

EU-LUPA

European Land Use Patterns

Applied Research 2013/1/8

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Stakeholders Workshop Report

Part C Scientific report |

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This report presents the final results of an Applied Research Project conducted within the framework of the ESPON 2013 Programme, partly financed by the European Regional Development Fund.

The partnership behind the ESPON Programme consists of the EU Commission and the Member States of the EU27, plus Iceland, Liechtenstein, Norway and Switzerland. Each partner is represented in the ESPON Monitoring Committee.

This report does not necessarily reflect the opinion of the members of the Monitoring Committee.

Information on the ESPON Programme and projects can be found on www.espon.eu

The web site provides the possibility to download and examine the most recent documents produced by finalised and on-going ESPON projects. This basic report exists only in an electronic version.

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Contributions by all participants in the workshop

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1. Day 1 Stakeholder's Workshop

September 10th and 11th, 2012 EU-LUPA partners meeting took place in IGSO PAS building in Warsaw

Workshop Participants:

Marjan van Herwijnen ESPON CU
Efren Feliu
Mathjis Danes
Ryan Weber
Jerzy Banski
Mariola Ferenc
Marcin Mazur
Konrad Czapiewski
Gemma Garcia Blanco

Stakeholders' from case study regions

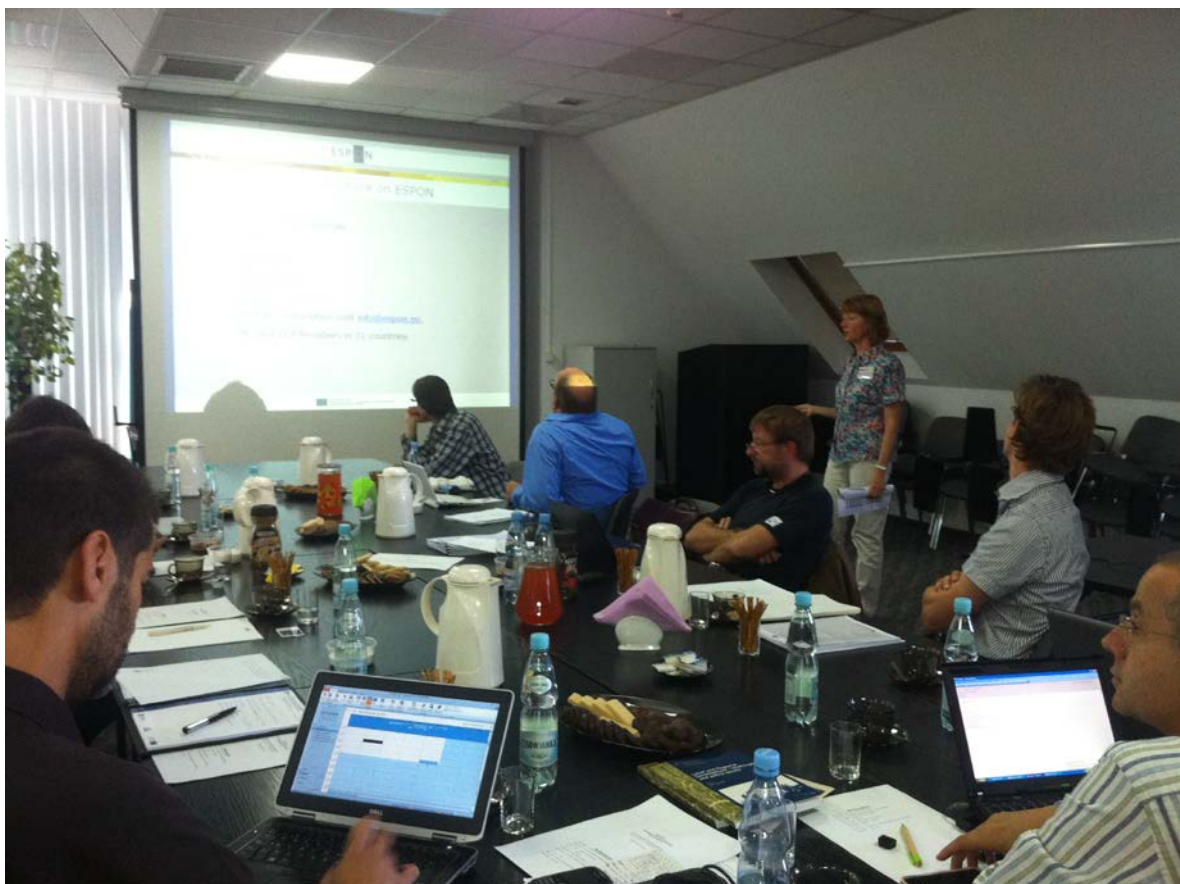
Alfonso Sanz, Director of Spatial Planning in the Basque Government, Basque Country
Przemysław Malczewski, Regional Bureau of Spatial Planning in Wrocław, Jeleniogorski Region
Soren Bitsch, Roskilde University, Oresund Region
Krzysztof Stopyra, The city council of Zamosc, Chełmsko-Zamojski Region

