



RURALIZATION

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The opening of rural areas to renew rural generations, jobs and farms

D4.1 Trend analysis: technical report



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¹ PU=Public, CO=Confidential, only for members of the consortium (including the Commission Services), CL=Classified, as referred to in Commission Decision 2001/844/EC

Table of contents

Table of contents	3
Acknowledgements	9
Abstract.....	11
1 Objective, scope and approach in the trend analysis	12
1.1 Objective	12
1.2 Scope.....	13
1.3 Approach.....	14
2 Methodology of trend analysis	17
2.1 Method and data	17
2.1.1 Identification and reporting of the trends	17
2.1.2 Assessment of the impacts of the trends.....	22
2.1.3 Content analysis and categorisation of the qualitative trend data	23
2.1.4 Analysis of the qualitative trend data	25
2.1.5 Selection of the trends included in the trend cards.....	25
2.1.6 Identification and analysis of the quantitative manifestation of the trends.....	26
2.1.7 Reporting of the findings.....	27
3 Results.....	28
3.1 Megatrends, trends and weak signals.....	28
3.2 Drivers of the megatrends, trends and weak signals	57
3.3 Impacts of the megatrends, trends and weak signals.....	68
3.3.1. Positive impacts on rural areas (territorial perspective) by impact topics and categories	70
3.3.2. Negative impacts on rural areas (territorial perspective) by impact topics and categories	74
3.3.3. Impacts on preselected aspects of rural development (thematic perspective).78	
3.3.4. Impacts on rural areas (territorial perspective) by trend type.....	83
3.3.5. Impacts on selected rural development issues (thematic perspective) by trend type	84
3.3.6. Impacts on rural areas (territorial perspective) by trend topic.....	85
3.3.7. Impacts on selected aspects of rural development (thematic perspective) by trend topic	89
3.4 A more detailed look at the trends and their impacts	90
3.5 Trend cards – promising trends to promote rural regeneration	111
4 Concluding remarks	128
References	135
ANNEXES.....	137

List of Tables

Table 1: Description of different types of trends.....	14
Table 2: Thematic scope and journal selected for the Scopus query	19
Table 3: Overview of the elements in mixed futures literature search	20
Table 4: Number of trend observations by type of search and origin	22
Table 5: Assessed attributes of the trends	23
Table 6: Outcome of the categorisation process of trends, drivers and impacts	25
Table 7: Trends by affected sector and scale, %	30
Table 8: Trends by significance for rural areas within various time scales, %	31
Table 9: Description of the trends	33
Table 10: Trend topics by affected sector, %	52
Table 11: Top-20 trends by affected sector: primary production, %	53
Table 12: Top-20 trends by affected sector: manufacturing, %	54
Table 13: Top-20 trends by affected sector: private services, %	55
Table 14: Top-20 trends by affected sector: public services, %	55
Table 15: Drivers, count and %	60
Table 16: Driver topics by trend type, %	61
Table 17: Top-20 drivers of megatrends, %	62
Table 18: Top-20 drivers of trends, %	63
Table 19: Top-20 drivers of weak signals, %	64
Table 20: Drivers topics by affected sector, %	65
Table 21: Top-20 drivers by affected sector: primary production, %	66
Table 22: Top-20 drivers by affected sector: manufacturing, %	67

Table 23: Top-20 drivers by affected sector: private services, %.....	67
Table 24: Top-20 drivers by affected sector: public services, %	68
Table 25: Specification of the impacts, number of observations	69
Table 26: Shares of trends with identified positive impacts, % of trend observations under each trend topic.....	90
Table 27: Positive impacts (impact categories) of the trends by type of rural area and associated TOP-3 trends by impact (based on the number of observations).....	92
Table 28: Negative impacts (impact categories) of the trends by type of rural area and associated TOP-3 trends by impact (based on the number of observations).....	97
Table 29: Gender impacts (impact categories) of the trends and associated TOP-3 trends by impact (based on the number of observations)	102
Table 30: Impacts (impact categories) of the trends on social capital and associated TOP-3 trends by impact (based on the number of observations)	104
Table 31: Migration impacts (impact categories) of the trends and associated TOP-3 trends by impact (based on the number of observations).....	106
Table 32: Impacts (impact categories) of the trends on access to land and associated TOP-3 trends by impact (based on the number of observations)	107
Table 33: Impacts (impact categories) of the trends on farm structures and associated TOP-3 trends by impact (based on the number of observations)	109
Table 34: Impacts (impact categories) of the trends on farming prospects and associated TOP-3 trends by impact (based on the number of observations).....	110
Table 35: TOP-5 trends by the target of impact (based on the number of observations)....	111

List of Figures

Figure 1: The process of trend analysis.....	15
Figure 2: Trend analysis as participatory foresight analysis.....	16
Figure 3: Guide for trendspotting	21
Figure 4: Categorisation process and different levels of abstraction	24
Figure 5: Illustration of simple clustering approach	26
Figure 6: Trends by type, %.....	28
Figure 7: Trends by scale, %.....	29
Figure 8: Trends by domain, %.....	29
Figure 9. Trends by affected sector, %.....	30
Figure 10: Trends by significance for rural areas, %	31
Figure 11: Trends by topic, %.....	32
Figure 12: Most significant trends (top-20) in the short run (1–10 years) and in the long run (10-30 years) based on the frequency ranking of trends that were assessed to have ‘high significance’ for the rural areas	57
Figure 13: Drivers by topic, %	58
Figure 14: Positive impacts (impact topics) of the trends by type of rural area, %	71
Figure 15: Positive impacts (impact categories) of the trends by type of rural area, %	73
Figure 16: Negative impacts (impact topics) of the trends by type of rural area, %	75
Figure 17: Negative impacts (impact categories) of the trends by type of rural area, %	77
Figure 18: Gender impacts of the trends, % of specified impacts	78
Figure 19: Impacts of the trends on social capital, % of specified impacts	79
Figure 20: Migration impacts of the trends, % of specified impacts.....	80
Figure 21: Impacts of the trends on access to land, % of specified impacts.....	81

Figure 22: Impacts of the trends on farm structures, % of specified impacts	82
Figure 23: Impacts of the trends on farming prospects, % of specified impacts	83
Figure 24: Trends with identified impacts on rural areas by trend type, % of all trend observations	84
Figure 25: Trends with identified impacts on preselected rural development issues, % of all trend observations.....	85
Figure 26: Shares of trends with positive and negative impacts for rural areas within FUAs, % of trend observations under each trend topic (NOTE: frequencies of the trends per topic are given in Table 26).....	86
Figure 27: Shares of trends with positive and negative impacts for rural areas in proximity to FUAs, % of trend observations under each trend topic (NOTE: frequencies of the trends per topic are given in Table 26).....	87
Figure 28: Shares of trends with positive and negative impacts for rural areas in proximity to FUAs, % of trend observations under each trend topic (NOTE: frequencies of the trends per topic are given in Table 26).....	88
Figure 29: Some global socio-economic and earth system trends with extrapolation of recent developments paths. Source: adapted from Steffen et al. 2015	129
Figure 30: Evolutionary development featuring stability and change. Source: adapted from Mannermaa 1991 and Laszlo 1985	130
Figure 31: Some ingredients of the contemporary and possibly becoming world models ..	131
Figure 32: Trend cards – a user’s guide	132

Acronyms and Abbreviations

EU	European Union
FUA	Functional Urban Area
NUTS	Nomenclature of territorial units for statistics, including three hierarchical levels (NUTS 1–3)
WP	Work Package

Partner short names in the report

CE	Consulta Europa Projects and Innovation (Spain)
CNRS	Centre National de la Recherche Scientifique (France)
EcoRur	Asociatia Eco Ruralis-In Sprijinul Fermierilor Ecologici Si Traditionali (Romania)
ILS	Institut für Landes- und Stadtentwicklungsforschung, Research Institute for Regional and Urban Development (Germany)
KulturLand	Kulturland eG (Germany)
Landg	De Landgenoten (Belgium)
MTA	Magyar Tudományos Akadémia Társadalomtudományi Kutatóközpont (Hungary)
NUIG	National University of Ireland, Galway
ProVertes	Pro Vértés Nonprofit Zrt. (Hungary)
SA	Shared Assets Limited (United Kingdom)
TdL	Terre de Liens (France)
Teagasc	The Agriculture and Food Development Authority (Ireland)
TUD	Delft University of Technology (The Netherlands)
UNICAL	University of Calabria (Italy)
UNIDEB	University of Debrecen (France)
UTU	University of Turku (Finland)
UWr	University of Wrocław (Poland)
XCN	Xarxa per a la Conservació de la Natura (Spain)

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This report is a result of concerted action. The participants of the RURALIZATION project have made a major effort in the identification and assessment of diverse trends which could play a role in the rural regeneration in Europe. We were able to identify as much as 1,560 trends which were analysed and finally synthesised in 60 trends cards. These cards will be put in the assessment process in 20 regions around Europe to find out context specific ways to benefit from the contemporary and emerging trends.

The whole process is based on our reading of the world. It is not a complete one and may include biased perspectives. Some other teams could come up with a different set of trends.

Our perspective on the futures of the rural Europe is positive. We try to figure out ways for rural regeneration, for stepping in by new generations with novel values, ideas and practices. The new generations earn a chance. This has motivated our quest of the drivers and contents of possible rural futures. We have observed many adverse effects of the trends (especially contemporary megatrends) on the rural areas, but in the trend cards some positive ingredients of the rural futures are provided.

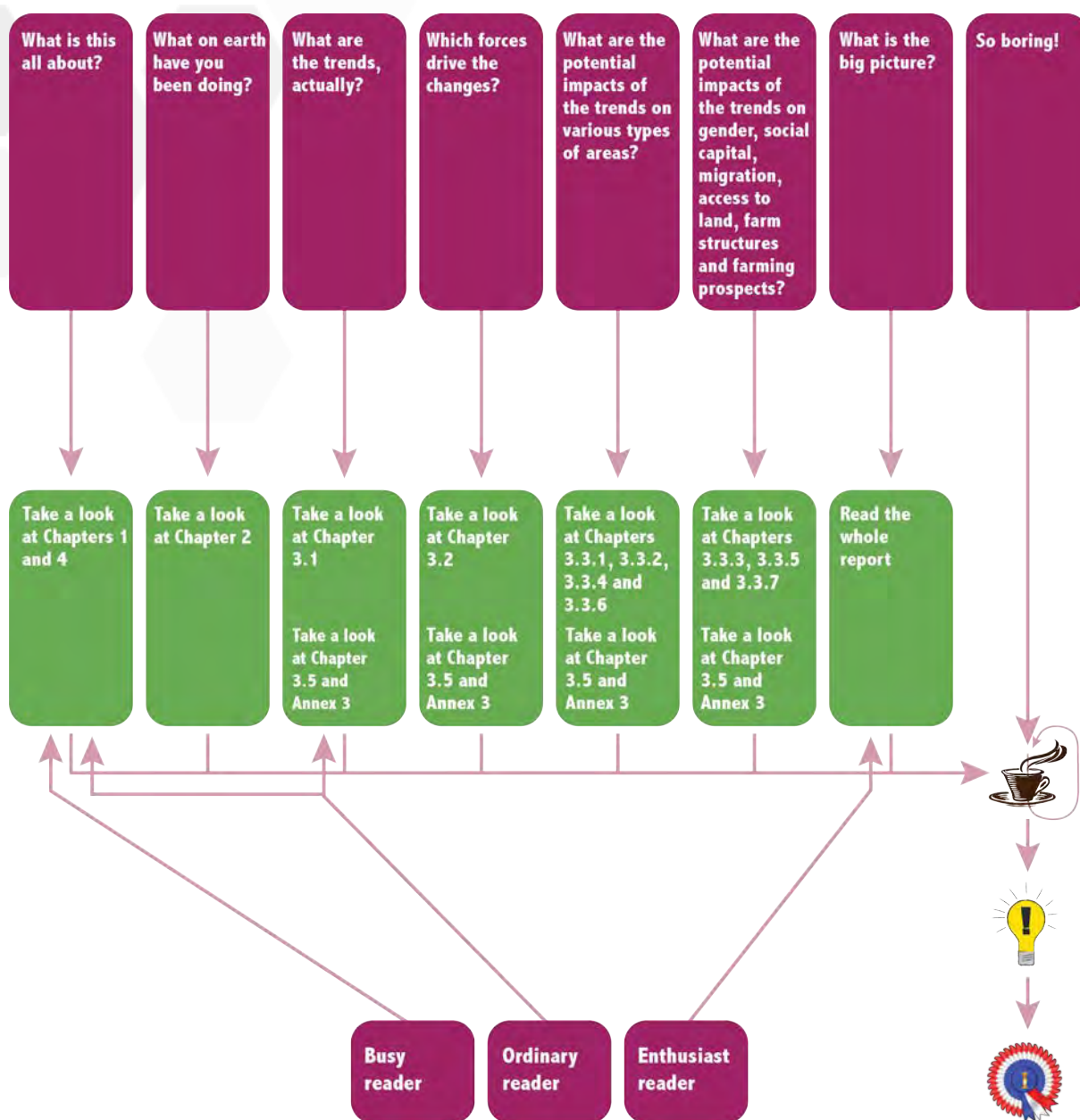
Most part of the analysis work has been carried out by our colleagues in Germany, Poland and Finland as indicated by the list of authors. Without a team effort this report would not be in Your hands, however. We would like to thank all the participants of the project for their valuable input. We would like to say special thanks to Alice Martin-Prével from Terre de Liens – she carefully read the draft of the long report and made several valuable suggestions to improve it. An important contribution to produce the maps was done by Florian Ahlmeyer from ILS.

The report is quite long. There are several strategies to access it. These are introduced at the next page in reader's guide to the trend report. We hope that You will be brave enough to meet the standard of an enthusiast!

Vesanto, Finland, 25th January 2021

Tuomas Kuhmonen

Leader of the Work Package 4 (Foresight Analysis)



Abstract

This report is a documentation for an extensive trend identification and assessment process which was carried out by the RURAIZATION team. A large diversity of trends was identified in European research reports, scientific journals, futures literature as well as in national sources to avoid the language bias. The approach of the trend analysis was exploratory, not confirmatory or normative. The list of 1,560 trend observations is neither exhaustive nor representative and fully balanced as there is no theory of the future that would guide us to pick up the 'correct' trends. Each trend has both positive and negative impacts on specific areas, sectors or actors and observing this diversity is important for understanding the emergence and evolution of alternative futures. The general perspective on the trend analysis has been rural regeneration: what kinds of force fields and developments could shape the futures of rural Europe?

Each of the trend observations was assessed by the observer – supported by the source of the trend – for its impacts on different types of rural areas (rural areas within functional urban areas, rural areas in urban proximity and remote rural areas), gender, social capital, migration, access to land, farm structures and farming prospects. Also the drivers of the trends were identified. This process provided a good understanding of the diversity of the impacts of the trends in various contexts.

In order to make the results more user-friendly, the findings were synthesised in 60 trend cards. These cards feature the contents, drivers and impacts of 10 megatrends, 20 trends and 30 weak signals which could play in the rural regeneration. Obviously, there is no single silver bullet trend that would bring about the desired outcomes for all regions. Rather, hopefully each region, economic sector, policy field, business, decision-maker or citizen could find out the way to benefit from (some of) the trends in specific contexts. This is the role in which the trends cards are meant to serve and in the next steps of the RURALIZATION project this aspect will be assessed in various interactive engagements.

1 Objective, scope and approach in the trend analysis

Futures research and foresight analysis discuss phenomena that do not exist since they reside in the future. We have no observations and no data about the future (Bell 1997, Voros 2007). For this reason, all future-related information is conjectural, speculative, prospective and subject to several interpretations (Checkland 2000; de Jouvenel 1967). Future remains 'epistemically inaccessible' (Barnes and Cameron 2009, 298).

Scientific futures research observes these aspects by studying alternative futures instead of making forecasts. The manifestations of alternative futures are most often organised in the form of trends, scenarios or futures images (Bell and Mau 1971). Systematic and transparent design and evaluation of several alternative futures gives an idea of the space of alternatives (Kuhmonen 2017). This setting is the most important argument for studying the futures: 'To the extent that we become aware of different future alternatives, we gain access to new choices in the present' (Slaughter 1993, 290). Through exploring alternative futures, we may become aware of futures that we would have no idea about without studying the futures field. We are able to make informed choices in the present as we see the possible future outcomes of our choices. Luckily, a human being has the ability 'to be a citizen of two worlds: the present and the imagined – out of this antithesis the future is born' (Polak 1973, 1).

RURALIZATION project investigates regeneration of rural areas in Europe. Regeneration is an ongoing process and it has many avenues ahead. Trend analysis is one way to get ideas of the possible ingredients of the updated rural Europe and related future developments. Trends provide opportunities to benefit from mainstream force fields (megatrends), from some context specific developments (trends) or from symptoms of change (weak signals). Trend is not a norm neither a promise of a certain kind of future, since every societal trend is valid only for a limited period of time and every trend will end. Weak signals, especially, provide insights for discontinuity and emergence (Inayatullah, 2008; van Notten et al. 2005). Identification and assessment of trends that have relevance for rural regeneration is an integral part of RURALIZATION process in which the opportunities are translated into promising practices and policies. Embodiments of alternative societal futures are facilitated by social action (Malaska 2000, 239; Schulz 2015, 129). This report provides a documentation of the extensive trend analysis exercise that was carried out in 2019–2020 by the participants of the project.

1.1 Objective

Objective of the trend analysis is three-folded:

- 1) To identify an extensive set of diverse trends that have a contribution to rural futures,
- 2) To carry out a general level assessment of their impacts on rural development in specific contexts,
- 3) To put a subset of the trends under more careful scrutiny based on their potential to promote rural regeneration in several contexts.

Identification of many trends. Rural areas are more versatile than cities and subject to a large variety of political, economic, social, technological, environmental and cultural force fields. The futures of rural areas are not driven by one or two well-known trends but by a very large set of drivers that have varying breaths, strengths and scopes. The same trend may play a major role in some specific context and hardly any role in another context. In order to be able to discuss the role of various trends in rural regeneration, it is important to observe many trends residing in diverse contexts.

General level impact assessment. Every trend has many kinds of impacts. Especially broad megatrends have many impacts on, for example, demographics, local economy, employment, trade, local services, governance and the environment. The problem is that many of these impacts are context specific. Impacts of globalisation, urbanisation and climate change can be quite different in Spain and in Sweden. Necessarily, the impacts have to be discussed at a rather high level of abstraction. In this vein, the trends are partly taken out of their contexts to reach some understanding of their impacts.

Trend cards. Trend analysis serves identification of effective practices and policies to promote rural regeneration in diverse contexts. Even though a very marginal trend or weak signal could offer promising perspectives for rural regeneration in some specific context, some of the trends could offer promising perspectives in several contexts. Observing that picking out a smaller subset of trends that have impacts in several contexts is a risky business, only part of the trends will be subjected to more detailed analysis and evaluation and finally presented as trend cards. In 2021, these trend cards are being put back into diverse contexts in 20 regional workshops to find out which of them have most potential to promote rural regeneration in each of these contexts.

In other words, objective of the trend analysis is to identify a large set of trends potentially having an impact on rural regeneration and to evaluate these trends across diverse contexts and levels of abstraction.

1.2 Scope

Three types of trends were identified: megatrends, trends and weak signals. These have varying breath and specificity of impact as indicated in Table 1. The generic selection criteria of for each type of the trend are also indicated in the table.

Table 1: Description of different types of trends

Trend type	Definition	Criteria for positive selection in the analysis
Megatrend	Overarching mainstream that affects most regions and activities	Is the megatrend effective in most rural areas? Does the megatrend have potential for surviving next 10–15 years?
Trend	Developments that are effective in specific regions and activities	Is the trend effective in some rural areas? Does the trend have potential to become a megatrend?
Weak signal	Symptoms of change in specific regions and activities	Is the weak signal effective in some rural areas? Does the weak signal have potential to become a trend?

Scope of the trend analysis is very broad and open. The topics of the trends to be identified and investigated has not been restricted in advance. Broad scope has made it possible to observe many kinds of trends instead of repeating the well-known most common megatrends like globalisation or urbanisation. The broader the scope, the more likely also non-obvious trends and weak signals will be included. Since societal futures are open, we will never know in advance whether some of these outliers and seemingly trifling topics will scale up to a trend and even up to a megatrend.

1.3 Approach

The process in trend analysis is described in Figure 1. Identification of trends has been done through targeted search and through national search. Each of the trends has been assessed for its qualitative impacts. The subset of trends that are included in the trend cards are studied also for their quantitative manifestations, if they existed. Finally, the results are reported. The methodology is explained more in detail in Chapter 2. **The approach is exploratory, not confirmatory or normative.**

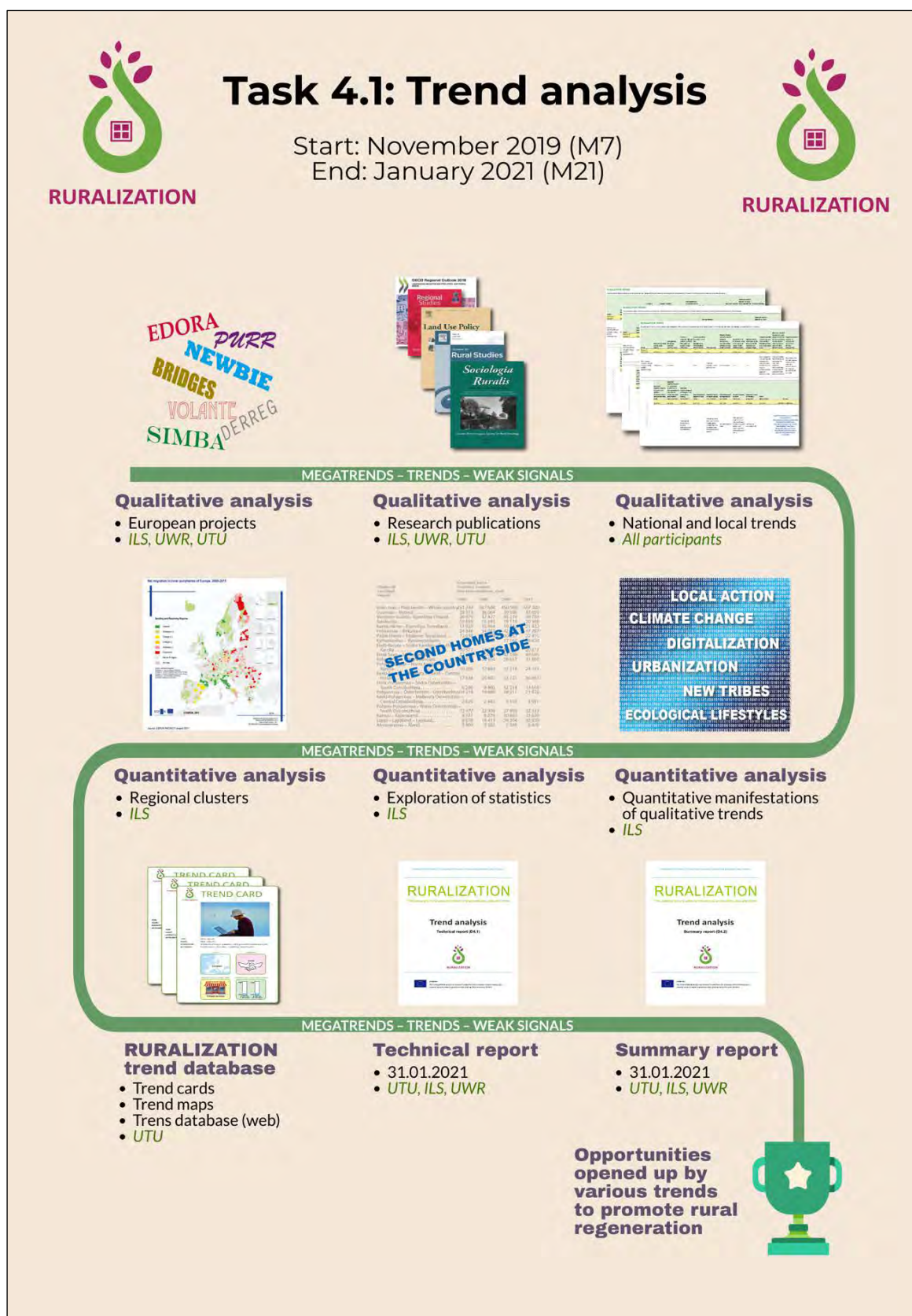


Figure 1: The process of trend analysis

In terms of research act, the trend analysis can be considered also as a **participatory foresight process** while observing all stages of the process (Figure 2). As a starting point, the participants of the RURALIZATION research team are well informed about the concept of rural regeneration (discussed in the conceptual guideline; Murtagh et al. 2020) and on the basis of this frame of reference they are attuned to identify trends that have relevance for rural regeneration. Rural regeneration is the backbone against which the trends and their potential impacts are judged. Even though regeneration is an ambiguous concept, the main idea of this concept in RURALIZATION project is worth of repeating because it plays such an important role also in the trend analysis (Murtagh et al. 2020, 18):

‘Regeneration should enable transformation, be it on a smaller or larger scale that allows places to reach their potential. Rural regeneration is more than just reversing decline, or trying to restore a previous state of development, but implies a process of transition and more positive reinvention or revival. Regeneration must respond to the need to re-make, to transform in response to decline. Regeneration can be theorised as an ambitious, transformative process.’

Based on this understanding, a rich set of trends is first identified in diverse contexts (Figure 2). Second, they are taken out of their detailed contexts to find out some universals among them and among their impacts. Third, they are put back to diverse contexts to find out ways to benefit from the trends within each context and further to identify promising practices and policies to promote rural regeneration. This third step takes places later and will not be reported as part of the trend analysis.

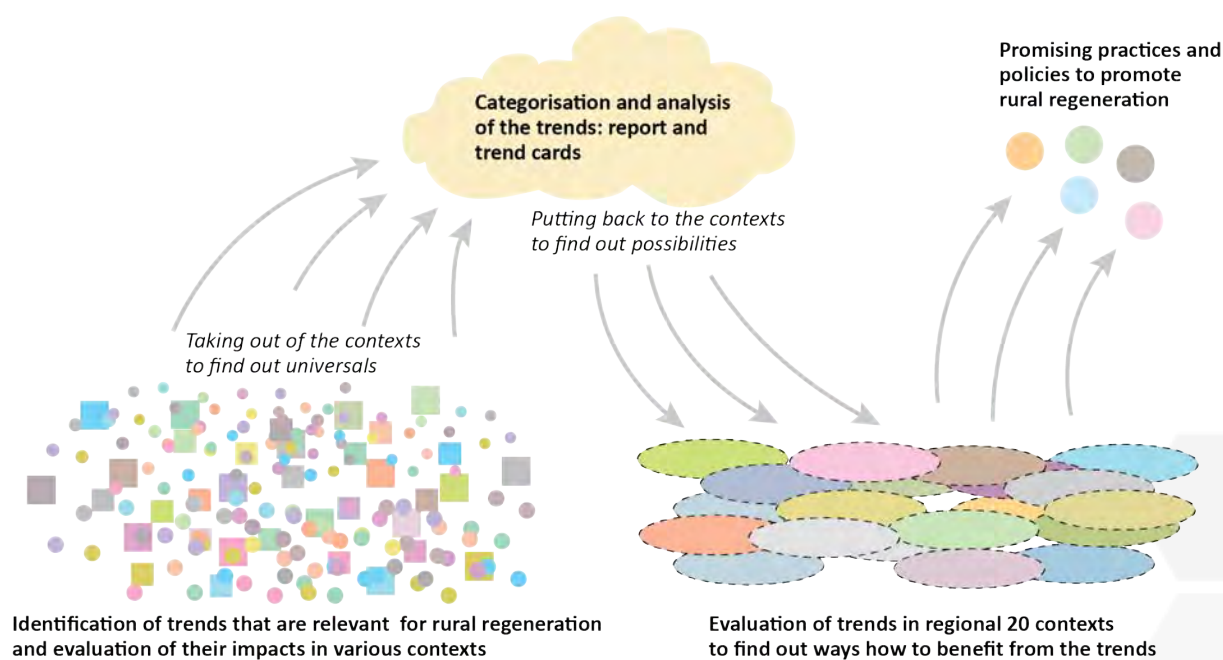


Figure 2: Trend analysis as participatory foresight analysis

2 Methodology of trend analysis

Trend analysis included several steps, and all participants were involved in the identification of the trends. The methodology of this process and main features of the trend data are described in this section.

The methodology is attuned to observe many kinds of trends in many kinds of contexts. Trend identification process is not expected to bring about any representative or balanced set of trends that could be used to delineate and define the future of the rural Europe. Such an approach would be neither possible nor feasible. Rural regeneration processes and trends hosting them are diverse and different across contexts, but they include some degree of universality especially in their drivers, contents and general level impacts.

2.1 Method and data

Trend analysis consisted of three steps that we be explained next:

- 1) Identification and reporting of the trends,
- 2) Assessment of the impacts of the trends,
- 3) Content analysis and categorisation of the qualitative trend data,
- 4) Analysis of the qualitative trend data,
- 5) Selection of the trends included in the trend cards,
- 6) Identification and analysis of the quantitative manifestation of the trends,
- 7) Reporting of the findings.

2.1.1 Identification and reporting of the trends

Identification of the trends included two tracs: 1) targeted search and 2) national search. This organisation of search was considered necessary to ensure extensive coverage of relevant trends and to avoid language bias. Through engaging all participants in the search of trends in their own country and regions it was possible to get access to trends are not reported in the scientific journals or English language research reports.

Targeted search. This strand of search included identification of relevant trends in 1) European projects, 2) scientific journals and 3) futures research organisations and mixed futures literature.

European projects

The selection of the projects and reports at the European level includes projects that are relevant on rural areas, agricultural research and demographic and socio-economic developments. The period of investigation is between 2010 and 2020, in which the projects were started or finished. These projects are also supplemented with those from the project list in WP3 (D3.3). In sum, the set covers 74 projects, of which 64 projects and 71 reports were

selected for further analysis based on their relevance. On the one hand, the selection was based on keyword search. The keywords megatrend, trend, dynamic, development, change, future, rural, global or Europe were used to observe the trends in the EU and in the European countries. On the other hand, the reports were scanned for sections that provided information on future developments and trends for rural regenerations, newcomers, new entrants into farming or access to land.

As a result, 626 trend observations were made for European projects. If trends occurred several times they have been listed repetitively, to indicate their importance. This explains the high number of trends. The reports at European level primarily highlight trends and megatrends, which affect most regions and activities. Many of those trends are not only related to predominantly rural areas, but also to intermediate and predominantly urban areas. In addition, regional and national trends which are effective in certain member states, regions and activities could also be observed in the European projects.

A significant number of the trends could be identified in the publications of the following project: A Territorial Reference Framework for Europe 2019 (ESPON), Possible European Territorial Futures (ESPON), Rural Sustainable Development for Local Decision Makers (RUSELDA), Study on Employment, Growth and innovation in Rural Areas (SEGIRA), Rural-Urban Outlooks: Unlocking Synergies (ROBUST), Farming Transitions: Pathways Towards Regional Sustainability of Agriculture in Europe (FARMPATH), Heritage for Rural Regeneration (RURITAGE), Spatial Indicators for a 'Europe 2020 Strategy' Territorial Analysis (SIESTA), Peri-urban Land Use Relationships: Strategies and Sustainability Assessment Tools for urban-rural linkages (PLUREL), Report on Evaluation of the impact of the CAP on generational renewal, local development and jobs in rural areas; New Entrant netWork: Business models for Innovation, entrepreneurship and resilience in European agriculture (NEWBIE), European Development Opportunities in Rural Areas (EDORA), Space for innovations in Agriculture (AGRISPIN), Rural-Urban Partnerships Motivating Regional Economies (RUMORE), Social Innovations in Structurally Weak Rural Regions: How Social Entrepreneurs Foster Innovative Solutions to Social Problems (RURINNO), Potential of Rural Regions (PURR), Smart Farming Thematic Network (SMART-AKIS), Rural-Urban Partnerships Motivating Regional Economies (RUMORE), European Shrinking Rural Areas Challenges, Actions and Perspectives for Territorial Governance (ESCAPE), Towards RUral Synergies and Trade-offs between Economic development and Ecosystem services (TRUSTEE), Territories with Geographical Specificities (BRIDGES), Valorising European Research for Innovation in Agriculture and Forestry (VALERIE), Visions Of LAND use Transitions in Europe (VOLANTE), Assessment of the impact of drivers of change on Europe's food and nutrition security (TRANSMANGO), Public Ecosystem Goods And Services from land management: Unlocking the Synergies (PEGASUS), Living Lab research concept in Rural Areas (LIVERUR) and Rural Future Networks (RUFUS).

Scientific journals

The targeted search in scientific journals was organized into four main steps. In the first step, academic journals were screened that would form the basis for a Scopus query (Scopus is world's largest abstract and citation database of peer-reviewed research literature). This began with establishing a list of relevant journals belonging to four thematic groups – (1)

futures studies, (2) rural studies, (3) sustainable development and its components and (4) geography, planning and regional studies. The selection was performed on the basis of expertise of the project team members, who after iterative rounds of consultation agreed on a list of 23 academic journals (Table 2).

Table 2: Thematic scope and journal selected for the Scopus query

Thematic scope	Journals selected for the query
Futures studies	Futures, Structural Change and Economic Dynamics, Technological Forecasting and Social Change
Rural studies	Agricultural Economics, European Countryside, Food Policy, Journal of Rural Studies, Sociologia Ruralis
Sustainable development and its components	Earth's Future, Ecological Economics, Ecological Indicators, Global Environmental Change, Socio-Economic Review, Sustainability Science, The Anthropocene Review
Geography, planning and regional studies	Geoforum, Economic Geography, European Planning Studies, Land Use Policy, Progress in Human Geography, Progress in Planning, Regional Studies, World Development

In the second step, a query was performed with the use of the Scopus search engine. The query was based on (1) keywords such as 'trend' and its synonyms, (2) keywords related to the supralocal range of the trend, (3) keywords related to the analysed period, (4) ISSN numbers of the selected journals and (5) the publication date. The exact text of the query can be found in the box below. The query was performed on 7th February 2020 and the search included the entire period since the beginning of 2010.

TITLE (*trend*) OR (TITLE-ABS-KEY (*trend* OR transition* OR transform* OR develop* OR chang* OR increase* OR decreas* OR grow* OR reduc* OR declin* OR improv* OR pattern* OR evol* OR dynamics) w/10 (international* OR global OR wide*spread OR world*wide OR Europe* OR EU) w/15 (period* OR decade* OR year* OR centur* OR time OR *term OR *temporal OR between OR from OR over))) AND ISSN (0016-3287 OR 0040-1625 OR 0954-349X OR 0743-0167 OR 1467-9523 OR 1803-8417 OR 1574-0862 OR 0306-9192 OR 1862-4057 OR 1470-160X OR 0959-3780 OR 2328-4277 OR 2053-020X OR 0921-8009 OR 1475-147X OR 1477-0288 OR 0016-7185 OR 1469-5944 OR 0305-9006 OR 0264-8377 OR 1944-8287 OR 1360-0591 OR 0305-750X) AND PUBYEAR > 2010

The query returned 1,126 articles in total. The third step consisted of a verification of the relevance of the articles by screening their titles, abstracts and keywords. Any articles that were not directly relevant to the search were discarded, which resulted in a final number of 342 articles kept for further analysis. In the fourth step, the articles were checked for any megatrends, trends or weak signals relevant directly or indirectly to European rural areas. As a result, 96 specific observations were identified (the total number of observed trends was higher but due to frequent repetitions of trends in different sources many observations were merged).

Futures research organisations and mixed futures literature

Websites of well-known European foresight or futures studies organisations and sources mixed futures literature (books, newspapers, miscellaneous reports etc.) were consulted. Several search strings were applied in various combinations and specifications (singular and plural, noun and adjective). The search strings included keyword (type of trend), keyword attributes (synonyms or characteristics of the trend type), futures attributes (manifestations or specifications of the trend), context attributes (to observe relevance for rural regeneration) and regional attributes (European countries and agglomerations). Table 3 presents an overview of the search elements. The futures research organisation which were studied were Copenhagen Institute for Futures Studies, Finland Futures Research Centre, Finnish Innovation Fund SITRA, Fraunhofer Institute for Systems and Innovation Research, Futuribles, FUTURLAB – University of Alicante, Institut Futur Freie – Universität Berlin, Institute for Futures Studies, International Institute for Applied Systems Analysis IIASA, Joint Research Centre JRC, Manchester Institute of Innovation Research, OECD Strategic Foresight Unit, Z_punkt GmbH – The Foresight Company and Zukunftsinstitut. Publications of many other futures organisations appeared in the open search as well. The findings were checked and screened for relevance for the scope of RURALIZATION trend analysis.

Table 3: Overview of the elements in mixed futures literature search

Keyword	Keyword attributes	Futures attributes	Context attributes	Regional attributes
<u>MEGATRENDS:</u> megatrend <u>TRENDS:</u> trend <u>WEAK</u> <u>SIGNALS:</u> weak signal	<u>MEGATRENDS:</u> movement, direction, global, systemic, force <u>TRENDS:</u> pattern, development, tendency, orientation, progression, transition, transformation, sequence, change, growth, decline, evolution, direction, dynamics <u>WEAK SIGNALS:</u> wild card, novel, surprise, innovation, unusual, exception, experiment, emergent	<u>ALL:</u> future, scenario, vision, image, anticipation	<u>ALL:</u> region, rural, urban, spatial, location, regeneration, land use, entrant, incomer, farm, livelihood, housing, lifestyle	<u>ALL:</u> Europe, Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, United Kingdom

National search. The participants of RURALIZATION project were instructed to do search within their own country and region. This effort was carried out 1) to observe trends that are not reported in the English language headlines or articles and 2) to observe the diversity of

the impacts of (common) trends or the impact of the diversity of contexts. The focus of this search was on the trends and weak signals. A simple guide for the search was prepared for the trendspotting (Figure 3).

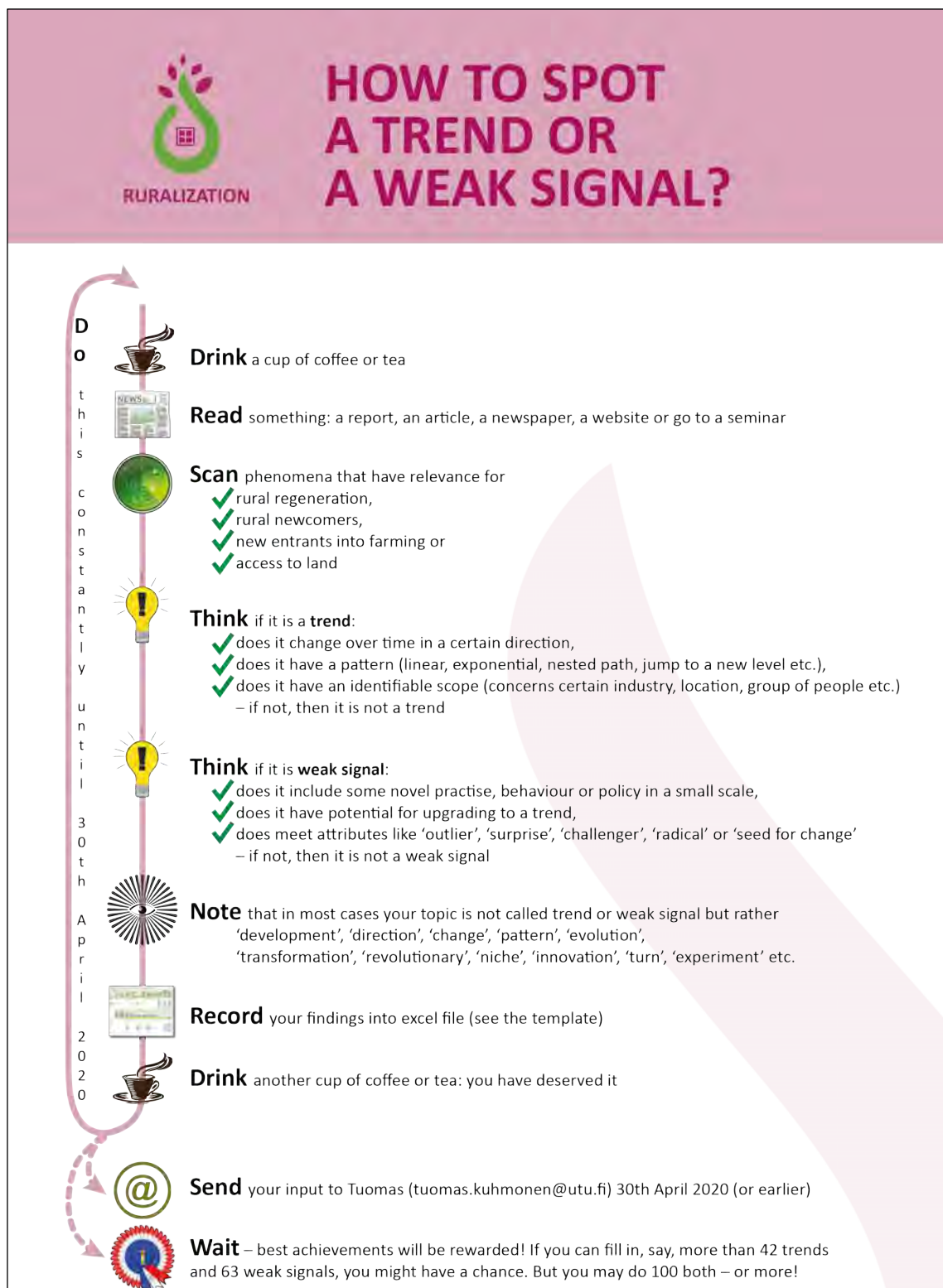


Figure 3: Guide for trendspotting

Identification of the trends resulted in 1,560 trend observations. Table 4 presents the number of trends by type of search and also by organisation in charge of the search. About half of the trends were identified in the targeted search and another half in the national search.

Table 4: Number of trend observations by type of search and origin

Search mode and participant	Number of trends	% of trends
Targeted search:		
European projects (ILS)	626	40
Scientific journals (UWr)	94	6
Futures literature (UTU)	90	6
Subtotal	810	52
National search:		
CE (Spain)	9	1
CRNS (France)	62	4
EcoRur (Romania)	27	2
ILS (Germany)	221	14
Kulturland (Germany)	33	2
Landg (Belgium)	22	1
NUIG (Ireland)	100	6
SA (United Kingdom)	16	1
TdL (France)	18	1
TUD (The Netherlands)	26	2
UNICAL (Italy)	32	2
UNIDEB (Hungary)	51	3
UTU (Finland)	85	5
UWr (Poland)	24	2
XCN (Spain)	24	2
Subtotal	750	48
Total	1560	100

2.1.2 Assessment of the impacts of the trends

The impacts of each trend were assessed by the trend observed based on the source (e.g. report, article) or based on the field observations in the regional or local context. Each trend was assessed for its general characteristics (type, scale, domain), drivers and expected impacts. The assessed topics are illustrated in Table 5.

Table 5: Assessed attributes of the trends

Attribute	Contents
Type	Megatrend, trend, weak signal
Scale	Global, European, national, regional, local
Domain (PESTE)	Political, economic, social (incl. demographic), technological, environmental
Main driver(s)	Open list
Affected economic sectors (main impacts)	Primary production, manufacturing, private services, public services
Significance for rural areas in the short run (1-10 years)	Small, medium, high
Significance for rural areas in the long run (10-30 years)	Small, medium, high
Expected positive impacts on rural areas within a functional urban area (commuting area)	Open list
Expected positive impacts on rural areas outside but in close proximity to a functional urban area (not part of urban labour market)	Open list
Expected positive impacts on remote rural areas ('low-density economies')	Open list
Expected negative impacts on rural areas within a functional urban area (commuting area)	Open list
Expected negative impacts on rural areas outside but in close proximity to a functional urban area (not part of urban labour market)	Open list
Expected negative impacts on remote rural areas ('low-density economies')	Open list
Expected gender impact in rural areas	Open list
Expected impact on social capital in rural areas	Open list
Expected impact on migration in rural areas	Open list
Expected impact on access to land	Open list
Expected impact on farm structures	Open list
Expected impact on farming prospects	Open list
Other observations	Open list
Source, references	Open list

2.1.3 Content analysis and categorisation of the qualitative trend data

The open lists of drivers and impacts had to be categorised before analysis work. Categorization method was **conventional content analysis** (Hsieh and Shannon 2005) without predefined categories. All the categories were derived from the primary data in an iterative process manually. Each of the open items were categorised by one scientist and checked by two scientists from other teams. In case there was disagreement, the item was subjected to closer scrutiny and the team leader decided the final category. This double assessment improved reliability of the categorisation process. However, the categories are not definitive: they are affected by what kind of a manifestation of the trend is being identified in each case.

As the trend observations are not balanced, some categories may be neither intuitive nor in line with other studies.

The outcome of the categorisation process resulted in multiple levels of abstraction. The trends are presented at three levels of abstraction (or even four levels if the references are included). **Topic** represents a very high level of abstraction and collects the trends into rather small number of categories. The topic captures both the contents and the perspective of the trend observation. This means that a very same trend could become included in several alternative topics; for example, innovation can be found in the topics of farms, networks and collaboration, policy, regional development, socio-economic models and technology depending on the content, context and perspective of the trend observation. **Trend name** is more precise description of the trend but still includes many different **trend observations**. Figure 4 illustrates this hierarchical setting. The different levels of abstraction make it possible to implement different types of analyses for various purposes. Similar three level categorisation was carried out for drivers. The impacts were put directly into specific categories each. In this process, 20,280 items were categorised. The frequencies of categories in trends, drivers and impacts at different levels of abstraction are given in Table 5.

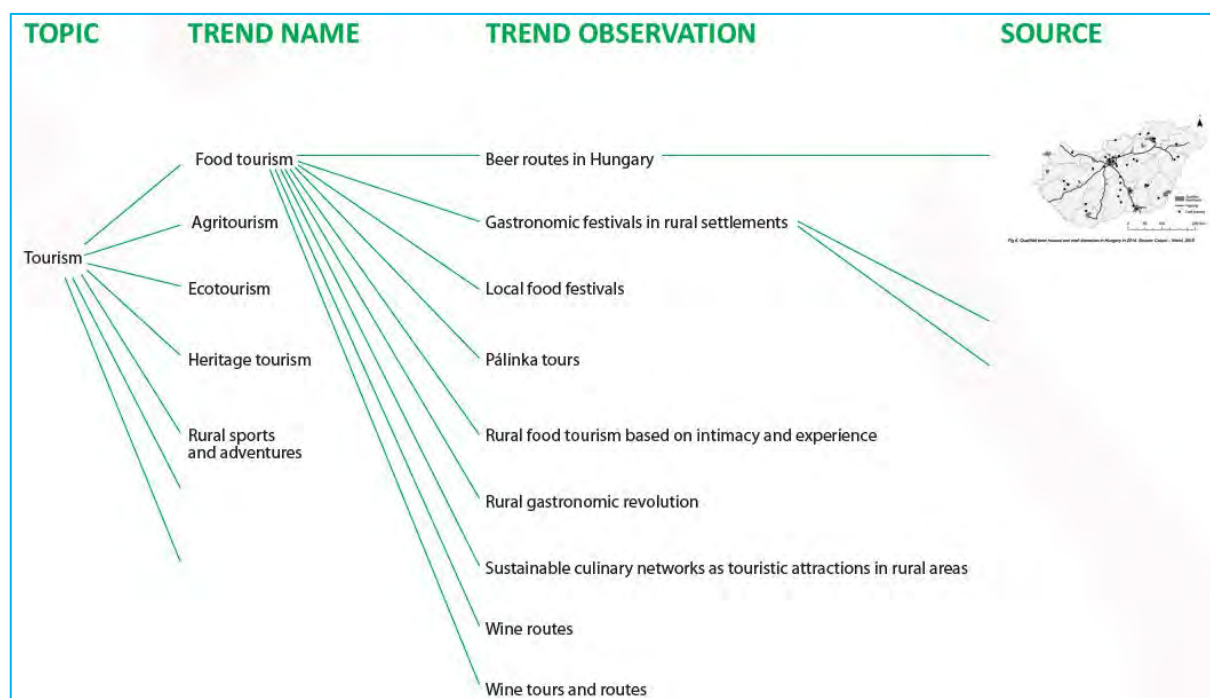


Figure 4: Categorisation process and different levels of abstraction

The frequencies of categories in trends, drivers and impacts at different levels of abstraction are given in Table 6. The final trend data includes 1,560 trends, 3,485 drivers and 11,429 specified impacts.

Table 6: Outcome of the categorisation process of trends, drivers and impacts

Item	Number of categories at different levels of abstraction
Trends	30 topics – 195 trends – 1,560 trend observations
Drivers	27 topics – 139 drivers – 3,485 driver observations
Positive impacts on rural areas within a functional urban area	21 topics – 57 impact categories – 1,368 impact observations
Positive impacts on rural areas outside but in close proximity to a functional urban area	21 topics – 58 impact categories – 1,533 impact observations
Positive impacts on remote rural areas	21 topics – 58 impact categories – 1,548 impact observations
Negative impacts on rural areas within a functional urban area	17 topics – 46 impact categories – 778 impact observations
Negative impacts on rural areas outside but in close proximity to a functional urban area	17 topics – 48 impact categories – 962 impact observations
Negative impacts on remote rural areas	17 topics – 49 impact categories – 1,077 impact observations
Gender impacts	12 impact categories – 280 impact observations
Impact on social capital	14 impact categories – 1,048 impact observations
Migration impact	7 impact categories – 616 impact observations
Impact on access to land	10 impact categories – 394 impact observations
Impact on farm structures	12 impact categories – 868 impact observations
Impact on farming prospects	6 impact categories – 957 impact observations

2.1.4 Analysis of the qualitative trend data

Basic frequencies of the trends, drivers and different types of impacts are presented. Besides these, a number of contingency tables are produced in which trends, their drivers and their impacts are combined.

2.1.5 Selection of the trends included in the trend cards

A subset of trends was to be selected and processed into trends cards in which these are discussed more in detail. Trends to be included in the trend cards should offer perspectives for promotion of rural regeneration. The selection process of these specific trends was based on quantitative and qualitative judgement. The target was to have 10–20 megatrends, 20–40 trends and 30–50 weak signals in the trend cards.

Many of the positive impacts on different types of rural regions, gender, social capital, migration and farming are associated with promotion of rural regeneration. For this reason, the trends that rank high in each type of positive impact were good candidates for the trend cards. On the other hand, **high frequency of specific trend does not guarantee that it has high potential to promote rural regeneration**. To observe this aspect, also qualitative aspects were assessed. Some of the original (195) trends were subsumed to a wider trend when this was logical. Finally, 60 trends were selected for the trend cards: 10 megatrends, 20 trends and 30 weak signals. Type of the trend was also checked at this stage. The research team consisted of ILS, UTU and UWr scientists made the final judgement of the trends to be included in the

trend cards by utilising all the information that was available in the trend data. The 60 trend cards are presented in section 3.4.

2.1.6 Identification and analysis of the quantitative manifestation of the trends

For those trends of the previous literature analysis where quantitative manifestations could be observed, regional data were assessed for the statistical analysis. EUROSTAT data on regional scale were used in the smallest available scale (NUTS0, NUTS1, NUTS2 or NUTS3 depending on the variable). Most trends are illustrated on the NUTS2 scale. Except for one trend card, we decided not to use ESPON data, because most of the data does not represent the recent years. Apart from this ESPON data often indicates only one year which makes it impossible to illustrate time series. The statistical analysis will be made for the EU27 and the United Kingdom. The members of EFTA, candidate countries or associated members are not reconsidered. This is because several indicators are based on the average value of the current EU Member states (including the United Kingdom) as a reference value.

In the statistical analysis, only those trends were statistically substantiated which were also described in the 60 trend cards. Furthermore, the availability of longitudinal regional data for the EU Member States was crucial. In case these two criteria were met, a quantitative analysis was to be crafted to cover a period between 2000 and present. However, there were several limitations in this effort due to the limited data availability for several Member States or lack of annual data (e.g. agricultural data), so for almost every statistical analysis the time series are shorter. Many statistical analyses are presented in a four-cluster scheme. In this case, dynamic values (between two years) and static values (data for the last available year) are combined or two different dynamic and static statistical values were combined (e.g. development of the number of young inhabitants and the number of young farmers). In accordance, it was defined for each NUTS region whether the dynamic and static values were favourable or unfavourable. Figure 5 illustrates this simple clustering approach.

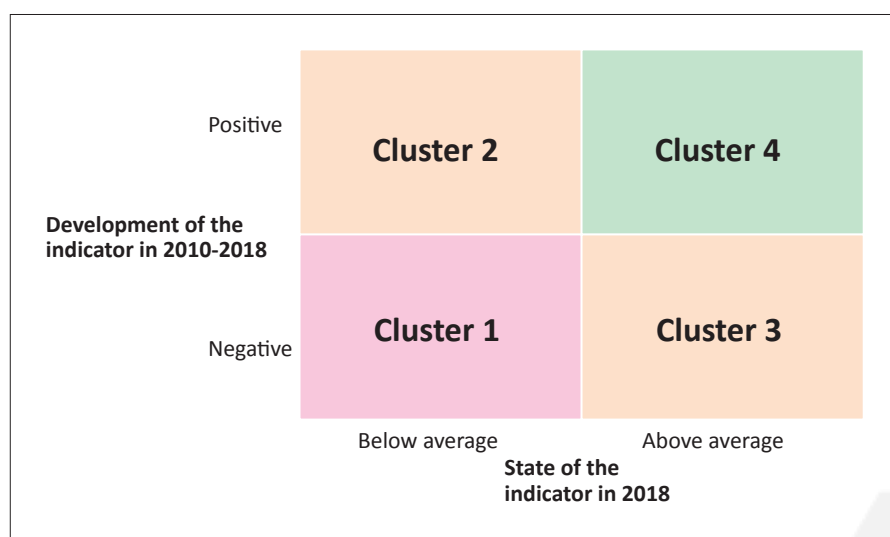


Figure 5: Illustration of simple clustering approach

The statistics on trends were presented using maps and graphs. Whether a trend was visualised in a simple or more rich way, depended on the context and the availability of statistical indicators. Depending on these boundary conditions, the quantitative manifestations of the trends could include a) maps and the graphs representing only one indicator for one year, b) a temporal development of one indicator or c) simple typology with four clusters. Furthermore, for some maps an explorative cluster analysis was made, where two or three different statistical indicators were combined. For those trends that had a statistical manifestation, the trend cards were supplemented with a regional trend map to indicate the incidence.

2.1.7 Reporting of the findings

The key findings of the analysis are presented in tables and figures. Additional information is presented in the annexes.

3 Results

This section introduces the trends together with their drivers and impacts. Different characteristics and attributes of megatrends, trends and weak signals are discussed first (3.1). This is followed by description of the drivers (3.2) and impacts (3.3). The nexus between trends and their impacts is illustrated (3.4) before presentation of 60 trend cards (3.5) which synthesise a set of promising trends for rural regeneration.

3.1 Megatrends, trends and weak signals

Identification of trends resulted in 1,560 trend observations. About 52% (815) were trends, about 36% (553) were weak signals and 12% (192) were megatrends (Figure 6). This distribution is quite typical in trend analysis as the number of megatrends and weak signals is smaller than the number of trends.

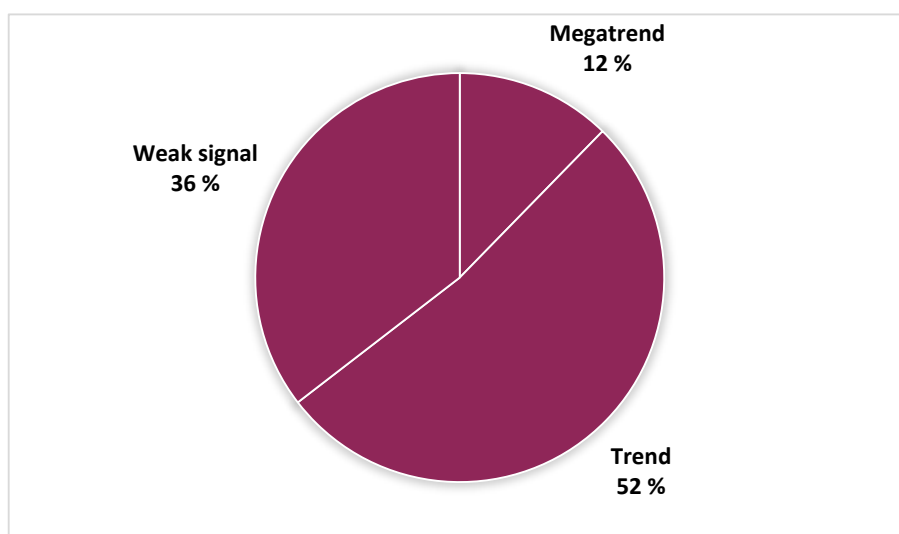


Figure 6: Trends by type, %

Geographical scale of the trends was quite diverse. Most trend observations were European, national or global in scale, whereas regional and local trends were less present in the data (Figure 7). Targeted search resulted in especially European trends (57%) and global trends (32%), whereas national searches resulted in especially national trends (55%) and regional trends (14%). The idea of having targeted and national search was to have a diversified set of trend observations and this seemed to work out well (see Annex 1).

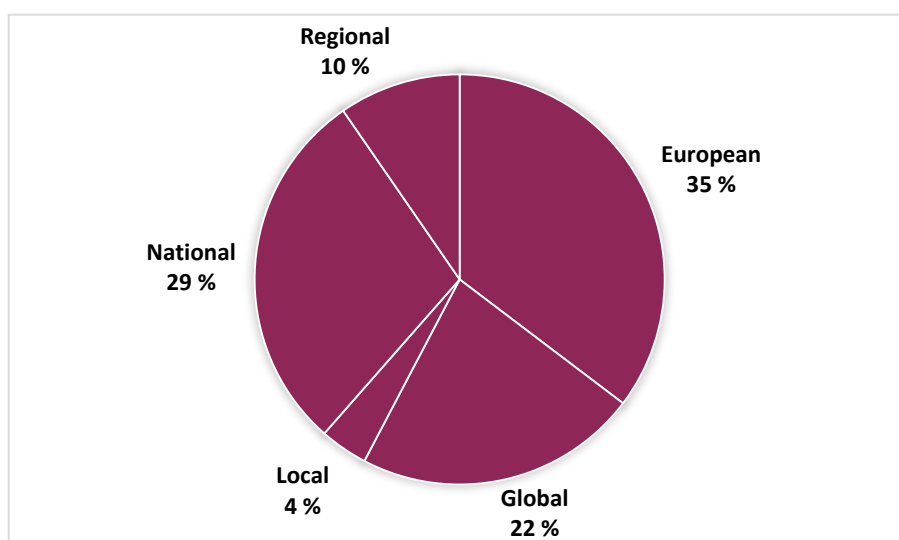


Figure 7: Trends by scale, %

The trend observations were also categorised according to their PESTE domain as to whether they were political (P), economic (E), social (S), technological (T) or environmental (E) in nature. Most common domains were economic (38%) and social (33%), which covered about two thirds of the trends. The remaining one third of the trends were environmental, political or technological by domain (Figure 8). It was typical that trends were considered to belong in several domains. About 32% of the trends were considered to belong to only one domain, whereas 18% of the trends were attached to all five domains. Shares of the PESTE domains were quite similar in targeted and national search modes.

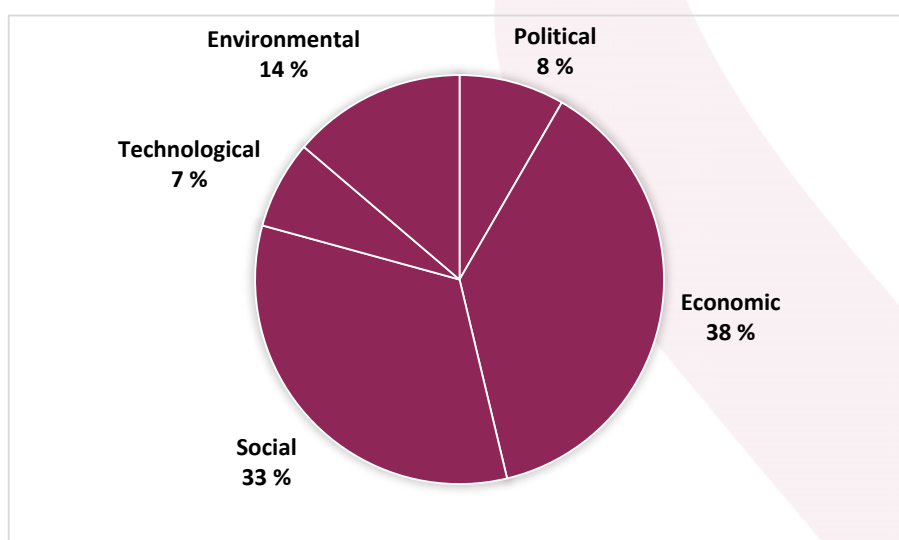


Figure 8: Trends by domain, %

Each trend observations were assessed for its impacts on economic sectors: primary production, manufacturing, private services and public services (Figure 9). Primary production was among the affected sectors in 37% of the trend observations. Services were affected by 47% of the trends and manufacturing by 16% of the trends. Trends having an impact on

primary production were slightly more common in the national search and in the targeted search (see Annex 1). About 45% of trend observations were assessed to have impacts on more than one economic sector and 27% to all four sectors.

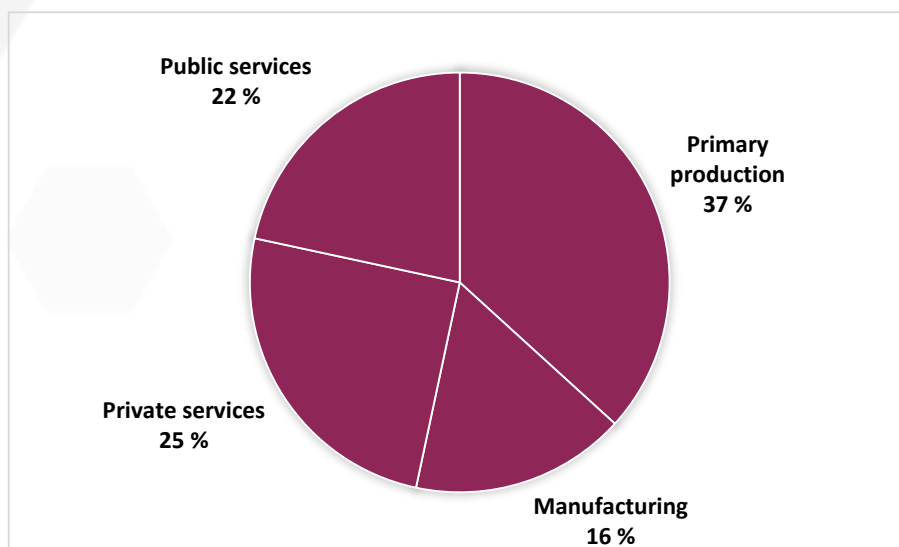


Figure 9. Trends by affected sector, %

Primary production was mostly affected by European and national trends, whereas all other economic sectors were mostly affected by global and European trends (Table 7). The impact of regional trends was quite similar across economic sectors. Local trends affected public services more widely than on other economic sectors.

Table 7: Trends by affected sector and scale, %

Affected sectors	Scale					Total
	Global	European	National	Regional	Local	
Primary production	23	38	28	9	2	100
Manufacturing	32	47	13	7	1	100
Private services	25	40	23	9	3	100
Public services	26	43	18	8	5	100
Total	26	41	22	8	3	100

The set of observed trends was considered to have high significance for the rural areas in the future (Figure 10). In the short run (1–10 years) about 37% of the observed trends were assessed to have high impact, 32 % medium impacts and 29% small impact. The impact of the trend set was judged to grow in significance over time. Concomitantly, about 69% of the trend observations were seen to have medium or high significance for rural areas in the short run but 77% in the long run (10–30 years). This suggests that the trend set is a very relevant starting point for studying the alternative futures of rural areas in Europe.

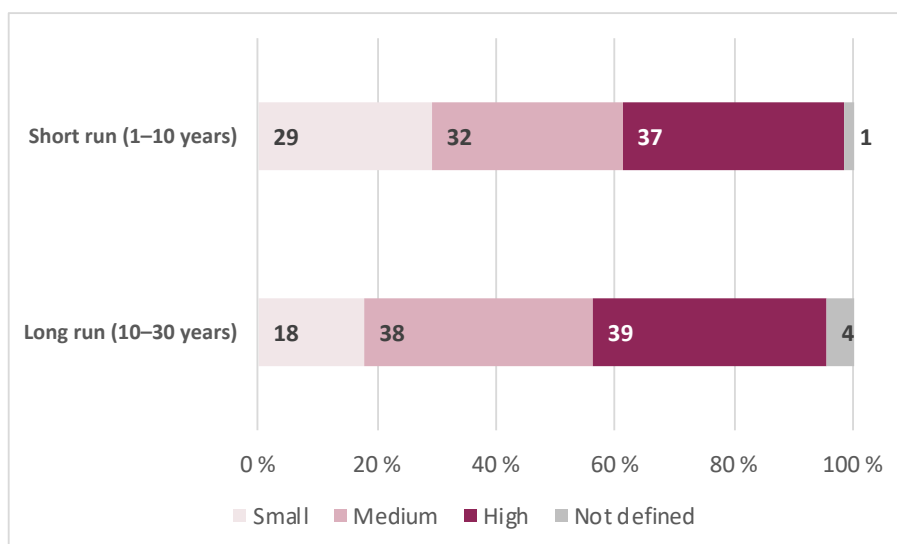


Figure 10: Trends by significance for rural areas, %

Megatrends were most often assessed to have high significance for the rural areas (Table 8). The result is very logical as megatrends are wide-ranging force fields. In the future, they were considered to have even higher significance. Most trends were also considered to have high or medium significance, but they were expected to slightly downgrade in significance as some of the trends will die out (every trend has an end). Weak signals were considered to have small, medium or high impact depending on the case. Contrary to trends, they were expected to upgrade in significance as some of the weak signals will upgrade to trends.

