even neglected, therefore we can not expect strongly increasing tendency. In spite of the fact, the public education and public awareness is enormously promoted and widely spread, it is mostly probable that the tendency (of community necessity) will be falling down. Nonetheless, we must believe in positive impact of the public education and common sense.

5.1.4 Barriers due to rural positioning related to the community sustainability

Concerning the rural positioning we can assume certain differences between the settlements in the Czech Republic and the french region. Although the Czech settlement structure is dense and remote areas (how it is defined in the previous chapter 3.1.2), basically do not exist, they still highly require certain proximity to a larger village or city. However, it does not prevent from the negative effects of rural barriers. In the opposite case, in France we can confirm in three out of four cases that several consequences, that Markey and his colleagues state, occur due to the rural position: “In rural area the communities struggle to implement sustainable alternatives, even when their planning documents are infused with the principles of sustainable development” (Markey et al., 2010:1). They struggle from capacity barriers as detailed in chapter 3.2, such as lack of variable access to information, limited staff resources, and fewer financial assets that represent added barriers to conducting innovative planning processes. Nevertheless, this “implementation gap” is not insurmountable. A variety of pragmatic techniques exists which can bridge the constraints appearing in sustainable development project (Markey et al., 2010). We can also infer from our research that even though some of the projects did suffer from some of these barriers

mentioned, the community support nevertheless positively affected the achievement of implementation of more eco-friendly technologies and practices.

Another proof showing certain community respect and appreciation is the common area (room, indoor or outdoor space) that is kept in all cases that is very often established at the first stage. We can then argue that it was established because the community spirit was still highly appreciated. Nevertheless, the interviewees confessed, people always enjoyed and are still enjoying the time spent together, when a social event takes place. Therefore, we can confirm that the community inclusion is very important (probably even necessary) for the planning phase and the following stages of construction and/or an implementation.

Once the construction of a settlement is finished or a transition completed the community's significance starts to decline. The settlers then, of course, prefer to maintain good relations based on solidarity, sharing and occasional cooperation. But the social objective of a strong community is sidelined for a while and sometimes even forever. It also seems that since there is no more need for the community spirit, the type of juridical status, of governance or the decision-making process changes and is not coincident anymore. The early setting of a strict democracy, consensus, etc., eventually ends up via blending or diffusion and becomes the consensus-democratic decision process. Thus, it doesn't seem to have an impact on the settlement development. Of course, in terms of the legal process and other internal/external aspects, the situation differs.

5.1.5 Impact on the outside world

In Hameau des Buis, they organize regular open and free visits (need to consider their personal free time) and attendance varies between 12 and 60 people! They are open to discussion, questions, etc. They produce/d books and DVDs. Great emphasis is placed on the local school and sustainable education which could, in our opinion, have an impact on the surrounding area since more than 60% of children comes from outside the settlement. For now, public education and awareness-raising regarding the sustainability goals are considered the main objective of the project "Montbrison-Forez in transition" and in other Czech settlements such as Hostětín and Osada Bílé Karpaty. It seems they are successful, although, in the words of my interviewee from Montbrison-Forez, "it goes too slow". They organize events such as animations, film projections and discussions for free and people are invited to leave their email address in case they are further interested. About 500

contacts have been collected so far. The popularity and success is definitely increasing in Hostětín where the Center Veronica organize wide range of events and workshops, plus the surrounding population seems to like it a lot. In Karma Ling, the general aim was never related to environmental/ecological or sustainable education! Nevertheless, they follow and respect the environmental values since it is rooted in Buddhists values. Therefore, there could be an impact on the outside world, with regards to the main objective of spiritual education and the fact that all students are external to the community. In Éourres, there are not many attempts to promote the environmental/ecological or sustainable lifestyle, to educate the public or to raise awareness about sustainable aims, nor are there such attempts at the personal scale. However, it must be mentioned that there are several associations giving lectures on eco-construction, crafts and agriculture, aiming to spread the idea of sustainability and a certain need for self-sufficiency. The primary school, from my point of view, serves to educate the local children well but doesn't have a larger impact since merely 1/12 of children comes from outside the community. In addition, it could be inferred that these settlements aim to contribute to the retention of the original rural population. However, it seems that it is simply a byproduct of their general activity. Although their actions are definitely honorable there is no direct link to rural development.

5.2 Towards the Environmental sustainability

As Hardin expresses in his work *Tragedy of the Commons*, the establishment of a sustainable community is contingent on consensus decisions about the use of space and energy, and at the same time there is a need for agreement on the voluntary limits that an eco-village life involves and the intention to break from the destructive environmental cycle. The great emphasis which is put on the choice of location, the disposition of building, the type of construction, etc. confirms Hardin's claim (Hardin, 1968). In our research, we examined five attributes in each settlement and their attitude towards each attribute was summarized in the table below (Table 4).