Schedule of meeting:

9.30– 9.45 Welcoming and round of presentations
9.45- 10.00 Welcome to the Workshop and general introduction to the EU-LUPA project (Efren Feliu, Tecnalía)
10.00- 10.15 Contextualisation on EU-LUPA projects within ESPON programme (Marjan van Herwijnen ESPON CU)
10.15- 10.50 Development of the typologies characterising Land Use in the EU-LUPA project (Ryan Weber, Nordregio)
10.50- 11.30 Land Use Functions (Mathjis Danes, Alterra)
11.30– 11.45 Coffee break
11.50 – 13.00 Case studies results in the context of the Land Use Hotspots, Land Use Change Typology and Land Use Functions (Jerzy Banski, Marcin Mazur, Mariola Ferenc, Konrad Ł. Czapiewski, IGSO)
13.00- 13.45 Workshop (Part 1)
13.45- 14.30 Lunch
14.30- 17.00 Driving forces & Policy options and recommendations (Gemma García, Tecnalía)

The meeting began with a presentation of the project participants and guests. After a brief presentation Marjan van Herwijen (ESPON CU) spoke describing the main characteristics of the ESPON, the main priorities, the first results of the projects and explained why the EU LUPA project-suited to the ESPON assumptions. At the end she invited to participate in the following ESPON events (PPT available as attachment).

In the next step Ryan Weber (Nordregio) presented results of his Institute works. He had a presentation about development of the typologies characterising Land Use in the EU-LUPA. He started from prevailing characteristics of land use, which show the state of the art regarding distribution of land cover at 1000 km² grid in the period 1990- 2006. Dominating characteristics were later converted into regional NUTS3 level. Next slides showed the magnitude of regional land change between 2000 - 2006 and identification of regions above the EU average. It shows that in Sweden, the Basque Region, Iberian peninsula, Ireland and Cyprus agriculture activities are most intensive. Urbanisation is linked to infrastructure development. In the Basque region, apart from tourism also forest activities are important. Afterwards Ryan was talking about the intensity of land use changes (focusing on the extent of intervention by human activities on the land-scored 1 to 7). According to Ryan maps do not illustrate the magnitude of changes but their specificity. Particular attention was paid to the impact of tourism, urbanisation, infrastructure, east-west dimension, accession of new countries to the EU. At the end, Ryan described the Land Use Change Typology: cluster analysis with land cover flows and share of those flows in each region, along with the notion of intensity index score.



Next presentation by Mathjis Danes (Alterra) focused on the Land Use Functions. He justified the use of LUF in EU-LUPA project (to assess the impact of land use change in a comprehensive way not based on partial views provided by individual indicators). Project based on multi-criteria analysis, about definition of LUF (express the goods and services that the use of land provides to human society, which are of economical, ecological and socio-cultural value and are likely to be affected by policy changes) and how to calculate land use functionality (see in ppt presentation available as attachment). As a result 35 pan EU-maps were created (25 indicators, 6 LUFs, 3 Dimensions, 1 Overall) and also spider diagrams for every case study region.

Some more important results:

1. LUF via provision of work:
 - ⤴ high and stable performance in the Blue Banana corridor;
 - ⤴ negative changes in the fringes of Blue Banana;
 - ⤴ positive changes are scattered except.
2. LUF via provision of land-based products
 - ⤴ negative development in the Mediterranean countries, due to land abandonment;
 - ⤴ decreasing of harvested area (conversion of rural areas into urban ones);
 - ⤴ Scotland and Central Europe are increasing their performance;
 - ⤴ Sweden has a high and stable performance in the north (forestry), and a negative performance in the south (agriculture).
3. LUF via provision of leisure
 - ⤴ general trend to increase the performance;
 - ⤴ coastal areas and the Canarias islands improve;
 - ⤴ Romania and Bulgaria increase from low to medium, showing development in the tourism sector in comparison to the period before their accession to the EU (2007).
4. LUF via provision of housing and infrastructure
 - ⤴ high and stable performance in the Blue Banana;
 - ⤴ coastal areas in the Mediterranean show a high and stable performance as well;
 - ⤴ southern Spain, southern Italy and eastern Germany, as well as main cities in central Europe (Budapest, Bratislava and surroundings) increase;
 - ⤴ Few rural areas of Romania, Poland, southern Sweden and Lleida (Spain) decrease.
5. LUF via provision of abiotic resources
 - ⤴ Abiotic result shows scattered changes. Therefore variations are difficult to explain without assessing specific indicators affecting them.
6. LUF via provision of biotic resources
 - ⤴ Biotic resources show improvement in central Spain and north-western France;
 - ⤴ More negative than positive development;
 - ⤴ Due to urban development, deterioration takes place in the Netherlands and the Po valley in Italy.