Table 8: Trends by significance for rural areas within various time scales, %

Trend type and time scale	Significance for rural areas				
	Small	Medium	High	Not defined	Total
Megatrends					
Short run (1–10 years)	6	27	66	1	100
Long run (10–30 years)	2	26	71	2	100
Trends					
Short run (1–10 years)	14	34	51	1	100
Long run (10–30 years)	10	37	46	7	100
Weak signals					
Short run (1–10 years)	29	32	37	1	100
Long run (10–30 years)	18	38	39	4	100

The large diversity of trend observations is compressed by taking a higher level of abstraction, which resulted in 30 trend topics (Figure 11). This describes the general contents of the trends. About 19% of the trend observations were related to farms, 18% to regional development and 9% to food. Policy (6%), environment (4%) and demographics (4%) also rank quite high in trend topics. There are many other interesting and potential topics for the future developments of

rural areas (e.g. tourism, lifestyle, housing, governance, energy) which rank lower among the trend topics. It is important to note that the frequencies of the trend observations do not indicate higher or lower potential for rural regeneration – they just paint a portrait of rural futures in this particular trend analysis.

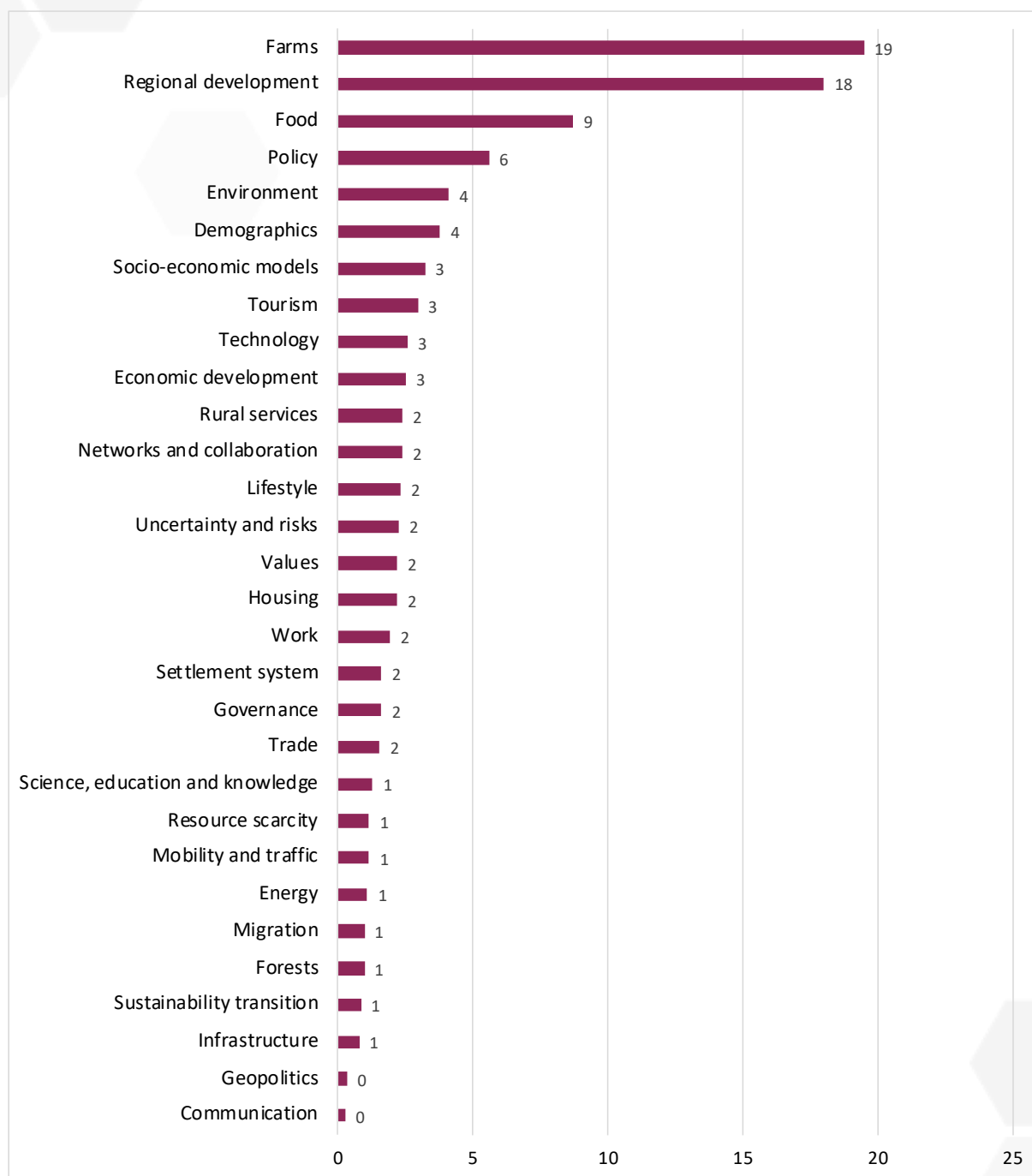


Figure 11: Trends by topic, %

The 1,560 trend observations were categorized and abstracted to 195 trends. These trends with a short description and attributes are presented in Table 9. Attributes shown in the table

are based on the category having highest frequency in the trend data. It is not the final one to be used in the trend cards, as some manifestations of for example megatrends could be considered trends or weak signals in a specific local context. For some trends the highest frequency may occur in more than one attribute category in which case both are presented. The table gives a general idea of the diversity of the trend set and provides as such one of the key outputs of the trend analysis. For this reason it is presented in the report despite of its length. Full description of the trends observations related to each trend is presented in Annex 2.

NOTE for the reader, Table 9: Type, scale, domain, most affected sector and significance is based on the category having highest frequency in the data. Other categories are also mentioned for many trends. Categories are not definitive: they are affected by what kind of a manifestation of the trend is being identified in each case. As the trend observations are not balanced, some categories may be neither intuitive nor in line with other studies. Full data is presented in Annex 2.

Table 9: Description of the trends

Trend	Description	Type	Scale	Domain	Most affected sector	Significance for rural development	
						Short run	Long run
Accessibility	Many rural regions face problems with accessibility (e.g. infrastructure and public transport); urban proximity may affect positively.	Trend	European	Economic	Public services	High	Medium
Ageing farmer population	European farmers are quite old on the average; more than half of them could retire within a decade.	Trend	European	Social	Primary production	High	High
Ageing population	Average age of the population is quite high and increasing in many rural regions.	Megatrend	Global	Social	Public services	High	High
Agri-environmental policies	Environmental aspects have become more and more integrated in the agricultural policies over time.	Trend	European	Political	Primary production	High	Medium
Agritourism	Holidays on farms is a tradition and gaining popularity in many regions; it is a manifestation of multifunctionality.	Trend, Weak signal	European	Economic	Private services	Medium	High, Medium
Agroecology	Agroecology is a farming practice which emphasises sustainability, diversity, local food and organic methods. Environmental and ethical concerns have increased its popularity especially on small farms.	Weak signal	National	Social	Primary production	Small	High, Medium
Agrosocial paradigm	Antithesis to agroindustrial paradigm; focused on the maintenance of peasant, small-scale	Weak signal	European	Social	Primary production	Small	High, Medium, Small

	farms and on the social aspects of farming.						
Alternative lifestyles	Many demand factors (e.g. identity, individualism) and supply factors (e.g. internet communities) have increased the diversity of lifestyles.	Weak signal	European	Social	Primary production, Private services	Small	Small
Animal welfare	Mixture of tendencies to allow animals to act in their natural behaviour; manifested in policies, farming practices, activism and consumer choices.	Weak signal	European, National	Environmental	Primary production	Small	Medium, Small
Anthropocene	Geological epoch which features significant human impact on earth system processes (e.g. climate, ecosystems).	Megatrend	Global	Environmental	Primary production, Manufacturing	High	High
Biodiversity loss	Deterioration of many ecosystems along with human action; source of new risks (e.g. maintained ecosystem services).	Trend	Global	Environmental	Primary production	High	High
Bioeconomy	Use of renewable natural materials to serve human ends; agriculture, forestry and aquaculture are the key platforms; can replace part of the fossil economy.	Weak signal	European	Economic	Primary production	Small	Medium
Black market	Shadow economy avoiding institutional rules; found also in agricultural and rural businesses (e.g. illegal labour practices, tax evasion).	Weak signal	Regional	Political, Social	Primary production	High	Small
Business clusters and ecosystems	Regional concentrations and networks of businesses to achieve efficiency and economies of scale; very important in specific regions.	Weak signal	Regional	Economic	Primary production	Small	Small
Business ownership	Evolving rural business ownership, e.g. legal forms, family firms, share deals, tenancy, succession.	Trend	National, Regional	Economic	Primary production	Medium	Medium
Care services	Diversified set of activities with many rural and novel models: green care, homecare, telemedicine, mobile services etc.	Weak signal	European	Social	Public services	Small	Medium, Small
Changing favourability of agricultural regions	Climate change, degradation of soils, urbanisation etc. change regional farming conditions.	Trend	European	Environmental	Primary production	Medium	High

Changing food trade patterns	Agricultural trade flows relate to economic trends and manifest regional and international interdependency.	Trend	Global	Economic	Primary production	Medium	Medium
Changing housing preferences	Housing preferences (cheap, ecological, safe, natural etc.) evolve and partly follow life cycle.	Weak signal	European	Social	Private services	Small	Medium
Changing role of the public sector	Limited financial capacities and increasing debt of the public sector limit intervention possibilities.	Trend	European	Economic	Primary production, Manufacturing, Public services	Medium	Medium
Cheap housing in rural fabric	Housing in rural fabric is cheaper than in urban areas which is a competitive advantage.	Weak signal	National	Social	Private services	Small	Medium
Circular economy	Economic model based on recycling, reuse, sharing and repair of previously extracted materials. This saves the environment and provides business benefits and opportunities.	Weak signal	European	Economic	Private services	Small	High
Climate change	Multifaceted phenomenon with progressive impacts on food production, land use, policies and lifestyles.	Megatrend	Global	Environmental	Primary production	High	High
Co-operatives	Organisation model to reach economies of scale in many kinds of activities: farming, housing, marketing, service etc.	Weak signal	National	Social	Primary production	Medium	High
Collaborative problem solving	Various online platforms, crowdsourcing, networks, social media etc. connect and empower citizens in solving common problems.	Weak signal	National	Social	Primary production	Small	Medium
Community-based action	Community-based initiatives and actions serve shared interests, capacities, identity, participation and communality in many domains: transport, planning, accommodation, charity etc.	Weak signal	National	Social	Public services	Medium, Small	Medium
Community-oriented food systems	Various forms of Community Supported Agriculture (CSA) and Alternative Food Networks (AFN), community gardens, food councils, shopping communities etc.	Weak signal	European	Social	Primary production	Small	Medium

Commuting	Commuting areas have extended in many regions; commuting allows living in preferred environment and working somewhere else.	Trend	National	Social	Primary production, Manufacturing, Private services, Public services	High, Small	High, Small
Concentration	Some economic and administrative activities have tended to concentrate to achieve economies of scale and agglomeration.	Trend	National	Political, Economic	Public services	High	Medium
Counterurbanisation	Some people move from urban areas to rural areas; motivations are mixed: quality of life, cheap housing, safety etc.	Weak signal	European	Social	Public services	Small	Medium
Creative economy	Nests of artists, creative work and creative class in the countryside.	Weak signal	Global, National	Social	Private services	Small	Medium
Decarbonisation	Obligations and options for carbon sequestration change practices, policies and competitive advantages.	Weak signal	Global	Economic	Primary production	High	High
Deconcentration	Decentralisation, regionalisation and decreased economies of agglomeration lead to more dispersed settlement, political, administrative and economic systems.	Trend	National	Economic	Public services	Small	Medium
Degrowth	Antithesis to economic growth paradigm; emphasises aspects of well-being not captured by GDP-indicator and the need to reduce consumption.	Trend, Weak signal	Global	Economic	Private services	Small	Medium
Deindustrialization	Decreasing importance and volume of manufacturing activities implies growing importance of services.	Trend	European	Economic	Manufacturing	Small	Small
Delivery-oriented food systems	Alternative food systems in which delivery mode is the key issue: box schemes, on-farm shops, online food markets, food vending machines, roadside market stands, food trucks and other short supply chains.	Weak signal	National	Economic	Primary production	Small	High, Medium
Demonstrations, events and fairs	On-farm demonstrations and advisory events attract participants and promote	Trend	European	Social	Primary production	High, Small	Medium, Small

	adoption of innovations.						
Depopulation	Some rural regions have suffered from shrinking population base in the past.	Trend, Weak signal	Regional	Social	Public services	High	Medium
Diet-oriented food systems	Food systems serving specific diets and dietary components, e.g. vegetarian food, insects, free-from products, health-promoting food.	Trend	European	Social	Primary production	Small	High
Digital economy	Economic activities facilitated by digital technologies and tools; provides productivity gains and platforms for new economic activities.	Trend	Global	Technological	Primary production, Private services	High	High
Diversification of rural economy	Many rural regions have diversified economies and the importance of non-agricultural activities has increased.	Trend	European	Economic	Primary production	High	High, Medium
Diversification/ specialisation of farms	Diversification (on-farm and off-farm) and specialisation are the two main farm business and livelihood strategies. Prevalence of the strategies has farm, region and country specific tendencies.	Trend	National	Economic	Primary production	High	High
DIY movement	Do-it-Yourself is a polymorphic phenomenon featuring home crafting, repair, on-demand development, self-production, bricolage and community-supported innovations.	Trend	Global, National	Economic, Technological	Manufacturing	Small	Small
Dominant food regime	Vertically coordinated, capital-intensive, fossil-based, long, weakly transparent and supermarket-oriented food chains prevail in many countries and sectors.	Weak signal	Global	Economic	Primary production	High	High
Dual food markets: price and quality	Diverging markets for cheap, standardized food and markets for more expensive, high-quality food.	Trend	European	Economic	Primary production	Medium, Small	High
e-commerce	Online markets remove the need for a physical presence and allow reach of distant customers.	Weak signal	Global, European, National	Economic	Primary production	Medium	High, Medium, Small
Easy food	Easy to prepare dishes and ready to eat products allow quick and effortless eating.	Trend	European	Social	Primary production, Private services	Medium	Medium

Eco-efficiency	Increased eco-efficiency is one way to reduce negative environmental impacts; more output with less inputs, waste and pollution.	Trend	Global, European	Technological	Manufacturing, Public services	Medium, Small	Medium
Economic growth	Economic growth means that more products and services are produced, and it is measured by GDP; a common policy objective to improve welfare but also a source of negative externalities.	Trend	European	Economic	Manufacturing, Private services	High, Medium	High
Ecotourism	Mode of tourism in which caring of the environment, learning and respect of local people are important besides the authentic nature experiences.	Trend	Global, European, National	Economic	Private services	Medium	Medium
Ecovillages	Diverse small settlement communities aiming at integration of all four dimensions of sustainable development: economic, social, environmental and cultural.	Weak signal	Global	Social	Primary production, Private services	Small	Medium
Educational farms	Co-operation between farms and schools contributes to demonstrative and participatory education about food, environment, technology, history, culture etc.	Trend	National	Social	Primary production, Private services	High, Medium, Small	High, Medium, Small
eGovernment	Modern communication technologies allow new ways to provide public services and to interact between government and citizens.	Trend	European	Technological	Public services	Small	Small
Empowerment	Encouraging, supporting and authorising societal actors to take up agency; relates to bottom-up view, endogenous development, democracy and self-determination.	Megatrend, Weak signal	Global, National	Social	Primary production	Medium, Small	High, Small
Environmental conservation	Large variety of policies and practices aiming at increase of positive environmental impacts and reduction of negative environmental impacts in practice; relates to climate, biodiversity,	Weak signal	European	Environmental	Primary production	Medium	Medium

	nutrients, landscapes etc.						
Environmentalism	Ideology or social movement to save earth systems and to promote sustainable and ethical ideas, policies and practices to reach this end.	Trend	Global, National	Social	Primary production	High, Medium	High
Exploitation of development potential	Many locations have attractions, resources and potentials that could be exploited if suitable actors, policies, networks, markets etc. could be organised.	Trend	European	Social	Private services	Medium	Medium
Extreme weather events	Increasing frequency and intensity of floods, droughts, storms, heat waves etc. increase risks.	Megatrend	Global	Environmental	Primary production	High	High
Farm fragmentation	Specific land tenure systems, inheritance laws and norms may increase farm fragmentation.	Trend	Regional	Political	Primary production	High	High
Farm population	The number of small farms has tended to decrease, but regions and farm types take many different development paths.	Trend	National	Economic	Primary production	High	High
Farm size	Average size of the farms has tended to increase driven by technologies, economies of scale, policies etc.	Trend	Regional	Economic	Primary production	High	High
Farmers facing new risks	New risks involve e.g. weather phenomena, new diseases, market volatility, management challenges and lack of successors.	Trend	Global, European	Economic	Primary production	High, Medium	High, Medium
Farming lifestyle	Lifestyle incorporating some aspects of farming, e.g. farm accommodation, gardening, animal husbandry or land management.	Weak signal	Global, European	Social	Primary production, Public services	Small	Medium, Small
Farming techniques and intensity changes	Intensification and extensification are competing strategies between which the farms are pushed to choose; they have different incentives, obstacles and impacts.	Trend	Global	Economic, Environmental	Primary production	High, Medium	Medium
Farmland prices	Demand of farmland for farming, housing, investment commodity etc. increases farming costs and hampers entry of new farmers.	Trend	National	Economic	Primary production	High	High
Food demand	Global food demand increases and is expected to increase	Megatrend, Trend	Global	Economic	Primary production	High	High

	further along with population growth.						
Food security	Availability of food for all at all times is constantly challenged by the weather, diseases, crises, markets, policies and inequality.	Weak signal	Global, National	Social	Primary production	High, Small	High, Medium
Food sovereignty	Antithesis to corporate food regime; emphasises culturally embedded food systems in which producers and consumers have governance over food practices and policies.	Weak signal	Global	Political, Social	Primary production	Small	Medium
Food tourism	Touristic activities organised around food: routes, tours, festivals, visits, cookery experiences, local specialties etc.	Trend	National	Economic	Private services	Medium, Small	Medium
Food waste	Food waste takes place in all parts of the food supply chain; it is an economic, environmental and ethical problem.	Trend	Global	Social, Environmental	Primary production, Private services	High, Small	Medium, Small
Food-related health risks	Food is related to many health risks which are related to diets, food safety, food fraud etc.	Weak signal	Global	Political	Primary production, Manufacturing, Public services	Small	Small
Forest coverage	Forest coverage in different places increases or decreases along with afforestation, construction, conservation and other activities.	Trend	National	Economic	Primary production	Medium, Small	Medium
Forest ecology	Forest ecosystems change constantly due to cuttings, fires, pests, climate change, conservation, recreation, construction etc.	Trend, Weak signal	European, National	Economic, Environmental	Primary production	Medium, Small	High, Small
Forest ownership	Forests are owned by e.g. farms, firms, governments, foundations and investors, which has implications for their use, role and impact.	Weak signal	National	Economic, Social	Primary production	Small	High, Small
Fossil economy	Economy based on fossil fuels and their derivatives (plastic, asphalt, mineral fertilizers, lubricants etc.); adds carbon to the atmosphere.	Megatrend	Global	Economic, Environmental	Primary production, Manufacturing	Medium	High
Fragmentation of land ownership	A piece of land may end up to several owners through inheritance, divorce, sale and other processes, making its coherent use problematic.	Trend, Weak signal	European, National	Economic, Social	Primary production	Medium, Small	Medium, Small

From farms to firms and from farmers to managers	Growth of farms makes them businesses asking for new management skills, tools and practices.	Trend	European	Economic	Primary production	High, Medium	High, Medium
Fusion of sectoral policies	Agricultural and rural policies become more integrated with environmental, trade, land use, technology etc. policies.	Trend	European	Political	Public services	High, Medium	High, Medium
Gender roles	Traditional vs. modern gender roles, e.g. male vs. female farmers, gendered vs. non-gendered jobs.	Trend	National	Social	Primary production	Small	Small
Gig economy	Temporary assignments and commitments for various tasks and jobs.	Trend, Weak signal	National	Economic	Primary production, Private services	Medium, Small	Medium, Small
Globalisation	Economic model based on market liberalisation, specialisation, division of labour and increasing trade, which add mutual interdependence of the economies.	Megatrend	Global	Economic	Primary production	High	High
Governance gaps and conflicts	The challenge of finding an appropriate governance model for contradictory topics related to regions, land use, advocacy etc.	Trend, Weak signal	National	Political	Primary production	Medium	Medium
Growth of energy demand	Energy consumption is expected to increase.	Trend	European	Economic, Environmental	Primary production, Manufacturing, Private services, Public services	High	Small
Growth of traffic	Increasing tourism, commuting, business travel and trade contribute to growth of air, water and land transportation.	Megatrend, Trend	National	Economic, Social, Technological	Primary production, Manufacturing, Private services, Public services	Medium	Medium
Heritage tourism	Historical attractions based on nature, industries, buildings, milieus, culture, food etc.	Weak signal	European	Economic	Private services	Medium, Small	Small
Home gardening	Growing own food for the sake of ideology, economy or experience.	Trend, Weak signal	European, National	Social	Primary production	Small	Small
House and land squatting	Taking over abandoned plots, houses or villages for common uses.	Weak signal	National	Social	Primary production	Small	Small
Import competition	Trade liberalisation increases import competition and may replace local production and jobs; production conditions or methods may not be comparable.	Trend	European	Economic	Primary production	High	High, Medium

Individualisation	Individuals taking and having more agency and freedom in personal and societal matters.	Megatrend	Global	Social	Public services	Medium	Medium
Industry 4.0	Fourth industrial revolution facilitated by Internet of Things, big data, cloud computing, artificial intelligence, machine learning and distributed manufacturing (e.g. 3D printing).	Megatrend	Global	Economic, Technological	Manufacturing	Medium	High
Informal settlements	Unplanned and unauthorised expansion of housing, often lacking civic amenities.	Weak signal	Global	Social	Private services	Small	Small
Infrastructure	Availability and quality of roads, railways, water, electricity, telecommunications etc. necessary for settlements and economic activities.	Trend	European	Economic	Public services	High	Not defined
Innovations	Introduction and adoption of new goods and services, new production methods, new markets and new organisational arrangements are crucial for economic development.	Weak signal	European	Economic	Primary production	Medium	Medium
Integration of immigrants	Integration of immigrant to local labour market and civic society promotes inclusive social fabric and the possibility to make a societal contribution.	Weak signal	National	Social	Private services, Public services	Small	Small
Interdependency	Increasing interdependency between businesses, places and communities provides advantages and increases risks.	Trend	European	Economic	Primary production, Manufacturing, Private services, Public services	High	High
Interregional networks	Interregional networks allow exchange of information and cooperation across borders; especially important for border regions.	Weak signal	European	Economic	Private services, Public services	Medium	Medium
Knowledge economy	Farming and many other rural activities are currently knowledge-intensive industries asking for sufficient education and intellectual capital.	Trend	European	Economic	Primary production	High, Medium	Medium
Labour shortage	Many rural areas suffer from lack of skilled local labour,	Trend	European	Economic	Primary production	Medium	Medium

	which asks for new solutions to attract new labourers and residents.						
Land consolidation	Reallocation of land parcels into larger entities provides business, management and environmental benefits, but may risk ecological infrastructures.	Weak signal	European	Economic	Primary production	Small	High, Small
Land management	Abandonment, degradation and marginalisation of land can be counteracted by land restoration, regeneration, rewilding etc.	Trend	Global, European	Environmental	Primary production	Medium, Small	Medium
Land markets	Land has become an investment commodity in some places, which makes entry of new farmers troublesome.	Trend	European	Economic	Primary production	Medium	High
Lifelong learning	Continuous, active development of skills and competences is necessary in modern work life.	Megatrend	Global	Social	Primary production, Manufacturing, Private services, Public services	Small	Small
Local paradigm	Territorial, holistic and integrative approach to promote local governance, local specialities, local autonomy and decentralisation.	Trend	European	Economic, Social	Primary production	Medium, Small	High
Manifestations of new technologies	Artificial intelligence, automation, robotics, blockchain, big data, virtual and augmented reality, internet of things etc. and their applications.	Trend	Global	Technological	Private services	Medium	Medium
Market volatility	Disturbances in supply chains, extreme weather conditions, connections between product and financial markets etc. maintain high market volatility.	Trend	National	Economic	Primary production	High	High
Meaning and experience economy	Markets of stories, meanings, experiences, roles, identities and uniqueness may supersede traditional livelihood and business conceptions.	Trend	Global, National	Social	Private services	Medium	Medium
Micro- and small units	Small farms, businesses, neighbourhoods and civic organisations offer various benefits: affordability, familiarity, flexibility, autonomy, participation.	Weak signal	European	Economic	Private services	Small	High, Small

Migration patterns	National and international migration flows modify both the point of departure and the point of arrival.	Trend	National	Social	Public services	High	Medium
Minorities' rights	The rights of ethnic, religious and sexual minorities are still an issue in some contexts.	Weak signal	National	Social	Primary production, Manufacturing, Private services, Public services	Small	Medium
Mobile services	Mobile medical and other services may supplement traditional place-bound services in rural areas.	Weak signal	Local	Economic, Social	Public services	Small	Small
Multi-local living	Seasonal or periodic living in urban and rural residences.	Weak signal	National	Social	Private services	Small	Medium
Natural and cultural heritage	Natural and cultural heritage carry on valuable environments, fabrics and artefacts from the past which contribute to identity and attractiveness of places.	Weak signal	National	Social	Private services, Public services	Medium, Small	Small
Natural lifestyle	Living without digital devices, noise, stress, pollution etc. possibly close to nature.	Weak signal	European	Social	Private services	Small	Small
Neoliberalism	Economic and political tendency to let markets decide without much regulation and intervention.	Trend, Weak signal	Global, National	Economic	Primary production, Manufacturing, Private services, Public services	High, Small	High, Small
New entrants	Install of new farmers without farm family background diversify farming sector but often have problems with access to land.	Weak signal	European	Economic	Primary production	High, Medium	Medium
New geopolitics	Shifts in global power balance and political and economic influence.	Megatrend	Global, European	Economic	Primary production, Private services	Medium	High
New mobility systems	Open, decentralised mobility systems, on-demand services and shared transportation models.	Weak signal	European	Social	Private services	Medium	Medium
New nomads	Voluntary lifestyle travellers taking possibly temporary jobs.	Weak signal	Global	Social	Private services	Small	Small
Night-time economy	Bars, pubs, restaurants and various entertainment facilities host diverse activities taking place after regular business hours.	Weak signal	National	Economic	Private services	Small	Small
Oligopolistic markets	Several markets are dominated by few big companies, e.g. food retail, agricultural	Trend	European	Economic	Primary production	High	High

	inputs and energy supplies.						
Outsourcing of environmental impacts	Relocation of the environmental burden caused by local consumption via imports.	Trend	Global	Environmental	Primary production	High, Medium	Medium
Pandemics and epidemics	More frequent or more dangerous epidemic diseases would affect whole societies and could increase preference for safe rural living environments.	Weak signal	Global	Social	Public services	Small	Medium, Small
Partnerships	Organisation model to reach benefits of specialisation and co-operation and to facilitate mutual interests.	Trend	European	Economic	Primary production	Medium, Small	Medium
Peri-urbanisation	Urbanisation of separate rural areas close to cities (rather than sprawl of cities) leading to fragmented urban fabric.	Trend	European	Social	Public services	Small	Not defined
Place branding	Development, management and communication of images, affections and brands related to specific places.	Weak signal	National	Economic	Private services	Medium, Small	High, Medium
Place identity	Emotional attachment to specific place based on personal history, family ties, physical attributes or community.	Weak signal	European	Social	Private services, Public services	Small	Small
Policy incidence and effectiveness	The challenge of effective policy design and delivery in service of several objectives while also facing large diversity of contexts.	Weak signal	European	Political	Primary production	Small	Medium
Political instability and fragmentation	Anti-attitudes, active protest, scepticism, discrimination, populism and ideological clubs create instability.	Trend	European	Political	Primary production, Manufacturing, Public services	Medium	Medium
Pollution	Pollution of soils, waters and air cause many local and global problems.	Trend	Global	Environmental	Primary production	Medium	Medium
Pop-up culture	Pop-up restaurants, shops, cinemas, art projects, camps, charity events etc.	Weak signal	Global	Economic	Private services	Small	Small
Population growth	Global population is growing, and it is predicted to grow further.	Megatrend, Trend	Global, European	Social	Public services	High, Small	High, Medium, Small
Postconsumerism	View or ideology in which increase of wellbeing is disconnected from increase of consumption.	Weak signal	European	Social	Manufacturing	Small	Small
Postmaterialism	Orientation in which personal autonomy, freedom, equality or	Weak signal	Global	Social	Manufacturing	Small	Small

	wellbeing are preferred instead of materialist values.						
Practice-oriented food systems	Alternative food systems in which the farming and processing practice is the key issue: organic farming, ecological food, food forests, permaculture, regenerative agriculture.	Trend	National	Economic	Primary production	High	High
Precision farming	Technology-assisted farm management to improve timing and targeting of farm management operations, e.g. fertilization and harvesting.	Trend	European	Technological	Primary production	Medium	High
Primary sector employment	Primary sector has diverse but generally diminishing employment in Europe.	Trend	European	Economic	Primary production	High	High
Productivity and competitiveness	Low production costs are the key to competitiveness in mainstream agriculture.	Trend	National	Technological	Primary production	Medium	High
Professional networks	Professional organisations and peer networks are important sources of information and support in modern agriculture and rural businesses.	Trend, Weak signal	European, National	Economic	Primary production	High, Small	High, Medium
Protectionism	Policy of restricting imports from other regions or countries in various ways: tariffs, quotas, norms etc.	Trend	Global, European	Political	Primary production, Manufacturing, Private services, Public services	Medium	Small
Public goods	Non-excludable and non-rivalrous goods open to all: national security, air, landscape, public media, many ecosystem services.	Trend, Weak signal	European	Social, Environmental	Public services	High, Small	Medium
Quality of life	Stress, crime, pollution, loneliness and other discomforts drive people to search for alternative pathways to better life.	Trend, Weak signal	European, National	Economic, Social	Primary production, Public services	Medium	High, Medium
Regional and local food	Various ways to prefer or indicate local or regional origin of the food: food movements, procurement schemes, labels, brands, dedicated shops, farmers markets etc.	Trend	European, National	Economic	Primary production	Medium	Medium, Small
Regulation and subsidies	Excessive agricultural and rural subsidies have resulted in	Trend	European	Economic	Primary production	High	Medium

	dependency culture, bureaucracy and weakening of market signals but also partial internalisation of externalities.						
Remote work	Working from outside of a traditional office environment e.g. from home or in rural hubs, which saves commuting time and the environment.	Trend	European	Economic, Social	Private services	Medium	High
Renewable and bioenergy	Getting rid of fossil energy asks for increase in wind, solar and biomass based energy and products.	Trend, Weak signal	European	Environmental	Primary production	High	High
Resilience	Capability of various systems (e.g. food, energy) to meet their purpose in all situations asks for maintenance of diversity and adaptive capacities.	Trend	Global	Environmental	Primary production	High, Medium, Small	High
Resource competition	Many activities are competing for natural resources as for example land: agriculture, forestry, energy production, housing, infrastructures, tourism, recreation, conservation etc.	Trend	Global	Economic	Primary production	Medium	High
Rural artisans	Artisanal and craft production of food, beverages and traditional products maintain small businesses and vitality of the rural areas, skills and cultures.	Weak signal	Global	Economic, Social	Manufacturing	High, Small	High, Small
Rural decline	Vicious circle in which the negative developments in population, hard and soft infrastructure and local services reinforce each other.	Trend	European	Social	Public services	High	High
Rural energy communities	Community owned wind farms, solar energy systems and bioenergy plants contribute to multidimensional sustainable development.	Weak signal	National, Regional	Economic	Private services	Small	Medium
Rural entrepreneurship	Entrepreneurial activity tends to be higher in rural than in urban areas and promotes innovation and competitiveness of rural areas.	Trend	National	Economic	Private services	Medium	Medium
Rural festival tourism	Music, artistic, sports, heritage, agricultural, food, village and many other rural festivals attract visitors and	Trend	National	Social	Private services	Small	Small

	reinvigorate local residents.						
Rural hubs	Multi-purpose spaces offering coworking and meeting facilities, broadband access, workstations, activity arenas and possibly some business services.	Weak signal	Local	Social	Private services	Small	Small
Rural labs and observatories	Rural nature observatories and research centres.	Weak signal	Global	Economic	Private services	Small	Small
Rural lifestyle	Rural idyll, space, nature, peace, animals, housing, safety, traditions and communities contribute to social welfare and attract new residents.	Weak signal	Local	Social	Private services, Public services	Medium	Medium
Rural second homes and villas	Rural second homes, holiday houses, villas and summer cottages are popular in some parts of Europe due to natural beauty or cultural tradition.	Weak signal	National	Social	Private services	Small	Small
Rural sports and adventures	Rural adventures and sports take advantage of the rural environment: forests, waters, mountains.	Trend	National, Regional	Economic, Social	Private services	Small	Small
Rural tourism	Touristic activities, resorts, routes and attractions in the rural environment: farm holidays, festivals, hiking, fishing, hunting, horseback adventures etc.	Trend	National	Economic	Private services	Medium, Small	Small
Rural volunteering	Volunteers supplement public services in many rural areas and provide charity services.	Weak signal	Local	Social	Private services, Public services	Medium	Medium
Secularisation vs. religiousness	Continuous tension between the tendencies of secularisation and religiousness.	Megatrend, Weak signal	European, National	Social	Primary production, Public services	Medium, Small	Medium, Small
Self-sufficiency	Better self-sufficiency at various levels (individual, household, farm, region, nation, Europe) in food, energy, competencies etc. increases costs but reduces risks.	Weak signal	National	Political, Economic, Social	Primary production	Medium, Small	High, Medium
Sharing economy	Modern non-profit or commercial sharing economy is based on internet platforms and allows limited and low-cost access to many resources: rooms, vehicles, tools etc.	Trend	Global, European	Economic	Private services	Small	Medium
Shifts in labour demand	The evolving role of primary, secondary	Trend	European	Economic	Manufacturing	Medium	Medium

	and tertiary sectors in employment growth.						
Shorter work time	Long-term tendency of shorter work time and more leisure.	Weak signal	National	Economic	Primary production, Manufacturing, Private services, Public services	Small	Small
Silver economy	Production of specific goods and services for the growing age cohort of old people, e.g. health care services, tours for senior citizens and senior houses.	Trend	European	Economic	Private services	Medium	High
Slow food and slow living	Antithesis to fast food and fast living.	Weak signal	Global	Economic	Private services	Small	Small
Smart solutions in rural space	Maintaining capacity for continuous innovation is essential in rural areas to bring up 'smart' villages, power grids, schools, machines, land use practices etc.	Weak signal	Global, European, National, Regional	Social	Private services, Public services	Small	Medium
Social capital	Capital arising from interpersonal relationships which manifest shared objectives, values, norms, identity etc. and is facilitated by cooperation, trust and reciprocity.	Trend	European	Social	Private services, Public services	High, Small	High, Small
Social enterprises and entrepreneurs	Rural areas provide fabrics for many kinds of social enterprises to improve health, rehabilitation and social inclusiveness.	Weak signal	National	Social	Primary production	Small	Small
Social innovations	New social practices, institutional arrangements and other improvements which across sectorial borders and are universally applicable: fair trade, open university, open-source software etc.	Weak signal	European	Social	Private services	Small	High, Medium
Social media	Presence, visibility and profiling of the rural activities, actors, places and communities in the social media platforms.	Megatrend, Weak signal	Global, European	Social	Private services	Medium	Medium
Socio-economic models	Various models and principles of organising society: capitalism, socialism, neoliberalism, globalisation, welfare state, degrowth, postmaterialism etc.	Trend	Global	Political, Social, Environmental	Primary production, Manufacturing, Private services, Public services	Medium	High
Speculative economy	Purchase of assets in the expectation of higher value in the future, including also agricultural land.	Trend, Weak signal	National, Regional	Economic	Primary production	Medium	Medium

Staycation	Holiday at home or in the vicinity of home.	Trend	National	Economic, Social	Private services, Public services	Medium	Medium
Suburbanisation	Outward growth of urban agglomerations and establishment of new suburbs.	Trend	European	Social	Public services	Medium	Medium
Succession	Challenges in succession of farm and rural businesses: low pensions, lack of capital etc.	Trend	National	Social	Primary production	High	Medium
Sustainability transition	Transformation towards more sustainable production and consumption especially in food, energy, construction and mobility systems; giving up fossil economy.	Weak signal	European	Environmental	Primary production	Medium	High
Sustainable food	Various schemes, labels, norms and organisations promote sustainability of food products.	Trend, Weak signal	Global, European	Economic	Primary production	Medium, Small	High
Sustainable lifestyles	Healthy, natural, local, authentic, conscious etc. characteristics of adopted lifestyle.	Trend	European	Social	Public services	Medium	High
Sustainable tourism	Mode of tourism which observes e.g. climate impacts of travelling, local economy and local communities.	Weak signal	European, National	Economic	Private services	Medium, Small	Medium
Techno-food	Technology provides productivity and environmental benefits but some applications (e.g. genetic modification, lab-grown food) raise ethical, cultural or economic doubts.	Weak signal	Global	Technological	Primary production	Small	High
Transparency of food system	Transparency of the food system in terms of origins, production methods, compliance (laws, standards) and distribution of value added in the food chain.	Trend	European	Economic, Social	Primary production	Medium	Medium
Tribal lifestyle	Lifestyle based on specific traditions, habits and group identities.	Weak signal	National	Social	Private services	Medium	Medium
Uberisation	Manifestation of platform economy with low transaction costs, e.g. agriculture without traditional farmers.	Weak signal	National	Social	Primary production	Small	Medium
Unequal development and inequality	Increasing disparities between many urban and rural regions leading to spatial injustice and	Trend	European	Social	Public services	High	Medium

	marginalisation of rural areas.						
Urban insecurity	Rising insecurity in many urban environments affects attractiveness and welfare.	Weak signal	Global	Social	Private services	Medium	Medium
Urban sprawl	Expansion of urban area and decrease of population density making distances longer and occupying new land for urban structures.	Megatrend	European	Social	Primary production	High	Medium
Urbanisation	Increased proportion of people live in cities and towns making them more powerful in terms of economy and politics.	Megatrend	Global	Social	Public services	High	Medium
Volunteer tourism	Tourism related to volunteering in underdeveloped or problematic destinations, often abroad.	Weak signal	Global	Social	Public services	Small	Small
Welfare state	Socio-economic model in which state has a central role in providing public services and maintaining equality.	Trend	European	Economic	Public services	High	Not defined
Wellness	Various ways to maintain physical and mental health.	Weak signal	European	Social	Private services	Small	Medium
Wild food	Use of fresh food from the wild: fruits, mushrooms, berries, edible plants etc.	Trend	National	Social	Primary production	Small	Small
Wood demand	Demand of wood could grow along with timber construction, wood-based textile clothes, new substituents of fossil products etc.	Trend	National	Economic, Technological, Environmental	Manufacturing	Medium	Medium
Work-life fusion	Less clear distinction between work and leisure in terms of place and time, e.g. remote work, flextime and part-time work.	Megatrend	Global, European, National	Economic, Social	Private services	High	High
Young farmers	Potential young farmers face challenges with e.g. start-up costs and access to land.	Trend	European	Social	Primary production	High	High

Table 10 presents the trend topics by affected sector. Primary production is affected mostly by trends related to farms, regional development, food and policy. Manufacturing is affected especially by trends dealing with regional development, demographics, socio-economic models, economic development and food. Private and public services are subject to impacts of trends falling under regional development, farms and demographics; private services are also affected by food and tourism trends and public services by environmental and policy trends.

Table 10: Trend topics by affected sector, %

Trend topic	Affected sector			
	Primary production	Manufacturing	Private services	Public services
Communication	0	0	1	0
Demographics	4	7	5	7
Economic development	3	5	3	3
Energy	1	2	1	1
Environment	5	4	3	4
Farms	25	4	7	6
Food	11	5	5	2
Forests	1	0	0	0
Geopolitics	0	1	1	1
Governance	1	2	2	3
Housing	1	2	3	3
Infrastructure	1	1	1	1
Lifestyle	1	1	4	1
Migration	0	1	1	2
Mobility and traffic	1	2	2	2
Networks and collaboration	2	2	2	3
Policy	6	3	2	6
Regional development	16	32	29	30
Resource scarcity	2	2	1	1
Rural services	0	1	3	4
Science, education and knowledge	1	0	1	2
Settlement system	1	3	3	3
Socio-economic models	3	6	4	4
Sustainability transition	1	2	1	1
Technology	3	3	2	2
Tourism	1	1	5	2
Trade	2	2	1	1
Uncertainty and risks	2	3	2	2
Values	2	3	3	3
Work	1	2	3	1
Total	100	100	100	100

NOTE: Top-5 trend topics by each affected sector highlighted.

While looking at the specific trends in more detail, top trends affecting primary sector were numerous and quite evenly distributed (Table 11) compared to other sectors (Tables 12–14). Top trends included e.g. unequal development and inequality, farm size, migration patterns, diversification vs. specialisation of farms and practice-oriented food systems (e.g. organic farming). Unequal development and inequality was the most frequently identified influential trend in the case of all economic sectors. Among top trends affecting primary production there were several trends that are important and specific to the development of the farming sector: community-oriented food systems, new entrants, young farmers, succession and farmland process. The table gives an indication of the trends to be investigated or addressed in order to come up with positive futures for primary production.

Table 11: Top-20 trends by affected sector: primary production, %

Trend	Primary production
Unequal development and inequality	4
Farm size	3
Migration patterns	3
Diversification/specialisation of farms	3
Practice-oriented food systems	3
Rural decline	3
Climate change	3
Sustainability transition	2
Ageing population	2
Policy incidence and effectiveness	2
Community-oriented food systems	2
Diversification of rural economy	2
Productivity and competitiveness	2
Digital economy	2
New entrants	2
Young farmers	2
Renewable and bioenergy	1
Succession	1
Farmland prices	1
Governance gaps and conflicts	1

The top trends affecting manufacturing were unequal development and inequality, rural decline, migration patterns, ageing population and climate change (Table 12). Rural decline, ageing population and migration patterns were among top-4 trends in all economic sectors but primary production. Resource competition and infrastructure were the only trends on the top-20 list in manufacturing that were not on the top-20 list in the other economic sectors.

Table 12: Top-20 trends by affected sector: manufacturing, %

Trend	Manufacturing
Unequal development and inequality	8
Rural decline	6
Migration patterns	6
Ageing population	4
Climate change	3
Diversification of rural economy	3
Exploitation of development potential	2
Manifestations of new technologies	2
Renewable and bioenergy	2
Globalisation	2
Economic growth	2
Sustainability transition	2
Resource competition	2
Urbanisation	2
Interdependency	2
Policy incidence and effectiveness	2
Governance gaps and conflicts	1
Local paradigm	1
Infrastructure	1
Concentration	1

Digital economy ranks high among trends affecting private services besides the common unequal development and inequality, rural decline, migration patterns and ageing population (Table 13). Development of private services is strongly dependent on the population base and purchasing power which is indicated by the importance of several demographic trends. Rural hubs and creative economy are among top-20 trends only in private services.

What is unique in the top trends affecting public services is that policy and governance trends rank highest in the economic sector (Table 14). Community-based action and accessibility are found on the top-20 list only in the case of public services.

Table 13: Top-20 trends by affected sector: private services, %

Trend	Private services
Unequal development and inequality	6
Rural decline	5
Migration patterns	5
Ageing population	3
Digital economy	3
Climate change	2
Manifestations of new technologies	2
Diversification of rural economy	2
Exploitation of development potential	2
Sustainability transition	2
Rural hubs	2
Renewable and bioenergy	1
Urbanisation	1
Community-oriented food systems	1
Economic growth	1
Policy incidence and effectiveness	1
Local paradigm	1
Creative economy	1
Globalisation	1
Interdependency	1

Table 14: Top-20 trends by affected sector: public services, %

Trend	Public services
Unequal development and inequality	8
Rural decline	6
Migration patterns	6
Ageing population	4
Climate change	3
Policy incidence and effectiveness	3
Governance gaps and conflicts	2
Manifestations of new technologies	2
Exploitation of development potential	2
Urbanisation	2
Diversification of rural economy	2
Community-based action	2
Local paradigm	1
Accessibility	1
Concentration	1
Digital economy	1
Sustainability transition	1
Renewable and bioenergy	1
Economic growth	1
Globalisation	1

Besides trends which are important for specific economic sectors it is worthwhile to look at the general significance of specific trends for rural areas. Figure 12 presents top-20 trends that are assessed as 'highly significant' in the short run (1–10 years) and in the long run (10–30 years). There are some interesting and potentially important differences in the significance profiles, even though the significance assessment is based on a large diversity of context specific trend observations. Among the top-20 trends which were assessed to downgrade in importance over time were unequal development and inequality, rural decline, migration patterns, diversification/specialisation of farms, farmland prices, diversification of rural economy and farm population. Practice-oriented food systems and primary sector employment were assessed to keep their rank. A number of top-20 trends were assessed to rank higher in significance in the future: climate change, farm size, ageing population, digital economy, young farmers and renewable and bioenergy. Succession, policy incidence and effectiveness, accessibility, ageing farmer population and concentration would drop from the top-20 list in the long run. Concomitantly, five new trends are on the top-20 list in the long run: sustainability transition, environmentalism, resource competition, productivity and competitiveness and biodiversity loss.

The ranks and their changes give some indication of the evolving significance of specific trends for the rural areas in the future and also hint what might remain important also in the future and what might become less vs. more important.

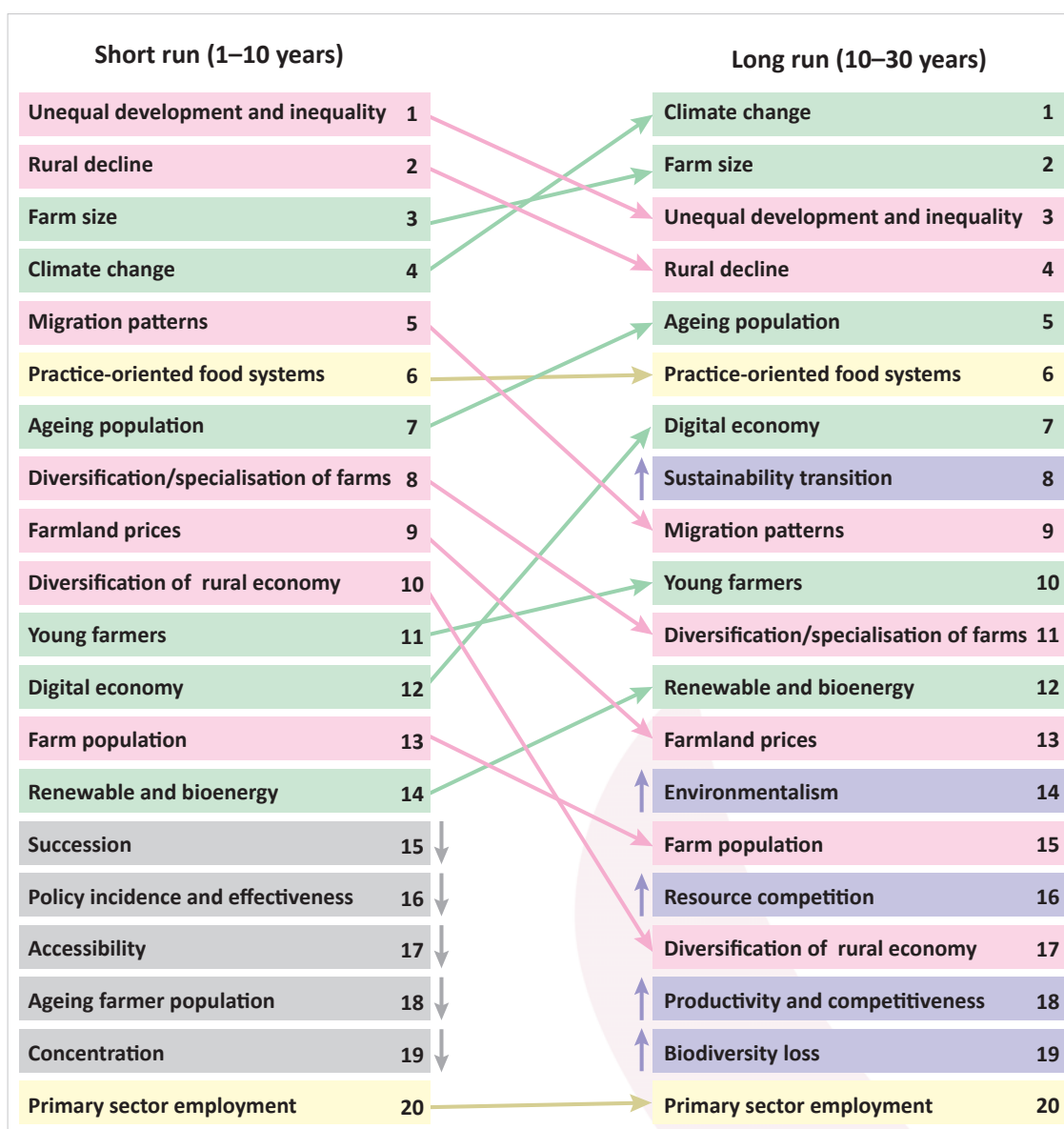


Figure 12: Most significant trends (top-20) in the short run (1–10 years) and in the long run (10–30 years) based on the frequency ranking of trends that were assessed to have ‘high significance’ for the rural areas

3.2 Drivers of the megatrends, trends and weak signals

The following section describes the drivers, which give rise to the megatrends, trends and weak signals. As result of the content analysis for the whole trend data base, a total of 3,485 entries for driver observations were identified. Those observations can be subdivided into 139 drivers and these in turn into 27 topics. The iterative categorisation process is described in Chapter 2.1.3. Figure 13 shows the distribution of the 27 topics. About 19% of the drivers are economic in character, which is by far the highest share. Other important topics are technology (10%), values (10%), farms (9%), environment (8%) and lifestyle (7%). As result almost two thirds (63%) of all 3,485 observations are covered by these seven topics.

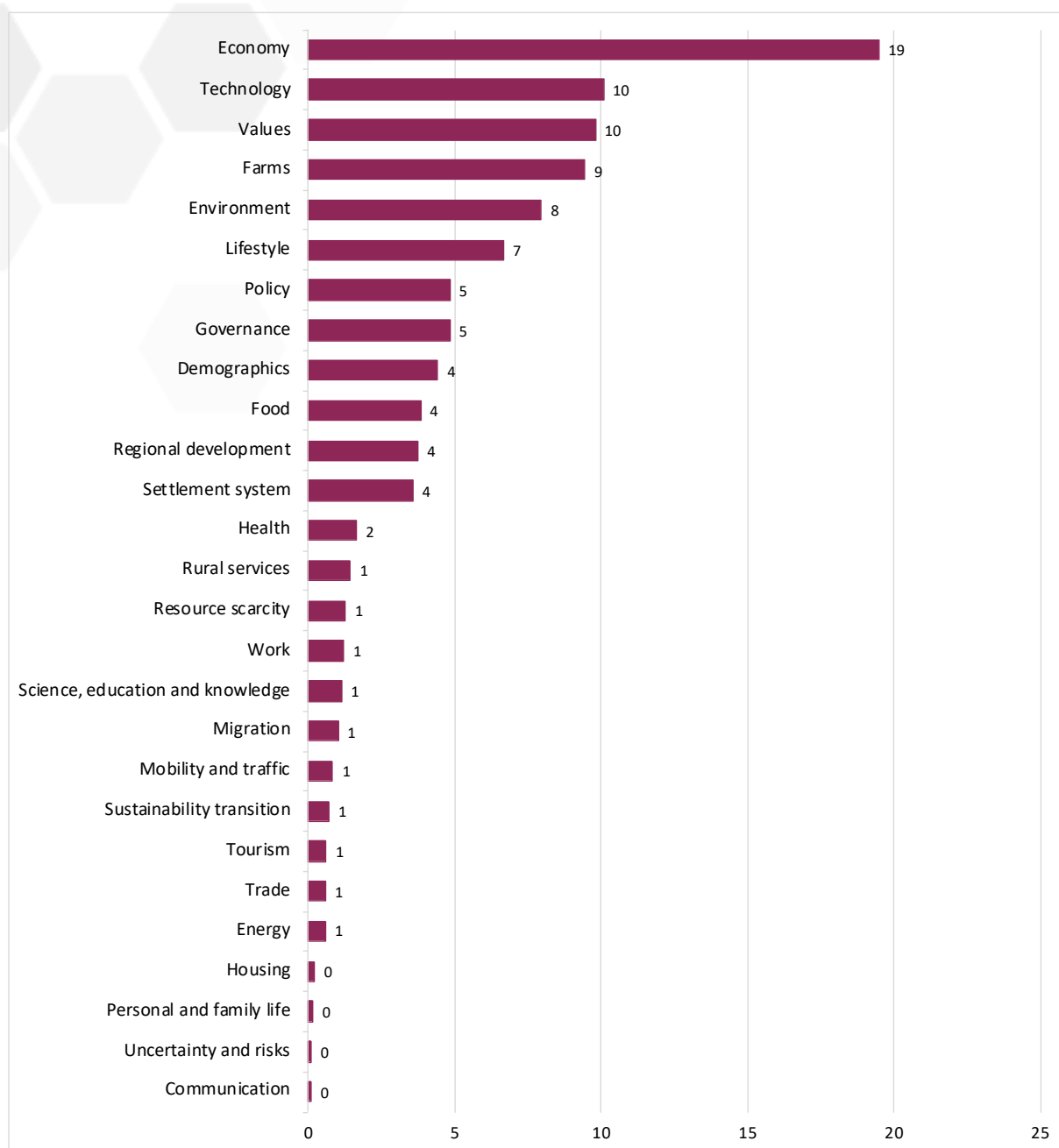


Figure 13: Drivers by topic, %

Table 15 lists all 139 drivers according to the count of observations and the share of the total observations. Frequencies of the drivers indicate the significance of spatial and social force fields beyond the trends. Globalisation has by far the highest frequency among drivers (8% of identified drivers). Consequently, increasingly intensive international interconnections between individuals, firms, institutions and governments have strong impact on economic, social, political, cultural and spatial trends for several years. Other important top-5 drivers are ecological awareness (6%), climate change (4%), digitalisation (3%) and technological development (3%).

Many of the drivers which were observed more than 20 times were related to environmental issues, e.g. climate change (4 % of all identified drivers), environmental degradation, pollution and risks (3%), environmentalism (1%) and natural capital (1%). Those drivers have a prominent direct or indirect impact on the development of rural areas and agriculture. Global warming, extreme weather events, floods, droughts and rising sea levels have a direct impact on agriculture. The trends related to digitalisation, technological development, internet and social media describe the convergence of the real and the digital world, which lead to new challenges and opportunities, especially for rural areas. Drivers which have a specifically 'rural' impact are for example availability and demand for local, healthy, sustainable food products (3% of all drivers), increasing farm size, decreasing farm numbers (3%), Common Agricultural Policy CAP (2%) and scarcity of natural resources (1%).

Table 15: Drivers, count and %

Driver	Count	%
Globalisation	279	8,0
Ecological awareness	200	5,7
Climate change	143	4,1
Digitalisation	119	3,4
Technological development	113	3,2
Internet	109	3,1
Availability and demand for local, healthy, sustainable food products	104	3,0
Urbanisation	103	3,0
Increasing farm size, decreasing farm numbers	100	2,9
Environmental degradation, pollution and risks	96	2,8
Demographic change	80	2,3
Industrialisation	77	2,2
Market liberalisation	74	2,1
Diversification of lifestyles	72	2,1
Slow, peaceful, natural lifestyle	64	1,8
Common Agricultural Policy (CAP)	58	1,7
Population growth	50	1,4
Viability of farm business, productivity	43	1,2
Scarcity of natural resources	42	1,2
Environmentalism	40	1,1
Liberal lifestyle	39	1,1
Decline or poor status of public services and infrastructures	38	1,1
Coronavirus pandemic, pandemics	36	1,0
Community co-operation and development	35	1,0
Rural decline	31	0,9
Bottom-up approach, empowerment	30	0,9
Growing inter-farm competition for markets and resources	30	0,9
Social discontent, isolation, lack of social inclusion	30	0,9
Global market competition and competitive pressure	28	0,8
Non-rural policies (fiscal, foreign, global, general etc.)	28	0,8
Regional inequality and disparity	28	0,8
National agricultural policies	27	0,8
New governance modes and models	27	0,8
Economic growth	26	0,7
Evolution of specific markets	25	0,7
Opportunities and entrepreneurship	25	0,7
Manifestations and demands for transition	24	0,7
Rural and regional policies	24	0,7
Evolving values and attitudes	23	0,7
Problems with access to markets	23	0,7
Regional farming conditions	23	0,7
Skills and competences, human capital	23	0,7
Localism, local paradigm	22	0,6
Nature capital (landscape, biodiversity etc.)	22	0,6
Attractiveness of farming, lack of young farmers and successors	21	0,6
Communality, solidarity, equality	21	0,6
Low-cost travel	21	0,6
Migration patterns	21	0,6
Urban sprawl, suburbanisation, decentralisation	21	0,6
Empowerment of services	20	0,6
Lack of effective governance strategies	20	0,6
Search for own lifestyle and quality of life	20	0,6
Socio-cultural evolution	20	0,6
Farming traditions	19	0,5
Financial constraints	19	0,5
Economic problems, e.g. low incomes, low profitability, price variations	18	0,5
Protectionistic or anti-based policies and actions	18	0,5
Depopulation	16	0,5
Nature conservation, environmental conservation	16	0,5
Neoliberalism	16	0,5
New types of travelling	16	0,5
Agri-environmental and environmental policies	15	0,4
Availability of jobs	15	0,4
Conflicts and governance failures	15	0,4
Food demand and supply	14	0,4
Individualism	14	0,4
Limited energy resources and sources	14	0,4
Outmigration from rural areas, possibly selective	14	0,4
Value of traditions	14	0,4
Diversification of farms and farming practices	13	0,4
Limits of growth	13	0,4
Network-based governance	13	0,4
Various economic factors	13	0,4
Decline or poor status of private services	12	0,3
Intensive farming practices	12	0,3
Unemployment	12	0,3
International trade rules and patterns	11	0,3
Population decline, depopulation	11	0,3
Preservation of heritage	11	0,3
Health concerns and problems	10	0,3
Rising educational demands and level of education	10	0,3
Top-down, centralised governance	10	0,3
Ethical concerns and priorities	9	0,3
Food safety	9	0,3
High demand of specific products	9	0,3
Local pride, local first, local identity	9	0,3
New modes of work e.g. flexible, freelance, project	9	0,3
Problems with access to land vs. land abandonment	9	0,3
Automation, robotisation	8	0,2
Mechanisation and industrialisation of farming	8	0,2
Scarcity of public funds	8	0,2
Ageing population	7	0,2
Competitiveness and productivity	7	0,2
European integration vs. disintegration	7	0,2
High/low housing costs in cities/rural areas	7	0,2
Laws guiding farming and succession	7	0,2
Ageing rural population	6	0,2
Alternative lifestyles	6	0,2
Growing energy demand	6	0,2
Health orientation, healthy lifestyle	6	0,2
Increase of consumption	6	0,2
Social awareness	6	0,2
Changing health-related trends	5	0,1
Concentration	5	0,1
Divorce or other crisis or change	5	0,1
Economic crisis	5	0,1
Economies of scale	5	0,1
Fossil economy	5	0,1
Insecurity-motivated governance	5	0,1
Tourism	5	0,1
Urban farming	5	0,1
Veganism, vegetarianism	5	0,1
Better accessibility	4	0,1
Consumption patterns and habits	4	0,1
Increased leisure time, work-leisure balance	4	0,1
Lack of public transport	4	0,1
Place branding	4	0,1
Progress of medicine and healthcare	4	0,1
Animal rights	3	0,1
Challenges in meeting educational demands	3	0,1
Crises	3	0,1
Forms of ecological and regenerative agriculture	3	0,1
Limited supply of education	3	0,1
Lobbying activities	3	0,1
Local policy and issues of the participation society	3	0,1
New geopolitics, rising East	3	0,1
Social media	3	0,1
Competition between agricultural vs. non-agricultural land use	2	0,1
Grey economy	2	0,1
Manifestations of new technologies	2	0,1
Remote work	2	0,1
Self-sufficiency, security	2	0,1
Stress	2	0,1
Transparency of the food system	1	0,0
Total	3485	100,0

Table 16 shows the driver topics by trend name. The highlighted cells represent the top-5 topics for megatrends, trends or weak signals, respectively. It is remarkable that almost half of the driver observations for the megatrends can be assigned to the topic economy. Regarding to the megatrends only the topics environment (15%), technology (12%) and demographics (7%) seem to be highly relevant. Megatrends are driven by few strong forces.

Drivers of the trends and weak signals are more dispersed. More than 60% of the identified drivers of trends are covered by the following five topics: economy (19%), farms (14%), personal values (10%), technology (9%) and lifestyle (7%). Respectively, more than 50% of the identified drivers of weak signals represent the topics related to values (12%), technology (11%), economy (11%), lifestyle (9%) and environment (8%).

Economic and technological developments are reflected strongly in all three trend types, while lifestyle and personal values are the important factors influencing both trends and weak signals. Drivers should be considered thus as general force fields in society that create and reinforce trends in rural areas. More precisely, the drivers are multi-dimensional phenomena from which a large number of individual trends can be generated and differentiated – and which also generate countertrends.

Table 16: Driver topics by trend type, %

Driver topic	Megatrends	Trends	Weak signals
Communication	0	0	0
Demographics	7	4	4
Economy	48	19	11
Energy	1	0	1
Environment	15	6	8
Farms	0	14	6
Food	0	4	5
Governance	1	4	7
Health	1	1	3
Housing	0	0	0
Lifestyle	1	7	9
Migration	2	1	0
Mobility and traffic	0	1	1
Personal and family life	0	0	0
Policy	2	6	4
Regional development	2	3	5
Resource scarcity	3	1	2
Rural services	0	2	1
Science, education and knowledge	0	1	1
Settlement system	3	3	4
Sustainability transition	0	0	1
Technology	12	9	11
Tourism	0	1	1
Trade	0	1	0
Uncertainty and risks	0	0	0
Values	2	10	12
Work	1	1	1
Total	100	100	100

NOTE: Top-5 driver topics by each type of trend highlighted.

Table 17 highlights the top-20 drivers of the megatrends. These 20 topics cover as much as 92% of all drivers of the megatrends. The top-5 drivers – having a high impact and long-term effects on global and European developments – are globalisation (18%), industrialisation (16%), climate change (10%), market liberalisation (9%) and digitalisation (7%). Many of the drivers of megatrends are economic, technological or environmental in character. Some of the top-20 drivers of megatrends have an intimate relationship with especially rural areas, e.g. climate change, scarcity of natural resources, outmigration from rural areas, Common Agricultural Policy and rural decline.

Compared to the top-20 lists of trends (Table 18) and weak signals (Table 19), nine of out twenty drivers were common for all types of trends. These included globalisation, climate change, digitalisation, environmental degradation, technological development, urbanisation, demographic change, ecological awareness and the Common Agricultural Policy. As much as ten of the top-20 drivers of the megatrends were unique in sense of not being included in the top lists of other trend types, whereas market liberalisation was on the top list both in megatrends and trends.

Table 17: Top-20 drivers of megatrends, %

Driver	Megatrends
Globalisation	18
Industrialisation	16
Climate change	10
Market liberalisation	9
Digitalisation	7
Environmental degradation, pollution and risks	5
Population growth	5
Technological development	4
Scarcity of natural resources	3
Urbanisation	3
Demographic change	2
Outmigration from rural areas, possibly selective	2
Ecological awareness	1
Various economic factors	1
Common Agricultural Policy (CAP)	1
Economic growth	1
Rural decline	1
Increase of consumption	1
Limited energy resources and sources	1
Progress of medicine and healthcare	1

Table 18 presents the top-20 drivers of the trends. These 20 drivers cover about 59% of all drivers of the trends. The top-5 drivers are globalisation (8%), ecological awareness (7%), increasing farm size, decreasing farm numbers (5%), technological development (4%) and availability and demand for local, healthy and sustainable food products (3%). Compared to the drivers of megatrends, a much more diversified distribution can be observed with trends. It appears that a diverse set of national and regional drivers is generating a wide range of constraining and promoting forces for rural development. Drivers of the trends that have

essentially rural influence include e.g. farm size and farm numbers, availability of local food, growing inter-farm competition and viability of farm business.

