

“Common Cross Border Strategy”

Development of common cross border strategy
for Somogy, Koprivnica-Križevci and Bjelovar-
Bilogora Counties



HUHR/1101/2.1.4/0005

Merging Study



The project is co-financed by the European Union through the
Hungary-Croatia IPA Cross-border Co-operation Programme

Merging Study

Contents

Introductory Analysis of Somogy County	3
Merged Stakeholder Analysis	5
Governmental Institutions, Authorities	5
Southern Transdanubian Regional Development Agency.....	5
Széchenyi Program Office	5
Somogy County Council	5
Districts and local self-governments.....	5
Government Office for Somogy County.....	5
Other Public Stakeholders.....	6
Market Sector	7
Agricultural companies	7
Upper Category Hotels.....	8
Notable Spas.....	8
Utility Service Providers.....	8
Transport Infrastructure Operators and Maintainers.....	9
Non-governmental organisations	9
Merged SWOT Analysis	10
Description of Key Challenges.....	12
Cross-sectoral Problem Tree	24
List of Publications Used.....	25

Introductory Analysis of Somogy County

Somogy County is situated in the southwest of Hungary, south of Lake Balaton. It is bordered by the counties of Zala, Fejér, Tolna, Baranya and Veszprém and by Virovitičko-podravska and Koprivničko-križevačka counties from Croatia. Its area is 6036 km² which is approximately 6.5% of the territory of Hungary, with a population of 318.000 inhabitants (2013) which is approximately 3.2% of Hungary's population. Excluding the agglomeration zone next to Lake Balaton, Somogy County is primarily a rural region and town-deficient in a functional sense. The county has 245 settlements, of which 16 are towns. Looking at the internal structure of the county from the economic point of view, three distinctive areas with outstanding level of economic development can be highlighted:

The Area Around Lake Balaton: Nine out of the 16 towns are located in area which shows the unbalanced territorial development. The garland of settlements around Lake Balaton from Siófok to Marcali is characterised by a well-developed transport infrastructure (M7, rail) and with an economy mainly based on tourism.

Kaposvár Region: Kaposvár is the only medium-sized town where 21% of the county's population lives. Characterised by developed service sector but processing industry capacities are also present. The connection between Kaposvár and Dombóvár could be further strengthened with the construction of the planned M9 motorway.

Southern Area of Somogy: The southern part of the county is in the worst position (Inner Somogy, settlements along Dráva), but in small settlements away from the towns and the main transport routes (Outer Somogy) negative trends can be observed. This area of the county can be characterised by relatively low population density, and high rate of unemployment; the level of income and the qualification of labour force are significantly below the county average.

Based on its position the county could play significant role in strengthening cooperation with the western and southern border regions in particular, but building partnerships is still quite slow even after joining the EU in 2004 (HU) and 2013 (HR).

Transport structure of the region quite depends on its location. Transport routes northwards are blocked by Lake Balaton 70 km lengthwise in the northern part – except for the ferry in Szántód which doesn't have enough permeability for letting through a national level transport. River Drava actually acting as the border river between Hungary and Croatia set a bar against transport, and road border crossing points can be found only at Berzence/Gola and Barcs/Terezino Polje. Connections to the western, northwest parts of the country are equally low and existing poor road network is not helping to improve it either. To sum up, **Somogy County is to be considered relatively isolated**. The deficiencies in the road transport network are mostly due to the geographical characteristics of the region but unfortunately are to blame for the decrease in the functions of settlements. Connections between cities and settlements found in their surroundings are poor. The transport situation of the county is exacerbated by the fact that the major part of the existing road network – regarding its structure, capacity, general condition – does not meet the demand expected. Transport routes of international importance running through Somogy County are the motorway E71 (M7) and the rail lines running along Budapest-Gyékényes leading to the Adriatic Sea. The only rail border crossing point can be found at Gyékényes. The other important

rail line goes along Budapest–Székesfehérvár–Nagykanizsa (electrified). Both rail lines carry freight and passengers and would require further improvements.

The agriculture potential in Somogy County is judged to be better than country average. It's **agro-ecological abilities are diversified. Tourism plays an important role** in the county's economic life. The main attraction of the county is the Lake Balaton and its surroundings. Despite all of these, the weight of tourism sector is minor in Somogy County, including investments and employment. The cultural and natural features of Somogy are favourable for the development of tourism. The river Dráva and Inner Somogy have good possibilities but their tourism infrastructure is underdeveloped.

In Somogy County hydrocarbon sources (oil and gas) are being exploited and it has a **great potential especially in biomass as well as geothermal** and solar energy. Conditions for producing biomass-based energy sources is very good even compared to the country level. Geothermal energy production can be efficiently used particularly in the micro-regions of Marcali, Kaposvár, Barcs and Nagyatád. Areas that get the most amount of solar energy (1295 kWh/m² per annum) are located south of Marcali-Kaposvár-Tab. There is now no solar power plant operating in the region. The geographical characteristics of the county do not show favour for using wind power. Some areas (like Balatonszentgyörgy-Marcali, Fonyód, Látvány-Somogybabod and Somogyvár-Igal) have enough wind speed to make a wind power plant with medium-scale performance.

In general, **the quality of the environment in Somogy County is good** due to the far location from the economic centrum. The county is rich in wetlands and forests and the diversity of landscape and nature are outstanding. Somogy belongs to the less compromised areas by air-pollution and traffic noise. Brown field areas, former industrial and military bases suffer from serious environmental damages; these territories need to be recultivated. Unused industrial areas are concentrated in bigger towns. Inland inundation and flood represent a real environmental risk, although the potentiality of them is lower than the country average, but on the riversides the danger is real.

Merged Stakeholder Analysis

The main stakeholders of Somogy County should be grouped as in the sectoral studies: public (governmental institutions, authorities, agencies) and private bodies (mostly companies). The NGOs of the county are relatively underdeveloped and they play a minor role in the regional development.

Governmental Institutions, Authorities

Southern Transdanubian Regional Development Agency

Being the Intermediary Body of the South-Transdanubian Operational Programme, the Agency was responsible for the management of EU funded regional development programmes. Between 2007-2013 the Agency supported the implementation of 904 projects and the use of 241.7 billion HUF. The Agency has wide experience in the field of local development programmes which is a good basis to further build on. Besides, there is a room for cooperation in case of cross-border projects. The agency's task will be similar in the next EU development period of 2014-2020 however the regional development was restructured in way that region has no functions and the responsibilities of regional development were passed to the counties.

Széchenyi Program Office

The office primarily sets up, manages and monitors the projects funded from EU funds. Due to the EU funds its role in regional development is fundamental. The Southern Transdanubian regional office handles the county.

Somogy County Council

As defined earlier the county councils are responsible for regional development. Thus one of the key stakeholders is the Somogy County Council itself. No regional or related county level public development is possible without the involvement of the county council – including the cross border cooperation.