Towards environmental sustainability	Hameau des buis	Éourres	Karma Ling	Montbrison en Forez	Sychrov	Osada Bílé Karpaty	Křižany	Hostětín
Solutions to weather extreme conditions	√	√	√	√	√	√	√	√
Attempts for food independency	√	√	×	√	×	√	×	×
Waste reduction and recycling, composting	×	×	>	√	√	>	>	×
Water re-use (rain, sanitation)	√	√	√	>	>	>	√	√
Renewable energy use and technology implementation	√	>	>	>	>	√	√	√
	√	Agreed						
	×	Rejected or neglected						
	>	Planned or in process						

Table 4 Towards environmental sustainability

5.2.1 Solutions to extreme weather conditions and resilience

In all cases, the houses and other constructions are always naturally built and well insulated, preferably from/by local resources using wood, stone and straw, which coheres well with their aims of environmental sustainability and eco-reversibility. The reduction of waste is inherent as well as is communal recycling, mostly through organic composting and use of dry toilets. With regards to water management, rain water is collected, primarily. On the other hand, in France, technologies for energy production are rarely used (sometimes in schools, community buildings). Almost no technologies are implemented in residential housing, nevertheless, the interviewees in all cases claimed that there is a plan for implementation of renewable energy plants. Currently, green energy is mainly provided by the conventional grid. In the Czech Republic, surprisingly, the phyto-purification system is wider-spread and used in all settlements (except Sychrov), as well as the implementation of solar panels and other technologies such as biomass heating or wind energy plants. It is supposed that since the eco-villages are delayed in the evolution, bigger amount of newer technologies is used, however, the monitoring isn't popular, maybe due to still continuing construction phase. On the contrary, in France they put emphasis on monitoring and observing the functionality and measuring accuracy of implemented technologies and practices. Concerning transportation, it is evident that commuting is unavoidable and its extent differs from village to village and from one family to another. E.g. in Hameu des Buis, the carpooling or car-sharing is practiced. In addition, the inhabitants want to create a small fleet of mutualized vehicles that includes different types of low-polluting and practical vehicles,

serving various needs. Furthermore, the organic production and/or purchase, and therefore mostly bio consumption is naturally abode in all settlements.

5.2.2 Different conditions and yet similar approach to become independent on food supply

It is worth noting that Éourres village and Hameau des Buis eco-village are both located in quite warm and dry places, which could pose a problem for organic agricultural practices. On the other hand, the Karma Ling Institute is located in a colder place, lacking the sunshine most of the day, and so they face a similar problem of non-optimal conditions. All settlements in the Czech Republic seem to be located in a good weather conditions. Nevertheless, permaculture and/or biodynamic approach for plant cultivation offer a good solution in all situations. That is why it is so widely promoted. In the Karma Ling Institute, Sychrov, Křižany and Hostětín, they are planning to set aside or even preparing a piece of land to transform it into a plant-bed. Ultimately, to grow their vegetables following the permaculture approach in order to become more food independent. In Montbrison-Forez and Sychrov as well, there is a shared garden (an orchard in case of Sychrov) cultivated in the permaculture style giving the opportunity to everyone to plant and later collect any kind of vegetables or fruits. Although these two approaches differ in several aspects, the similarity is in comprising the other sustainable dimensions, aiming to grow organic food, respecting nature and preserving or even eco-reversing the soil. Many trees often are planted in order to reduce the CO₂, to increase the green area and to cover the houses with shade.

5.3 Towards the Economic sustainability

There are several economical approaches and ideas how to achieve the economic sustainability nowadays, such as the concept of Degrowth or the theory of Localization. It seems that both are well-known and certain ideas are followed in all cases. We can clearly observe the emphasis on reaching the economic independence and self-sufficiency supported by the local production, consumption and local trade recommended in Localization theory. At the same time, the resilience and certain austerity show the support of the Degrowth too. All participants are aware of the coming peak oil (as mentioned in chapter 3.7.5) and while several new oil sources have been discovered and more efficient

ways to extract from oil deposits that are hard to reach, they still see the imminence of the oil-era end coming. As Johanisova suggests “There is an undercurrent of urgency and desperation in some of the literature, prophesying catastrophe and looking to a localized economy as one which will emerge whether we want it or not, so we had best prepare for it in advance” (Johanisova, 2007:55). Therefore, local trade or a pure exchange is seen as absolutely indispensable although economic well-being and self-sufficiency, from the economic and employment point of view, are considered as the least important objective. In our research, we examined five attributes in each settlement and their attitude towards each attribute was summarized in the table below (Table 5).