Half of the top-20 drivers were common between trends and megatrends. Trends had five common top-20 drivers that were not included in the top drivers of megatrends: availability of local food, internet, diversification of lifestyles, slow lifestyle and viability of farm business. There were also five drivers that were unique to trends in the sense of not being included in the top drivers of megatrends or weak signals. These were farm size and farm numbers, liberal lifestyle, growing inter-farm competition, decline of public services and global market competition.

At this point it is also worth observing that a same phenomenon can be a driver and a trend as the dynamics takes place within a systemic framework. Consequently, for example rural decline may be a driver and an impact of itself (reinforcing loop) or an impact of some other driver.

Table 18: Top-20 drivers of trends, %

Driver	Trends
Globalisation	8
Ecological awareness	7
Increasing farm size, decreasing farm numbers	5
Technological development	4
Availability and demand for local, healthy, sustainable food products	3
Urbanisation	3
Climate change	3
Digitalisation	3
Environmental degradation, pollution and risks	3
Demographic change	2
Internet	2
Diversification of lifestyles	2
Common Agricultural Policy (CAP)	2
Liberal lifestyle	2
Market liberalisation	2
Growing inter-farm competition for markets and resources	2
Decline or poor status of public services and infrastructures	2
Slow, peaceful, natural lifestyle	1
Global market competition and competitive pressure	1
Viability of farm business, productivity	1

Table 19 highlights top-20 drivers of weak signals. The weak signals are not so much characterised by individual strong drivers, but rather by a broad portfolio of forces; the top-20 drivers cover only 56% of all identified drivers of weak signals. Among the most common drivers of weak signals are internet (6% of the identified drivers), ecological awareness (5%), climate change (4%), availability and demand for local, healthy, sustainable food products (4%), globalisation (4%) and urbanisation (4%).

There were six drivers of weak signals that were not on the top list in megatrends and trends. These specific drivers were environmentalism, coronavirus pandemic, scarcity of natural

resources, bottom-up approach, communality and new governance models. These drivers seem to ignite mainly small scale, limited symptoms and seeds of change which have not upgraded to trends, at least not yet.

Table 19: Top-20 drivers of weak signals, %

Driver	Weak signals
Internet	6
Ecological awareness	5
Climate change	4
Availability and demand for local, healthy, sustainable food products	4
Globalisation	4
Urbanisation	4
Digitalisation	3
Slow, peaceful, natural lifestyle	3
Diversification of lifestyles	3
Environmentalism	3
Demographic change	2
Environmental degradation, pollution and risks	2
Coronavirus pandemic, pandemics	2
Technological development	2
Viability of farm business, productivity	2
Scarcity of natural resources	2
Bottom-up approach, empowerment	2
Communality, solidarity, equality	1
New governance modes and models	1
Common Agricultural Policy (CAP)	1

It is interesting to take a look at which are the most effective drivers from the perspective of economic sectors. In table 20, a distinction is made between primary production, manufacturing, private services and public services. Economy is the dominant driver topic across all four sectors, ranging between 23–33%. Technology is also among top-5 driver topics in all main economic sectors with a share of 8–12%. Driver topics related to demographics and lifestyle are among the top-5 in manufacturing, private services and public services, whereas driver topics related to personal values are among the top-5 in primary production, manufacturing and private services. Driver topics unique to primary production among top-5 drivers are related to farms and the environment. Respectively, the unique top-5 driver topic in public services relates to governance.

Table 20: Drivers topics by affected sector, %

Driver topic	Affected sector			
	Primary production	Manufacturing	Private services	Public services
Communication	0	0	0	0
Demographics	4	8	6	8
Economy	23	33	24	27
Energy	1	1	1	0
Environment	9	6	6	7
Farms	13	2	3	2
Food	5	2	3	1
Governance	4	5	5	7
Health	1	1	2	1
Housing	0	0	0	0
Lifestyle	5	8	9	9
Migration	1	1	1	2
Mobility and traffic	0	0	1	1
Personal and family life	0	0	0	0
Policy	6	3	2	4
Regional development	2	5	5	6
Resource scarcity	1	1	1	1
Rural services	1	1	2	3
Science, education and knowlec	1	0	1	1
Settlement system	3	4	5	5
Sustainability transition	1	1	0	1
Technology	8	10	12	8
Tourism	0	0	1	0
Trade	1	0	0	0
Uncertainty and risks	0	0	0	0
Values	10	6	8	6
Work	1	1	1	1
Total	100	100	100	100

NOTE: Top-5 driver topics by each affected sector highlighted.

Table 21 shows top-20 drivers which affect the primary production. In addition to the dominant driver of globalisation (10%) ranking highest in all economic sectors, a number of other drivers have a significant impact on primary production: ecological awareness (7%), climate change (5%) and increasing farm size & decreasing farm numbers (4%).

There were 12 common top-20 driver topics for all four economic sectors. These were globalisation, ecological awareness, climate change, digitalisation, environmental degradation, technological development, industrialisation, market liberalisation, demographic change, urbanisation, diversification of lifestyles and liberal lifestyle. Top-20 drivers that were common to primary production, manufacturing and private services (but not to public services) included availability of local food, internet and scarcity of natural resources. Further on, a top-20 driver common to primary production and public services was environmentalism. Finally, top-20 drivers unique to primary production were farm size and farm numbers, Common Agricultural Policy CAP, viability of farm business and growing inter-farm competition.

Table 21: Top-20 drivers by affected sector: primary production, %

Driver	Primary production
Globalisation	10
Ecological awareness	7
Climate change	5
Increasing farm size, decreasing farm numbers	4
Availability and demand for local, healthy, sustainable food products	3
Digitalisation	3
Environmental degradation, pollution and risks	3
Technological development	3
Industrialisation	3
Market liberalisation	3
Demographic change	3
Common Agricultural Policy (CAP)	2
Urbanisation	2
Diversification of lifestyles	2
Internet	2
Viability of farm business, productivity	2
Liberal lifestyle	2
Scarcity of natural resources	1
Growing inter-farm competition for markets and resources	1
Environmentalism	1

Top-20 drivers assigned to the manufacturing sector represent 70% of all drivers assessed to have a significant impact on this economic sector (Table 22). Top-5 drivers cover 36% of all the effective drivers. These shares are considerably higher than in the other economic sectors with shares of 61–62% and 28–29%, respectively. Top-5 drivers affecting manufacturing include globalisation (13%), market liberalisation (6%), demographic change (6%), industrialisation (6%) and digitalisation (5%).

There were two top-20 drivers that was common to all economic sectors except for primary production: community co-operation and development as well as decline or poor status of public services and infrastructures. Top-20 drivers common to manufacturing and public services were rural decline and population growth. Finally, the only top-20 driver unique to manufacturing was regional inequality and disparity.

Table 22: Top-20 drivers by affected sector: manufacturing, %

Driver	Manufacturing
Globalisation	13
Market liberalisation	6
Demographic change	6
Industrialisation	6
Digitalisation	5
Climate change	5
Ecological awareness	4
Urbanisation	3
Liberal lifestyle	3
Technological development	3
Diversification of lifestyles	3
Availability and demand for local, healthy, sustainable food products	2
Internet	2
Regional inequality and disparity	2
Community co-operation and development	2
Decline or poor status of public services and infrastructures	1
Rural decline	1
Population growth	1
Environmental degradation, pollution and risks	1
Scarcity of natural resources	1

Top-5 drivers affecting private services include globalisation (11%), digitalisation (5%), market liberalisation (4%), urbanisation (4%) and internet (4%). Only two top-20 drivers are unique to private services: slow and natural lifestyle as well as coronavirus and other pandemics (table 23).

Table 23: Top-20 drivers by affected sector: private services, %

Driver	Private services
Globalisation	11
Digitalisation	5
Market liberalisation	4
Urbanisation	4
Internet	4
Demographic change	4
Technological development	4
Industrialisation	3
Climate change	3
Ecological awareness	3
Availability and demand for local, healthy, sustainable food products	3
Slow, peaceful, natural lifestyle	3
Diversification of lifestyles	2
Liberal lifestyle	2
Decline or poor status of public services and infrastructures	1
Environmentalism	1
Community co-operation and development	1
Environmental degradation, pollution and risks	1
Coronavirus pandemic, pandemics	1
Scarcity of natural resources	1

Top-5 drivers affecting public services include globalisation (11%), demographic change (5%), market liberalisation (5%), industrialisation (4%) and digitalisation (4%). Surprisingly, top-11 drivers for public services and manufacturing are the same. Four top-20 drivers are unique to public services: rural and regional policies, search for own lifestyle and quality of life, new governance models and lack of effective governance strategies (Table 24).

Table 24: Top-20 drivers by affected sector: public services, %

Driver	Public services
Globalisation	11
Demographic change	5
Market liberalisation	5
Industrialisation	4
Digitalisation	4
Urbanisation	4
Climate change	4
Ecological awareness	3
Diversification of lifestyles	3
Technological development	3
Liberal lifestyle	3
Environmental degradation, pollution and risks	2
Decline or poor status of public services and infrastructures	2
Community co-operation and development	2
Rural decline	1
Rural and regional policies	1
Population growth	1
Search for own lifestyle and quality of life	1
New governance modes and models	1
Lack of effective governance strategies	1

Generally, drivers of change can be assessed in various regions, sectors and contexts for the expected endurance, strength and possibilities to benefit from them. All drivers effectuate many trends and possibilities to benefit from them or to affect their impacts is worth of some intellectual analysis work.

3.3 Impacts of the megatrends, trends and weak signals

The assessment of trends' impacts was performed from two perspectives: the territorial perspective (for three types of rural areas) as well as the thematic perspective (for six preselected themes related to rural development, see Table 25). Within the first perspective, each trend was attributed up to three positive and three negative impacts for each of the three types of rural areas. In the thematic perspective, each trend was attributed one impact for each preselected rural development issue – with the exception of the impacts on social capital, in which case up to three distinct impacts could be identified. In this subsection, a general characterization of the identified impacts is provided. Moreover, they will be considered from the perspective of each of the three types of rural areas as well as the preselected rural development aspects.

The assessment of the impacts for all the 1,560 trends returned 9,340 observations of specific impacts and 2,087 observations of non-specific, general impacts (Table 25). For most types of impact, no significant impacts were observed in about 700-900 cases, i.e. in roughly 45–60% of trend observations. In case of two thematic types of impacts – on gender and access to land – no impacts were observed for roughly 75% of the trends. This suggests that many trends have selective impacts only, i.e. they do not significantly affect all types of rural areas and all thematic aspects of rural development at once.

Table 25: Specification of the impacts, number of observations

Type of impact	Specific impact observed	Non-specified (positive or negative) impact observed	Impact not observed	Total
Positive – rural areas within functional urban areas	1124	242	793	2159
Positive – rural areas in urban proximity	1281	252	721	2254
Positive – remote rural areas	1303	245	719	2267
Negative – rural areas within functional urban areas	460	318	937	1715
Negative – rural areas in urban proximity	559	403	792	1754
Negative – remote rural areas	606	471	697	1774
Gender impacts	193	87	1280	1560
Impacts on social capital	1023	25	797	1845
Migration impacts	609	7	944	1560
Impact on access to land	394	0	1166	1560
Impact on farm structures	839	29	692	1560
Impact on farming prospects	949	8	603	1560
Total	9340	2087	10141	21568

NOTE: In case of the territorial impacts (and one thematic type of impact: social capital) up to three separate impacts could have been identified. Hence the totals in some rows sum up to numbers higher than the total number identified trends (1,560).

What is also notable is that in case of territorial impacts significantly (2 to 3 times) more positive than negative specific impacts were identified in total. Given that for each of the six types of territorial impacts about 600–800 trends were identified, it indicates that when a trend has any positive impacts at all, it has more of them than the trends with any negative impacts have negative impacts. In other words, positive trends have more positive impacts than negative trends have negative impacts. It is also easier to identify specific (in contrast to non-specific) impacts for those trends that have positive impacts in comparison to those that have negative impacts. Therefore, positive impacts are not only more frequent, but also more specific than the negative ones.

3.3.1. Positive impacts on rural areas (territorial perspective) by impact topics and categories

For the sake of clarity, positive impacts on rural areas have been classified into 21 broader topics such as economy, population or lifestyle (Figure 14). The group ‘non-specified positive impacts’ covers all the impacts that were not identified as specific impacts. As the results show, in each type of rural areas the three most frequent positive, specific impacts of the identified trends are impacts on rural economy (ca. 20% of all impacts), markets (16–18%) and farms (11–12%). Impacts on organisation and society follow with ca. 8–9% of frequency share, and then food, environment and population topics with ca. 4–5% frequency share each. The rest of impacts’ topics do not exceed 3% of frequency share while the least frequent are mobility and traffic, place brand and identity as well as trade. At the same time, between 16% and 18% of all identified impacts are ‘non-specified positive impacts’.

The profiles of impacts on three types of rural areas are quite similar. The impacts related to food are a bit more common in rural areas within functional urban areas compared to other types of rural areas and the impacts related to economy and population in remote rural areas.

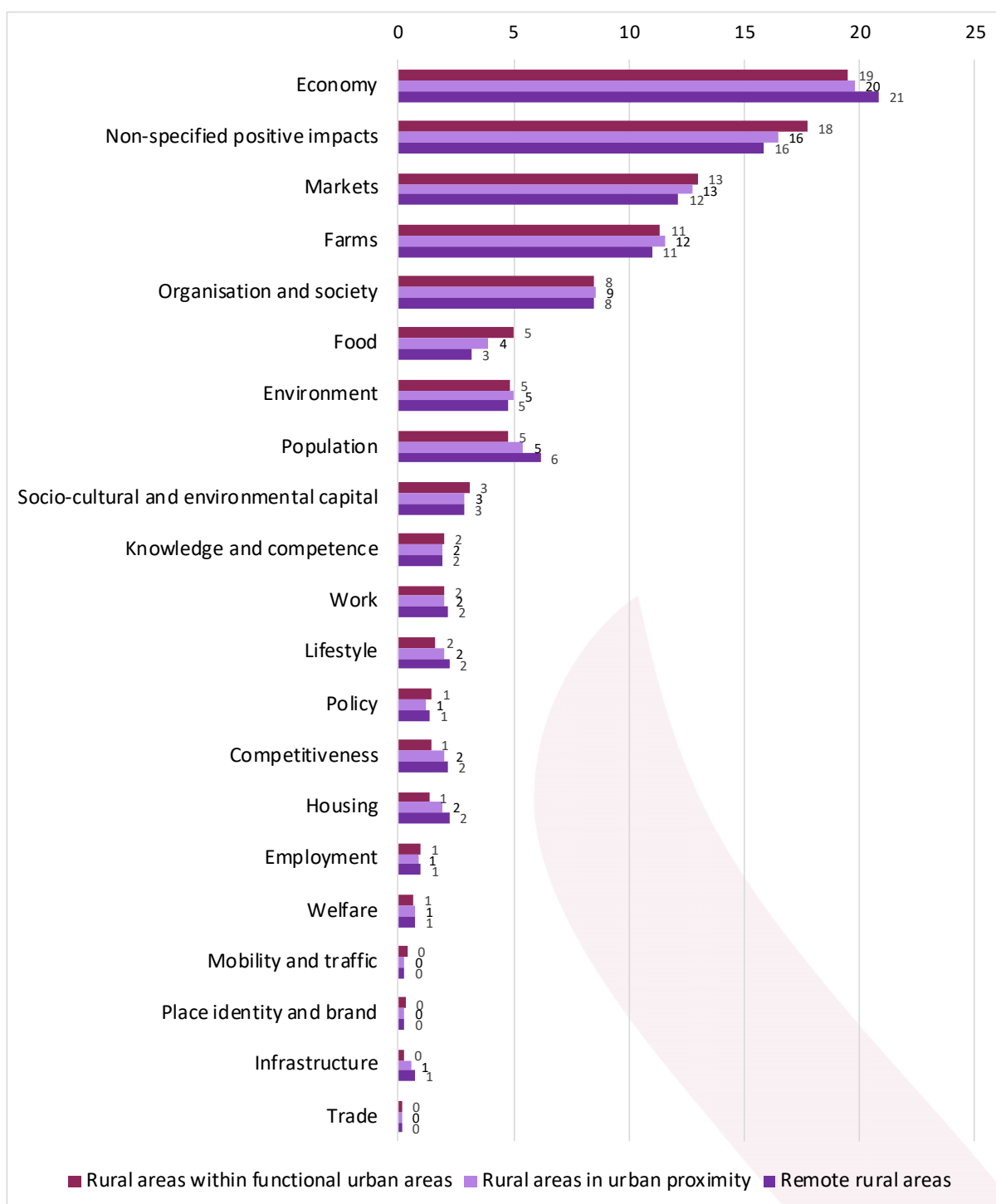


Figure 14: Positive impacts (impact topics) of the trends by type of rural area, %

When trend impacts are classified into more detailed categories of sub-topics, their frequency indicates that the three most frequent positive, specific impacts in all types of rural areas are (1) growth of rural economies in terms of incomes and jobs, (2) entry of new inhabitants and (3) diversification of rural economies (Figure 15). These three categories' impacts make up 5-7% each of all the identified positive impacts on rural areas from the territorial perspective.

The following three categories – each with around 4% of occurrence frequency – are (1) increase of environmental conservation/reduction of degradation, (2) more equal and inclusive social fabric as well as (3) more demand for (local) rural products and services.

An impact that is more common in rural areas within functional urban areas than in other types of rural areas is genesis of novel producer, prosumer or consumer organisations. In remote rural areas the impacts related to e.g. entry of new inhabitants, new or better services and/or better access to services, and halting of rural decline and preservation of activities have a higher share among impacts than in other types of rural areas. Profiles of the different types of rural regions appear to be quite similar indicating that they can benefit from the trends in a quite similar way.

Clearly, the frequency of specific impacts within the database of collected trends does not mean that they are automatically having a proportional impact on the ground. The database includes megatrends, trends as well as weak signals; in each case a positive impact can range from an established effect that has been well understood due to empirical observations to a probable impact of a weak signal that can have a larger or smaller potential for bearing a positive impact. In this analysis, all of these impacts are considered in combination, so the conclusions are associated with restrictions. Taking this simplification into consideration, one can however try to argue that, as a whole, current megatrends, trends and weak signals related to European rural areas bring about positive impacts mostly in contributing to rural economic growth and diversification (also based on rising demand for 'local' products), facilitating migration into rural areas, protecting rural environment and, finally, supporting equality and inclusiveness of rural societies.

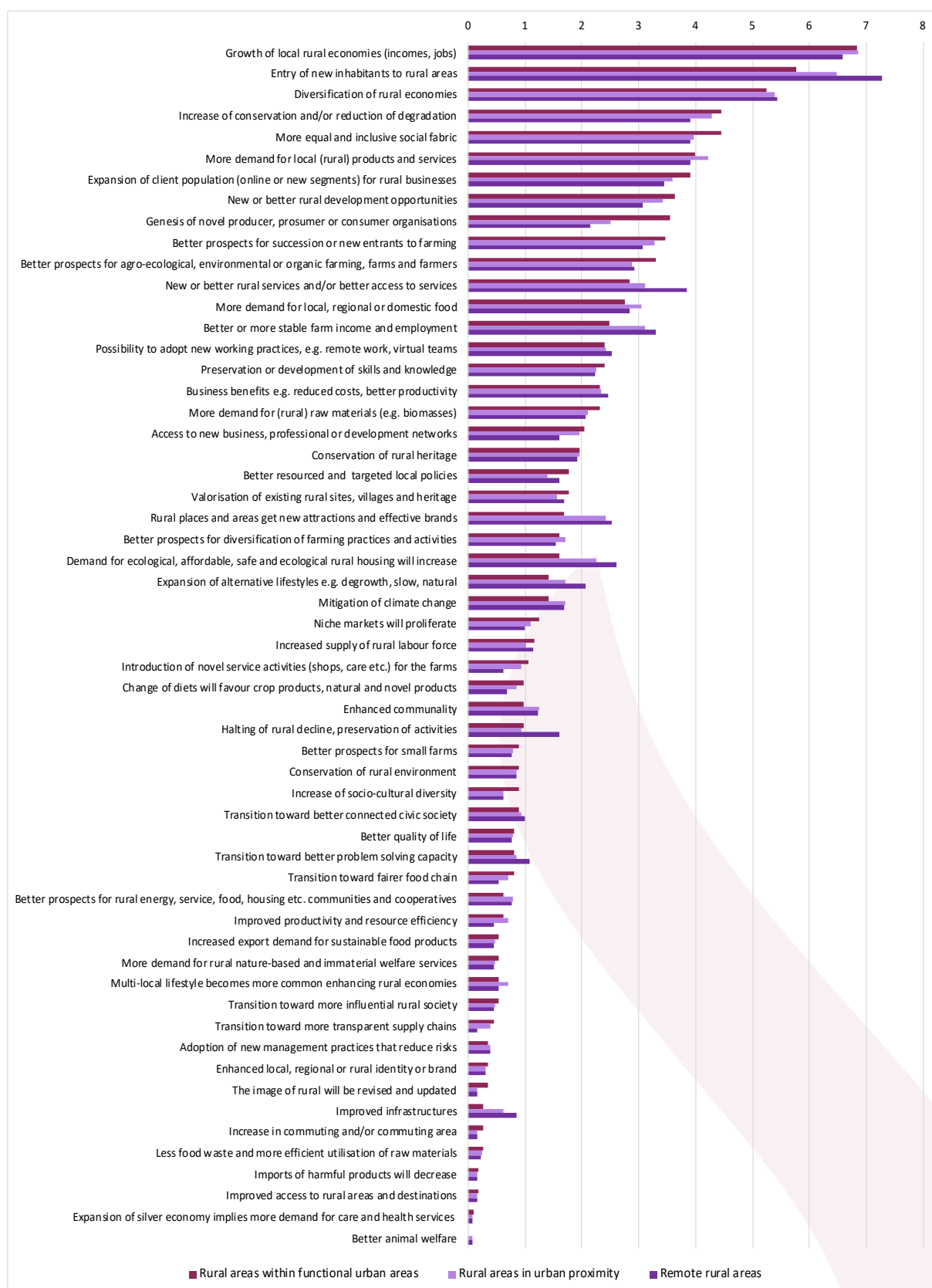


Figure 15: Positive impacts (impact categories) of the trends by type of rural area, %

3.3.2. Negative impacts on rural areas (territorial perspective) by impact topics and categories

As it was anticipated earlier, ‘non-specified negative impacts’ clearly dominate the frequency list of negative impacts, with 41–44% of occurrences in all three rural area types (Figure 16). The two subsequent impact topics – organisation and society as well as economy – cover 13–14% and 11–13% of occurrences, respectively. The only two other topics that exceed 5% of frequency are environment and farms, while the rest of the impacts have a frequency of 3% or lower.

Again, the impact profiles of the three different types of rural areas are quite similar. Negative impacts related to the environment rank higher in rural areas within functional urban areas as compared to other types of rural areas, whereas negative impacts related to economy are most common in remote rural areas.

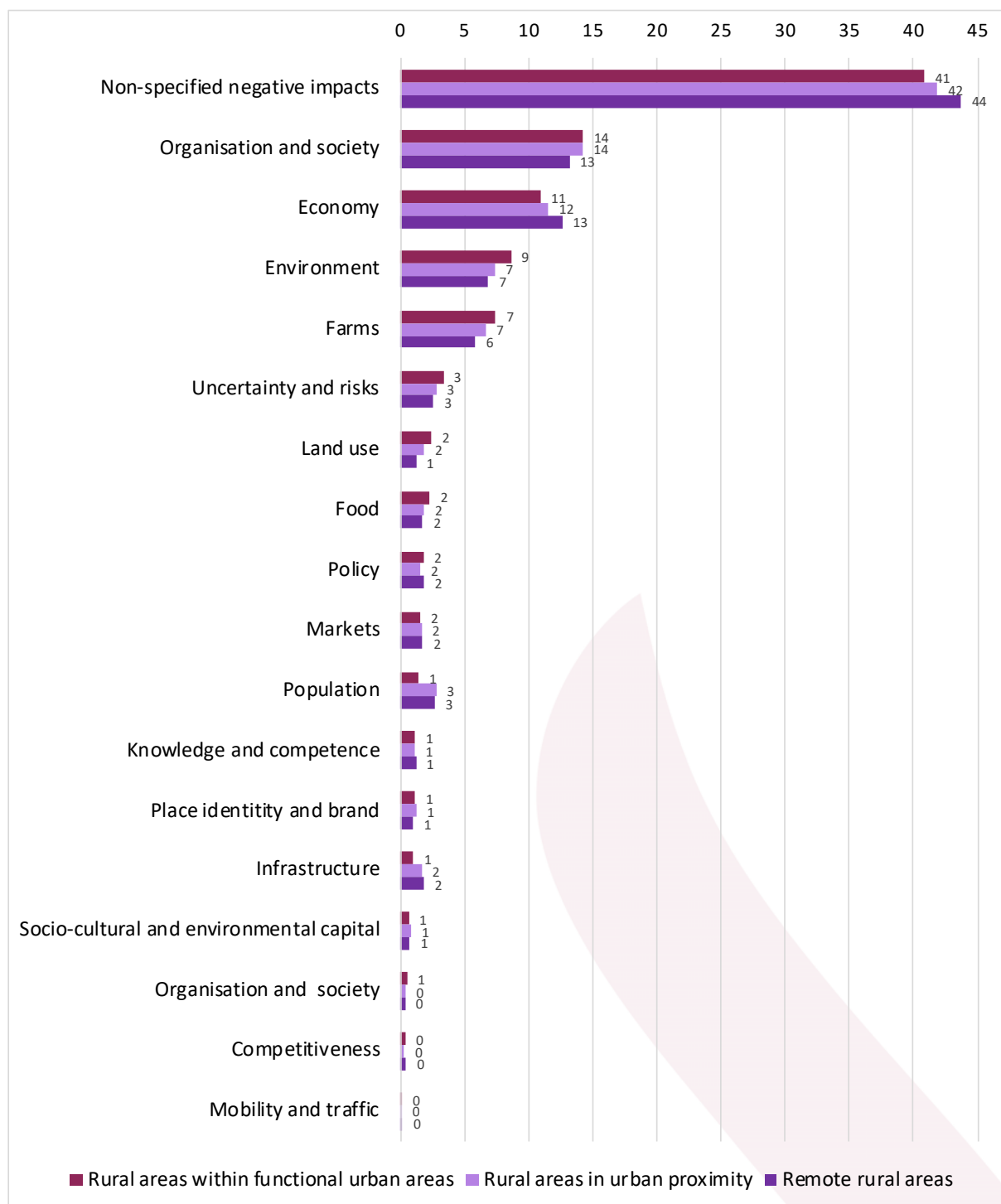


Figure 16: Negative impacts (impact topics) of the trends by type of rural area, %

When looking at the impacts in more detail (Figure 17), two categories stick out as the most frequent ones: increase of environmental degradation or risks (10–12%) and increased frequency of social conflicts (10–11%). This is followed by the selective loss of jobs in certain sectors of rural economy (6–7%) and then by four trends that oscillate around 4% of occurrences: (1) increase of production costs and decrease in profitability, (2) increased

inequality between regions or actor groups, (3) increased pressure or tendency to cut public spending in disfavours of the rural areas and (4) unequal division of costs and benefits between actors, sectors and regions.

In the case of negative impacts, a relatively high differentiation between impacts on different types of areas is visible. Tendency to cut public spending in disfavour of the rural, enhanced depopulation, deficiencies in services and infrastructures, increased transaction and reorganisation costs and role of regulation rather than markets in guiding production are examples of impacts that are more common in remote rural areas than in urbanised areas or in rural areas close to urban areas.

Acknowledging the already-mentioned limitations for inferring from these data, one could nonetheless sum up these negative impacts as clearly dominated by the risks of environmental and social degradation accompanied by unstable conditions and adverse effects characterizing the contemporary transition of rural economies. These instabilities are accentuated by rising levels of inequality – between both regions and actors – and by reductions in public spending in the already disfavoured areas. These negative impacts of the trends are most acute outside functional urban areas, where depopulation also adds to the difficult situation.

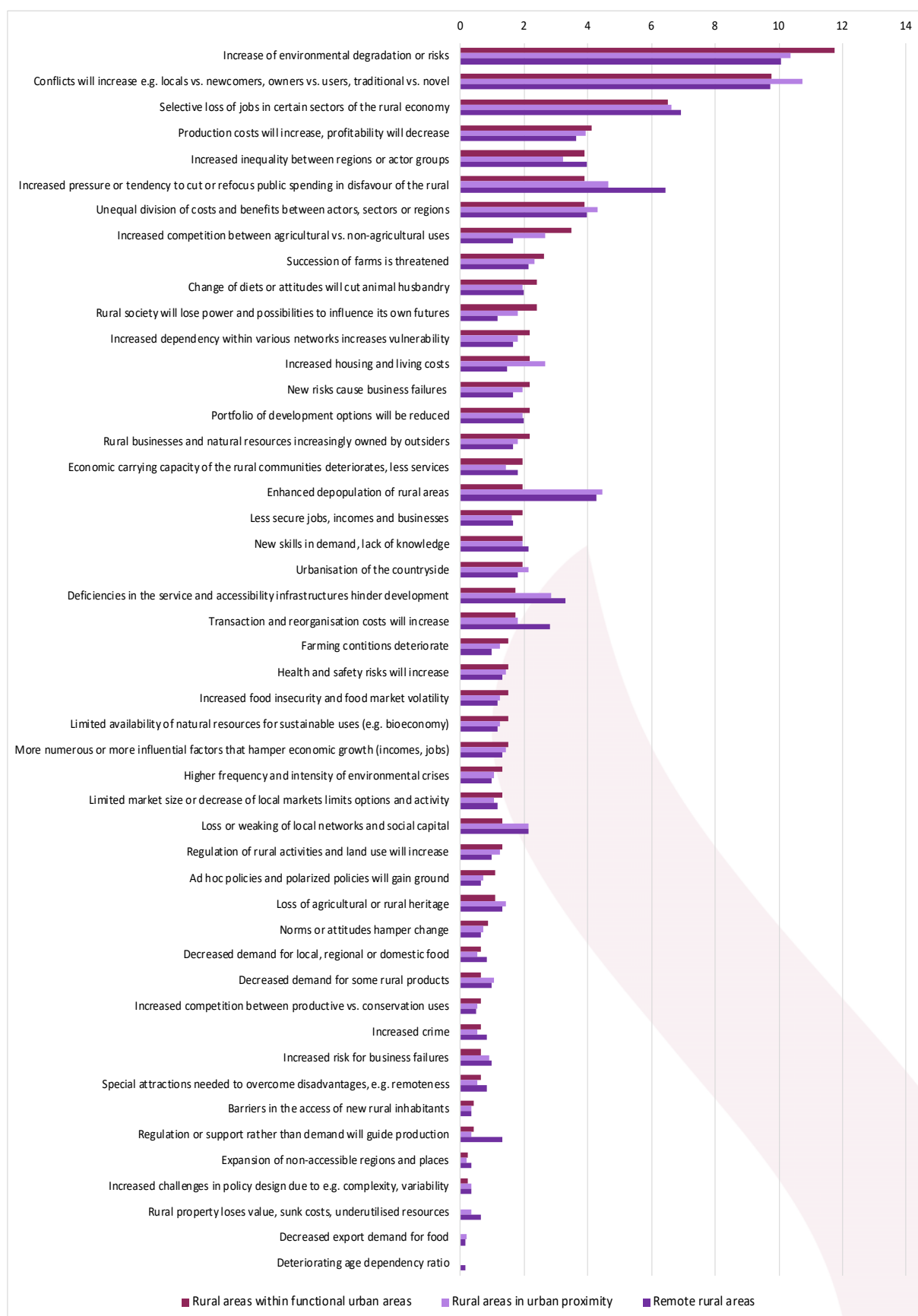


Figure 17: Negative impacts (impact categories) of the trends by type of rural area, %

3.3.3. Impacts on preselected aspects of rural development (thematic perspective)

The gender impacts of the identified trends (Figure 18) are generally positive: almost one third of the impacts are expected to provide better employment opportunities for women in rural areas, and more than a quarter will lead to a more balanced gender structure (although 11% of impacts will act in the opposite direction to the latter). Economic and demographic changes are also accompanied by improvements in gender equality as such, and in a general empowerment of women. However, it has to be noted that the overall total of trends that bear any identified impact for gender issues in rural areas is quite low (only 12% of all identified trends), and so even positive impacts of these trends might be limited in scope.

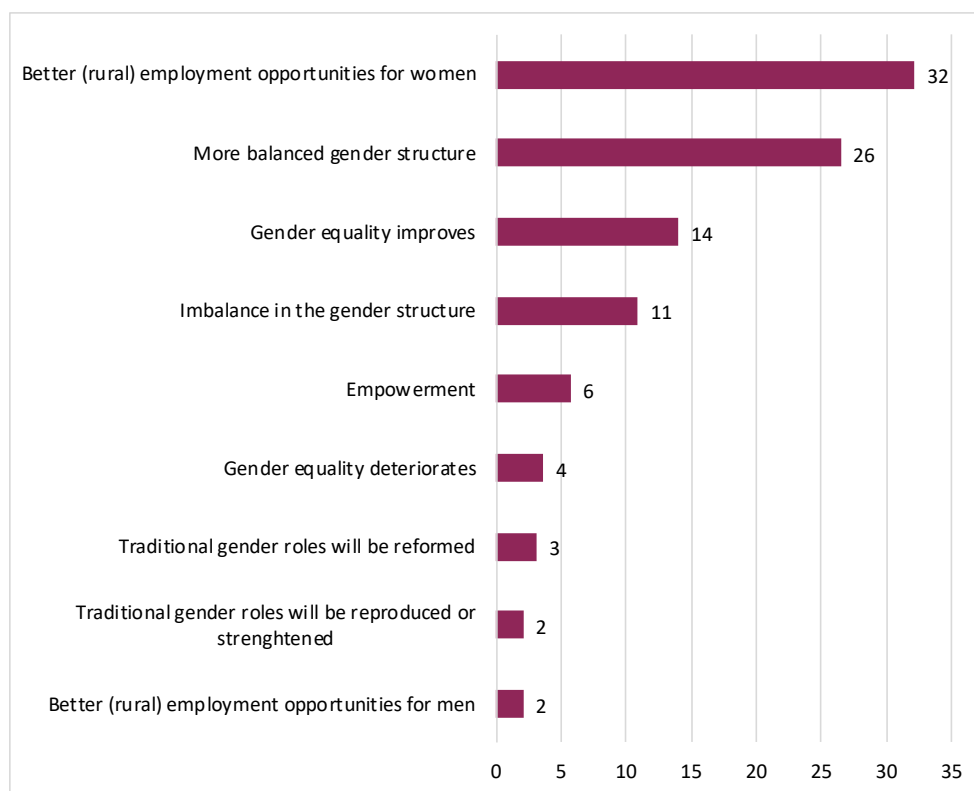


Figure 18: Gender impacts of the trends, % of specified impacts

In terms of social capital, the analysis of impacts paints a somewhat less optimistic picture (Figure 19). About 21% of trend impacts represent a decrease in social capital while 16%, conversely, indicate increase in social capital. Among the most frequent impacts are also new ways to or more productive interaction (13%), diversification of social capital (9%), new or more extensive networks (7%) or development of skills and knowledge (7%). However, rather common negative impacts on social capital will be also due to problems in the exploitation of existing social capital (7%).

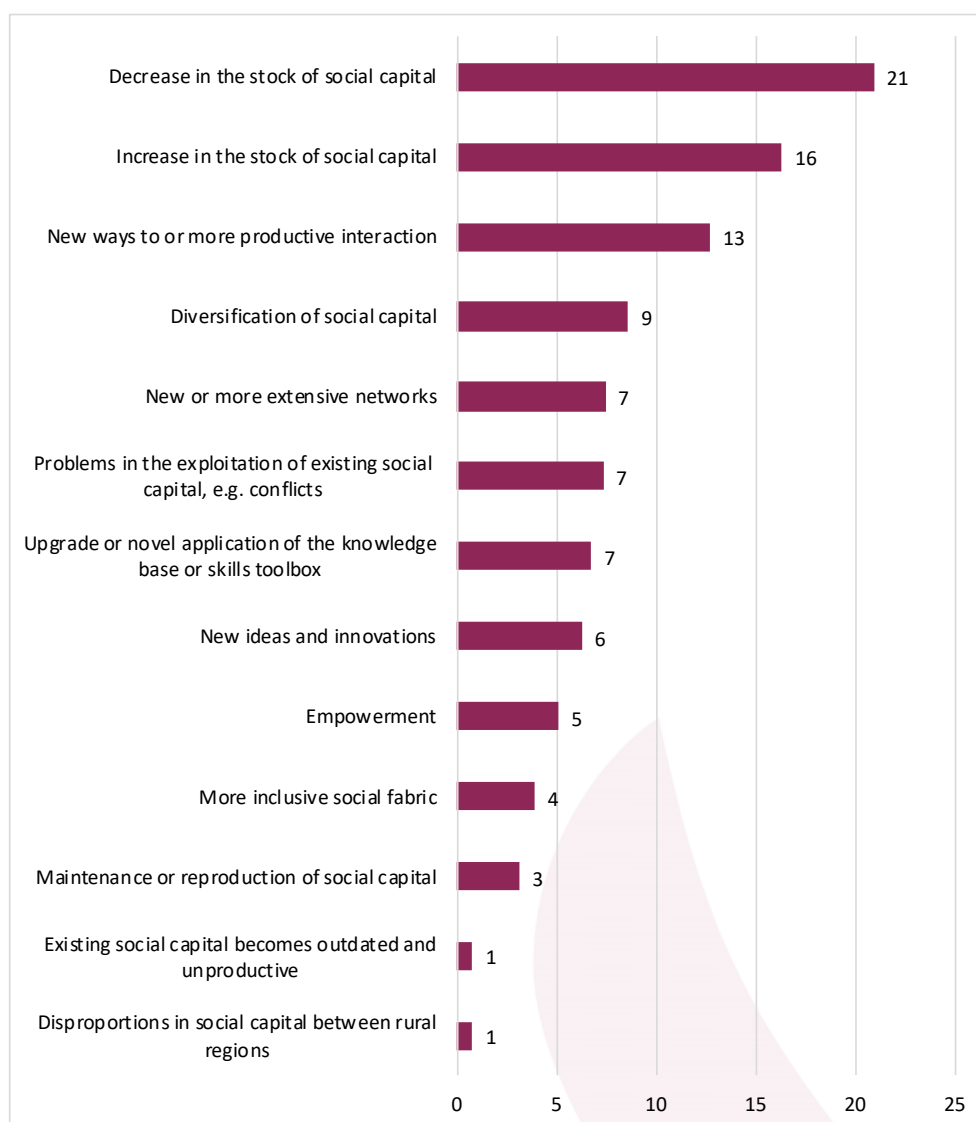


Figure 19: Impacts of the trends on social capital, % of specified impacts

Impacts on migration to and from rural areas are generally positive, since more than half of the identified migration impacts (56%) indicate that more people would move from cities to the countryside; and additional 10% of impacts show that current rates of rural depopulation would decrease (Figure 20). At the same time, one fourth of all specified impacts show the opposite, i.e. that rural depopulation will worsen with time due to outmigration. Therefore, the outcomes of various trends for rural areas will be definitely mixed. These results, however, should be considered in combination with the statistical analysis performed within this work package in order to gain more insight into the territorial dimension of that problem.

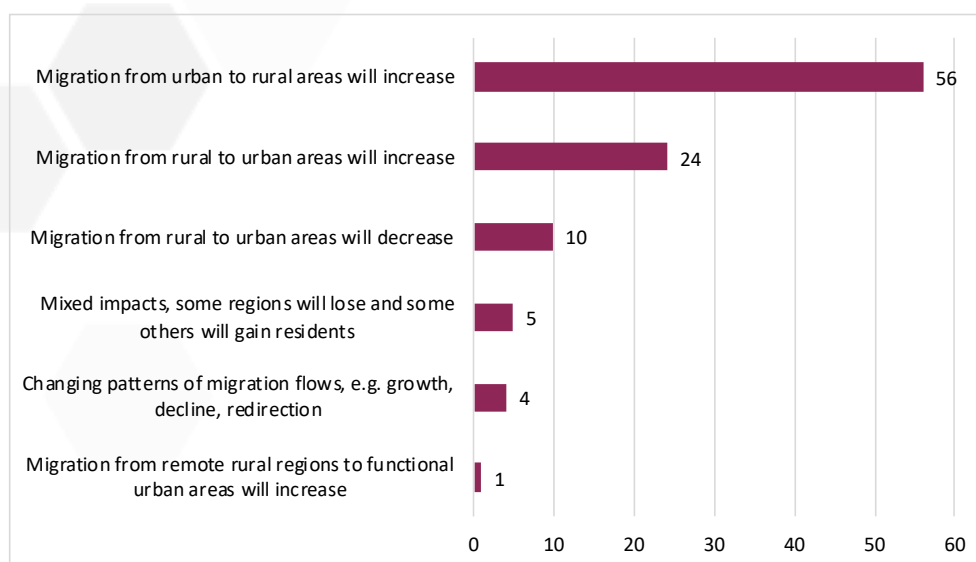


Figure 20: Migration impacts of the trends, % of specified impacts

According to the identified impacts, access to land in the future would be more complicated along with the progress of the contemporary trends (Figure 21). On the one hand, many trends and weak signals suggest that new organised opportunities for access to land will emerge in the coming years (19% of all access to land impacts). On the other hand, access to land will become more limited (17%) and, simultaneously, the demand for land will increase – not only for farming (14% of impacts), but even more importantly, for competing functions such as energy generation (15%) or residential purposes (11%). Overall, the results show mixed impacts of current trends on access to land that very much depend on the context in question.

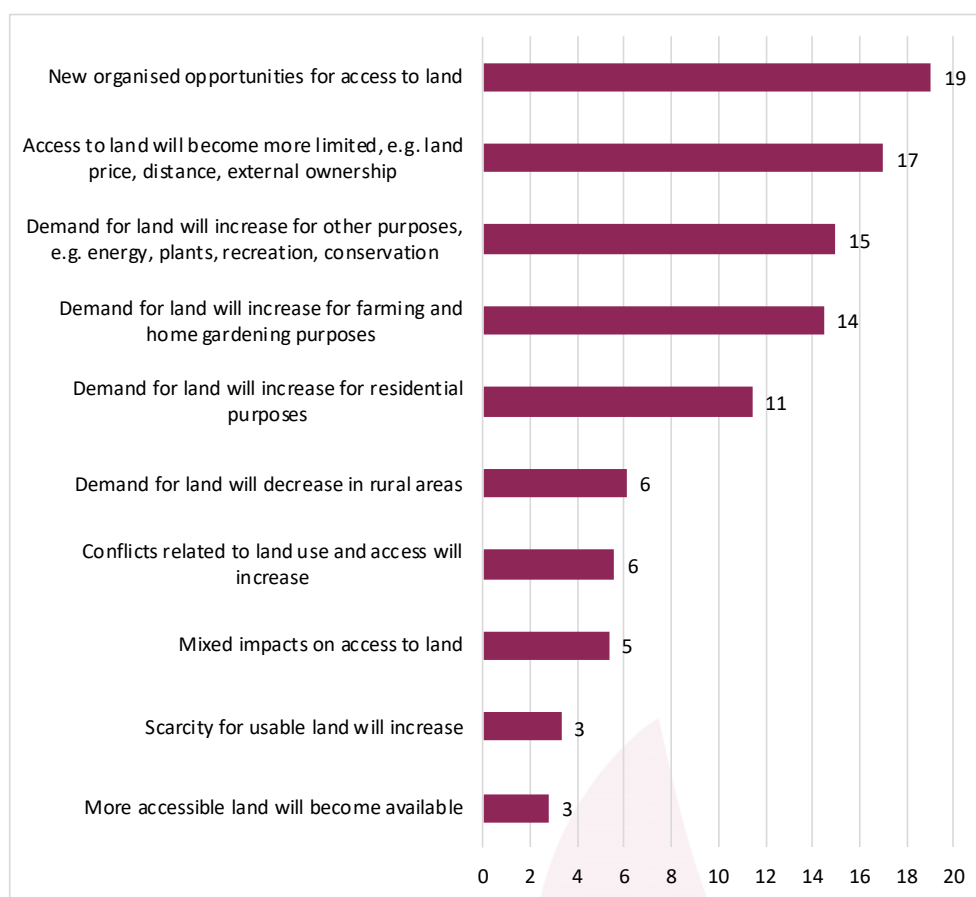


Figure 21: Impacts of the trends on access to land, % of specified impacts

Impacts of the trends on farm structures are mixed, too (Figure 22). Clearly, prospects for non-mainstream farms such as CSA schemes or ecological holdings will improve (29% of all impacts on farm structures). At the same time, 13% of impacts show that large farms would become more dominant and another 13% hint that the structural evolution of farms would be hampered by factors such as problems with succession or availability of resources. Correspondingly, the structure of European farms is expected to become more diversified as a result of adapting to new risks, policies or partnerships (12% of impacts). There will be some improvements that will benefit all types of farms (9% of impacts), but at the same time the decline of farm numbers might continue (8%). This diversity indicates that the impacts of trends on farm structures are highly trend specific and context specific.

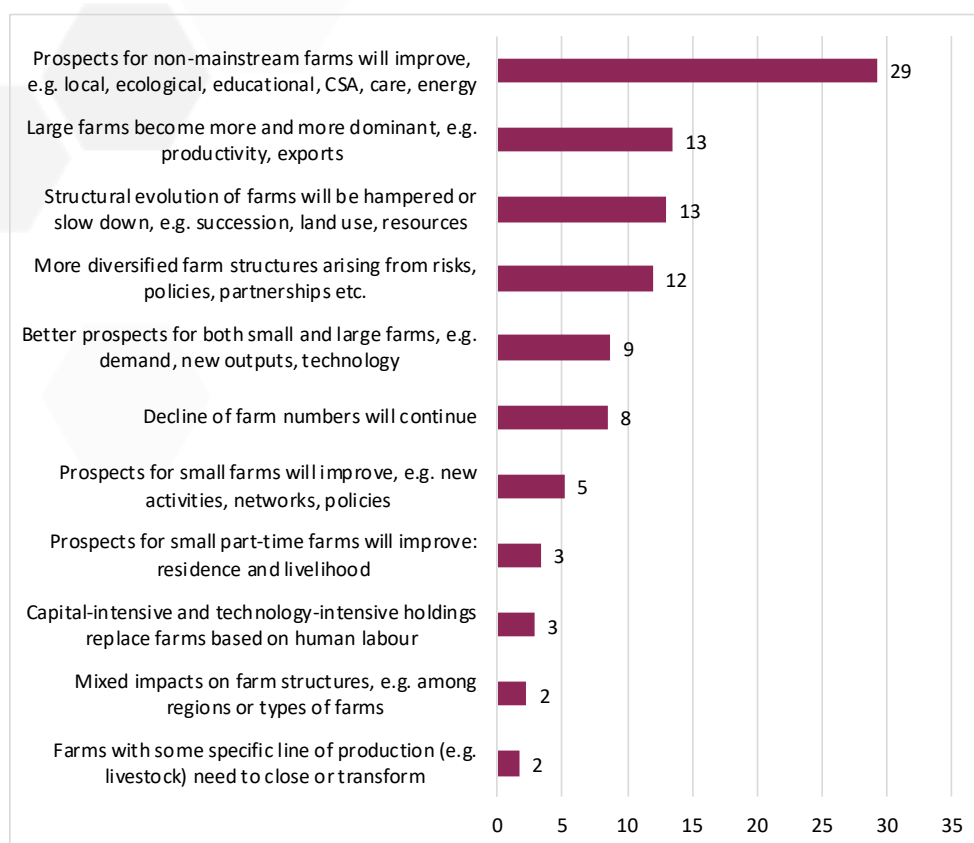


Figure 22: Impacts of the trends on farm structures, % of specified impacts

Finally, prospects for farming would also face varied and multidirectional impacts caused by the trends at hand (Figure 23). Some regions and farm businesses – for instance regions not suffering from climate change and organic farms – are expected to benefit from the trends unfolding in the future (34% of impacts on farming prospects). Nevertheless, 26% of impacts predict a generally negative impact on the prospects of farming in Europe. When the two following impacts – generally positive and mixed impacts on farming prospects (18% of impacts each) – are taken into account, it becomes clear that only some types of farming enterprises will have better starting conditions in the future. Future developments rather take a focused impact on farming regions, practices and structures than a general positive or negative stance.

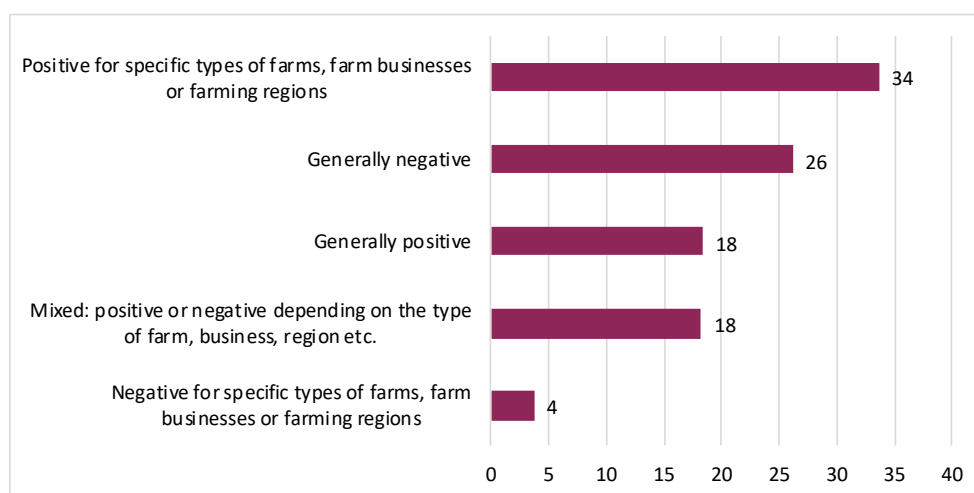


Figure 23: Impacts of the trends on farming prospects, % of specified impacts

3.3.4. Impacts on rural areas (territorial perspective) by trend type

As it was already mentioned, the analysis of impacts in the previous subsection did not distinguish between types of trends that were making particular impacts. In order to shed more light on this issue, Figure 24 presents positive and negative impacts on rural areas by rural area type as well as the type of trend (megatrend, trend or weak signal). The results clearly show significant differences in the impacts that various types of trends have in each type of rural area. In each case, megatrends bring more of the negative and less of the positive impacts, the impacts of trends are more balanced and weak signals bear the most positive impacts with the fewest negative impacts. This happens to the largest extent in remote rural areas where, looking at one indicator, almost 80% of megatrends bring negative impacts.

There are two factors that should be considered when trying to explain this setting. First, most weak signals were gathered not with a targeted search, but rather in more freely conducted searches performed by regional or national teams participating in the project. This means that their results could have been biased toward certain types of weak signals, e.g. more positive ones. Secondly, and perhaps more importantly, many weak signals are in fact responses to the megatrends or trends observed in one's surroundings – potentially primitive countertrends. For instance, degrowth (classified as a weak signal) is a direct response to a number of megatrends or trends (such as climate change or biodiversity loss). Therefore, many weak signals will be naturally more positive, and this could partly explain the observed proportions.

Nevertheless, there are some conclusions that can be drawn here. It seems that while ameliorating the negative impacts of trends or megatrends is a necessity, policy makers should pay much more attention to weak signals if they want to bring about positive change in territorial development of European rural areas. The overall impact of current, established trends suggests that they do not have as much potential to address rural decline. Of course, many weak signals are only potentially valuable for rural areas; probably most of them will fail to deliver any significant change. However, it is crucial to keep trying to support weak signals – even if it means navigating uncharted seas – since it is within them that policy makers have

to search for the best responses to the current challenges faced by rural areas. To put it metaphorically: rural problems of tomorrow will not be solved by the trends of yesterday; the question now is how to pick the right tools from a toolbox made up of all the weak signals emerging around us today.

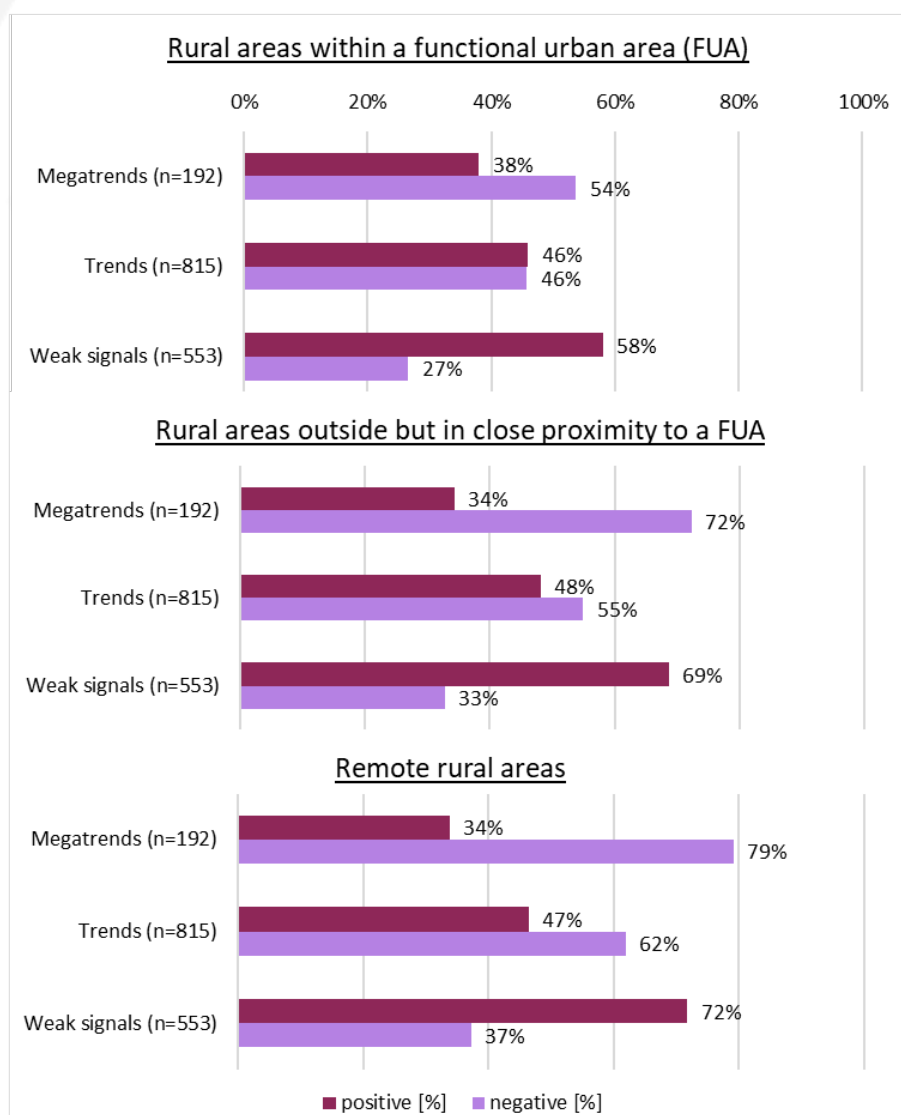


Figure 24: Trends with identified impacts on rural areas by trend type, % of all trend observations

3.3.5. Impacts on selected rural development issues (thematic perspective) by trend type

In terms of impacts that particular trend types bear on preselected issues of rural development (thematic approach), the situation is similar in case of three out of six analysed issues: gender, social capital and migration. In these cases, weak signals show the highest shares of impacts, although the differences are somewhat less pronounced than in case of the impacts considered from the territorial perspective. On the other hand, farm structures and farming prospects show an opposite situation: it is megatrends that bear the most impact on these issues, then trends, and in the end weak signals. For the last category, access to land,

the differences between the three trend types are not significant. Although the thematic approach includes both positive and negative impacts, the results still suggest where to look first when trying to address these six preselected rural development issues.

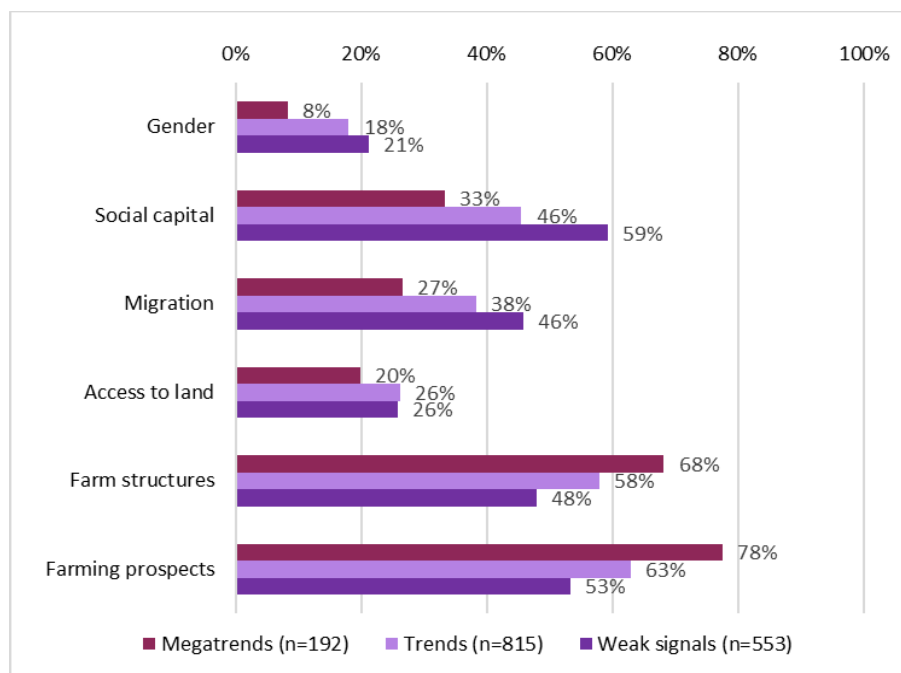


Figure 25: Trends with identified impacts on preselected rural development issues, % of all trend observations

3.3.6. Impacts on rural areas (territorial perspective) by trend topic

This subsection presents the impacts of the 1,560 trend observations – classified into 30 trend topics – on three types of rural areas. These data might be considered important primarily by policy makers who, depending on the type of rural areas, would like to find out which trend topics are associated with most positive and negative impacts.

Figure 26 shows the share of positive (X-axis) and negative (Y-axis) impacts on rural areas located within functional urban areas for each of the 30 trend topics. The most promising trends are located in the bottom-right square of the chart, where trends with most positive and least negative impacts can be found. A somewhat reassuring conclusion might come from the fact, that for this type of rural areas, almost half of all trend topics are located within this 'preferable' group. The most promising trend topics include: networks and collaboration, food, housing, energy and lifestyle and sustainability transition. This means that it will be relatively easy for rural areas within FUAs (Functional Urban Area) to capitalize on the developments taking place in trends related to these topics. What is also worth noting is that less than 25% of trend topics exceed the share of 50% of negative impacts; in practice, it suggests that rural areas within FUAs will have to focus on counteracting the negative impacts in relatively few aspects compared to other types of rural areas (although they might still be challenging).

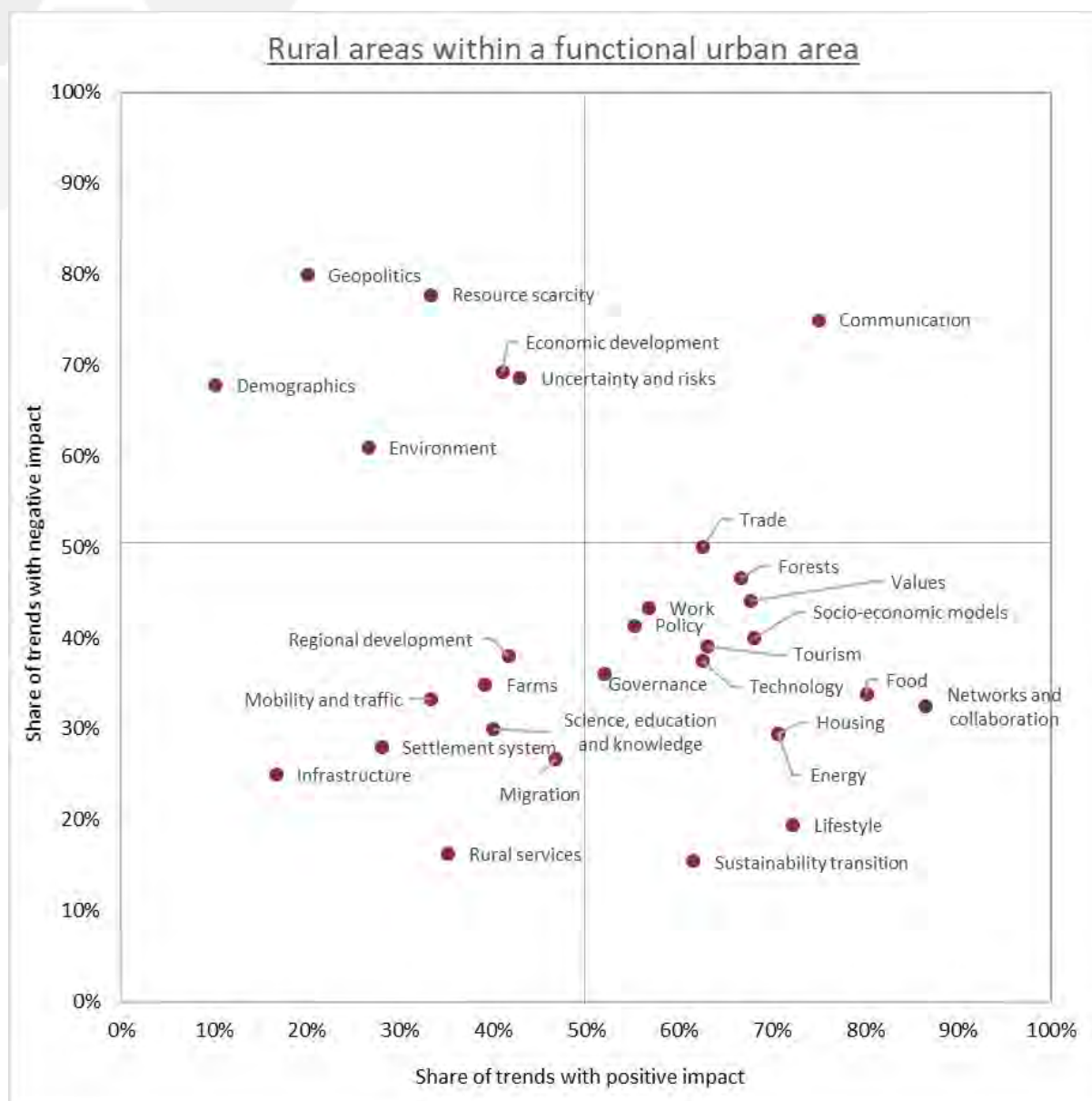


Figure 26: Shares of trends with positive and negative impacts for rural areas within FUAs, % of trend observations under each trend topic (NOTE: frequencies of the trends per topic are given in Table 26)

For rural areas located outside but in close proximity to FUAs (Figure 27), the setting is slightly more multifaceted. As in the case of rural areas within FUAs, half of the trend topics are in the 'desirable' group (bottom-right square). However, more than 33% of the trend topics are now exceeding the 50% share of negative impacts, thus indicating more extensive negative impacts. Moreover, some of those trends – particularly infrastructure, demographics and resource scarcity – are indeed very pronounced, reaching a share of about 90% negative impacts. Those are definitely problems that rural areas outside of FUAs would have to focus on to maintain adaptive capacities. At the same time, trends related to sustainability

transition, lifestyle or settlement system can be harnessed relatively safely and expectedly with positive impacts. It has to be noted though, that for most promising trends, the associated risks (i.e. the share of negative impacts) are clearly higher in rural areas in the proximity to FUAs than in rural areas within FUAs. In other words, there might be more uncertainty in the attempts to benefit from those (generally positive) trends, as they can be more easily balanced out by their negative impacts.