The third part was presented by the IGSO team (Jerzy Banski, Marcin Mazur, Mariola Ferenc, Konrad Ł. Czapiewski). Case studies results were shown in the context of the Land Use Hotspots, Land Use Change Typology and Land Use Functions.

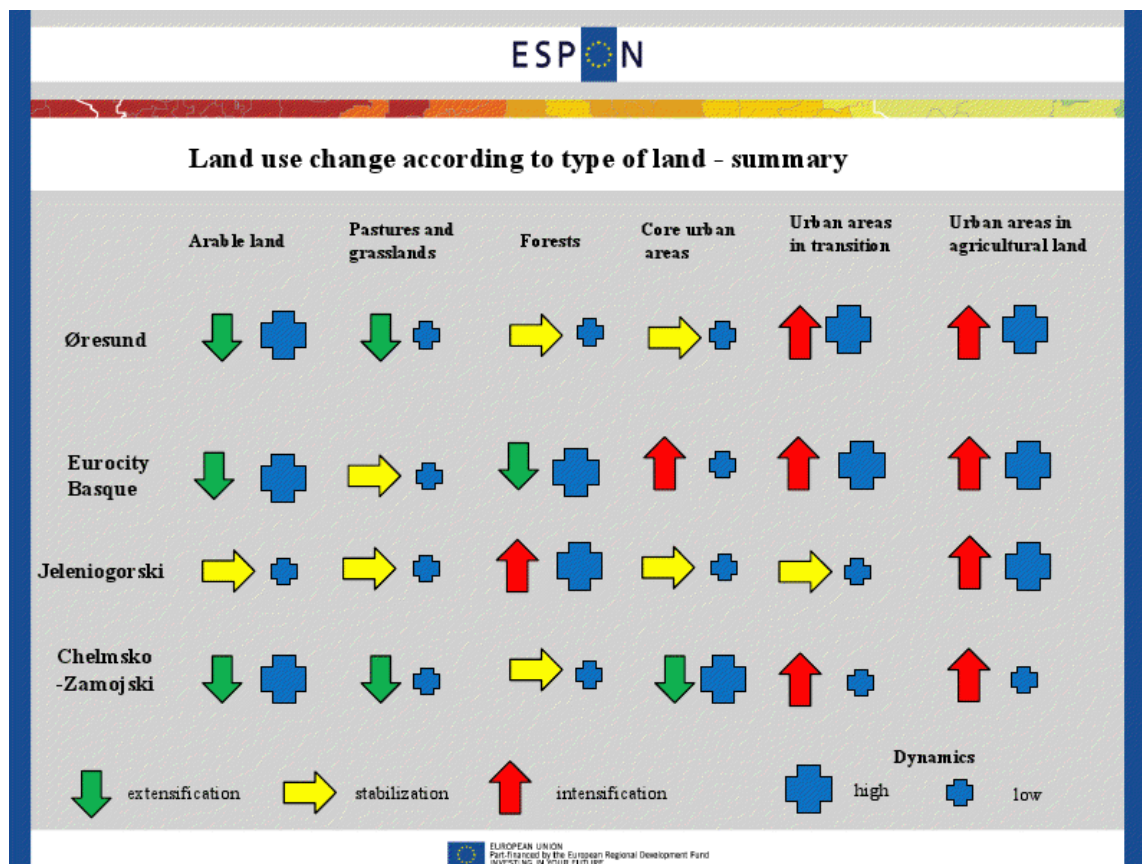


Figure 1 – Land use change according to type of land – summary
 Source: IGSO presentation

Key conclusions:

- Key issue to be considered when interpreting the case studies results is the difference in the size of the administrative regions being analysed e.g., in the Øresund region with small administrative regions in Denmark and a bigger one in Sweden; the same situation is also occurring in the Basque Country (Spanish and French border);
- In the regions characterised by the domination of mono-functional land use, the Land Use Change Typology identified correct types of changes;
- In the regions characterised by multifunctional land use the Land Use Change Typology identified "medium" types of changes;
- The effect of current changes in the land use is a deeper diversification of land use function and land use intensity;
- The changes of land use characterise the process of spatial polarisation;
- Sometimes average level does not show important changes;

- EU-LUPA project was designed to show European perspective for politics, people working on spatial planning; so the results should be written down in a simple language understandable to non-geographers and non-specialists;
- If we go on the lowest level we should use other groups of indicators;
- Differences between country policies are noticed on maps (different kind of land use and land use changes).

In the view of what was presented as results of the EU-LUPA project and particularly using the provided maps, the stakeholders were asked to validate project results on: land use change hotspots, Land Use Change typology and Land Use Functions.

- At the EU level, generally speaking, stakeholders recognised their region under the Land Change Hotspots and Land Use Change Typology maps.
- It is remarkably important to be cautious when elaborating policy recommendations since at case study level some dynamics could be covered by average results at the EU level.
- Scale of the analysis and quality of the data are also crucial:
 - Better resolution at regional scale is required,
 - But also more data,
 - For the analysis at case study level another kind of indicators (different from the ones used in the LUF approach) might be needed. In fact, different regions have developed different data sets depending on their own geographical characteristics. Northern regions might require the analysis of some data that could not make sense for the Mediterranean countries for example,
 - The methods developed by EU-LUPA are flexible enough to accept more detailed data whenever available and allows to differentiate the indicator weight and relevance between regions,
 - Spatial planning traditions, systems, policies and strategies and the differences between regions and countries are very important when analysing the results.

Open questions for debate:

- Does it seem reasonable?
- Where do you find issues that attract your attention?
- What are the key messages for you?

Due to time constraints the stakeholders were required to validate the project results as a “homework” (results in the next report).

The second part of the meeting was focused on working with stakeholders. At first, Gemma García gave a presentation on driving forces and policy options and recommendations. The case studies should be used for validation of project results but also as a way to identify the driving forces behind the ongoing patterns and trends in the EU regions and from that point to potential ideas for policy responses.

An exercise was carried out in order to identify potential driving forces and policy recommendations for the case studies.

Methodology:

To undertake the exercise the following material was distributed among project participants (available as attachment):

- A DPSIR (drivers, pressures, state, impact, response) diagram on land use change;
- Potential driving forces associated to land use dynamics;
- Policy priority areas, linked directly or indirectly to land use and land use change;
- Suggested structure for policy options and recommendations.

1st part of the exercise (10 min.)

Working in groups, each stakeholder assigned to a member of the IGSO team and one member of the research organisation in charge of the case study, was asked to think about the potential driving forces of land use in his region:

- Mega-trends
- Local drivers
- Policies as a driving forces

2nd part of the exercise (10 min.)

Working in groups, each stakeholder assigned to a member of the IGSO team and one member of the research organisation in charge of the case study, was asked to think of the potential policy responses, needed in order to resolve potential conflicts in the land use, or to reverse unwanted trends linked to driving force and also guiding land use intensity towards the sustainable development.

Results:

Jeleniogorski region

Key drivers

- Demography (out-migration, decrease of natural increase);
- Industrialisation at the beginning of the 1900s. and a decline from the 1950s.;
- Historical heritage- period of the People's Republic of Poland and a transformation of the political system;
- Tourism attractiveness;
- Local drivers:
 - mountainous area, good quality of soils, landscape,
 - poor accessibility,
 - coexistence of numerous functions.
- No strategic policy for the region;
- Lack of vertical cooperation;
- No land use plans;
- Natural & environmental conflicts.

Policy responses

- Regional plan already exists, but it is a very weak formal document with no significant influence;
- Subregional programs related to certain problems and conflicts but these are informal planning thematic strategies;
- Policy based on social trust rather than legal framework;
- Efficient governance needed;
- Bottom- up planning system approach rather than top-down required;
- Vertical cooperation needed;
- Real local consultancy;
- Horizontal cooperation among municipalities;
- Strong monitoring: both socio-economic and land use;
- Regional umbrella needed.

Discussion:

- Stronger regulation and strategic perspective;
- Multilevel distribution of competences;
- Bottom-up is not enough, top-down regional is needed;
- Participation at local level in the definition of regional planning is crucial;

- New policy fields: integrated approach, landscape, clean technologies etc.