Towards economic sustainability - Self-sufficiency achievement	Hameau des buis	Éourres	Karma Ling	Montbrison en Forez	Sychrov	Osada Bílé Karpaty	Křížany	Hostětín
Local trade functionality	√	√	>	>	>	√	>	√
External cooperation and interaction	√	√	χ	√	>	√	√	√
Importance of choosing the right place	√	√	√	√	√	√	√	√
Maximal employment self-sufficiency achievement	√	χ	√	>	>	>	>	>
High importance of available funds	/	/	χ	/	χ	χ	χ	χ
	√	Agreed						
	χ	Rejected or neglected						
	>	Planned or in process						
	/	Accepted but not necessary						

Table 5 Towards economic sustainability

5.3.1 Towards economic self-sufficiency

With regards to economic and regional development, great emphasis is placed on local trade development. It was proved by all interviewees except the one from Hostětín where the main actor Veronica center isn't involved in such activity as supporting the development of local trade. Anyways, it is also related to the importance of external cooperation, interaction and its further development which has been enhanced in all settlements. There is only one exception of the Institute Karma Ling which tries to be as least dependent on someone else as possible. However, it is not possible hundred percent, of course. The importance of community coherence and consensus on this principle is evident and required at the same time in order to achieve the economic sustainability. Everyone is aware that without this conformity such remote settlement would not be able to survive. We can then confirm (especially with regards to the cases of Éourres, Institute Karma Ling and Sychrov) that these settlements are and will always be inseparable from certain community aspects. To conclude, community sustainability will be needed indefinitely, even though its significance is often much greater in the initial phases and

then fades. We can infer from the personal interviews that the choice of the right spot and its location plays an important role. The main criteria were the possibility of free/low-priced land purchase and access to sources of certain natural resources (such as rock and forest for construction material, water, as the most important source for living and sun/warm climate as it avoids concerns about very low temperatures in the winter and too high humidity) in order to be capable of reaching self-sufficiency and independence in the future. Schuman, one of the proponents of localization, claims that localized economy also gives people more control over their destiny and raises “connotations of stability, trust and friendship, is an important benefit associated with localization.” (Johanisova, 2007:49). It further helps to keep a balance between competition with co-operation and leads to retaining more money within the community. In order to revitalize local trade and support its further development, this additional money must be reinvested in the community (Johanisova, 2007).

5.3.2 Towards the employment self-sufficiency

At the same time, Johanisova sees localization as a key to enhancing employment, especially when automation in large centers leads to layoffs and pushes prices down. The only way to protect local communities from distress is to produce locally for local consumption. This ensures not only the enhancement and stability of employment but also full or at least partial independence and self-sufficiency which ultimately leads to a better quality of life (Johanisova, 2007).

In Éourres, when asked whether it is possible for an individual to get some help when unemployed, the answer was “no”. The same opinion was expressed by Caroline Yaffee, the current Mayor of Éourres in the Alliance magazine: “Talking about employment: People who choose to live at Éourres must have the capability to create their own professional project. It is the great challenge and the natural selection.” We can see that the factor of well-being and both economic and employment self-sufficiency is not prioritized. In these terms, it can be inferred that in this alternative village, every man is the master of his own fortune. Although, this fear and concerns emerged from the interview in Éourres, it applies to most, if not to all, studied cases. The interviewee claimed that it is difficult to find a job, given that the village is quite remote. She also confessed at the end that many inhabitants live on social support alone. Hameau des Buis does not have the potential to

employ all its inhabitants neither. However, the maximal potential volume has been achieved and furthermore the sensitivity and attempts to solve the problems related to commuting necessity are addressed. The representative of the Karma Ling Institute was asked whether the institute has had the aim of providing employment to all its inhabitants from the beginning, and the self-assured respond was “yes”. “The institute was meant to employ all its inhabitants and has the capacity to do so, yet there are some who chose to work in the exterior.” The banal fact that the eco-site is developing constantly, guarantees sufficient amount and diversity of employment. New buildings are constructed and a new piece of land is transformed into a plant bed. In this way, they continuously try to improve the efficiency of current practices, implement or adopt new techniques and practices in agriculture, forestry, energy production and consumption. In addition, the university has an inexhaustible number of courses offering many further employment opportunities. The project of Montbrison-Forez in transition is still in evolution and since they started as an association of nine people, the creation of employment isn't applicable at present. In all cases in the Czech Republic, the potential of employment opportunities is high as all interviewees mentioned several possible jobs that people can do when the settlements are finished. Nevertheless, for now, we can not anticipate the evolution process.