Districts and local self-governments

It has to be highlighted that the districts and the local self-governments are stakeholders in the regional development. Settlement development is basically the task of town authorities. The districts don't have their own self-governments but they are a help to the settlements to cooperate between each other.

Government Office for Somogy County

Another important actor is the Government Office for Somogy County. Several administrative departments are concerned in the county government office regarding regional development. The two professional management organisations of the government office which have a role in the local labour-market are the Labour Affairs Center and the Labour Affairs Inspectorate. The Labour Affairs Center helps people find vacant jobs and aids the employers finding suitable labour. The Labour Affairs Inspectorate is tasked to enforce the Labour Law among employers.

The agricultural departments are: Food Chain Safety and Animal Health Directorate, Directorate of Forestry, Land Registry, Board of Agriculture and Plant Protection and Soil Conservation Directorate.

The following specialised departments of the office are affected in the environmental protection issue: land registry, woods and forests directorate, agricultural directorate, and the plant- and soil protection directorate.

The office is to be partially involved with energy policy by taking part in permitting processes, cooperating with Land Registry Office and Woods and Forests Offices.

The Transport Inspectorate acting as the specialised body of the office is responsible for transport affairs happening in the administrative area of the county. The appeals against the decisions made by the Transport Inspectorate in first instance are judged by the National Transport Authority. The Inspectorate's main tasks are the followings: permission issue for activities of technical testing stations; checking tolls; controlling the driving and rest periods of drivers of heavy duty vehicles; controlling the road transport of vehicles delivering dangerous goods; controlling the meeting the restrictions on heavy trucks; controlling the environmental suitability of vehicles and testing the drivers as well.

Some of these authorities have subdivisions on the district levels as well.

These numerous authorities are all grouped and operated jointly in the Government Office. Almost any kind of development project should involve the informing or licensing procedures in relation to the authorities.

Other Public Stakeholders

- Ministry of Agriculture
- Prime Minister's Office

Both of these are unavoidable partners when development affects the agricultural sector.

Hungarian Office of Mines and Geology – Mining Authority of Pécs

Mining Authorities belongs to the supervision of Hungarian Office of Mines and Geology working as its regional offices. They are dealing with mining affairs in the first instance but the office is also involved with the control of oil and gas utilisation. This explains the office's significance related to the energy sector.

Southern Transdanubian Water Management Directorate

The Directorate's main responsibilities are the following: flood protection, water damage prevention, water supply management, hydrography and monitoring, waste water management and water supply. The Directorate actively participates on the border-river negotiations in accordance with the 'Agreement between the governments of Croatia and Hungary on water management.' The Directorate is an important professional partner regarding the environmental protection sector.

National Chamber of Agriculture and Chamber of Commerce of Somogy

Local chamber of industry, commerce and the national chamber are important players in the agriculture of the county. They provide useful services to chamber members. The local chamber of industry is an important actor in regional development as it provides useful information and help to the various companies and entrepreneurs.

Council for Balaton Development and Non-profit Balaton Integration Ltd.

The main objective of the Council is to secure the development of the Balaton region. The Council formulates and represents the common opinion of the stakeholders of the region's development. Its important as a stakeholder is mainly in the tourism sector.

Kaposvár University

Kaposvár University is the only higher education institution in the county; the Faculty of Agricultural and Environmental Sciences is one of its four faculties. It serves the higher agricultural education of the region. The master degree program and postgraduate courses offered by the faculty cover the entire agricultural industry. It is an important centre of research and development programs in the county. Therefore the university can be a significant partner in various programmes and projects.

National Parks

The two national parks which are present in Somogy are the Duna-Drava National Park and the Balaton Uplands National Park. National parks are important stakeholders in the matter of environmental preservation and as well as in tourism.

Tourism Destination Management (TDM) organisations

These public-private associations gather various stakeholders of tourism aiming at improving the cooperation of local service providers and implementing coordinated touristic programmes. Due to the former, the importance of the organisations is significant as they can contribute to the touristic competitiveness of the given sub-region.

Market Sector

Agricultural companies

The following companies are the largest stakeholders in the agro-industry sector. Their importance seems to be limited to the agriculture however they are big employers and this sector has the most potential and growth possibilities in the county. Due to these they should be mentioned in the current study.

- SEFAG Forestry and Timber Industry Company

The company is managing a forest area of 80.000 hectares, half of the forests in Somogy County. These forests are owned by the state. It has a determining role of the county's forestry, wildlife management and nature protection. The company has 500 employees. SEFAG is a key multi-sectorial stakeholder in Somogy. Besides its agricultural importance as a large forestry it is a possible partner in environmental projects. (It even operates a local narrow gauge railway.) Also the company's role in wildlife management makes it linked to tourism. Part of the exploited wood is utilized for heating and it can be used in bioenergy plants as well hence the company has a role in the local energy sector as well.

- KASZÓ Ltd.¹
- Aranykalász Agricultural Cooperative
- Kométa 99 Corporation²

¹ It is a notable forestry in the county.

² Kométa 99 is the country's largest pork processor.

- Magyar Cukor Corporation³
- SIÓ-ECKES Ltd.⁴
- Balatonboglár Winery Corporation⁵
- Szent István Winery⁶

Wineries are cross-sectorial stakeholders in the agricultural and tourism sectors.

Upper Category Hotels

There are several high category reputable castle hotels in the county, out of which the two most significant are: Chateau Visz⁷ and Castle Hertelendy⁸.

Notable Spas

Spas play an important role in the county's tourism. They are tourist destinations with functioning infrastructure and they provide the basis of further development.

- Barcs Spa and Recreation Centre
- Csiszta Spa
- Health Spa and Camping Csokonyavisonta
- Igal Health Spa
- Kaposvár Swimming Pool and Health Spa
- Thermal Spa and Leisure Center in Marcali
- Thermal and Medicinal Spa of Nagyatád

Utility Service Providers

The following utility service providers are the key actors regarding energy distribution and water and waste management. This related to energy and the environmental protection sectors.

- Transdanubian Regional Waterworks Corporation (DRV Zrt.)
- KAVÍZ: Waterworks and Sewage of Kaposvár Ltd.
- Regional Communal Solid Waste Handling System of South-Balaton and Sió-valley
- Kapos-menti (Kapos region) Waste-management System
- Mecsek-Drava Regional Solid Waste Handling System
- ZALAISPA Regional Waste-management Zrt.
- E.ON DÉDÁSZ⁹
- E.ON Dél-dunántúli Gázhálózati Zrt.¹⁰

³ It is currently the only working sugar refinery company in Hungary. In November 2007 a biogas plant started its operation next to the factory in the name of environment protection which is a unique initiative in Europe.

⁴ The company is the leading juice manufacturer in Hungary, a major player in the industry.

⁵ Balatonboglár Winery Corporation has a history of decades. It is one of the largest producers of wine and champagne of Hungary.

⁶ Szent István Winery is an important wine producer of the Balatonboglár Wine Region. It is operating as a family business and offers hospitality services as well.