Oresund Region

Key drivers

- Regional competitiveness: accessibility and leading certain economic sectors;
- Housing and land prices: promotes the importance of multi-functionality. Decrease in the value of the agricultural land has driven the people to sell the land for housing. Also wind energy production;
- Increasing wealth lead to greater number of second houses, a lot of pressure to limit farming activities and develop second houses and leisure activities.

Policies

- Strength and increasing accessibility;
- Focus on clean technology as a economic sector with a long term perspective (renewable energy mainly but not solely);
- Significant exporting of the clean tech strategy even out of the country:
 - Infrastructure development for connection with Hamburg, Copenhagen and Malmo and biodiversity offsets protecting landscape or land use somewhere else in the region.
- CAP is not able to include notion of multifunctional and additional land functions out of farming;
- Transport corridor in the EU from Oslo to Oresund and Berlin or even Warsaw for example.

Discussion

- Most of the policies emphasized the continuation of the ongoing strategies: increasing accessibility and focus on clean tech;
- Improving the planning particularly in Denmark with innovative instruments related to landscape and natural resources, this is already taking place in case of National Parks and landscape plans;
- Tax system: is problematic since some people are working in one place and living in another. The system should be addressed to them individually and somehow improved;
- Suburbs around Malmo and Copenhagen concentrating immigration which causes some conflicts, leading to spatial segregation- how to manage the growth from a social perspective;
- For instance in the Basque country around 20% of the new urban development should be social housing supporting housing.

More general ideas that could be applied in all cases

- Financial bubble particularly in wealthy countries, after the crisis those regions have societies of the highest debt;

- Public debts and financial bubble.

Basque Government- San Sebastian- Bayonne

Drivers

- Good performance indicators compared to the EU average;
- Non-aggressive urban processes;
- Strong spatial planning systems, controlling the urban development;
- Investment on public infrastructure;
- CAP is not influencing the Basque country since it is not receiving subsidies but is developing the organic farming with quality labels for traditional products and production;
- Forest management - pines and eucalyptus;
- Traditional industrial settlements located in rural areas, helping in maintaining economic activities. Linked with the steel sector located in the vicinity of to mining activities;
- Social phenomena – cooperatives;
- Successful urban regeneration;
- An above average social and economic performance comparing to other Spanish regions could explain why the income from urban taxes was not the key element for municipality income.

Policies

- Common agricultural strategy is needed to coordinate rural activities and reinforce agricultural production related to quality products certification;
- Primary sector is about 1% of the GDP and the government wants to reinforce this;
- Forestry policies needed;
- Improvement of the coherence among policy sector and spatial planning;
- Improvement of coherence and the level of competence;
- Innovative planning instruments: landscape, sustainable transport plans, climate change adaptation;
- Strengthen the land use restrictions: delimitation of urban perimeters focused on regeneration and non-artificiality.

Discussion

- Ageing should be included as a general driver with significant consequences.

The Chełmsko-Zamojski presentation of results on drivers and potential policy responses was postponed for the next day during the field trip in the region.

Drivers:

- ⤴ Administrative division;
- ⤴ Food processing industry;
- ⤴ EU agricultural policy;
- ⤴ Strengthen of external border;
- ⤴ Competition of foreign food;
- ⤴ Urban sprawl;
- ⤴ Outmigration of young and educated people;
- ⤴ Ageing of rural societies;
- ⤴ Collapsing of state farms.

Policy response:

- ⤴ Strengthen the sub-regional function of Chełm and Zamość (culture, education, tourism);
- ⤴ Special economic zone (bio-energy);
- ⤴ Support for alternative energy production (e.g., rape as a biofuel source);
- ⤴ Support for traffic services;
- ⤴ Promotion of organic farms, concentration of land ownership;
- ⤴ Strengthen of spatial planning;
- ⤴ Social policy of state;
- ⤴ Supporting of enlarging medium sized farms.

During the field study four places were visited:

- Zwierzyniec and the seat of Roztocze National Park
- Krasnobród
- Zamość
- Werbkowice and border crossing point

At 5 pm a trip to Lublin began, where accommodation was arranged. During the journey, Konrad L. Czapiewski described the development of Warsaw and suburban areas, availability problems, development of transport infrastructure. Professor Roman Kulikowski, IGSO PAS expert, talked about the structure of agriculture in Poland, with particular emphasis on the Lublin region.

2. Day 2 – September 11th, 2012

The second day started at 6.30 am with a breakfast and at 7.00 am the group began their journey to Chełmsko-Zamojski region. During the field trip Wojciech Janicki, PhD from the University of Maria Curie-Skłodowska in Lublin, presented main subject related to economy and geography of the Lubelskie voivodeship.