What we can infer from the research is that employment is deeply related to the importance of funds which could be considered as an important factor for the planning and construction phase. Although it was ranked at the fifth place on average, it represented the most important factor in the case of Éourres. By contrast, in the Karma Ling Institute and other Czech settlements, funds were on the bottom of the list. For the Hameau des Buis, Montbrison-Forez in transition and Křižany, funds are/were considered as a necessary but not the most important factor.

5.3.3 Extraordinariness

One trading specificity in Éourres is so called “Chambre chaude”. It is an easily applicable and well-functioning system to become independent on grocery store's opening hours, requires notion of trust of the farmer towards the customers and reliability in the opposite direction. This system avoids packaging, contributes to lower waste production since you come any time you need certain amount of food and you do not buy more than you need at once, you do not store excessive amounts at home.

5.4 Towards the Personal sustainability

Although the personal dimension is not very often included in the definition as an important part or aspect of sustainable development, it turned out to be (in my research) the second most important dimension. Nevertheless, it must be taken in to account that this result came out unexpectedly, according to the personal interviewee's perception. After explaining the interviewees, the widely-cited theory (referenced in the chapter 3.7.4) including three sustainable dimensions, they completely inherently embraced the idea of incorporating the personal dimension as well. It seems then that the theory we have chosen is right and complies with the people's expectations. It could be also inferred that it gives impetus for revision and potential improvement of the sustainable development theory. At least, the results show not only a good acceptance of this dimension's inclusion but also the high natural significance in most cases. The personal dimension (or ideological in the case of Karma Ling Institute) represents mainly the aim, desire and motivation to change their lifestyle in favor of sustainability, the vision of better life for them, their children and consequently for the whole society. The interviewees claimed identically, that they felt sometimes excluded from the society just for having a different vision of a good and wholesome life. In addition, they desired to live in a simpler way, without stress and tensions of the city life. However, they admitted this desire of simpler life wasn't truly accomplished. In our research, we examined five attributes in each settlement and their attitude towards each attribute was summarized in the table below (Table 6).

Towards personal sustainability	Hameau des buis	Éourres	Karma Ling	Montbrison en Forez	Sychrov	Osada Bílé Karpaty	Křižany	Hostětín
Incorporation of personal dimension	√	√	√	√	√	√	√	√
Importance of the individual vision related to community development	√	√	√	√	/	√	/	/
Personal motivation recovery	√	χ	√	/	/	/	/	/
Importance of the individual motivation related to environmental improvement	√	√	√	√	√	√	√	√
Importance of the individual motivation related to economical independence	χ	χ	χ	√	√	χ	χ	χ
	√	Agreed						
	χ	Rejected or neglected						
	/	Accepted but not necessary						

Table 6 Towards personal sustainability

5.4.1 Relations to social dimension

The personal dimension also seems to be highly socially related. The individual motivations, as well as the individual visions, play an important role in the community which in all cases, appears to be coherent and corresponding to the vision of community. We can assume then, that according to our results, the individual vision and motivation is indispensable for the community and overall social development because the whole always works better when everyone is “on the same page”. This individual vision filled the notion of an open community that is non-exploitative and avoiding consumerism, comprising diverse but like-minded people. It seems to represent the driving motivation in achieving the environmental as well as social sustainability goals. However, it doesn't work the other way around, with the collective vision and motivation. If there is some community vision but not everyone is convinced about its rightness, effectivity or is not completely involved, then the force of community weakens. We could observe such tendencies from our results. While from the planning phase, both dimensions were strongly emphasized, from the following stages of construction and moving-in phase, the coherent community vision was declining but the personal dimension remained the same. And in the later stage, we could see the personal dimension's recovery and even improvement in some cases which seemed to be the reason for the social dimension 's recovery as well. However, in the case of Éourres, where the personal dimension isn't that much emphasized anymore, neither the social dimension has been recovering. The Czech settlements are excluded from this analysis since they are still in the construction/moving-in phase at present.

5.4.2 Relations to environmental dimension

With regards to relations to environmental dimension, the interviewees talked mainly about the desire to live with respect to nature and the aim to raise their children in a healthy environment, on fresh air, including many-sided and unbiased education, etc. The individual rules but which are commonly respected, are the bio consumption and production, individual effort for waste reduction and for the least water and energy depletion as well as the emphasis on eco-construction, proper insulation and collaboration with the natural cycles. Therefore, many technologies and practices are implemented in order to achieve these either individual or collective environmental aims. By complying with these rules, the community reduces its overall carbon footprint and very often benefits

to the nature preservation and its eco-reversibility as well. However, as it has been already mentioned, when such rules are applied collectively, there is obviously much bigger force and the efficiency is much higher too.

