
EUROPEAN RURAL DEVELOPMENT NETWORK
IAEI
17th European Rural Development Network Conference
CAP 2021+:
balanced development
among the dimensions
of rural sustainability

17th European Rural Development Network Conference

CAP 2021+: balanced development among the dimensions of rural sustainability

Velké Bílovice, Czech Republic 2019

European Rural Development Network
Book of abstracts

Edited by:
Tomáš Hlavsa, Institute of Agricultural Economics and Information, Czech Republic
Marie Trantinová, Institute of Agricultural Economics and Information, Czech Republic
Paweł Chmieliński, European Rural Development Network and Institute of Agricultural and Food Economics – National Research Institute, Poland

The printing of this volume was carried out by ERDN – European Rural Development Network, www.erdn.eu.

Publishing Editors:
Krzysztof Kossakowski
Barbara Pawłowska

Managing Editor:
Leszek Ślipski

Printed by Institute of Agricultural and Food Economics – National Research Institute, Warsaw, Poland

European Rural Development Network (ERDN), www.erdn.eu
Secretariat of the ERDN: dr Paweł Chmieliński, IAFE-NRI, Szkolna 2/4, 00-006 Warszawa, Poland;
phone +48 22 50 54 774, fax +48 22 827 19 60; erdn@ierigz.waw.pl, chmielinski@ierigz.waw.pl.

17th European Rural Development Network Conference

CAP 2021+: balanced development among the dimensions of rural sustainability

Book of abstracts

Scientific Committee:

Organising committee:
(Institute of Agricultural Economics and Information – IAEI):

Tomáš Hlavsa
Ondřej Chaloupka
Marta Mrnuštík Konečná
Marie Šimpachová Pechrová
Marie Trantinová
Edita Turková

Host Organiser:

Institute of Agricultural Economics and Information Prague

Mánesova 75

120 00 Prague, Czech Republic

Tel: +420 736 484 232 (Marie Trantinová), +420 776 349 412 (Tomáš Hlavsa)

Conference email: 17erdn2019@gmail.com

ERDN Contact:

dr Paweł Chmieliński, chmielinski@ierigz.waw.pl

Conference site: http://erdn.eu/17erdn2019/

Table of Contents

Introduction

The main objective of this conference is to advance international knowledge transfer and scientific cooperation in the field of rural development and agriculture. The topic is highly relevant in the context of the current preparation of the new Common Agricultural Politicy (CAP) 2021+.

The CAP aims to integrate agricultural and rural development, bringing together various sectors of the rural economy and emphasizing the social and environmental context of the measures' complexities. On the one hand, the CAP support has the potential to create synergies in rural areas but, on the other, support for one issue can disadvantage the others. A focus on solely economic profit can lead to ecological damage and neglect of the social dimension of rural development. Without economic viability, however, sustainable life in rural areas and care for the environment would not be possible. The conference will focus on these synergies and trade-offs between economic growth, ecological sustainability and social dimensions as well as the role of the CAP in balancing support for all of them. The aim was to present the lessons learned from the current CAP design and describe future visions of the balanced CAP support. The CAP strives for synergy between business development, nature conservation and social development. Therefore, the contributions are devoted to the relationships between these 3 dimensions of sustainable development.

Conference participants tried to answer the question how the future CAP can address and balance the development of three dimensions of the rural sustainability (environmental sustainability, economic growth and social cohesion)?

There are synergies and trade-offs between policy measures. The question "How and what will be supported?" is a political decision but one should stress that the EU is strongly promoting the evidence-based policy making, where research outcomes are behind delivery of particular policy measures. Considering these drivers, the conference aimed to show the pros and cons of the CAP and make use of the lessons we can learn from current experiences.

Contributions focus on the relationship between economics and the environment, the environment and social cohesion as well as between social cohesion and economics.

The topics for the presentation are divided into three sections:

a) Trade-offs between economic growth and ecological sustainability (section one)
b) Trade-offs between social cohesion and ecological sustainability (section two)
c) Trade-offs between economic growth and social cohesion (section three).

XVII European Rural Development Network Conference

"CAP 2021+: balanced development among the dimensions of rural sustainability"

24-26 September 2019, Velké Bílovice, Czech Republic

Conference Programme

Monday 23.9.2019 informal dinner **20:30**

Tuesday 24.9.2019

Time	Section	Name	Content
8:30 – 9:00	Registration of participants		
9:00 – 9:30	Opening session	• Director of IAEI: Kala Š. • ERDN Coordinator: Chmieliński P. and Organising Committee	• Welcome speech • Welcome speech, organization issues
9:30 – 11:00	Keynote speakers	• Pražan J. (IAEI) • Hrdoušek V. (LAG) • Škodová Parmová D. (USB České Budějovice)	• Economy versus ecology • Ecology versus sociology • Sociology versus economy *25 min. each + 15 min discussion*
11:00 - 11:20		Coffee break	
11:20 – 12:30	Session 1	• Hlavsa T., Trantinová M. • Gedminaitė-Raudonė Ž., Vilkė R.	• Short introduction to sustainable development (CAP) • Collaboration between agribusiness and government for biogas production: balanced development of rural sustainability

		• Wieliczko B. • Jurga P., Loizou E., Rozakis S.	• Ecological sustainability of agriculture and rural areas vs. economic growth and social cohesion. Is there really a trade-off? • Ex-ante Impacts Assessment of the Polish Rural Development Programme 2014-2020 Employing a Bioeconomy Input-Output Table
12:30 – 14:00		Lunch	
14:00 – 15:30	Session 2	• Mrnuštík Konečná M. • Noll D., Fischer-Kowalski M., Wiedenhofer D. • Biba V., Stepura L., Varchenko O. • Gospodarowicz M. • Wojcieszak M.	• Pro's and Con's of the Support of Extension Services Towards Innovation and Cooperation • The role of science in the sustainability transition of agriculture: A case study from Samothraki, Greece • Diversification of small farms activities as a tool for the sustainable development of rural territories • The territorial cohesion of regions in Poland • Financing and costs of marketing activities in agritourism farms in Poland
15:30 – 16:00		Coffee break	
16:00 – 18:00	Poster session	Szekely V. as a guide through the session	Presentation of posters (*authors and topics listed below*)
19:00		Welcome dinner at Hotel Akademia	

Wednesday 25.9.2019

Time	Section	Name	Content
9:00 – 10:30	Session 3	• Reindl A., Gahleitner G., Resl T. • Biró S., Kis M. • Vilkė R., Gedminaitė-Raudonė Ž. • Kiryluk-Dryjska E. • Gariuolo G., Faccilongo N., Fiore M., La Sala P.	• Evaluating the effects of a redistributive payment system in the CAP 2020+ programme in Austria • Future directions of Rural Development in Hungary based on RDP 2014-2020 • Fostering balanced development among the dimensions of rural sustainability in the EU: quintuple helix model approach+ • Effectiveness versus Fairness in rural development planning: how different formal procedures affect funds allocation • The sustainable development of rural areas in the perspective of the new CAP: the SMART era in the RDPs of the Puglia and Basilicata regions
10:30 – 10:50		Coffee break	

10:50 – 11:40	Session 4	• La Sala P., Conto F. • Surová D. • Székely V., Novotný J.	• Sustainable use of water resources in Italy in the perspective of the CAP 2021-2027 • The stakeholders' perspectives on the impacts of different agricultural types on rural well-being • Rural territory of Banská Bystrica region (Slovakia): are there any public transport deserts?
11:40 – 12:30	Guests practitioners	• Čarková A. • Marada P.	• LAG Slovácko v pohybu, experiences, skills (envi – socio) • Farmer, Landscape, sustainable agriculture (econom – envi)
12:30 – 14:00		Lunch	
14:00 – 17:30	Field trip	by bus	
19:00		Dinner and wine tasting in cellar (Villa Jarmila at the Hotel Akademia)	

Thursday 26. 9.2019

Time	Section	Name	Content
9:30 – 10:20	Session 5	• Bezat-Jarzebowska A., Jarzebowski S. • Gjokaj E., Halimi K. • Konečný O., Hrabák J., Průša J.	• Short supply chains in the food economy • Food quality standards and participation of farmers in modern supply chains in Kosovo • LEADER Experiences in 2007-2013 in Czechia: Agricultural Multifunctionality or Non-agricultural Rural Development?
10:20 - 10:40		Coffee break	
10:40 – 12:00	Closing of the conference	• ERDN Coordinator • Organising Committee	• Closing remarks, summary of messages presented at the conference • Evaluation activity • Closing speech
12:00		Lunch	

Poster session presentations

1. Baer-Nawrocka A., Mrówczyńska-Kamińska A.: Changes in incomes and structure of the material flows in agriculture in the European Union countries
2. Cadar R. L., Pocol C. B.: Sustainability of medicinal and aromatic plants value chain in Romania
3. Hrabák J., Zagata L.: Regional differentiation of organic agriculture in Czechia
4. Hruška V., Píša J.: Recent economic development of post-socialist rural areas and its implications for the new CAP
5. Pawłowska A., Chmieliński P.: Small farms and sustainable rural systems. A case of the bottom-up, farm-based local short food supply chain in Poland
6. Pocol C. B., Alexa A., Cadar R. L.: Understanding urban residents' perception of and role in the development of sustainable rural tourism in Romania: preliminary results
7. Sadowski A.: Functioning of the Family 500+ program on a selected example of rural areas
8. Smutná Z.: Food hubs in post-socialist rural space
9. Turková E., Štolbová M.: Small farmers in the Czech countryside: The case study of small farms from 1 to 5 ha
10. Trantinová M.: Evaluation of a project funded by the LAG using Social Return on Investment (SROI)
11. Veselicz A., Patkós C..: Anomalies in centralised and community-led rural development resource allocation in Hungary
12. Vorobljevová V., Novotná M.: Aspects of Business Development in Rural Areas and Amenity Migration as a Potential for Economic Growth of Rural Areas
13. Wagner K., Egartner S., Grüneis H., Heinschink K., Niedermayr J.: The regional circular living lab business concept as chance to foster sustainable rural development – interim results of the H2020 project LIVERUR.

Rita Vilkė, Živilė Gedminaitė-Raudonė

Fostering balanced development among the dimensions of rural sustainability in the EU: quintuple helix model approach

Lithuanian Institute of Agrarian Economics
email address: rita.vilke@laei.lt; zivile.gedminaite@laei.lt

The increasingly demanded balance among the three dimensions of rural sustainability use to be discussed in the name of economic, social and environmental concerns for a few decades in scientific literature and rural development policy. Numerous rural development studies has been devoted to create fundamental frameworks and operational models, able to measure the state and progress of balanced development among the dimensions of rural sustainability. However, scientific studies rarely link these findings towards the vital importance of balanced approach towards sustainability of all stakeholders who take part in different rural development activities.

This paper aims to explore the relevance of balanced stakeholders' understanding regarding the main issues of rural sustainability in the agri-food sector when reaching the prospective smart specialization.

To reach the aim, theoretical part of the paper presents the necessity to develop specialized regions in the EU with regard to smart specialization strategies. The newly emerged quintuple helix innovation model is used to explain the vital importance of balanced approach towards regional development policy in reaching sustainability of agri-food sector in the 21st century. Balance in reaching sustainability is explored using the quintuple helix innovation model. SWOT framework was developed to generalize data from focus groups regarding the agri-food sector development among the five parties of the helix: university, industry, government, media-based and culture-based public and civil society, and the natural environments of society. Research and innovation infrastructure for agri-food sector was used as a branch to explore the relevance of balanced stakeholders' approach regarding the main issues of rural sustainability. Research results prove that prospective innovation in any dimension of rural sustainability might happen only in case all stakeholder attitudes are balanced. Therefore it is suggested to use the quintuple helix model based approach in fostering the balanced development among the dimensions of rural sustainability in the EU CAP policy 2020+.

Živilė Gedminaitė-Raudonė, Rita Vilkė

Collaboration between agribusiness and government for biogas production: balanced development of rural sustainability

Lithuanian Institute of Agrarian Economics
email address: zivile.gedminaite@laei.lt; rita.vilke@laei.lt

Throughout the half of a last century, rural development policy experienced many transformations in the name of industrialization, including mechanization of work process in agriculture, installation of irrigation and amelioration systems, electrification of farms, application of chemical production technologies, increasing productivity and other. Current time's questions of balanced sustainability and minimization of negative impacts with regard to quality of life are taking leading positions in agricultural policy debates. Results of previously implemented agribusiness support measures start signalizing about disastrous future of ongoing agricultural policy, which over accelerated rural development and thus caused significant changes in rural landscapes and life of rural residents. Therefore future agricultures call for new models and innovative decisions as well as good political will in the field.