⁷ Chateau Visz is a luxury hotel with a focus gastronomy. Besides gastro tourism, the hotel is famous for its wellness services as well.

⁸ In the hotel there is a gourmet restaurant while wellness and leisure services are also provided. A private airstrip is one peculiarity of the castle which can be used by powered aircrafts, helicopters and gliders as well (free of charge).

⁹ It's main activities have been the transportation of electricity and the secure operation of the requisite distribution networks. The company's main tasks include system operation, network development and maintenance, regional customer relations management, as well as tasks in regard to metering and monitoring consumption.

Transport Infrastructure Operators and Maintainers

Regarding any transportation related developments the following companies are the important actors in the county (and some in Hungary as well).

- National Infrastructure Development Ltd. (NIF Ltd.)¹¹
- Hungarian Roads Management Company (Magyar Közút Ltd.)¹²
- MÁV Co. (Hungarian State Railways Ltd.)¹³

Passenger and Freight Transport Companies

- Máv-START Ltd.
- Kapos Volán Ltd.
- Kaposvár Public Transport Ltd.
- Balaton Shipping Ltd.
- Rail Cargo Hungaria

Non-governmental organisations

The local NGO community is underdeveloped and they don't represent key stakeholders in Somogy. This list contains some of the notable ones.

- Association for the Agro-Food Development of Southern Transdanubia
- Zselic Non-profit Association for Rural Development
- Koppányvölgyi Non-profit Association for Rural Development
- Rinya-Dráva Association
- Our Region is Our Future Association
- Balatongyöngye Association for Rural Development
- Wide Road Community and Association for Rural Development
- Partners of North-Kapos Association for Rural Development
- Lanterns of Zselic Association for Rural Development
- Foki-Hill Association

¹⁰ It's primary activity is gas supply. The company's main tasks include system operation, network development and maintenance, regional customer relations management, as well as tasks in regard to metering and monitoring consumption.

¹¹ As a state-owned development company NIF implements economic and transport programmes. It manages projects invested to building highways, public roads and railway lines.

¹² The Hungarian Roads Management Company is responsible for maintaining and operating the road network. The activities carried out by the company include operating, service and maintenance tasks both in term of national public road network and motorway network.

¹³ MAV is responsible for operating the whole railway infrastructure, and increasing the investments and developments in rail lines. It also deals with coordinating subsidiaries.

Merged SWOT Analysis

Strengths

- ➔ The main attraction of the county is the Lake Balaton and its surroundings. The area is relatively well developed and the local economy is traditionally based on tourism.
- ➔ The overall climate is good; it has both Mediterranean and Atlantic influences. The scale of forest areas is outstanding and wildlife management also has a high economic potential.
- ➔ Excellent potentials and experience for quality agriculture and quality food production.
- ➔ Kaposvár University has different agricultural BA and MA programmes; also it is the R&D base of the industry in the county.
- ➔ The environmental conditions of Somogy County are good, thanks to the small population density and the lack of the polluting industry.
- ➔ Natural environment, mineral and thermal water are considered significant attractions.
- ➔ Somogy has a high biodiversity potential. Natural heterogeneity has a real value.
- ➔ There is great potential in renewable energies including solar and wind power, geothermal energy, biomass and biogas, energy plantation. Also there are hydrocarbon stocks available to be exploited.
- ➔ Adria oil pipeline of national importance crosses the county
- ➔ Many European (TEN-T) transport corridors going across the county (motorway and railway) also the Hévíz-Balaton Airport is located in Zala county but has a definite impact on economy of Somogy.

Opportunities

Weaknesses

- ➔ Disadvantageous settlement structure: Somogy is mainly an area with small and tiny villages with unfavourable demographic trends.
- ➔ There are many untapped economic development opportunities.
- ➔ Lack of capital discourages small-scale investments
- ➔ Fruit production uses only a small part of the county's resources. Utilization of energy-crops is sparse. Only a few biogas or bioethanol plants are found in the county. (It is notable that the agricultural property sizes are fragmented.)
- ➔ The weight of tourism sector is minor, including investments and employment. The whole county is characterised by seasonality, it is especially a serious problem around Lake Balaton. The intertwining and coherence of the county tourism program elements and cooperation among the players in the tourism are missing. Also the cycling infrastructure is underdeveloped which effects bicycle tourism.
- ➔ Institutions and firms operating with low energy-efficiency.
- ➔ Somogy county is relatively isolated in terms of transport too: the bypass roads around the towns have not yet been built. There is no quality main road connection from Kaposvár to the motorway network. The capacity of the railway network limits the potential for development. Passenger facilities outside the main lines are almost completely missing.
- ➔ The rare crossing possibilities over the river Drava and the lack of main roads to the south-western direction and the shortage of the border crossing points is a hindering factor in the field of cross-border cooperation.
- ➔ The section of the Sió Canal located in Somogy County is barely navigable most of the year due to the low water level and the untended state of the water-course at some places.

Threats



- ➔ Common (cross-border) EU funds.
- ➔ There is significant economic potential in the agro-food sector and wood processing industry. There are major fruit processing capacities in the Balaton-region to be utilized.
- ➔ Further development of the agro-R&D is necessary on the basis of Kaposvár University.
- ➔ The development of the tourism sector provides several numbers of options (eco-tourism, water tourism, hunting, cycling tourism, etc.). Gastro-tourism is currently underutilized in the county. This could be exploited in the future; for example in the framework of cross-border co-operation, or on the basis of the wine regions. Nature reserves provide further tourism development opportunities.
- ➔ Somogy has significant renewable energy resources: setting up wind turbines in the northern part of the region is feasible. Solar and geothermal energy can be utilized on household and institutional levels. Building biomass and bioethanol plants would also help utilize energy plantations.
- ➔ There is a real long-term potential in the reuse and recycling of communal waste, in the case of good market background.
- ➔ Intergovernmental cooperation for oil utilisation in the cross-border region is a great opportunity. Also there are serious potentials in the utilization of Adria oil pipeline to diversify the national oil supply.
- ➔ Regarding transportation: constructing M9 highway would create east-west connections, and increase the accessibility of Kaposvár; existing rail infrastructure and the River Drava could be used more effectively for freight transport. Intermodal hub can be established at the currently unused Taszár Airport with the creation of a freight railway station.