5.4.3 Relations to economic development

Regarding the economic point of view, the personal aim wasn't related to the financial or employment focus to get better off. The newcomers did not and do not expect the life to be less expensive and as they found out even this kind of cheap eco-construction is not at the end immensely less expensive. On the other hand, the individual visions somehow correlate with the idea of localization theory and that is the focus on local production, consumption and therefore local trade. Furthermore, these communities seek out the possibility to become more self-sufficient (in terms of production and consumption, decision-making, energy use, etc.) and less dependent on the current unsustainable system.

6 Modeling

6.1.1 Modeling the process of an alternative settlement building

We observed from the interviews that, through the different phases of the project's evolution, the emphasis on certain dimensions has changed. Several times it appeared that the interviewees tended to divide the responses accordingly to certain stages of the settlement evolution. With regards to our results, we identified five fundamental phases these projects went through (the results are illustrated in the Table 7). The first phase represents the period before the actual initiation. In our cases, it is the phase of the "normal life", of the imagination and individual vision of different, better life. The second phase introduces the planning period when the project is launched and when the coherent collective vision starts to incarnate, representing a very important factor for efficient and long-term success. The third phase is the period of implementation whether it is new construction or transition. The following stage represents the moving-in period in the case of the new settlement construction and certain adaptation in the case of transition. The last stage is called the "new normal life" or "back to the new normal" phase. This part of modeling concerns only the settlements in France as they went through all of the stages (except for Montbrison-Forez in transition that is at the beginning of the construction phase and could be, therefore, taken as a substitute for the other settlements in the Czech Republic).

We then evaluated each phase on the scale from 1 – 4, where 4 represents the strongest emphasis on given dimension and 1 the weakest. We followed mainly the results of our interviews and later evaluated the strength of each phase for each sustainability dimension. We also gained some information from the official as well as non-official websites and other printed resource publications. Another source of information represented a simple observation of the site and the interviewees, their emotions, expressed feelings, movements, etc., during the interview. Regarding the social dimension, we asked questions about the best practices implemented to support the social development within the community and how they feel when it comes to the community cooperation, interaction, inequality reduction and non-exploitation. "Does the community serve to develop or improve some of the listed options?" The emphasis on technologies and practices

implemented to achieve the environmental goals was crucial criteria for drawing the picture about the strength of environmental dimension. In addition, we asked about the reasons for choosing the given place if the certain environmental reasons appear. Finally, some questions covered the interviewee's perception regarding the impact on natural preservation and eco-reversibility. The questions aiming to discover how strong was/is the personal dimension were about the personal reasons and motivations for moving into such a sustainable community, their further goals and the overall vision they have had and they have now. Lastly, the strength of economic dimension was deduced from the perception of the financial trading and employment influence of their surroundings. Furthermore, we asked what was their goal with respect to the self-sufficiency and independence increase and how much or if they achieved it.

We then assumed that a final stronger emphasis (of 3 or 4) should lead to more innovation, idea creation, dynamics and improvement within the sustainability dimensions, and oppositely when the emphasis is ended up being lower (of 1 or 2) then the expectation of further evolution and improvement would be much lower as well or even not expected at all. Nevertheless, we could observe that certain values and behavior routine remains even though the strength of several dimensions decreases.

Emphasis on sustainability and its strength	From living the "normal life" - dreaming	Planning phase	Construction phase	Moving-in phase	To living a "new normal life"
Éourres					
Social	4	4	3	2	1
Environmental	4	4	2	2	2
Economic	2	2	2	2	2
Personal	4	3	3	2	3
Hameau des buis					
Social	4	4	4	2	3
Environmental	4	4	4	4	4
Economic	2	1	2	2	2
Personal	4	4	3	4	4
Institute Karma Ling					
Social	3	2	2	3	3
Environmental	3	3	3	3	4
Economic	4	4	4	4	3
Personal	4	4	4	4	4
Montbrison-Forez en Transition					
Social	4	3	3		
Environmental	4	3	3		
Economic	4	2	2		
Personal	4	4	4		

Table 7 Modeling the process of an alternative settlement building

7 Results

7.1.1 Expectations

From the beginning of this research, we had some expectations based mainly on the literature review. Some were confirmed, some not at all. A wide-spread opinion supported by many authors (as described in chapter 5.1.1 and also further documented in chapter 5.1.3), is that sustainable communities are always community-based, driven by coherent vision, motivation and power and rely on cooperation, interaction, sharing and solidarity. We assumed this to be the social dimension, the most important in the project evolution. Kirby also observed that this type of sustainable projects helps in community regeneration and in eco-reversibility (Kirby, 2003). However, we could see certain controversies between the theory and the research results. For instance, by contrast to the findings of the literature review, which emphasizes the community importance, the information gained from the interviews show that environmental improvement and living in harmony with nature is the most desirable objective when the decision was taken to construct an eco-village or to start its transition. We further assumed that the aspect of the previous familiarity among the future villagers would appear as an important factor for the community and for its sustainability. Yet, the research shows, it, in fact, has very little importance and this factor was neglected or rejected in three out of four interviews.