The main aim of this paper is to propose future directions for collaborative agribusiness using circular economy approach as balanced development of rural sustainability. Research is grounded on positivist methodology approach. Qualitative data were collected in summer-autumn 2018 using semi-structured interviews in Lithuanian livestock farms and government institutions, which, from one side takes part as biogas producers (livestock farms) and from the other - actual decisions makers (government institutions). Research results give evidence that future agribusiness is highly depended on the role taken by government in accelerating prospective innovations even though they happen in field of activity, supported from public funds. Collaborative political decisions made to support circular economy approach in biogas production might be helpful for future development of less polluting and more society-benefiting livestock agribusiness. Therefore it is suggested to broaden the use of circular economy approach in fostering the balanced development among the dimensions of rural sustainability in the EU CAP policy 2020+.

Majerová Věra, Sálus Jiří, Adamcová Jiřina

Fifteen Years of CAP in the Czech Countryside – Expectations and Reality

CULS in Prague
email address: majerova@pef.czu.cz; salusj@pef.czu.cz; adamcovaj@pef.czu.cz

For the Czech Republic, membership of the EU heralded a new phase in rural development and agriculture. There was no longer a dependency on internal resources only, but the possibility of utilising the financial support of the Structural Funds. Representatives of the Czech Republic are able to decide on the form of their subsidies with other EU members.

CAP policy has brought about methodological support for registration, scheduling, distribution and control of the implementation of national policies, as well as intervention in the activities of local actors in rural development. Differences in the socio-economic context of the old and new EU Member States may not always be properly reflected in CAP policies e.g. the dual quality of food.

While measurable and quantifiable outputs of economic processes can be planned, implemented and evaluated relatively easily by means of a number of indices and indicators, the more subtle processes of rural development (especially the quality of life of the rural population) cannot be easily included within this methodological framework.

For example, the statistical data describing the increased living standards of the rural population can be considered as complete only in the case of a comparison of sociological research, which captures the finer nuances of contentment, with the dissatisfaction of the rural population with their living situation.

The CAP is primarily targeted at agriculture (which is its content). Not only are preconditions for the economy included, but also social and environmental development. However, this viewpoint is not sufficiently methodologically elaborated and thus not substantiated by data (either in individual Member States or in the framework of EU Policy). Therefore it can only present a subjective evaluation, as well as mistaken interpretations.

The paper therefore deals with the benefits of the CAP for the Czech countryside, as well as the expectations concerning the equalisation of disparities in the quality of life of the Czech rural population. The empirical part is based on a quantitative comparison of statistical data (CSO, EUROSTAT, OECD, etc.) and a qualitative comparative analysis of strategic development documents of the EU and the Czech Republic, including a study of contemporary Czech and international sociological literature dealing with the countryside.

Ewa Kiryluk-Dryjska

Effectiveness versus Fairness in rural development planning: how different formal procedures affect funds allocation

Poznan University of Life Sciences, Poland
email address: kiryluk-dryjska@up.poznan.pl

Since Poland's accession to the EU, the total budget (until 2020) of the rural development programs, financed from the II Pillar of the Common Agricultural Policy in Poland, exceeded 35 billion Euros. Because UE funds have significant potential to positively impact the future structure and competitiveness of agriculture and rural areas, their allocation is of crucial importance. However, the multi-objectivity of the programs, the diversity of proposed measures and the lack of commonly accepted indexes to measure policy effects makes the budgeting very complex.

In current economic literature, different forms of formal allocation procedures are proposed to support decision- makers to allocate public budgets. One of them, stressing the importance of effectiveness, is Multiple Criteria Decision Analysis. It provides insights into the problem structure, explores trade-offs, and provides a set of Pareto-efficient solutions. The concept was introduced by Tinbergen (1952) and further developed by Chiang (1984). The attempts of their practical application in the public sector has been presented by Dyer et al. (1992), Bell et al. (2001), Bojorquezi et al. (2005), De Agostini (2006) and Stewart et al. (2010), Kim (2008). To support the budgeting of structural policies Kirschke and Jechlitschka (2003) and Kiryluk-Dryjska (2014) propose mulitobjectve linear programming.

Other possible way to formally address the political allocation decisions is to apply game theoretic allocation rules. Hougaard (2009) defines an allocation rule as 'general allocation principle that is used with respect to an entire class of similarly structured allocation problems for which there is no objective way to attribute value to specific members.' There are various types of rules for allocating a common monetary value between individual members of groups on game theoretic basis. Most of them are related to the notion of fairness. 'Clearly, if the actual allocation is conceived as unfair by some agents in the group, these agents have an incentive to block the cooperation and thereby the group as a whole will suffer an efficiency loss (Hougaard 2009).

In the theory of fair allocation, different procedures are proposed for varied types of problems (Young 1995, Brams and Taylor 1996, Moulin 2003 and Thomson 2015). Some attempts of their practical application in the public sec-

tor for many different decision-making problems has been presented by Petrosjan and Zaccour (2003) and Kompas and White (2003). Fragnelli and Kiryluk-Dryjska (2019) demonstrate that formal fair-division allocation rules can be also applied to structural budget allocation.

Objective of this paper is to compare and discuss the results of the two aforementioned allocation procedures: Multiple Criteria Decision Analysis and formal fair division rules applied to a practical structural policy budget allocation problem. More specifically, we discuss the results of the mulitobjectve linear programing model and classical bankruptcy rules (Proportional (PROP), Constrained Equal Awards (CEA) and Constrained Equal Losses (CEL) and at the example of Polish Rural Development Program 2007-2013.

The Gini indexes and Lorentz curves were used to compare allocation results of the analyzed procedures. The results show some similarities between allocation performed by linear programing model and CEL method. Both of the procedures result in the allocation concentrated on limited number of measures assuring them high financing. Conversely, CEA allocation is the most similar to the actual allocation of MARD. In both cases the financing is spread among all programs, with a special emphasis on satisfying programs with lower claims. Moreover, the results clearly demonstrate that, with the use of formal methods, decision-makers can choose if they are willing to set more dispersed or more concentrated budgets. This can depend on current political situation or decision- makers preferences. However, once this important public choice decision is made, the formal allocation rules provide objective results treating all the measures in a fair manner. Thus, decision-makers may not change the given financing of any measures without clearly objective reasons.

Marie Trantinová

Evaluation of a project funded by the LAG using Social Return on Investment (SROI)

ÚZEI (IAEI)
email address: trantinova.marie@uzei.cz

That contribution is focused mostly on topic Trade-offs between economic growth and ecological sustainability (section one).

The tested method of Social Return on Investment (SROI) was applied to calculate the profitability of investments in a smaller project. This method enables a dynamic concept of profitability of an investment that includes both economic

social and environmental effects. In the real world, every investment affects not only the owner of the new investment, but also changes the life of the employee who will use it and the people in whose vicinity the new investment (equipment) will operate. The SROI analysis is based on the CBA principles. The CBA examines the project from a macro perspective and assesses how the project will affect society as a whole. SROI examines the impacts of the project also from a stakeholder perspective. Usually, there are two or more variants or projects that are compared with each other. The existing differences between these scenarios are identified and then measured for economic, social and environmental impacts. They are converted into monetary units. The SROI indicator expresses the cost-benefit ratio.

SROI has been tested on a machine sweeper and wood chipper project that has been designed to increase cooperative productivity, protect green areas, and raise population standards (comfortable, clean environment). The analysis was performed according to the SROI methodology in six stages.

Stage 1. Establishing scope and identifying stakeholders. There are three steps in this stage: 1.1 Establishing scope, 1.2 Identifying stakeholders, 1.3 Deciding how to involve stakeholders

Stage 2. Mapping outcomes. There are five steps when filling out an Impact Map: 2.1 Starting on the Impact Map, 2.2 Identifying inputs, 2.3 Valuing inputs, 2.4 Clarifying outputs, 2.5 Describing outcomes.

Stage 3. Evidencing outcomes and giving them a value. There are four steps in stage 3: 3.1 Developing outcome indicators 3.2 Collecting outcomes data 3.3 Establishing how long outcomes last 3.4 Putting a value on the outcome.

Stage 4. Establishing Impact. There are four parts to this section: 4.1 Deadweight and displacement 4.2 Attribution 4.3 Drop-off 4.4 Calculating your impact.

Stage 5. Calculating the SROI. There are four steps to calculating your ratio, with an optional fifth: 5.1 Projecting into the future 5.2 Calculating the net present value 5.3 Calculating the ratio 5.4 Sensitivity analysis 5.5 Payback period.

The predictive method was chosen due to lack of data in cost records, but presumption got on real data. Used data were collected from sources like various records, price lists, interviews, workshops and expert estimates were used. Two scenarios were assessed, one of them were based on the situation before the machines was purchased and one after the machines was purchased. The mulcher and the wood chipper were assessed separately. Costs include equipment acquisition, labor and material costs, cut and crushed material processing, nutrient costs, organic matter. Involve stakeholders were agricultural cooperative and municipalities in the cooperative district. Impact duration was 5 years.

The result showed that one crown invested in a chipper and sweeper was returned 2 times (in 5 years). The cost / benefit ratio for each stakeholder was 1.6 : 1 for the cooperative and 1.5 : 1 for the municipalities. Some benefits were not accounted for reason as are the complexity of data acquisition and the expected small effect. These were social impacts (stakeholder satisfaction, better feeling due to clean in municipalities and on the fields).

SROI is a tool for deciding whether to enter a project, invest in technology, etc. Furthermore, SROI brings a change in thinking about the impacts of the activities carried out. European Commission puts emphasis on evaluating the impact and value added in non-financial areas. In the Czech Republic, the measurement of these values is not a long tradition. This was one of the reasons for testing the SROI method.

References

The SROI Network – an international network of SROI analysis experts, has published widely accepted SROI analysis methodologies, which is also based on this handbook, organizes training events, operates a Wikivois database of indicators.

Vladimír Székely, Ján Novotný

Rural territory of Banská Bystrica region (Slovakia): are there any public transport deserts?

Institute of Geography, Slovak Academy of Sciences
email address: szekely@savba.sk
geognovo@savba.sk

Territory of Banská Bystrica region (NUTS 3), which consists from 13 LAU1 with 24 urban and 492 rural municipalities, is generally characterized as the economically underdeveloped region (Fig.1). Regional centre, centre of political, economic and cultural life, is Banská Bystrica. The middle-size town (80 thousand inhabitants) from central Slovakia has an eccentric geographical position in the relation to the rural rest of the administrative region. It has an important impact on the management (directions, distances, and frequencies) of the public transport from the side of individual providers. Public transport is one of the services of general interest that are also defined in the official documents of the EU (European Commission, 2011). Provision of services of general interest should be in accordance with the principles of the spatial organisation of society (according to Christaller´s central place theory the higher-order "goods and

services" are located mainly in centres of higher concentration of population, in centres of administrative units), which include spatial efficiency and spatial equity (spatial justice). Application of both principles can be evaluated using the concept of accessibility. A number of studies (e.g. Delbosc and Currie, 2011; Horňák and Rochovská, 2014; Jaroš, 2018) have demonstrated the close correlation between unfavourable access to "goods and services" by public transport and social exclusion of affected (especially elder, poor, and disabled) people. The aim of the study is to identify municipalities and areas which inhabitants are marginalised or excluded from using of the public transport services to/from regional centre Banská Bystrica. Rural areas, which inhabitants are isolated or only poorly accessible from the employment possibilities, healthcare, education and cultural facilities in the regional administrative centre, represent very serious problems of the balanced and sustainable spatial development of Slovakia. For the identification of negatively perceived "public transport deserts" we use the concept of "daily accessibility" as a decisive criterion for delimitation of territories which suffer from long distances and travel time to the regional centre and/or insufficient organisation of public transport. Electronic database of train and bus timetables https://cp.hnonline.sk has been used by procedure for obtaining the information about (1) the travel time between municipality and regional centre, and (2) the difference between the arrival of the first link from municipality to regional centre and the departure of the last return link during 24 hours (daily accessibility).

Fig.1. Banská Bystrica region: geographical position of studied area

Barbara Wieliczko

Ecological sustainability of agriculture and rural areas vs. economic growth and social cohesion. Is there really a trade-off?

Institute of Agricultural and Food Economics – National Research Institute
email address: Barbara.Wieliczko@ierigz.waw.pl

The changes in the surrounding of the agricultural sector and rural areas have been accelerating in recent years. The process of climate change and digitalization of the global economy and world's population are the most visible drivers of changes in the economy and society. Agriculture and rural areas in their well-being are especially reliant on the condition of the nature.

There is a vast literature on the forecasted situation of the whole world and specific regions around the year 2050. These studies show that conditions in which agriculture and rural areas will be operating in 30 years will be significantly different from the current ones. The prognosed extent of changes in the environmental conditions will require a totally new approach to agriculture and new agricultural practices that will be suitable to the changes in the environment.