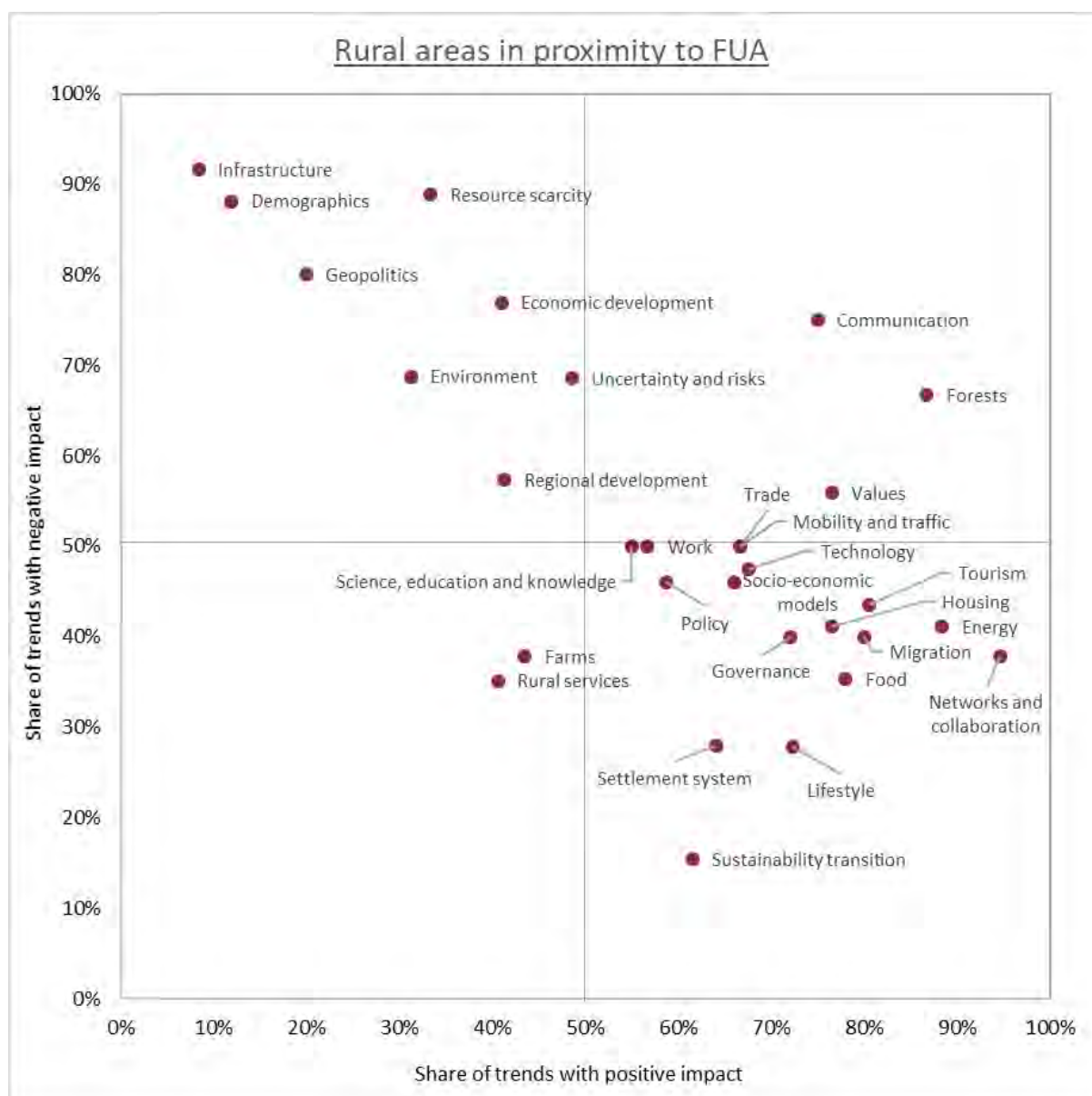


Figure 27: Shares of trends with positive and negative impacts for rural areas in proximity to FUAs, % of trend observations under each trend topic (NOTE: frequencies of the trends per topic are given in Table 26)

Finally, in case of remote rural areas the general setting is rather similar, but even more accentuated (Figure 28). The share of trends topics for which more than 50% trends have positive impacts (the right side of the chart) equals 70% and this is the highest share out of the three types of rural areas considered. However, most of the trends are also more risky for

Remote rural areas

Share of trends with negative impact (Y-axis) vs. Share of trends with positive impact (X-axis).

Key trends and their approximate coordinates (Positive Impact %, Negative Impact %):

- Demographics: (12, 93)
- Infrastructure: (8, 91)
- Resource scarcity: (35, 89)
- Geopolitics: (20, 80)
- Economic development: (40, 79)
- Environment: (35, 70)
- Regional development: (45, 63)
- Uncertainty and risks: (55, 74)
- Science, education and knowledge: (58, 65)
- Communication: (98, 75)
- Forests: (85, 67)
- Values: (75, 56)
- Migration: (82, 53)
- Energy: (88, 53)
- Work: (65, 60)
- Policy: (62, 55)
- Rural services: (68, 54)
- Trade: (60, 50)
- Technology: (68, 47)
- Sustainability transition: (70, 46)
- Housing: (80, 47)
- Tourism: (90, 46)
- Networks and collaboration: (85, 43)
- Lifestyle: (85, 36)
- Food: (72, 40)
- Socio-economic models: (68, 30)
- Governance: (65, 40)
- Mobility and traffic: (55, 44)
- Farms: (45, 46)
- Settlement system: (15, 44)

RURALIZATION GRANT AGREEMENT No 817642

3.3.7. Impacts on selected aspects of rural development (thematic perspective) by trend topic

This final subsection looks upon the impacts of assessed 1,560 trend observations (arranged into the same 30 topics) on preselected aspects of rural development (i.e. from the thematic perspective). Table 26 shows shares of trends within the 30 trend topics that have an impact on the same six thematic impacts related to rural development that were considered earlier (gender, social capital, migration, access to land, farm structures and farming prospects). In terms of gender impacts, none of the topics exceeds the share of 50% positive trends – there are no dominant topics with a clear positive impact on gender-related issues. In the case of social capital, lifestyle and communication are the trend topics which could bring about mostly positive impacts. In the case of migration, these are housing, lifestyle and, not surprisingly, migration. In case of access to land, energy, forests and housing are the topics hosting trends that have most positive influence, albeit none of them in a very evident way. Finally, farm structures and farming prospects are similar in the sense that energy, resource scarcity and technology affect them positively to the largest extent. In case of farming prospects, however, communication also seems crucial.

Table 26: Shares of trends with identified positive impacts, % of trend observations under each trend topic

Trend topic	Trend count	Share (%) of trends within the trend topic that have a positive impact on:					
		Gender equality	Social capital	Migration	Access to land	Farm structures	Farming prospects
Communication	4	50	100	75	0	0	100
Demographics	59	44	69	36	14	76	78
Economic development	39	13	31	23	18	36	54
Energy	17	0	41	41	65	88	82
Environment	64	3	14	22	31	59	64
Farms	304	13	38	19	26	75	74
Food	136	15	53	26	26	67	73
Forests	15	33	40	47	53	47	40
Geopolitics	5	0	20	40	0	0	40
Governance	25	12	40	44	20	24	20
Housing	34	15	76	88	50	41	35
Infrastructure	12	0	58	50	0	58	75
Lifestyle	36	28	81	81	44	44	42
Migration	15	20	67	80	20	33	33
Mobility and traffic	18	17	39	44	17	11	22
Networks and collaboration	37	43	76	38	30	57	46
Policy	87	15	45	26	29	49	52
Regional development	281	23	56	54	19	44	61
Resource scarcity	18	6	39	50	72	78	83
Rural services	37	14	59	54	8	22	27
Science, education and knowledge	20	20	75	50	10	35	50
Settlement system	25	8	28	64	20	24	36
Socio-economic models	50	12	48	34	32	70	68
Sustainability transition	13	0	46	38	23	54	54
Technology	40	8	28	23	15	75	80
Tourism	46	30	63	67	26	46	52
Trade	24	17	38	21	17	67	71
Uncertainty and risks	35	9	34	40	26	37	57
Values	34	38	68	53	35	71	74
Work	30	30	60	70	20	40	43

NOTE: Top-5 highest shares of trends with positive impacts for each rural development issue are highlighted; shares 50% or higher are indicated by bold font.

3.4 A more detailed look at the trends and their impacts

Looking at the prospects for finding feasible ingredients for the adoption or design of new practices and policies which promote rural regeneration, the nexus between the trends and their impacts is interesting. When a specific impact is the one to be reached for, the trends that are observed to relate to this specific impact are good candidates for further

investigation. Due to presence of diverse contexts and interpretations, the nexus is only indicative but still provides some avenues ahead toward finding ways to benefit from specific trends or to tackle their negative impacts.

Table 27 presents the positive impact categories of all trends and indicates TOP-3 trends for each impact by type of rural area. If several trends have the same number of observations, they are all listed. The table shows that each impact is associated with a specific set of trends. This means that **there is no single or few trends – a silver bullet – that would bring about the positive rural future, but specific positive aspects are related to a subset of the trends.** If, for example, a specific remote rural region would like to improve the prospects for small farms, the regional actors and stakeholder could consider how to generate community-oriented food systems, how to support micro- and small units, how to promote sustainability transition and how to challenge or integrate with the dominant food regime. Taking another example: if the possibility to adopt new working practices was pursued, then trends concerning remote work, creative economy and rural hubs could be worth of studying. As discussed earlier, each trend hosts a number of manifestations and varieties and might ask for conforming or opposing actions. The trends associated to each impact are rather similar across types of rural areas, but there are slight differences especially in the case of remote rural areas.

Of course, it is also possible to pick up a trend that is considered to be possible to implement or have potential in the region and take a look which of the positive impacts are present and which could still become amplified. If, for example, heritage tourism would be this kind of a trend, the regional actors and stakeholder could evaluate whether impacts related to growth of local rural economies (incomes, jobs) and valorisation of existing rural sites, villages and heritage have been well reached. Even though the table is large and indicative, it may provide these kinds of insight when put under scrutiny for finding ingredients for local and regional development.

Table 27: Positive impacts (impact categories) of the trends by type of rural area and associated TOP-3 trends by impact (based on the number of observations)

Positive impact of the trends	TOP-3 trends by each positive impact (number of observations)		
	Rural areas within functional urban areas	Rural areas in urban proximity	Remote rural areas
Competitiveness: rural places and areas get new attractions and effective brands	Food tourism 3 Place branding 3 Public goods 3 Rural festival tourism 3 Rural lifestyle 3	Rural festival tourism 5 Food tourism 4 Creative economy 3 Place branding 3 Public goods 3 Rural lifestyle 3	Rural festival tourism 5 Creative economy 3 Diversification/specialisation of farms 3 Food tourism 3 Place branding 3 Rural lifestyle 3 Urbanisation 3
Economy: business benefits e.g. reduced costs, better productivity	Digital economy 9 Precision farming 3 Sharing economy 3	Digital economy 9 Precision farming 6 Knowledge economy 3 Sharing economy 3	Digital economy 9 Precision farming 8 Knowledge economy 3 Sharing economy 3
Economy: diversification of rural economies	Diversification of rural economy 7 Regional and local food 6 Food tourism 4 Integration of immigrants 4	Diversification of rural economy 9 Diversification/specialisation of farms 6 Regional and local food 6	Diversification of rural economy 9 Diversification/specialisation of farms 6 Regional and local food 6
Economy: growth of local rural economies (incomes, jobs)	Rural energy communities 7 Heritage tourism 5 Deconcentration 4 Rural entrepreneurship 4 Unequal development and inequality 4	Rural energy communities 7 Community-oriented food systems 5 Heritage tourism 5 Renewable and bioenergy 5	Rural energy communities 7 Community-oriented food systems 5 Diversification of rural economy 5 Heritage tourism 5 Renewable and bioenergy 5
Economy: halting of rural decline, preservation of activities	Commuting 2 Policy incidence and effectiveness 2 Rural decline 2 Rural festival tourism 2	Commuting 2 Policy incidence and effectiveness 2 Rural decline 2 Rural festival tourism 2 Quality of life 2	Rural decline 4 Commuting 2 Decarbonisation 2 Ecotourism 2 Policy incidence and effectiveness 2 Rural festival tourism 2 Quality of life 2
Economy: new or better rural development opportunities	Co-operatives 9 House and land squatting 6 Local paradigm 5 Social enterprises and entrepreneurs 5	Co-operatives 9 House and land squatting 6 Local paradigm 5 Social enterprises and entrepreneurs 5	Co-operatives 9 House and land squatting 6 Local paradigm 5 Social enterprises and entrepreneurs 5
Economy: new or better rural services and/or better access to services	Social innovations 4 Digital economy 3 Local paradigm 3 Migration patterns 3 Social enterprises and entrepreneurs 3	Social innovations 4 Digital economy 3 eGovernment 3 Local paradigm 3 Migration patterns 3 Rural volunteering 3 Social enterprises and entrepreneurs 3	Digital economy 6 Rural volunteering 5 Social innovations 4
Economy: valorisation of existing rural sites, villages and heritage	Heritage tourism 5 Environmentalism 3 Migration patterns 3 Rural artisans 3	Heritage tourism 5 Environmentalism 3 Migration patterns 3 Rural artisans 3	Heritage tourism 6 Community-based action 3 Environmentalism 3 Natural and cultural heritage 3 Rural artisans 3
Employment: increased supply of rural labour force	Migration patterns 9 Care services 2 Labour shortage 2	Migration patterns 9 Care services 2 Labour shortage 2	Migration patterns 10 Care services 2 Labour shortage 2
Environment: increase of conservation and/or reduction of degradation	Circular economy 6 Farming techniques and intensity changes 4 Pollution 4 Practice-oriented food systems 4 Sustainability transition 4	Circular economy 6 Environmental conservation 5 Farming techniques and intensity changes 4 Pollution 4 Practice-oriented food systems 4 Sustainability transition 4	Circular economy 6 Environmental conservation 5 Farming techniques and intensity changes 4 Pollution 4 Practice-oriented food systems 4 Sustainability transition 4

Environment: mitigation of climate change	Environmentalism 3 Renewable and bioenergy 3 Sustainability transition 3	Environmental conservation 3 Environmentalism 3 Forest coverage 3 Renewable and bioenergy 3 Sustainability transition 3	Environmental conservation 3 Environmentalism 3 Forest coverage 3 Renewable and bioenergy 3 Sustainability transition 3
Farms: adoption of new management practices that reduce risks	Agroecology 2 Farmers facing new risks 2	Agroecology 2 Farmers facing new risks 2 Farming techniques and intensity changes 1	Agroecology 2 Farmers facing new risks 2 Farming techniques and intensity changes 1
Farms: better or more stable farm income and employment	Practice-oriented food systems 5 Market volatility 4 Agritourism 3 Regional and local food 3	Diversification/specialisation of farms 6 Practice-oriented food systems 5 Market volatility 4	Diversification/specialisation of farms 5 Practice-oriented food systems 5 Regional and local food 5
Farms: better prospects for agro-ecological, environmental or organic farming, farms and farmers	Agroecology 7 Community-oriented food systems 6 Practice-oriented food systems 4	Agroecology 7 Practice-oriented food systems 5 Community-oriented food systems 3 Diversification/specialisation of farms 3 Environmental conservation 3 Sustainability transition 3	Agroecology 7 Practice-oriented food systems 5 Community-oriented food systems 3 Diversification/specialisation of farms 3 Environmental conservation 3 Sustainability transition 3
Farms: better prospects for diversification of farming practices and activities	Diet-oriented food systems 4 Agritourism 3 Migration patterns 3 Self-sufficiency 3	Diet-oriented food systems 4 Agritourism 3 Bioeconomy 3 Migration patterns 3 Self-sufficiency 3	Diet-oriented food systems 4 Agritourism 3 Bioeconomy 3 Self-sufficiency 3
Farms: better prospects for small farms	Community-oriented food systems 3 Micro- and small units 3 Dominant food regime 2 Sustainability transition 2	Community-oriented food systems 3 Micro- and small units 3 Dominant food regime 2 Sustainability transition 2	Community-oriented food systems 3 Micro- and small units 3 Dominant food regime 2 Sustainability transition 2
Farms: better prospects for succession or new entrants to farming	New entrants 7 Business ownership 5 Governance gaps and conflicts 4 Succession 4	New entrants 7 Business ownership 5 Partnerships 5	New entrants 7 Partnerships 5 Governance gaps and conflicts 4 Succession 4
Farms: improved productivity and resource efficiency	Eco-efficiency 2 Farming techniques and intensity changes 2 Precision farming 2	Eco-efficiency 2 Farming techniques and intensity changes 2 Precision farming 2	Eco-efficiency 2 Precision farming 2 Partnerships 1
Farms: introduction of novel service activities (shops, care etc.) for the farms	Educational farms 3 Meaning and experience economy 3 Regional and local food 3 Social enterprises and entrepreneurs 3	Educational farms 3 Meaning and experience economy 3 Regional and local food 3 Social enterprises and entrepreneurs 3	Educational farms 3 Meaning and experience economy 3 Social enterprises and entrepreneurs 2
Food: change of diets will favour crop products, natural and novel products	Diet-oriented food systems 7 Environmentalism 3 Wild food 1	Diet-oriented food systems 7 Environmentalism 3 Wild food 1	Diet-oriented food systems 5 Environmentalism 3 Wild food 1
Food: genesis of novel producer, prosumer or consumer organisations	Community-oriented food systems 13 Co-operatives 6 Community-based action 3 Diet-oriented food systems 3 Farming lifestyle 3 Food security 3 Regional and local food 3 Self-sufficiency 3	Community-oriented food systems 13 Co-operatives 6 Community-based action 3 Diet-oriented food systems 3 Farming lifestyle 3 Regional and local food 3 Self-sufficiency 3	Community-oriented food systems 11 Co-operatives 3 Community-based action 3 Farming lifestyle 3 Regional and local food 3
Food: less food waste and more efficient utilisation of raw materials	Techno-food 2 Food waste 1	Techno-food 2 Food waste 1	Techno-food 2 Food waste 1
Food: transition toward fairer food chain	Transparency of food system 5 Community-oriented food systems 3 Delivery-oriented food systems 1	Transparency of food system 5 Community-oriented food systems 3 Delivery-oriented food systems 1	Transparency of food system 5 Community-oriented food systems 2

Food: transition toward more transparent supply chains	Circular economy 3 Delivery-oriented food systems 2	Circular economy 3 Delivery-oriented food systems 2	Delivery-oriented food systems 2
Housing: demand for ecological, affordable and safe rural housing will increase	Cheap housing in rural fabric 3 Community-based action 3 Deconcentration 3	Climate change 3 Community-based action 3 Counterurbanisation 3 Deconcentration 3 Pandemics and epidemics 3 Rural second homes and villas 3 Urbanisation 3	Creative economy 5 Rural second homes and villas 5 Climate change 3 Community-based action 3 Counterurbanisation 3 Pandemics and epidemics 3
Infrastructure: improved infrastructures	Manifestations of new technologies 3	Manifestations of new technologies 3 Unequal development and inequality 3 Rural hubs 2	Rural hubs 5 Manifestations of new technologies 3 Unequal development and inequality 3
Knowledge and competence: preservation or development of skills and knowledge	Community-oriented food systems 6 DIY movement 6 Collaborative problem solving 3 Home gardening 3 New entrants 3 Smart solutions in rural space 3	Community-oriented food systems 6 DIY movement 6 Collaborative problem solving 3 Home gardening 3 New entrants 3 Smart solutions in rural space 3	Community-oriented food systems 6 DIY movement 6 Collaborative problem solving 3 Home gardening 3 New entrants 3 Smart solutions in rural space 3
Lifestyle: expansion of alternative lifestyles e.g. degrowth, slow, natural	Slow food and slow living 5 Alternative lifestyles 3 Degrowth 3 New nomads 3	Meaning and experience economy 6 Slow food and slow living 5 Alternative lifestyles 3 Degrowth 3 New nomads 3	Meaning and experience economy 6 Slow food and slow living 5 Alternative lifestyles 3 Degrowth 3 New nomads 3
Lifestyle: multi-local lifestyle becomes more common enhancing rural economies	Commuting 3 New nomads 2 Multi-local living 1	Commuting 5 Multi-local living 2 New nomads 2	Commuting 3 Multi-local living 2 New nomads 2
Markets: expansion of client population (online or new segments) for rural businesses	Delivery-oriented food systems 15 e-commerce 9 Regional and local food 6	Delivery-oriented food systems 15 e-commerce 9 Regional and local food 6	Delivery-oriented food systems 14 e-commerce 9 Regional and local food 6
Markets: expansion of silver economy implies more demand for care and health services	Ageing population 1	Ageing population 1	Ageing population 1
Markets: increased export demand for sustainable food products	Food demand 2 Climate change 1 Globalisation 1 Population growth 1 Resource competition 1	Food demand 2 Climate change 1 Globalisation 1 Population growth 1 Resource competition 1	Food demand 2 Climate change 1 Globalisation 1 Population growth 1 Resource competition 1
Markets: more demand for (rural) raw materials (e.g. biomasses)	Renewable and bioenergy 7 Sustainability transition 4 Climate change 3 Environmentalism 3	Renewable and bioenergy 7 Sustainability transition 5 Climate change 3 Environmentalism 3	Renewable and bioenergy 7 Sustainability transition 5 Climate change 3 Environmentalism 3
Markets: more demand for local (rural) products and services	Multi-local living 6 Regional and local food 4 Changing favourability of agricultural regions 3 Food tourism 3 Local paradigm 3 Meaning and experience economy 3 Peri-urbanisation 3 Rural festival tourism 3 Rural tourism 3 Rural volunteering 3	Local paradigm 6 Multi-local living 6 Rural tourism 6	Rural tourism 9 Local paradigm 6 Migration patterns 6
Markets: more demand for local, regional or domestic food	Regional and local food 7 Climate change 3 Diet-oriented food systems 3 Diversification/specialisation of farms 3 Pandemics and epidemics 3	Regional and local food 7 Diet-oriented food systems 6 Climate change 3 Diversification/specialisation of farms 3 Pandemics and epidemics 3	Regional and local food 8 Diet-oriented food systems 6 Climate change 3 Diversification/specialisation of farms 3 Pandemics and epidemics 3

		Productivity and competitiveness 3 Self-sufficiency 3	Productivity and competitiveness 3
Markets: more demand for rural nature-based and immaterial welfare services	Degrowth 3 Wellness 2 Meaning and experience economy 1	Degrowth 3 Wellness 2 Meaning and experience economy 1	Degrowth 3 Wellness 2 Meaning and experience economy 1
Markets: niche markets will proliferate	Dual food markets: price and quality 6 Circular economy 3 Productivity and competitiveness 3	Dual food markets: price and quality 6 Circular economy 3 Changing food trade patterns 2 DIY movement 2	Dual food markets: price and quality 6 Changing food trade patterns 2 DIY movement 2 Techno-food 2
Markets: the image of rural will be revised and updated	Local paradigm 2 Sustainability transition 2	Sustainability transition 2	Sustainability transition 2
Mobility and traffic: improved access to rural areas and destinations	Accessibility 1 New mobility systems 1	Accessibility 1 New mobility systems 1	Accessibility 1 New mobility systems 1
Mobility and traffic: increase in commuting and/or commuting area	Manifestations of new technologies 2 Urbanisation 1	Manifestations of new technologies 2	Manifestations of new technologies 2
Organisation and society: access to new business, professional or development networks	Community-oriented food systems 3 Environmental conservation 3 Professional networks 3 Smart solutions in rural space 3	Community-oriented food systems 3 Environmental conservation 3 Food security 3 Professional networks 3 Smart solutions in rural space 3	Community-oriented food systems 3 Environmental conservation 3 Professional networks 3 Rural hubs 3 Smart solutions in rural space 3
Organisation and society: better prospects for rural energy, service, food, housing etc. communities and cooperatives	Community-oriented food systems 3 Postmaterialism 3 Ecovillages 1	Community-oriented food systems 3 Postmaterialism 3 Smart solutions in rural space 3	Community-oriented food systems 3 Postmaterialism 3 Smart solutions in rural space 3
Organisation and society: enhanced communality	Individualisation 3 Local paradigm 3 Governance gaps and conflicts 2 Micro- and small units 2	Farm population 3 Individualisation 3 Local paradigm 3	Farm population 3 Individualisation 3 Local paradigm 3
Organisation and society: more equal and inclusive social fabric	Gender roles 8 Community-based action 7 Care services 6 Unequal development and inequality 6	Gender roles 8 Integration of immigrants 8 Care services 6	Gender roles 8 Community-based action 7 Care services 6 Integration of immigrants 6
Organisation and society: transition toward better connected civic society	Collaborative problem solving 3 Socio-economic models 3 Sustainable food 3	Collaborative problem solving 3 Community-based action 3 Socio-economic models 3 Sustainable food 3	Collaborative problem solving 3 Community-based action 3 Socio-economic models 3 Sustainable food 3
Organisation and society: transition toward better problem solving capacity	Collaborative problem solving 3 Governance gaps and conflicts 3 Concentration 2	Collaborative problem solving 3 Governance gaps and conflicts 3 Changing role of the public sector 2 Concentration 2	Collaborative problem solving 3 Concentration 3 Extreme weather events 3 Governance gaps and conflicts 3
Organisation and society: transition toward more influential rural society	Deconcentration 6	Deconcentration 6	Deconcentration 6
Place identity and brand: enhanced local, regional or rural identity or brand	Food tourism 2 Natural and cultural heritage 2	Food tourism 2 Natural and cultural heritage 2	Food tourism 2 Natural and cultural heritage 2
Policy: better resourced and targeted local policies	Governance gaps and conflicts 4 Environmental conservation 3 Exploitation of development potential 3 Local paradigm 3	Governance gaps and conflicts 4 Environmental conservation 3 Exploitation of development potential 3 Local paradigm 3	Governance gaps and conflicts 4 Environmental conservation 3 Environmentalism 3 Exploitation of development potential 3 Local paradigm 3
Population: entry of new inhabitants to rural areas	Migration patterns 17 Pandemics and epidemics 7 Integration of immigrants 6	Migration patterns 23 Pandemics and epidemics 10 Integration of immigrants 6	Migration patterns 28 Pandemics and epidemics 10 Integration of immigrants 6

Socio-cultural and environmental capital: conservation of rural environment	Policy incidence and effectiveness 3 Practice-oriented food systems 3 Secularisation vs. religiousness 2	Policy incidence and effectiveness 3 Practice-oriented food systems 3 Secularisation vs. religiousness 3	Policy incidence and effectiveness 3 Practice-oriented food systems 3 Secularisation vs. religiousness 3
Socio-cultural and environmental capital: conservation of rural heritage	Natural and cultural heritage 9 Creative economy 3 Ecovillages 3 Food tourism 3	Natural and cultural heritage 9 Creative economy 3 Ecovillages 3 Food tourism 3 Rural second homes and villas 3	Natural and cultural heritage 9 Creative economy 3 Ecovillages 3 Food tourism 3 Rural second homes and villas 3
Socio-cultural and environmental capital: increase of socio-cultural diversity	Integration of immigrants 3 Rural lifestyle 3 Minorities' rights 2 Night-time economy 2	Integration of immigrants 3 Rural lifestyle 3 Minorities' rights 2	Integration of immigrants 3 Rural lifestyle 3 Minorities' rights 2
Trade: imports of harmful products will decrease	Biodiversity loss 2	Biodiversity loss 2	Biodiversity loss 2
Welfare: better animal welfare	–	Animal welfare 1	Animal welfare 1
Welfare: better quality of life	Innovations 3 Smart solutions in rural space 3 Manifestations of new technologies 2	Innovations 3 Smart solutions in rural space 3 Manifestations of new technologies 2 Rural lifestyle 2	Innovations 3 Smart solutions in rural space 3 Manifestations of new technologies 2 Rural lifestyle 2
Work: possibility to adopt new working practices, e.g. remote work, virtual teams	Remote work 10 Creative economy 6 Rural hubs 5	Remote work 12 Rural hubs 7 Creative economy 6	Remote work 12 Rural hubs 9 Creative economy 6

Table 28 presents the negative impact categories of all trends and indicates TOP-3 trends for each impact by type of rural area. If several trends have the same number of observations, they are all listed. The table shows that also each negative impact is associated with a specific set of trends. This means that **there is no single or few trends that would bring about negative rural futures, but specific negative aspects are related to a subset of the trends.** The table also reminds that **most favourable trends have also negative impacts to at least some rural regions.** If, for example, the problem of limited market size or decrease of local markets was considered, the trends and regional and local food, bioeconomy and sharing economy could face specific challenges and ask for novel solutions and the trend of rural decline could be tackled or reversed with the help of these and some other trends. As obvious, the association between the trends and the impacts is not straightforward but multifaceted and it may assist in finding useful questions rather than in providing clear answers. This is very typical setting in the futures field where time, place and dynamics maintain ambiguity.

Table 28: Negative impacts (impact categories) of the trends by type of rural area and associated TOP-3 trends by impact (based on the number of observations)

Negative impact of the trends	TOP-3 trends by each negative impact (number of observations)		
	Rural areas within functional urban areas	Rural areas in urban proximity	Remote rural areas
Competitiveness: special attractions needed to overcome disadvantages, e.g. remoteness	Labour shortage 1 Rural festival tourism 1 Rural tourism 1	Labour shortage 3	Labour shortage 3 Meaning and experience economy 1 New nomads 1
Economy: economic carrying capacity of the rural communities deteriorates, less services	Micro- and small units 3 Unequal development and inequality 3 Deconcentration 2	Unequal development and inequality 3 Deconcentration 2 Micro- and small units 2	Deconcentration 3 Unequal development and inequality 3 Labour shortage 2 Micro- and small units 2
Economy: increased housing and living costs	Circular economy 3 Migration patterns 3 Multi-local living 2 Urbanisation 2	Multi-local living 4 Circular economy 3 Migration patterns 3	Multi-local living 4 Accessibility 2 Migration patterns 1 Rural artisans 1 Rural festival tourism 1
Economy: increased pressure or tendency to cut or refocus public spending in disfavour of the rural	Local paradigm 4 Migration patterns 3 Ageing population 2 Community-based action 2 Degrowth 2 Food security 2	Local paradigm 4 Ageing population 3 Changing role of the public sector 3 Migration patterns 3 Pandemics and epidemics 3	Concentration 7 Local paradigm 4 Ageing population 3 Changing role of the public sector 3 Food security 3 Migration patterns 3 Pandemics and epidemics 3 Rural decline 3
Economy: increased risk for business failures	Community-oriented food systems 1 Social media 1 Sustainability transition 1	Meaning and experience economy 2 Community-oriented food systems 1 Creative economy 1 Social media 1	Meaning and experience economy 2 Community-oriented food systems 1 Creative economy 1 Social media 1 Sustainability transition 1
Economy: more numerous or more influential factors that hamper economic growth (incomes, jobs)	Import competition 2 Labour shortage 2 Globalisation 1 Manifestations of new technologies 1 Shorter work time 1	Import competition 2 Labour shortage 2 Globalisation 1 Governance gaps and conflicts 1 Manifestations of new technologies 1 Shorter work time 1	Import competition 2 Labour shortage 2 Globalisation 1 Governance gaps and conflicts 1 Manifestations of new technologies 1 Shorter work time 1
Economy: rural property loses value, sunk costs, underutilised resources	–	Unequal development and inequality 2	Food tourism 2 Unequal development and inequality 2
Economy: selective loss of jobs in certain sectors of the rural economy	Rural decline 5 Innovations 3 Renewable and bioenergy 3	Rural decline 8 Innovations 3 Renewable and bioenergy 3	Rural decline 8 Climate change 5 Concentration 3 Innovations 3 Renewable and bioenergy 3
Economy: transaction and reorganisation costs will increase	Climate change 3 Rural festival tourism 2 Cheap housing in rural fabric 1 Sharing economy 1 Unequal development and inequality 1	Climate change 3 Rural festival tourism 2 Cheap housing in rural fabric 1 Gig economy 1 Partnerships 1 Sharing economy 1 Unequal development and inequality 1	Climate change 3 Migration patterns 3 Community-oriented food systems 2 e-commerce 2 Rural festival tourism 2
Environment: higher frequency and intensity of environmental crises	Climate change 3 Biodiversity loss 2 Productivity and competitiveness 1	Climate change 3 Biodiversity loss 2 Productivity and competitiveness 1	Climate change 3 Biodiversity loss 2 Productivity and competitiveness 1
Environment: increase of environmental degradation or risks	Outsourcing of environmental impacts 5 Biodiversity loss 4 Pollution 4	Outsourcing of environmental impacts 6 Biodiversity loss 4 Pollution 4	Biodiversity loss 5 Outsourcing of environmental impacts 5 Pollution 4

		Renewable and bioenergy 4	Renewable and bioenergy 4
Environment: limited availability of natural resources for sustainable uses (e.g. bioeconomy)	Resource competition 5 Bioeconomy 2	Resource competition 5 Bioeconomy 2	Resource competition 5 Bioeconomy 2
Farms: farming conditions deteriorate	Extreme weather events 3 Changing favourability of agricultural regions 2 Biodiversity loss 1 Urban sprawl 1	Changing role of the public sector 3 Changing favourability of agricultural regions 2 Biodiversity loss 1 Urban sprawl 1	Extreme weather events 3 Changing favourability of agricultural regions 2 Biodiversity loss 1
Farms: new risks cause business failures	Regional and local food 3 Extreme weather events 2 Labour shortage 2	Regional and local food 3 Changing role of the public sector 2 Labour shortage 2	Regional and local food 3 Extreme weather events 2 Labour shortage 2
Farms: portfolio of development options will be reduced	Food demand 3 Policy incidence and effectiveness 3 Ageing farmer population 2 Farmland prices 2	Food demand 3 Policy incidence and effectiveness 3 Ageing farmer population 2 Farmland prices 2	Ageing farmer population 3 Food demand 3 Policy incidence and effectiveness 3
Farms: production costs will increase, profitability will decrease	Changing food trade patterns 2 Dual food markets: price and quality 2 Environmentalism 2 Farming techniques and intensity changes 2 Fossil economy 2 Fragmentation of land ownership 2 Governance gaps and conflicts 2 Market volatility 2 Resource competition 2	Changing food trade patterns 2 Dual food markets: price and quality 2 Environmentalism 2 Farming techniques and intensity changes 2 Food demand 2 Fossil economy 2 Fragmentation of land ownership 2 Governance gaps and conflicts 2 Market volatility 2 Resource competition 2	Changing food trade patterns 2 Dual food markets: price and quality 2 Environmentalism 2 Farming techniques and intensity changes 2 Food demand 2 Fossil economy 2 Fragmentation of land ownership 2 Governance gaps and conflicts 2 Market volatility 2 Resource competition 2
Farms: succession of farms is threatened	Succession 7 Rural decline 3 Business ownership 2	Succession 7 Rural decline 3 Business ownership 2	Succession 7 Rural decline 3 Business ownership 2
Food: change of diets or attitudes will cut animal husbandry	Diet-oriented food systems 8 Animal welfare 1 Climate change 1 Sustainability transition 1	Diet-oriented food systems 8 Animal welfare 1 Climate change 1 Sustainability transition 1	Diet-oriented food systems 9 Animal welfare 1 Climate change 1 Sustainability transition 1
Food: increased food insecurity and food market volatility	Market volatility 4 Climate change 3	Market volatility 4 Climate change 3	Market volatility 4 Climate change 3
Infrastructure: deficiencies in the service and accessibility infrastructures hinder development	Digital economy 2 Manifestations of new technologies 2 Smart solutions in rural space 2	Manifestations of new technologies 4 Rural decline 3 Digital economy 2 Smart solutions in rural space 2	Manifestations of new technologies 4 Rural decline 3 Digital economy 2 Smart solutions in rural space 2 Staycation 2
Knowledge and competence: new skills in demand, lack of knowledge	Precision farming 3 Labour shortage 2 Deconcentration 1 Governance gaps and conflicts 1 Renewable and bioenergy 1 Wild food 1	Precision farming 3 Eco-efficiency 2 Labour shortage 2	Precision farming 3 Eco-efficiency 2 Labour shortage 2
Land use: increased competition between agricultural vs. non-agricultural uses	Peri-urbanisation 3 Diversification of rural economy 2 Forest coverage 2	Peri-urbanisation 3 Commuting 2 Forest coverage 2	Forest coverage 2 Climate change 1 Deconcentration 1 Diversification of rural economy 1 Land management 1 Market volatility 1 Renewable and bioenergy 1 Speculative economy 1 Urban sprawl
Land use: increased competition between	Biodiversity loss 3	Biodiversity loss 3	Biodiversity loss 3

productive vs. conservation uses			
Markets: decreased demand for local, regional or domestic food	Techno-food 2 Community-oriented food systems 1	Techno-food 2 Community-oriented food systems 1	Techno-food 3 Community-oriented food systems 1 Local paradigm 1
Markets: decreased demand for some rural products	Sustainability transition 2 Postmaterialism 1	Sustainability transition 5 Postmaterialism 1	Sustainability transition 5 Postmaterialism 1
Markets: decreased export demand for food	–	Regional and local food 1	Regional and local food 1
Markets: limited market size or decrease of local markets limits options and activity	Regional and local food 2 Rural decline 2 Bioeconomy 1 Sharing economy 1	Regional and local food 2 Rural decline 2 Forest coverage 1 Sharing economy 1	Rural decline 2 Delivery-oriented food systems 1 Forest coverage 1 Local paradigm 1 Regional and local food 1 Sharing economy 1
Mobility and traffic: expansion of non-accessible regions and places	Forest ownership 1	Forest ownership 1	Accessibility 1 Forest ownership 1
Organisation and society: norms or attitudes hamper change	Minorities' rights 2 Rural entrepreneurship 1 Secularisation vs. religiousness 1	Minorities' rights 2 Rural entrepreneurship 1 Secularisation vs. religiousness 1	Minorities' rights 2 Rural entrepreneurship 1 Secularisation vs. religiousness 1
Organisation and society: conflicts will increase e.g. locals vs. newcomers, owners vs. users, traditional vs. novel	Rural lifestyle 6 Integration of immigrants 5 Governance gaps and conflicts 4	Integration of immigrants 7 Rural lifestyle 7 Governance gaps and conflicts 6	Governance gaps and conflicts 8 Integration of immigrants 7 Migration patterns 6
Organisation and society: increased crime	Manifestations of new technologies 2 Diversification/specialisation of farms 1	Manifestations of new technologies 2 Diversification/specialisation of farms 1	Manifestations of new technologies 2 Multi-local living 2 Diversification/specialisation of farms 1
Organisation and society: increased inequality between regions or actor groups	Creative economy 2 Integration of immigrants 2 Rural decline 2 Unequal development and inequality 2	Creative economy 2 Gender roles 2 Integration of immigrants 2 Rural decline 2	Rural decline 3 Creative economy 2 Gender roles 2 Heritage tourism 2 Integration of immigrants 2 Regional and local food 2 Unequal development and inequality 2
Organisation and society: loss or weakening of local networks and social capital	Migration patterns 3 Changing role of the public sector 1 Local paradigm 1 Secularisation vs. religiousness 1	Migration patterns 3 Rural decline 2 Rural second homes and villas 2 Secularisation vs. religiousness 2	Migration patterns 3 Deconcentration 2 Rural decline 2 Rural second homes and villas 2 Secularisation vs. religiousness 2
Organisation and society: unequal division of costs and natural resources increasingly owned by outsiders	Land markets 4 Farmland prices 3 e-commerce 1 New geopolitics 1 Professional networks 1	Land markets 4 Farmland prices 3 e-commerce 1 New geopolitics 1 Professional networks 1	Land markets 4 Farmland prices 3 e-commerce 1 New geopolitics 1 Professional networks 1
Organisation and society: rural society will lose power and possibilities to influence its own futures	Rural tourism 3 Unequal development and inequality 3 Empowerment 2	Rural tourism 3 Unequal development and inequality 3 Empowerment 2	Unequal development and inequality 3 Empowerment 2 Community-oriented food systems 1 Local paradigm 1
Organisation and society: unequal division of costs and benefits between actors, sectors or regions	Migration patterns 3 Pandemics and epidemics 3 Economic growth 2 Heritage tourism 2 Knowledge economy 2	Migration patterns 5 Pandemics and epidemics 3 Community-based action 2 Economic growth 2 Heritage tourism 2 Knowledge economy 2 Rural decline 2	Migration patterns 5 Pandemics and epidemics 3 Community-based action 2 Economic growth 2 Knowledge economy 2 Rural decline 2

Place identity and brand: urbanisation of the countryside	Natural and cultural heritage 2 Resource competition 2 Agritourism 1 Business clusters and ecosystems 1 Sustainable tourism 1 Unequal development and inequality 1 Urban insecurity 1	Food tourism 2 Natural and cultural heritage 2 Resource competition 2	Resource competition 3 Food tourism 2 Natural and cultural heritage 2
Policy: ad hoc policies and polarized policies will gain ground	Political instability and fragmentation 2 Community-oriented food systems 1 Individualisation 1 Rural volunteering 1	Political instability and fragmentation 2 Individualisation 1 Rural volunteering 1	Political instability and fragmentation 2 Individualisation 1 Rural volunteering 1
Policy: increased challenges in policy design due to e.g. complexity, variability	Diversification of rural economy 1	Diversification of rural economy 2	Diversification of rural economy 2
Policy: regulation of rural activities and land use will increase	Environmentalism 2 Pollution 2 Practice-oriented food systems 1 Sustainability transition 1	Environmental conservation 2 Environmentalism 2 Pollution 2	Environmental conservation 2 Environmentalism 2 Pollution 2
Policy: regulation or support rather than demand will guide production	Educational farms 1 Practice-oriented food systems 1	Educational farms 1 Practice-oriented food systems 1	Political instability and fragmentation 3 Practice-oriented food systems 2 Regulation and subsidies 2
Population: barriers in the access of new rural inhabitants	Commuting 1 Integration of immigrants 1	Commuting 1 Integration of immigrants 1	Commuting 1 Integration of immigrants 1
Population: deteriorating age dependency ratio	–	–	Ageing population 1
Population: enhanced depopulation of rural areas	Migration patterns 4 Depopulation 2 Urbanisation 2	Rural decline 7 Farm population 5 Migration patterns 4	Rural decline 7 Farm population 5 Migration patterns 4
Socio-cultural and environmental capital: loss of agricultural or rural heritage	Deconcentration 2 Land management 2 Rural festival tourism 1	Bioeconomy 2 Deconcentration 2 Land management 2	Bioeconomy 2 Deconcentration 2 Land management 2
Uncertainty and risks: health and safety risks will increase	Extreme weather events 3 Pandemics and epidemics 2 Agroecology 1 Governance gaps and conflicts 1	Changing role of the public sector 3 Agroecology 2 Pandemics and epidemics 2	Extreme weather events 3 Agroecology 2 Pandemics and epidemics 2
Uncertainty and risks: increased dependency within various networks increases vulnerability	Digital economy 3 Uberisation 3 Delivery-oriented food systems 2 From farms to firms and from farmers to managers 2	Digital economy 3 Uberisation 3 Delivery-oriented food systems 2 From farms to firms and from farmers to managers 2	Digital economy 3 Uberisation 3 Delivery-oriented food systems 2 From farms to firms and from farmers to managers 2
Uncertainty and risks: less secure jobs, incomes and businesses	Globalisation 2 Pandemics and epidemics 2 Rural entrepreneurship 2	Globalisation 2 Pandemics and epidemics 2 Rural entrepreneurship 2	Diversification/specialisation of farms 2 Globalisation 2 Pandemics and epidemics 2 Rural entrepreneurship 2

While looking at the gender impacts (Table 29), the same logic appears to be valid: there is no silver bullet which would bring about the positive gender impact, but various impacts are associated with specific trends. The top trends which are associated with better rural employment opportunities for men – forest coverage, decarbonisation and DIY movement – are different from trends which are associated with better rural employment opportunities for women: diversification of rural economy, regional and local food, care services, rural

tourism and sustainability transition. First glance of gender-relevant developments could result in few significant trends, but actually TOP-3 trends for nine types of gender impacts include 38 different trends. This manifests the complexity and contextuality of the trend–impact nexus also in this phenomenon.

Some of the gender impacts are evidently positive and have a potential to contribute to rural regeneration. These impacts include better employment opportunities, empowerment, better gender equality, more balanced gender structure and reformed gender roles. Top trends which are associated to these impacts include **diversification of rural economy, recruitment of new entrants to farming, regional and local food, community-based action, migration patterns and sustainability transition**. Based on the observations and assessment made by the participants of the RURALIZATION project, these trends could open some avenues for promoting rural regeneration from gender perspective. The needs and possibilities of the regions to achieved specific gender impacts may vary, however.

Table 29: Gender impacts (impact categories) of the trends and associated TOP-3 trends by impact (based on the number of observations)

Gender impacts of the trends	TOP-3 trends by each impact (number of observations)
Better (rural) employment opportunities for men	Forest coverage 2 Decarbonisation 1 DIY movement 1
Better (rural) employment opportunities for women	Diversification of rural economy 13 Regional and local food 5 Care services 3 Rural tourism 3 Sustainability transition 3
Empowerment	Community-based action 4 Environmentalism 1 Extreme weather events 1 Governance gaps and conflicts 1 Policy incidence and effectiveness 1 Practice-oriented food systems 1 Rural festival tourism 1 Sustainability transition 1
Gender equality deteriorates	Rural decline 2 Accessibility 1 Community-based action 1 Concentration 1 Knowledge economy 1 Unequal development and inequality 1
Gender equality improves	Knowledge economy 2 Manifestations of new technologies 2 Unequal development and inequality 2
Imbalance in the gender structure	Young farmers 6 Migration patterns 4 Succession 3
More balanced gender structure	New entrants 6 Migration patterns 3 Agrosocial paradigm 2 Community-oriented food systems 2 Commuting 2 Diversification/specialisation of farms 2 Farm population 2 Gender roles 2 Local paradigm 2 Partnerships 2 Quality of life 2
Traditional gender roles will be reformed	Diet-oriented food systems 2 Environmental conservation 1 Environmentalism 1 Gender roles 1 Migration patterns 1
Traditional gender roles will be reproduced or strengthened	Gender roles 2 Rural lifestyle 1 Tribal lifestyle 1

The stock, characteristics and contribution of social capital is crucial in rural regeneration. The logic which prevails in other types of impacts is still valid: there is no silver bullet which would bring about the positive social capital impact, but various impacts are associated with specific trends. Depending which impact is pursued, a specific set of trends appears to be most useful

to take advantage of (Table 30). If, for example, diversification of the social capital is pursued, the trends related to creative economy, migration patterns and multi-local living could offer some promising practices. If new or more extensive networks were pursued, the trends related to community-oriented food systems, regional and local food, ecovillages, rural hubs and rural lifestyle could be consulted for insights. Complexity and contextuality of the trend–impact nexus in this phenomenon is manifested by the fact that TOP-3 trends for the 13 types of impacts include 48 different trends.

Some of the impacts on social capital are evidently positive and have a potential to contribute to rural regeneration. These impacts include increase, diversification and maintenance or reproduction of social capital, empowerment, more inclusive social fabric, new ideas and innovations, new or more extensive networks, new ways to or more productive interaction and upgrade or novel application of the knowledge base or skills toolbox. Top trends which are associated to these impacts include **community-oriented food systems, migration patterns, regional and local food, creative economy, local paradigm, new entrants to farming and co-operatives**. Based on the observations and assessment made by the participants of the RURALIZATION project, these trends could open some avenues for promoting rural regeneration from social capital perspective. Depending on the region, the needs and possibilities may vary, however.

Table 30: Impacts (impact categories) of the trends on social capital and associated TOP-3 trends by impact (based on the number of observations)

Impacts of the trends on social capital	TOP-3 trends by each impact (number of observations)
Decrease in the stock of social capital	Rural decline 26 Unequal development and inequality 25 Migration patterns 15
Disproportions in social capital between rural regions	Unequal development and inequality 11 Business clusters and ecosystems 2 Counterurbanisation 2
Diversification of social capital	Creative economy 9 Migration patterns 5 Multi-local living 5
Empowerment	Local paradigm 3 Gender roles 2 House and land squatting 2 Manifestations of new technologies 2 Renewable and bioenergy 2 Unequal development and inequality 2
Existing social capital becomes outdated and unproductive	Rural decline 2 Commuting 1 Exploitation of development potential 1 From farms to firms and from farmers to managers 1 Globalisation 1 Speculative economy 1 Tribal lifestyle 1
Increase in the stock of social capital	Migration patterns 12 Community-oriented food systems 10 New entrants 8
Maintenance or reproduction of social capital	Natural and cultural heritage 3 Environmental conservation 2 Heritage tourism 2 Migration patterns 2 Rural festival tourism 2 Rural hubs 2
More inclusive social fabric	Community-oriented food systems 3 Co-operatives 2 Collaborative problem solving 2 Community-based action 2 Creative economy 2 Ecovillages 2 Gender roles 2 Governance gaps and conflicts 2 Integration of immigrants 2 Rural festival tourism 2 Social enterprises and entrepreneurs 2
New ideas and innovations	Creative economy 3 Migration patterns 3 Sustainability transition 2 Circular economy 2 Co-operatives 2 Environmental conservation 2 Environmentalism 2 Innovations 2 Meaning and experience economy 2 New entrants 2 Place branding 2 Renewable and bioenergy 2

	Rural entrepreneurship 2 Rural volunteering 2 Social innovations 2
New or more extensive networks	Community-oriented food systems 9 Regional and local food 6 Ecovillages 3 Rural hubs 3 Rural lifestyle 3
New ways to or more productive interaction	Community-oriented food systems 11 Local paradigm 7 Regional and local food 6 Co-operatives 6
Problems in the exploitation of existing social capital, e.g. conflicts	Farm size 11 Farm population 6 Ageing population 5 Rural decline 5
Upgrade or novel application of the knowledge base or skills toolbox	Community-oriented food systems 10 DIY movement 4 Environmental conservation 3 Governance gaps and conflicts 3 House and land squatting 3 Meaning and experience economy 3 Rural energy communities 3

Migrations patterns have had a significant role in the evolution of the rural communities and regions. Migration takes very varied forms, directions and magnitudes and for this reason its impacts are difficult to grasp synthetically. For this reason, the impact categories are quite broad and host a large number of more detailed developments (Table 31). Positive migration trends logically have a potential to contribute to rural regeneration. Top trends which are associated to these positive impacts include **specific favourable migration patterns, new entrants to farming, renewable and bioenergy, creative economy and rural lifestyle**. Finding ways to benefit from these trends could open some avenues for promoting rural regeneration from migration perspective. Region specific needs and possibilities may vary, however.

Table 31: Migration impacts (impact categories) of the trends and associated TOP-3 trends by impact (based on the number of observations)

Migration impacts of the trends	TOP-3 trends by each impact (number of observations)
Changing patterns of migration flows, e.g. growth, decline, redirection	Urbanisation 8 Governance gaps and conflicts 4 Globalisation 3 Migration patterns 3
Migration from remote rural regions to functional urban areas will increase	Business clusters and ecosystems 2 Peri-urbanisation 2 Economic growth 1 Land management 1
Migration from rural to urban areas will decrease	Manifestations of new technologies 4 Care services 3 Policy incidence and effectiveness 3 Rural hubs 3
Migration from rural to urban areas will increase	Rural decline 21 Migration patterns 20 Unequal development and inequality 12
Migration from urban to rural areas will increase	Migration patterns 19 New entrants 12 Renewable and bioenergy 11 Creative economy 11
Mixed impacts, some regions will lose and some others will gain residents	Unequal development and inequality 3 Rural decline 3 Climate change 3 Ageing population 3

Access to land is featured by many developments: demand for land for specific purposes may increase or decrease, the amount of accessible land may change, there may be diverse policies and practices to affect access to land and it may be accompanied by adverse effects like conflicts (Table 32). Which of these impacts are positive and which are negative, depends much on the context. In some regions new demand of land for residential, farming or ‘other’ (energy, plants, recreation, conservation) purposes may be considered very positive but in some other regions the same impact might be considered very negative.

For this reason, it is difficult to draw any synthetic conclusions about promising trends. If increase of accessible land and new organised opportunities for access to land were considered as clearly positive impacts in most contexts, then the trends related to **community-oriented food systems, ecovillages, new entrants to farming and sharing economy** could be studied to find out promising practices and policies. If also additional demand for land for various purposes was considered positive, then the promising policies and practices could be found in **renewable and bioenergy, community-oriented food systems, diversification and specialisation of farms, multi-local living and environmental conservation**. The nexus between the trends and their impacts is very versatile and context specific in the case of access to land.

Table 32: Impacts (impact categories) of the trends on access to land and associated TOP-3 trends by impact (based on the number of observations)

Impacts of the trends on access to land	TOP-3 trends by each impact (number of observations)
Access to land will become more limited, e.g. land price, distance, external ownership	Farm size 9 Resource competition 9 Farmland prices 8
Conflicts related to land use and access will increase	Policy incidence and effectiveness 7 Farmers facing new risks 2 Political instability and fragmentation 2
Demand for land will decrease in rural areas	Rural decline 14 Urbanisation 2 Changing food trade patterns 1 Farming techniques and intensity changes 1 Fossil economy 1 Land management 1 Market volatility 1 Migration patterns 1 Regulation and subsidies 1 Unequal development and inequality 1
Demand for land will increase for farming and home gardening purposes	Environmentalism 6 Community-oriented food systems 4 Regional and local food 3
Demand for land will increase for other purposes, e.g. energy, plants, recreation, conservation	Renewable and bioenergy 15 Diversification/specialisation of farms 8 Environmental conservation 6
Demand for land will increase for residential purposes	Multi-local living 6 Migration patterns 5 Peri-urbanisation 5
Mixed impacts on access to land	Productivity and competitiveness 4 Precision farming 3 Farming techniques and intensity changes 3
More accessible land will become available	Farm size 3 Co-operatives 2 Community-based action 1 Diet-oriented food systems 1 Outsourcing of environmental impacts 1 Partnerships 1 Pollution 1 Wood demand 1
New organised opportunities for access to land	Community-oriented food systems 7 Ecovillages 5 New entrants 5

The relationship between the trends and farm structures is also versatile. Some trends contribute to declining farm numbers, whereas some other trends favour specific kinds of farms (capital-intensive, small, large, non-mainstream, part-time etc.). It is difficult to make a general conclusion which of the impacts are clearly positive and which are clearly negative (Table 33). Competitiveness and large capacity farms are required to keep most food production for European consumers on the home ground, whereas small, part-time and non-mainstream farms bring about many benefits for the environment and vitality of the rural areas.

If competitiveness was considered as positive impact – i.e. structural change will continue and economies of scale and productivity gains dominate – then the trends related to **farm size and farm population, migration patterns, digital economy, manifestations of new technology, productivity and competitiveness, farmland prices and (diversification and) specialisation of farms** could be relevant ones to be put under scrutiny. If more diversified farm structures and better prospects for small, non-mainstream and part-time was considered as positive impact, then the trends related to **practice-oriented food systems, climate change, sustainability transition, community-oriented food systems, diversification (and specialisation) of farms, renewable and bioenergy, digital economy, regional food, environmentalism and new entrants** could offer some ingredients for effective practices and policies.

Table 33: Impacts (impact categories) of the trends on farm structures and associated TOP-3 trends by impact (based on the number of observations)

Impacts of the trends on farm structures	TOP-3 trends by each impact (number of observations)
Better prospects for both small and large farms, e.g. demand, new outputs, technology	Digital economy 12 Productivity and competitiveness 6 Manifestations of new technologies 5 Migration patterns 5
Capital-intensive and technology-intensive holdings replace farms based on human labour	Manifestations of new technologies 7 Digital economy 6 Industry 4.0 3 Primary sector employment 3 Productivity and competitiveness 3
Decline of farm numbers will continue	Migration patterns 14 Farm population 11 Farmland prices 8
Farms with some specific line of production (e.g. livestock) need to close or transform	Diet-oriented food systems 4 Food demand 2 Climate change 2 Pollution 2
Large farms become more and more dominant, e.g. productivity, exports	Farm size 20 Diversification/specialisation of farms 7 Young farmers 6
Mixed impacts on farm structures, e.g. among regions or types of farms	Interdependency 5 Accessibility 1 Co-operatives 1 Concentration 1 Deconcentration 1 Food security 1 Food sovereignty 1 Migration patterns 1 Partnerships 1 Practice-oriented food systems 1 Renewable and bioenergy 1 Resource competition 1 Secularisation vs. religiousness 1 Sustainability transition 1 Urbanisation 1
More diversified farm structures arising from risks, policies, partnerships etc.	Climate change 22 Local paradigm 6 Agritourism 4 Regional and local food 4
Prospects for non-mainstream farms will improve, e.g. local, ecological, educational, CSA, care, energy	Practice-oriented food systems 23 Sustainability transition 16 Community-oriented food systems 15
Prospects for small farms will improve, e.g. new activities, networks, policies	Practice-oriented food systems 3 New entrants 3 Environmental conservation 3 Co-operatives 3 House and land squatting 3
Prospects for small part-time farms will improve: residence and livelihood	Diversification of rural economy 7 Remote work 3 Diversification/specialisation of farms 2 Migration patterns 2 Rural hubs 2
Structural evolution of farms will be hampered or slow down, e.g. succession, land use, resources	Ageing population 18 Rural decline 16 Unequal development and inequality 10

The prospects for farming are partly related to farm structures, but also provide a general overview of the future prospects (Table 34). If generally positive impacts and positive impacts for specific types of farms, farm businesses and farming regions were taken as a starting point, then **regional and local food, new entrants, practice-oriented food systems, diversification and specialisation of farms, sustainability transition, community-oriented food systems and digital economy** could be trends worth of consulting to find out context relevant practices and policies to take advantage of. As with all the other cases of trend–impact nexus, any too straightforward conclusion could be risky and the presented ‘promising trends’ only provide starting points for region, actor or perspective specific evaluation and elaboration.

Table 34: Impacts (impact categories) of the trends on farming prospects and associated TOP-3 trends by impact (based on the number of observations)

Impacts of the trends on farming prospects	TOP-3 trends by each impact (number of observations)
Generally negative	Rural decline 39 Unequal development and inequality 21 Ageing population 20
Generally positive	Digital economy 11 Migration patterns 9 Local paradigm 8
Mixed: positive or negative depending on the type of farm, business, region etc.	Practice-oriented food systems 15 Climate change 14 Farm size 10
Negative for specific types of farms, farm businesses or farming regions	Young farmers 6 Business clusters and ecosystems 2 Climate change 2 Environmentalism 2 Farm fragmentation 2 Farm size 2 Pollution 2
Positive for specific types of farms, farm businesses or farming regions	Regional and local food 15 Practice-oriented food systems 14 Diversification/specialisation of farms 14

A summary of the thematic impacts is provided in Table 35. In the table, the top-5 trends within highest frequency of trend observation per type of impact are presented. Obviously, rural decline, migration patterns as well unequal development and inequality have extensive impacts on all topics under consideration. Trends that are on the top-5 list only in one of the thematic impacts are diversification of rural economy (gender), new entrants (migration), resource competition (access to land), community-oriented food systems (access to land) and climate change (farm structures). Compared to the previous trends, these trends have significant focused impacts and are worth of observing while discussing effective policy measures targeted to the targets of impacts of these trends.

Table 35: TOP-5 trends by the target of impact (based on the number of observations)

Target of the impacts	TOP-5 trends by each impact (number of observations)
Gender	Rural decline 18 Diversification of rural economy 15 Migration patterns 14 Unequal development and inequality 14 Young farmers 14
Social capita	Unequal development and inequality 179 Migration patterns 130 Rural decline 127 Farm size 97 Diversification/specialisation of farms 80
Migration	Migration patterns 43 Rural decline 28 Unequal development and inequality 27 New entrants 15 Renewable and bioenergy 13
Access to land	Renewable and bioenergy 15 Rural decline 14 Resource competition 13 Farm size 12 Community-oriented food systems 11
Farm structures	Climate change 29 Migration patterns 29 Practice-oriented food systems 29 Diversification/specialisation of farms 28 Farm size 26
Farming prospects	Rural decline 40 Migration patterns 30 Unequal development and inequality 30 Practice-oriented food systems 29 Diversification/specialisation of farms 27

3.5 Trend cards – promising trends to promote rural regeneration

The large number of trend observations with their drivers and assessed impacts were synthesised in 60 trend cards. Some of these come directly from the 195 trends whereas some others synthesise several trends. For example, alternative food systems incorporate community-oriented, practice-oriented, diet-oriented and delivery-oriented food systems, agroecology, and regional and local food as well as aspects of wild food and dual food markets (price and quality), which all feature alternatives to the dominant food regime. Likewise, sustainability transition features also renewable and bioenergy, wood demand, bioeconomy, decarbonisation, eco-efficiency and fossil economy (to be given up). In this way it was possible to observe a bit larger spectrum of effective force fields than just by picked up 60 trends among the 195 trends; actually, about half of the original trends are included in the trend cards.

All the trend cards illustrate trends that have potential to promote rural regeneration at least in some regions, sectors or actor groups. Neither all trends are promising in all regions nor a single trend is promising in all regions. As discussed earlier, many of the important megatrends have primarily adverse impacts on rural areas but they still should be observed. For these

trends the perspective in the trend card is the benefits the primarily negative trends could bring about, as all trends have positive and negative impacts on rural phenomena. Further on, also trends evolve and every trend has an end; rural problems of tomorrow will not be solved by the trends of yesterday.

The purpose of the trend cards is to assist rural policy design and development work. In crafting rural development programs and plans, the trend cards might be consulted to find some promising priority topics which are considered possible, feasible and productive in each specific context. The trends presented in the cards are not normative as all of them include positive and negative aspects but rather descriptive and informative tools for the design of alternative futures. In this role they will serve also in RURALIZATION project as the task 4.3 (interaction and evaluation) introduces a series of regional workshops and seminars to discuss the ways to benefit from the trends in various regional contexts. The process of finding ways to benefit from trends is basically an iterative process in which a strategic fit (Drazin & Van de Ven 1985; Grant 2005; Venkatraman 1989) should be found between a specific promising trend and local/regional/sectorial objectives, resources and actors.

Next, short versions of the 60 trend cards are presented as a list. They feature 10 megatrends, 20 trends and 30 weak signals. The short versions include some basic information of each trend. Full versions of the trend cards may be found in Annex 3. The full versions include more detailed information of the characteristics of the trends, their drivers and their impacts. About half of them also include some statistical information of the quantitative developments related to the trend. It should be observed that no single statistical indicator is able to capture more than some specific aspects of the trend. The statistical manifestations of the trends still assist regions in positioning and benchmarking.



1 AGEING POPULATION





Average age of the population is quite high and increasing in many rural regions, which increases the demand of targeted services

-  **Type:** megatrend
-  **Drivers:** demographic change – globalisation – economic growth – skills and competences, human capital
-  **Impacts:** expansion of silver economy implies more demand for care and health services – structural evolution of farms will be hampered or slow down, e.g. succession, land use, resources – migration from rural to urban areas will increase



2 ALTERNATIVE FOOD SYSTEMS





Diverse community-, delivery-, diet- and practice-oriented food systems challenge the dominant food regime

-  **Type:** trend
-  **Drivers:** environmental awareness – availability and demand for local, healthy, sustainable food products
-  **Impacts:** expansion of client population (online or new segments) for rural businesses – genesis of novel producer, prosumer or consumer organisations – prospects for non-mainstream farms will improve, e.g. local, ecological, educational, CSA, care, energy



3 BENEFITING FROM GLOBALISATION






Finding ways to benefit from open markets and specialisation while acknowledging various adverse effects and risks of interdependency

-  **Type:** megatrend
-  **Drivers:** globalisation – food demand and supply – network-based governance – international trade rules
-  **Impacts:** increased export demand for sustainable food products – large farms become more and more dominant, e.g. productivity, exports – mixed farming prospects, positive or negative, depending on the type of farm, business, region etc.