Lublin, which is the capital city of the Lubelskie voivodeship, is a pulsating city. Since the beginning of October until late June it is inhabited by about 450 thousand people, while after the end of June about 90 thousand students leave the city. This results in significant relief in transportation (hardly any traffic jams, even at rush hours), but at the same time in clearly fading activity of city life. Lublin is a city of five state universities and the proportion of number of students to the number of regular inhabitants is the largest in Poland, and probably also one of the largest in the EU, if to put aside typical university towns like Louvain-la-Neuve in Belgium.

Agriculture in the Lubelskie voivodeship is considerably dispersed. Average farm size of 6,7 ha, much less than country average of 10,4 ha, along with a relatively high number of fields comprising a farm, makes farming highly ineffective. Paradoxically, the European Union supports preservation of this ineffective structure with all its financial efforts. Direct payment subsidies under the Common Agricultural Policy, along with other forms of financial support constitute almost half of farmers' income. This helps to develop Polish rural areas, but at the same time it deters small fields owners from abandoning agricultural activity and from selling their fields to other farmers. Consequently, the average farm size has increased very slowly over the last decade, from 6,3 in 2002 to 6,7 ha in 2011. Also the activity of some of Polish politicians, especially those from parties recruiting their electorate in rural areas, harms the economic condition of these areas. They proclaim their support for small family-farms this way trying to maintain the 19th century agrarian structure and provide themselves with future support.

A potentially important tool of change in rural areas is a system of support including the so called structural pensions. The goals of the system have been defined first of all as rejuvenation of the Polish rural areas and increasing the size of farms. Elderly farmers are offered regular pension after having fulfilled several conditions, among them selling or granting their farm to a younger farmer. Therefore, the first of the goals set has been achieved. Unfortunately, the farm under this system can be transferred to another family member, which clearly prevents reaching the other goal, no less important than the first one.

Beet-sugar industry used to be one of the most important branches of agriculture in the Lubelskie voivodeship. This resulted from fine soils covering most of the region. However, after accession of Poland to the EU and after introduction of the system of production limits, most of beet-sugar factories were closed down. In most cases this happened after privatisation of the factories by foreign-origin capital. New owners were much more interested in seizing limits granted to the factories than the factories themselves. Clearly this is the result of the agricultural policy of the EU erecting tariffs on their external borders to prevent the inflow of cheap cane-sugar and artificially limiting production on the internal market. Since 2001 until mid-2012 the number of beet-sugar factories in Poland fell down from 76 to 16 only. However, beet-sugar industry in the near future may get a strong and

positive development incentive. In 2009 a group of chemists from the University of Maria Curie-Sklodowska patented a method of producing petrol from carbon dioxide in the presence of sugar-beet extract. If further research is conducted and industrial scale of production is achieved, both global environmental problems connected with carbon dioxide, Polish market demand for fuel and regional need for sugar cultivation are to be provided.

Another factor that may be decisive for the future of the Lubelskie Province is shale gas. It is methane released from solid rocks of Paleozoic age, mostly Ordovician and Silurian shales. By far the largest potential resources of shale gas in Europe are located in the Eastern Poland, with Lubelskie Province as a leading area. Technology of exploitation is owned by few American oil and gas companies who started exploration in Poland in 2010. As for mid-2012, 19 concessions for exploration were released and 111 wells were already drilled. The amount of expected shale gas in Poland may cover the needs of the country for a few decades, if both political and economic circumstances allow for exploitation in the future. However, potential changes in the region, with a huge inflow of investments and creation of a few dozen of thousand of jobs may be become realistic after at least ten years. This is the time needed to launch industrial-scale exploitation after exploration of the area and affirmation of abundance of the shale gas fields.

The visit in Zwierzyniec was dedicated to environmental issues of Roztocze Hills. It's also the case of small town with local industries, like furniture factory or brewery. The loess gorge as an example of water erosion of fertile soils and part of local landscape was also investigated. During the trip traditional wooden houses were seen. After that Tadeusz Grabowski, Director of the Roztocze National Park, presented the issues linked to nature protection in the national park and its surroundings and innovative system of landscape changes monitoring introduced in the last time in the area. Also the Polish law regulations were considered. Discussion was focused on the existing and potential spatial conflicts and the system of the Roztocze National Park neighbourhood compensation for farmers in Polish law. At the end the exhibition on the Roztocze National Park environment was visited.