Yet, in order to mitigate the scale of the undesirable climate changes and to ensure food security operating within the fast depleting natural resources agriculture must already today adjust to the perspective of the year 2050.

Social, economic and environmental goals have often been presented as mutually contradictory. Yet, this does not have to be and is not always the case. This paper argues that in the long-term perspective the environmental sustainability is in fact the only guarantee of social cohesion and economic growth.

The study is based on the analysis of the literature on the perspectives for the year 2050 and is aimed at presenting optimal long-term development path for both agriculture and rural areas. The foundations for designing this path stem from complexity economics that focusses on complex socio-ecological systems. Agriculture and rural areas can be considered as such systems and therefore, such an approach is well justified. The study also applies backcasting approach, which determines the final goals of the policies and on this basis designs policy instruments that can lead to the chosen long-term goals. In the case of this study these long-term goals are long-term resilience of agriculture and rural areas. The results show that only by treating ecological sustainability as a prerequisite for resilience can both economic growth and social cohesion be also achieved.

Keywords: agriculture, rural areas, ecological sustainability, economic growth, social cohesion, complexity economics, backcasting.

Biba Valentina, Stepura Ludmyla, Varchenko Olga

Diversification of small farms activities as a tool for the sustainable development of rural territories

Bila Tserkva National Agrarian University, Ukraine
email address: vbiba584@ukr.net; ludmila.stepura@gmail.com; 1207olia@gmail.com

Introduction: The transformation processes in the agriculture allowed the impact of the destabilization factors on production and commercial activities in rural area and on possibilities to enlarge reproduction. As a result we can observe the reducing of the sustainability of small farms. In these conditions the elaboration of the rational economic strategy and its implementation with the permanent adaptation to external factors based on diversified economic activities are needed.

The objective of this article is the summarizing of the native and international experience of the diversification of small farms economic activities and development of the proposals for creation of favorable conditions for non-agricultural activities for the sustainable development of rural territories.

Data and methods: The general and specific methods of economic researches were applied: the systemic approach for the study of links between phenomena and processes in the system of diversified development providing, the economic and statistic methods for the detection of dynamic, structure and results of small farms activities, the questioning of the farmers from the different regions of Ukraine (143 respondents) for the testing possibilities to develop the tourism and non-agricultural activities in rural area, the questioning of towns inhabitants as potential consumers of these services

Results: The opinions of different experts were collected, thus we questioned researchers, representatives of advisory services, heads of rural communities, farmers. 97% of our respondents trust in the success of the tourisms development in rural area, 77% of these persons noticed that to be successful these initiatives should be supported by local authorities. As for the form of the state support provided to farmers for rural tourism development, our 63% of respondents put the financial aid on the first place, 43% pointed out the need of a special training.

As the research showed only 37% of farmers with stable incomes were ready to develop the rural tourism within their farms. It is because of the undeveloped infrastructure of farms and rural area. All our respondents are ready to receive the financial support in form of loan but in privileged conditions. The major-

ity of the questioned farmers count on their own finances – 60%, a little more respondents count on support by local authorities – 50% (20% of them envisage this aid as reimbursable), and only 10% count on classic credits. 70% of respondents pointed out the absence of special knowledge, they believe that first of all farmers themselves should be trained (87%), than members of their families (57%) and their employees (20%). The training programme should include bases of the rural tourism development, economics of guest house, management, services organization, as well as best practices of rural guest houses organization.

The main requirements for rural tourism development by small farms are the following: promotion of natural landscapes and historical heritage of region, guarantee of tourists security, respect of sanitary standards for providing food to tourists, respect of standards of fire security; carrying out of tourist market study in different rural areas, carrying out of advertising campaign, use of internet resources (development of the site), promotion of folk crafts and possibilities for interesting leisure such as fishing, hunting, rafting etc.

One of the ways for the diversification of small agricultural producers' activities is their integration into the supply chains of necessary materials, technologies, capital and sale management. It can significantly increase the possibilities of access to markets, prices, incomes for individual sector and thus contribute to the sustainable development of rural area. So, corporative structure should be interested to initiate the processes for involving small and medium agricultural producers into agri-food chains on principles of cooperation. For this purpose these structures should be encouraged by the economic way to the cooperation with small and middle producers. One of these tools can be the establishment of the dependence between the application of rights to privileged taxation that is actually used by corporative structures and their activity aimed to the enlargement of agro-food chains in the sector of small production.

In the context of the enlargement of the participation of small producers in acting added value chains and the creation of their own chains, the efforts should be aimed to enhancing their economic power based on group participation. The encouraging of added value chains creation is not only a social initiative but also the economic policy aimed to the sustainable development of rural areas.

Conclusion: The development of non-agricultural activities of small farms in rural area needs a complex technological and financial support by the state and local authorities. This support should be a part of the state strategy of rural areas development.

Keywords: Rural area, agricultural and non-agricultural activities, state support, added value chains, rural tourism.

Marta Mrnuštík Konečná

Pro's and Con's of the Support of Extension Services Towards Innovation and Cooperation

Institute of Agricultural economic and information (ÚZEI)
email address: konecna.marta@uzei.cz

In the last decades, the EU strongly has focused its agricultural policies on innovation. The aim is to support cooperation and transfer of cross-cutting information among the actors of Agricultural Knowledge and Innovation System (AKIS) and farmers. The pressures from the politicians and EU office on the Extension and Advisory services tend to support it as a tool for boosting interactive approaches to cooperation and innovation. Therefore the following questions are very important to explore:

"Who is the influencer in the farmer's decision-making process towards innovations?" "What is the roles and functions of support from the point of view of the farmers and advisors."

These research questions were incorporated into a semi-structured questionnaire in WP2 AgriLink (H2020). The project AgriLink has received funding from the European Union's Horizon 2020 research and innovation programme. Particularly, AgriLink addresses the question of the role of farm advice regarding farmers' decision to adopt (or not) various types of sustainable innovations. Innovations in the project are sorted into eight innovation areas based on classical taxonomies on innovation presented by OECD (technological, process, market, social or organisational). In the Czech Republic, the Soil Improvement Technologies and the Precision Farming were chosen for closer examination. The innovation areas were explored in two focus region, particularly the South Moravian Region and Central Bohemian Region.

The research intends to identify the main actors (person/organisation) in the farmers' decision making process towards innovations.

The concepts used are the Trigger Change Model and the MicroAKIS. The Trigger Change Model describes the main stages of a decision-making process like awareness, assessment and implementation. The MicroAKIS concept describes the personal AKIS network of the farmer.

To ensure the relevant outcome, a sample was collected by the snowball method. To identify the first respondent, the AKIS actors (i.e. universities, advisors) were asked to determine innovative farmers in the region. Consequently, the interviewed farmers were asked to suggest other innovative farmers. The sam-

ple was closed when the new suggestions named the questioned farmers. The regional association helps us to complement the sample with non-innovative farmers with the required characteristics.

The findings of the interviews show the suppliers and their activities present the most significant influence. In farmers' opinions, the reasons for that, among others, are the quality of the information and the possibility to get experience with machinery for free. Suppliers are highly motivated to keep their technologies and information up to date as well as flexible to fit farmers' needs and financial strength. The current system of FAS (Farm advisory services), eligible to be supported by CAP 2020+, do not fit to the farm information need, on one hand. On the other hand, It deforms the farmer willingness to pay for the advice. It causes the payoffs between the social and economic aspects of the state/EU support of cooperation and innovation. The way of support does not fit to the process of the development of the cooperation, mainly due to the evidence-based policy and time aspect. So the significant attributes of cooperation, which are the reliability and reciprocity among the actors, do not have conditions to be developed. The establishment of reliability and reciprocity needs time for failing and growing. The time for failing and growing is something, what the CAP (it's evidence-based evaluation) does not allow. Therefore, the projects tend to be mainly administrative then collaborative. So the CAP miss the declared target.

Keywords: AKIS actor, cooperation, advisory services, AgriLink (H2020), value of information.

Ondřej Konečný[1], Jiří Hrabák[2], Jiří Průša[2]

LEADER Experiences in 2007-2013 in Czechia: Agricultural Multifunctionality or Non-agricultural Rural Development?

[1] Faculty of Regional development and international studies, Mendel University in Brno)
[2] Faculty of Economics and Management, Czech University of Life Sciences Prague)
email address: ondrej.konecny@mendelu.cz

After the year 2004, rural localities in the Czech Republic can be developed by innovative method of endogenous development called LEADER. The method was based on involvement of local community to achieve balanced local development from the economic, social and environmental perspectives. The achievement of the objectives was allowed by a sufficiently broad local actors' partnership (municipalities, farmers, (non-agricultural) entrepreneurs, non-profit organizations)

and a diverse range of supported topics by Rural Development Program of the Czech Republic (2007-2013)(RDP). The published studies show that the municipalities presented successful applicants within the Local Action Groups (Bečica 2013; Svobodová 2015), which focused on improving the environment in municipalities and life of community. Support of rural/local economy had been directed towards private actors operating in diverse rural sectors. Therefore, the objectives of the contribution is to identify the size and share of the implemented Rural Development measures through its axis IV and assess the role of farmers and entrepreneurs outside agriculture in the provided implementation. To fulfil the designated aims of contribution, we analyze the list of supported projects in the frame of LEADER (through the Local Action Groups) in the period 2007-2013 in the Czech Republic. Based on proceeded database, prevailed type of RDP measures were identified and still strong position of farmers was confirmed in rural development through LEADER method. Therefore, in next step, presented research is focused on farmers-oriented measures. Respecting concept of multifunctionality (van der Ploeg, Roep 2003; Wilson 2008), we analyze the supported projects of farmers according its objects and possibilities to fulfil strong multifunctionality. Therefore, we indicate whether LEADER contributed to strengthening of rural/agricultural multifunctionality in the Czechia in 2007-2013 to achieve the balanced rural development.

Keywords: endogenous development, rural areas, LEADER, multifunctionality, projects.

Olena Borodina[1], Vladlena Martsynkevych[2], Viktor Yarovyi[1]

Agricultural and rural development policy challenges in EU-Ukraine relations

[1] Institute for Economics and Forecasting, National Academy of Sciences of Ukraine
[2] CEE Bankwatch Network/Centre for Environmental Initiatives "Ecoaction"
email address: olena.borodina@gmail.com; vladlena@bankwatch.org; v.yarovyi@gmail.com

This paper deals with interrelations between EU agriculture related policies and processes in agriculture sector of non-member states. We argue that CAP not only implements agricultural and rural development programs throughout the EU, but also strongly affects similar processes in economically linked non-member states. The study investigates the EU-Ukraine relations governed by the Agreement of Association between the sides.

The analysis focuses on causes for the imbalance among the economic and ecological dimensions of sustainable development. The main task is both testing if the implementing the Agreement of Association would integrate the principles of sustainable development as it relates to agricultural and rural issues and substantiating priorities for next policies to balance the dimensions of sustainability. The approach includes policy analysis and evaluation, and case study analysis.

The analysis confirms that being implemented and balanced in the member states, CAP sustainability principles are often ignored in relations between the EU and Ukraine. According to the Article 403 of the Association agreement between the European Union and Ukraine, the parties shall cooperate to promote agricultural and rural development, in particular through gradual approximation of policies and legislation. In practice, focusing mainly on economic aspects of agricultural trade between the sides leads to environmental damage and decreases the viability of both agricultural sector and rural areas.

On the example of Ukrainian poultry meat export to the EU, we show that imbalanced trade agreement between the European Union and Ukraine affects both sides. While the EU tries to protect its producers and reduce the uncontrolled Ukrainian poultry meat export, Ukraine faces a number of challenges and ecological consequences of large-scale poultry production.

We argue that it is necessary to extend the scope of the next CAP by implementing the CAP sustainability principles also into trade agreements between EU and non-member states as it relates to agricultural and rural issues.

Keywords: CAP 2021+, EU-Ukraine trade agreement, balanced rural development, sustainability dimensions.