- ➔ No significant development in local economy despite the fact of extended exploitation of gas and oil.
- ➔ Employment rates continue to deteriorate.
- ➔ Less foreign direct investment, venture capital and investment comes to the region. The lack of capital is seriously hindering the development of the agro-food industry, as well of agriculture itself. In addition, fragmented property sizes are a major obstacle for investments in agriculture.
- ➔ Unfavourable economy can easily push the livestock, meat and milk based production into another decrease.
- ➔ Most of Somogy has poor accessibility; it means a risk that only few external investments will be realised in the county. The reconstruction of main and local roads and construction of bypass roads are costly investments.
- ➔ Due to the few border crossing opportunities, the creation of cross-border cooperation will remain limited.
- ➔ Extreme weather conditions can cause serious water management challenges (drought, inland inundation, flood) and seriously influence agricultural production. Such of these already caused overthrow in yields. Weather also affects tourism, especially outdoor activities and the length of the season. This is especially true in the recreational area of Lake Balaton.
- ➔ Tourist turnover has strong seasonality and its decreasing volume causes employment and profitability problems.
- ➔ The prices of waste management have been raised a lot. Occurrences of illegal handling and desiccation activities have been increased a lot.
- ➔ No interest in use of renewable energies, because of strict regulation and the lack of capital of companies, institutions and households.

Description of Key Challenges

Although Somogy County has excellent potentials in many areas including agriculture, forestry, tourism, it has shown negative trends in recent years regarding a number of economic and social indicators. Besides **declining population, negative migration trends**, rate of unemployment above the national average the decreasing GDP per capita, the **declining ability to attract capital and low research and development activities indicate the importance of interventions.**

Settlements lying close to the Lake Balaton are rich in natural and built heritage. Villages offer excellent opportunities for the development of the tourism industry, while in the respect of overnight stays and incomes from tourism Somogy County has one of the weakest indicators in the region.

Somogy is under industrialized in comparison to the other Hungarian counties. Agro-food industry is the most significant in the area. Besides food industry, timber industry is the other a major capacity in the county. Regarding employment, food industry and the production of electric equipment have the biggest weight among the industrial sectors. Other major employers are the companies producing computer, electronic and optical products, metal basis and metal products, textiles, clothing, leather and leather products, paper products and wood processing, printing. In the economy of Somogy County tourism plays an important role, and it mainly concentrates on the settlements near the shore of the Lake Balaton Priority Resort Area. Industry employs less than a third of the working residents of Somogy. Despite the importance of agriculture it only employs around 5% of the local workers. However at the current competitiveness of the agricultural sector it can't employ more people.

The inactive and unemployed stratum of Somogy mostly lacks the proper up-to-date expertise to find jobs. Besides this Somogy's economy would need further expansion to be able to employ significantly more people.

The local economy should be improved and it's the primary challenge the county faces.

Agriculture, food processing, forest and timber industry, tourism and partially energy sector are the primary sectors to be further developed. They have favourable conditions and opportunities.

About the business infrastructure of Somogy County

There were 179 industrial parks established in the country, seven of them are located in the county.

The reinforcement of services and infrastructure in underutilised industrial parks, along with the enhancement of cooperation and marketing is necessary, apart from improving their utilisation, and providing incentives for local businesses to settle in such.

There are free enterprise zones but they are not competitive among investors with their existing infrastructure, as they fail to provide complex services, and the institution system, necessary for their efficient operation, has not been established either.

The competitive disadvantage of the county is most noticeable in respect of the research and development expenditures. The county's share of national expenditure is only 0.75% (2012). The role of Kaposvár University is particularly important in the field of innovation in agriculture and food industry.

A possible breakout point could be the field of innovation and research and development: building on the universities and research institutions in the region it may be possible to serve the innovation needs of the most important economic sectors (agriculture, food industry, wood industry, power engineering, machine building, textile industry, etc.) and increase the county's business competitiveness with the utilization of research and development results.

The county has significant untapped potential in the energy sector, especially in the field of renewable energy production.

Agriculture

Despite the county's excellent agricultural conditions and traditions of food processing the county produces little processed, high added-value agricultural and food products, the employment potential of the agro-food sector is not exploited. In addition fragmented land ownership is a county and nationwide issue which needs to be changed in a favourable way. This is a primary challenge. **Currently the primary agricultural cultivation is poised by the lack of investments.** Fragmented land ownership structure and the distrust in agricultural co-operatives result in overall lower rates of productivity. However major change in the property structure is not likely in the

foreseeable future, so this means the industry has to conform itself to the current structure. Situation is better in the food processing industry where the mentioned difficulties are not present. The issue with the agro-food industry is that the local commodity supply is bigger than the processing capacities. Expansion of the industry would be welcome, conditions are favourable, but investments and further developments are needed. The growth of this industry would provide invaluable jobs which the county really needs.

The high proportion of forests in Somogy would be an excellent opportunity for the forest-based sectors. **The vast majority of forest products leave the county unprocessed.** Today, a significant portion of timber is used for energy purposes but the wood chips produced mostly satisfy the energy needs of consumers outside the county. There is only one significant timber processing factory in the county (parquet factory in Csurgó) except the smaller furniture manufactures. The county's wood industry has low added value. The situation is almost the same as with food processing industry: the local wood industry's capacity is smaller than the raw material output of the county. Practically the only obstacle in front of the expansion of the wood industry is the lack of investments.

The forests of Somogy are underutilised in two another fields as well. One is the energy sector, the other is tourism. Besides the agro-food industry the processing of energy-plants is an additional breakout possibility for the county. Which would be a profitable sector based on the favourable yields of the Somogy agriculture. Energy plants can be many kinds; they can be grown in forest areas (acacia trees, etc) or cultivated on fields (corn, etc).

It is of **great importance to make wildlife management more organized and have multiple utilizations** (tourism, unique products and level of processing). Wildlife management seems to be a minor issue but it has cross-sectoral importance between agriculture, tourism and environmental protection just like forestry which has a significant environmental consideration or winery which is related to tourism.

Tourism

The unutilised tourism aspect of the wildlife management is an example that Somogy has more possibilities in the sector of tourism. **The intertwining and coherence of the county tourism program elements and cooperation among the players in the tourism are missing** – though as a result of the establishment of local tourism destination organisations and primarily the regional tourism clusters there is a noticeable shift in the last few years (it would be fruitful to work together with the Croatian side in this field as well). For example there is no quality supply of local tourist maps and hiking maps of the county.

Growth in tourism can be achieved by developing the currently marginal specific branches of tourism. Such branch is the eco-tourism or the active tourism which includes biking, hiking, rowing. Gastro-tourism is currently underutilized in the county; this area could be exploited in the future; for example in the framework of cross-border co-operation, or on the basis of the wine region of Lake Balaton. In the Balatonboglár wine region everything is given for wine tourism. The river Drava, the area of Zselic and Lower Somogy provides opportunities for eco-tourism and active tourism. At least further cooperation and organizing are needed to improve the situation.

It is worth mentioning that the **county's cycling infrastructure is underdeveloped, it hinders the development of bicycle tourism** which is becoming increasingly popular. Biking brings tourists into the less discovered areas of Somogy. These possible tourists on wheels would spice up the economy of little towns and villages. Providing even one new job in such places would help the local communities. Hence it's important to improve the cycling infrastructure of the county. It has a minor cross-sectoral aspect in relation with transportation. **Bike routes could possibly be created between Croatia and Hungary to promote cross-border ties.**

However the proportion of spa and wellness hotels in the county - popular with hotel guests - is low. This issue also features the advanced Balaton area, but in the rest of the county it causes more barriers. There is no high quality and big capacity hotel in Kaposvár, and there are few accommodation are present in the less developed areas therefore **capacities of tourism are limited.**

Speaking of spas, here are numerous spas and outdoor pleasure resorts are located in Somogy. Their services are mainly used by local people and domestic tourists. They provide the basic infrastructure and point of interest for tourists. Although these spas are usually operated by the local municipality and there could be issues of profitability.