4 BENEFITING FROM URBANISATION





Increase of cities in terms of people and land use will make 'rural' more rare and valuable but challenge rural economy and autonomy

-  **Type:** megatrend
-  **Drivers:** globalisation – population growth – demographic change – economies of scale – urban sprawl
-  **Impacts:** demand for ecological, affordable, safe and ecological rural housing will increase – more demand for local (rural) products and services – entry of new inhabitants to rural areas – rural places and areas get new attractions and effective brands


5 CARE SERVICES



Diversified set of activities with many rural and novel models: green care, homecare, telemedicine, mobile services

- Type:** weak signal
- Drivers:** scarcity of public funds – bottom-up approach, empowerment – internet – depopulation – pandemics
- Impacts:** more equal and inclusive social fabric – growth of rural economies (incomes, jobs) – better (rural) employment opportunities for women – migration from rural to urban areas will decrease

6 CARING FOR THE ENVIRONMENT



Ideologies, policies and practices to reduce environmental degradation, to safeguard earth systems and to improve the status of the environment

- Type:** megatrend
- Drivers:** climate change – environmental degradation, pollution and risks – ecological awareness – urbanisation
- Impacts:** mitigation of climate change – better resourced and targeted local policies – increase of environmental conservation and/or reduction of degradation – prospects for non-mainstream farms will improve, e.g. local, ecological, educational, CSA, care, energy

7 CHANGING GENDER ROLES



Evolving traditional and modern gender roles in private life and working life

- Type:** trend
- Drivers:** communality, solidarity, equality – farming traditions – attractiveness of farming, lack of successors
- Impacts:** more equal and inclusive social fabric – enhanced communality – migration from urban to rural areas will increase – empowerment – more balanced gender structure – increase in the stock of social capital

8 CHEAP RURAL HOUSING AND RURAL SECOND HOMES



Affordable houses, second homes or holiday houses close to nature and away from crowds

- Type:** weak signal
- Drivers:** availability of jobs – technological development – pandemics – economic growth – urbanisation
- Impacts:** entry of new inhabitants to rural areas – demand for ecological, affordable and safe rural housing will increase – growth of local rural economies (incomes, jobs) – migration from urban to rural areas will increase – demand for land will increase for residential purposes

9 CIRCULAR ECONOMY




Economic model based on recycling, reuse, sharing and repair of previously extracted materials

Type: trend

Drivers: ecological awareness – scarcity of natural resources – opportunities and entrepreneurship

Impacts: increase in environmental conservation and/or reduction of degradation – diversification of rural economies – prospects for non-mainstream farms will improve, e.g. local, ecological, energy – new ideas and innovations

10 CLIMATE CHANGE



Multifaceted phenomenon with progressive impacts on food production, land use, policies and lifestyles

Type: megatrend

Drivers: industrialisation – fossil economy – population growth – mechanisation and industrialisation of farming

Impacts: more demand for (rural) raw materials (e.g. biomasses) – demand for ecological, affordable and safe rural housing will increase – prospects for non-mainstream farms will improve, e.g. local, ecological, energy – scarcity for usable land will increase

11 CO-OPERATIVES AND PARTNERSHIPS



Organisation models to reach economies of scale and benefits of specialisation and co-operation or to facilitate mutual interests

Type: weak signal

Drivers: viability of farm business, productivity – internet – globalisation – problems with access to markets

Impacts: halting of rural decline, preservation of activities – genesis of novel producer, prosumer or consumer organisations – new ways to or more productive interaction – positive prospects for specific types of farms, farm businesses or farming regions

12 COMMUNITY-BASED ACTION



Community-based initiatives and actions serve shared interests, capacities, identity, participation and communality in many domains

Type: weak signal

Drivers: bottom-up approach, empowerment – community co-operation and development – financial constraints

Impacts: more equal and inclusive social fabric – genesis of novel producer, prosumer and consumer organisations – new ways to or more productive interaction – empowerment – prospects for non-mainstream farms will improve, e.g. local, ecological, energy

13 COUNTERACTING UNEQUAL DEVELOPMENT AND RURAL DECLINE




Efforts to halt the vicious circle (less population, less services, less infrastructure, less population etc.) which marginalises rural areas

Type: megatrend

Drivers: market liberalisation – demographic change – urbanisation – globalisation – decline of public services

Impacts: more equal and inclusive social fabric – entry of new inhabitants to rural areas – growth of rural economies (incomes, jobs) – halting of rural decline, preservation of activities – improved infrastructures – new or better rural services and/or better access to services

14 CREATIVE ECONOMY



Nests of artists, creative work and creative class in the countryside

Type: weak signal

Drivers: internet – globalisation – slow and natural lifestyle

Impacts: possibility to adopt new working practices, e.g. remote work, virtual teams – diversification of rural economies – demand for ecological, affordable and safe rural housing will increase – diversification of social capital – migration from urban to rural areas will increase

15 DEGROWTH



Antithesis to economic growth paradigm; emphasis in social and ecological well-being

Type: weak signal

Drivers: new modes of work e.g. flexible, freelance, project – environmental degradation, pollution and risks

Impacts: expansion of alternative lifestyles, e.g. degrowth, slow, natural – more demand for rural nature-based and immaterial welfare services – more demand for local, regional or domestic food – migration from urban to rural areas will increase

16 DIGITAL ECONOMY



Economic activities facilitated by digital technologies and tools; provides productivity gains and platforms for new economic activities

Type: trend

Drivers: technological development – digitalisation – internet – globalisation

Impacts: business benefits (reduced costs, better productivity) – new or better rural services and/or better access to services – possibility to adopt new working practices, e.g. remote work, virtual teams – better prospects for both small and large farms

17 DIVERSIFICATION OF RURAL ECONOMY



Many rural regions have diversified economies and the importance of non-agricultural activities has increased

- Type:** trend
- Drivers:** digitalisation – empowerment of services – evolution of specific markets
- Impacts:** diversification of rural economies – growth of rural economies (incomes, jobs) – new or better rural services and/or better access to services – better (rural) employment opportunities for women – migration from urban to rural areas will increase

18 DIVERSIFICATION/SPECIALISATION OF FARMS



Diversification (on-farm and off-farm) and specialisation are the two main farm business and livelihood strategies

- Type:** trend
- Drivers:** Common Agricultural Policy (CAP) – empowerment of services – ecological awareness
- Impacts:** diversification of rural economies – better or more stable farm income and employment – prospects for non-mainstream farms will improve, e.g. local, ecological, educational, CSA, care, energy – demand for land will increase for 'other' purposes, e.g. energy

19 DIY MOVEMENT



Do-It-Yourself is a polymorphic phenomenon featuring home crafting, repair, on-demand development, self-production, bricolage and community-supported innovations

- Type:** weak signal
- Drivers:** technological development – bottom-up approach, empowerment – diversification of lifestyles
- Impacts:** preservation or development of skills and knowledge – valorisation of existing rural sites, villages and heritage – better prospects for agro-ecological, environmental or organic farming, farms and farmers

20 e-COMMERCE



Online markets remove the need for a physical presence and allow reach of distant customers

- Type:** trend
- Drivers:** availability and demand for local, healthy, sustainable food products – internet – digitalisation
- Impacts:** expansion of client population (online or new segments) for rural businesses – positive prospects for specific types of farms, farm businesses or farming regions – new ways to or more productive interaction – migration from urban to rural areas will increase



21 ECOVILLAGES



Settlement communities aiming at integration of all four dimensions of sustainable development: economic, social, environmental and cultural

Type: weak signal

Drivers: ecological awareness – slow, peaceful, natural lifestyle – social discontent, lack of social inclusion

Impacts: new or better rural development opportunities – migration from urban to rural areas will increase – new organised opportunities for access to land – prospects for non-mainstream farms will improve, e.g. local, ecological, educational, CSA, care, energy



22 EDUCATIONAL FARMS



Co-operation between farms and schools contributes to demonstrative and participatory education about food, environment, technology etc.

Type: weak signal

Drivers: availability and demand for local, healthy, sustainable food products – attractiveness of farming

Impacts: introduction of novel services activities (shops, care etc.) for the farms – entry of new inhabitants to rural areas – prospects for non-mainstream farms will improve, e.g. local, ecological, educational, CSA, care, energy



23 FOOD SECURITY



Availability of food for all at all times is constantly challenged by the weather, diseases, crises, markets, policies and inequality

Type: trend

Drivers: coronavirus pandemic, pandemics – new governance modes and models – climate change – crises

Impacts: genesis of novel producer, prosumer and consumer organisations – better or more stable farm income and employment – adoption of new management practices that reduce risks – more demand for local, regional or domestic food



24 FOOD SOVEREIGNTY



Antithesis to corporate food regime; emphasis in culturally embedded food systems governed by producers and consumers

Type: weak signal

Drivers: environmentalism – communality, solidarity, equality – bottom-up approach, empowerment

Impacts: diversification of rural economies – better prospects for agro-ecological, environmental or organic farming, farms and farmers – more demand for local, regional or domestic food – new organised opportunities for access to land



25 FOOD TOURISM



Touristic activities organised around food: routes, tours, festivals, visits, cookery experiences, local specialties etc.

Type: trend

Drivers: availability and demand for local, healthy, sustainable food products – slow, natural lifestyle

Impacts: diversification of rural economies – rural places and areas get new attractions and effective brands – growth of rural economies (incomes, jobs) – conservation of rural heritage – migration from urban to rural areas will increase



26 GROWING FOOD DEMAND



Global food demand increases and is expected to increase further along with population growth

Type: megatrend

Drivers: food demand and supply – Common Agricultural Policy (CAP) – globalisation – population growth

Impacts: increased export demand for sustainable food products – better or more stable farm income and employment – demand for land will increase for farming and home gardening purposes – large farms become more and more dominant, e.g. productivity, exports



27 HERITAGE TOURISM



Historical attractions based on nature, industries, buildings, milieus, culture, food etc.

Type: weak signal

Drivers: low-cost travel – preservation of heritage – community co-operation and development

Impacts: growth of local rural economies (incomes, jobs) – valorisation of existing rural sites, villages and heritage – conservation of rural heritage – migration from urban to rural areas will increase – positive prospects for specific types of farms, businesses or farming regions



28 INFRASTRUCTURES, ACCESSIBILITY AND CONNECTEDNESS OF REGIONS



Availability and quality of roads, railways, water, electricity, telecommunications etc. necessary for settlements and economic activities

Type: megatrend

Drivers: decline or poor status of public services and infrastructures – rural and regional policies

Impacts: new or better rural services and/or better access to services – improved infrastructures – improved access to rural areas and destinations – multi-local lifestyle becomes more common enhancing rural economies

29 INTEGRATION OF IMMIGRANTS



Integration of immigrant to local labour market and civic society promotes inclusive social fabric and the possibility to make a societal contribution

Type: weak signal

Drivers: migration patterns – community, solidarity, equality – conflicts and governance failures

Impacts: more equal and inclusive social fabric – diversification of rural economies – increase in the socio-cultural diversity – entry of new inhabitants to rural areas – migration from urban to rural areas will increase

30 LOCAL PARADIGM



Territorial, holistic and integrative approach to promote decentralisation and local autonomy, governance, media, business, specialities etc.

Type: trend

Drivers: globalisation – availability of local, healthy, sustainable food products – social discontent

Impacts: new or better rural development opportunities – new or better rural services and/or better access to services – more demand for local (rural) products and services – enhanced communality – new ways to or more productive interaction

31 MANIFESTATIONS OF NEW TECHNOLOGIES



Artificial intelligence, automation, robotics, block-chain, big data, virtual and augmented reality, internet of things etc. and their applications

Type: trend

Drivers: technological development – digitalisation – globalisation – internet

Impacts: growth of local rural economies (incomes, jobs) – improved infrastructures – business benefits e.g. reduced costs, better productivity – new or better rural services and/or access to services – migration from urban to rural areas will increase

32 MEANING AND EXPERIENCE ECONOMY



Markets of stories, meanings, experiences, roles, identities and uniqueness may supersede traditional livelihood and business conceptions

Type: trend

Drivers: urbanisation – individualism – viability of farm business, productivity – diversification of lifestyles

Impacts: expansion of alternative lifestyles, e.g. degrowth, slow, natural – introduction of novel service activities (shops, care etc.) for the farms – more demand for local (rural) products and services – expansion of client population (online or new segments) for rural businesses



33 MICRO- AND SMALL UNITS



Small farms, businesses, neighbourhoods and civic organisations offer various benefits: affordability, familiarity, flexibility, autonomy, participation

Type: weak signal

Drivers: globalisation – evolution of specific markets – technological development – ecological awareness

Impacts: better prospects for small farms – enhanced communality – entry of new inhabitants to rural areas – migration from urban to rural areas will increase – increase in the stock of social capital



34 MIGRATION PATTERNS



National and international migration flows modify both the point of departure and the point of arrival

Type: megatrend

Drivers: liberal lifestyle – globalisation – search for own lifestyle and quality of life – climate change – urbanisation

Impacts: migration from urban to rural areas will increase – migration from rural to urban areas will increase – decrease/increase in the stock of social capital – diversification of social capital – mixed impact on farming prospects depending on the type of the farm, business, region etc.



35 MULTI-LOCAL LIVING



Seasonal or periodic living in urban and rural residences

Type: weak signal

Drivers: slow, peaceful, natural lifestyle – financial constraints – digitalisation – urbanisation – globalisation

Impacts: more demand for local (rural) products and services – diversification of rural economies – migration from urban to rural areas will increase – diversification of social capital – demand for ecological, affordable and safe rural housing will increase



36 MULTIFUNCTIONAL FORESTS



Use of forests for economic, social, environmental and cultural purposes: timber, fuel, food, health, recreation, conservation, carbon sink, hiking, education

Type: trend

Drivers: globalisation – non-rural policies (fiscal, foreign, global, general etc.) – environmental degradation

Impacts: increase in the environmental conservation and/or reduction in the degradation – growth of local rural economies (incomes, jobs) – mitigation of climate change – demand for land will increase for 'other' purposes, e.g. energy, plants, recreation, conservation

37 NATURAL AND CULTURAL HERITAGE



Natural and cultural heritage carry on valuable environments, fabrics and artefacts from the past which contribute to identity and attractiveness of places

- Type:** weak signal
- Drivers:** preservation of heritage – farming traditions – individualism – ecological awareness
- Impacts:** conservation of rural heritage – enhanced local, regional or rural identity or brand – valorisation of existing rural sites, villages and heritage – maintenance or reproduction of social capital

38 NEW GOVERNANCE MODELS



The challenge of finding an appropriate governance model for contradictory topics related to regions, use of land and natural resources, advocacy etc.

- Type:** weak signal
- Drivers:** urbanisation – urban sprawl – protectionistic policies and actions – socio-cultural evolution
- Impacts:** better prospects for succession or new entrants to farming – better resourced and targeted local policies – transition toward better problem solving capacity – increase of environmental conservation and/or reduction of degradation

39 PANDEMICS AND EPIDEMICS



More frequent or more dangerous epidemic diseases would affect whole societies and could increase preference for safe rural living environments

- Type:** weak signal
- Drivers:** coronavirus pandemic, pandemics – scarcity of natural resources – environmental degradation
- Impacts:** entry of new inhabitants to rural areas – demand for ecological, affordable and safe rural housing will increase – more demand for local, regional or domestic food – more demand for local (rural) products and services

40 PLACE BRANDING



Development, management and communication of images, affections and brands related to specific places

- Type:** weak signal
- Drivers:** problems with access to markets – localism, local paradigm – internet – market liberalisation
- Impacts:** rural places and areas get new attractions and effective brands – new or better rural development opportunities – entry of new inhabitants to rural areas – expansion of client population (online or new segments) for rural businesses

41 POLICY INCIDENCE AND EFFECTIVENESS



The challenge of effective policy design and delivery in service of several objectives while also facing large diversity of contexts

Type: trend

Drivers: Common Agricultural Policy (CAP) – lack of effective governance strategies – rural and regional policies

Impacts: increase of environmental conservation and/or reduction of degradation – conservation of rural environment – halting of rural decline, preservation of activities – better resourced and targeted local policies – conflicts related to land use and access will increase

42 POP-UP CULTURE AND GIG ECONOMY



Pop-up restaurants, shops, cinemas, art projects, camps, charity events etc. and short-term work engagements or stays

Type: weak signal

Drivers: evolving values and attitudes – globalisation – digitalisation – new modes of work e.g. flexible, freelance

Impacts: growth of local rural economies (incomes, jobs) – possibility to adopt new working practices, e.g. remote work, virtual teams – problems in the exploitation of existing social capital, e.g. conflicts – positive prospects for specific types of farms, farm businesses or regions

43 PUBLIC GOODS




Non-excludable and non-rivalrous goods open to all: national security, air, landscape, public media, many ecosystem services

Type: weak signal

Drivers: environmental degradation, pollution and risks – ecological awareness – urbanisation

Impacts: rural places and areas get new attractions and effective brands – diversification of rural economies – increase of environmental conservation and/or reduction of degradation – prospects for non-mainstream farms will improve, e.g. local, ecological, CSA, energy

44 REMOTE WORK



Working from outside of a traditional office environment e.g. from home or in rural hubs, which saves commuting time and the environment

Type: trend

Drivers: internet – increased leisure time, work-leisure balance – skills and competences – human capital

Impacts: possibility to adopt new working practices, e.g. remote work, virtual teams – growth of local rural economies (incomes, jobs) – increase of environmental conservation and/or reduction of degradation – migration from urban to rural areas will increase

45 RESILIENCE



Capability of various systems (e.g. food, energy) to meet their purpose in all situations asks for maintenance of diversity and adaptive capacities

- Type:** weak signal
- Drivers:** ecological awareness – new governance modes and models – environmental degradation – crises
- Impacts:** mitigation of climate change – adoption of new farm management practices that reduce risks – better prospects for agro-ecological, environmental or organic farming, farms and farmers – less food waste and more efficient utilisation of raw materials

46 RURAL ARTISANS



Artisanal and craft production of food, beverages and traditional products maintain small businesses and vitality of the rural areas, skills and cultures

- Type:** weak signal
- Drivers:** viability of farm business, productivity – globalisation – localism, local paradigm – internet
- Impacts:** growth of local rural economies (incomes, jobs) – valorisation of existing rural sites, villages and heritage – rural places and areas get new attractions and effective brands – expansion of client population (online or new segments) for rural businesses

47 RURAL BUSINESS SUCCESSION



Large share of farmers and rural entrepreneurs will retire soon providing opportunities for young people to take over their businesses

- Type:** trend
- Drivers:** economic problems, e.g. low incomes, low profitability, price variations – attractiveness of farming
- Impacts:** better prospects for succession or new entrants to farming – better prospects for both small and large farms, e.g. demand, new outputs, technology – diversification of social capital

48 RURAL ENERGY COMMUNITIES



Community owned wind farms, solar energy systems and bioenergy plants contribute to multidimensional sustainable development

- Type:** weak signal
- Drivers:** climate change – ecological awareness – limited energy resources and sources – localism, local paradigm
- Impacts:** growth of local rural economies (incomes, jobs) – diversification of rural economies – more demand for (rural) raw materials (e.g. biomasses) – better prospects for rural energy, service, food, housing etc. communities and cooperatives

49 RURAL HUBS



Multi-purpose spaces offering coworking and meeting facilities, broadband access, workstations, activity arenas and possibly some business services

Type: weak signal

Drivers: decline or poor status of private services – internet – depopulation – community-operation

Impacts: possibility to adopt new working practices, e.g. remote work, virtual teams – improved infrastructures – diversification of rural economies – new or more extensive networks – new ways to or more productive interaction

50 RURAL IN THE SOCIAL MEDIA



Presence, visibility and profiling of the rural activities, actors, places and communities in the social media platforms

Type: trend

Drivers: digitalisation – internet – diversification of lifestyles

Impacts: expansion of client population (online or new segments) for rural businesses – rural places and areas get new attractions and effective brands – entry of new inhabitants to rural areas – increase in the stock of social capital

51 RURAL LIFESTYLE



Rural idyll, space, nature, peace, animals, housing, safety, traditions and communities contribute to social welfare and attract new residents

Type: weak signal

Drivers: slow, peaceful, natural lifestyle – nature capital (landscape, biodiversity etc.) – health concerns

Impacts: rural places and areas get new attractions and effective brands – diversification of rural economies – increase in socio-cultural diversity – growth of local rural economies (incomes, jobs) – migration from urban to rural areas will increase

52 RURAL TOURISM




Touristic activities, resorts, routes and attractions in the rural environment: farm holidays, festivals, hiking, fishing, hunting, horseback adventures etc.

Type: trend

Drivers: slow, peaceful, natural lifestyle – new types of travelling – internet

Impacts: more demand for local (rural) products and services – rural places and areas get new attractions and effective brands – growth of local rural economies (incomes, jobs) – new ways to or more productive interaction

53 SEARCH FOR BETTER QUALITY OF LIFE



Stress, crime, pollution, loneliness and other discomforts drive people to search for alternative pathways to better life

- Type:** weak signal
- Drivers:** population growth – diversification of lifestyles – top-down, centralised governance – stress
- Impacts:** halting of rural decline, preservation of activities – demand for ecological, affordable and safe rural housing will increase – expansion of alternative lifestyles, e.g. degrowth, slow, natural – increase in the stock of social capital

54 SELF-SUFFICIENCY



Better self-sufficiency at various levels (individual, household, farm, region, nation, Europe) in food, energy, competences etc. increases costs but reduces risks

- Type:** weak signal
- Drivers:** insecurity-motivated governance – socio-cultural evolution – conflicts and governance failures
- Impacts:** better prospects for diversification of farming practices – entry of new inhabitants to rural areas – more demand for local, regional or domestic food – diversification of social capital – more diversified farm structures arising from risks, policies, partnerships etc.

55 SHARING ECONOMY



Modern non-profit or commercial sharing economy is based on internet platforms and allows limited and low-cost access to many resources: rooms, vehicles, tools

- Type:** weak signal
- Drivers:** internet – digitalisation – ethical concerns and priorities – community co-operation and development
- Impacts:** business benefits, e.g. reduced costs, better productivity – more equal and inclusive social fabric – new organised opportunities for access to land – new or more extensive networks – mitigation of climate change – generally positive impacts for farming prospects

56 SMART SOLUTIONS IN RURAL SPACE



Maintaining capacity for continuous innovation is essential in rural areas to bring up 'smart' villages, power grids, schools, machines, land use practices etc.

- Type:** weak signal
- Drivers:** internet – socio-cultural evolution – digitalisation – globalisation – technological development
- Impacts:** preservation or development of skills and knowledge – access to new business, professional or development networks – better quality of life – better prospects for rural energy, service, food, housing etc. communities and cooperatives

57 SOCIAL ENTERPRISES AND ENTREPRENEURS




Rural areas provide fabrics for many kinds of social enterprises to improve health, rehabilitation and social inclusiveness

Type: weak signal

Drivers: agri-environmental and environmental policies – opportunities and entrepreneurship – unemployment

Impacts: new or better rural development opportunities – new or better rural services and/or access to services – introduction of novel service activities (shops, care etc.) for the farms – more equal and inclusive social fabric

58 SUSTAINABILITY TRANSITION



Transformation towards more sustainable production and consumption especially in food, energy, construction and mobility systems; giving up fossil economy

Type: megatrend

Drivers: environmental degradation, pollution and risks – climate change – environmentalism

Impacts: more demand for (rural) raw materials (e.g. biomasses) – mitigation of climate change – growth of local rural economies (incomes, jobs) – prospects for non-mainstream farms will improve, e.g. local, ecological, educational, CSA, care, energy

59 TECHNOLOGY-INTENSIVE FARMING




Technology provides productivity and environmental benefits but some applications (e.g. genetic modification, lab-grown food) raise ethical, cultural or economic doubts

Type: trend

Drivers: technological development – digitalisation – diversification of farms and farming practices – globalisation

Impacts: better or more stable farm income and employment – more demand for local, regional or domestic food – mitigation of climate change – less food waste and more efficient utilisation of raw materials – niche markets will proliferate

60 TRANSPARENCY OF THE FOOD SYSTEM



Transparency of the food system in terms of origins, production methods, compliance (laws, standards) and distribution of value added in the food chain

Type: trend

Drivers: food safety – ecological awareness – increase of consumption – neoliberalism – ethical concerns

Impacts: transition toward fairer food system – better prospects for succession or new entrants to farming – better or more stable farm income and employment – positive prospects for specific types of farms, farm businesses or farming regions

4 Concluding remarks

The purpose of the trend analysis discussed in this report has been to introduce a rich set of trends which could shape rural futures in Europe. The list is neither exhaustive nor representative and fully balanced as there is no theory of the future that would guide us to pick up the 'correct' trends. The future is open and there are always several alternative futures for any specific region, activity or actor. **The approach is exploratory, not confirmatory or normative.** Through identification, analysis and assessment of these alternative futures it becomes possible to make choices in the present as we become aware of what might wait or come up in the future. The analysis and the introduction of the trend cards serves these many choices, and for this reason we have not presented any silver bullet trend that would regenerate rural Europe (such a trend does not luckily even exist). Without continuous futures work we might be blind for (some) alternatives and, in the worst case, consider future as prolonged past. It is obvious that this will not be the case for many developments, for many reasons.

Figure 29 illustrates some global socio-economic and earth system trends which are relevant for most regions and most economic activities. One might think about the potential state of the world if the development paths for the next few decades would be similar to the past few decades. In what kind of a world would we live in by then? There are many reasons for some of the trends to become halted or reversed. Another interesting question arises: if some of the trends would be reversed, in what kind of a world would we live in that case? In both cases, the future could be very different from the past and from now.

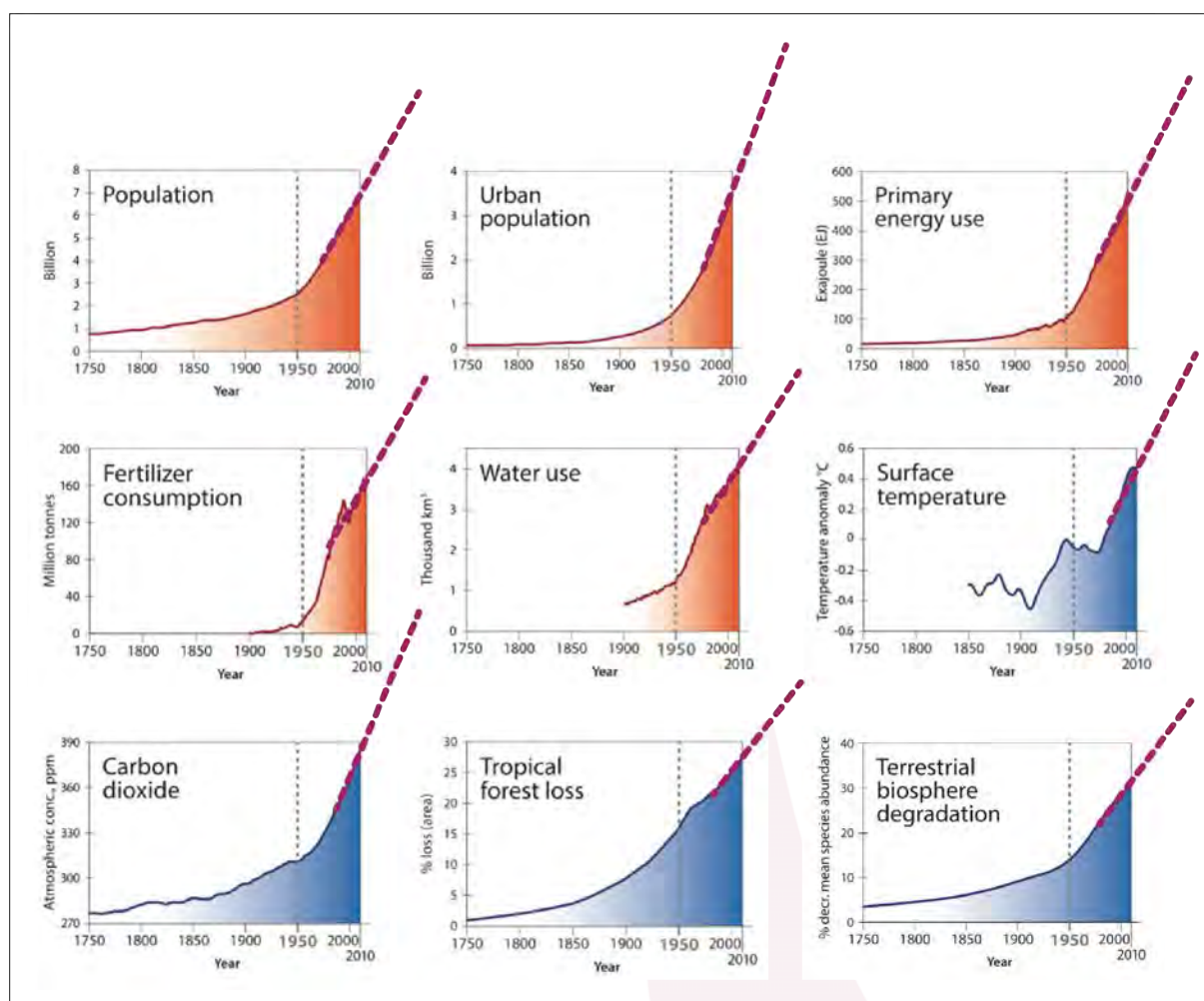


Figure 29: Some global socio-economic and earth system trends with extrapolation of recent developments paths. Source: adapted from Steffen et al. 2015

The operating environment of the European countryside has been characterised by a ‘well-functioning world’ for decades. In this kind of an environment, it is possible to specialise and pursue for economies of scale. These developments unavoidably imply increase of interdependencies among countries, regions, economic sectors and actors. In a well-functioning world, the benefits of interdependency may outweigh the (hidden) vulnerabilities. Trend analysis serves this type of a setting by introducing many trends which maintain, reproduce or only slightly modify the contemporary world model; these could be studied for the possibilities to adopt new practices, policies, business models, customers or partners. Which of the trends could still continue, which could grow in importance and which could die out – and how to benefit from them presuming the world would not change radically? This type of ‘calibration’ is by far the most common way to take advantage of the identified trends.

But it is well possible that in the future we will live in a ‘poorly-functioning world’. In this case the benefits of interdependencies could turn out to be vulnerabilities. Diversification might outweigh specialisation and economies of scope could outweigh economies of scale. Depending on the essence of the ‘poor’ (e.g. environmental, civic, health, economic or political

crisis), completely different trends could prevail and several contemporary weak signals could upgrade to megatrends. Generally, current megatrends tell stories of the past and present and could go on for quite some time in the future, but the new futures reside in weak signals and trends. Anticipation of these kind of transformations (Figure 30) is the key core of evolutionary futures research paradigm (Laszlo 1985; Mannermaa 1991). Then one could ask which of the developments actually hint to a major societal transformation and whether we are approaching the fog of a societal bifurcation point? Which of the trends could dominate after such a change of the world model? This type of ‘anticipation’ (Poli 2017) is another but not necessarily exclusive way to take advantage of the identified trends.

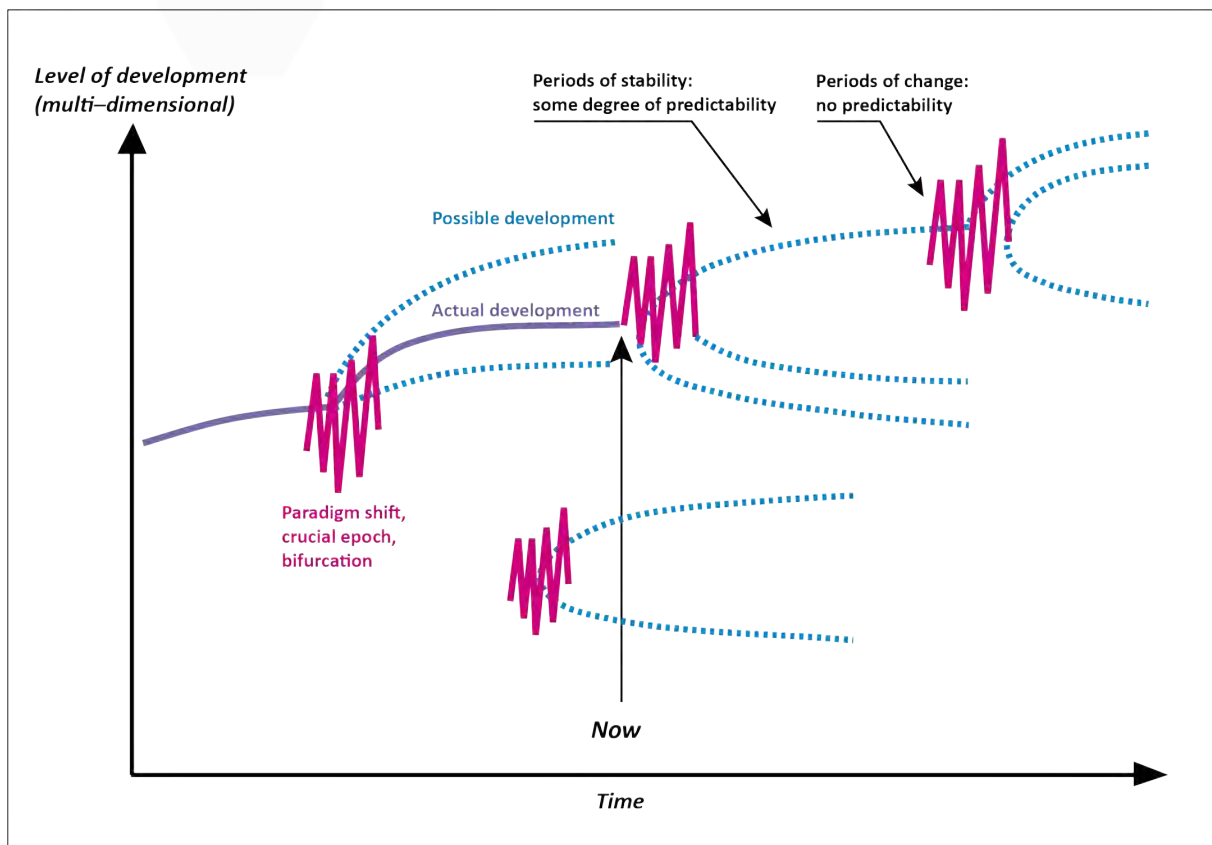


Figure 30: Evolutionary development featuring stability and change. Source: adapted from Mannermaa 1991 and Laszlo 1985

Many of the contemporary megatrends have an adverse impact on many rural areas. Megatrends are cornerstones of the contemporary food, energy, trade, consumption and policy regimes by maintaining or reproducing them. Many of the current weak signals could play a significant role in the world beyond the next bifurcation point of the European societies or specific societal systems (Figure 31). Although it is difficult to predict how many or which of the positive weak signals will turn into trends and megatrends in the future, public policies should play an important role in the processes of assessing them, strengthening their importance and spreading them in the practice of socio-economic life. The contemporary megatrends could also be put under scrutiny to assess their role in a different kind of works model: what could happen to them and should they be accepted, promoted or resisted. In a world model which is based on different logics and evaluation standards (e.g. sustainability

advantage instead of production cost advantage) the competitive position of the rural regions could be very different from now. It is also relevant in this context to ask to what extent public policies are currently targeted at such an objective. The 60 trends cards provide food for thought in the anticipation of possible paradigm shift, crucial epoch or bifurcation and ingredients of the world model after such a change; Figure 32 provides a simple guide for this adventure.

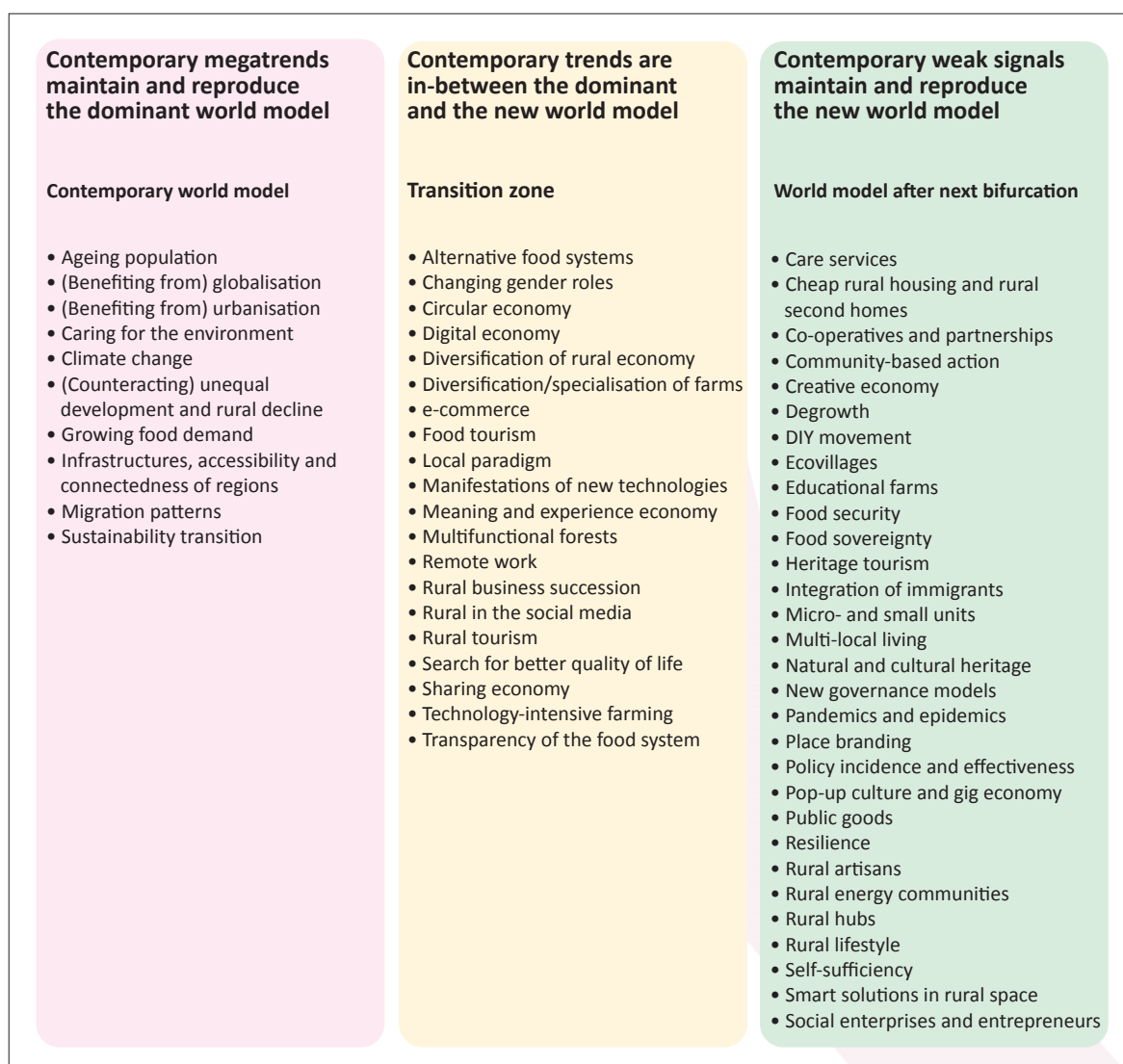


Figure 31: Some ingredients of the contemporary and possibly becoming world models

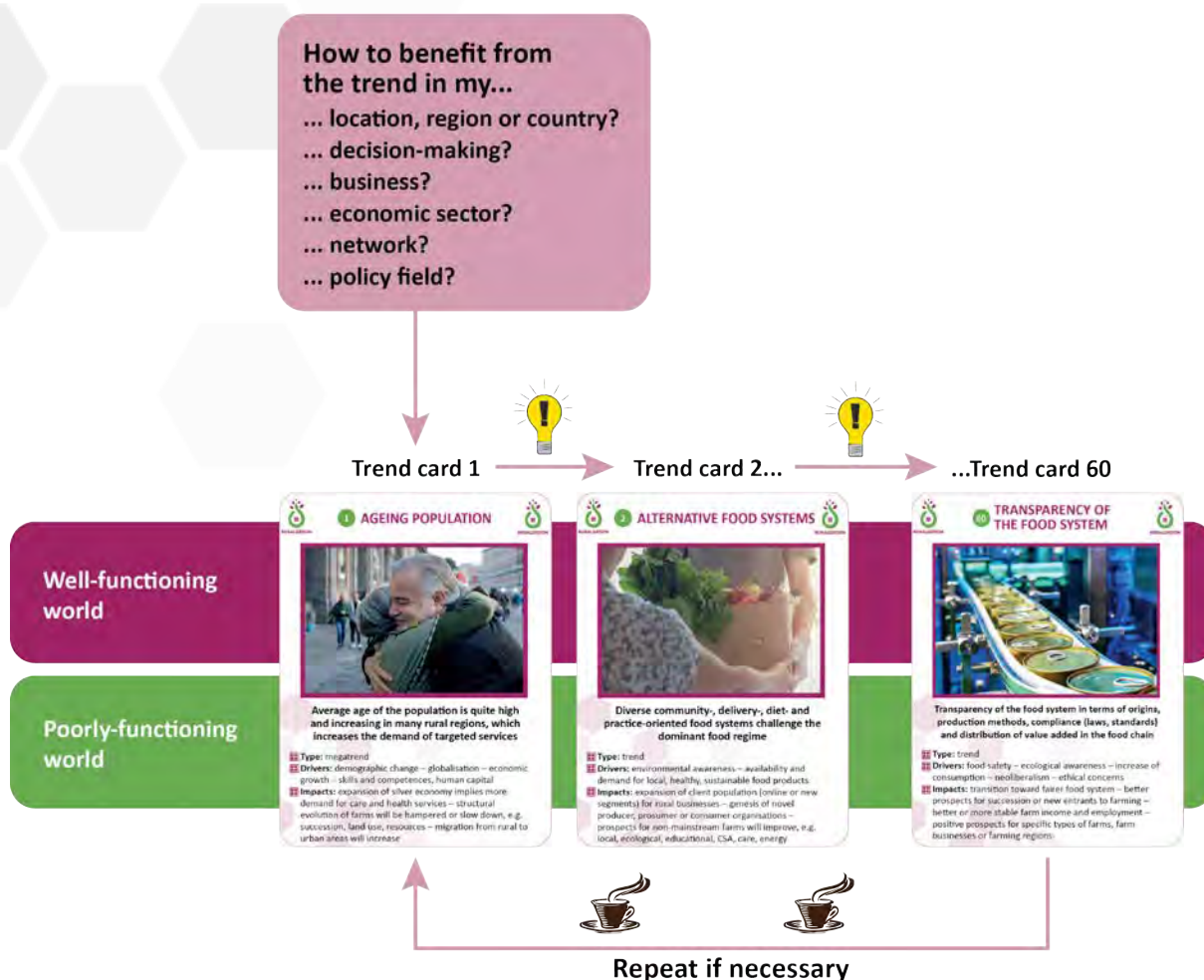


Figure 32: Trend cards – a user's guide

The trend report can be accessed from many perspectives with a specific topic, sector, trend, impact, driver or type of area in mind or with an interest of capturing the big picture of possible futures. We want to close the report with a short reflection of the trend report by Dr. Kati Volgmann who has been a member of the trend team in the RURALIZATION project. Hopefully the report will contribute to many secondary thoughts!

Secondary thoughts

A personal reading of the trend report by Kati Volgmann, ILS

The current situation of the Covid 19 pandemic is accelerating megatrends and triggering negative consequences also for rural areas. At the same time, national and regional political influence (e.g., lockdown, closing borders) on society and the economy is becoming increasingly important as a result. Regional, local conditions are more important, which benefits rural areas.

The Corona crisis is changing the way we live together, our culture and our working environment in many ways. Large metropolitan areas have been particularly vulnerable to the spread of the pandemic; these are more vulnerable and nervous than rural areas. Closed restaurants, gyms, cinemas and clubs – life in the metropolises was suddenly empty. The Corona crisis is therefore also the driver of a new urban exodus (wealthy New Yorkers or Parisians moved to second homes outside the city) – especially since more and more regions were already relying on local supply before the crisis.

In the crisis, rural areas can gain in importance. In the future, the winners could be those regions, small towns and villages, that take an offensive approach to change and shape it optimistically. Quality of life, education and civic engagement are important location factors in rural regions.

Technological progress, with digitalisation and automation, can accelerate the gap between the booming cities and regions and the shrinking and isolated regions, but it can also reduce it. The need to catch up in the digitalisation sector is a key factor in this. Many rural regions lack a fast internet connection. Home office and teaching at home were difficult for many in the countryside during the Corona period.

Another factor will be whether people will continue to work at their place of work in the future, making residential locations away from the large and medium-sized cities increasingly interesting. Real estates in rural areas are increasingly in demand. In the post-crisis period, the urban-rural view will probably change somewhat.

Of course, agriculture also faces challenges during the pandemic. The closure of restaurants as buyers, shortage in the availability of harvest workers as well as high standards on transportation and processing logistics for perishable food became visible as risks.

The significance of trends gives some indication of the future developments: what might remain important also in the future and what might become less vs. more important. The assessment can help to determine the impact of future trends.

Climate change, renewable and bioenergy and ageing population are crucial megatrends, which are very important for the rural areas and agriculture in the future. We notice extreme weather events such as rising temperatures, increased periods of drought and increasing

precipitation in winter. Regional specific adaptation strategies need to be developed for a sustainable development in agriculture. Renewable and bioenergy represents an opportunity for many farmers, especially for small farms. The additional source of income is important for securing their livelihood. However, it also entails some risks, e.g., that agricultural land will be converted. Demographic change, especially the ageing society in rural areas, has an enormous impact on rural areas, because young people, especially well-educated people, are moving away. This in turn has a major impact on agriculture. There is a lack of young people in agriculture who are also potential successors. Here it is important to find political framework conditions and local strategies that keep people in their home regions or attract new young people.

Specific regional trends – farm size, diversification/specialisation of farms, farmland prices, farm population, young farmers, diversification of rural economy, practice-oriented food systems and digital economy – have crucial impact on the agricultural development. The increase on the average size of the farms has been driven by technologies, economies of scale and policies in many European regions. This in turn has an impact on farmland prices, on the difficulty of access to land for young farmers and on the decrease of the farm population. Strategies for rural areas to attract young people can be a focus in the diversification of the rural economy. This means that the digital economy must be developed more intensively in agriculture, but also in other sectors. Considering how fast technology is changing, it may well be that in 10–15 years farmers will spend more time in the office programming and monitoring fully automated machines than out in the fresh air. However, in the future, only large-scale farms will be able to afford such fully automated machines and robots. Their employees will be technicians and computer experts rather than traditional farmers. The scarcer the food and the larger the profit margins become the more investors will enter the agricultural sector.

Another trend is the alternative practice-oriented food systems – food systems in which the farming and processing practice is the key issue: organic farming, ecological food, food forests, permaculture, regenerative agriculture. A new field could be vertical farming, for example. Here, animal and plant production are to be brought into the direct neighbourhood of consumers: it will then be done in multi-storey buildings where animals are bred or vegetables, lettuce and mushrooms are produced all year round. At the same time, the circular economy will contribute to environmental protection. Corona has shown that regional supply chains are important and how much we depend on foreign countries and how fragile the global system is in times of crisis.

In addition, there are five new trends on the top-20 list of significant trends in the long run. The five trends – sustainability transition, environmentalism, resource competition, productivity and competitiveness and biodiversity loss – show clearly how important it is to take care of nature and soil in future. The challenges for agriculture in particular also offer opportunities. Only sustainable, environmentally conscious and resource-conserving agriculture can be sustainable for the future. Sustainable management in line with people and the environment, resources and climate are the prerequisites for sustainable global and European agriculture.

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ANNEXES

Annex 1. Additional information about the trends

Table A1: Number of identified trends by type of trend and search mode

Search mode and participant	Number of			Total	% of total
	Megatrends	Trends	Weak Signals		
Targeted search:					
European projects (ILS)	153	296	177	626	40 %
Scientific journals (UWr)	14	60	20	94	6 %
Futures literature (UTU)	15	27	48	90	6 %
Subtotal	182	383	245	810	52 %
National search:					
CE (Spain)		1	8	9	1 %
CRNS (France)	1	40	21	62	4 %
EcoRuralis (Romania)		12	15	27	2 %
ILS (Germany)	8	182	31	221	14 %
KULTURLAND (Germany)		12	21	33	2 %
Landg (Belgium)		11	11	22	1 %
NUIG (Ireland)		44	56	100	6 %
SA (United Kingdom)		8	8	16	1 %
TdL (France)		9	9	18	1 %
TUD (The Netherlands)	1	19	6	26	2 %
UNICAL (Italy)		16	16	32	2 %
UNIDEB (Hungary)		28	23	51	3 %
UTU (Finland)		28	57	85	5 %
UWr (Poland)		4	20	24	2 %
XCT (Spain)		18	6	24	2 %
Subtotal	10	432	308	750	48 %
Total	192	815	553	1560	100 %

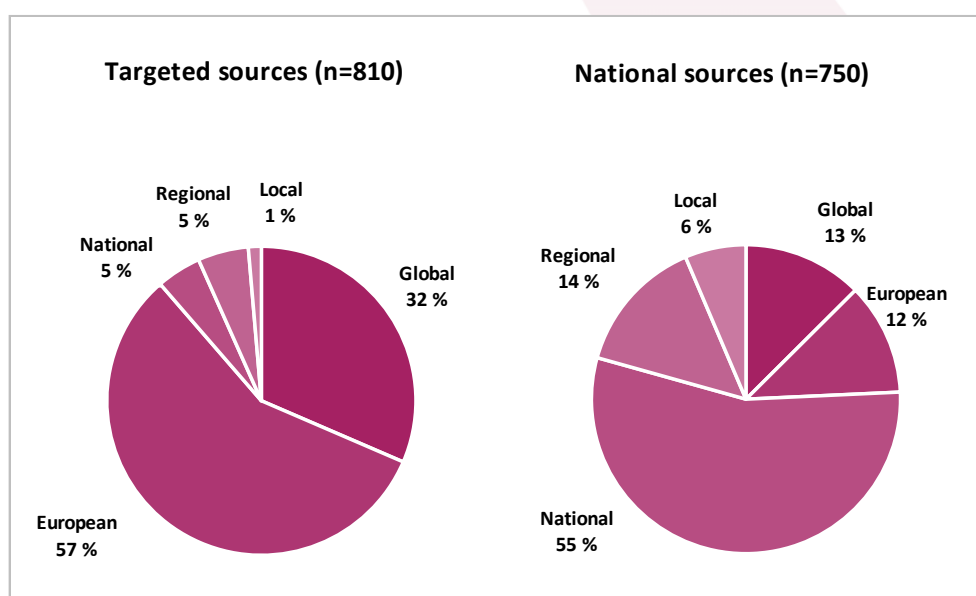


Figure A1. Trends by scale and search mode, %

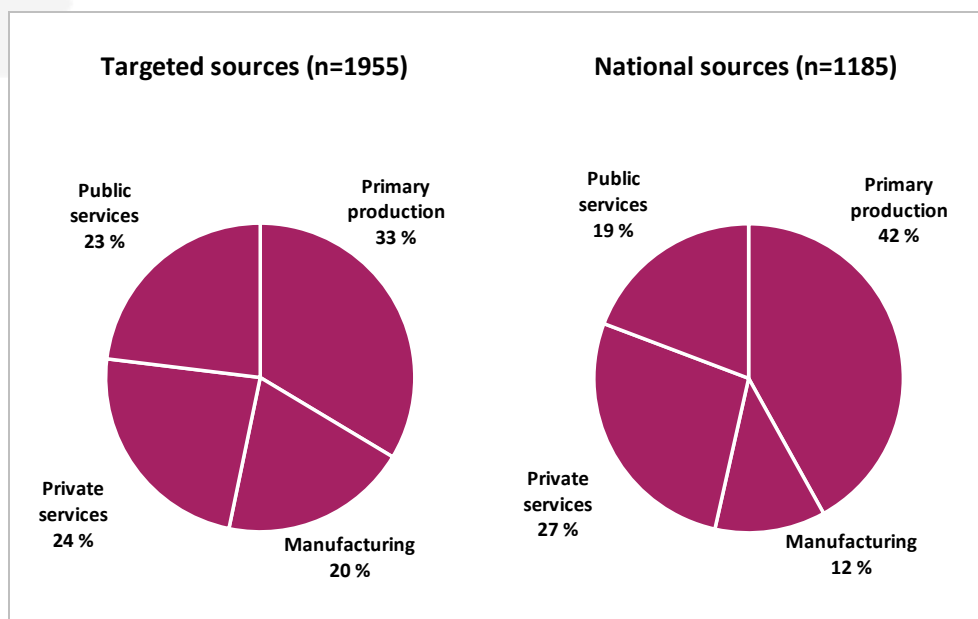


Figure A2. Trends by affected sector and search mode, %

Annex 2. Trends and their manifestations (trend observations)

Trend and its manifestations (trend observations) /1	Count
Accessibility	15
At a wider level, access to agricultural markets is also a major driving force for the development of farms	1
Car dependency: Reliance on private car transport in rural areas	1
Decreasing quality of accessibility	3
distance matters and spill-over effects: if a rural region is successful or not largely depends on the distance to important urban centers	1
Evolution of the transport system : regions and rural areas less and less interconnected with the 8 metropolises	1
Horticulture close to the city: Transport routes are short and better for consumers --> In the cities of Düsseldorf, Ludwigshafen am Rhein or Hamburg, more than every second business is a horticultural company	1
Increase in the road accessibility of European regions	1
Lacking public transport causes limitations in knowledge transfer	1
Low level of accessibility (i.e. geographical, transport facilities) in rural regions	1
Mobility in rural areas: school transport	1
Proximity to urban areas appears to be an important factor for rural areas	1
Remote areas with difficult access (transport infrastructure) and low rural services will not be attractive for young farmers and their family to settle	1
rural people's access to various services is very limited	1
Ageing farmer population	11
Age structure of farmers: 7 % of the farm-holders are 65 years or older; age group with the largest share are those between 45 and 55 years old	1
Age structure of farmers: only 8 % of the farm-holders are under 35 years old.	1
Ageing farming population	1
Ageing farming population: average age of market-oriented farmers in the EU-28 in 2013 was 51 years	1
Ageing farming population: More than half of European farmers will retire within 10 years, while only 7% are under the age of 35	1
Ageing farming population: Young farmers --> 5.6% of all European farms are run by farmers younger than 35 while more than 31% of all farmers are older than 65 (- Statistik aus Eurostat für die Nationen, - Average age of EU farmers (FADN, 2004-2013)	1
Greying farming population	1
Lack of adequate pension for farmers	1
The agricultural population is getting older in Germany	1
The agricultural population is getting older in Ireland	1
the average age of farmers is increasing	1
Ageing population	26
Ageing population	5
Ageing population and depopulation are challenges in Duoro landscape area, Spain	1
Ageing population in rural Northern Spain	1
ageing society	1
Ageing society	1
Ageing village	1
Aging population in rural areas	2
Demographic change	1
Demographic change: Aging of the population in rural areas	5
Demographic change: Germany depends on workers from abroad, the baby boomer generation is retiring and society is aging	1
Demographic shift: aging & shrinking in Europe, young & growing in Asia and Africa	1
global ageing	1
global ageing (Worldwide 760 million people are over 60 years. By 2030, that number will probably double)	1
Increasing life expectancy	1
Megatrend: global ageingThe European old-age-dependency ratio will increase from 13.5% to 36%	1
Rising life expectancy	1
severe demographic challenges	1
Agri-environmental policies	4
Larger properties tend to participate more in EU Rural Development agri-environmental schemes (AES)	1
Manifestation of environmental policies due to agricultural policies	1
Purely environmental aspects will be more emphasized in EU agricultural subsidies - more potential for smaller multi-functional farms	1
The results of the latest ecological reforms of the Common Agricultural policy (CAP) were modest	1
Agritourism	6
Agritourism: a historic expression of multifunctionality in Italian agriculture, consisting in tourists spending their holidays in a farm	1
Agritourism	1
agritourism (e.g. Tukum, Valencia)	1
Increasing importance of agricultural tourism in Germany	1
over-dependence on tourism for some agricultural holdings	1
Rising interest in agro-tourism	1

Trend and its manifestations (trend observations) /2	Count
Agroecology	5
Agricultura bio/biodinamica [biodynamic agriculture]: a conception and long-drawn-out actual practice of agriculture based on a continuous process of learning to live in harmony with nature	1
Fires in nature and barns will raise more and more societal unrest impacting farm and forestry practices	1
New entrants: Many of them turn towards agroecological forms of farming	1
Recovery of biodiversity / local productions: experiences of protection and recovery of local flora and fauna, of local environment and natural resources, of local culture and productions using sustainable methods and techniques.	1
Rural nonformal agroecology schools	1
Agrosocial paradigm	3
Grassroots initiative work to help maintain peasant, small-scale agriculture and agroecological practices	1
Shift from agroindustrial to agrosocial paradigm	1
The industrialisation of agriculture has been completed and will increasingly give way to an alternative form of agriculture in the future	1
Alternative lifestyles	1
Hippie Communities: people leaving the city since the 1960s for a natural alternative lifestyle in the countryside	1
Animal welfare	5
Animal rights activists, partly eco-warrior style	1
Animal rights, Animal activism, Natura materials: case wool	1
Animal rights, Animal activism: case fur production	1
redesigned stables and housing systems for animals (e.g. sows, chickens) in NL and Denmark	1
Trend of concepts that allows animals to act in their natural behaviour	1
Anthropocene	2
Anthropocene - increasing influence of human activities on Earth's biosphere and shooting over its capacity to regenerate	1
Natural environment and ecosystems are under increasing stress	1
Biodiversity loss	12
Biodiversity loss and deterioration of ecosystem services	1
biodiversity reduction	1
Biodiversity: as a trend in agriculture	1
Changes in timing and duration of the spring migration periods of birds	1
Cities are getting greener, with a higher biodiversity	1
Declining farmland and woodland bird populations	1
Global biodiversity loss	1
Global loss of ecosystem services	1
Loss of biodiversity Landscape degradation	1
loss of biodiversity, as well as habitat destruction	1
loss of open habitats and related species	1
Sitio de Monfrutado, Portugal: loss of regeneration of oaks	1
Bioeconomy	9
Access to funding and lack of policy incentives are regarded as barriers to bio-industry start-ups	1
Bark-based Insulation Material in Hungary	1
Bioeconomy	1
Financial and business supports were key needs identified for bio-industry start-ups	1
For agriculture related biomass sidestreams main used techniques are extraction, enzymatic fractionation and organosolv fractionation as well as gasification and pyrolysis mainly to produce products for food applications followed by functional material and fine chemicals and energy.	1
For forestry related biomass sidestreams, extraction, gasification, low NOx combustion, pyrolysis, organosolv fractionation, and torrefaction, in combination with pelletisation are techniques found to valorise woody side-streams into marketable products for food, (fine) chemicals, functional materials and fuel applications.	1
Increasing footprint-to-bioproductivity ratios in the bioeconomy sector	1
Rural bioeconomy	1
Small-scale Grass Biorefineries in Ireland	1
Black market	1
"Agromafia" in sicily: immigrants forced to work in agriculture	1
Business clusters and ecosystems	6
Agriculture will be concentrated on agroparks (industrial estates for agriculture)	1
clustered markets for innovative mixes	1
Rural clusters and technological clusters in Milano aim to work closer together	1
Rural economies in Milano region have grouped into certain clusters since 2010	1
Super clusters to supply and serve big cities with food and bioenergy	1
The maritime ecosystem in Burgas Region offers economic development potential which is currently underused.	1
Business ownership	11
Different legal forms of agricultural holdings: Different inheritance laws and historical ownership structures are the reason for the different landscapes in Germany	1
Family business ownership: Dominance of family ownership in Irish farms and importance of family businesses to regional economy	1
Increase of agricultural businesses with youth in their administration	1
Increasing diversification of legal forms in German agriculture: business partnerships, legal entities, owner-proprietorship, etc.	2
Large acquisitions of arable land with impact on small-scale farming, concentration of control in rural communities and contributing to biodiversity loss and soil fertility erosion	1
Preservation of family holdings	1
Share Deal (Investors acquire shares in a limited company to save land transfer taxes)	1
Share Deals: In many places in Eastern Germany, agricultural companies have been bought up in recent years through so-called Share Deals, the purchase of capital shares of legal entities. Studies have shown that in the period 2007 to 2016, around 2% of agricultural land was given a new owner through share deals. The investors usually come from other regions and/or economic sectors and often own several agricultural companies in different regions.	1
Successors: Farms are not often passed on to the farmers' daughters. Women in general are underrepresented in farm ownership and management in Germany. Only 9% of the farm holders are women, which is one of the lowest numbers in Europe.	1
Tenancy contracts: 60% of agricultural land is under tenancy contracts	1

Trend and its manifestations (trend observations) /3	Count
Care services	7
Care communities	1
combining farming with social projects (mentally ill people, vulnerable groups)	1
Green care	1
Homecare and telemedicine	1
Medical services in rural areas: Dental care visits the patients	1
Social agriculture/Social farms: a form of multifunctionality, where farm activities involve people with social, physical and mental difficulties, thus bringing together agriculture, social inclusion, education to respect nature.	1
Valorization of the « care » and of related jobs due to the coronavirus pandemic	1
Changing favourability of agricultural regions	7
Agricultural productivity and innovation Yield increases are slowing down	1
Degradation of soils, including erosion, decline in organic matter, sealing, compaction and salinization	1
Greenhouse-gases induced decrease in global agricultural yields by 9.5 ±3.0%	1
Immigration and food production entering more north	1
Near cities where the need for food production is highest, land has become so expensive, that the income generated by agricultural production is not sufficient to cover the investment	1
Northward migration of agro-climate zones in Europe	1
Territorial imbalances between climate change vulnerability and adaptive capacity	1
Changing food trade patterns	3
Agricultural trade follows global economic trends	1
Agricultural trade has expanded, but most food is supplied domestically	1
Growth in global agricultural trade volume and, in the recent decade, a significant growth in the total value of the trade in high-value products	1
Changing housing preferences	3
Evolution of places and way of living according to the different stages of life	1
Generally changing situation in housing preferences	1
Innovative and different accommodations are becoming more and more successful	1
Changing role of the public sector	4
Contractualism in service provision	1
Increasing public debts	1
Nationally funded public investment and regional growth	1
Weakening of the financial intervention capacities of European and national public authorities	1
Cheap housing in rural fabric	3
Rescuing old and vacant housing: Higher rates of vacant housing and availability of very low cost (run-down) housing in rural areas	1
Self-sustainable houses and easily modifiable homes	1
well-educated returning migrants seek good environment and lower housing expenses for their families	1
Circular economy	9
Circular economy	1
Circular economy (low waste economy, due to environmental problems)	1
circular economy is one main issue for agri-food businesses in Europe	1
Circular economy: an opportunity for economic development and the creation of new sources of sustainable employment in the rural world	1
Economia circolare [Circular economy]: kind of production where every element involved in the process (water, energy, other materials) is linked to another in a circular logic and nothing is wasted	1
Organic compost from olive mill residues in Andalusia, Spain	1
Rural circular economy: Upcycling as rural business opportunity	1
transition towards a circular economy	1
Zero waste shops	1
Climate change	33
Agribusiness reacts to a concern of climate impacts	1
agriculture is a major source of GHGs liable for climate change	1
alarming climatic trends in Europe	1
Climate change	9
Climate change	2
climate change affects natural resources and influences economic viability.	1
Climate change and environment are growing concerns	1
climate change and macroeconomic drivers have an important impact on agricultural production, GHG emissions, as well as prices and consumption trends	1
Climate Change as Megatrend will be a big issue especially for small holdings	1
Climate Change: As for Europe as a whole, precipitation is generally increasing in northern mountains and decreasing in southern mountains. These trends are likely to continue, and the frequency and magnitude of extreme events are likely to increase (EEA, 2017)	1
Climate politics may change the way of urbanisation	1
Climate protection	1
Environmental Processes: climate change, higher average temperature,...	1
GHG mitigation potential and the abatement costs in the end depend on carbon sequestration rates, land markets or structure of agricultural production	1
Global sea level rise with a projected increase in the sea level along European coastline in 2100 ranging from 0,5m to 1m between regions	1
Global warming	1
Global warming: humid winters, dry summers	1
Land use changes due to climate change	1
Land use changes due to climate change: peat land in agriculture (Ostrobothnia)	1
Rising emissions of anthropogenic greenhouse gases	1
Sequence of crop rotation is changing due to climate change	4

Trend and its manifestations (trend observations) /4	Count
Co-operatives	7
Abandoned Farmhouse and/or Land Acquisition	1
Abandoned Rural Village acquisition through Cooperative Housing	1
Community Cooperative (in italian cooperative di comunità) : a group of people joining efforts to produce goods and services for the well-being of the local community	1
Farmers cooperatives: to bring better incomes and access to market, and local products to consumers	1
Online cooperative farming/cereal co-op movement - e.g. #OurField project - co-investors and co-farmers decide on farming approach of a field (with an on-site farmer) using online tools	1
Senior Cooperative Housing in Rural Areas	1
Shops opened by local cooperatives for better access to market of producers and provide local products to consumers	1
Collaborative problem solving	7
Cooperation 2.0: vibrant, informed, connected (social media) and empowered civic society takes a lead in addressing societal problems	1
Crowdfunding of "new approaches" to land and farming	1
Diverse local actors relevant to a local initiative or challenge need to be integrated in shared planning processes and their plans and concerns need to be connected more to wider social innovation networks and relevant partners	1
Ecological Networks - Bartering Groups promoting social currency exchanges	1
Nonviolent communication (Marshall Rosenberg)	1
Online platform for collective problem solving in local development	1
User-friendly software for common good land use	1
Community-based action	14
Foundation for equal opportunities for the poor	1
Community charity to reverse population decline	1
Community planning: bottom-up plans developed by communities to drive future development	1
Development of the participation society, in which citizens and civil organisations take over responsibilities previously held by the government	1
Distretti di Economia Solidale (DES) [Solidarity Economy Districts]: local networks of solidarity economy connecting GAS, producers, suppliers, associations who exchange ideas, information, products and services	1
Men's sheds	1
Mobility in rural areas: Citizen buses as an extension to bus service by routes	1
Multi-generational co-Living / co-Housing: sharing a flat, house or farmstead with non-family members	1
renewal of youth social movement	1
Rise in community-led public transport services in rural Ireland - Local Link scheme	1
social factors and community engagement are increasingly important for agricultural initiatives	1
Social initiatives in rural areas need greater local political support	1
The participation society will have a large impact on rural areas	1
Women's Sheds	1
Community-oriented food systems	25
Alternative agri-food networks (AAFNs) have been increasingly understood as a social trend	1
Community seed houses to maintain and distribute heirloom seeds and act as community spaces	1
Community Supported Agriculture	1
Community supported agriculture (CSA)	1
Community Supported Agriculture (CSA): consumer-farmer partnerships that establish a direct link between food production and consumption	1
Crowd-farming	1
Development of urban community gardens	1
Farms collectives	1
Food Councils: regional/local community groups that lobby and work for food sovereignty and other issues connected to food & nutrition	1
Grow Gothenborg: Matchmaking platform new entrants, learning opportunities, volunteering, land	1
Gruppi di Acquisto Solidale (GAS) [Solidarity Purchasing Groups]: solidarity based group of people living in an urban area purchasing goods directly from local producers	1
Herenboeren	1
Home restaurant / community restaurant: informal non-professional restaurants, hosted in private houses, mostly in small de-populating villages	1
Increase of community supported agriculture in rural areas contributing to short supply chains, better income for producers and healthy and diverse food for consumers	1
Increasing interest in urban agriculture	1
Indigenous food systems are influencing mainstream food thinking	1
Networking is important for AAFNs but recently there is a growing competition between the actors	1
Reciprocity has been an increasingly important principle in order to bring different interests together (e.g. high-quality beef: better prices for farmers, better image for restaurants, healthier food for consumers)	1
Rising importance of Alternative Food Networks	1
Shopping communities for urban consumers and rural producers	1
Shopping communities in local level	1
Spiritual farming - set up of agroecological farms guided by religious / spiritual principles	1
Urban farmer is a promising career choice	1
Urban farming a growing trend	1
Urban farming/gardening: food councils, rooftop and community gardens, school gardens and local food markets.	1
Commuting	4
Extension of commuting areas	1
Increases in long-distance commutes from rural to urban areas	1
Rural to urban commuting for work	1
Urban to rural commuting to participate in GAA	1