Near Roztocze National Park



Talk by Tadeusz Grabowski, Director of the Roztocze National Park

During the visit in Krasnobród, the local guide, Wojciech Sachajko, conducted the trip around this little town. The study trip visited sightseeing point and observed transformation of the landscape related to tourism development. The most important investments last years were ski lift and artificial the enlarging of artificial water reservoir what additionally enhanced the potential of this traditionally local tourism centre, sanatorium for children and destination point for pilgrims.



Near Krasnobród

During the visit to Zamość, one of the two centres of the region, the issues of current urban sprawl and the role of medium-sized towns in regional development were taken up. At the same time Zamość itself is a historical example of a well spatially organised city. It is an ideal town of the Renaissance period, founded by private aristocratic family and planned by Italian architect according to theoretical assumptions of that age. Zamość is inscribed at the UNESCO List of World Cultural Heritage. During the visit the panorama of the old town was seen.



Zamość central square



Panoramic view from Zamość cityhall tower

In Werbkowice the meeting with municipality mayor, Lech Bojko, Director of Agricultural Experimental Unit in Werbkowicach, Piotr Kozera, was organised. After the presentation about the specificity of this very agricultural commune and all eastern part of the region, there was a discussion on its impact on land use changes.

Werbkowice is a village with one of the few still active sugar refineries in Poland, industry basing on local sugar beets cultivated on the surrounding very best soils – *chernozems*. An impact of the vicinity of external EU border was taken into consideration as well. After the meeting the Polish-Ukrainian border crossing point was visited as well.



Near the Polish-Ukrainian border crossing point

3. Stakeholders results validation

Basque Government- San Sebastian- Bayonne

First stakeholder

1. Express your opinion concern the main results of the project (see presentations and a figures below)

	Land Use Change Typology Hotspots Land Use Functions Other results
<i>Looking at the maps. Do the results seem reasonable?</i>	<p>Land Change Typology seems quite difficult to understand and interpret, for that is not easy to have an opinion.</p> <p>Map on page 37 does not match with the explanatory text above.</p> <p>Figure 5 on page 11 does show a vision which is in line with the Basque territorial reality. In my opinion this is due, partly, because the typology integrates mix of uses: forest and agriculture with areas of special protection or environmental improvement. But the result is confusing. For example, the surface devoted to forest is less than 30%. This gives a wrong idea about the Basque coverage of forest which is more than 50% and this is mentioned somewhere else in the document.</p> <p>There is unresolved conflict on the land use occupation and the functions, in particular with regard to the forest.</p>
<i>Where do you find things that call your attention?</i>	<p>Still unclear for me how to differentiate the definition of areas of intensification and areas of extensification.</p> <p>In the document areas of intensification are mentioned that are coincident with áreas of extensification: loss of agriculture lead to extensification, however there areas with this characteristics that appeared as intensification.</p>
<i>Which are the key messages from you?</i>	<p>Multifunctionality and mixture of uses and functions, city-region, loss of agriculture and farming, intensification of accesible áreas, extensification in áreas less accesible, difficulties in the advance towards the Euroregion Donosti-Bayonne.</p>
<i>Do you see yourself reflected in the results?</i>	

2. Give comments on the case studies report.

2.1. Do you agreed with the major results of case studies?

In general terms yes but I would need more time and information to analyse the results in depth.

2.1.1. What is your opinion about the conclusion: "The effects of current changes in land use are deeper diversification of land use function and land use intensity"

I do agree with the statement "The effects of current changes in land use are deeper diversification of land use function"

With respect to intensity I think I do not understand the concept used within this project as explained before.

2.1.2. What is your opinion about the conclusion: “The changes of land use characterize the process of spatial polarization”

I do agree. Spatial polarization of population, economic activities and social activities, lead to land use changes.

2.2. Do you have additional remarks to the case studies?

.....

2.3. Provide additional comments on discussion about drivers and policy responses at your region level.

Economic consequences and more important environmental consequences derived from the abandonment of agriculture activities and farming.

Although there are notorious advances there is still a lack of global policy with regard to spatial planning, that overcome effectively the dispersion of sector policies and urban policies.