Marcin Gospodarowicz

The territorial cohesion of regions in Poland

IAFE-NRI
email address: gospodarowicz@ierigz.waw.pl

The process of territorial cohesion in Polish regions takes place at different paces, and its intensity within the social and economic sphere is not homogenous. The aim of this study was to assess territorial cohesion within regions in Poland between 2005 and 2015. The analysis of intraregional cohesion was based on NUTS 5 (municipalities/gminas-level) statistical units. The entire population of gminas in rural areas was analyzed (over 2000 units). In order to formulate a synthetic indicator (index) of the territorial cohesion of gminas, non-para-

metric Data Envelopment Analysis (DEA) methodology was implemented, as it allows for including in one synthetic indicator a large number of explanatory variables covered by analysis. An extensive set of measures describing social, economic, infrastructural, demographic and environmental characteristics of the surveyed local government entities was used to build an aggregate indicator of territorial cohesion. The analysis of territorial cohesion of gminas in regions shows that there are significant differences in spatial distribution, and that they involve different directions of change. The results of the empirical analysis indicate that the level of territorial cohesion in the sample of individuals surveyed was systematically decreasing. The index values for most communes were in fact falling in the period 2005-2015. The exception in this respect are local government units located in close proximity to large cities - regional capitals. An attempt was also made to explain the dynamics and spatial distribution of the territorial cohesion measures by means of spatial measures and, inter alia financial (including the intensity of absorption of EU funds) and organizational characteristics as well as ratios related to human, social and civic capital intensity in gminas. For the presentation of results in territorial context, tools for spatial statistics and cartographic methods are used. The most important conclusions stemming from this research indicates that implementing the polarisation and diffusion model in Poland gives rise to the risk that the differences in territorial cohesion of regions will deepen even more.

Keywords: territorial cohesion, region, municipality.

Monika Wojcieszak

Financing and costs of marketing activities in agritourism farms in Poland [case study in Wielkpolska region]

Poznan University of Life Sciences
email address: monika.wojcieszak@up.poznan.pl

Agrotourism is one of the most popular forms of rural tourism. It offers tourist services in rural areas. One of the best known agritourism regions in Poland is the Wielkopolskie Voivodeship. Natural conditions, rich culture, traditions and customs make the provision of agritourism services popular among farm owners. In order to be competitive on the market, hosts use modern technologies to promote their products and services.

The aim of the article is to indicate the possibility of financing marketing activities and costs incurred by the owners of agritourism farms due to the marketing tools used. The use of marketing activities while running agritourism farms is

a very important topic, because it shows, on the one hand, the entrepreneurship of the owners and, on the other hand, it is an excellent promotion of the farm or region. Currently, we can observe continuous technical progress, thanks to which the variety of marketing channels available to choose from is increasing. In order to be attractive, farms use a number of state-of-the-art tools for communication with the market. However, there are still numerous barriers faced by their owners. Such barriers are very often the changing legal regulations concerning the acquisition of funds from state institutions and the European Union, which could significantly improve the development and promotion of agritourism. The article attempts to present the financing of marketing activities in agritourism and the costs incurred by the owner of the marketing tools used in Poland. The research was conducted among agritourism farms located in the Wielkopolskie voivodeship. On the basis of the conducted research it can be stated that the farms use marketing tools, however, the owners declare that they allocate a small amount of money to this type of activity.

Keywords: agritourism, women in rural areas, women's entrepreneurship, Poland, marketing in agritourism.

Piotr Jurga[1], Efstratios Loizou[2], Stelios Rozakis[3]

Ex-ante Impacts Assessment of the Polish Rural Development Programme 2014-2020 Employing a Bioeconomy Input-Output Table

[1] Department of Bioeconomy and Systems Analysis, Institute of Soil Sciences and Plant Cultivation State Research Institute, 24-100 Pulawy, Poland)
[2] Department of Agriculture - Division of Agricultural Economics, University of Western Macedonia, Florina 53100, Greece)
[3] School of Environmental Engineering, Technical University of Crete, 73100 Chania, Greece / Department of Bioeconomy and Systems Analysis, Institute of Soil Sciences and Plant Cultivation State Research Institute, 24-100 Pulawy, Poland)
email address: pjurga@iung.pulawy.pl

Theoretical framework – objectives

Development of Rural areas is a primary aim for many countries, especially those with strong agricultural sector; that is why various policies are formed and applied in this direction. The European Union recognizing the importance of rural areas and their integrated role for the sustainable development of the national economies, supports various policies aiming at rural development. The

Rural development programmes that are formed for each country member resume the main tools for this purpose. Theyare financed through CAP and specifically by Pillar II. A number of measures and axss of the Rural development programmes aim to financially relieve a large spectrum of actions in order to render rural areas more attractive for investment and business activities.

Within this context the rural development programme of the Polish economy was formed for the period 2014-2020. The Rural Development Programme (RDP) 2014-2020 is one of the tools of implementation of the Strategy for sustainable development of rural areas, agriculture and fishing for the period 2014-2020. It is formulated to regulate the development strategy of rural areas and guides the distribution of the funds of the European Agricultural Fund for Development of Rural Areas. Improvement of competitiveness of the Polish agriculture, sustainable maintaining of natural resources, measures to mitigate climate changes and maintainable territorial development of rural areas are the main objectives of RDP 2014-2020 for Poland. According to the last amendment of the RDP 2014-2020, the total budget allocated for Poland exceeds EUR 13,5 billion. All six Rural Development Priorities have been included in the polish RDP, with Priority 2 (P2) 'Improvement in the competitiveness of various types of agricultural businesses and increase in the economic viability of agricultural holdings' receiving the majority of the funds, along with P4 'Restoration, protection and strengthening of ecosystems dependant on agriculture and forestry" . Almost half of the polish territory (51,2 %) is covered by rural areas which is inhabited by 39 % of the population of Poland (Ministry of Agriculture and Rural Development, 2019).

Realizing the importance of the rural development programme for the polish economy and especially for the rural areas, it becomes necessary to develop a tool suitable to assess its economy-wide impacts at the sectoral level. For doing so in the current study, we develop a general equilibrium form model tailormade to capture impacts of the rural development funds injected in the Polish economy. In fact, it is an Input-Output model used to assess both direct and indirect impacts throughout the whole economy. Moreover impacts are calculated per axis of the programme and thus one can see which of the programme policies are more effective in benefitting in the economy and thus development, in terms of impacts on output, employment and household income. Additionally in this study bio-based sectors are extracted from all of the economy sectors in order to measure the wide impact of RDP 2014-2020 on bio-based industry at the sectoral level. The ex-ante evaluation of the performance of the RDP (period 2014-2020) in Poland is the main goal of this study. Specifically, the objective is to measure the potential economy wide impacts in the polish economy and apprehend impacts on the national output, employment and household income.

The additional contribution of the current study is the use of a bioeconomy oriented Input-Output (I-O) table, for the evaluation of the polish RDP (2014-2020). The I-O table is built with the inclusion of a number (18) of fully and mixed bio-based sectors in its structure, in order to see bioeconomy's contribution and impacts in addition. The performance of the traditional sectors in the I-O model as well as the biobased will be revealed by calculating the corresponding I-O sectoral multipliers and elasticities along with their impacts.

Methodology and Data

General and partial equilibrium models can be used for the assessment of the performance of various policies and the calculation of economy-wide impacts. Input-Output (I-O) analysis enables the assessment of impacts on the whole economy, instead of single sector models (Miller and Blair, 2009; Mattas et al, 2005; Mattas et al, 2009; UN, 1999). In that case, a model including bio-based sectors (Grealis & O'Donoghue, 2015) is build, to obtain potential impacts of the Polish RDP 2014-2020. Building such a model provides the opportunity to assess potential impacts of the RDP 2014-2020, to examine its interconnections with all sectors (including bio-based) in the national economy and evaluate the interconnections among all sectors (bio-based and non bio-based) of the national economy and evaluate the value and importance of in terms of output, employment and household income. I-O multipliers and impact analysis are used in order to do that (Loizou et al., 2014). The major advantage of performing such a methodology is its ability to measure both direct and indirect impacts, using the I-O multipliers and impact analysis.

For doing so the National symmetric I-O table of 2010 was used, after the creation and inclusion of the bio-based sectors (Loizou, 2019). The constructed Bioeconomy Input-Output Table is consisted by 79 sectors of economic activity. For the calculation of the impacts, the I-O multipliers were used while the funds of the RDP 2014-2020 were allocated per axis to the sectors of the model.

Preliminary Results I-O multipliers and elasticities are used to identify the most important sectors and rank their performance in the economy, in terms of output, income and employment. Apart from the evaluation and performance of the Polish RDP per axis, through impact analysis, the results will provide important information for the performance of the biobased sectors. Such results will be important and useful for policy makers and experts as the promotion of bioeconomy is among the main targets in the EU. According to previous analysis, where the ex-ante influence of CAP 2014-2020 was not assessed, it was found that the food sector, the beverages sector, agriculture have high multipliers in terms of output and employment as well as in terms of household income. Beside that wood products, bio-based furniture, tobacco, bio-based electricity,

paper products and bio-based chemicals are either important in terms of employment or income (Loizou, 2019). Further improvements to the I-O biobased table are planned for the next period.

Keywords: Impact assessment; bioeconomy Input-Output; linkage analysis; rural development; CAP.

Krzysztof Janc[1], Konrad Czapiewski[2]

In the starting blocks for smart agriculture – challenge for Polish farmers in the context of CAP 2021+

[1] University of Wroclaw, Poland
[2] Polish Academy of Sciences, Poland
krzysztof.janc@uwr.edu.pl ; konrad@twarda.pan.pl

European Commission in the context of new CAP 2021+ states "Knowledge and innovation are essential for a smart, resilient and sustainable agricultural sector. The CAP of the future will both encourage increased investment in research and innovation and enable farmers and rural communities to benefit from it." And one of the four main group of actions for achieving that goal is "supporting the digital transition in agriculture".

Therefore, the proposed work described here has sought to define the role of the Internet in knowledge acquisition among Polish farmers, as well as the diversity characterising their professional activity conducted online. Relevant discussion is in this way broadened to reflect the conditioning underpinning smart agriculture, most especially in the context of states emerging from a period of economic transition. Particular attention is here paid to the factor of choice of source of information assisting with the running of a farm. Analyses relating to this matter are founded upon questionnaires supplied by almost 2500 farmers. The results show that the Internet does not constitute the most important information source for Polish farmers, though there is a close link between use of the Internet and their basic social characteristics, as also associated with structural features of Polish agriculture. On that basis, it can be considered that Polish farming still finds itself at the preliminary phase of entry into smart agriculture.

Keywords: Internet, knowledge, economic transition, agriculture, Poland.

Andreas Reindl, Gerhard Gahleitner, Thomas Resl

Evaluating the effects of a redistributive payment system in the CAP 2020+ programme in Austria

email address: andreas.reindl@bab.gv.at

For the new CAP period 2020+ the European Commission (2018) is proposing a capping system for direct payments as well as redistributive payment system for the first pillar. The amounts freed up from capping should be redistributed within each Member State to ensure a fairer distribution of payments. The primarily goal is to ensure a higher share of each country's direct payment allocation goes to small and medium-sized farms. The current CAP redistributive payment system is voluntary and it is applied in nine Member states. The financial allocation to the scheme takes up from 0.5 % to 15 % of the Member States national ceiling for direct payments. If such a redistributive payment system will be mandatory, it is crucial for Member states to assess the effects of the current program concerning the distribution of payments to be able develop a target-oriented future agricultural policy. This paper analyses in a first step the distribution of direct payments of the current program as well as the second pillar payments for disadvantaged areas period in Austria on regional level, different farming types, various classes of economic power and different level of disadvantaged areas. The joint analysis of the first and second pillar payments allows a wider perspective of the distribution of CAP payments. In a second step, a deeper analysis of the effects of redistributive payment system on farm income is performed to be able to understand the proportional effects on farm income.

Keywords: Redistributive payment system, Common Agricultural policy, direct payments, capping.

Piermichele La Sala, Francesco Contò

Sustainable use of water resources in Italy in the perspective of the CAP 2021-2027

University of Foggia, Department of Economics
email address: piermichele.lasala@unifg.it; francesco.conto@unifg.it

Historically, the water resources management has been foreign to the CAP. The theme begins to be present in the 2007-2013 programming period, within the Rural Development Programs (Axis II) and limited to the qualitative protection of water. Even the EU Water Framework Directive focused, in 2000, only

on the qualitative state of water. In the Communication of the Commission on Water Deficiency of 2007, the theme of a water price policy was introduced to encourage the efficient use of the resource (De Filippis, Zucaro, 2019). In the 2014-2020 programming period, the protection of water resources is one of the priority challenges for sustainable development, both in terms of quality (protection from pollution) and quantity (more efficient use of the resource). In Italy, the sustainable use of water has become a strategic priority of the 21 regional RDPs and the National RDP (De Filippis, Zucaro, 2019). In this context, the rational use of water resources is a strategic tool to pursue the economic and environmental sustainability of the agri-food sector. Therefore, this work aims to analyze the withdrawal of water in the primary sector in Italy and the conditions that influence the value of the water resource, evaluating the impacts on the water resource management deriving from the CAP reform proposal.