Trend and its manifestations (trend observations) /5	Count
Concentration	11
Redistribution of schools and health service cards	1
Concentration of Green tech	1
Favouring intercommunalities	1
increasing concentration and ageing	1
Increasing concentration of economic activities	2
Local supply: dominance of large grocery	1
Loss of local infrastructure for small farms and woodlands such as abbatoirs sawmills and millers	1
Metro-polarisation policy	1
Reducing the number of rural municipalities, encourage merge	1
territorial concentration	1
Counterurbanisation	7
Counter urbanisation	3
counter-urbanisation	1
Seeking better quality of life will speed up counterurbanization	1
Suburbanisation/Counter urbanisation: proximity to urban centres remains to be important	2
Creative economy	12
Artist villages: old depopulated villages inhabited temporarily or permanently by artists, craftsmen, intellectuals looking for a peculiar place for inspiration	1
Artists in rural areas	1
Creative city people find countryside as a good environment for work and housing	1
Creative Class moving to rural areas	1
Creative placemaking	1
Cultural Creatives Economy: opportunities in and for the countryside	1
Development of artistic activities by young people in rural areas	1
Nests for creative work at the countryside	1
Remote rural writing/artistic retreats	1
Rise of rural creative class	1
Rural creative economy	1
Rural space for creative professions	1
Decarbonisation	4
Bog (fish) farming: Response to need for decarbonisation related to peat in the rural economy	1
Carbon farming: Payment for ecosystem service "carbon absorption & storage" in farming	1
decarbonisation of industrial activities	1
Decarbonisation and decentralisation of the energy system	1
Deconcentration	11
Alternative Education Hub: Provision of training programmes promote social inclusion	1
Decentralisation	1
Decentralisation of tasks to regional and local authorities, but without sufficient means	1
Decentralisation/regionalisation	1
decentralising political powers, such as on health care and youth policies, and the consequent merge of small municipalities	1
Deconcentration of large cities	1
Decreasing agglomeration advantages and increasing sprawl	1
Devolution of competencies from the national to the sub-national levels	1
Growing decentralisation	1
One-off rural housing: by rural inhabitants and non-rural commuters	1
Rural relocation or "sourcing", companies moving to rural areas	1
Degrowth	4
"slowbalisation"	1
Degrowth	1
Postulates of 'degrowth' as a necessary direction to reduce the negative impact of humans on ecosystems	1
Value of (leisure) time will increase	1
Deindustrialization	1
Deindustrialization in Europe	1
Delivery-oriented food systems	11
(Staple) food vending machines: new models of food retailing	1
Combination of channels in order to reach their customers	1
e-commerce will grow in food markets	1
Evolution of the supply of collective catering (schools, ...)	1
Expansion of food delivery market	1
Farm to table movement in Hungary	1
Online Marketing Platforms for Organic Farmers	1
Renaissance of roadside market stands for farm products (improved automation technology)	1
Short food supply chains important for new entrants' businesses like on-farm shops, farmers' markets, box schemes, and online food assemblies, but also short chains to local cafés and restaurants	1
three key aspects of the so-called new food geography: sustainable food supply chains, public sector food procurement practices and (peri-)urban food strategies.	1
Trends in supplies to supermarkets: room for local producers, also for processed products	1

Trend and its manifestations (trend observations) /6	Count
Demonstrations, events and fairs	8
decentralization and fragmentation (vertical and horizontal) of advisory services	1
Farm demonstration activities gain new dynamic since the emergence of organic farms	1
Farm demonstration activities recently decrease in Italy, Greece or Slovenia	1
Farm demonstration activities recently increase in most of Eastern Europe or Austria	1
In Northern and Southern Europe, agricultural events are typically male-dominated, whereas gender representation is more balanced in Eastern Europe. Additionally there are various differences in the topics presented by men or women	1
more highly educated farmers are more likely to attend demonstration events.	1
regions with higher numbers of active, commercial farms, higher population and more central location are more likely to have on-farm demonstration activities	1
Where available, advisory services are the key initiators of demonstration activities. But the role of commercial companies is increasing	1
Depopulation	4
Depopulation	1
Depopulation is a challenge in Trento, Italy	1
Population density of many former socialist countries decreased	1
the issue of population decrease is primarily framed as a regional and municipal issue	1
Diet-oriented food systems	13
Development of food alternatives (insects, synthetic meat, etc.),	1
Fashion for vegetarianism among young people	1
growing consumer demand for healthy food.	1
Health promoting, functional food: Case oat	1
Increasing popularity of veganism	1
More demand for free-from and natural food products	1
Place of animal sectors in the future	1
The diet of humans changes due to climate change, vegetarianism becomes more popular	1
The value of organic and natural food products will increase	1
Trends of vegetarian and vegan nutrition	1
Vegan farming	1
Veganism	1
Veganism and relation to animal and meat	1
Digital economy	28
Cashless society: move away from cash to digital transactions in wider society as the norm	1
development of digitalization has numerous effects on rural development	1
Digital economy	1
Digital innovation	1
Digital pioneers: small towns with communal living and innovative working models (sharing desk and office with others)	1
Digitalisation	1
Digitalisation in agriculture	7
Digitalisation in the agriculture and food industry: "Internet of Things", "Big Data", "Cloud Computing", "Artificial Intelligence" and "Robotics and Sensor Technology" on "Smart Farming" or "Agriculture 4.0	1
Digitalisation of agriculture	1
Digitalization	1
Digitalization and Robotization	1
Digitalization changes agricultural practices	1
digitalization in agriculture	1
Digitalization in the primary sector	1
Digitalization opens jobs for rural teleworkers and entrepreneurs	1
Digitalization, public services go down in rural areas: e.g. postal services, internet access/broadband	1
E-Learning as a growing opportunity to decrease the number of early school leavers and raise educational level	1
increasing use of GPS-Technology in livestock management	1
More use of digital Technology in agriculture, in this case agroforestry	1
Smart communities: government pilot initiative to drive use of digital tech to address rural problems/harness opportunities	1
Technological change and Digitalization	1
The progress of ICT offers the prospect to mitigate some of the effects of distance.	1

Trend and its manifestations (trend observations) /7	Count
Diversification of rural economy	23
Decoupling of economic development of rural areas from agricultural activities	1
Diverse sectoral structure of the economy in rural areas	2
Diversification of agricultural economy	1
Diversification of rural areas in peripheric and remote regions which are still agriculturally determined, Consumption Countrysides where indicators relating to tourism and recreation activity, access to 'natural assets' are very important for the rural economy and diversified rural economies where secondary or the market service sector play an important role	1
Diversity of rural regions	1
Fermentation, food and farming: Use of 'fermentation' as a core method within food and farming businesses	1
Growing demand for organic essential oils from Bergamot citrus	1
Increasing of service sector in rural economies	1
Increasing of the agrarian countryside, which leads to a growing secondary and tertiary sector in rural areas	1
Nursery Stock: Horticulture sub-sector supplying garden products	1
Rural areas develop from an agricultural production landscape towards a multi-function work- and living environment; In rural areas there is a trend of less farms, more: civilians, non-agrarian enterprises, recreation, nature development, care facilities	1
Rural craft drinks industry	1
Rural, natural cosmetics industry	1
Socio-economic changes	1
Structural change in the rural economy	2
Tertiary sector as an important job creator in rural regions	1
The employment rate and the number of people employed in service sector are significantly different in rural and urban areas	1
The influence of agriculture in rural areas has declined while the importance of other activities (social innovations, tourism, transport, and increasingly, energy policy) has increased.	1
There is a structural economic change in European rural areas (e.g. new practices, larger scale, more interactions, shifting natural and market conditions)	1
While the workforce is increasingly mobile, many Territories with Geographic Specificities have longstanding traditions of seasonal migration, multiactivity and in, some cases, multiple decades of demographic decline	1
Wool industry revival: attempts to re-capture value from/revive a traditional industry	1
Diversification/specialisation of farms	36
After the turndown of tobacco industry in Phthiotis (Greece) in 2008 the farmers discovered Stevia production	1
Alpaca Farming: (breeding, livery, selling of wool and/or a tourist/wellbeing attraction)	1
Cropland diversification	1
Debate about the legitimation and about growing acceptance of use of cannabis	1
Decrease in cow population	1
Digital disruption and consolidation of farming inputs suppliers and on the other hand the consumer behavior of digital native customers will diversify the farming structure and food markets.	1
Diversification in the structure of qualification in agriculture	1
Diversification of farm income	1
diversity of farming is important for biodiversity conservation and agricultural production	1
Farm diversification, a shift away from primary sector activities and emergence of the New Rural Economy	1
Farmers view renewable energy production as a means of farm business diversification but that field depends heavily on political measures, economic market developments and access to infrastructure	1
From farm to pharmacy: Medicinal herbs farming	1
Hemp growing: Potential new significant farming sector	1
Increase in cultivation of biotech crops	1
Increase in diversified agriculture (combination with non-agricultural activities)	1
Increase in diversified agriculture (combination with non-agricultural activities) in Slovenia	1
Increase of additional income/sideline economy: renewable energy, forestry/wood industry, direct marketing, horse boarding, tourism	3
Livestock: dairy cattle in the coastal regions of Lower Saxony and Schleswig-Holstein, the Lower Rhine and the Alpine foothills	1
Low-yield soils in the Weser-Ems region	1
Off-farm income as an option to safeguard the early stage of taking over respectively establishing an own farm business	1
Organic farming: sheep, goats and suckler cows	1
Pluriactivity and farm diversification is one way of palliating the issue of economic stagnation in the primary sector, also contributing to regional diversity	1
Reallocation of land use and the further concentration, specialisation and intensification of agriculture are all likely to increase	1
Some farmers chose a more inclusionary strategy away from more and more production	1
Specialisation in agriculture	5
Specialisation in agriculture: 9 farms out of 10 are specialised farms, either in animal husbandry or in crop farming	1
Tree and bush- fruit: predominant in Schleswig Holstein, Lower Saxony and Baden-Württemberg	1
Västra Götaland, Sweden: marginalisation of agriculture and specialisation of crops	1
Wine and hops: Southern Germany	1
Wineyards	1
DIY movement	5
Do-It-Yourself (DIY) movement	1
Farmhack - worldwide community of farmers that build and modify their own tools	1
Home crafting, DIY do it yourself, repair cafés, private food processing	1
Low-cost and do-it-yourself agricultural machines and buildings for peasant agroecology	1
Valorization and development of self-production and self-consumption	1

Trend and its manifestations (trend observations) /8	Count
Dominant food regime	5
A column of the president of the 2nd largest farmers union in Flanders saying during this coronacrisis it's time for reflection. And that our very export oriented farming industry (at least some sectors, the dairy branch for instance) shows its weaknesses in a crisis like this. It's a call for rethinking the idea of 'the bigger, the better'. Coming from one of the biggest farming unions this is quite remarkable and it got a lot of positive feedback from the agro-ecological angle.	1
Changing food system	1
Increased productivity/industrialization of agriculture in many developing regions (further expected increase in South America, Africa and Asia)	1
Longer food value chains may have a larger ecological footprint	1
Vertically coordinated, capital-intensive value chains challenge small-scale farmers	1
Dual food markets: price and quality	5
Europe asserts its ambition in the field of quality agricultural production	1
Increase in farm businesses built around rare breed meats (e.g. pork, beef)	1
Parallel development of two types of food industries: (1) high-tech, mass production (cheap, standardized products) and (2) organic high-quality production (local, more expensive products)	1
Pillar II of CAP leads to an export of products to countries, where people can afford agricultural products with a higher quality	1
The 'quality' turn in food purchasing	1
e-commerce	6
Digital direct marketing: combination of online- and direct marketing mainly of food	1
Local Food markets getting more important for small holdings, due to possibilities in marketing via internet	1
Online marketing of small-scale farming products with increase for rural income and short direct food chain with the consumers	1
Online markets	1
Renewal of direct sales channels: local production and distance selling on internet sites	1
Rural food producers' webshops	1
Easy food	1
User-friendly and ready-to-eat products are very popular	1
Eco-efficiency	2
Decline in energy intensity of economies	1
Increase in eco-efficiency of EU economies	1
Economic growth	10
Decoupling between growth and jobs (for economic growth, high employment rates are not necessary anymore)	1
Economic growth for Germany	1
GDP grows faster in rural than in non-rural areas	1
GDP per capita growth	1
Global economic growth	1
Growth-orientated policy culture	1
negative economic effects in rural areas	1
Recent impacts of the global economic crisis on rural industry and employment	1
Slow growth (Markets still grow, but slower)	1
The landscape for development finance is changing (New sources of investment financing are emerging)	1
Ecotourism	3
Ecological Tourism, Bird Observation Tourism	1
Ecotourism in rural areas	1
Travelers seeking authentic local experiences and unspoiled landscapes that only rural areas can offer	1
Ecovillages	7
"Eco aldeas" (Eco Villages) development	1
Eco communities	1
Eco villages	1
Eco-Villages: newly founded communities to pursue alternative lifestyle in a collective	1
Ecovillages	2
Ecovillaggi (ecovillages): self-run, self-sufficient ecological communities of people re-populating abandoned farms and/or villages in rural areas	1
Educational farms	3
Agro-education: Connecting farmers and schools	1
Educational Farms: farms running educational activities directed mainly to students of all education levels, related to agriculture and environmental issues, healthy diet, rural culture	1
Graduate Internships in farms located in Rural Areas	1
eGovernment	1
eGovernment	1
Empowerment	2
Bottom-up endogenous development and community empowerment- the LEADER Programme	1
empowered individuals	1

Trend and its manifestations (trend observations) /9	Count
Environmental conservation	12
Climate-friendly practices in agriculture contributing to soil fertility and maintenance of biodiversity	1
Consideration of biodiversity and pesticide-related issues by municipalities: anti-pesticide decrees	1
Cooperative conservation approaches, e.g. remuneration by number of rare plant species on the grassland, or EU contracting local farmers' associations in NL	1
Farming for Nature and Conservation/ High Nature Value Farming	1
High Nature Value Farming (HNVF) as a trend against modern mainstream farming	1
High nature value farmlands	1
Interwinning nature conservation and agriculture: Nature 2000 and small-scale agriculture	1
Nature conservation viewpoint will get stronger in land use policy in remote rural areas	1
Opportunities created by ecosystem services get people moving from the city to the country	1
Regenerating bogs - a part of the Irish cultural landscape	1
Regions with rural tourism have potential for environmental conservation, intense farming areas not	1
vision of future of agriculture 2: Conservation of the environment and natural resources	1
Environmentalism	13
Animal rights, Animal activism: case wolf and other natural predators in Finnish nature	1
Climate change and environment are growing concerns	1
consumers awareness of food production processes is increasing, as well as their concern about diets and food choices	1
Ecological awareness	1
Environmental awareness increases	1
Environmental topics are more common in northern Europe	1
Increasing of environmental issues regarding to agricultural holdings	1
Increasing recognition of the importance and challenges of climate change	1
New relationships with nature	1
Pro-environmental behavior	1
Raising public awareness and maintain lobbying on land issues is more and more essential	1
Rise of the social representation of nature and new ideology of our threatened planet	1
Young people and the ecological imperative	1
Exploitation of development potential	16
loss of potential in rural areas	1
A challenge for rural development in North-East Poland is the prevalent indifference and passivity of parts of the local population	1
Activities such as sustainable organic agriculture or short value chains, community tourism and social inclusion aim to support the sustainable socioentrepreneurial potential of local young people	1
core challenges of agricultural and rural development: social cohesion, quality of life, competitiveness, sustainable use of natural resources	1
European study on the attractiveness of the countryside: how attractive is the countryside and how can we attract more people for living, working and investing. How can we support farmers and inhabitants of the countryside with developing their businesses, whilst taking into account environmental and climate issues along with landscapes, are the central questions of this research.	1
high investment costs as a barrier for farmers' access to technologies	1
In rural regions, novel ideas and developments often struggle to gain traction because of a shortage of facilitators for those ideas, insufficient involvement in new policies, or reservations about embracing change	1
Problems for social initiatives: remoteness, depopulation, seasonal differences	1
Rising importance of intangible assets	1
Rural spaces have less capacity in being innovative (The innovation capacity of SMEs is critical to the competitiveness and growth of rural economies across the EU)	1
Similar opportunities in Europe: opportunities for fostering social innovation and change, act as a backdrop for engaged local people, offering available venues that provide physical and metaphorical space for trying out novel solutions, without the immediate pressures of commercial viability.	1
Smart Village / Regions: cooperation of different actors to develop their digital potential	1
Technology and innovation hold the potential to make new regional stars	1
Too few individuals with time for the voluntary-based work in social engagement	1
underlying challenges of agricultural and rural development: food security, climate change, sustainable energy production	1
Urban areas in Northwest Europe are innovation locations	1
Extreme weather events	6
Big « natural » or disease events (heathwave, pandemic coronavirus)	1
Climate change: increase of natural disasters and extreme weather conditions	2
Environmental risks	1
Increasing frequency and intensity of extreme weather events: floods, droughts, heat waves, cyclones, etc.	1
Increased frequency and intensity of extreme weather events	1
Farm fragmentation	2
Land holdings: "Realteilung" (system of equal inheritance, partible inheritance): In the south of Germany land is inherited through the so called "Anerbenrecht", so that every descendant will inherit a part of the land. Despite to that in the north of Germany only one successor inherit. This practise dates back to the 15th century land tenure systems of the large land owners known as the so called "Prussian Junker".	2
Farm population	14
Agricultural structure: small family farms with small farm land are located in the federal states of Saarland, Baden-Württemberg and Bayern	1
Competition for land: decrease in the number of farms, decline in the number of persons involved in agriculture	1
Dalmatian Islands, Croatia: Marginalisation of agriculture	1
Decline of family farming	1
Decrease in the number of agricultural holdings	5
Extremadura, Spain: Disappearance of goat farmers	1
reduction in the number of farm workers and the number of farms	1
Smaller-scale farms and family farms are disappearing, more joint-ownership farms	1
Structural change in agriculture: The number of farms decreasing, average size of farms getting bigger, the amount of work put into farming decreasing, spatial/territorial centralization of agricultural production, part-time farming increasing, the aging of farmers	1
Tendance au maintien du nombre de salariés agricoles	1

Trend and its manifestations (trend observations) /10	Count
Farm size	40
Agricultural holdings are increasing in size	1
Causses and Cévennes, France: concentration in larger farms	1
Cluj, Romania: Recomposition towards larger farms	1
concentration of holdings (smallest holdings disappear and are replaced by larger ones)	1
Decline in the number of farms: land concentration, agricultural holdings are increasing in size	4
Dying of small farms	3
Gap between labour force in eastern and southern Germany: In the east, an average of 1.8 workers work on 100 hectares of land (in the south 4.6 workers and in the north 3.0 workers)	1
Heavy workload in farming	1
Industrial farms become bigger and more intensive while small scale, agroecological farming is declining	1
Large agricultural holdings: Intensive agriculture in flat lands with good soil qualities ensure high yields	2
Large livestock: Bavaria (25% cattle)	1
Large livestock: In the northwest and southeast of Germany	1
Large livestock: Lower Saxony (>50% poultry)	1
Large livestock: Lower Saxony and North Rhine-Westphalia (60% of all pigs)	1
Large scale commercialised holdings	1
Structural differences between the east, northwest and south of Germany: Large farm structures in the east as a result of the former agricultural production cooperatives (LPG) and state-owned enterprises (VEG); north-west Germany corresponds to the national average; in the southern Germany there are mainly small farms	9
Trend towards large holdings	8
Very large land holdings in East Germany	1
western stara planina, Bulgaria: Recomposition towards larger farms	1
Farmers facing new risks	2
European farmers are dealing with fluctuating commodity prices, a changing subsidy regime, disease risks and outbreaks, extreme weather events, and a perceived shortage of young people interested in becoming farmers	1
Many kinds of risks in agriculture are increasing (price volatility, weather, diseases, management of large farms)	1
Farming lifestyle	2
Agrivillages - new sustainable land based communities , affordable housing together with meaningful land based work	1
lifestyle was identified as the most common motivator for new farmers	1
Farming techniques and intensity changes	5
Agricultural intensity changes in Europe focussing on yields and fertiliser application for six major crop-type groups for the period 1990–2007	1
changes in agricultural production and practices	1
Extensification of agricultural land use in relation to Natura2000 sites	1
Increase in the total agricultural land under irrigation	1
Vertical farming	1
Farmland prices	17
high land prices, partly due to a lack of sufficient regulation of land concentration/speculation	1
High prices for arable land and rural houses creating obstacles for new entrants in agriculture and revitalization of rural spaces	1
increase of agricultural land prices in EU and Poland	1
Increasing prices for leased land	8
Land and lease prices increasing	1
Land competition is overlaid and intensified by increasing land prices	1
New entrants: main problem to buy land are the missing availability and the high prices of land.	1
Prices for land are very high, driven by high demand from investors, hobby farmers and existing farmers' intent on achieving economies of scale, and intensified by side-effects of tax and environmental legislation	1
Regional differentiation in land prices for agricultural land	1
The land with the best soil is difficult to access by young farmers. Market prices of arable land are extremely high, foreigners and national financial investment groups are searching for productive and irrigated land. Urban demand is mainly for small farmland units (for weekend housing) and contributes to further increased prices.	1
Food demand	6
Human consumption of quinoa in Western Europe is expected to grow with 20% a year	1
increase global food production	1
Increase in global food demand	1
Increase in global food demand (by 62%-98%) in 2005-2050	1
Increasing demand for agricultural land	1
The nutrition transition - level of income and agricultural transformation	1
Food security	2
COVID-19 crisis will catalyze the debate about the weaknesses of the food system	1
Governance for food and nutrition security ('Good governance' has given way to more pragmatic, problem-driven decision-making)	1
Food sovereignty	3
Food sovereignty movement	2
Food sovereignty movements	1

Trend and its manifestations (trend observations) /11	Count
Food tourism	9
Beer routes in Hungary	1
Gastronomic festivals in rural settlements	1
Local food festivals	1
Pálinka tours	1
Rural food tourism based on intimacy and experience	1
Rural gastronomic revolution	1
Sustainable culinary networks as touristic attractions in rural areas	1
Wine tours and routes	1
Wine routes	1
Food waste	2
Food losses and waste	1
Reducing food waste in rich countries	1
Food-related health risks	3
Globalisation of food fraud	1
the European market currently depends on dubious quality stevia products imported mainly from China.	1
Unsafe food remains a major cause of disease and death	1
Forest coverage	6
Afforestation	1
Expanding forestry land cover, but still low in European terms	1
Expansion of forests in the Carpathian region	1
forestry already shows trends towards more production in the north	1
Forests are expanding on land that is no longer used for agriculture. Challenge between forestry and forest protection	1
Increase in areas dedicated to forests (about 90 000 ha/year since 30 years)	1
Forest ecology	2
A shift towards less coniferous forests	1
Sustainable forestry management and smart use of biomass	1
Forest ownership	2
Increase in private forest area in Europe	1
The ownership structure of private forests in change; mutual funds, carbon sink investors	1
Fossil economy	2
Peak of everything	1
Peak oil - a projected peak in global oil production estimated to occur within three decades	1
Fragmentation of land ownership	2
Increase in land ownership fragmentation and a decrease of the mean parcel size in Czechia and Portugal (possible extrapolation for other CEE countries)	1
Increasingly threatened existence of farms which belong to marriages that get divorced	1
From farms to firms and from farmers to managers	4
farmers become managers more and more (→ CECRA) and corresponding training is demanded	1
From farm to firm: evolution of agricultural models	1
Lack of knowledge to manage financing, land purchases, and land sales	1
Rural business models still depend heavily on soft indicators	1
Fusion of sectoral policies	2
Agricultural policy comes more and more into contact with other policy regimes	1
Agriculture policy goes towards more societal challenges: ecological topics, public goods, sustainability, rural economy	1
Gender roles	7
Changing gender roles as male farmers are increasingly expected to participate in caring for children rather than focusing purely on agricultural work	1
Decline of the bachelor farmer: past trend of rural single farm men seems to be reversing	1
High share of male farmers	1
Increasing numbers of women in agriculture and women farm managers	1
Renaissance' of the farmers' wives associations (PL: 'koła gospodyń wiejskich')	1
Unequal repartition of household and administrative tasks (largely assumed by women) in farming families	1
Women In Farming' Groups; Female-centred rural support & representation	1
Gig economy	2
Increase in seasonal work force	1
Rural 'gig' economy: a more urban dominant trend, nevertheless still found in rural areas	1

Trend and its manifestations (trend observations) /12	Count
Globalisation	14
Internationalisation of Agriculture as a consequence of "open" rural economies	1
Current trends are leading to a polarisation of land functions in Europe, a greening of marginal agricultural land, and a displacement of food production to other regions in the world.	1
decreasing global trade	1
Globalisation	2
Globalization	1
Globalization of food markets	1
Growing export-orientation of agri-food economy	1
increasing global trade	1
Investments are on the rise, especially in China	1
Large scale Foreign Direct Investments	1
Market Liberalization, with diadvantages (competen) and advantagees (Expanding export markets) Experiences of, and responses to, globalization vary between rural regions.	1
Rising touristic activities	1
Uncontrollable globalisation	1
Governance gaps and conflicts	20
'governance gap' for decision making and investment in terms of peri-urban obstacles	1
alienation from/of the countryside: a farmer placed posters in a village after he got complaints of a neighbour saying he makes too much noise while working his land. The poster 'warns' people in a humouristic way saying they're in the countryside at their own risk ("we have church bells ringing, roosters crowing early in the morning, herds living nearby,...")	1
An article on the question whether the corona-crisis will increase the urban exodus in Flanders. Although urban planners are trying to convince us of the need for more dense building in city and village centers (nuclei) to counteract urban sprawl/fragmentation), reports show the opposite movement of people moving out centers is more popular. Moreover pleading for 'compact living' is in these corona-times very counter intuitive (closer to other people + less comfortable in times of quarantaine). Intuition isn't always right though: numbers show Covid-19 strikes more in rural/intermediate areas. It does stresses the need for a qualitative urban planning.	1
Changing geo-economic and geo-political landscape (Multipolar economis world)	1
Citizens' action groups lobbying against commercial projects	1
complex governance	1
Conflicts can arise between peri-urban land use and agriculture	1
Conflicts, crises and natural disasters --> Conflicts are on the rise again	1
Debate about animal rights vs. defenders of animal production, contradictory issue	1
Emergence of "ZAD" social movements or zones to be defended against major development projects,	1
Ethnic conflicts	1
Farmers bottom-up movement: Protester asking for dialogue with politcs and society	1
Increasing global tensions	1
Independent groups running for local elections	1
Local conflicts between urban newcomers and the local population (rooster crowing, bells, smells, ...)	1
Making farmers and forest owners feel guilty for negative impacts of environmental or animal welfare	1
Mobilisation of citizens for access to land and better land governance	1
Proactivity of professional agricultural organizations to negotiate a new contract with the society	1
Rural crime	1
There's currently a discussion going on about the reform of the land tenancy law in Flanders. Moreover the discussion on access to land is being held in the authorised commission in the Flemish Parliament. The reason for this is the publication of a report by the Flemish CSA-network and De Landgenoten on access to land for CSA-farms.	1
Growth of energy demand	1
Increasing energy demands. Overall energy consumption in the world is expected to increase, by 2030 it is expected to be 30% higher than in 2010	1
Growth of traffic	4
Higher mobility	2
Increasing travel and tourism	1
Rising air traffic (actually stoped by Corona, could be reduced, due to climate policies)	1
Heritage tourism	7
Albergo Diffuso [Widespread hotel]: the idea is that of using restored houses in the historical center of italian villages for tourism, managing them as if part of a unique hotel	1
Castle hotels in rural Hungary	1
Community-driven rural heritage tourism	1
Cultural heritage: Rural regions with natural parks or built heritage attractions and areas with authentic cultural practices have potential to attract visitors, especially if they are accessible to large urban centres	1
Engaging museums with rural heritage tourism	1
Industrial heritage tourism (mines, factories, canals etc., ref. UNESCO list of industrial heritage sites)	1
Open air museums	1
Home gardening	2
Grow your own food	1
Increase in growing food for personal and family consumption	1
House and land squatting	3
Abandoned Farmhouse squatting, by youth social movements	1
Abandoned Rural Village squatting, by youth social moviments	1
Occupations to preserve farmland and protest large-scale infrastruture development	1
Import competition	3
a further going liberalization of agricultural markets would have negative effects on agriculture in general	1
Import competition and productivity growth in the food industry	1
the reduction of trade barriers via multilateral and regional trade agreements will probably increase international competition	1

Trend and its manifestations (trend observations) /13	Count
Individualisation	1
Governing is getting harder	1
Industry 4.0	4
4th Industrial revolution	1
4th industrial revolution (part of the Megatrend: product design, use of big data, artificial intelligence, machine learning, internet of things)	1
Rising popularity of distributed manufacturing (e.g. 3D printers)	1
technological change (4th industrial revolution)	1
Informal settlements	1
Expanding informal settlements	1
Infrastructure	8
Decreasing quality of infrastructure	1
Decreasing quality of infrastructure:	1
Decreasing quality of infrastructure: Growing mismatch between the supply and demand of services of general interest (SGI)	2
Decreasing quality of infrastructure: increasing costs for infrastructure, decline of municipal revenues	1
Decreasing quality of infrastructure: reduction of public services, underutilisation of technical infrastructure, deficits in mobility	1
good rural services	1
There is a lack of digital supply in central macedonia	1
Innovations	11
Agricultural innovation: Driven by EIP-AGRI EU programme	1
Agriculture and bio-based industries currently play a minor role in the innovation strategy of Hessen	1
Encouraging cross-sectoral engagement and off-farm employment is important for enabling innovation.	1
Farmers are not sufficiently stimulated to make use of modern innovative technologies	1
In the region of Lüneburg there are innovations and measures to improve the interplay between ecology and economy for national parks etc.	1
Innovation in public employment	1
new markets, more innovation, more competitiveness	1
No marketing innovation will take place in declining areas, where economic actors are not present.	1
technologic disruption in all services	1
Technological innovations are changing rural areas	1
Too little innovations in agriculture	1
Integration of immigrants	10
Arrival of migrants	1
Arrival of refugees	1
Ethnic entrepreneurship	1
Failte Isteach; Language classes for migrants facilitated by older volunteers	1
Immigrants: integration in rural areas, key to depopulation and labor shortage	1
Inclusion processes of immigrants are difficult in rural regions that are lagging behind	1
Reception of refugees: national policies for the reception of refugees became a significant factor of social inclusion of refugees in rural areas in connection with development objectives	1
Refugee and asylum seekers reception projects (they are implemented by the National Protection System for Asylum seekers and Refugees (SPRAR) that has been financed by the Italian Ministry for the Interior since 2002 and re-named in 2018 in SOPRIMI)	1
Social Apiculture: project to train refugees and asylum seekers as apiculturists	1
Welcoming asylum seekers: Communities embracing new communities	1
Interdependency	9
economic sectors grow together (especially in agriculture)	1
Growing interdependencies	1
growing interdependencies between places	1
increasing 'connexity' of rural economy, due to growing interdependencies	1
increasing mixture in cultural dynamics between rural and urban sites	1
Interdependencies	1
Interdependencies and global value chains	1
urban and rural areas grow together (getting more integrated)	1
vision of future of agriculture 3: Increasing the connectedness between farming and rural communities	1
Interregional networks	3
borderless local cooperations	1
not enough interregional networks in central macedonia	1
Territoriality will be disrupted by the increasing relevance of networks of relations overpassing borders	1
Knowledge economy	8
increasing knowledge in agroforestry leads to social benefits	1
Knowledge economy	1
Knowledge economy in cities: main driver of growth	1
need to integrate education and training into stakeholder initiatives	1
New Entrants: 65% of the successors with agricultural education, part-time successors: only 25% with agricultural education --> extra-occupational education is needed	1
On average: lower education in regions with high share of agricultural jobs	1
The education level is increasing among the farming population	1
There is a high knowledge and skills deficit in the group of farmers	1

Trend and its manifestations (trend observations) /14	Count
Labour shortage	13
Farm labour is not local	1
Increasing domestic farm labour supply	1
Labor shortage in agriculture	1
Lack of high skilled human capital and skills shortage in rural areas	2
lack of qualified labour, seasonal workers, machinery, advice of private consultants and access to insurance	1
Medical services in rural areas: lack of medical doctors in rural areas	1
Mobility in rural areas: reinvention of the "community nurse model" to relieve doctors in under-supplied regions	1
Rural areas have issues in getting skilled labour (such as medical doctors) for services	1
Shortage of skilled labour (crafts, industry)	1
Shortage of skilled professionals	2
The need for helping hands in the agricultural sector during the corona-crisis. There's a shortage of labour force -mostly seasonal workers from abroad. This is a stressor for a lot of businesses. A second article in relation to this states that asylum seekers help to fill in the gaps. Other measurements are doubling the amount of days seasonal workers are allowed to work, prioritising vacancies within the agro-food industry,...	1
Land consolidation	2
Land consolidation process	1
land fragmentation decreases farm returns in the beginning but later has a positive effect for high levels of fragmentation	1
Land management	9
abandonment, degradation, economic and social marginalisation are long-standing challenges	1
Current trends in biodiversity loss, pollution and soil degradation are fundamentally related to land management	1
Decreasing area of land under cultivation and grazing	1
Grassland degradation and restoration	1
increasing levels of artificial land use	1
Land degradation neutrality (recovery of degraded areas)	1
Regenerative farming movement	1
Rewilding - ecosystem restoration	1
The practice of rewilding has recently gained resonance.	1
Land markets	3
Financialisation of land markets	1
Land as investment commodity	1
Land becomes more valuable to housing market than it is for agriculture, also because of improving infrastructure	1
Lifelong learning	1
Lifelong learning	1
Local paradigm	15
"glocalisation"	1
A turn towards appreciating 'local food'	1
Citizens' investment schemes in local businesses and social infrastructure	1
Development of collective local food policies and programmes	1
from national to local governance	1
increasing role of regional arrangements	1
Interview in a magazine with the 'countryside poet' of the province of East-Flanders. He roamed around the province for 4 years and talked to a lot of inhabitants of the countryside. There's a right wing undercurrent in some of the areas although typical right wing issues like the multicultural society don't manifest themselves in these areas as much as in cities. This tendency shows a general alienation between 'Brussels' and the people living in the countryside. They feel like certain rules get imposed on them for instance.	1
Local products market	1
Local Radio	1
Local supply: Municipalities receive subsidies for developing a "local market" (MarktTreff) in cooperation with the local population and a professional operator. The result is a multifunctional village centre with local supply and locally adapted services.	1
Local turn in societies	1
New Localities (reconfiguring of spatial relations)	1
New Regionalism: political parties at regional level defending rurality and repopulation of rural areas	1
Shop Local Vouchers: Emergence and rise of Local Voucher Schemes that can only be spent locally supporting rural town economy	1
Social and political organizations, and matching platforms, at regional level, defending rurality and repopulation of rural areas, through Information, Advisory, Welcoming and Integration programs for Newcomers	1

Trend and its manifestations (trend observations) /15	Count
Manifestations of new technologies	21
artificial intelligence	1
Artificial intelligence and automation	1
Automation	1
Autonomous vehicles (self-driving cars)	1
Blockchain-technology (Value chain from the field to the grocery store)	1
Cyber attacks and cyber criminality	1
data mining and processing	1
Gamification	1
Geoengineering for climate control	1
ICT research and companies influence rural development	1
Importance of ICT technologies	1
Information technology progress	1
Lack of digitalisation in agriculture: 15% without IT equipment and internet connection	1
Lack of digitalisation in agriculture: 36.2% without video-conferencing facilities and equipment	1
Robotics and digitisation increase productivity and growth	1
Robotics and digitisation replace humans	1
Robotisation	1
Robotization and automation	1
The development of smart technologies and networks will create new opportunities to bring life to rural communities	1
The Internet evolution	1
Virtual and augmented reality techniques	1
Market volatility	10
Although the corona crisis puts an emphasis on the importance of certain jobs and sectors, agriculture for instance, the latter has to deal with lowered prices. For some agricultural sectors that is especially the case, for instance sectors that are catering for hotels, restaurants and industrial kitchens; sectors focused on export (the potato industry for instance).	1
Decline in real agricultural prices by approx. 4% per year between the 1960s and the 2000s, which, however is unlikely to continue in the next 3 decades as the prices will increase due to the effects of climate change	1
Effective coordination and distribution between supply and consume of food can be a key in future	1
Food price volatility due to increasingly stronger connections of food markets with energy prices and financial markets	1
Overproduction in agriculture	1
Price pressure on the market, falling yields and annual income variations due to weather conditions and variations between producers and input prices	3
Real estate market (vacancies, loss of financial assets, low costs for tenants and buyers)	1
Volatility as a new normal in resource markets (food, fuel, metals)	1
Meaning and experience economy	9
Alternative gastronomic events ("experiences") to bring closer urban people and promote local, diverse, healthy food and culture	1
Changes in tourism. Older and more wealthy tourists need tourism services, the emerging generations are more likely to pick travel experiences that they consider to be "authentic", "live like a local", more ecological tourism should be preferred due to environmental reasons.	1
Crisis of Meaning: Change of professional orientation, of place and of way of Life	1
For generation Y the nature is above all the place for recreation and experience not so much a source of livelihood	1
Increased search for autonomy, meaning and freedom of choice in life in a global context of great uncertainty	1
Increasing role of perceptions (political trend)	1
Selling the Farming Experience	1
Soft factors becoming more important	1
The market for stories and storytellers increases	1
Micro- and small units	7
Micro-Farming / Market Gardening: biointensive vegetable/fruit production on small landholdings often in or close to settlements	1
Microenterprises/small firms in rural and peripheral regions	1
Rural Gloucestershire has to face an abundance of digital SMEs	1
Rural regions tend to have a higher dependency on smaller enterprises	1
Scale enlargement of farms, enterprises and services coincides with a growth of small-scale and local initiatives	1
Small-scale, non-farm enterprises can generate employment if legal and financial constraints are addressed	1
Tiny Living: movement that seeks flexible, minimalistic forms of housing & living ("tiny houses")	1

Trend and its manifestations (trend observations) /16	Count
Migration patterns	48
A great deal of working-age people and entrepreneurs in Finland are dreaming to settle in countryside - circumstances of their personal life still meaningful	1
Ageing of the population: arrival of retirees (with relatively high incomes)	1
Arrival of poor people (low income, low level of training seeking « refuge » in rural areas)	1
Attracting young people to rural areas (Movements to move home)	1
Comeback of Romanian migrants in rural areas with investments in agriculture and other initiatives	1
Community schemes that actively "recruit" newcomers by campaigns, marketing, inquiry offices	1
Demographic Rural dynamics	1
Europe internal migration towards mediterranean coast and towards metropolitan areas	1
External migration from rural areas (to other states)	1
Forcing migrants in agriculture and rural society at large: a major trend worth mentioning as it represents a good part of the wider process of return to land	1
Immigrants do not tend to move to rural areas	1
In the Western EU, many rural areas are re-populated by urban-based residents	1
Increase of the restrictiveness in migration entry policy in OECD countries after the financial crisis of 2007–08	1
Increasing awareness of crisis (e.g. COVID-19) may increase migration to smaller municipalities and rural areas near cities	1
Increasing out-migration from countries that suffer from the impacts of climate change on agriculture	1
immigration of European neighbourhood	1
Internal migration towards global cities	1
International in-migration to work in certain agri-food industries (e.g. meat processing, horticulture)	1
It is essential to weaken rural-urban migration and to strengthen urban-rural migration	1
Mass migration increases (e.g. climate change could displace 200 mill. people by 2050)	1
Migration and agriculture Poverty	1
Migration flows from the rest of the world towards industrialised countries	1
Migration from urban areas to rural with potential to new entrants in agriculture, new economical initiatives and community development	1
Migration of well educated population towards the cities	1
National migration is a challenge in Visegrad, Hungary	1
Out-migration of young and well-qualified people in Austria	1
outmigration from East Germany	1
outmigration from rural areas	3
Outmigration of less populated areas	1
Permanent migration of young families into rural areas	1
Population growth, urbanization and ageing (accelerate among rural populations)	1
Pre-retirement age migration to the rural areas	1
Refugees do not reverse the trend of ageing population in rural areas	1
Return migration	1
rural towards urban migration on a regional level in Europe	1
Rural-urban migration	1
Selective job-related out-migration from rural to urban regions particularly of younger and well-educated workers	6
Social context can make population decline slower at first but after a certain point social satisfaction decreases and more people will outmigrate	1
temporarily migration into rural areas	1
Urban exodus	1
well-educated women move to the countryside to carry out their professional activities	1
Minorities' rights	1
Growing recognition of LGBTQ communities in farming and rural areas; but acceptance issues persist	1
Mobile services	2
Medical services in rural areas: Pharmacy bus as new form of service to people	1
Medical services in rural areas: Rolling medical office - When the doctor comes to the village	1
Multi-local living	8
Bi-focal urban/rural Multi-Locality Living: people having their place of residence in the city as well as in the countryside	1
Multi-locality: Newcomers to rural areas, nature is good for mental and physical health	1
Multi-locality: The renewal of working life and better labour mobility need changes in housing policy and labour policy also regarding rural areas	1
Multilocalism city country	1
multilocally	1
Polytopic living	1
Seasonal multilocalism	1
The significance of Multi-local living will grow	1

Trend and its manifestations (trend observations) /17	Count
Natural and cultural heritage	9
(Re-)discovering of cultural heritage and actions taken to preserve it	1
Bill in France: French sounds of the countryside become national heritage. A proposal to consider smells and sounds typical to the (French) countryside as national heritage in response to complaints on crowing roosters, howling cows,...	1
De-populated old towns: Re-population of small old towns of great historic and architectural interest being de-populated by outmigration	1
Heritage protection associations in rural areas	1
Heritage-led regeneration of rural towns	1
High natural and landscape values and valuable cultural heritage	1
Local heritage based identity building	1
Preserving the valuable features of the landscape and preserving those features which result from the natural and historical development of the areas	1
Revitalization of ancient vineyards & orchards ("Zärtlkett programme")	1
Natural lifestyle	1
Digital detoxing: periodically and voluntarily refraining from using digital devices	1
Neoliberalism	2
Liberalisation of world trade	1
Neoliberal approach to state policies	1
New entrants	19
Access to land initiatives to support and install new entrants in agriculture	1
Agricultural tendencies to provide access to land for new entrants to farming, while purchases are less frequent due to the comparable high costs when starting the farm business	1
ex-urban people to be driven into agriculture because of its potential for income stability	1
Hurdles are in particular access to land, capital, labour, markets, and housing as well as business skills, knowledge development, and social networks	1
less new entrants into farming, due to lack of support regarding to access to land	1
Mutualisation of practices and work among alternative agricultural organisation working to accompany new entrants into farming	1
New entrants are important for innovation but they are not the main source of transformation in agriculture	1
New entrants are important for vitality and competitiveness of the agricultural sector and rural regions in Europe	1
New entrants are more likely to be involved in alternative agricultural systems (organic farming, short food supply chains, back to the land movements)	1
new entrants tend to be younger, operate smaller farms, are more highly educated and are more likely to be female than is characteristic of mainstream farming	1
New entrants to farming with no agricultural family background (non-issus du milieu agricole or NIMA in French)	1
New entrants typically do not have the resources to start a large-scale farm business (economies of scale), so that they are primarily looking for and entering niche products and niche markets.	1
New entrants: Inheriting a farm is the only way for many persons, who want to be a new entrant into farming. But, since 2008 the exemption regulation (Verschonungsregelung) enables an uncomplicated farm succession, however out of the family farm succession is still very marginal in Germany.	1
New entrants' business models are primarily belonging to (or are a mixture of) differentiation (niche products and markets: organic farming, short chains, direct sale), Alternative Food Networks (Community Supported Agriculture, co-production), and on-farm diversification (pedagogical, social, recreation)	1
Newcomers to farming, de-urbanization	1
Organic Farm Internships: Practice-based farming skills development	1
Public Land Banks	1
Specific models developed by and for new entrants include: career-ladder farming, contract farming, crowd funding, crowd sourcing, community supported agriculture, equity partnerships, farming incubators, junior-senior partnerships, land partnerships, share farming, social enterprise and workers' cooperatives	1
The most common barrier identified was access to land	1
New geopolitics	4
Brexit, e.g. possible loss of over 70,000 tonnes of cheese	1
Chinas growing influence	1
less economic impact of the EU	1
Shift in global economic power from Western-led to the East and to the South	1
New mobility systems	4
Mobility in rural areas: dial-a-bus service	1
Mobility in rural areas: dial-a-bus service, call shared taxis	1
New transport and communication technologies	1
Open, decentralised mobility system OMOS	1
New nomads	3
Digital Nomads: work & travelling as a constant life-style	1
New nomads: ecosystem regeneration camps, new movement	1
New nomads: voluntary lifestyle travellers taking possibly temporary jobs	1
Night-time economy	1
Reviving the night-time economy	1
Oligopolistic markets	3
Capacity of agri-food industry champions to reinvent themselves and provide leadership	1
Growing power of big retail companies	1
Predicted oligopoly of three gas exporters (Russia, Iran and Qatar) over the supplies of gas for the EU and a projected peak in global gas extraction	1

Trend and its manifestations (trend observations) /18	Count
Outsourcing of environmental impacts	5
Increases in the global phosphorus flows through agricultural trade	1
Large amounts of concentrate feed is being imported in Europe	1
New sites for high-environmental impact enterprises can mostly be found in more peripheral areas. Displacement of these functions transfers rural area to the sewage area.	1
Recently, an increasing awareness of the negative social, cultural, economic, health and environmental side effects of spatially extended (and in particular global) food chains has emerged	1
Relocating EU's footprint related to agricultural production and forestry to other parts of the world	1
Pandemics and epidemics	9
Articles on the link between the Covid-19 pandemic and our relationship with nature, deforestation, use of land, the agro-industry...	1
Coronavirus crisis may change the demographic model	1
Impact of COVID 19 pandemic on perceived attractiveness of rural areas	1
Impact of COVID pandemic on food supply chains	1
Increase in the popularity of rural living along Coronavirus crisis	1
Increasing epidemiological risks	1
Pandemics getting more frequent	1
Transboundary pests and diseases	1
Urban to rural flight in response to COVID-19 - urban populations travelling to remote rural areas or second homes to avoid densely populated urban areas potentially more at-risk during pandemic	1
Partnerships	11
Contract rearing: Practice of raising heifers for other farmers based on contract	1
Cooperation between farmers and environmentalists	1
Farm Partnerships: farmers combine resources to avail of the various benefits or succession partnerships to enable transfer to next generation	1
Increasing number of agricultural group holdings	1
Joint ventures in agriculture	1
Land partnerships or land sharing arrangements	1
Partnership models become more common	1
Rising importance of business networks and innovations for rural economies	1
Rising importance of translocal economies	1
Share farming	1
younger people are often strongly motivated to seek farm enlargement through collaboration or amalgamation, as a way to improve the income-earning potential of choosing to farm	1
Peri-urbanisation	6
Peri-urban areas are growing rapidly in Europe	1
Peri-urban areas suffer and gain from urban proximity	1
Peri-urban development endangers ecosystem services as well as landscapes and their opportunities of recreation	1
Population growth in urban-adjacent rural regions	1
The peri-urban is often seen as a place to make higher profits at lower risk	1
Urban sprawl or peri-urbanisation	1
Place branding	5
"Made in Italy": different activities to promote Italian products, ranging from territorial marketing to big exhibitions	1
Local brands with participatory guaranteeing to ensure quality products for consumer, environmental benefits, good income for producers	1
Location in rural areas as a brand and marketing tool (especially alcohol, cosmetics, food, textiles, furniture and design firms)	1
Sexing up rural places brings about new possibilities to the image of the Finnish rural areas. Showing and finding the authentic origin of products will be a sales appeal for rural food, catering and tourism enterprises.	1
Survival strategies: regional brands, tourism, organic farming, renaturation or, in the worst case, discontinuation of business	1
Place identity	3
Novel sense of rural communities (not based on enduring family ties, but on being there)	1
Regions develop their own identity but also shared identities with neighbours (borders become less important)	1
Rising place identity in rural regions	1

Trend and its manifestations (trend observations) /19	Count
Policy incidence and effectiveness	31
Co-funding for European development projects is difficult in rural areas	1
Conservation easements are not very common in Europe (compared to USA), especially due to a lack of incentives and implementation practices	1
current institutional supports are oriented towards assisting existing farmers.	1
Distretti biologici / Biodistretti [Bio-districts]: areas with a biological vocation where local producers, residents, tourist activities and institutions act together to protect and valorise local products and culture	1
EU agricultural policy: little support for small holdings compared to large holdings	4
EU agricultural policy: the main beneficiaries of agricultural subsidies are those who have a lot of land, respectively are owners of large holdings	1
EU agricultural policy: imbalance in the financing of organic farming	1
EU agricultural policy: lacking support for young farmers	1
EU programmes fail because of vague or too general recommendations, lack of relevant data or poor accessibility of evaluation documents	1
Farmers and agricultural practitioners find CAP requirements too complex	1
implications of new approaches to policy design and delivery for rural regions	1
in most cases political plans and documents have only little importance for rural development	1
It is anticipated that a Biosphere designation prompts local sustainable development initiatives	1
mismatches between territorial jurisdiction	1
more effort of Governments to create suitable solutions of governance regarding to urban-rural functionalities	1
New legal framework (2010) points more clearly in which direction to boost growth, create jobs and improve sustainability for rural areas	1
new territorialities	1
Personal payments as a factor preventing young farmers from leaving the farm	1
Public social and welfare services will get poorer in small municipalities in remote rural areas - strong political interventions are needed if accelerated urbanization is not seen as a desirable phenomenon	1
recent government reforms endanger the approved business model for the delivery of public services by rural social enterprises in Ireland	1
slow capacity in The EU to react in critical situations.	1
Small influence of CAP (The pattern of trends in rural employment is strongly influenced by EU-wide market and economic phenomena, of which the CAP resources are only a small part)	1
Social impacts of agri-environment schemes (AES)	1
Strategia Nazionale per le Aree Interne (SNAI) [National Strategy for Inner Areas]: national strategy to contrast de-population and loss of essential services in inner areas, defined by their distance to the centers offering essential services (health, education and mobility)	1
Structural Funds impact on European Regional Growth	1
targeted measures in CAP are helpful for Generational renewal	1
The food system is fragmented and contains a rich diversity of niche practices offering 'pockets' of potential futures and these niche practices are not sufficiently included in policy and strategic processes at the European level	1
The structure of subsidies leads to less farmers getting access land, due to money spend on old farmers	1
Political instability and fragmentation	6
Anti-EU and anti-establishment votes	1
Emergence of strong social protest outside the trade union movement (yellow vest movement)	1
Euroscepticism and retrospective feelings	1
Passivity of professional agricultural organisations, dominated by the multiplication of crises of all kinds	1
political instability	1
social and political fragmentation	1
Pollution	10
A significant decrease in the total deposition of non-marine SO ₄ and bulk deposition of total inorganic nitrogen in Europe, but mixed response of SO ₄ and nitrogen output fluxes	1
Air pollution in large cities and industrial sites	1
Dutch nitrogen crisis, too much nitrogen pollution. Agricultural, industrial and/or construction activities should be restricted to fit in European Law on Nature protection	1
ecological status of surface water depends on the land use	1
Increase in the use of synthetic pesticides	1
New fertiliser regulations due to high nitrate limits	1
Noise and light pollution in the proximity of cities (harmful for some people)	1
Non point source water pollution (nutrients, pesticides)	1
Projected decrease of soil organic carbon (SOC) emissions in Europe	1
Water pollution by nitrogen and phosphorus for major rivers around the world, in particular dissolved inorganic nitrogen (DIN) and dissolved inorganic phosphorus (DIP)	1
Pop-up culture	1
Pop-up culture	1
Population growth	4
Global population growth	1
Overall population increase - but decrease in eastern Europe	1
population grows faster in rural and peri-urban parts of metropolitan areas than in the urban cores	1
Population growth	1
Postconsumerism	1
Post-consumerism	1
Postmaterialism	1
Postmaterialism	1

Trend and its manifestations (trend observations) /20	Count
Practice-oriented food systems	34
A more organic agricultural system is more attractive to young farmers	1
Agricoltura biologica (Organic Agriculture): agriculture based on local biodiversity, using sustainable methods and techniques of production	1
AgroForestry Forest Gardening - creating productive food forests	1
consumers are spending more than 20 billion Euros annually on organic food, and demand is still growing	1
Development of "ecologically intensive" agriculture (New Plant Breeding Techniques, biocontrol, etc.).	1
Development of ecological farms that follow the methods of ecological or organic production but do not apply for certificates	1
Ecological and KMO (local) restaurants	1
EU funded development of organic farming	1
Heirloom/heterogeneous seeds: increase in use and exchange of peasant seeds by small-scale farmers and urban gardeners resulting in healthier food, autonomy in food production and maintaining biodiversity	1
Increase in organic farming	1
More and more requests from farmers looking for land via De Landgenoten that want to start a project involving a 'food forest'	
Between May 2014-August 2019: only 1 application; since September 2019: 4 new food forest applications from farmers	1
more than 300,000 production businesses are engaged with the organic sector in Europe along with another 40,000 processors, importers, etc.	1
Organic agriculture to ensure a cleaner agriculture	1
Organic farming	9
organic farming went through an evolution and became a profitable business	1
Organic farming: 11% of the utilised agricultural area in Bavaria	1
Organic farming: Organic farms in Eastern Germany are smaller than conventional farms	1
Organic farming: Organic farms in western Germany tend to be larger than in the eastern Germany	1
Organic farming: rather small percentage shares for Lower Saxony, Schleswig-Holstein and North Rhine-Westphalia	1
Organic farming: regions with a high share of organic farming are located in the north-east of Germany (Berlin/Brandenburg) and in larger parts of the low mountain regions such as Taunus, Westerwald, or the pre-alpine region	2
Permaculture: universal approach to food production that draws new entrants & newcomers	1
policy makers are investing millions of Euros annually in organic farming support payments	1
Regenerative agriculture	1
Reliable market data and official statistics of the organic market are available only in few European countries which can lead to contradictory trends	1
statistical data is becoming more and more important for the organic sector	1
Precision farming	6
Development of precision agriculture (numerical solutions, robotization, block-chain, etc.)	1
Precision agriculture	2
Smart Farming	1
technical improvements to control livestock, plants or machines: e.g. microchips, apps or "precision farming", a modern mechanized technique for the management of each plant	1
Too little (less than 25%) EU farmers have access to Precision Agriculture technologies	1
Primary sector employment	11
Agriculture has a diverse but diminishing importance in Europe	1
Agriculture has become less labour intensive	1
Decline in agricultural employment (significant (12.5%) decline in overall employment in agriculture in the EU since 2009)	1
Decrease in the number of farms, which goes along with an increase in the size of farms and a decrease of the number of employees in agriculture	1
Decrease in the number of farms, which goes along with an increase in the size of farms and a decrease of the number of employees in agriculture.	1
Decrease of family work force in the agricultural sector, which goes along with an increase in salaried work force	1
Decreasing labour intensity of agriculture	1
Employment in agriculture, hunting, forestry and fishing decreased greatly	1
most new jobs in agriculture are eventually taken by new migrants or outside commuters	1
rapid decrease of employment in agriculture and fisheries	1
shrinking labour force	1
Productivity and competitiveness	21
A lot of news on Covid-19 and the importance of agro-ecological farming and local food production has been published. This article however comes up with a different approach: reducing the surface of farmland so more land can be given back to nature. And instead of producing locally, it defends the idea of producing food on the best possible location and then distributing it worldwide.	1
agricultural production is still characterised by low competitiveness and insufficient market orientation	1
Dairy production has shifted from grazing outdoors to keeping cows indoors due to economic pressures to concentrate production.	1
Data-driven agriculture will take place in food production, less labor needed, environmental management important	1
Different location factors: according to soil type and agricultural structure (field size, administrative and use restrictions or economic viability, precipitation)	1
Evolution of technologies in farming	1
Farms become high-tech producing a lot against low prices	1
Farms might become more productive in future due to technical and biological improvements	1
High-yield soils: Hannover and Braunschweig regions	1
In Germany traditionally managed orchards, a characteristic element of the cultural landscape, are in decline because of economic reasons	1
Milk price as key economic barometer in agriculture	1
out of date technologies and inefficient integration are common reasons of inefficiency of agricultural production in Eastern Europe	1
Progress in technology and breeding in agriculture	5
Trend of competitiveness for farming and forestry	1
Using open source information to improve processes in agriculture	1
vision of future of agriculture 1: Farming competitiveness and profitability	1
Zero grazing: grass brought to animals rather than grazed in field	1

Trend and its manifestations (trend observations) /21	Count
Professional networks	2
Professional organization and networks become more important in the farming sector	1
Support from online counselling and peer networks and not only from established professional structures	1
Protectionism	4
Borders between countries or groups of countries are pronounced than today	1
Euroscepticism, illiberal and antiglobalisation feelings have become increasingly present in EU and national politics, reflected also by stronger nationalism	1
growing preferences in anti-globalisation and euroscepticism	1
National protectionism	1
Public goods	5
Ecosystem services and public goods are increasingly important within the European context	1
Public goods (climate, water, soil,...) as challenges in agriculture and rural development	1
public goods and functions desired by European citizens (e.g. safe and high quality food, renewable energy and fibre production, maintenance of the environment, viable rural communities, recreational and amenity landscapes)	1
Trading ecosystem services will diversify the economic value of forest land and farmland	1
Tuin van Adem en Eten ('Garden of Breath and Food'): a local municipality and an intermunicipal company decide to not develop an area destined for housing, but to devote it to a sustainable and innovative open space project.	1
Quality of life	4
"Soft" factors become more important for rural development than physical factors like natural resources	1
Quality of rural life is under pressure	1
The negative effects of centralisation for children will be a topic of discussion	1
young people have higher expectations of the quality of life in rural areas than in the past	1
Regional and local food	21
A national radiostation declares farmers as the heroes of the day. This is a daily campaign during the coronacrisis to shine light on those professions that are essential in times of crisis and to the society as a whole. They also mention the rise in popularity of the short food supply chain. As is mentioned quite frequently by different media sources.	1
Brands for quality local products	1
current trends toward local food production and greening in urban areas	1
Eat local movement	1
Food Market in Ljubljana connects consumers and producers of food (face-to-face)	1
Food Provenance Certification which leads to a protection of traditional agriculture	1
Growing demand for local and distinguishable food (different locations/farmers/countries/sorts of crops = different taste)	1
Growing demand for local food	1
Increase in demand for local food due to COVID-19	1
Increasing interest in regional products	1
Interest in local production and private gardening increasing	1
Local Food Consumption (either individual or in groups/consumer cooperatives)	1
Local food product development	1
Local products shops	1
Mercati contadini [farmers markets]: local markets where small local farmers sell their products to local clients	1
Open farm yards (Nyitott porták)	1
Regionalisation of food systems	1
Regionalization trend of regional production as marketing tools	1
REKO Ring movement: Local produce advertised for sale and consumers pledge to buy	1
Shortening of the producer-consumer chain by High Nature Value Farmers	1
Small scale producers with shorter locally embedded supply chains	1
Regulation and subsidies	9
Abolishing agricultural subsidies through a more open world economy?	1
Agriculture's dependence on subsidies is increasing in Spain	1
Health and environmental concerns dominate European agricultural policy, but there is little ambition for agricultural power	1
less EU-funding	1
Often land acquisition implies a complex and long legal procedure (Romania and Czech Republic)	1
Restrictive regulations on nitrogen in Denmark. Mini-wetlands as a biological solution	1
Rural 'dependency culture', which leads to a dependency on subsidies	1
Strong dependence of the rural economy on the regulatory framework	1
Subsidies has bad influence on Cooperative structure	1
Remote work	6
Home office work & education: remote and decentralised working & learning	1
Increase in the use of telework (massive in periods of confinement)	1
Remote work increases	1
Remote Working and Co-worker Networks	1
Remote working: trend of working from home/in rural hubs, also organisation driving development 'Grow Remote'	1
Rural co-working, telework and digital nomads	1

Trend and its manifestations (trend observations) /22	Count
Renewable and bioenergy	20
Biofuels	1
Growing importance of renewables	1
In terms of biomass production companies in farming/forestry sector now focus mostly on energy or fertiliser production	1
Increasing share of renewable energy	1
Increasing share of renewable energy sources	1
Localized energy systems - municipal and house levels (biogas, solar heat, photovoltaic, firewood gasifier; battery storage for autonomous energy supply)	1
Municipalities' financial participation in wind parks to increase public acceptance	1
New market for the production of biofuels that creates energy landscapes	1
Out of fossil energy sources: Peat, a big issue in Finland	1
Out of fossil energy sources: yes to wood biomass, no to coal	1
Renewable energy	1
Renewable energy production in rural areas: Wind power plants, solar parks Cultivation of corn for biomass	1
Renewable energy production in rural areas: Utilization of land, especially agricultural land, by photovoltaic installations	1
Renewable Energy projects (biomass, solar energy...)	1
Renewable energy use in rural development	1
Shift towards renewable energy and products	1
Solar Farms: a renewable form of energy generated on (suitable) land	1
The strategy identifies specifically renewable energy production as a future growth sector for sparsely populated territories including on- and off-shore wind power, ocean energy, geothermal energy and hydropower	1
Using renewable sources of energy, e.g. biomass, rapeseed	1
Using specific natural conditions to produce more renewable energy. This can have an impulse on Jobs in Rural Areas (for example in mountain areas)	1
Resilience	3
crop diversity improve resilience of major crop production	1
Natural resources and environmental quality in rural areas	1
Resilience	1
Resource competition	16
Agri-tourism and services can also be a threat for agricultural areas because farming is less profitable and becomes therefore even less attractive for local young people	1
Competition for natural resources	1
Competition for natural resources - expansion of agricultural land continues to be the main driver of deforestation	1
Global growth in resource demand leading to substantial constraints in resource availability and rising pollution costs	1
Global megatrends of resource scarcity, climate change, health and nutrition ,communication in the information society and demographic change	1
Growing demand on resources	1
Increase in water scarcity events	1
Increased competition for agricultural resources (land, water)	1
increasing competition for resources	1
Increasing demand for farmland	1
Increasing demand for long-term land leases (more than 5 years)	1
Increasing freshwater withdrawal and depletion	1
Lack of space for rural entrepreneurs	1
the key driving forces for farms include land access, capital and production factors availability, labour force	1
Tourism gentrification: the displacement of local residents and businesses to accommodate tourists	1
Water and food scarcity will also impact Europe	1
Rural artisans	5
Artisan/Craft Food and Beverage Microbusiness (mainly beer)	1
Artisanal Food Production	1
Establishment of artists/artisans in rural areas	1
New rural artisans revitalizing crafts and popular culture	1
Rural artisans' webshops	1

Trend and its manifestations (trend observations) /23	Count
Rural decline	49
A small share of youth population threatens the school system in rural areas. Upper secondary schools do not have enough pupils. On the other hand the IT development may ease the problem.	1
Ageing population and international immigration are challenges in Southern Iceland	1
Ageing population and international immigration in Asti, Italy	1
Ageing population and poverty are challenges in Penela, Portugal	1
Ageing population, depopulation and international immigrants are challenges in Halland, Sweden	1
Ageing population, depopulation and poverty are challenges on Crete, Greece	1
Ageing population, depopulation, poverty and unemployment are challenges in the northern headlands area, Ireland	1
Ageing population, depopulation, poverty and unemployment are challenges in the region of the Ecomuseum Alpi Apuane, Italy	1
Ageing population, depopulation, unemployment and international immigration are challenges on Lesbos islands, Greece	1
Close down schools in Rural areas	1
Decline and further threats to rural GP services	1
Decline in the provision of infrastructure in rural areas	3
decline of rural regions and eastern europe	1
Decline of the small rural school: trend of one/two teacher schools in rural areas	1
Declining labour markets in less accessible rural areas	1
Declining rural pub (and need for re-invention of an Irish rural cultural institution)	1
Decrease of agronomy highschoools to provide education to younger generations	1
Depopulation and unemployment in Apulia, Italy	1
Down-ward spiral: Loss of quality of life and cultural capital in rural areas	2
Increase of unattractive living conditions in rural regions	1
Infrastructure: fragmented school network in rural areas	1
lack of social mobility	1
Long-term decline of agriculture, forestry, fishing and traditional manufacturing	1
Loss of work places in rural areas	1
Low educated	1
More and more rural areas become decling areas: shrink regions	1
People with multiple disadvantages (ethnicity, gender, age,...) in rural areas	1
Population decline - Rural shrinkage	3
Population decline - Rural shrinkage and marginalisation	1
Population growth in rural regions is limited	1
Poverty, unemployment and resulting demographic challenges in Harghita county, Romania	1
Regenerating declining rural towns	1
Rural departments in decline	1
Rural population decline	1
Rural regions become marginalised and peripheralised when public and private players withdraw from them	1
Rural towns loose functions	1
Slight poverty and ageing of population are challenges in Sommerset, UK	1
Social changes (resignation, negative atmosphere, lack of trainees in associations and other voluntary clubs)	1
sparsely populated territories are often faced with steady depopulation trends and socio-economic slump that weakened the social fabric and local economy	1
The 'rural exodus', which is characterised by out-migration and demographic ageing	1
The network of village shops has thinned out which affects not only private but also public services	1
unsustainability of current welfare systems	1
weakened peripheric areas	1
Withdrawal and remoteness of services	1
Rural energy communities	5
Community energy: Community owned wind farms	1
Financial participation of citizens/municipalities in renewable energy	1
Renewable energy production in rural areas: decentralised energy supply through citizen participation and cooperatives as organisational forms	1
Rural energy communities	1
Sustainable energy communities	1
Rural entrepreneurship	3
Female entrepreneurship: rise of innovation and business creation by rural females	1
Higher rates of self employment in rural than urban areas	1
Mobilization around the creation of an ecosystem that encourages entrepreneurship in the rural environment is constantly growing.	1