It's problematic that the whole county is characterised by seasonality, it is especially a serious problem around Lake Balaton, given that along the shore the contrast is significantly higher

regarding programme features and guest traffic within the high season and beyond the season than in the southern areas of the county. This also refers to the concentration of tourist attractions.

Tourist turnover has strong seasonality, and its decreasing volume causes employment and profitability problems in the exclusively tourism-based economy. This constantly present fluctuation should be reduced by the need to increase tourism in other areas. Due to cultural and tourist assets it mainly depends on the investments and potential foreign and domestic demand. Particular areas for exploitation in the county are the region along Dráva or Kaposvár, but we should also mention the numerous thermal and medicinal baths in the county. Obviously, the amount of tourist like at Lake Balaton can't be reached, but the mid-year seasonal variation could be reduced. Also, seasonality is the reason that the municipalities of Lake Balaton struggle with significant fluctuation in economic output and employment.

The Balaton-season is unambiguously weather-dependent and cannot be extended. During the rest of the year, unused capacities are partly occupied by accommodating conferences and trainings. Still the vast capacities on the shores of Balaton are difficult to fill outside of the season.

The accommodation structure is a composite of different kinds of hotels, rentable apartments, rooms at private houses, small bed and breakfast places, etc. Only the large capacity hotels can house events around the year. Smaller places may be only suitable for summer usage. Note that all the other catering and entertainment services completely stop functioning after season. This lowers the appeal of the Balaton region during the colder months.

An exception to this is the wine tourism which can properly welcome tourists from spring to late autumn. Also the prime season of wine tourism is during the vintage season which is after the summer season. In addition wine tourism is exclusively linked to Balaton.

On the side note about historic preservation: Inspecting the field of historic preservation, the condition of the protected buildings are not unitary, there are a lot in good condition; some of them are renovated and some of them go to rack and ruin and they cannot be saved any more. Small settlements lack funds to protect and renovate the historic memories, which in fact projects that either the matter requires outside funding from different sources or let the historic values to decay. Examples for the later are already visible.

So the main aims of developing tourism would be to:

- Diversify the tourism and include newer areas like eco-tourism, gastro-tourism, active tourism, etc.
- Bring in more tourists to other neglected parts of the county. The Drava region should be highlighted as it could offer cross-border cooperation and opportunities.
- Expand the general tourism season, specifically in the Balaton region.
- Create more quality and competitive accommodations.
- Improve the county's tourism programmes and organization.
- Promote bicycle tourism and improve the needed infrastructure.

Environmental Protection

Weather which very much influences the touristic season and the yields of agricultural cultivation has more effects.



The extreme weather conditions can cause serious water management challenges. Flood and inland inundation define real environmental risks. Somogy is less affected by floods than the rest of the country, still the quick floods that can happen on the river Drava and river Kapos present a challenge as they are difficult to prepare for. Inland inundations prove to be real problems in lower areas. The real damages of inland inundations are dealt to agricultural production. Besides too much water, extremes happen on the end of the scale. Droughts can hinder the agricultural production too during the summers. Sometimes for a long period there is no precipitation.

Otherwise the environmental condition of Somogy is good, thanks to the small population density and the lack of the polluting industry. In accordance with Somogy County's Spatial Plan, it can be declared, that the already existing tendencies and natural processes will not change significantly. The expected growth of forests (which is related to the environmental friendly approach of the forestry of Somogy who have sustainable operations) will improve the air-quality and it will help to protect the climate. Slowly expanding forest can help reduce erosion risks too at certain areas. The planned motorways will not worsen the conditions. The planned railway developments will be beneficial and will have a significant environmental protection aspect.

In short there is **no real outside environmental challenge in Somogy except the extreme weather**, extreme water levels and low probability industrial accidents.

On the other hand the utility services provide some challenges in the county.

The infrastructure of public utilities needs improvements, especially the supplied water's quality in small villages and the wastewater management needs developments. **It is necessary to improve the quality of drinking water in some areas of the county.** The occurrence of water-quality complaint is higher than the average and it is caused by the high level of chemical components (e.g. arsenic, manganese, ammonium, iron) in tap water. This issue is currently being worked on by the water-quality improvement program funded by the EU; still it has to be mentioned. Ground water protection measures were already taken at least on the level of stricter regulations. It's a natural resource the county has to protect well.

The **proportion of selectively collected waste is really low** from the whole transported communal waste (in 2012 it was just 14.6%). It means that reuse and recycling have a high unexploited potential which can be utilised in the long run if the market conditions are appropriate. The rate didn't really increased in the last years, which requires the attention of the county legislations and authorities as without recycling the amount of disposed waste is rising more quickly which is not how a sustainable waste management works.

It is possible that the occurrence of illegal handling and desiccation activities have been increased a lot beside a positive trend (illegal handling appears because of the rising waste handling prices). Some of this waste presumably appears on illegal dumps.

The **utilities of the settlements (especially the smaller ones) will need modernisations. However the funds that are available for these municipalities won't be able to support the financial needs of modernisation.** The most important issues are waste water management and recycling, after that ensuring that the local people have access to clean and healthy tap water.

Regarding environmental protection, the system of National Parks functions well. They of course would welcome further funds for their operations but there are no serious issues. As a basic but important common cross-sectoral field between agriculture and environmental protection is

forestry. The forestry of Somogy is the key to the professional handling and augmentation of the high biodiversity forests as it is one of the remarkable attribution of the environment of Somogy. It's of high importance that this is kept intact.

If river Drava experiences more transportation or the touristic usage than further actions should be taken to preserve the nature and environment in the area.

Transportation

Speaking of transportation, there are difficulties that the county should overcome in order to develop and grow.

First of all, the **highways are necessary to be improved** including ensuring a better tracing, reducing the number of passages, carrying on ongoing rehabilitations and preparing new ones. These works would help highways meet the needs and ensure a more efficient road transport.

Some settlements are short of connections to the cities (e.g. Tab–Lengyeltóti–Marcali, Kaposvár–Marcali); there are settlements to be reached by side-roads only (e.g. Csurgó, Tab, Lengyeltóti). Deficiencies in the road transport network are mostly due to the geographical characteristics of the region but unfortunately are to blame for the decrease in the functions of settlements. Connections between cities and settlements found in their surroundings are poor. It happens quite often to take a by-pass to reach the neighbouring settlement (e.g. Karád–Somogymeggyes etc.). Close to one third of settlements are with dead end and being addressed differently: the situation of a settlement approachable easily even by a side road connected to a main road with good connections is favourable since it doesn't suffer from heavy traffic crossing the settlement. A settlement, however, also approachable by side-road connected to a main road with worse connections can make the area lagging behind. (The most villages with dead end are in the surroundings of Tab, Zselic and north from Kaposvár.)