Italy is among the most water-rich countries with an annual availability of 155 billion m3, equal to a per-capita volume of 2,700 m3. The estimated water footprint in Italy, referring to production or the total volume of water used in Italy for the production of goods and services, is about 70 billion m3 of water per year. Agriculture is the economic sector that uses greater volumes of water, equal to 85% of the total. The remaining 15% is divided between industrial production (8%) and domestic use (7%). The estimated water footprint in Italy, referring to withdrawals or the total volume of fresh water used to produce the goods and services (in Italy and abroad) consumed in Italy, is about 132 billion m3 of water a year. Food consumption (both agricultural products and products of animal origin) contributes to 89% of the total daily water footprint of Italians (La Sala, 2019).

The distribution of the Italian water network, with an extension of over 210,000 km, is very fragmented and the water losses deriving from the water network stand at an average value of 40% and are concentrated in the southern regions (Co.Vi.R.I., 2005; ISTAT, 2015). Italy is the second European country in terms of irrigated area, equal to 2.4 million hectares (ISTAT, 2010). The propensity to use irrigation potential (irrigated area / irrigable area) and the propensity to irrigation (irrigated UAA / total UAA) are respectively 65.6% and 19.3% (ISTAT, 2010). In Italy, about 35% of the water supply used by farms comes from groundwater.

As regards the economic aspects connected to the use of irrigation water in agriculture and in the agri-food sector, the determination of the water value is an indispensable element for an efficient allocation of the resource connected to the minimization of the lower gain deriving from alternative uses of one insufficient resource stock to cover the entire demand. Agriculture for irrigation purposes is the first user of water resources and important impacts derive from it: quality of production and induced (industry, employment); environmental benefits; landscape; development of rural areas; food safety (La Sala, 2019).

The theme of the impact and result indicators is not secondary in the management and, therefore, in the determination of the total economic value of the water (understood as the sum of the values of use and non-use), especially in view of the CAP 2021- 2027. The proposals on the new CAP confirm the structure on two pillars and report 3 general objectives that are articulated in 9 specific objectives that identify a less agricultural and more environmental and territorial CAP. In this framework, the water resources management increases its importance compared to the past, being explicitly mentioned in the specific objective 6 "Efficient management of natural resources such as water, soil and air" (De Filippis, Zucaro, 2019).

But the challenges of the future CAP are above all in its governance, with important new features both in the New Delivery Model, that is a more focused and result-oriented support model, in terms of targets to be reached and indicators with which to evaluate achievement, both in the further widening of the margins of autonomy of the Member States, explicitly called upon to draft a national strategic plan, including both pillars, with which to apply the CAP in a flexible way, adapting it to its own national needs. Based on these analyzes, the conclusions of the work illustrate the opportunity to improve the water resources management within the two pillars of the new CAP.

Keywords: Water Resource Management, Water Withdrawal, Water Value, Sustainability, CAP.

Gianluca Gariuolo[1], Nicola Faccilongo[2], Mariantonietta Fiore[2], Piermichele La Sala[2]

The sustainable development of rural areas in the perspective of the new CAP: the SMART era in the RDPs of the Pugliaand Basilicata regions

[1] Policies and Bioeconomics Research Center, Council for Agricultural Research and Economics (CREA) – Basilicata)
[2] Department of Economics, University of Foggia)
email address: nicola.facilongo@unifg.it

The rural territories hold an important social and economic patrimony that, in the face of the changes in progress, require development paths capable of contrasting the risks of abandonment, degradation and poverty, in compliance with the principles of sustainability. The role of agriculture in the rural context remains central and, with it, the debate on the role that the sector must play to promote the sustainable development of rural areas in relation to the proposals contained in the new CAP.

Theories on multifunctional agriculture seem to focus increasingly on productivistic aspects, in line with the idea of an agriculture capable of ensuring food production and the protection of the environment and the rural landscape.

The proposals on the new CAP identify a less agricultural and more environmental and territorial policy. The strategic plan of the new CAP confirms the structure on two pillars and pursues three general objectives, complemented by the transversal objective of modernizing the sector by promoting and sharing knowledge, innovations and digitalisation processes in agriculture and rural areas and encouraging their use. These general objectives are articulated in 9 specific objectives. The environmental and socio-economic development of rural territories increases its importance compared to the past, being explicitly mentioned in the specific objectives 5 "promoting sustainable development and an efficient management of natural resources, such as water, soil and air", 6 "contributing to the protection of biodiversity, improving ecosystem services and preserving habitats and landscapes", 7 "attracting young farmers and facilitating entrepreneurial development in rural areas" and efficient management of natural resources such as water, soil and air" and 8 "promoting employment, growth, social inclusion and local development in rural areas, including bioeconomy and sustainable forestry" (Com. UE, 2018).

In this context, it is possible to create new development paradigms and new relationships between the urban world and the rural world, according to the smart logics that borrow the smart city's own development policies to smart land. The economy, planning, policies and landscape vision have evolved considerably in recent decades, so much so that the same theoretical analyzes and methodological solutions still seem far from providing the necessary tools for the understanding of the territories to the communities in the face of changes in place.

This research work aims to verify, starting from the implementation of the 2014-2020 policy in Puglia and Basilicata regions, in the South of Italy, the compliance of the strategies and tools of the new 2021-2027 programming, with the principles of development sustainable development of smart lands.

In particular, the aim is to analyze the tools offered by the 2014-2020 RDP, based on "smart" intervention logics, and correlate them to the opportunities offered by the new CAP 2021-2027.

To pursue these objectives, it will be essential to start from the analysis of programs and intervention tools (Furmankiewicz et al., 2016; Ravier et al., 2015) of two regional realities, Puglia and Basilicata, with different territorial characteristics and whose RDPs are being fully implemented.

Through the collection of primary and secondary data (Gersick, 1988; Eisenhardt and Graebner, 2007) and through the Multi-criteria and Multi-stakeholder

analysis method (Beinat & Nijkamp, 1998; Enengel et al., 2014), it will be possible to verify Strategies ; Intervention needs; Priority; Selection criteria; at the same time, we will analyze the other tools that the new programming makes available to rural areas.

Consequently, it will be possible to analyze how the contents and the strategic projects pursued with the current planning will be able to pursue the smart principles, in order to evaluate the choices made by the regions and support the policy makers in making the appropriate corrections useful to make needs and actions converge to the smart development logics within the analysis (Context Analysis and SWOT Analysis) preparatory to writing the National Strategic Plans of the CAP 2021-2027.

Keywords: Sustainable Development, Rural Areas, Smart Land.

Agnieszka Bezat-Jarzębowska, Sebastian Jarzębowski

Short supply chains in the food economy

Institute of Agricultural and Food Economics – National Research Institute
email address: agnieszka.bezat@gmail.com

The goal of the paper was to focus on short supply chains from a perspective of development possibilities and scenarios for future growth. The following directions were taken into account Improve the Retail Experience, Adopt a Multichannel Sales and Distribution Strategies, Systematically Develop the Relationship with the Consumer, Create Economies of Scale and Efficiencies Based on Collaboration, Tap into the Circular Bio-Economy. The research was extended by assessment of transaction costs – one of the barrier of short supply chains' development.

Currently in Europe as well as around the world there are many examples and types of short food supply chains. It is due to the increasing number of consumers looking for alternative sources of food produced near their place of residence [Cicia et al., 2010; Nie and Zepeda, 2015]. The dissemination of new forms of food distribution organization in recent years, called short supply chains, can be linked to the increasingly important role played by credibility-based goods in shaping consumer preferences. Indeed, the growing popularity of short supply chains should be attributed to the distribution model, which allows consumers to support local agriculture while adding fresh products to their diet [Uribe et al., 2012].

Usually, small enterprises with limited local impact are involved in short supply chains. However, these small initiatives indicate that these enterprises are able to provide solutions to improve the profitability and stability of agricultural

producers. Therefore, there is a great need to identify, synthesize, exchange and present good practices in the short food supply chains management. These arguments were the basis for identifying examples of such chains in Europe. For this purpose, good practices regarding short chains in 15 European Union countries were analyzed. As part of the study, over 100 examples of initiatives were described and classified in specific sectors. The best practices were collected within the SKIN project (HORIZON 2020).

Keywords: short supply chains, distribution strategies, transaction costs, food economy.

Diana Surová

The stakeholders' perspectives on the impacts of different agricultural types on rural well-being

Česká Zemědělská Univerzita v Praze, Provozně Ekonomická Fakulta
email address: dsurova.mail@gmail.com

Well-being in rural areas is recognized as one of the primary goals of public intervention and it has been increasingly considered in different sectoral European policies aiming towards sustainable development. The concept of well-being has been gaining an increasing interest in research as well because it is multidimensional, covering multiple life domains, including social, economic and environmental, and their interplay.

The agriculture embedded in rural landscape creates a coupled social-ecological system which can contribute to rural communities' well-being in multiple ways beyond the food production. Recently, the assessment of the multiple benefits that people gain from agricultural landscapes has been recognized as one of the research interests, especially in landscape management and governance. So far, too little evidence-based knowledge exists about the multiple benefits that diverse groups of stakeholders and actors attribute to different agricultural landscapes, beyond their mere production valuation. A better understanding of these relations can reveal the societal perspectives, and when using wisely in policy, this knowledge can help design a desired future for rural areas and prevent conflicts in agricultural management and governance.

The present paper compares diverse agricultural landscapes in their contribution to the well-being of the rural community. The case study is located in Southern Portugal, where the traditional agricultural management types at both small- and large-scale levels have been competing nowadays with the global trends of

the agricultural intensification and specialization. The perceptions of a variety of stakeholders were collected qualitatively by using the semi-structured interviews. Thirty-six respondents, including public authorities, researchers, rural inhabitants, and farmers answered questions about the main agricultural landscapes in the region and their contribution to rural well-being. The assessed agricultural types were different in their management scale and the level of specialization. The following four agricultural types were in focus: small-scale diversified, small-scale specialised, large-scale diversified, and large-scale specialized agriculture. Data were analysed using content analysis and frequency statistics. The resulted abstract categories of benefits and challenges of the particular agriculture to contribute to well-being were subsequently interpreted within the framework of the three dimensions of the rural sustainability (RS): social, economic and environmental.

The results show that the studied agricultural landscapes were recognised to benefit rural well-being, but the extent of how they contribute to the well-being of the rural community diverge considerably across the agricultural types. The two more diversified agricultural landscapes were recognized for a greater variety of benefits, especially in social and environmental RS dimensions than the specialized agricultural landscapes. It indicates that the small-scale diversified and the extensive large-scale agriculture have a better capacity to provide more synergies between the three dimensions of rural sustainability than the landscape involving purely specialized agriculture.

The relations between agricultural types and rural well-being need more empirical research across Europe to provide more solid knowledge useful for the new agricultural policy.

Keywords: well-being, agricultural types, perception, sustainable development, social dimension, economic dimension, environmental dimension.

Ekrem Gjokaj, Kapllan Halimi

Food quality standards and participation of farmers in modern supply chains in Kosovo

email address: ekremgjokaj@gmail.com; ekrem.gjokaj@uni-prizren.com

(Over last decades modern supply chains have increased in size due to the rapid growth of modern retailing such as supermarkets and hypermarkets. This is associated with expansion of investments in food processing and retailing leading to the consolidation in food markets and the increased dominance of large food companies in the food supply chains. Food production is increasingly regu-

lated through stringent public and private requirements on food quality and safety and environmental aspects. As a consequence of these developments, modernized food supply chains are put in place that require different production methods and business relationship between agents operating in the chain particularly including a more closer vertical co-ordination, adoption of product quality standards and adoption of more complex contractual agreements.

The participation in the modern supply chains is an important factor determining farmers' growth and their wellbeing. A key aspect in farmers accessing modern supply chains is their ability to deliver a consistent quality and quantity of products which often requires the application of specific production process and contractual arrangements.

Supermarkets increasingly apply strict quality standards upon their suppliers. This does not only affect immediate suppliers but the whole supply chain, including farmers. For example, small farmers often face the challenge to access modern supply chains. Indeed this might be an issue in the Kosovo where the agricultural sector is dominated by small family-based farm households. Small farms make up more than 70% of the agricultural holdings in some countries. Small farms coexist with large farms which are expected to be in a better position to access modern supply chains.

In this context, the objective of this study is to investigate factors affecting farmers' participation in modern supply chains and contractual arrangement applied between farmers and processors/retailers to ensure the supply of the food quality desired by the market. This will allow better understanding of the socio-economic situation of farming sector as well as the constraints that impede their growth. Further, the project shall aim at providing insights to improve the effectiveness and efficiency of adopted policies and thus can provide scientifically-based support to policy making. A more comprehensive knowledge of the farm's access to modern supply chains would allow better targeting on both national support schemes and IPARD pre-accession assistance.