The personal dimension ranked at the second place was completely unexpected since this dimension is rarely included in the definition of sustainable development as mentioned in the chapter 2.1.1. The social dimension has been sidelined, although we could confirm the initial importance of the community and certain routinized behavior that remains. As the least important, also quite unexpectedly, however, still necessary economic dimension represents the aspects of economic well-being which is more likely translated in the personal and environmental aims than to financial or employee satisfaction. Contradictorily to the goals for increasing self-sufficiency and certain independence which is highly desired (according to the concept of Degrowth and the Localization theory, chapter 2.1.2) but rarely accomplished.

With reference to Markey and his colleagues, commenting on the progress towards sustainability, progress is highly dependent on the local capacity to mobilize, either to start a new project or to ensure that the rural community is ready for its eco-transition. It requires deep education of the target local group from the initial phase and promotion of sustainability issues in general. Simultaneously, the balance of development objectives is crucial (Markey et al., 2010). We thus expected that these grassroots initiative efforts would have rather low influential reach (as argued in chapters 4.1 and 5.1) and we were also interested in the extent of influence to raise awareness in whole society. Surprisingly, this influence is respectable (the evidence described in chapter 5.1.5), though it is clear that it doesn't reach that far. However, the multiplication effect is possible and anticipated. And of course, there is still need for further promotion and support!

7.1.2 Limits

All four cases are different in terms of self-defining and the actual form of the small-scale community initiatives. Hameau des Buis can be considered as an Eco-village (incorporating all four sustainable dimensions), while Éourres is an alternative village supporting environmental and personal development. The Karma Ling Institute is an eco-site mainly focusing on ideological and intrapersonal development. Lastly, the association of Montbrison-Forez is on its way to sustainable transition (also incorporating all four sustainable dimensions) and at present, it is fluctuating between the planning and implementation phases as demonstrated in Table 1. Additionally, the alternative village of Éourres is a little specific by comparison to others, since it is still going through an evolution even though the village was first established in the late 20th century. Some principal values have since then changed and therefore the latest development followed a slightly different path to the original idea. Due to this limitation, we can clearly see that generalized guidelines can't be developed and replicated in the case of Montbrison-Forez which is in transition right now. Simultaneously, adaptation to different external contexts is evident and so, as indicated in chapter 4.1.4, variety in the settlements forms lead to different paths.

8 Interpretation and discussion

In this view, the evolution in Hameau des Buis seems to have a clear direction, maintaining a coherent vision, relatively high motivation and the most importantly high potential for further evolution and improvement of the settlement and community in all dimensions. These are the reasons for taking this settlement as an example of beneficial sustainable development. We observe that the main reason for starting this sort of project was the aim of environmental protection and eco-reversibility. This dimension has been the main common and coherent vision for all cases and remained the most important during the project's evolution. The results show that accomplishing such environmental aims must be supported by personal sustainable vision and conviction of the correctness of the sustainable lifestyle. Without this internal conviction and motivation, such a project would not work out. However, we know that the force and power are more significant when there is a particular initiator that the community very well represents. We can see a high interaction between these three dimensions where the economic one still plays a role, though it is in many cases neglected. Additionally, it is hard to be precise because its aspects, such as the necessity of funds and trade, and increasing self-sufficiency and independence are vulnerable to distortion.

There is a strong emphasis placed on all dimensions of sustainability from the beginning in all cases, except on the economic dimension in Hameau de Buis and Éourres. In addition, we observed a little less focus on the social and environmental dimension in Karma Ling since they mainly focus on personal and ideological sustainability, as well as economic viability. They all had a similar collective vision of sustainable life based on trust, solidarity, sharing and non-exploitation as well as individual visions respecting similar values of a sustainable lifestyle, aiming to live and educate their children in a natural and healthy environment.

Another aim was to fully achieve environmental sustainability and to establish an overall life project of one's own (in Éourres at present) and a community life project in the rest, a project that makes sense. Their objective was also to increase self-sufficiency in production, consumption and energy use as well as to attain independence from the current unsustainable political, economic and social system, by developing local trade and

implementing new technologies. Nevertheless, full economic and employment independence was not achieved in any of these cases. Neither Hameau des Buis nor Éourres were ever meant to provide all the villagers with employment opportunities. This is in contrast to the Karma Ling Institute where everyone can work at the site, though some decided to work externally. This does not concern Montbrison-Forez in transition since all the inhabitants already have jobs and, for now, in any case, it is not yet creating any. We could polemize about reaching self-sufficiency, especially in energy use.