Geographical features are difficult (and expensive) to overcome and in most cases are not worth to implement. Most of the small settlements are with dead end and a lot of new roads should be constructed in order to connect these to the other parts of the network. These extensive road building would heavily load the local environment. It's not certain how much these roads would reduce accessibility times and how much would they improve the local economy. In order to deal with this issue, the county should look into the situation and carefully pick where it should construct new connections. However the spatial plan doesn't contain any extensive secondary road construction except for the area south of Lake Balaton. Such plans are to connect Lengyeltóti with Somogymeggyes.

Attention should be paid to the area of Marcali–Lengyeltóti–Tab where the number of roads is the lowest for a long time. No connections between the cities and their surroundings built and a lot of settlements with dead end are located here. New section of highway No. 67 will be numbered as 671 connecting Sávoly - Marcali - Somogyvár - Gamás - Törökkoppány – Nagykónyi will be started to construct in 2025-2027 the earliest.

Such new road connections would increase the connectivity in the area south of Lake Balaton where the settlements further away from the lake have no connection to each other. (Hence the traffic between them has to rely on the roads between the shore settlements of the lake.)

Rest of the new connections, **the most urging problem with the road network of Somogy are the lack of bypass roads at towns and villages.** This issue affects the no. 61, no. 67 and no 68 roads the most. Actually these roads are the core networks of the county aside the motorway on the north. Until the needed bypasses are not constructed, the traffic is poised with slow moving sections within the settlements. Bypass roads would also lower the environmental load on the towns and villages itself and raising the quality of living as well.

Regarding Croatian connections crossing the border at another place by rail could be solved at Barcs. There is a railway line in Croatia running along a few kilometres away from the border. A further road border crossing point could be opened between Barcs and Berzence including a building of a bridge over the river Drava connecting Đurđevac in Croatia and Nagyatád in Hungary. It would help to build long-term cross-border partnerships but that needs to construct new roads and bridges as well (partly in the area of a National Park).

Not only the road network is inadequate but the low capacity (in volume and speed) of rail transport network sets a bar against the development of the region. It would be necessary to transform at least the main railway routes (30 and 41) into double-track lines and increase the speed limit to 160km/h maximum. Double-track lines would allow much higher capacities and

simultaneous traffic in both ways so trains shouldn't wait each other at train stations. Luckily the both of the lines are electrified. Both of these lines serve passenger and freight traffic.

The role of public transport in the county is very important since helps remove bottlenecks the transport infrastructure network is suffering from in the areas with minor villages in particular. Collective rail transport is ensured by MÁV-START Zrt., bus transport by Kapos Volán Zrt.

To ensure that all settlements are reached by bus or coach extra vehicles making by-passes have to be involved which costs a lot.

Passanger transport on Lake Balaton primarily serves for tourism purposes.

Another challenge is the maintenance of railway facilities built in the beginning of 20th century. They cost a lot. The need for their reconstruction however is justified. After implementing developments rail line running from Dombóvár to Gyékényes (41) would be one of the main transport corridors in the region, ensuring the appropriate connection either to the capital or the cross-border regions.

Railway passenger facilities need further improvements. There are numerous places where railway stops doesn't consist more than a paved strip of land next to the tracks. Conditions for suburban rail transport are not appropriate. Since travelling by rail takes a long time because of the speed limits, rail transport is not able to replace or even compete travelling by bus.

Not only developments and constructions require extensive funds and support but the maintenance of public transport as well. **Community transport continuously needs national financial support to run.** Operation of managing companies cannot be altered without reducing some range of services; introduction of new services also require quite a lot of support. Maintenance and modernisation of railway lines knowing the fact that volume of rail traffic suffers from continuous decline also costs a lot.

Bike infrastructure needs developments as mentioned earlier in the context of tourism.

Possible challenges with cross-sectoral importance are the development of inland waterways and the improvements of air transportation. River Drava is partially navigable from Barcs. The river allows to be navigated by only smaller vessels so large scale barges are out of question. The possible utilization of Drava is also problematic due to its ecological importance. Navigability can be improved but only through river dredging which would harm the wildlife of the river and destabilize the biodiversity. Such costs counterweight the possible benefits of improving the navigability. Although setting up new crossing points on the Drava is more cost efficient than building bridges or dredging the riverbed. Such low capacity local ferries would be able to connect the communities on both sides of the river and strengthen cross-border cooperation.

There is present air transportation infrastructure in Somogy County. The ex-military airfield close to Kaposvár is perfectly functional. It can be used for freight traffic. The county plans to build a logistical centre next to the airport combining rail, road and air transportation. Currently the airport is rarely used. The demand for this kind of service is very low not only in Somogy but in Hungary as well. The competitiveness of the Taszár airfield is lowered by the unfavourable location of the airport. It's far away from motorways and the only significant network elements are the road no. 61 and the Dombóvár-Gyékényes (no.41.) railway which is to be connected to airfield. Significant improvement for the airport and the county as well would be the construction of the new M9 motorway but this can only be realized after 2020. In addition there is a functional international airport close to Somogy which is the Hévíz-Balaton Airport in Zala County. This airport mainly serves chartered passenger airlines. It serves as an airport of the Balaton, a destination which welcomes foreign tourists mainly Germans and Russians. It's clear that the Taszár airport can't compete with Hévíz-Balaton Airport. The tourists who fly to the Balaton won't a more far away and less connected airport next to Kaposvár and the rest of the county even with the neighbouring counties are not going to attract enough tourists to the Taszár airfield to economically benefit from. Otherwise the industry in Southern Transdanubia also won't attract enough traffic to Taszár. The airports cross border relevance are low due to its mediocre connections to Croatia. It's a challenge for the county to keep up the airport and meanwhile find the opportunities to meaningfully utilize it.

As a short summary of the county transportation issues:

- The Taszár airport's success is tied to the development of the transportation network and the local economy.
- Waterway traffic is limited by the river Drava and its natural importance.
- Any kind of cross-border cooperation is poised by the low number of connections which should be improved.
- The settlements in Somogy need to have bypass roads so the traffic can speed up through the area hence improve the availability of Somogy in order to be more included in the national economy.
- The railway network needs improvements; suburban rail transportation needs even more improvements so the quality can rise.
- Biking infrastructure must be further developed and interconnected.
- At the current level of service community transport needs extensive funding.

Based on the sectorial studies the last theme that should be covered in the current study is the sector of the energy.

Like transportation, energy is very closely tied to the rest of the sectors. Both of these areas are partly national competences and partly county or municipal competences.

Energy Sector

There are great opportunities in using renewable energies in Somogy County. However, connection to the regions on the other side of the border to put it into practice is very limited since cross-border areas of both countries are partially isolated. It is very true for the energy sector as well.