This study has the objective of carrying out a survey among farmers in all over Kosovo to obtain data to perform analysis on factors affecting farmers' participation in modern supply chains and contractual arrangement applied between farmers and processors/retailers to ensure the supply of the food quality desired by the market. The survey will be based on the questionnaire designed to collect the necessary data and information. The specific objectives that the survey and the analysis performed need to meet are:

- Analysis of the structure of the market;
- Understanding of the farmers participation in different sales channels, e.g. modern channels versus informal (traditional) channels;

- Contractual agreements of sales channels;
- The role of cooperatives and producers organizations in determining farmers' participation in modern sales channels;
- The role of food standards and food quality in determining farmers' participation in modern supply chains;
- The use of standards, certification, and labeling to ensure food quality and provision of information of food attributes to consumers;
- The role of agricultural policy in supporting quality standards and farmers' entering in new markets;
- Which farmers are excluded from modern supply chains;
- Detailed contractual agreements between farmers and processors/retailers applied to enforce the food quality standards.

In order to fulfill the objectives, we will conduct a survey (on the basis of the questionnaire) at farm level and provide raw data. We will also provide description about the structure of the studied food chains collected from secondary sources. The survey must include farmers operating in sectors relevant for rural development in Kosovo (e.g. fruit farmers, dairy farms, and vegetable growers). The interviews will be done face to face and individually. The total duration of each interview must be around 1.5 hours. The questionnaire must have also time coverage, at least of three years (e.g. 2018, 2017 and 2016).

The study strategy to reach the final amount of interviewed farmers must be organized in three stages:

- First, define a strategy to identify and contact the potential farmers to be included in the survey.
- Second, a pilot survey on at least 5% of the total sample of farmers to pre-test the questionnaire.
- Third, a final survey on the rest 95% of the total sample of farmers with the questionnaire pre-tested during the pilot survey.
- The final number of interviewed farms that answered the questionnaire must be at least 210 farms surveyed, including the pilot.

The study must also collect information about the structure of the studied food chains in the surveyed farms. This information must be collected from secondary sources such as statistical reports, policy documents or other literature. In fulfilling the study objectives, the study must take into consideration all relevant empirical and theoretical literature on food supply chains in Kosovo.

Keywords: supply chain, food, market, small farms.

Roxana Larisa Cadar, Cristina Bianca Pocol

Sustainability of medicinal and aromatic plants value chain in Romania

University of Agricultural Sciences and Veterinary Medicine, Department of Animal Production and Food Safety, Cluj Napoca, Romania
email address: roxana.cadar@usamvcluj.ro; cristina.pocol@usamvcluj.ro

The value chain of medicinal and aromatic plants consists of five types of actors: producers, collectors, processors, wholesalers and retailers (Criss et al., 2006). Although these actors are aware of the opportunities on the local and foreign market for products derived from medicinal and aromatic plants, the value chain functions with little vertical integration and almost no horizontal collaboration (Hishe et al., 2016).

Romania has rich natural resources, appropriate soil and the necessary climatic conditions to produce wild and cultivated medicinal and aromatic plants. There are more than 3600 superior plant species in the Romanian flora (Fierascu et al., 2017), which are considered to be important from a natural resource and economic viewpoint.

As the second pillar of the common agricultural policy (CAP), the Rural Development Policy focuses on the economic, environmental and social sustainability of EU rural areas aiming at enhancing competitiveness and increasing sustainability (European Commission, 2013). The Romanian National Programme for Rural Development 2014-2020 supports the medicinal and aromatic plants sector with financial measures, such as measure 6 and sub-measure 6.3. "Support for small farms development" and measure 11 "Green agriculture", sub-measure 11.1. "Support to convert to green agricultural methods, through payments for conversion". The sub-measure 11.1 comprises package 5 – „Medicinal and aromatic herbs".

For a sustainable development of the medicinal and aromatic plants sector is important that all stakeholders in the value chain be involved in valorisation, from the cultivation/harvesting stage to end-product stage, as well as in studying the market and consumer preferences (Kumar et al., 2014). By respecting the guidelines on Good Agriculture and Collection Practices (GACP), farmers can have access to the general technical guidance on obtaining good quality raw materials for a sustainable production of herbal products (WHO, 2003) . Processing the plants can increase product value, some authors recommending processing vegetal material in their home country and exporting the end product (Lange, 2006). By using the right policies and regulations the government can ensure added value.

Despite growth and potential, the medicinal and aromatic plants sector is facing several challenges. The following reasons caused Romania's loss of its leading position as an exporter and processor of medicinal and aromatic plants: poor cooperation between the authorities, lack of collaboration between suppliers and local producers (Oncioiu, 2017), absence of local sources of certified seeds and difficulties to maintain collection (Rural Romania, 2015).

To improve the competitiveness and sustainability in this sector, these issues must be a priority for the stakeholders.

Keywords: herbal products, stakeholders, value added, opportunities, sustainable development.

Cristina Bianca Pocol, Ana Alexa, Roxana Larisa Cadar

Understanding urban residents' perception of and role in the development of sustainable rural tourism in Romania: preliminary results

University of Agricultural Sciences and Veterinary Medicine, Department of Animal Production and Food Safety, Cluj Napoca, Romania
email address: cristina.pocol@usamvcluj.ro; ana.faur@usamvcluj.ro; roxana.cadar@usamvcluj.ro

One of the main priorities of "the second pillar" of Common Agricultural Policy (CAP) is the sustainable development of rural areas. Rural tourism represents for Romania an important sector, which could contribute to the development of local communities, by creating jobs and revenues, by reducing poverty and supporting vulnerable groups, especially women. Rural tourism is mentioned in the National Rural Development Program 2014-2020 as one of the most important non-agricultural activities that could contribute to the development of rural economy through the valorization of natural resources, local traditions and heritage (MADR, 2019). The demand for rural tourism and ecotourism is currently on the rise all over the world because of the developing trend of adopting a sustainable lifestyle. In Romania, the interest in such services has increased considerably over the past decade, but not sufficiently so to meet the rising demand and the expected quality standards. This could be explained by the poor infrastructure and by the lack of a coherent strategy in terms of communication between all the stakeholders involved: individuals, local communities, policy makers, interest groups, representative organizations and tourists. In this context, a question arises: "How and what should be done in order to improve the flow of communication among all the parties involved?"

The present study focuses on the role of tourist, as one of the main actors in this communication process. In the context that urban residents are more and more sensitive to sustainability issues, the aim of the study is to evaluate their perception regarding sustainable rural tourism. An online survey was initiated with the purpose of identifying the following aspects: the frequency of choosing rural tourism destinations by urban residents and the motivation of choosing rural area as a holiday destination (rural gastronomy, local products, cultural aspects, customs, agricultural practices, local markets, local events, festivals, activities dedicated to children, sports, adventure, natural parks, protected areas, and historical sites). An important question addressed by the study was related to the identification of those elements that mostly define rural tourism in Romania: traditions, environment, architecture, culture and hospitality. Negative aspects that could discourage people from choosing rural tourism destinations were also identified: poor infrastructure, insufficient information, lack of authenticity, "kitsch" effect due to the construction of new buildings, low endowment of households with goods and services, long distances and difficulty of access. The willingness to pay for sustainable rural tourism services was also assessed. The preliminary results show that Romanian urban residents are aware of the importance of sustainability issues related to rural tourism. As the number of travelers who choose rural destinations for their holidays increased, knowing their preferences and attitude is a necessity for creating a good communication strategy among all stakeholders involved. Educating Romanian tourists for choosing sustainable rural destinations could be an important tool for increasing the demand for sustainable rural tourism services and for the development of local economies. Policy makers play an important role in this education process and should assist urban residents to become more sensitive to the rural heritage.

Keywords: sustainability, rural area, tourism, development, stakeholders.

Szabolcs Biró, Máté Kis

Future directions of Rural Development in Hungary based on RDP 2014-2020

email address: biro.szabolcs@aki.gov.hu

The main criterion for assessing the economic performance of the CAP is the competitiveness and livelihood of farmers. The key of long-term profitability is economies of scale and productivity growth. Higher profitability creates a more favorable financial situation, which guarantees continuous develop-

ment and sources of innovative management. On the one hand, competitiveness requires efficiency gains. At the same time, increasing investment, human resource capacities and agri-environmental support can also contribute to productivity growth.

Most of the resources of the Hungarian Rural Development Program 2014-2020 are committed to investment-type operations affecting the food economy. Unlike previous programs, this RDP focuses specifically on higher value-added and labor intensive sectors such as animal husbandry and horticulture. In addition, the approach puts a new emphasis on addressing environmental and climate change challenges. A new element is the provision of flat-rate development aid that is easy to access for small farms, with a simplified business plan. Off-farm diversification of agricultural businesses serves not only to secure the multi-legged economy, but also to diversify the use of local resources, providing new products and services to boost employment and offset seasonality in rural areas.

Increasing the competitiveness of farmers is also a key consideration when assessing the economic performance of rural development. Changes in the competitiveness of agriculture were assessed on the one hand by taking into account the restructuring and modernization of the supported farms, and on the other hand by evaluating the impact indicators characterizing their economic performance and by a control group study. To calculate the change in technical efficiency and productivity, the Total Factor Productivity change is examined by priorities, then divided into components, technological and technical efficiency changes, and the latter into pure technical and to scale of economy changes.

Based on the mid-term analysis, the impact of the Hungarian RDP on competitiveness in the 2014-2018 period is that the incomes of primary farmers have increased significantly. Realization of investments increase the size of the production, help to modernize the production structure and diversify the activity, which is an effective means of increasing the income by increasing the value of production or reducing the costs. In the area of local development, it is worth considering development of new support tools to expand off-farm diversification, which simultaneously provides the opportunity to bridge the capital gap with mentoring services and the selection of marketable business ideas.

Keywords: competitiveness, mid-term evaluation of RDP, Total Factor Productivity analysis, off-farm diversification.

Agnieszka Baer-Nawrocka, Aldona Mrówczyńska-Kamińska

Changes in incomes and structure of the material flows in agriculture in the European Union countries

Poznan University of Life Sciences
email address: nawrocka@up.poznan.pl

Sustainable agriculture, and in broader terms rural sustainability, depends on the environment conservation, social acceptance and economic effectiveness. As numerous studies indicate the low level of agricultural income excludes realisation of cultural, social and environmental functions by farms. Without economic viability sustainable agriculture and rural sustainability would not be possible. Agricultural income is a synthetic measure describing the economic situation of the population related to agricultural production. What is more, the analysis of the economic situation of agriculture sector in the European Union countries indicates the level of the Common Agricultural Policy (CAP) efficiency. The main aim of the CAP is to ensure a satisfactory income (comparable to this obtained by other social groups) for the agricultural producers. Therefore agricultural income occupies an important place in the economic and social policy of the European Union. The implementation of this objective involves the use of a full range of instruments, with varying intensity, which are introduced by the successive agricultural policy reforms. One of them are direct payments. These instruments, by being the institutional factors (regulatory ones) are a fundamental exogenous determinant of agricultural incomes level. The agricultural income is also related to the development of agriculture and material flows from the other sectors of economy. The proportions between agriculture and sectors providing the production means and services are important. The paths of the development of global agriculture indicate that the share of agriculture in the production of agricultural products decrease, while the role of two others sphere of agribusiness (industry and services) increases. Considering the above, the aim of the article is to assess changes in agricultural incomes and in the structure of material flows to agriculture. The changes in direct payments were also analysed. The conducted analysis show that despite of the positive changes, differences in the level of the agricultural income and structure of material flows to agriculture among EU countries are still significant. These differences are particularly visible between the EU-13 and Western and Northern European countries belonging to the EU-15.

Keywords: agricultural incomes, material flows, European Union.

Alev Sındır, Ahmet Ali KOÇ

Distributional Dimension of IPARD Co-funded Rural Development Project Grant in Turkey

Akdeniz Universitesi
email address: alikoc@akdeniz.edu.tr; alev.sindir@gmail.com

Rural development is the positive development and improvement of economic, social and environmental aspects of human life in terms of quality of life and welfare increase. The issue of rural development, which has been debated since the 1950s, has now moved to a point where the Millennium Development Goals process of the 21st century have been mentioned. Rural areas were mentioned as underdeveloped areas that need modernization in the first rural development approaches. However new paradigms have been introduced for rural areas that takes advantage of the diverse and innovative role rural areas can play while integrating economic, social and ecological concerns (OECD, 2016).

In the light of these paradigms, rural development policy based on the idea of changing and transforming rural development is one of the most important policies of the EU which is the second pillar of the Common Agricultural Policy. Rural development programs are implemented by the EU for both the member states and candidate countries (through pre-accession development assistance called IPARD). The IPARD project grants and international rural development supports have played extremely important role for rural development in Turkey.