We can see from the model that, for each of the four cases, the emphasis on certain dimensions either remained the same (in 9 out of 16 dimensions of the four cases) or decreased (in 7 out of 16) in the planning phase. This was most probably caused by facing reality, seeing the real constraints (mainly financial or decisional) and limits (mostly technical and related to outreach) of their projects. On the other hand, in Hameau des Buis and Montbrison-Forez individual visions are always strong since personal aims are highly connected to community goals and community spirit is at that point very strong and influential. In the next stage of implementation, emphasis decreased only in 3 out of 16 possibilities and even increased for economic sustainability in Hameau des Buis, due to the agriculture advance focusing on reaching food self-sufficiency via land re-cultivation and use of a permaculture approach. However, we can see a drop in environmental sustainability in Éourres where many planned technologies were not implemented (mainly due to financial constraints and disagreement within the community). Otherwise, the emphasis remained the same. We assign this fact firstly, to the inhabitant's observation of huge progress in achieving their goals, which became the key driver for further motivation. Secondly, the community eco-center and social accommodation are established first representing a certain foundation for the project and further raising motivation and group cohesion. In addition, for Hameau des Buis this phase was very challenging since there was not much documentation about eco-construction and certain technology implementation, yet this challenge made the community spirit even stronger. From the stage of moving-in, the emphasis usually continues to be constant (in 7 out of 12) or to decrease (in 3 out of 12) due to the demanding character of the long-lasting project. The participants claimed they were exhausted and wished to finally start their own life, so community cohesion is suddenly neglected or even rejected (in Éourres). The community fades during the construction phase in Éourres since the core members were forced to leave

due to various external reasons. It weakened the importance placed on social sustainability and we could see certain impacts on the other dimensions as well. Since then, it was the matter of individual decision to what extent the environmental-friendly technologies and practices are implemented. Simultaneously, several hesitations or disagreements emerge regarding the lack of specialized services, the different approaches to education and overall access to higher education, the importance of employment diversification and the impossibility of reducing transportation. These factors further lead to a decline in individual vision and motivation, and also personal and environmental sustainability as a result. In the final stage, we observe very low levels of lasting sustainability strength in Éourres while in Hameau des Buis and Karma Ling, the emphasis on overall sustainability increases. Concerning Éourres, there is a very weak direct emphasis on social sustainability. Although they are very open towards newcomers (proposing new communal land and only requiring respect for certain routinized values), the inhabitants mostly decided to live on their own and they are not interested in the community development. Therefore, it seems this sustainable community won't further evolve in terms of the maintaining sustainable goals, at least not at the community level. On the other hand, individual motivation regarding environmental sustainability enhancement persists. Contrary to Éourres, it seems that in Hameau des Buis and Karma Ling, this final stage helped the new inhabitants to regain greater interest in the community development though it never attained the strength it had at the beginning. This aspect probably led to change in decision-making in favor of a more democratic approach.

What we observed in the modeling part is the fact that, in cases where the community is strong during the project until the final phase, there is greater potential for higher efficacy, more complex implementation of the planned practices and technologies and greater overall sustainability of the remaining dimensions. In consequence, at the end of the project, sustainability in Éourres reaches a strength of only 1 – 2, which is still a good result and we believe that the values and certain behavior routines (supporting and following the sustainable goals) remain. Nevertheless, we can assume that there will be no further evolution and improvement. By contrast, as the community and overall appreciation of the social dimension increased (strength of 3) in the final stage in Hameau des Buis, emphasis on the other sustainability dimensions remained at higher levels (with a strength of 4 in environmental and personal dimensions and 2 in the economic dimension).

Such a strength has a huge potential for further evolution and improvement of the settlement in the future. Additionally, there is a need in all cases for population increase in order to preserve viability, economic efficiency and functionality, aiming to potentially increase employment opportunities.