Trend and its manifestations (trend observations) /24	Count
Rural festival tourism	6
Continuing strong rural trend of the 'Agricultural Show'	1
Festival economy: Rural festivals (e.g. music, arts, sport, heritage) as economic, social and cultural regeneration drivers	1
New rural week-end festivals to promote local culture, attract urban tourists and bringing extra income for locals	1
Rural Artistic Festivals	1
Sagre paesane [village festivals]: festivals happening in small towns or villages, based on typical local food and culture	1
Setting up festivals, annual events and programmes	1
Rural hubs	13
Community broadband hubs: Rural broadband public connection points	1
Community shops: Rise in community run shops/cafes as multi-purpose community hubs	1
Coworking Spaces in rural areas	1
Growth Hub Network will provide business support services across Gloucestershire	1
Installation of new multi-service businesses (private/public)	1
Local supply: "Große Emma" as an idea of a village service centre	1
Local supply: idea of the village service centre	1
Rural 'Fab Labs'	1
Rural CoWorking: self-employed or traveling workers sharing offices in the countryside	1
Rural digital hubs	1
Rural digital hubs: co-working hubs to support business and innovation	1
Third places in rural areas combining co-working, cultural and associative activities	1
Village houses as service hubs in remote regions	1
Rural labs and observatories	1
Rural nature observatories and research centres	1
Rural lifestyle	12
Intrest in living and working in rural areas	1
Media promotion of rural idyll	1
People living in rural areas more and more ask to limit agricultural expansion	1
Research observations: centralization of population is not the same as centralization of social welfare. Rural areas are not necessary losers of social welfare.	1
Rural areas' hobbies and life style coming back	1
Rural cosmopolitanism: High numbers of non-nationals in some rural towns	1
Rural idyll services	1
Urban exodus and new desire for the country life: People move to the country (e.g. Berlin - new housing projects in Brandenburg for creative and digitally affine people)	1
Urban exodus and new desire for the country life: People move to the rural areas	2
Urban exodus and new desire for the country life: Revitalisation of villages	1
Urban people in information society may long for natural physical work with animals, permanent and temporary newcomers in countryside.	1
Rural second homes and villas	3
Regained popularity of summer cottages and holiday houses among young people, boosted by the Coronavirus	1
Rural second homes	1
Second homes	1
Rural sports and adventures	2
Boom in surfing in west of Ireland and strong local place impact	1
Growing rural adventure sports sector	1
Rural tourism	10
Bog Tourism: rural peatlands as a tourist and recreation attraction	1
Development of rural tourism with more small households equipped and opened as guesthouses, generating extra income for hosts and other villagers to be involved (workshops, storytelling, guides etc.) and maintaining local practices and culture	1
Equestrian tourism	1
Growing interest in visiting "natural", rural areas among (urban) tourists	1
New business models of rural tourism in Portugal	1
Rise in rural-resort tourism	1
Rural Tourism	1
Rural tourism: tourism based on the attractiveness of rural areas	1
Touristic routes in rural areas	1
Trail-blazing: Boom in rural walking and cycling routes	1
Rural volunteering	5
Community-driven Taxi service; a local taxi service based on a network of local volunteer drivers	1
Irish Gap Year; programme for foreign students to engage with Irish culture and society; including a community volunteering element	1
Mobility in rural areas: volunteers as chauffeurs	1
Rural volunteering	1
Volunteering stages in farms with contribution to formation of future generations and promoting informal knowledge transmittion	1

Trend and its manifestations (trend observations) /25	Count
Secularisation vs. religiousness	2
Agricultural youth and religion	1
Secularisation	1
Self-sufficiency	5
Concern about the depopulation of rural areas and about self-sufficiency of national food production will increase. Awareness of the value of renewal resources in rural areas will increase.	1
Farmers' understanding of national food self-sufficiency as a strategy towards more viable farming prospects in the globalized food supply system	1
Genuino Clandestino: return to the land political movement for alimentary self-determination with people actually going to live in the country in self-sufficient farms	1
More self-sufficient life style is more desirable in the future. Old, abandoned estates may or should find new owners/occupiers	1
Seeking greater food self-sufficiency in Europe	1
Sharing economy	4
Commoning: sharing resources, like housing/ office/ furniture/ processing kitchen/ knowledge/ music/ books, by donation or with new legal forms of property	1
Sharing economy	2
Sharing economy	1
Shifts in labour demand	1
Traditional 'job creation engine' is freezing	1
Shorter work time	1
Working time reduction	1
Silver economy	1
silver economy	1
Slow food and slow living	3
Presidi Slow Food [Slow Food Defense]: a project by Fondazione Slow Food, consisting in a series of activities (such as communication, networking, branding) to promote and valorize products and territories	1
Slow food movement in Hungary	1
Slow living movement in Hungary	1
Smart solutions in rural space	5
Intelligent villages using technology in support of rural community development	1
Resilient villages' ('veerkrachtige dorpen' in Dutch): is a current collaboration between six villages, the province of Antwerp and some organisations that are experienced in participatory trajects. The aim is to enhance the resilience of the village and in two other villages it also looks at the local church building and a possible future strategy for it.	1
Smart electricity grid with small supplier option	1
Smart Village - promoting healthy ageing	1
Smart villages	1
Social capital	2
influx of more affluent workers and retired households to rural areas	1
Social initiatives in rural areas benefit from strong social capital (relationships, trust, shared values, norms, cooperation, identity,...)	1
Social enterprises and entrepreneurs	7
Rural Business Incubators and Social Entrepreneurship Platforms	1
Social enterprises	1
social enterprises have a lack of specialised training, education, and knowledge exchange, especially in rural regions with typically low entrepreneurial activity	1
Social Farming	1
Social farming/Green care	1
Social farms in rural areas involving vulnerable groups in agriculture and providing lucrative activity and income	1
Woodland Social Enterprise	1
Social innovations	5
Politiche locali per il cibo / Piano del cibo [Local food policies / Food Plan]: local policies of social innovation based on local planning of a series of activities in the direction of changing consumers and producers behaviour in the direction of sustainability	1
Rise in social innovation via the social enterprise business model	1
Social entrepreneurship increasingly drives social innovation addressing social challenges in marginalised rural regions.	1
Social innovation for marginalised rural areas	1
Social innovations open opportunities in agri-food, forestry and rural development	1
Social media	2
The rise of social media	1
Young families with children find rural areas for place of living through social media and popular bloggers	1
Socio-economic models	1
Transition Town processes: societal transformation processes from municipality level bottom-up	1
Speculative economy	2
Fragmentation of rural land for speculative aims	1
Listed companies buy agricultural land	1
Staycation	1
Staycations	1

Trend and its manifestations (trend observations) /26	Count
Suburbanisation	3
sub-urbanisation	1
Suburbanisation/Counter urbanisation: suburbs are attractive for potential residents, especially for families (30 to 49 years)	1
There is still a trend of rural-urban migration and urbanization but with a growing counterpart towards suburbanisation	1
Succession	17
Ageing and succession are widely recognised as the main societal challenge in agriculture	1
Agricultural start-ups	1
Communication, future strategies and financial factors are the most important issues in succession processes	1
Extra-familial farm succession	1
Farm succession is rather secured for larger farms	2
In FR, the challenge of Generation Renewal in agriculture is complex. The diminution in the number of farmers has been a long-term trend	1
Lack of capital and securities bring difficulties to finding new entrants into farming or change of farm ownership to new generations	1
Lack of public support mechanisms for farm succession	1
Low pensions of older farmers	1
more specific measures would help despite to generational renewal in farming	1
Most new farmers are direct successors, also called "continuers", i.e. young people taking over the family farm	1
Problems of Generation Renewal in peripheral regions	1
starterssteun voor nieuwe landbouwers omhoog trekken	1
Successors: 5,900 farms with farm successors under 15 years of age are particularly important for capacity planning in the next decade.	1
Successors: high motivation of successors which are stock exchange landscapes	1
Successors: only few successors; farms are mainly run on a sideline basis, the quality of the soil and the natural site conditions limit the prospects for succession in unfavourable locations	1
Sustainability transition	28
Agriculture and Forestry: important part of solving carbon sequestration (non-fiction writers viewpoint); vegetarian food, textiles by wood fibres, carbon sink	1
Agriculture is again considered as a place of production that is opposite that research has argued recent years since industrialization	1
article from a Architectural magazine on an exhibition called 'Countryside, the future' in the Guggenheim museum (NY) created by architects Koolhaas and Bantal in which they address environmental issues, politics and socio-economical inequality in the non-urban area of the planet. As the majority of the people lives in cities, it seems the countryside is being ignored. Yet it is changing drastically. The article touches briefly some topics, like modernisation of the countryside, climate change, etc.	1
Circular bioeconomy will be an opportunity for rural areas.	1
Contribution of agriculture to energy transition (methanisation, agrofuels and substitute materials...)	1
crisis in the energy mix of many member states	1
EU Green Deal	1
Forestry and forest industry will face more pressure of environmental aspects	1
Future cultivars will be more resistant to pests and diseases	1
Midlands of Ireland re-invented as an energy hub (part of transition away from peat-burning)	1
Out of fossil energy sources	1
Pressure on young farmers: it is a challenge to bring reconciling environmental protection and price pressure together	1
Produzioni etiche [ethical productions]: Small business activities, both in agriculture and craftsmanship, producing goods in respect of human and worker's rights, in harmony with nature and avoiding suffering to animals [some are also vegan]	1
Recupero semi [seeds recovery]: activities involving different subjects (farmers, experts) to protect natural seeds/plants from extinction, recovery of ancient seeds, creation of "banks of seeds"	2
reduced CO2 emission	1
Reducing herbicides use in arable crops	1
significance of green technology	1
Sustainability: a more competitive and sustainable industry in the future	1
Sustainability: Products and services for the the local market	1
Sustainability: sustainable methods of food production	2
Sustainable cereal cultivation	1
Sustainable farming at landscape scale	1
Sustainable soil management in livestock production	1
Sustainable water and nutrient management	1
The transition towards increased sustainability in agriculture has been important to government, NGOs and research institutions	1
Utilization of forest resources changes: longer lifecycle for trees, long-lasting use of wood material	1
Sustainable food	6
increasing awareness and responsibility of consumers about their food and more stringent environmental regulations	1
During a meeting of civil society organisations that all work on sustainable food production and consumption (called 'Voedsel Anders'; translated 'Food Differently') the question was asked how to anticipate the consequences of the coroncrisis and how to influence policy makers to make changes accordingly.	1
In Ede (NL), food policy is influenced by regional trend towards sustainable and healthy food	1
Responsible Gastrohero community	1
sustainable food supply chains are a growing market	1
Using scientific knowledge for sustainable agriculture	1

Trend and its manifestations (trend observations) /27	Count
Sustainable lifestyles	4
Current public interest in sustainable lifestyles, authenticity, local produce, meaningful leisure activities	1
healthy and natural lifestyle causes new people and new ideas to come in and create new dynamics and networks	1
Increasing use of the countryside as a space of consumption, driven by a general demand for healthy and natural lifestyles	1
Sustainable lifestyles	1
Sustainable tourism	2
More sustainable tourism can be expected (for example agri-tourism)	1
Partnership-based sustainable rural tourism: The Schist Villages Network Program	1
Techno-food	3
Genetic modification gets increasingly common in food production also in Europe	1
Lab-grown food (especially meat)	1
Technological development will change food production methods: producing artificial food and food production in cities will increase, environmental load will be decreased	1
Transparency of food system	6
Breeders of Flavour Iséroises: fully transparent intermediary supply chain by SYAM Operational Group	1
Better sharing of added value between stakeholders in the sectors, better redistribution upstream of the sectors (for the quality of life of farmers and the quality of territories).	1
Consumers are increasingly looking for complete and total transparency from food companies and the farmers who supply them	1
Distance between production and consumption means that the origin and (final) destination of consumed products is often unknown to the end consumer	1
increasing societal demands for local organic food, and climate and biodiversity friendly agriculture.	1
People want to know where their food is being produced and what kind of life the pigs have had	1
Tribal lifestyle	1
Tribal settlers: traditional values, family-centered, organic subsistence farming, folkish/racial ideology - discriminating minorities etc, partly neo-nazi contacts; e.g. Anastasia movement from Siberia	1
Uberisation	1
An agriculture without farmers : "uberisation" of farm work	1
Unequal development and inequality (continues)	68
Gypsy segregation in the village	1
A major rural-urban divide in ICT employment is evident	1
Above average unemployment rates	2
Agriculture remains much less capital intensive in low - and middle - income countries	1
Anticohesion results of rural development policy and territorial cohesion policy	1
Declining global income inequality, with a projected (relatively low) rise again after 2027	1
Demographic change: rising birth rates in northern and eastern Germany	1
Depreciation in the value of properties (houses, occupation) in strongly net emigration rural areas is a social problem and income distribution challenge	1
Differences in rural areas; for example, rural regions in North Rhine-Westphalia are not comparable with rural areas in Mecklenburg-Western Pomerania.	1
Digitalisation in agriculture: low level of broadband expansion in rural regions of Thuringia or Saxony	1
Early school leaving is more common in rural areas	1
East-west divide in legal forms of farms	1
Economic convergence of developing nations and the use of biomass, fossil fuels, and minerals.	1
Europe's economic development has been asymmetric since the financial crisis	1
European desintegration	1
European disintegration may affect lagging regions more than advanced regions	1
Excessive disparities between EU and its neighbouring countries are placing further pressures on humanitarian conflicts challenging the core of European values	1
GDP per head in cities is higher than in rural areas	1
growing disparities	1
growing disparities within the EU (Welfare inequalities between and within Member States, regions and municipalities is a driving force of political fragmentation, together with socio-cultural differences related to migration flows)	1
High vacancy rates of apartments and houses in remote areas	1
Higher female unemployment rates	1
Increasing urban-rural inequalities	1
In eastern European countries urban regions had much higher rate of human resources in science and technology than rural regions	1
In the Central and Eastern EU, many rural areas depopulate, while urban areas experience modernisation, some with population decline and others with growth	1
Increase of international inequality in material consumption since the beginning of the 21st century	1
Increase of rural poverty	1
Increasing access to land for Black, Indigenous and People Of Colour	1
Increasing disparities between rural and urban areas: Growing cities, shrinking rural areas	3
Increasing gaps between central and peripheral areas at different geographic levels	1
Increasing inequalities	1
Increasing polarisation of settlement patterns	1
Increasing polarisation of settlements	1
Increasing rural-urban disparities	1
increasing spatial polarisation	1
Increasing urban-rural inequalities	1

Trend and its manifestations (trend observations) /28	Count
Unequal development and inequality (continued)	
internal socio-economic fragmentation in cities	1
Less-skilled, lower earning households are often forced to settle in lower-priced and lower quality dwellings at urban margins and in rural areas	1
Medical services in rural areas: About 40 percent more people in North Brandenburg die from the consequences of cardiovascular diseases comparing to the national average.	1
National policies tailored only to growing cities may change in some areas	1
Negative economic and demographic trends in several peripherial regions of Lower Saxony (from Emden via Wilhelmshaven and Lüchow-Dannenberg to Holzminden)	1
peripheric regions getting more less developed than most of central regions	1
Poverty, inequality and food insecurity	1
Regional differences of farm structures: the historical division of Germany between east and west can still be seen in the clearly different tenancy agreements	1
Regional disparities in demographic patterns will increase	1
Regional economic disparities	1
Rising poverty and economic decline in remote rural areas	1
rundown rural tourist accommodation is used by urban dropouts	1
Rural labour markets are commonly associated with segmentation in which a dominant 'secondary' component is characterised by low levels of human capital, insecurity, low activity rates (especially for females), disguised unemployment, and high levels of selfemployment. All of these characteristics are certainly present in some (but by no means all) rural areas	1
Rural shrinkage becomes to a broader structural crisis of economic and labour market decline, peripheralisation and a deepening urban-rural divide	1
Smilar problems in Europe: out-migration of young and well-skilled people; lack of local opportunities for skilled employment; limited possibilities for higher education; dispersed pockets of rural poverty; the exclusion of particular social groups; and sparse provision of public and private services such as public transport and community shops and services	1
Social inequalities will increase	1
spatial injustice	1
The number of students increases in general. But the ratio of human resources in science and technology was the lowest in rural areas.	1
The ratio of females became more significant	1
The Regional Employment Pact promoted closing the gap between rural and urban areas in the labour market (Austria)	1
The revenge of rural areas: inequality of regional development may change relative strength of different political parties. Traditional agrarian or country parties may get more support.	1
The status of unemployed in rural areas differs from unemployed in urban areas. Should unemployment benefit system differ between rural and urban areas?	1
The unemployment gap increased between rural and urban areas	1
The urbanization process continued and the gap in population density increased	1
There are parallel growth, stagnation and shrinkage processes within regions (region = NUTS 3 or below)	1
There is a gap between rural and urban economy in Twente	1
Two-speed Irish economy: Dublin/Eastern region moves ahead, western/northern (more rural) regions left behind	1
Worthless properties	1
Youth unemployment: excluded from labour markets	1
Urban insecurity	1
Rising urban insecurity	1
Urban sprawl	6
Artificialization of soils	1
Increasing urban sprawl	1
Urban land is growing more in intermediate regions	1
Urban sprawl	1
Urban sprawl causes socially and environmentally injust infrastructure systems	1
Urban sprawl, gated communities and the removal of local community services from the peri-urban areas.	1
Urbanisation	15
A majority of citizens are willing to slow down the urbanization	1
Growth of mega-cities	1
growth of metropolitan areas	1
increasing population density (urbanization) increases farm returns	1
Logistic challenges due to growing urbanisation: Longs distances of transportation for food from rural areas to the metropolitan areas	1
Paris grand projet	1
The region of Amsterdam has a large ecological footprint and a low biodiversity but there are several programmes tackling this issue	1
Urbanisation	1
Urbanization	1
urbanization	3
urbanization is a significant worldwide development	1
Urbanization in the 21st century	1
urbanization increases disadvatages for rural areas	1
Volunteer tourism	1
Volunteer tourism in rural areas	1

Trend and its manifestations (trend observations) /29	Count
Welfare state	4
Less welfare state in rural areas leads to a decline of economic competitiveness	1
Long-term unemployment	1
Services of General Interest education, health, social services, and so on): shift away from a "welfare state" ethos towards market based	2
Wellness	1
Wellness	1
Wild food	3
Constant interest in collecting non-timber forest products for personal purposes	1
Decrease in the gathering and consumption of wild edible food (and its parallel shift from a ecosystem provisioning service to an ecosystem cultural service)	1
Foraging	1
Wood demand	3
Clothing from wood-based textile fiber	1
Growing demand for wood	1
Timber construction becomes more common also in urban areas	1
Work-life fusion	3
Diverse working models: part-time and self-employment, home working	1
Flexibility in work and leisure time	1
Work-life fusion: managing life and work at the same time	1
Young farmers	20
access to land as a barrier for young farmers, especially due to regulatory framework	1
Considerable high start-up costs	1
Decrease in the number of young farmers	1
exchange schemes play a growing role for young farmers and they become increasingly flexible and individual	1
Few young farmers: under 35	1
Growing farming interests of (young) people (with and without family background)	1
lack of a new generation of farmers	1
Not enough young farmers and farm successors	5
Not enough young farmers and unclear or lack farm succession: 70% of the 187,000 farms have a manager aged 45 or older. These holdings account for approx. 7,5 million hectares, i.e. 45% of German agricultural area. For this reason the closing down of farms is expected , which leads to a further accelerate agricultural structural change and increasing share of very large, intensive farms.	1
Relatively few young farm managers, especially in southern Europe	1
Skills, knowledge, networking, etc. is regarded as less important by young farmers themselves	1
specific CAP on generation renewale has positive effects on numbers of young farmers	1
the number of young farmers and the level of farm employment on farms managed by young farmers are both declining, on average	1
Young farmers are open-minded, and interested in learning more about the farming and in developing their entrepreneurial and business competences. Especially when educated	1
Young farmers: with the highest professional qualification	2
Total	1560

Annex 3. Trend cards

No.	Trend name	Trend type
1	Ageing population	Megatrend
2	Alternative food systems	Trend
3	Benefiting from globalisation	Megatrend
4	Benefiting from urbanisation	Megatrend
5	Care services	Weak signal
6	Caring for the environment	Megatrend
7	Changing gender roles	Trend
8	Cheap rural housing and rural second homes	Weak signal
9	Circular economy	Trend
10	Climate change	Megatrend
11	Co-operatives and partnerships	Weak signal
12	Community-based action	Weak signal
13	Counteracting unequal development and rural decline	Megatrend
14	Creative economy	Weak signal
15	Degrowth	Weak signal
16	Digital economy	Trend
17	Diversification of rural economy	Trend
18	Diversification/specialisation of farms	Trend
19	DIY movement	Weak signal
20	e-commerce	Trend
21	Ecovillages	Weak signal
22	Educational farms	Weak signal
23	Food security	Trend
24	Food sovereignty	Weak signal
25	Food tourism	Trend
26	Growing food demand	Megatrend
27	Heritage tourism	Weak signal
28	Infrastructures, accessibility and connectedness of regions	Megatrend
29	Integration of immigrants	Weak signal
30	Local paradigm	Trend
31	Manifestations of new technologies	Trend
32	Meaning and experience economy	Trend
33	Micro- and small units	Weak signal
34	Migration patterns	Megatrend
35	Multi-local living	Weak signal
36	Multifunctional forests	Trend
37	Natural and cultural heritage	Weak signal
38	New governance models	Weak signal
39	Pandemics and epidemics	Weak signal
40	Place branding	Weak signal
41	Policy incidence and effectiveness	Trend
42	Pop-up culture and gig economy	Weak signal
43	Public goods	Weak signal
44	Remote work	Trend
45	Resilience	Weak signal
46	Rural artisans	Weak signal
47	Rural business succession	Trend
48	Rural energy communities	Weak signal
49	Rural hubs	Weak signal
50	Rural in the social media	Trend
51	Rural lifestyle	Weak signal
52	Rural tourism	Trend
53	Search for better quality of life	Weak signal
54	Self-sufficiency	Weak signal
55	Sharing economy	Weak signal
56	Smart solutions in rural space	Weak signal
57	Social enterprises and entrepreneurs	Weak signal
58	Sustainability transition	Megatrend
59	Technology-intensive farming	Trend
60	Transparency of the food system	Trend



1 AGEING POPULATION



Average age of the population is quite high and increasing in many rural regions, which increases the demand of targeted services

TYPE

- ☒ Megatrend
- ☐ Trend
- ☐ Weak signal

TOPICS

- ☒ Demographics
- ☒ Regional development

SCALE



DOMAIN

Social

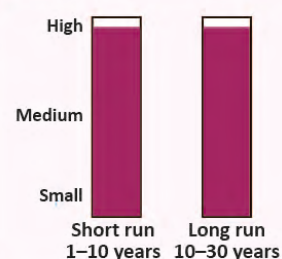


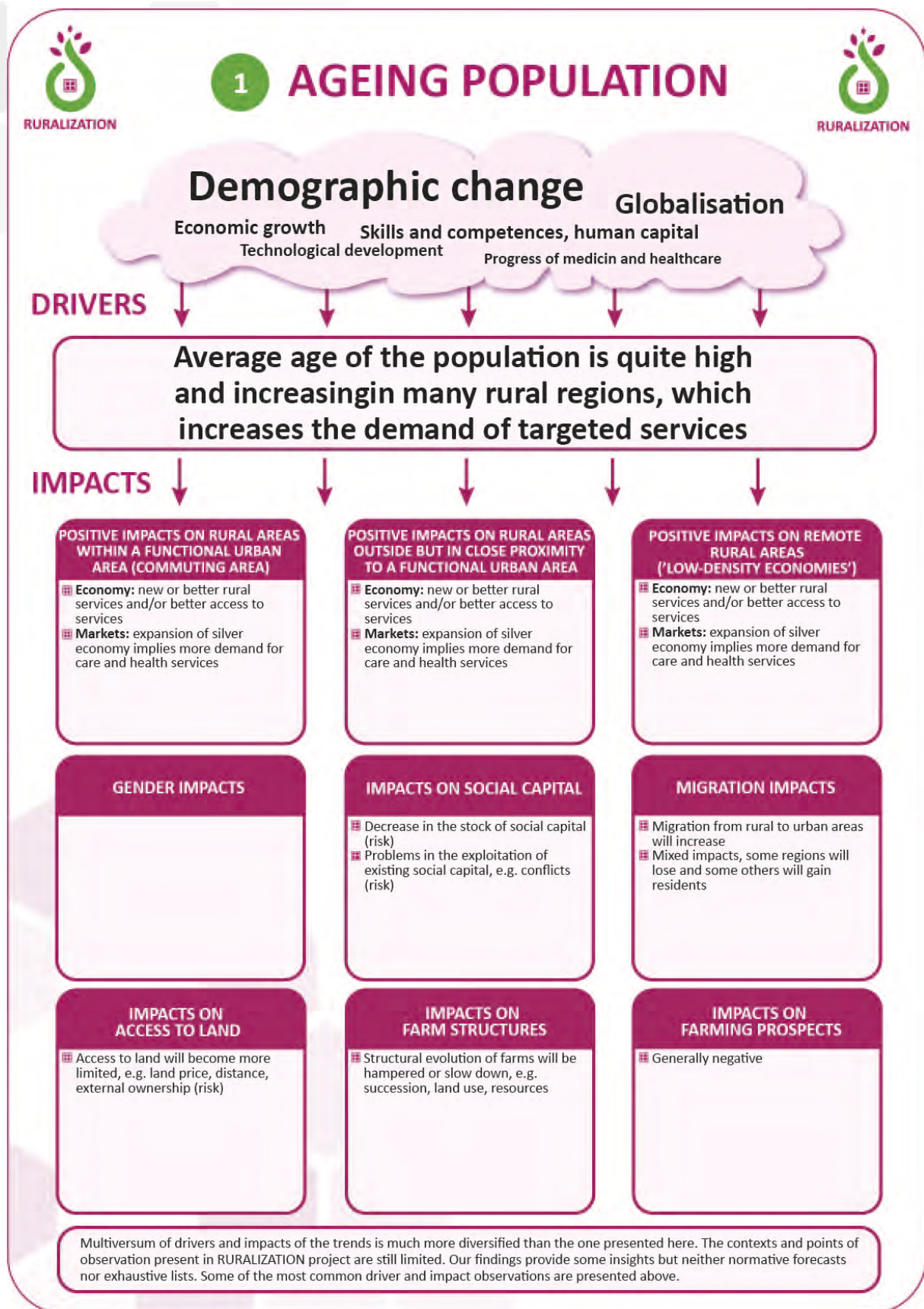
MOSTLY AFFECTED SECTOR

Public services



SIGNIFICANCE FOR RURAL AREAS







RURALIZATION

1

AGEING POPULATION

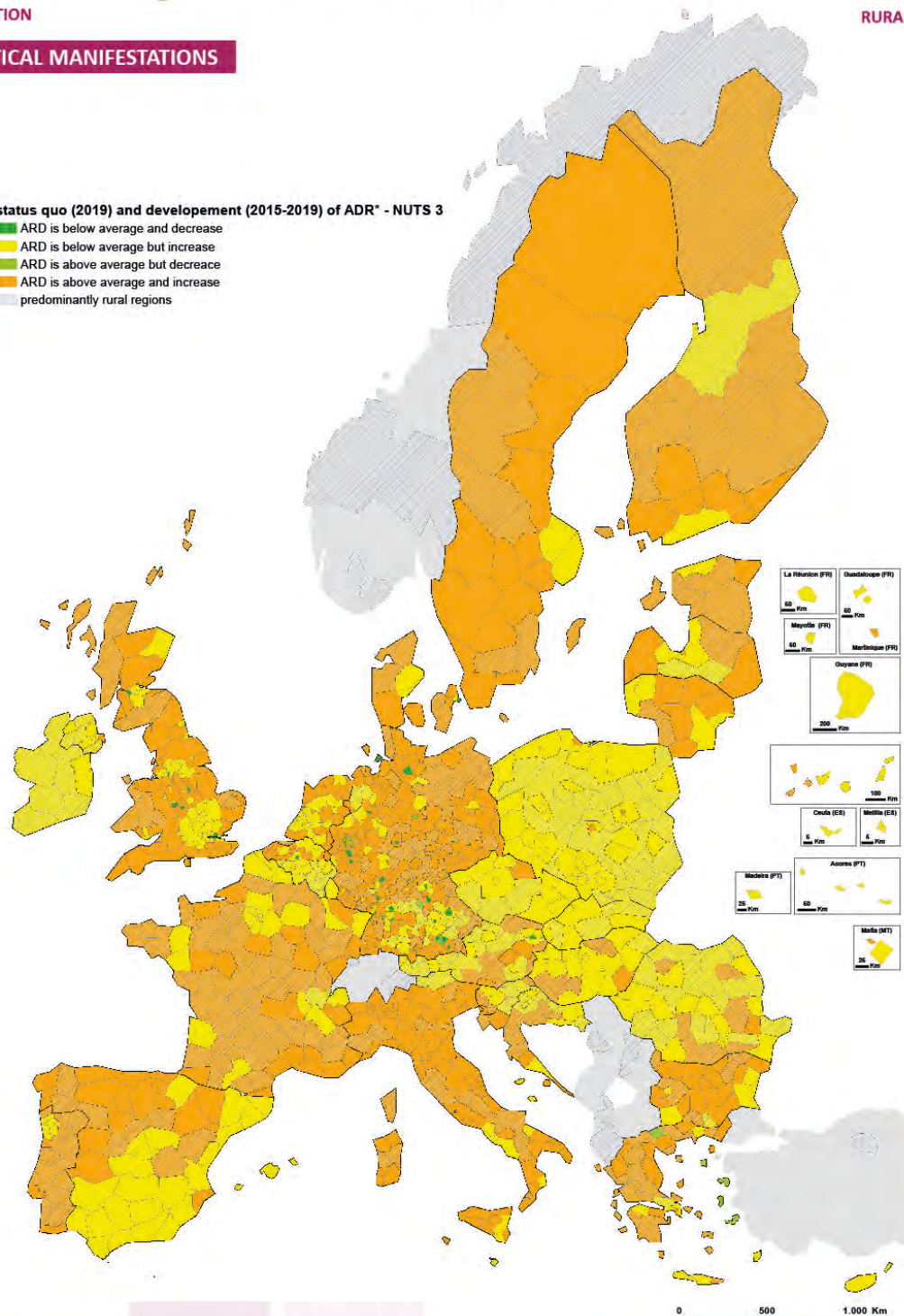


RURALIZATION

STATISTICAL MANIFESTATIONS

status quo (2019) and development (2015-2019) of ADR* - NUTS 3

- ADR is below average and decrease
- ADR is below average but increase
- ADR is above average but decrease
- ADR is above average and increase
- predominantly rural regions



*ADR = aged dependency ratio
The ADR expresses the ratio of number of inhabitants who are 65 years or older to the number of inhabitants who are between 15 and 64 years old

Used Eurostat Datafile: demo_r_pjanagr3



source of shapes and data: EUROSTAT
geographical projection: Mercator (sphere)



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2

ALTERNATIVE FOOD SYSTEMS



Diverse community-, delivery-, diet- and practice-oriented food systems challenge the dominant food regime

TYPE

- ☐ Megatrend
- ☒ Trend
- ☐ Weak signal

TOPICS

- ☒ Farms
- ☒ Food
- ☒ Science, education and knowledge
- ☒ Policy
- ☒ Technology
- ☒ Uncertainty and risks
- ☒ Values

SCALE



DOMAIN

Social

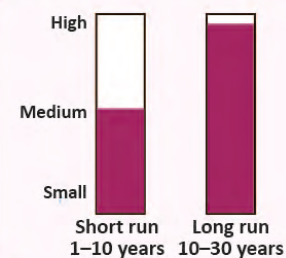


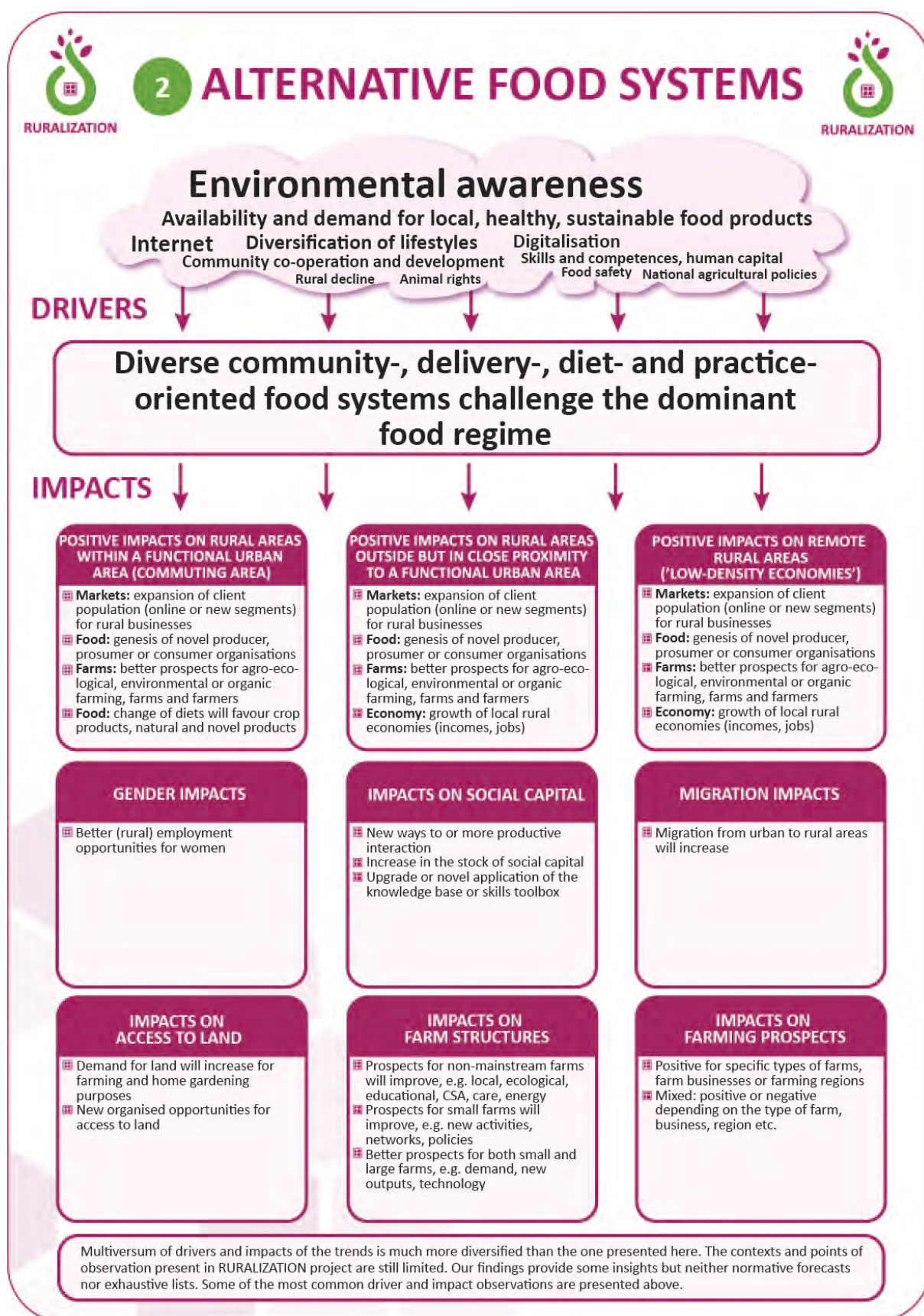
MOSTLY AFFECTED SECTOR

Primary production



SIGNIFICANCE FOR RURAL AREAS







RURALIZATION

2

ALTERNATIVE FOOD SYSTEMS

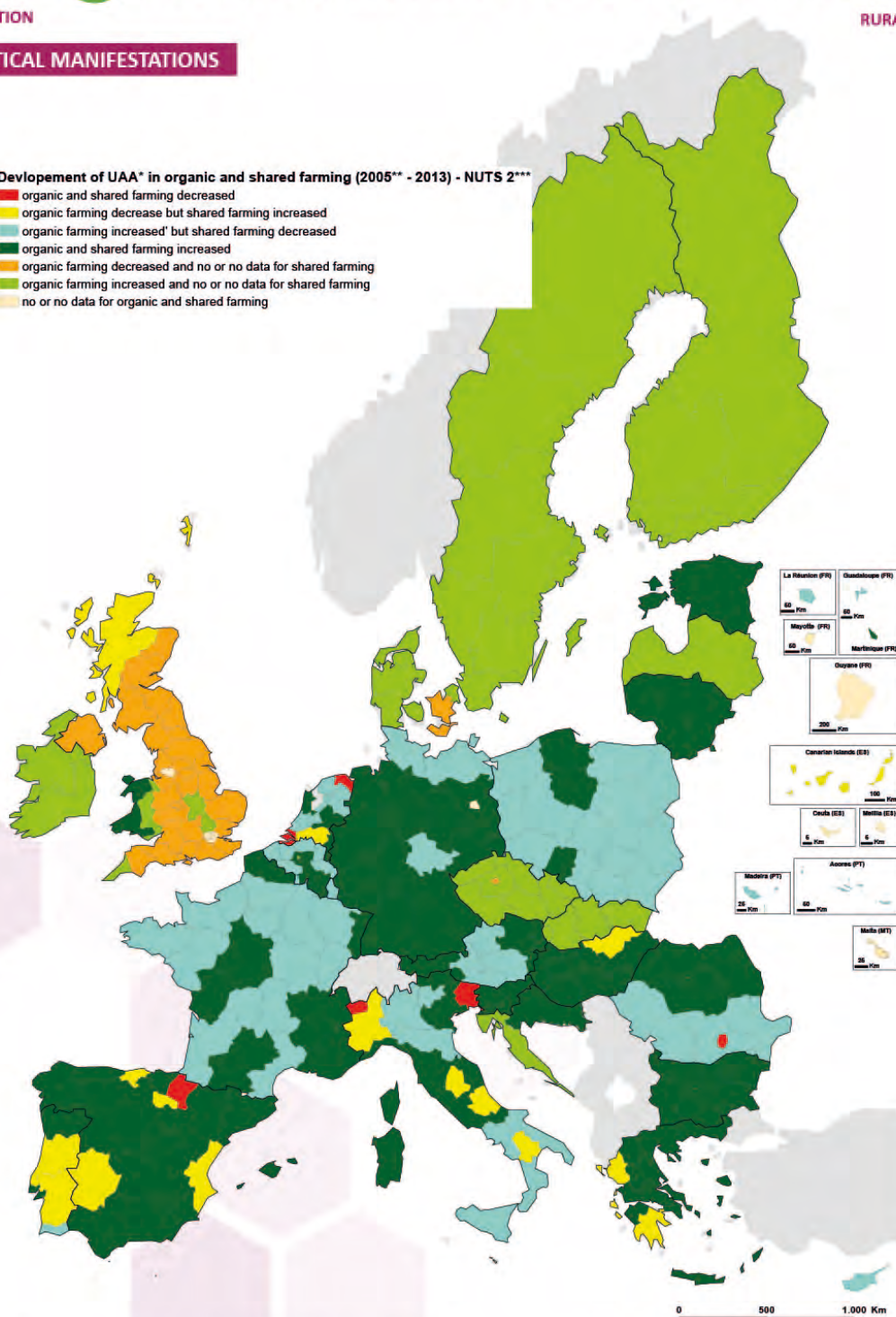


RURALIZATION

STATISTICAL MANIFESTATIONS

Development of UAA* in organic and shared farming (2005** - 2013) - NUTS 2***

- organic and shared farming decreased
- organic farming decrease but shared farming increased
- organic farming increased but shared farming decreased
- organic and shared farming increased
- organic farming decreased and no or no data for shared farming
- organic farming increased and no or no data for shared farming
- no or no data for organic and shared farming



*UAA = utilised agricultural area per spatial unit

**for Bremen (DE5), Croatia (HR03;HR04) and Hamburg (DE6) the year 2007 is reference insted of 2005

***for Germany values are displayed for NUTS 1

For Antwerp Province (BE21) and South Holland (NL33) organic farming stagnates

Used Eurostat Datafiles: ef_mptenure / ef_mporganic

source of shapes and data: EUROSTAT
geographical projection: Mercator (sphere)



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RURALIZATION

2

ALTERNATIVE FOOD SYSTEMS

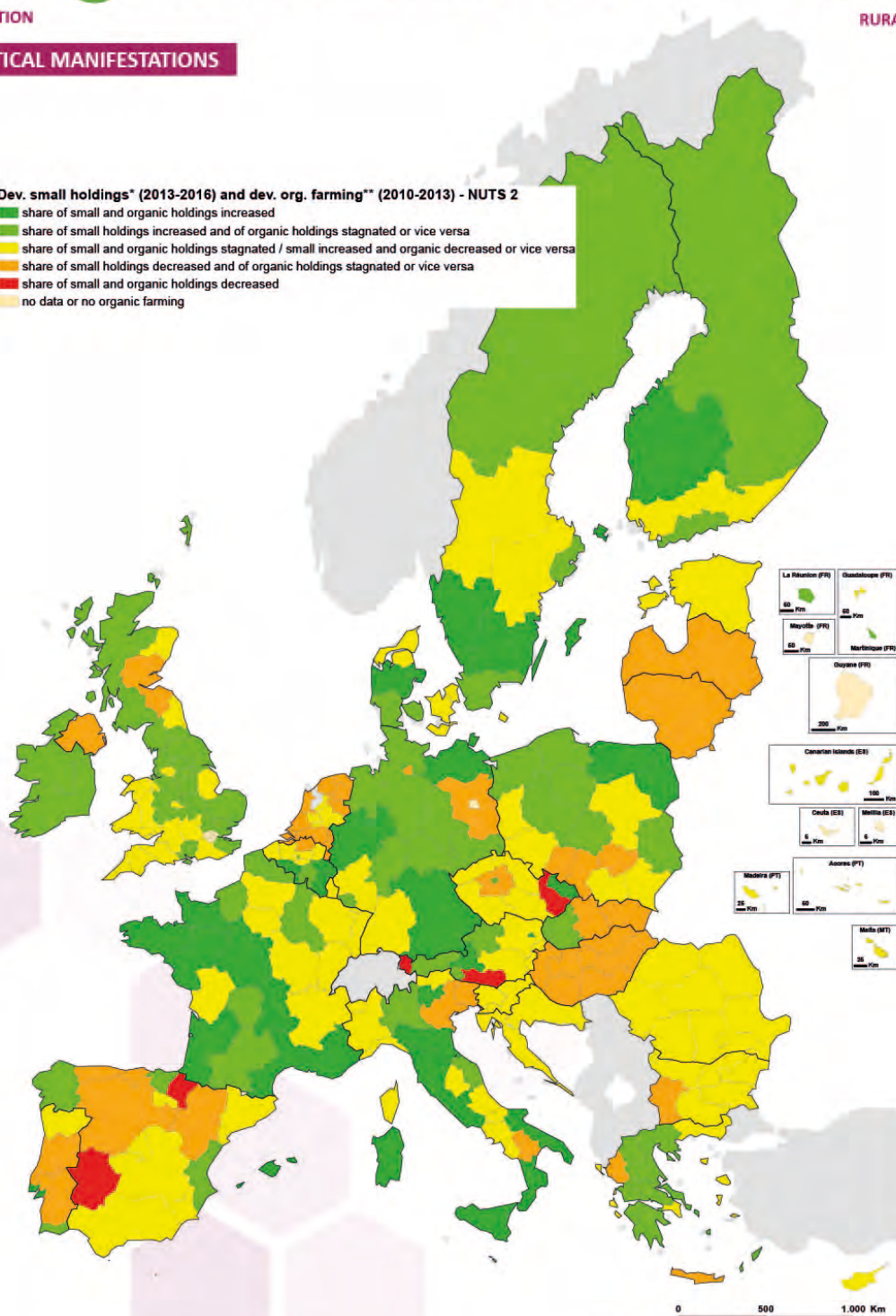


RURALIZATION

STATISTICAL MANIFESTATIONS

Dev. small holdings* (2013-2016) and dev. org. farming** (2010-2013) - NUTS 2

- share of small and organic holdings increased
- share of small holdings increased and of organic holdings stagnated or vice versa
- share of small and organic holdings stagnated / small increased and organic decreased or vice versa
- share of small holdings decreased and of organic holdings stagnated or vice versa
- share of small and organic holdings decreased
- no data or no organic farming



*Development of share of holdings with a size less than 10 ha.

**Development of share of organic farming

Used Eurostat Datafile: ef_m_farmang / ef_mporganic



source of shapes and data: EUROSTAT
geographical projection: Mercator (sphere)



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RURALIZATION

2

ALTERNATIVE FOOD SYSTEMS

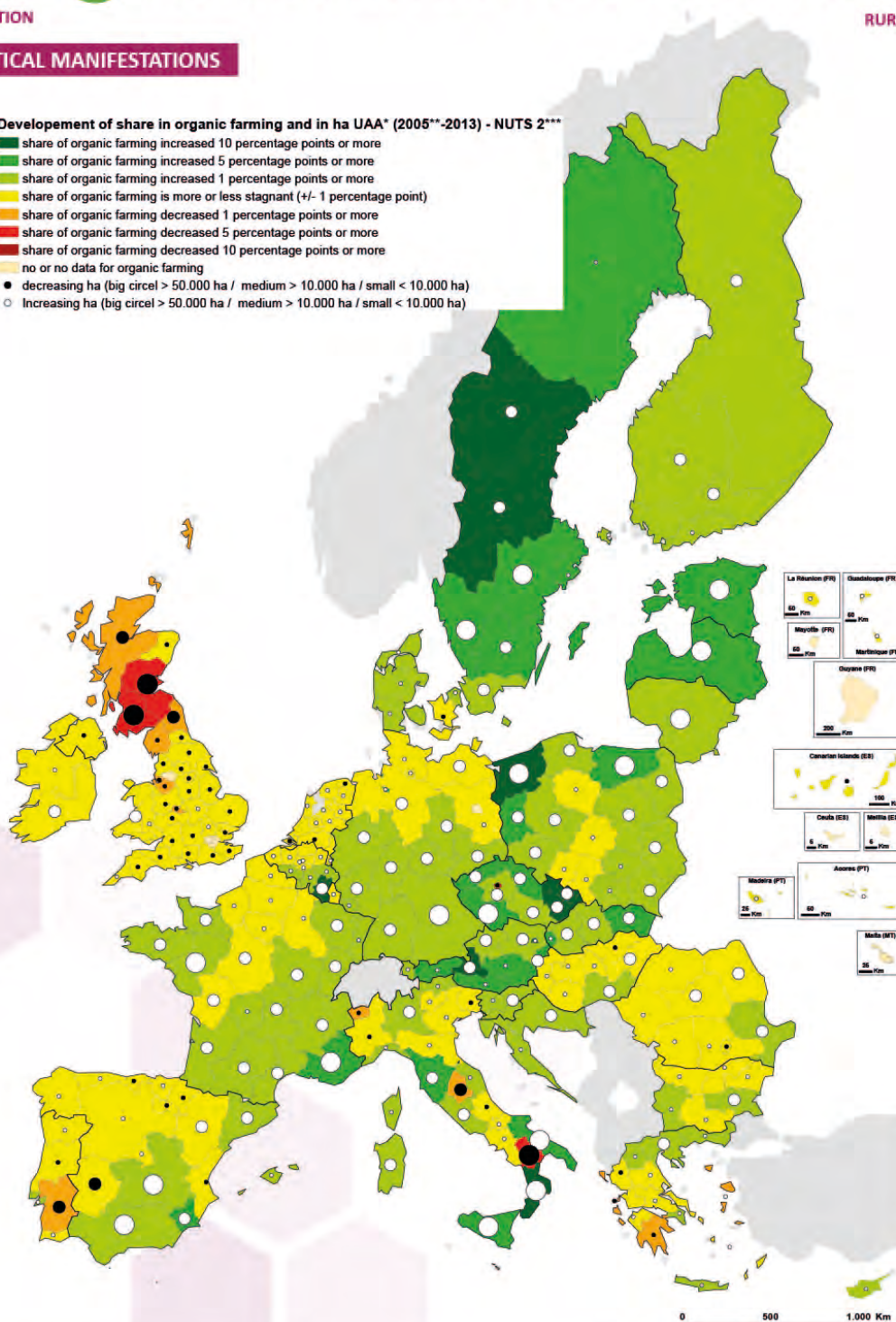


RURALIZATION

STATISTICAL MANIFESTATIONS

Development of share in organic farming and in ha UAA* (2005** - 2013) - NUTS 2***

- share of organic farming increased 10 percentage points or more
- share of organic farming increased 5 percentage points or more
- share of organic farming increased 1 percentage points or more
- share of organic farming is more or less stagnant (\pm 1 percentage point)
- share of organic farming decreased 1 percentage points or more
- share of organic farming decreased 5 percentage points or more
- share of organic farming decreased 10 percentage points or more
- no or no data for organic farming
- decreasing ha (big circle > 50.000 ha / medium > 10.000 ha / small < 10.000 ha)
- Increasing ha (big circle > 50.000 ha / medium > 10.000 ha / small < 10.000 ha)



*UAA = Utilised agricultural area

**for Bremen (DE), Croatia (HR04) and Hamburg (DE) the year 2007 is reference instead of 2005

***for Germany values are displayed for NUTS 1

Used Eurostat Datafiles: ef_mporganic

source of shapes and data: EUROSTAT
geographical projection: Mercator (sphere)

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3

BENEFITING FROM GLOBALISATION



Finding ways to benefit from open markets and specialisation while acknowledging various adverse effects and risks of interdependency

TYPE

- ☒ Megatrend
- ☐ Trend
- ☐ Weak signal

TOPICS

- ☒ Economic development
- ☒ Environment
- ☒ Farms
- ☒ Food
- ☒ Socio-economic models
- ☒ Tourism
- ☒ Trade

SCALE



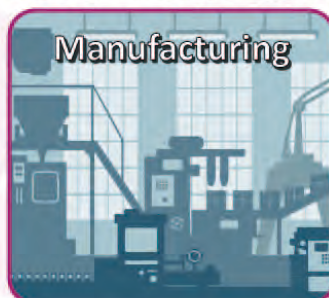
DOMAIN

Economic

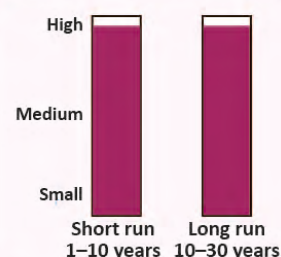


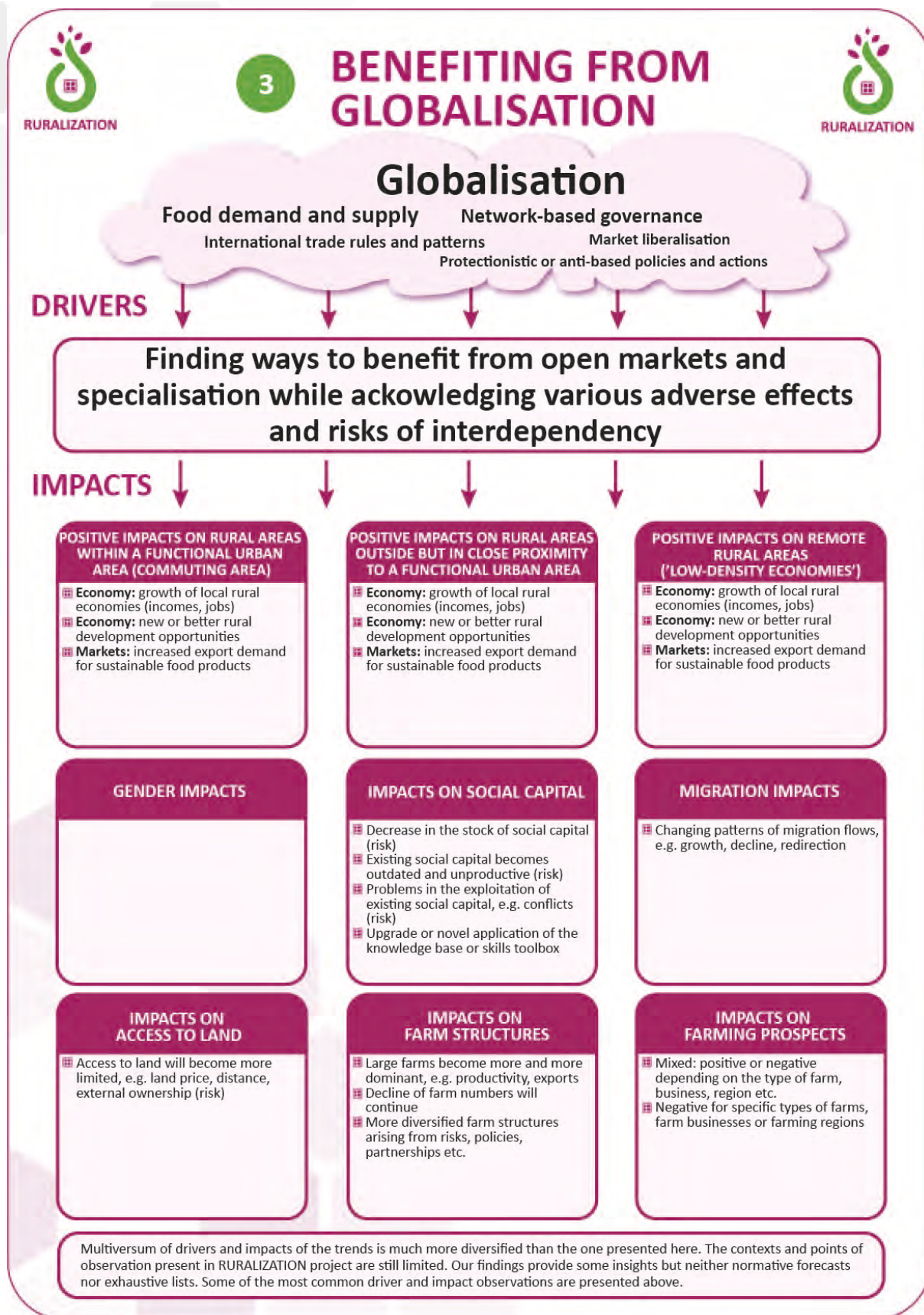
MOSTLY AFFECTED SECTOR

Manufacturing



SIGNIFICANCE FOR RURAL AREAS







RURALIZATION

3

BENEFITING FROM GLOBALISATION

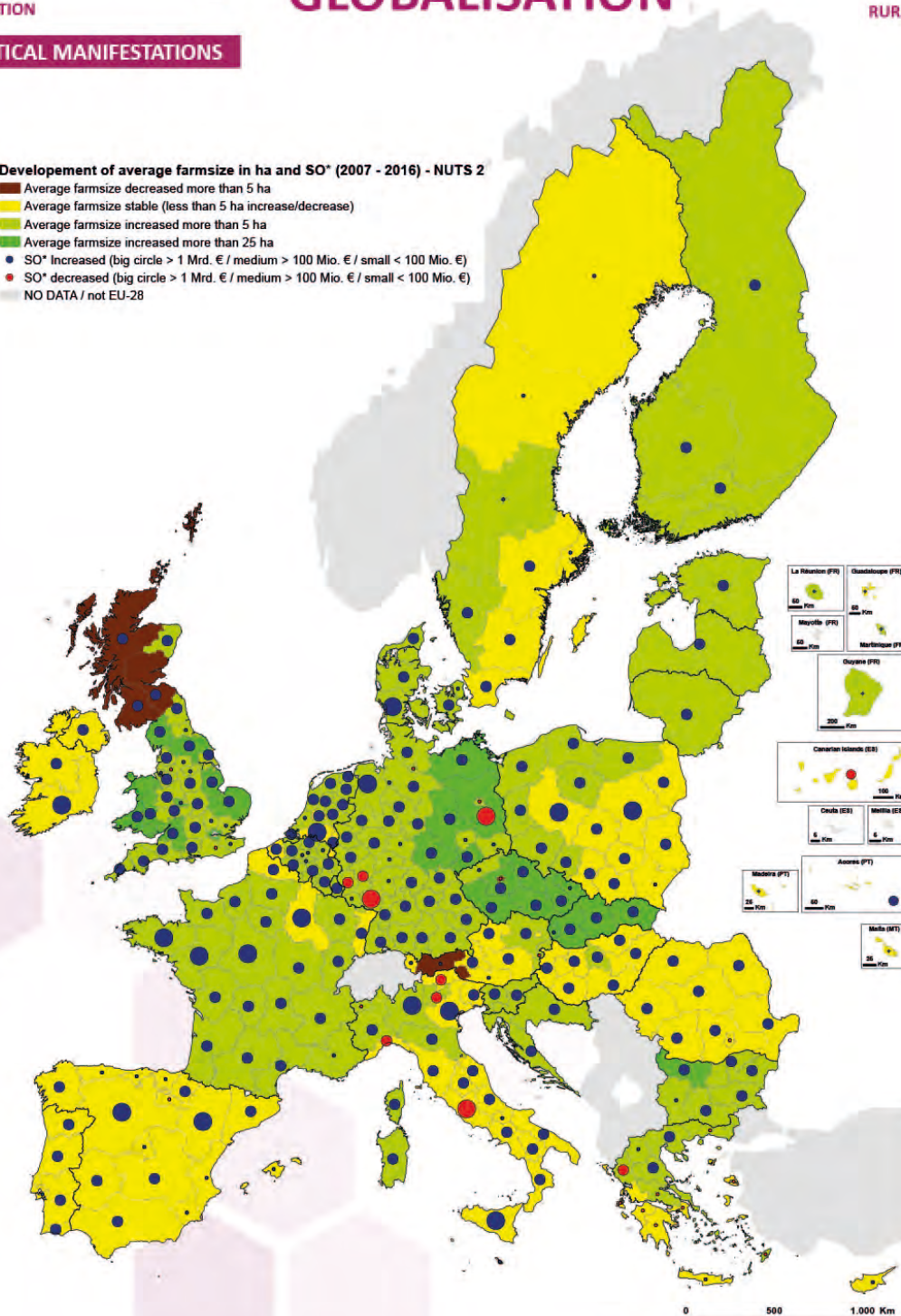


RURALIZATION

STATISTICAL MANIFESTATIONS

Development of average farmsize in ha and SO* (2007 - 2016) - NUTS 2

- Average farmsize decreased more than 5 ha
- Average farmsize stable (less than 5 ha increase/decrease)
- Average farmsize increased more than 5 ha
- Average farmsize increased more than 25 ha
- SO* Increased (big circle > 1 Mrd. € / medium > 100 Mio. € / small < 100 Mio. €)
- SO* decreased (big circle > 1 Mrd. € / medium > 100 Mio. € / small < 100 Mio. €)
- NO DATA / not EU-28



*SO stands for Standard Output which expresses the economic performance in agriculture
Used Eurostat Datafile: e1_m_farmang



source of shapes and data: EUROSTAT
geographical projection: Mercator (sphere)



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4

BENEFITING FROM URBANISATION



Increase of cities in terms of people and land use will make 'rural' more rare and valuable but challenge rural economy and autonomy

TYPE

- ☒ Megatrend
- ☐ Trend
- ☐ Weak signal

TOPICS

- ☒ Environment
- ☒ Farms
- ☒ Mobility and traffic
- ☒ Policy
- ☒ Regional development
- ☒ Settlement system
- ☒ Values

SCALE



DOMAIN

Social



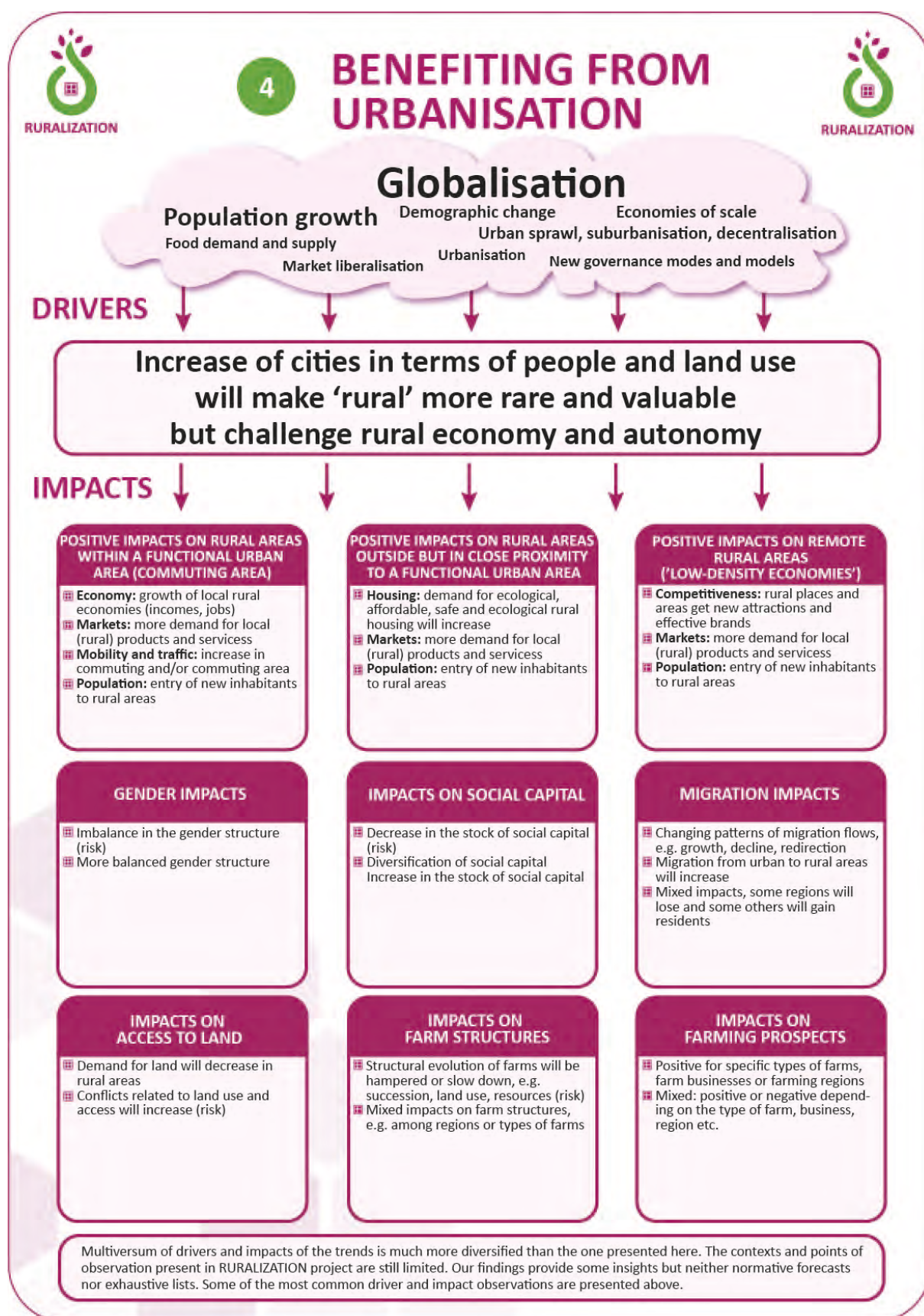
MOSTLY AFFECTED SECTOR

Public services



SIGNIFICANCE FOR RURAL AREAS







RURALIZATION

4

BENEFITING FROM URBANISATION

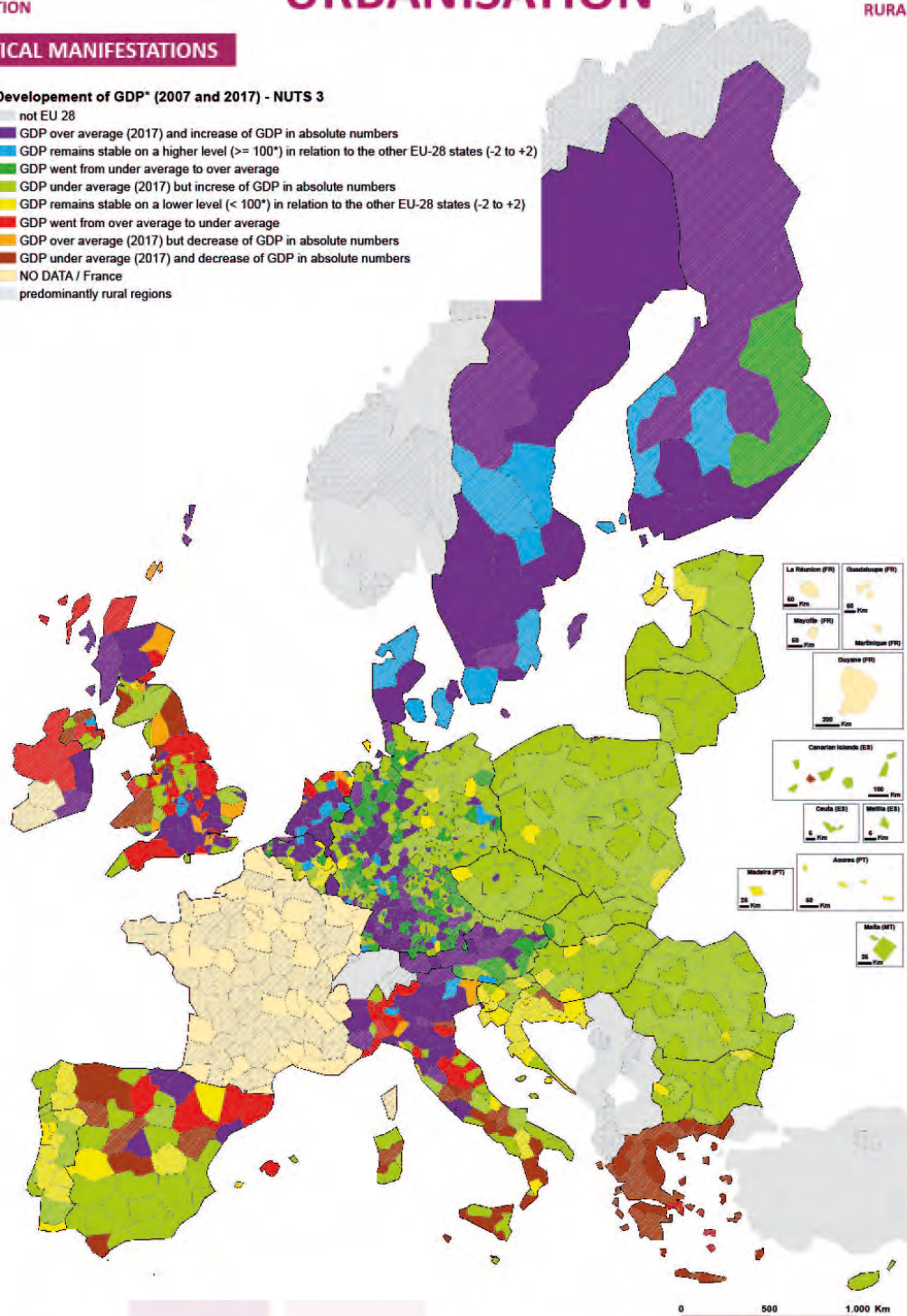


RURALIZATION

STATISTICAL MANIFESTATIONS

Development of GDP* (2007 and 2017) - NUTS 3

- not EU 28
- GDP over average (2017) and increase of GDP in absolute numbers
- GDP remains stable on a higher level ($\geq 100^*$) in relation to the other EU-28 states (-2 to +2)
- GDP went from under average to over average
- GDP under average (2017) but increase of GDP in absolute numbers
- GDP remains stable on a lower level ($< 100^*$) in relation to the other EU-28 states (-2 to +2)
- GDP went from over average to under average
- GDP over average (2017) but decrease of GDP in absolute numbers
- GDP under average (2017) and decrease of GDP in absolute numbers
- NO DATA / France
- predominantly rural regions