Prior to the EU candidacy process in Turkey, rural development policies and practices aimed at diversifying economic activities and improving the quality of life in the underdeveloped provinces and regions. Implementations including agriculture and animal husbandry development, irrigation, construction of village roads, construction of forest roads, drinking water ponds, increasing agricultural and animal production and afforestation were realized. In this context, aids made before IPARD in Turkey mostly include infrastructure investments and agricultural productivity enhancing technology adaptation. It is aimed to contribute to the sustainable modernization of the agriculture and food sector with the IPARD program. For this purpose, investments on Restructuring Agricultural Holdings, Restructuring of Processing and Marketing of Agricultural and Fishery Products and compliance with EU Standards were supported. On the other hand, Investments in Diversification and Development of Rural Economic Activities aiming to promote the sustainable development of rural areas were supported.

The IPARD program aims to support the sustainable development of rural areas by increasing the competitiveness of the agricultural sector and diversifi-

cation of income sources in rural area. This program is implemented by the "Agriculture and Rural Development Support Institution" (ARDSI) accredited as IPARD agency. The program continues to be implemented by 42 provincial coordination unit at the local level. In the process of 15 Call for Applications supported by IPARD I, a total of 3.2 billion TL was paid to 10694 investments and the total monetary value of the investments reached 6.8 billion TL (ARDSI, 2019). IPARD II (2014-2020) implementation for the IPA II period is ongoing and the 6th Call for Applications has been issued. As of January 2019, a total of 612 million TL was paid to 1347 investments in the IPARD II period and total investment amount of 3.4 billion TL was reached. In this context, the total number of investments project realized in rural development area is 14441; 3.8 billion TL has been paid for these investments. The total value of the investments realized in the field of rural development has reached 10.2 billion TL since IPARD project put in place (Ministry of Agriculture and Forestry, 2019).

The aims of this study consists of investments that have received grant support within the scope of IPARD I program, whose implementation has been completed. The activity areas in which these investment projects are implemented, the appropriate expenditure amounts and support amounts that are the basis of the grant amount are obtained from ARDSI 2017 data. In the scope of the IPARD I program, as of 2017 total grant paid has reached 3.06 billion TL representing 10495 beneficiaries in the fields of milk, meat, broiler production, milk processing, milk collection centres, meat processing, meat slaughterhouses, fruit and vegetable processing, aquaculture processing, beekeeping, ornamental plants, medicinal aromatic plants, local products, rural tourism, aquaculture activities. The investment data obtained based on the active enterprises which have ended the investment period.

When evaluated in terms of activity areas (supported sub-sectors), it is seen that approximately 39.8% of the grant support is used by the dairy cows. This is followed by broiler production with 16.6% and cattle/sheep fattening with 9%. The sector with the least grant support obtained is aquaculture with 0.2%. This sector is followed by investments to establish milk collection centres by the producer organizations with a rate of 0.3%. In this context, there is striking bias in favour of the dairy cow sector in Turkey.

The 42 provinces unit included in the IPARD I program are ranked according to the grant support they receive. In this ranking, it is seen that the top 10 provinces unit receiving the most grant support attract 45% of the total grant amount. The evaluation made in terms of sectoral distribution of grant is also valid at provincial unit level. Because it is seen that the same sectors come to the forefront for the first 10 provinces unit receiving the most grant support and there is a difference in terms of milk cows, broiler production and cattle/sheep

fattening sectors compared to other sectors. A regional assessment is also possible. Turkey consists of 26 regions at NUTS 2. There are 22 regions at NUTS 2 within the scope of IPARD I. When ranking according to the grant support, the grant support received by the first 5 regions at NUTS 2 obtained 43.9% of the total grant amount. In this sense, the distribution of funds to project at the provincial and regional levels is not homogeneous.

As briefly introduced general distributional profile of IPARD funded project in Turkey, this study is further assessed that whether the rural development policy progress in Turkey is aligned/towards to converging with the EU rural development policy progress. In this context, rural development investments project has funded through IPARD I grants (2007-2013) is examined at various distributional dimension. It is observed that the investments under IPARD grant has biased at sectoral, provincial, regional, ownership status, rural vs agriculture and economic scale of enterprise dimensions.

Keywords: Distributional issues in rural grant support, IPARD implementation in Turkey, rural development in Turkey and EU.

Jiří Hrabák, Lukáš Zagata

Regional differentiation of organic agriculture in Czechia

Faculty of Economics and Management,
Czech University of Life Sciences Prague
email address: hrabakj@pef.czu.cz

The poster explores development of the organic agriculture in Czechia after the year 1990 with a specific focus on the process of regional differentiation. This issue has not been thoroughly researched in the Czech Republic by geographers, unlike in the Western European countries where the discussion has been on for a long time (Ilbery, Holloway, Arber 1999; Frederiksen, Langer 2004; Ilbery, Maye 2011; Läpple, Cullinan 2012; Ilbery, Kirwan, Maye 2016). Our conceptualisation of the factors affecting organic agriculture is based on the approach of Ilbery, Kirwan and May (2016), who classified factors shaping regional concentration of organic farming on (1) physical, (2) structural and (3) socio-cultural. Main goal of the poster is to evaluate the regional differentiation of the organic agriculture. With the use of quantitative approach to data analysis the sector is observed on several spatial levels (regions – districts – land units). The regional differentiation is visualized by cartograms. Based on the analysis of different spatial levels we have identified differences in regional distribution.

Keywords: agriculture – organic agriculture – regional differentiation – Czechia.

Vladan Hruška, Jan Píša

Recent economic development of post-socialist rural areas and its implications for the new CAP

Jan Evangelista Purkyně University in Ústí nad Labem, Czechia
email address: vladan.hruska@ujep.cz; jan.pisa@ujep.cz

During the last decades rural scholars have observed growing social and economic differentiation of rural localities of the post-socialist countries. In these localities, their new economic dynamic has been conditioned by the retreat from centrally-directed and more or less nationalized economies and switching to neo-liberal modes of regulation. As a result, rural localities move along different development trajectories based on their endowment with local resources and ability to absorb or transform external influences. Some localities profit from the inflow of urban in-migrants, their entrepreneurial activity and talent or absorb foreign direct investment whereas other localities suffer from the depopulation process, brain drain, fall of traditional economic industries and following growth of poverty rates. From the economic point of view, agriculture is no more the backbone of rural economies and localities must search for new sources of prosperity and employment. In our contribution we would like to focus on the current economic diversity of rural areas. Based on the typology of rural economies developed on the example of Czech rural localities we will identify their key characteristics and development needs which could inspire future formulations of the CAP-based interventions. However, as we are aware of its dominant focus on agriculture, we will also discuss the position of agriculture in the CAP and more generally in rural development policies.

Keywords: rural, economy, typology, development.

Aleksandra Pawłowska, Paweł Chmieliński

Organic farms and sustainable rural systems. A study and a case of the bottom-up, farm-based local short food supply chain in Poland

IAFE-NRI
email address: Aleksandra.Pawlowska@ierigz.waw.pl; Pawel.Chmielinski@ierigz.waw.pl

The purpose of this study was to analyse the drivers behind the organic production within the local short food supply chain. Organic farming systems, although less efficient, are relatively more profitable and environment-friendly,

and provide equally or more valuable food products. According to survey conducted among consumers of organic food, local products purchased directly from the producer are particularly preferred.

Since organic farming can play a leading role in building sustainable agricultural systems, we identify the tendency of farms to switch from conventional to organic production. We analyse the actions of organic farms based on the data on 6,229 individual farms, which in 2009-2016 continued to participate in the Polish FADN. Estimation of logit models allowed us to indicate, separately for each period in the years between 2009 and 2015, a set of characteristics influencing the decision of farms on the use of organic production.

We demonstrate that, first of all, land factors were of major importance when deciding on conversion to organic farming, with only the own land inputs (owned by the farm) having a positive impact on the transition of farms to organic production. But then the resource of the capital factor, identified with the assets owned by the farm, exercised a significant negative impact. Income derived from the family farm, although had a positive impact, did not significantly determine the farm's decision on conversion to organic production. While support for agri-environmental purposes had a positive impact on the decision of farms to undertake organic activities, the payments received under the direct payments affected this decision negatively. The tendency to start organic production is also conditioned regionally.

The case study of the local network of food producers showed that the maintenance and development of the organic and traditional food sales platform depends on both the correct economic relations and, above all, the social relations between suppliers and consumers. An in-depth analysis of the case of an organised sales network has shown the relationship between the nature of the network and its development potential. In the case of a regional network with only farmers, its further development is hampered by logistical barriers and higher transport costs, which have a significant impact on farmers' margins. At the same time, the network's representatives demonstrated a high capacity to raise external funding for socio-educational activities (e.g. in the framework of a local product centre or demonstration campaigns during trade fairs and mass events).

The study broadens the view that in the Polish reality conversion to organic farming is better linked to the labour and land factor than with the capital factor. It is a voice in the discussion on effective support for the development of organic farming in the context of sustainable development. Short supply chain sales offer opportunities for higher margins, which is important especially for small producers, however the success of such projects depends primarily on the

possibility of achieving economies of scale in production, which calls for a better organisation of the supply chain of this type of farming activity.

Keywords: organic farms, sustainable development, family farms, conversion factors, logit model, FADN.

Arkadiusz Sadowski

Functioning of the Family 500+ program on a selected example of rural areas

Poznan University of Life Sciences
email address: sadowski@.up.poznan.pl

The governmental program Family 500+ is a relatively new instrument of social policy in Poland, aimed at supporting families. It involves monthly payment of PLN 500 for each second and subsequent child in the family. If the income per person does not exceed PLN 800, the benefit is also payable on the first child. In the presented formula (currently it is planned to extend the support to all children, regardless of the income criterion) it has been functioning since 2016, so it is now possible to undertake research on its short-term effects. The program is aimed at families with children under the age of 18, regardless of place of residence and social status, however, it plays a specific role in rural areas, where social problems and the family model are slightly different than in cities. First of all, there is a disposable income disparity in the countryside, and fertility rate is higher. Therefore, research was undertaken to indicate the effects of the 500+ Program and the opinion of its beneficiaries living in rural areas. As an example, the rural commune of Duszniki, located in the Wielkopolska Region was selected. First, the data from the Commune Social Welfare Center, which is the program administrator at the local level, was analyzed. Second, a survey was conducted on a sample of 100 parents who expressed their opinions on the functioning of the program. As a result of the conducted research, it was noticed that in the analyzed commune a significant part of the beneficiaries uses support for the first child, which indicates a fairly large poverty range. On the other hand, the surveys have shown that the funds granted help to raise children, although they do not cover the necessary expenses in full. For the most part, they are devoted to the basic needs of children, such as food, clothing and education. Also, the dangerous phenomenon of women's professional deactivation after the introduction of the program was noticed. In addition, research has pointed to the existence of a specific form of "free riding" - respondents to a small extent declared the enlargement of the family after the introduction of the program, although they believed that on a national scale it will contribute to the increase in fertility.

Keywords: Family 500+, social policy, Wielkopolska Region, commune Duszniki.

Zdeňka Smutná

Food hubs in post-socialist rural space

University of Jan Evangelista Purkyně, Faculty of Social and economic Studies
email address: Zdenka.smutna@ujep.cz

Currently, (neo)endogenous approaches to rural development are implemented as a part of new rural development paradigm. They might contribute to the extension of bottom-up approach, economic re-localization, support of regional production as well as encouragement of local actors. These movements are anchored in the CAP for the period 2014 – 2020 by a support of the coordination and building of short food chains. However, many SMEs in agro-food sector are not able to position themselves in upper tiers of value chains or to control them as these are dominated by large and transnational players in food-processing and retail. As a result consumers living both in rural and urban places (unless they practise food self-provisioning) have limited access to local fresh food of known origin. Thus, potential for value added capturing based on utilisation of local resources is low. Therefore, food hubs, controlled by local players and connecting key actors in local food chain in order to ensure access to local food for local people, entrepreneurs in tourism and local institutions, seem to be promising tool to ensure viability of SMEs, capture value added in a given rural locality and bring community-led local development. Moreover, there is a promise of increasing sustainability in food supply chains and creating new job or business opportunities. Nevertheless, it is questionable whether food hubs – as a dominantly Western concept - can be successfully implemented in the post-socialist rural areas with their specifics. The aim of this paper is to discuss the potential of food hubs in Czech rural space with the focus on challenges stemming from post-socialist specifics, e.g. prevalence of large agricultural enterprises, insufficient agricultural diversification, competition of highly developed food self-provisioning etc. In the context of the future CAP, following topics will be opened: i) further or new ways of promotion of sustainability in agri-food systems ii) necessity of taking into account the differentiated character of European rural space.

Keywords: Rural, sustainability, food hubs, post-socialist specifics, Czechia.