9 Conclusion

This thesis is dealing with the issue of economic activity diversification in the rural area. Or in other words, it is trying to respond question: “What could people do in the rural area, besides working in agriculture.” There are some possibilities mostly depending on the external factors such as location, remoteness, weather condition and availability of natural resources, etc. However, this paper aimed to go beyond these factors and take the complexity of problems and barriers into account. Inspired by many alternative approaches such as sustainable development, degrowth and localization, we focused our research on alternative settlements. There is today a wide network of such settlements, communities and groups that are locally based and aim to increase diversity since they know that diversity in the economy, social classes, biodiversity, employment, etc. is very important for healthy and sustainable development which is in the rural areas even more required. They also try to achieve independence and self-sufficiency, and in order to do so, one would think, they naturally need a diversity of professions. There are some references in the literature that such alternative settlements exist. Settlements, that had succeeded to reach a high level of self-sufficiency and independence. We can refer to the Ithaca eco-village (Kirby, 2003), the eco-villages included in the Italian Ecovillage Network (Losardo, 2016) and Canadian Craik community (Markey et al., 2010). All settlements I visited are not capable of providing sufficient amount of job opportunities for now. Nevertheless, some of them have the potential to create a certain number of jobs related to education, culture and tourism, healthcare and maybe more. Overall, there is wide range of possibilities what the rural people could do but it is not always applicable for all of them due to many factors. Already mentioned, external factors (landscape, natural and weather conditions, soil quality) and internal factors such as education, a field of studies, access to information, interaction, cooperation, etc. Together, the internal and external factors create an invincible barrier.

Our research showed that the alternative settlements in France are much farther in terms of the evolution, compared to the settlements in the Czech Republic. In the modeling process, 5 fundamental phases were identified and we found out that the czech settlements reached in maximum the third phase of construction.

The research also confirmed the literature view about the importance of the social and economic dimensions (comprising the component of employment sufficiency and diversity) that must be, together with the environmental dimension, in balance. It is the view of sustainable development theory that is traditionally represented by a triangle with each vertex representing one dimension. However, our results also indicate other effects and influences, changing the original design of the sustainable development. Our model (see Figure 13) would look as follows:

1. The environmental dimension is on the top of the triangle, representing the principal achievement that the alternative settlements want to reach.
2. The personal dimension would lead directly to the goal, evincing the highest influence, since it encourages the single person of a group, community, society, etc. to achieve the principal goal.
3. The social and economic dimensions lead directly, each from the opposite side, to the preceding stage, as it is the engine enabling the operation and circulation. While the social dimension moderately influences the individual, the economic dimension impacts the individual with the lowest influence.

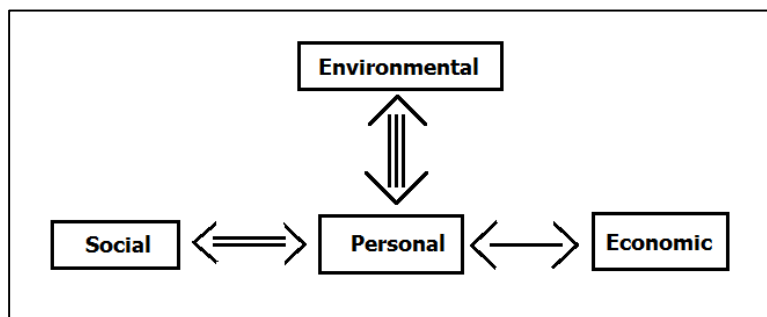


Figure 13 Model of the interrelated influences between four sustainable dimensions

We further observed that in cases where the community relations are strong during the final phase, there is greater potential for higher efficacy, more complex implementation of the planned practices and technologies and greater overall sustainability of the remaining dimensions. Factors such as often repeated migration have significant influence on community steadiness. In the case of Éourres, this factor weakened the importance placed on social sustainability and we could see certain impacts on the other dimensions as well. Other factors include lack of specialized services, the different approaches to education and overall access to higher education, the importance of employment sufficiency and

diversification, and the impossibility of reducing transportation. These factors further lead to a decline in individual vision and motivation, and also personal and environmental sustainability as a result. Finally, we could infer that if the sustainability dimensions reach significant strength, and are balanced, then the potential for further evolution, diversification and improvement of the settlement in the future is significant as well. Among the threats, we mainly highlight the limitation by low population. It was even mentioned in few interviews that there is a need for population increase in order to preserve viability, economic efficiency and functionality, aiming to potentially increase employment opportunities.

Hameau des Buis could be a representative example for the evolving settlements such as Montbrison-Forez and those in the Czech Republic. As they are still evolving and Hameau des Buis shows a good balance between all dimensions which was proved to be beneficial for the overall development. Consequently, it would lead potentially to a higher diversification of employment. This settlement, as the only one, could be considered as an eco-village, although they have not reached total independence and self-sufficiency yet. The evolution of czech settlements seems very similar and all of them are trying to reach the status of the eco-village, however, it can change during the next evolution phases. For now, the emphasis is put on the transparency and openness to the public, maybe because it is still a very new concept in the country and the need for education is significant. Therefore, they reasonably and meaningfully work on the development of external (public) and to some extent, internal education systems which are very important. It is related to the necessity of raising the public awareness that is indispensable at the beginning of every kind of new concept or project. It must start with demonstrations, events helping to raise awareness and explaining why it is needed, further education, etc. This applies twice for the old rural generation.

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