It is basically a challenge to use the regional characteristics efficiently, in terms of opportunities being both in renewable energies and agriculture. **Production of biomass, biogas and utilisation of geothermal energies offer the greatest asset for the county to use to achieve development.**

As an important cross sectoral connection is the use of agricultural products and by-products in order to generate electricity or heat. Biomass and biogas are so versatile they can be used in small scale plants as well as larger ones. Even biofuels can be refined from them to be used in vehicles. A possible connection is the usage of these biofuels in the community transportation. These are great opportunities for the county. Locally produced products of the agriculture are to be locally refined and locally used. This would ease the energy demand with efficient local solutions that offer potentials for research and development and can create jobs that are extremely important for the county.

Excellent opportunities lying in energy plantation and production of biomass and bio fuels especially needs to be emphasised. Agricultural spin-offs produced for energy purposes would set a good direction to the county to move toward.

It would be worth utilising wind and solar power. **Heating public institutions, buildings even flats by using geothermal energy could contribute to a long term and sustainable operation.** The studies show that the Drava region offers opportunities to exploit the thermal power of the earth efficiently. Strong cooperation between Hungary and Croatia is suggested in this field as was experienced before in a project in Csurgó. In such places like Csurgó, geothermal wells could be drilled to utilize the heat coming from beneath in public buildings for heating. Due to the favourable geographical attributes of Somogy, the thermal power of the earth can be used for heating in other places.

Solar and wind power can be exploited as well. These are more general methods and it needs to be said that the county doesn't offer extraordinary opportunities for solar and wind power generation. Somogy has average number of sunny days, and there are more favourable places in Hungary for large scale solar farms. Same is true about the wind power too. There are places (Balatonszentgyörgy-Marcali, Fonyód, and Látvány-Somogybabod) which offer wind speeds over 70 metre that can be efficiently exploited for building medium sized wind power plant parks.

The most enormous barrier which hinders the implementation of projects utilizing these possibilities is the lack of funding and investments. Currently the energy sector is not a favourable investment target in Hungary and the regulations doesn't make it easier for renewable projects too.

Besides the task that the county have to take advantage of these opportunities, the future's locally produced electricity will need to be wired in the national electricity grid.

The present electric grids in Europe were planned as centralized networks with few input points. If there will be more green small scale power plants which can produce electricity it has to be directed in the national grid but it will require advanced improvements on the infrastructure. The so-called smart grid will be needed to be developed that allows more fluctuations and many input points. This is more of a national investment but it has to be mentioned in this study as well.

Using the current energy supply more efficiently is another task which is a challenge for the county too. **Energy-efficient reconstructions are necessary in public institutions and buildings, but justified even for flats and houses.**

As a sidenote about solar and wind power:

20 years ago, photovoltaic cells were producing in Kaposvár; at present, some companies are dealing with making solar collectors (e.g. in Siófok and Segesd). Most probably solar energy will be used only in small areas or buildings, albeit the idea of establishing a solar cell park has been already drawn up.

In Somogy county the investment of Wind Power Plant Park of Gölle was the closest to the implementation (permit plan) when the settlement applied to the Hungarian Energy and Public Utility Regulatory Authority for 48 MW energy production; 25 pieces of wind tower were planned to build. There are efforts to establish wind power plants in Szőlősgyörök (25 MW) and in Kánya (22x50kW). However, due to the national law on regional development adapted to the Development Plan of Somogy County as well, the investments are not to be implemented awhile.

Conserving electricity and heat is already a consideration when energy prices are constantly rising. Consumption should be reduced by more efficient buildings, infrastructure and appliances. More importantly the habits of energy consumption should be changed and this can only be achieved through local actions. A community program on how to be more environmentally conscious and achieve energy savings is also highly recommended to carry out.

Local gas consumption should be mentioned while the energy usage of the citizens is subjected. Natural gas consumption is primarily for heating and it's tied to the issue of using energy efficiently. The easiest way of improving heating efficiency is the improving of the insulations in houses and flats. These home owner investments costs lot of money and the **majority of local population can't allow such expenditures. As long as heating is not efficient, the residents of the county are subject to raising gas prices or possible**

gas outages.

It can be concluded that the two major factors behind implementing greater energy saving measures in the county are the lack of funds from the residents and the current habits of energy consumption. Both of these require the attention and effort of Somogy County.

To reveal how energies can be utilised in the region an elaboration of a study is suggested on the stocks of biomass, on the way and place of setting up power plants, and opportunities how to use



geothermal energy on local level. Alternative energies can also contribute to agricultural activities as well.

There is a general need expressed, that cross-border cooperation is necessary between the Hungarian and Croatian border regions, even for implementing energy projects. Mainly small-scale investments can be initiated and implemented jointly, since larger infrastructural developments are not of regional competence and require huge financial support.

It's needed to be mentioned that the Adria hydrocarbon (oil) pipe is running through the country. This pipe has national importance both for Croatia and Hungary which goes beyond county and cross-border regional cooperation. The national supply of oil can be diversified by using more extensively the Adria pipe. Unfortunately the pipeline has no real significance in the county economy. There are no long term plans for construction any kind of oil refinery or distribution facilities. Also there is slight possibility that a branch of the planned South Stream natural gas pipeline goes through Somogy County but exact plans are not present.

As a matter of Croatian-Hungarian cooperation, the hydrocarbon reserves of the border region are to be exploited. This could improve the presence of the already present oil industry in the county. These aren't huge scale exploitations. The natural values can be preserved. The task is that how can the border region benefit from these current and planned oil extraction sites.