Edita Turková, Marie Štolbová

Small farmers in the Czech countryside: The case study of small farms from 1 to 5 ha

Institute of agricultural economics and information Prague
email address: turkova.edita@uzei.cz

The paper deals with an analysis of small farms with an area of one to five hectares. These farms have considerable importance in most of the EU countries. This mostly part-time farming improves local social situation and it is more environmentally friendly than the large farms are. In the Czech Republic, these microfarms represent 27% of the total number of farms but they cultivate only 0.7% agricultural land. The paper focuses on the spatial delimitation of small Czech farms and on obtaining information about their activities, because most of them are not included in official statistics. Therefore, we asked directly a sample of farmers. The aim was to assess the attitudes of small farmers in relation to their own farming activities and to the role of their farms in rural areas. Furthermore, there was an effort to identify possible factors that affect the farmer's attitude to his own farming, his role in life of municipalities and the conditions of farm survival. Of the total number of 35 599 enterprises in the Czech Republic, 9 679 belong to the surveyed size category 1-5 ha. These microfarms cultivate total area of 25 067 hectares of which 8 577 ha is arable land. Statistics shows that 61% of these businesses (5 590) are focused on crop production. Regarding farms with animal production (defined as those with the density of cattle, sheep, goats and horses above 0.3 livestock unit per hectare), the highest number of farms falls to the category up to 2 livestock units per ha. About two thirds of micro-enterprises are in areas facing natural and other constraints (ANC). Based on the sample of farms in different locations in the Czech Republic, a questionnaire survey was conducted, from which the results will be available in the poster.

Keywords: small farms, countryside development, Czech countryside.

Adél Veselicz[1], Csaba Patkós[2]

Anomalies in centralised and community-led rural development resource allocation in Hungary

[1] Uni Debrecen
[2] Eszterházy Károly University, Institute of Geography and Environmental
email address: veseliczadel1994@gmail.com; patkos.csaba@uni-eszterhazy.hu

In Hungary during the 2007-2013 planning period LEADER local action groups (LAGs) had participated of the EAFRD Axis 4 (general rural development) and the Axis 3 (wider range of rural development) realization. The projects in Axis 3 must serve economic diversification, quality of life and the projects in the Axis 4 have to help of the implement to the other three Axes (1 – Competitiveness, 2 – Environment, land management, 3 – Economic diversification, quality of life) with special local resources. The basic difference between Axes 3 and 4 is the following: although the LAGs take part in both axis in the Axis 3 the final beneficiaries were assigned by the Ministry, but in the Axis 4 LAGs make decision. Some managing authority and paying agency tasks were transferred to the LAGs, so the application and tender treatment complete administrative tasks were fulfilled by the LAGs. Our database was formed by collected data from the Internet and information from LAGs. A Lorenz-curve was created from data related to the distribution of EAFRD Axes 3 and 4 by settlements and we depicted distribution of resources per capita in the settlements. In the majority of the examined Hungarian LAGs (2007-2013) the distribution the centrally managed (Axis 3) EU resources was more even. In general the Axis 4 financial resources distribution showed more inequality. As the local associations were able to decide on the range of beneficiaries within their scope of competences, our results also show that objective decision-making and the "fair" distribution of resources between the municipalities have not been sufficiently implemented.

Keywords: LEADER programme, LAGs, Hungary, community initiative, regional policy.

Dominik Noll, Marina Fischer-Kowalski, Dominik Wiedenhofer

The role of science in the sustainability transition of agriculture: A case study from Samothraki, Greece

Institute of Social Ecology, University of Natural Resources and Life Sciences (BOKU), Vienna, Austria
email address: dominik.noll@boku.ac.at

We introduce a case study about the small and mountainous Greek island of Samothraki in which long-term research efforts brought together scientists and local actors who collaborate on a shared vision about a sustainable future for the island (Petridis et al. 2017). The project combines a transdisciplinary with a transformative science approach serving the academic goal of enhancing the understanding of transition processes, especially in regard to agriculture, with the practical outcome of creating a long-lasting space for knowledge production, making the island a UNESCO Biosphere Reserve (Fischer-Kowalski et al. 2011)[1].

Samothraki is inhabited by 2.800 people and its economy is shaped by small business, tourism and agriculture, relying mainly on sheep and goat farming. Today the sector is affected by a crisis that is evident in all three dimensions of the sustainability triangle. (1) Socially: The numbers of farmers are declining, and the younger generations are not willing to conduct such labor-intensive work with so little financial profits. (2) Ecologically: Despite declining numbers of farmers since 1950, animal numbers increased from 15.000 in 1960 to 70.000 in 2002, stabilizing at about 45.000 thereafter (Fetzel et al. 2018). As one of the main socio-economic drivers for this development we identified the Common Agricultural Policy of the EU (CAP) that was for a long time directed towards animal stocking rates. As the local ecosystems cannot sustain such high numbers of ruminants, overgrazing became omnipresent and not only threatens the survival of the mountainous oak forests and reduces natural ruminant pastures but also causes wide spread soil erosion (Biel and Tan 2014). (3) Economically: The combination of rising feed prices, weakly informed and badly organized farmers and marketing problems led to an economic deadlock situation that threatens the very basis of farming on the island. The main question against this background is how to reduce environmental pressures by in the same time improving the socio-economic capabilities of the local agricultural system.

In our contribution we will show how a socio-metabolic analysis (Haberl et al. 2004) of the local livestock farming system serves as an empirical foundation for a transdisciplinary process that helps developing sustainable practical alter-

[1] For more information about the project and the process of declaring the island to a UNESCO BR look at http://sustainable-samothraki.net/.

natives for the sector on the island and farm level. This systemic inquiry enables us to identify crucial socio-economic drivers that led to the current situation and formulate policy recommendations which would help to relieve pressures from local ecosystems and farmers. Further, it allows us to engage into collaborative processes with local livestock farmers and jointly work on sustainability strategies for the entire farming sector of the island. We will highlight how transdisciplinary research, in particular a citizen science-based process, can trigger the much-needed collaboration among local livestock farmers and facilitate communication between science and practice partners. Our presentation will incorporate latest research findings and report from the ongoing research process.

Keywords: sustainable agriculture, social metabolism, EU-CAP, sustainability transition, island sustainability, sustainability trade-offs.

O.M. Varchenko, K.V. Tkachenko, O. Dragan

Balancing the interests of stakeholders to ensure the sustainable development of rural areas in Ukraine

Bila Tserkva National Agrarian University
email address: omvarchenko@ukr.net

The relevance of the research topic is due to the fact that for a long period of time, the interests of the rural population were not taken into account by all interested stakeholders, in particular, the principles of sustainable development of agriculture were not taken into account in strategic programs at the national and regional levels. As a result, there was a manifestation of destructive phenomena in the development of rural areas: migration of rural population to cities and foreign countries, which led to an increase in the number of depressed rural areas; the development of vertically-integrated holding type structures, which are oriented primarily to obtaining economic profit, ignoring the environmental and social aspects; The participation of agribusiness in ensuring sustainable development of rural areas is insignificant. Consequently, Ukrainian realities indicate that there is a multi-sectoral dynamics of agrarian production, which shows a tendency for growth, while rural population and rural settlements are falling.

The purpose of the article is to summarize the constituent elements of the rural development policy in Ukraine and their impact on the sustainable development of the rural territory, as well as to justify the instruments of balancing the interests of different groups of stakeholders in balancing the economic, social and environmental aspects of sustainable development of rural areas.

Keywords: stakeholders, rural population, agribusiness, agrarian production.

Veronika Vorobljevová, Marie Novotná

Aspects of Business Development in Rural Areas and Amenity Migration as a Potential for Economic Growth of Rural Areas

Západočeská univerzita v Plzni, Fakulta ekonomická, Katedra geografie
email address: veronikv@kge.zcu.cz, novotnam@kge.zcu.cz

The concept of this contribution builds upon works dealing with current issues in the area of forms of business in rural areas, i.e. upon the theoretical background for research of rural areas from business perspective. Additional sources come from works regarding amenity migration for it is particularly this group of new residents who can introduce new business directions to rural areas and creatively harness the potential for various economic activities. If there is an increased trend of amenity migration in the rural area, it may play a positive role in its sustainable development. The majority of amenity migrants is comprised of educated people who are not limited by their economic situation and who also display certain creativity. The move to a rural area with a smaller number of job opportunities may represent a starting point for their new business activity. This activity may be related to agricultural activity and processing of agricultural products, or to crafts - using local resources (carvers, joiners, blacksmiths, etc.). Other business opportunities are in operation and management of sports and leisure centers which are suitable for the local area. Finally, there is also an opportunity to develop businesses in the area of information and communication technology (website operation, database administration, and various general programming services) (Novotná 2013). It is also important to stress the importance of the inner connection between economic growth and social cohesion. Theoretical research in this issue had been largely overlooked and it has only experienced a rather dynamic development in the last 15 years (Pato, Teixeira 2016). The objective is to assess the business development opportunities in rural areas and the related influence of amenity migrants. It is necessary to include other aspects in this debate, such as social cohesion, education and economic growth. It has been proven in numerous works by researchers discussing amenity migration in America that there are similar migration models on the global scale (Nelson L., Nelson P. 2010). In their conclusions, sociological researches of amenity migration reflect the fact that the traditional patterns and habits which affect the migration of people from large urban centers to rural areas are changing, and that in turn alters the character of lifestyle in rural areas. This contribution deals with internal and external factors which have an impact on this issue. It not only explains their effect on rural area development, but it also mentions a critical discussion in relation to Czech rural areas. The basis for the evaluation of the findings of this research consists of structured interviews with members of local and regional authorities, which serve to obtain in-depth and

detailed information. The questionnaire is structured in such a way so as not to interfere with the overall quality and value of the research. The draft of the research is based on a large amount of available scientific literature, mostly from American authors (Deller, Kures a Conroy 2019; Nelson L., Nelson P. 2010). The research was carried out primarily within Pilsen region, and it was followed by an empirical analysis. It shows that 85% of respondents assume that business in rural areas may have a positive influence on the living standards of the population in rural areas and that it will serve as an incentive for more potential amenity migrants from urban areas. Almost 60% of respondents associate business in rural areas with higher level of education, which corresponds with the tendency to focus the business activities on areas with higher added value. The survey also shows that decisions about business in rural areas are further influenced by other circumstances, such as transport accessibility, availability of cultural and leisure activities, as well as the role of grants and subsidies. Respondents see the lack of purchasing power as the greatest risk in business in rural areas. The structure of rural society is changing in connection to the increasing urbanization of rural areas, including the elements that the amenity migrants themselves introduce to the area. As is to be expected, the research shows a distinct connection to tradition in rural areas – traditions that amenity migrants claim to identify with, even though it seems to be more of a fashion trend with an economic subtext rather than a historical connection. The results of the research so far confirmed that there is a certain technological development associated with rural areas, be it in areas of transport, communication technologies, digitization, or transformation technologies (Binek 2007). This fact translates not only into a larger number of job opportunities, but also into a larger space for business, economy, geography, and sociology (Pato, Teixeira 2016).

Keywords: amenity migration, rural areas, business in rural areas .

K. Wagner, S. Egartner, H. Grüneis, K. Heinschink, J. Niedermayr

The regional circular living lab business concept as chance to foster sustainable rural development – interim results of the H2020 project LIVERUR

Federal Institute of Agricultural Economics, Rural and Mountain Research
klaus.wagner@bab.bmnt.gv.at

In the Horizon 2020 project LIVERUR (https://liverur.eu) the Living Lab approach for the development of projects will be broadened and adapted to specifically rural problems, to sustainability and circular economy aspects. The Federal Institute of Agricultural Economics, Rural and Mountain Research is

responsible for drafting a new business model concept, called RAIN (Regional circular living lab business concept) on the basis of various preliminary work in the course of the project and a specific literature research. Living Labs are user-centred, open-innovation and ICT enabled ecosystems often operating in a territorial context integrating concurrent research and innovation processes within a quadruple helix (Government, Industry/Agriculture, People, Research). Living Labs have been discussed and implemented for some years, but mostly in urban environments. LIVERUR analyses the specific rural context and problems in 13 pilot regions (AT, CZ, ES, FR, IT, LV, SI, MA, PT, TN, TR) and for various topics like agriculture, food processing, marketing, tourism, energy production. Selected projects using the RAIN concept approach will then be implemented and evaluated.

The RAIN concept comprises and integrates core business model elements, specific principles of the LIVERUR project approach (e.g. economic, ecological and social sustainability, circular economy, open innovation, stakeholder involvement) and in the same way exogenous regional, national and global influences (e.g. infrastructure, markets, climate, legal framework…). It seeks to enable innovative and sustainable projects and development in rural areas. LIVERUR project results are expected to show new approaches, aspects and suggestions to be integrated in the CAP discussions and in future CAP measures.