Second stakeholder

1. Express your opinion concern the main results of the project (see presentations and a figures below)

	Land Use Change Typology	Hotspots	Land Use Functions
<i>Looking at the maps. Do the results seem reasonable?</i>	Yes	Yes	
<i>Where do you find things that call your attention?</i>	N of Norway and E of Turkey Very high intensification with artificial surfaces Eurocity Basque: Getaria and Mutriku haven't changed almost anything, while others have developed urban areas.	N of Norway and E of Turkey Czech Republic The Netherlands Eurocity Basque: migration processes from cities to small villages.	
<i>Which are the key messages from you?</i>	Low intensification in East Europe High intensification in West. Mediterranean front Eurocity Basque: in global, there has been little changes.	Iberian Peninsula has changed so much (above all centre and south) Eurocity Basque: environment recovery as a challenge	Very dense urban areas Forested areas mainly with pines and eucalyptus.
<i>Do you see yourself reflected in the results?</i>	Almost yes... maybe less in Biscay	Yes (on average)	

2. Give comments on the case studies report.

2.1. Do you agreed with the major results of case studies?

Yes.

2.1.1. What is your opinion about the conclusion: "The effects of current changes in land use are deeper diversification of land use function and land use intensity"

I don't agree...I think changes (specially those that are reflected in the studies...) are produced by specialization and extension, and then less diversification and intensity.

It depends on the sprawl model or the policy for land use, if the model used is core model, polycentric or territory town, for example.

2.1.2. What is your opinion about the conclusion: "The changes of land use characterize the process of spatial polarization"

I think there are two "speeds" in change: a higher one (among infrastructure corridors and big conurbations) and other slow (rural areas). One of the aims of spatial planning should be to balance these two phenomena.

To strengthen this idea, changes in land use should be focused on multifunctionality to avoid spatial polarization.

2.2. Do you have additional remarks to the case studies?

Analyse scales produce a loose of a big amount of information.

2.3. Provide additional comments on discussion about drivers and policy responses at your region level.

Measuring change is difficult at certain scales, because diversity and intensity makes some databases useless.

There should be less competitiveness among the tree big cities, the tree of them should work together for a better competitiveness in Spain.

Chełmsko-zamojski

1. Express your opinion concern the main results of the project (see presentations and a figures below)

	Land Use Change Typology	Hotspots	Land Use Functions	Other results
<i>Looking at the maps. Do the results seem reasonable?</i>	Yes	Yes	Yes	Yes
<i>Where do you find things that call your attention?</i>	Gradual extensification, especially of agricultural	Very few hotspots	Low diversification: Forestry and farming	-
<i>Which are the key messages from you?</i>	The average farm size is increasing.	Region has a very small number of hotspots, just like the other parts of Poland, in comparison to Europe.	The tourist function is becoming more and more important.	-
<i>Do you see yourself reflected in the results?</i>	Yes	Yes	Yes	Yes

2. Give comments on the case studies report.

2.1. Do you agreed with the major results of case studies?

Yes

2.1.1. What is your opinion about the conclusion: "The effects of current changes in land use are deeper diversification of land use function and land use intensity"

I agree with the statement

2.1.2. What is your opinion about the conclusion: "The changes of land use characterize the process of spatial polarization"

I agree

2.2. Do you have additional remarks to the case studies?

Yes. The changes should be observed in the future, to see if the tendencies remain. 2.3. Provide additional comments on discussion about drivers and policy responses at your region level.

2.3. Provide additional comments on discussion about drivers and policy responses at your region level.

- increasing the areas for residential housing around towns,
- creating new areas for industry using the resources of the Region,
- common Polish-Ukrainian policy, because Chełmsko-Zamojski Region is a border region.

Jeleniogórski

1. Express your opinion concern the main results of the project (see presentations and a figures below)

	Land Use Change Typology	Hotspots	Land Use Functions	Other results
<i>Looking at the maps. Do the results seem reasonable?</i>	Yes	Yes	Yes	Yes
<i>Where do you find things that call your attention?</i>	Intensive changes in western and northern Norway	-	-	-
<i>Which are the key messages from you?</i>	The necessity to attract external entrepreneurships to invest in the region to fasten the development processes or rural areas.	-	-	-
<i>Do you see yourself reflected in the results?</i>	Generally yes. There is only one exception in Norway and in Benelux countries (maybe the changes are connected with the post-industrial processes).	Yes	Yes	-

2. Give comments on the case studies report.

2.1. Do you agreed with the major results of case studies?

Yes

2.1.1. What is your opinion about the conclusion: "The effects of current changes in land use are deeper diversification of land use function and land use intensity"

Correct

2.1.2. What is your opinion about the conclusion: "The changes of land use characterize the process of spatial polarization"

Correct

2.2. Do you have additional remarks to the case studies?

No

2.3. Provide additional comments on discussion about drivers and policy responses at your region level.

Lack of comments.

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