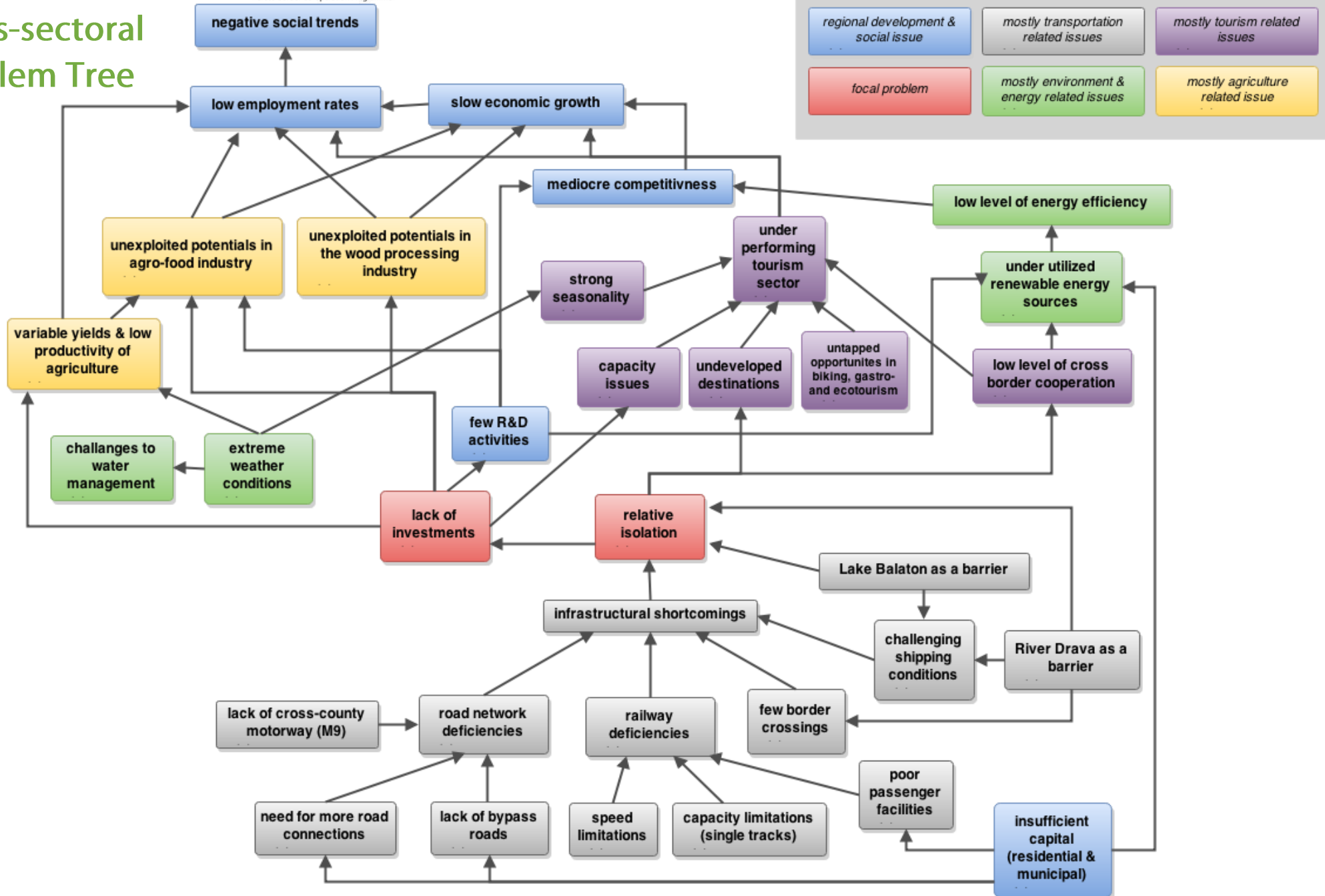
Key Points

Based on the joint description of challenges here is a list of the key points.

- There are negative trends in recent years regarding a number of economic and social indicators.
- The county has significant untapped potential in the energy sector, especially in the field of renewable energy production. Renewable energies should be utilized in greater scale.
- The agro-food industry has the potentials to growth, investments are needed.
- Agricultural land ownership is fragmented which is a barrier for higher return of investments.
- Agricultural investments lack the funding.
- Forestry, timber industry and food processing industry have favourable conditions for developments although the required funding is not present. For example: The vast majority of forest products leave the county unprocessed.
- Somogy County is relatively not a popular target for investments.
- Tourism is a potential sector where the county can advance. Capacity is an issue: Creation of more quality and competitive accommodations is necessary.
- The intertwining and coherence of the county tourism program elements and cooperation among the players in the tourism are missing.
- Growth in tourism can be achieved by developing the currently marginal specific branches of tourism. Diversify the tourism and include newer areas like eco-tourism, gastro-tourism, active tourism, etc.
- Bring in more tourists to other neglected parts of the county. The Drava region should be highlighted as it could offer cross-border cooperation and opportunities.
- The county's cycling infrastructure is underdeveloped, it hinders the development of bicycle tourism. Bike routes could possibly be created between Croatia and Hungary to promote cross-border ties.

- Tourist turnover has strong seasonality, and its decreasing volume causes employment and profitability problems in the exclusively tourism-based economy. The effects of seasonality should be addressed. This could raise the resilience of tourism.
- Somogy has a low R&D rating. Innovation activities should be expanded.
- Major roads are necessary to be improved including building bypass roads around settlements.
- Low capacity (in volume and speed) of rail transport network sets a bar against the development of the region.
- Any kind of cross-border cooperation is poised by the low number of connections which should be improved. Further road, railway or small capacity local crossings should be implemented to help the cross-border cooperation develop.
- Public transport continuously needs national financial support to run. This issue needs to be addressed. Another challenge is the maintenance of railway facilities.
- The railway network needs improvements; suburban rail transportation needs even more improvements so the quality can rise.
- Agricultural spin-offs produced for energy purposes (biomass, biogas) would set a good direction to the county to move toward.
- Besides the agro-food industry the processing of energy-plants is an additional breakout possibility for the county.
- Energy-efficient reconstructions are necessary in public institutions and buildings, but justified even for flats and houses.
- Local energy consumption habits should be changed in a direction toward more efficient and responsible use.
- Residential energy efficiency investments are needed but they require more funds than the concerned people can allocate.
- Opportunities for benefiting renewable sources should be exploited: small scale geothermal, solar and wind power plants can be constructed for heating and electricity production.
- There is a need to create local, cross-border cooperation in the field of renewable energies as well.
- The infrastructure of public utilities needs to be developed: sewage network coverage is still lagging behind the tapped water coverage. However the funds that are available for these municipalities won't be able to support the financial needs of modernisation.
- It is necessary to improve the quality of drinking water at the places where there is risk of water contamination.
- Ground water reserves should be protected.
- The proportion of selectively collected waste is really low from the whole transported communal waste, and it needs to be addressed.
- On the field of water management actions need to be taken in order to be prepared for extreme weather conditions, like draughts and floods.
- Some of the protected heritage – mostly buildings – needs to be renovated due to their poor conditions unless they will deteriorate further.
- It is essential to make wildlife management's multiple utilization.
- Extreme weather poses as a challenge, mainly for water management.

Cross-sectoral Problem Tree



List of Publications Used

Joint Cross-border Enterprise Development Strategy for Somogy and Virovitica-Podravina Counties 2013-2020 (SOVISEC Project, 2012)

Website of Kapos Volán Zrt.

Website of Kaposvári Tömegközlekedési Zrt.

Websites of the MÁV-START and MÁV Zrt.

Hungarian Central Statistical Office (HCSO) Statistical Information Publication – Somogy County, 2013/4 (HCSO, 2014)

Regional Development Concepts of Somogy County (Somogy County Municipality, 2014)

Spatial Plan of Somogy County (Somogy County Council regulation no. 15/2004 (XII. 27.))

Joint Cross-border Enterprise Development Strategy for Somogy and Virovitica-Podravina Counties 2013-2020 (SOVISEC Project, 2012)

TEIR National Regional Development and Spatial Planning Information System database (www.teir.hu)

Somogy County Land Registry statistics (<http://somogy.foldhivatal.hu/>)