*GDP = gross domestic product
 *100 = EU 28 average

Used Eurostat Datafile: nama_10r_3gdp



source of shapes and data: EUROSTAT
 geographical projection: Mercator (sphere)



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RURALIZATION

4

BENEFITING FROM URBANISATION

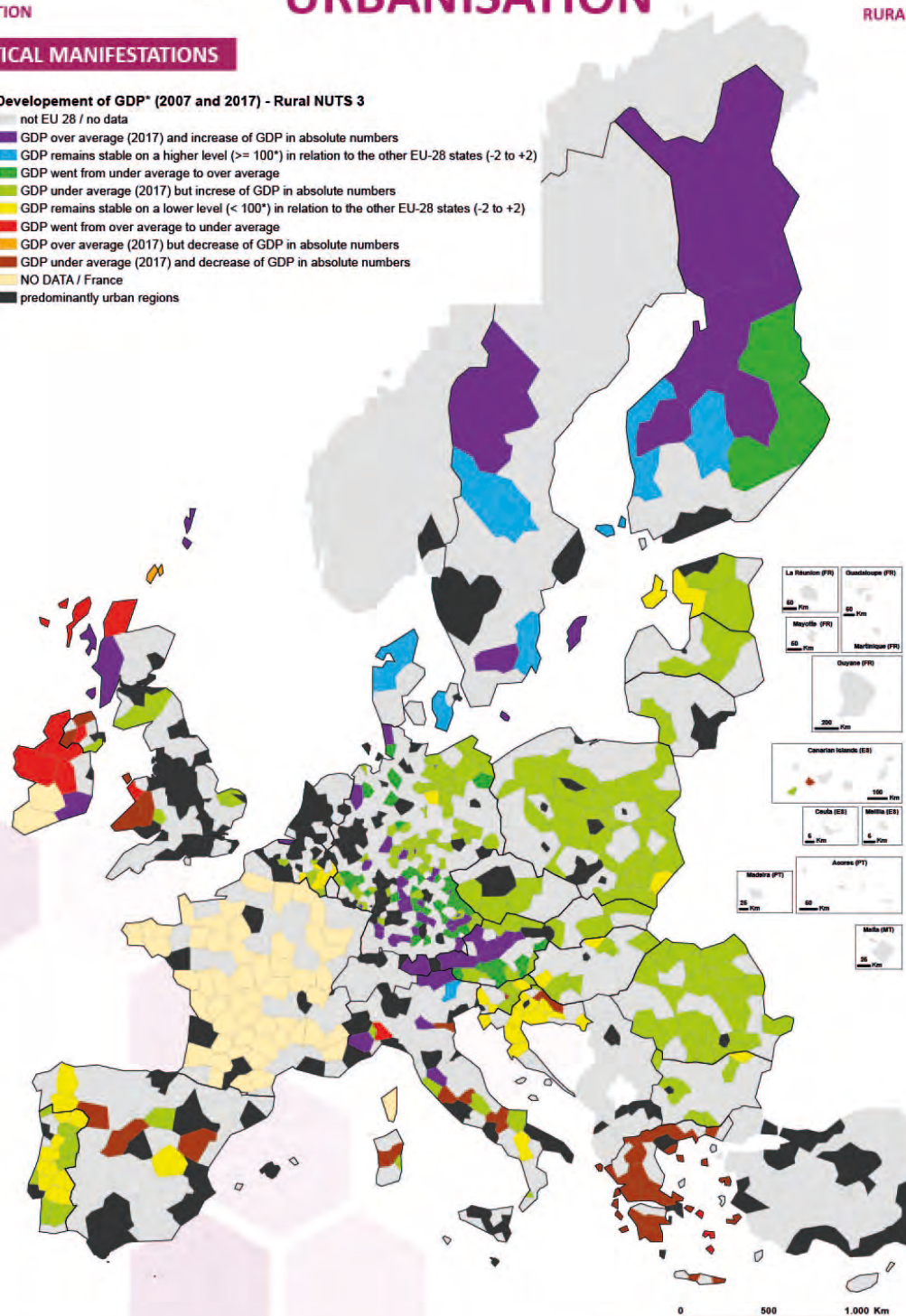


RURALIZATION

STATISTICAL MANIFESTATIONS

Development of GDP* (2007 and 2017) - Rural NUTS 3

- not EU 28 / no data
- GDP over average (2017) and increase of GDP in absolute numbers
- GDP remains stable on a higher level ($\geq 100^*$) in relation to the other EU-28 states (-2 to +2)
- GDP went from under average to over average
- GDP under average (2017) but increase of GDP in absolute numbers
- GDP remains stable on a lower level ($< 100^*$) in relation to the other EU-28 states (-2 to +2)
- GDP went from over average to under average
- GDP over average (2017) but decrease of GDP in absolute numbers
- GDP under average (2017) and decrease of GDP in absolute numbers
- NO DATA / France
- predominantly urban regions



*GDP = gross domestic product
 *100 = EU 28 average

Used Eurostat Datafile: nama_10r_3gdp



source of shapes and data: EUROSTAT
 geographical projection: Mercator (sphere)



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5

CARE SERVICES



Diversified set of activities with many rural and novel models: green care, homecare, telemedicine, mobile services

TYPE

- ☐ Megatrend
- ☐ Trend
- ☒ Weak signal

TOPICS

- ☒ Farms
- ☒ Networks and collaboration
- ☒ Regional development
- ☒ Rural services
- ☒ Technology

SCALE

European



DOMAIN

Social

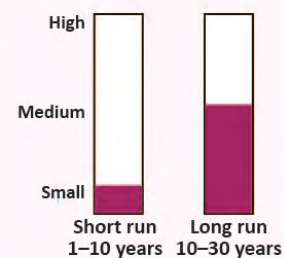


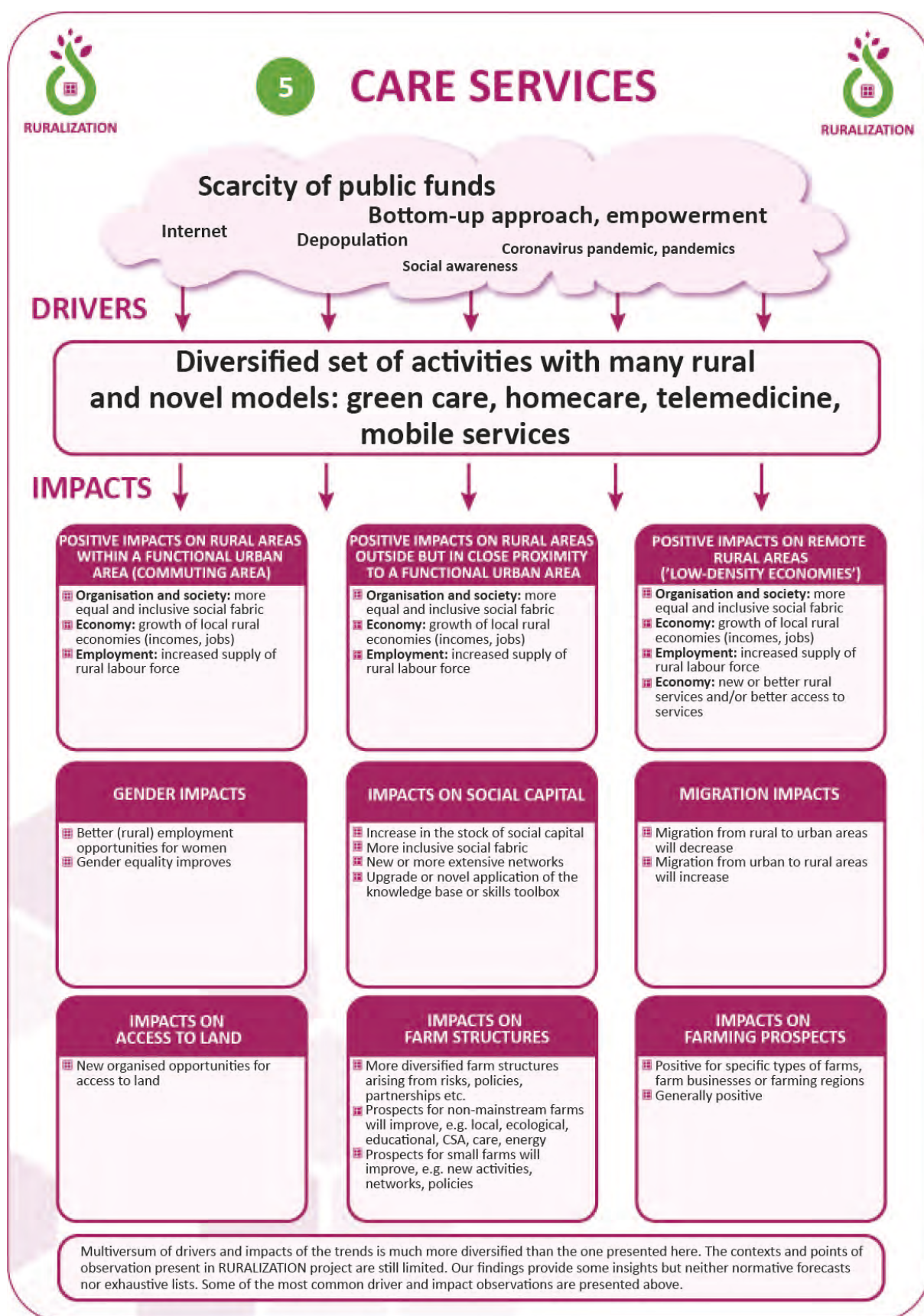
MOSTLY AFFECTED SECTOR

Public services



SIGNIFICANCE FOR RURAL AREAS







RURALIZATION

5

CARE SERVICES

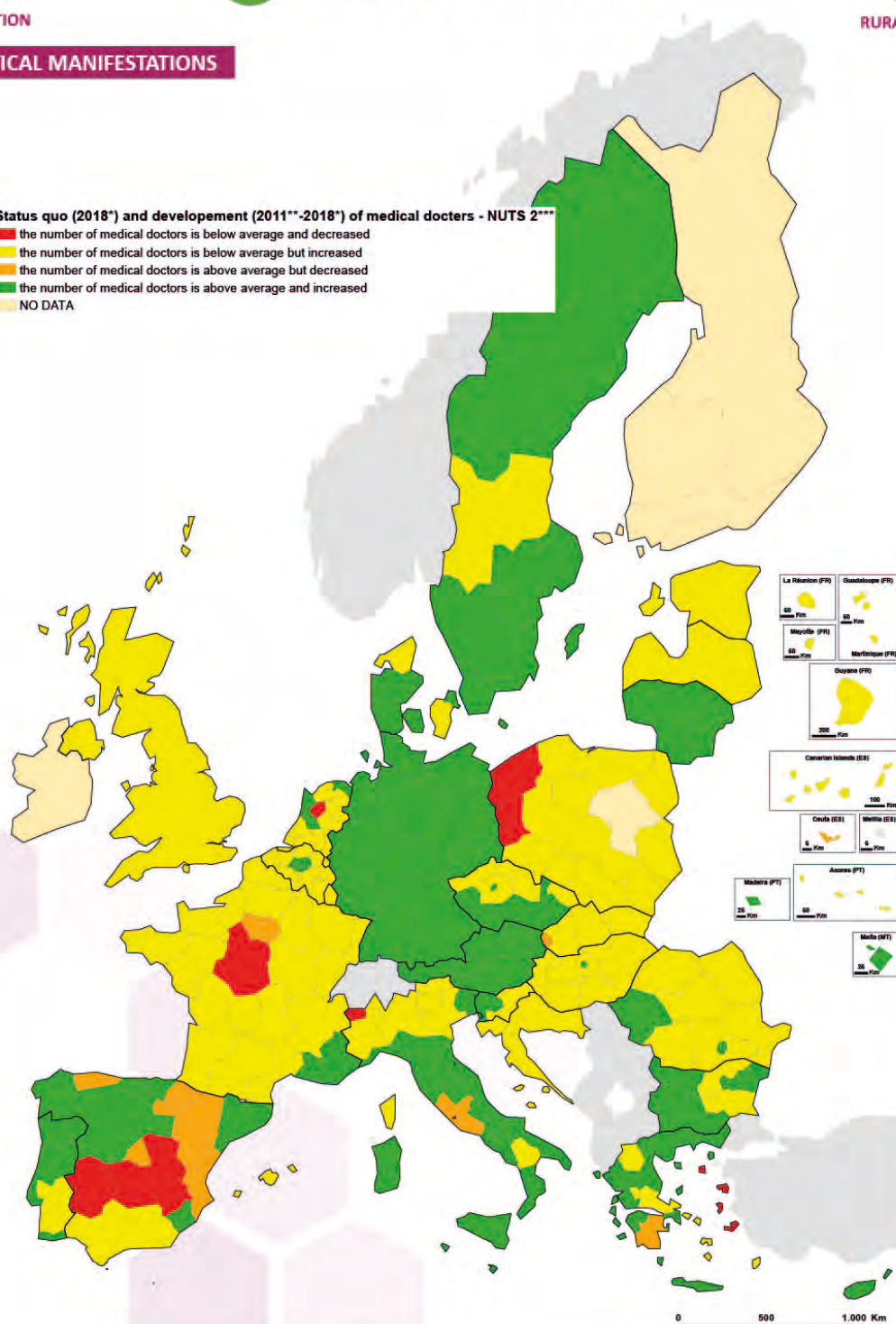


RURALIZATION

STATISTICAL MANIFESTATIONS

Status quo (2018*) and development (2011**·2018*) of medical doctors - NUTS 2***

- the number of medical doctors is below average and decreased
- the number of medical doctors is below average but increased
- the number of medical doctors is above average but decreased
- the number of medical doctors is above average and increased
- NO DATA



*for the NUTS 2 regions of Poland and Sweden the year 2017 is reference insted of 2018
 **for the NUTS 2 regions HU10 / LT00 the year 2016 is reference insted of 2018
 ***for the NUTS 2 regions FR11 / FR15 / HU11 / HU12 the year 2014 is reference insted of 2011
 ****for Germany Data is only available on NUTS 1 and for UK only on NUTS 0 level
 Used Eurostat Datafile: hlth_rs_psrsg



source of shapes and data: EUROSTAT
 geographical projection: Mercator (sphere)



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6

CARING FOR THE ENVIRONMENT



Ideologies, policies and practices to reduce environmental degradation, to safeguard earth systems and to improve the status of the environment

TYPE

- ☒ Megatrend
- ☐ Trend
- ☐ Weak signal

TOPICS

- Energy
- Environment
- Farms
- Food
- Forests
- Migration
- Networks and collaboration
- Policy
- Regional development
- Socio-economic models
- Sustainability transition
- Trade
- Tourism
- Values

SCALE



DOMAIN

Environmental

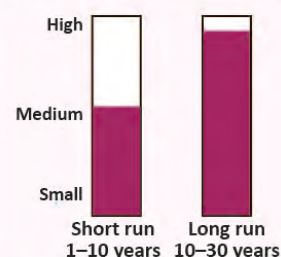


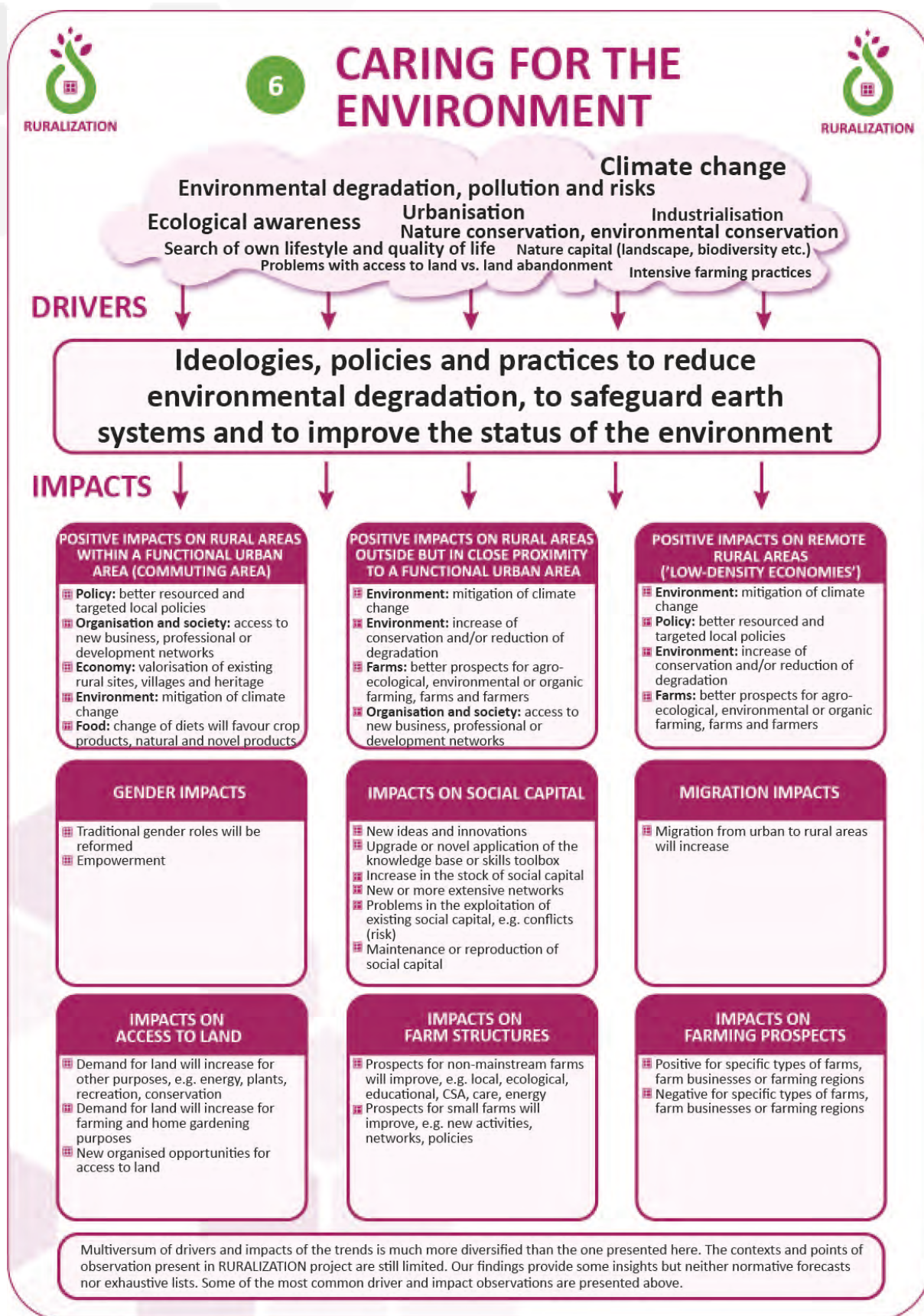
MOSTLY AFFECTED SECTOR

Primary production



SIGNIFICANCE FOR RURAL AREAS







RURALIZATION

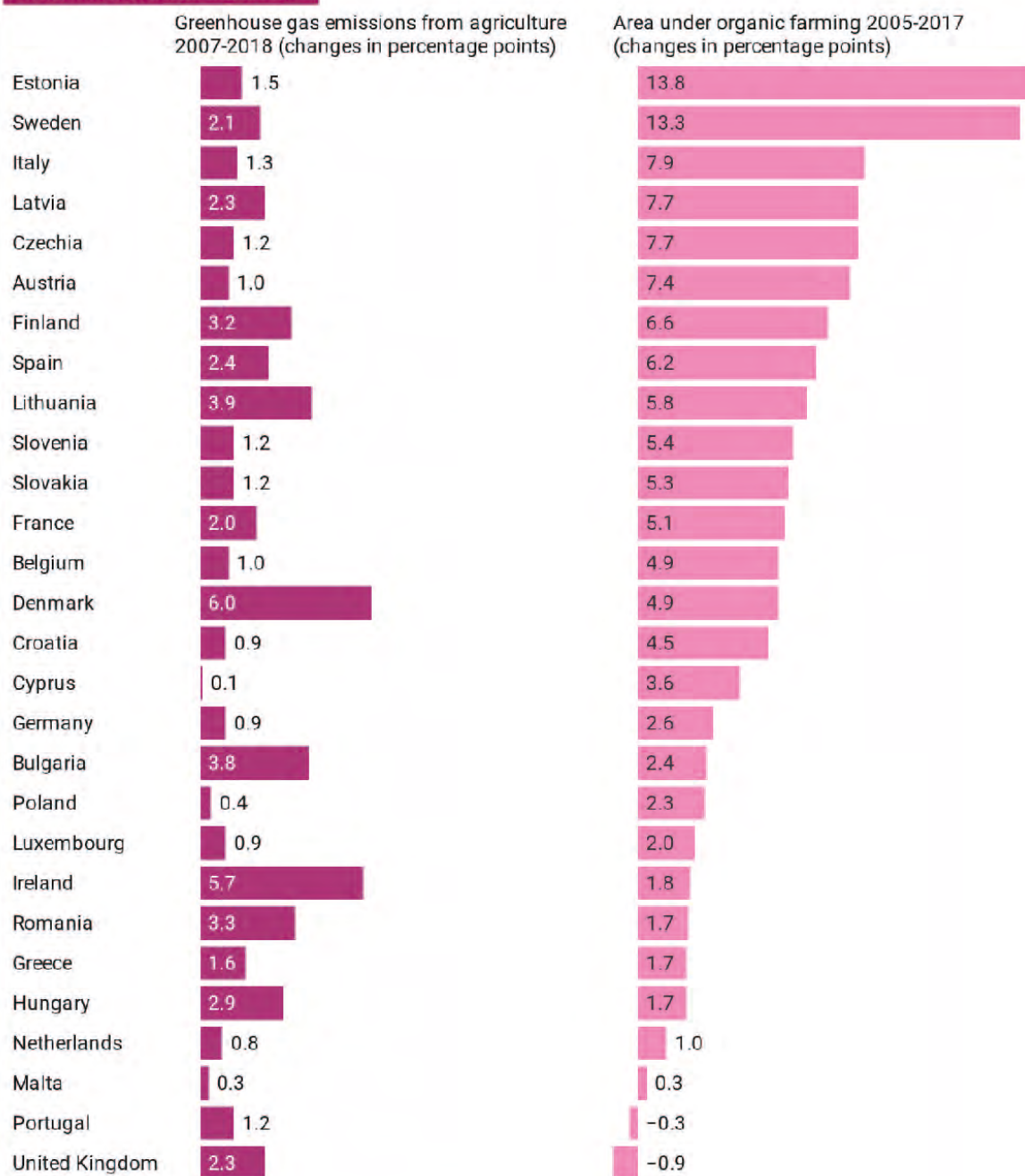
6

CARING FOR THE ENVIRONMENT



RURALIZATION

STATISTICAL MANIFESTATIONS



Used Eurostat Datafiles: SDG_02_40 / TA108

Created with Datawrapper



7

CHANGING GENDER ROLES



Evolving traditional and modern gender roles in private life and working life

TYPE

- ☐ Megatrend
- ☒ Trend
- ☐ Weak signal

TOPICS

- ☒ Environment
- ☒ Networks and collaboration
- ☒ Values
- ☒ Work

SCALE



DOMAIN

Social

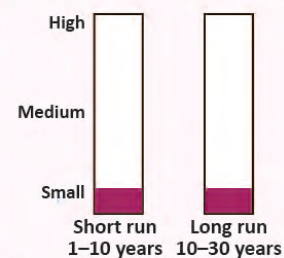


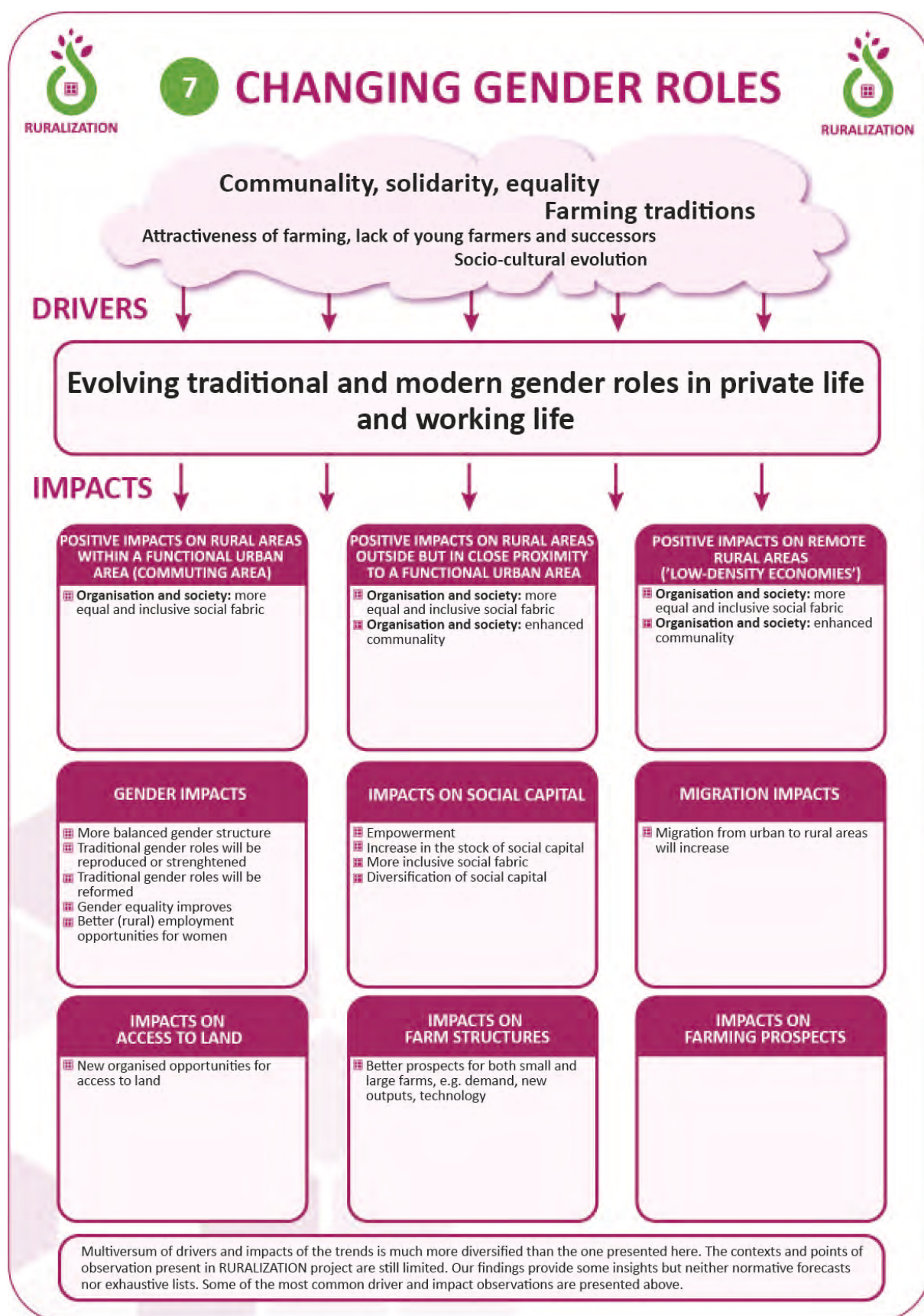
MOSTLY AFFECTED SECTOR

Primary production



SIGNIFICANCE FOR RURAL AREAS







RURALIZATION

7

CHANGING GENDER ROLES

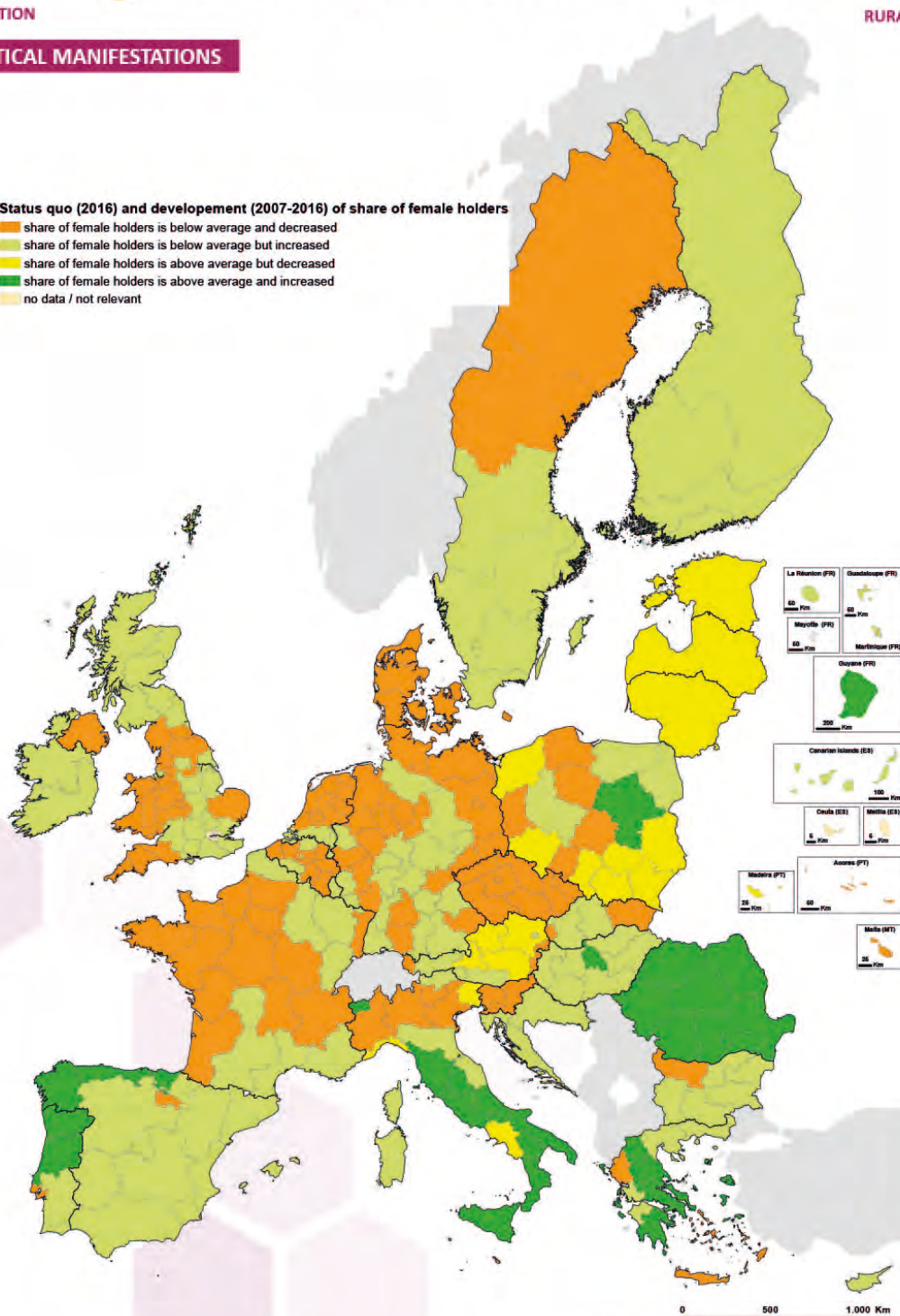


RURALIZATION

STATISTICAL MANIFESTATIONS

Status quo (2016) and development (2007-2016) of share of female holders

- share of female holders is below average and decreased
- share of female holders is below average but increased
- share of female holders is above average but decreased
- share of female holders is above average and increased
- no data / not relevant



Used Eurostat Datafile: e_f_m_farmang



source of shapes and data: EUROSTAT
geographical projection: Mercator (sphere)



"The project RURALIZATION has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement 817642."



8

CHEAP RURAL HOUSING AND RURAL SECOND HOMES



Affordable houses, second homes or holiday houses close to nature and away from crowds

TYPE

- ☐ Megatrend
- ☐ Trend
- ☒ Weak signal

TOPICS

- ☒ Housing
- ☒ Lifestyle

SCALE



DOMAIN

Social

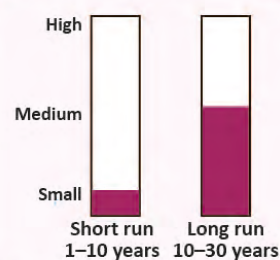


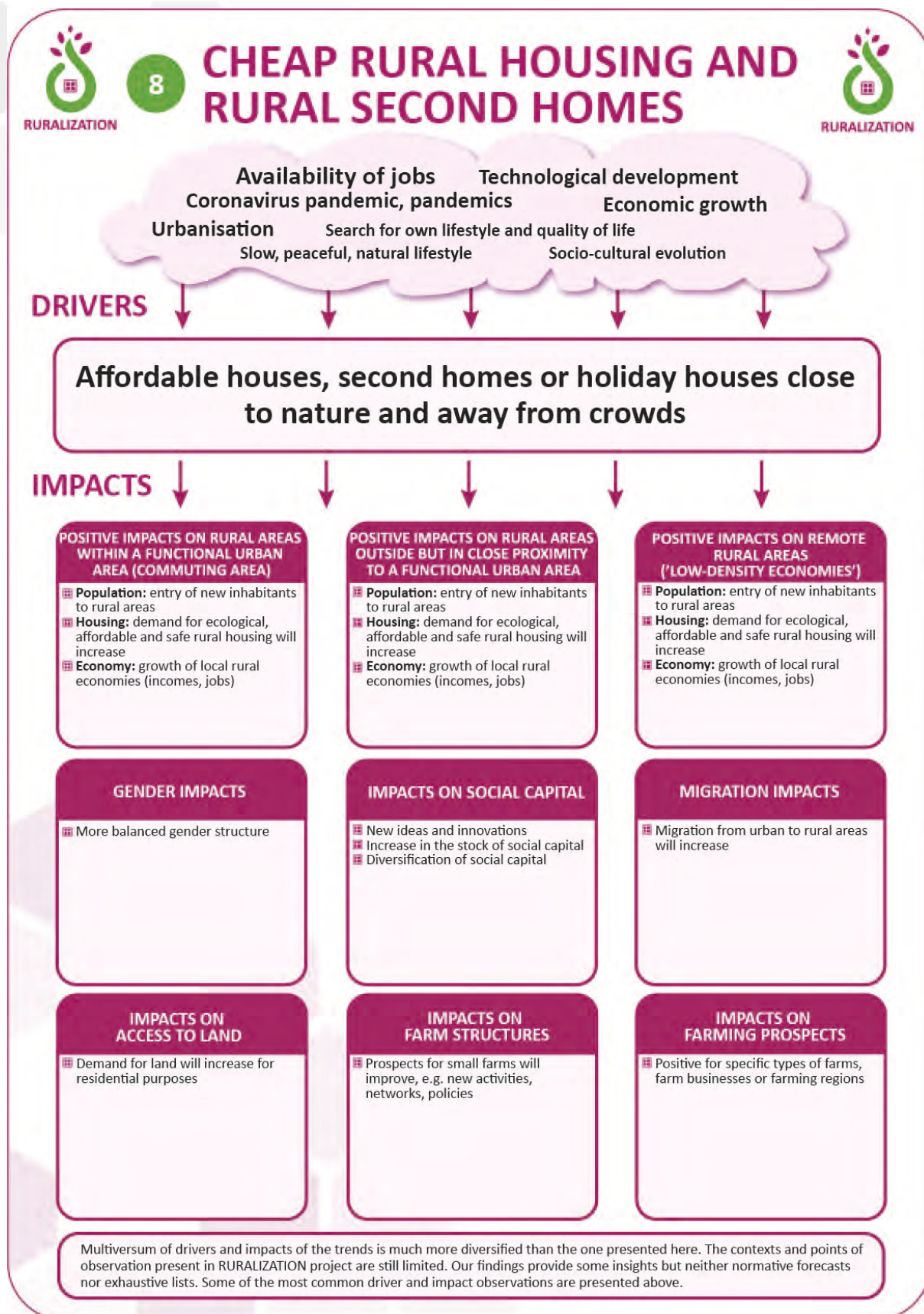
MOSTLY AFFECTED SECTOR

Private services



SIGNIFICANCE FOR RURAL AREAS







RURALIZATION

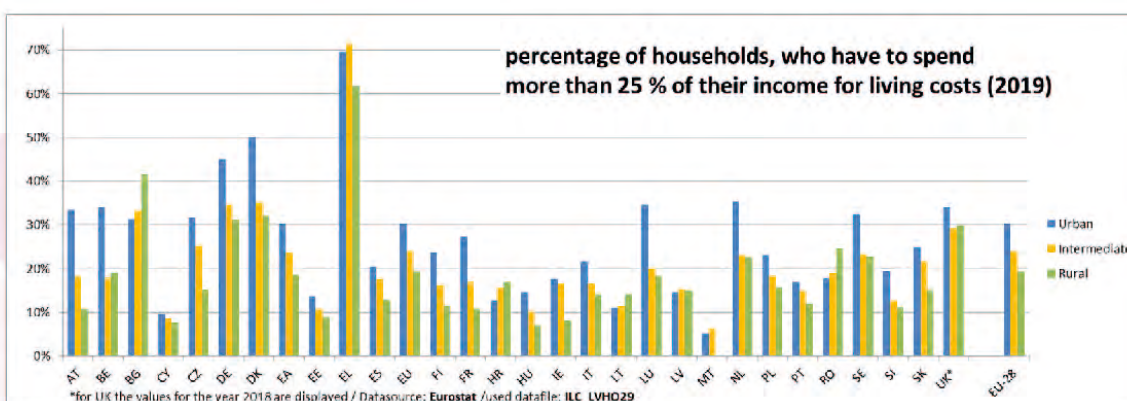
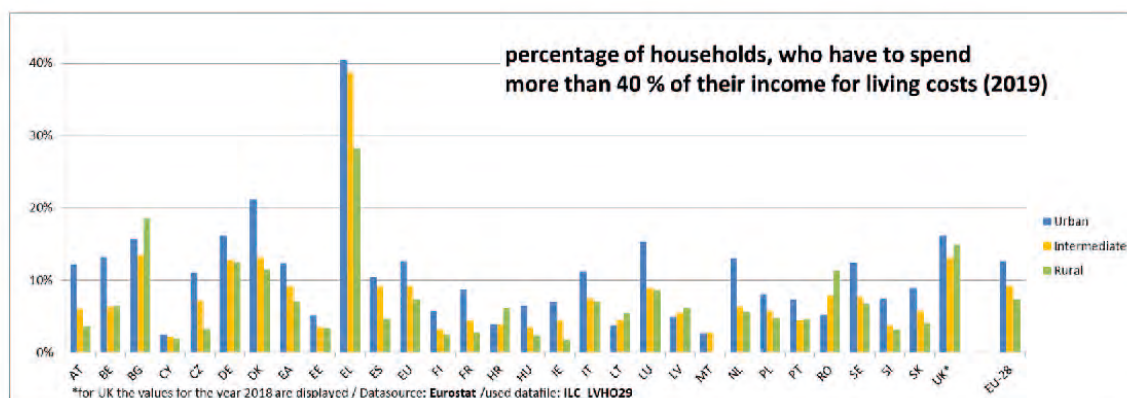
8

CHEAP RURAL HOUSING AND RURAL SECOND HOMES



RURALIZATION

STATISTICAL MANIFESTATIONS





RURALIZATION

9

CIRCULAR ECONOMY



RURALIZATION



Economic model based on recycling, reuse, sharing and repair of previously extracted materials

TYPE


- ☐ Megatrend
- ☒ Trend
- ☐ Weak signal

TOPICS

- ☒ Environment
- ☒ Food
- ☒ Regional development
- ☒ Socio-economic models
- ☒ Sustainability transition
- ☒ Technology
- ☒ Trade


SCALE

European



DOMAIN

Economic

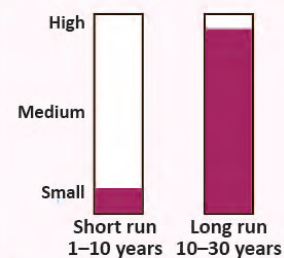


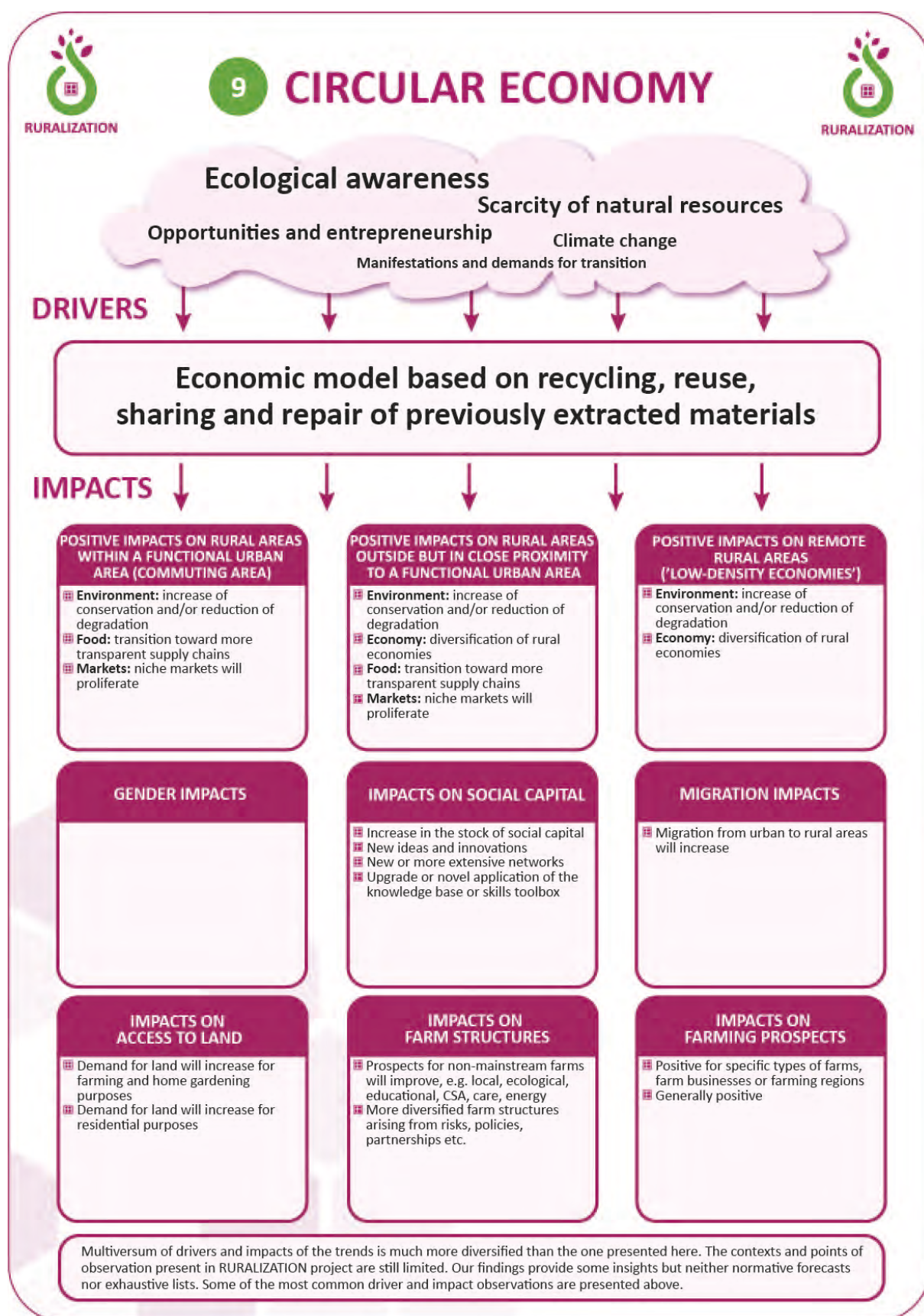
MOSTLY AFFECTED SECTOR

Private services



SIGNIFICANCE FOR RURAL AREAS







RURALIZATION

10

CLIMATE CHANGE



RURALIZATION



Multifaceted phenomenon with progressive impacts on food production, land use, policies and lifestyles

TYPE

- ☒ Megatrend
- ☐ Trend
- ☐ Weak signal

TOPICS

- ☒ Environment
- ☒ Farms
- ☒ Economic development
- ☒ Food
- ☒ Policy
- ☒ Regional development

SCALE



DOMAIN

Environmental

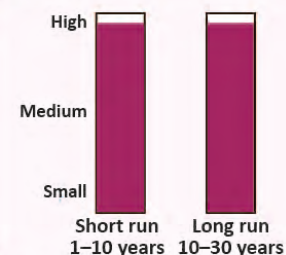


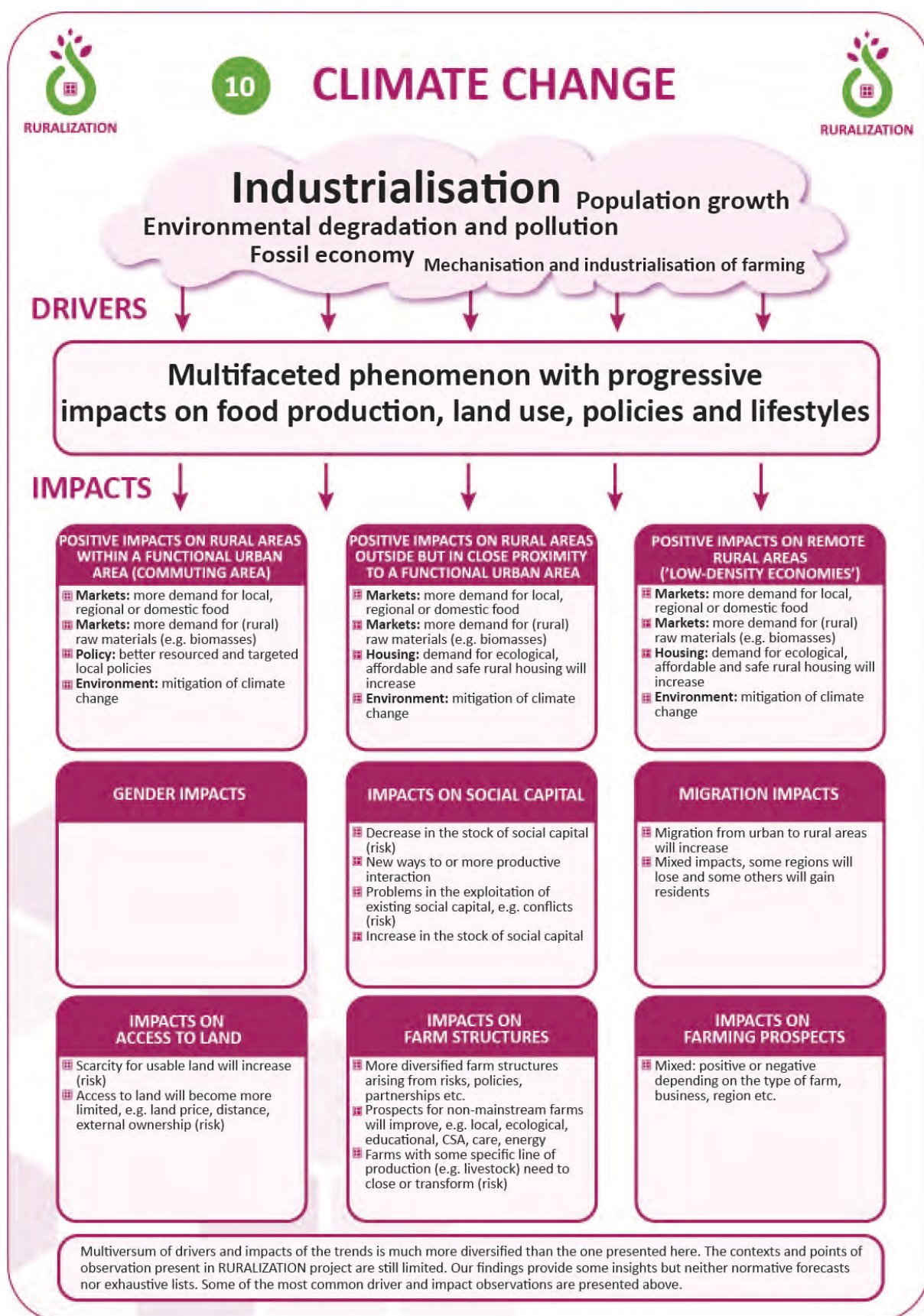
MOSTLY AFFECTED SECTOR

Primary production



SIGNIFICANCE FOR RURAL AREAS







RURALIZATION

10

CLIMATE CHANGE

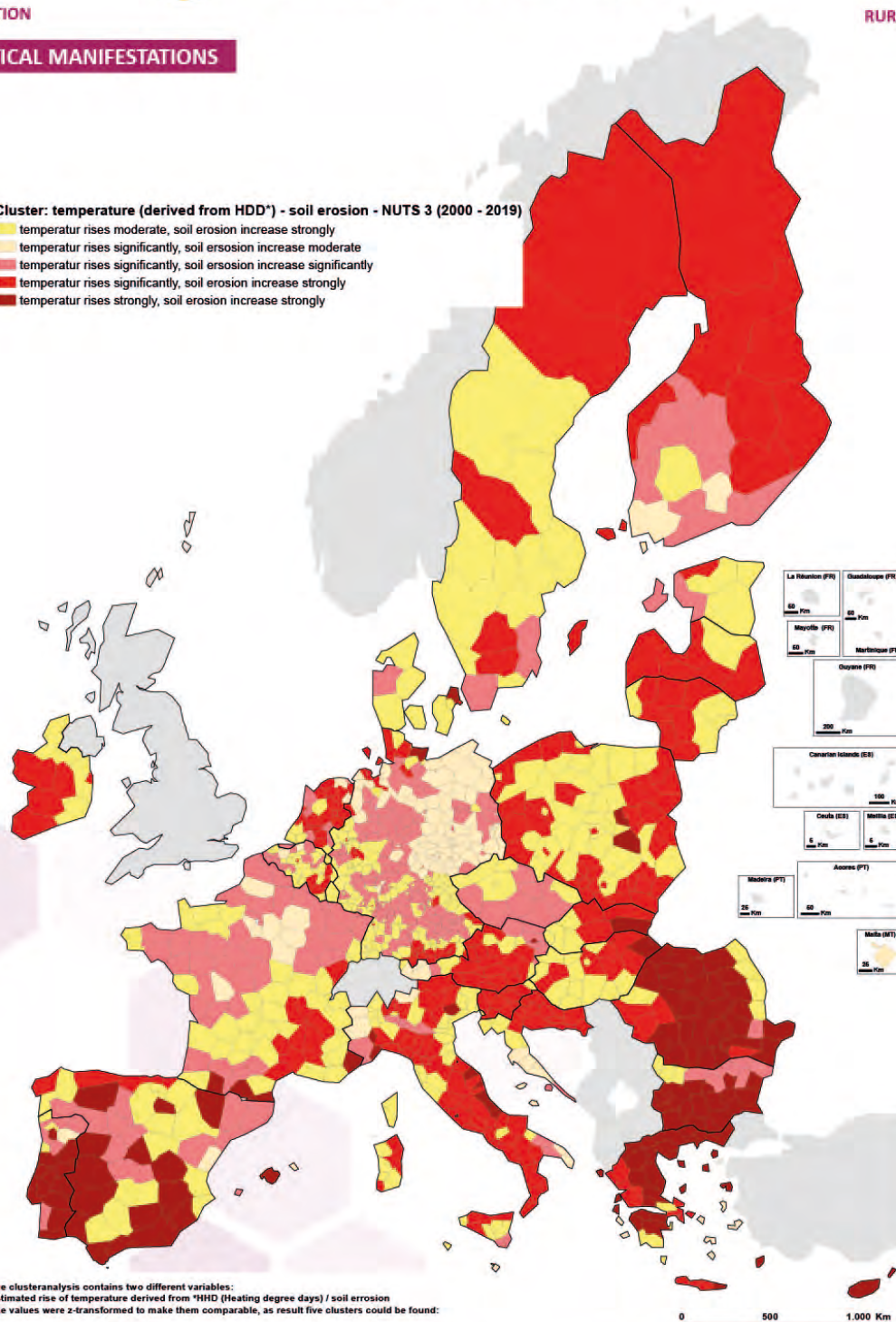


RURALIZATION

STATISTICAL MANIFESTATIONS

Cluster: temperature (derived from HDD*) - soil erosion - NUTS 3 (2000 - 2019)

- temperatur rises moderate, soil erosion increase strongly
- temperatur rises significantly, soil erosion increase moderate
- temperatur rises significantly, soil erosion increase significantly
- temperatur rises significantly, soil erosion increase strongly
- temperatur rises strongly, soil erosion increase strongly



The clusteranalysis contains two different variables:
Estimated rise of temperature derived from *HDD (Heating degree days) / soil erosion
The values were z-transformed to make them comparable, as result five clusters could be found:

		soil erosion		
		+	++	+++
temperature	+	2	3	4
	++	1	4	5
	+++			

for UK and the overseas territories of France, Portugal and Spain no data is available
Used Eurostat Datafiles: nrg_chddr2_a / aei_pr_soiler



source of shapes and data: EUROSTAT
geographical projection: Mercator (sphere)

*The project RURALIZATION has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement 101017642.



11

CO-OPERATIVES AND PARTNERSHIPS



Organisation models to reach economies of scale and benefits of specialisation and co-operation or to facilitate mutual interests

TYPE

- ☐ Megatrend
- ☐ Trend
- ☒ Weak signal

TOPICS

- ☒ Farms
- ☒ Food
- ☒ Housing
- ☒ Networks and collaboration
- ☒ Socio-economic models

SCALE



DOMAIN

Economic

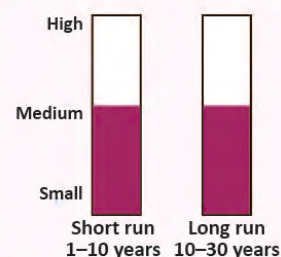


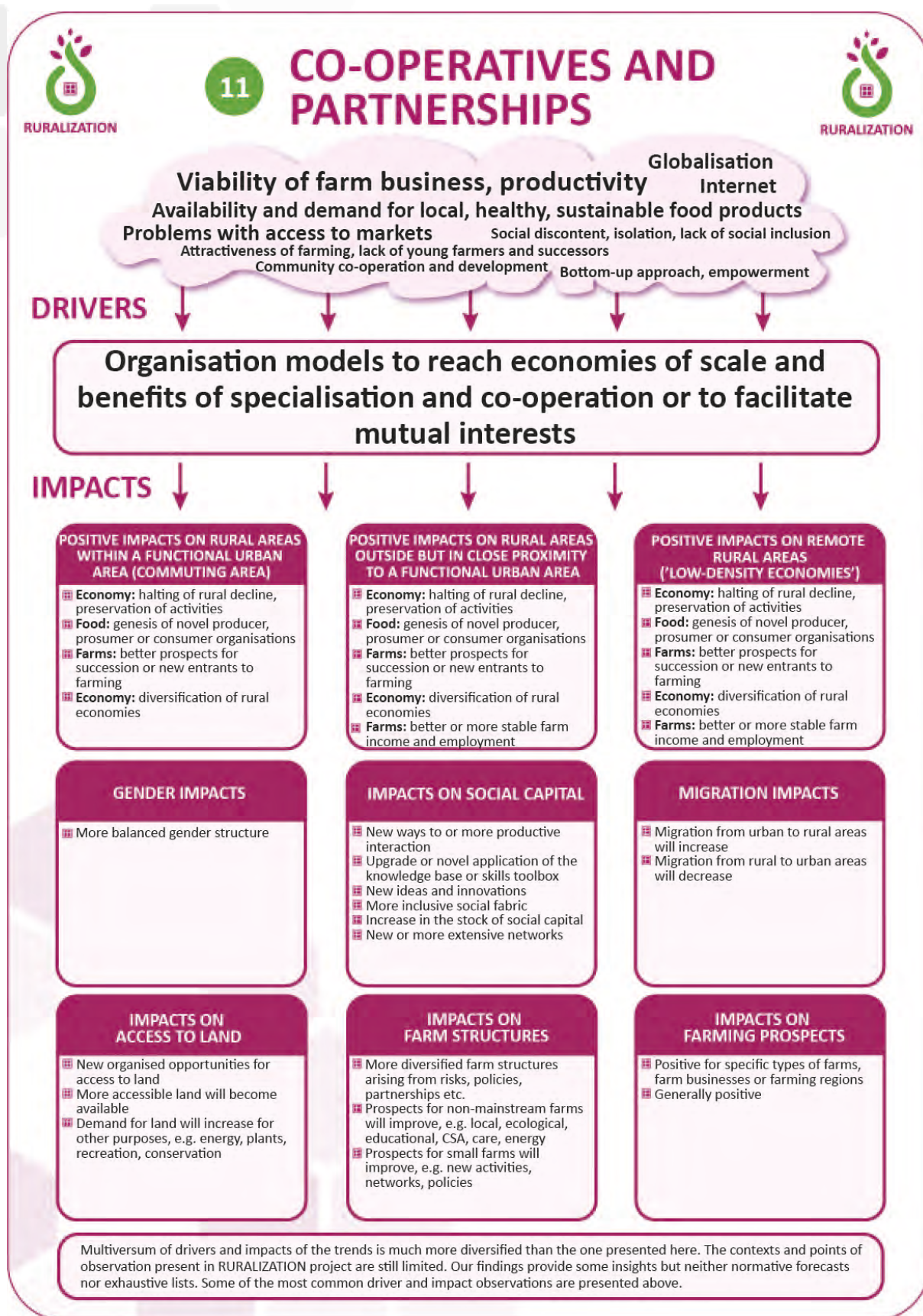
MOSTLY AFFECTED SECTOR

Primary production



SIGNIFICANCE FOR RURAL AREAS







12

COMMUNITY-BASED ACTION



Community-based initiatives and actions serve shared interests, capacities, identity, participation and communality in many domains

TYPE

- ☐ Megatrend
- ☐ Trend
- ☒ Weak signal

TOPICS

- ☒ Environment
- ☒ Governance
- ☒ Housing
- ☒ Mobility and traffic
- ☒ Networks and collaboration
- ☒ Policy
- ☒ Regional development
- ☒ Rural services

SCALE



DOMAIN

Social

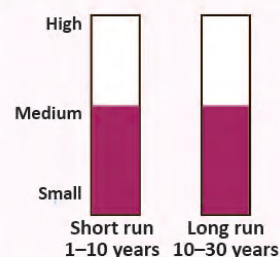


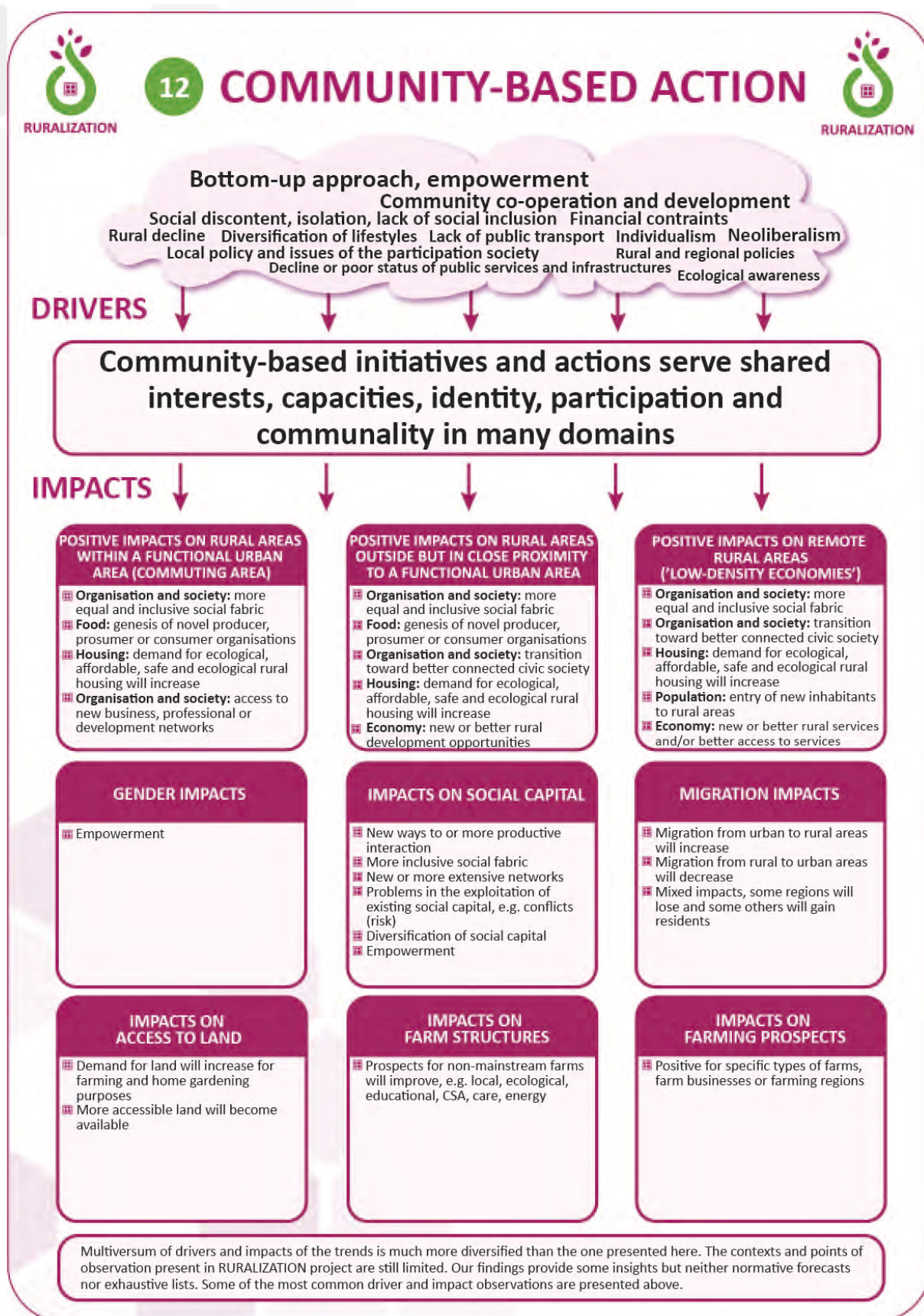
MOSTLY AFFECTED SECTOR

Public services



SIGNIFICANCE FOR RURAL AREAS







RURALIZATION

12

COMMUNITY-BASED ACTION

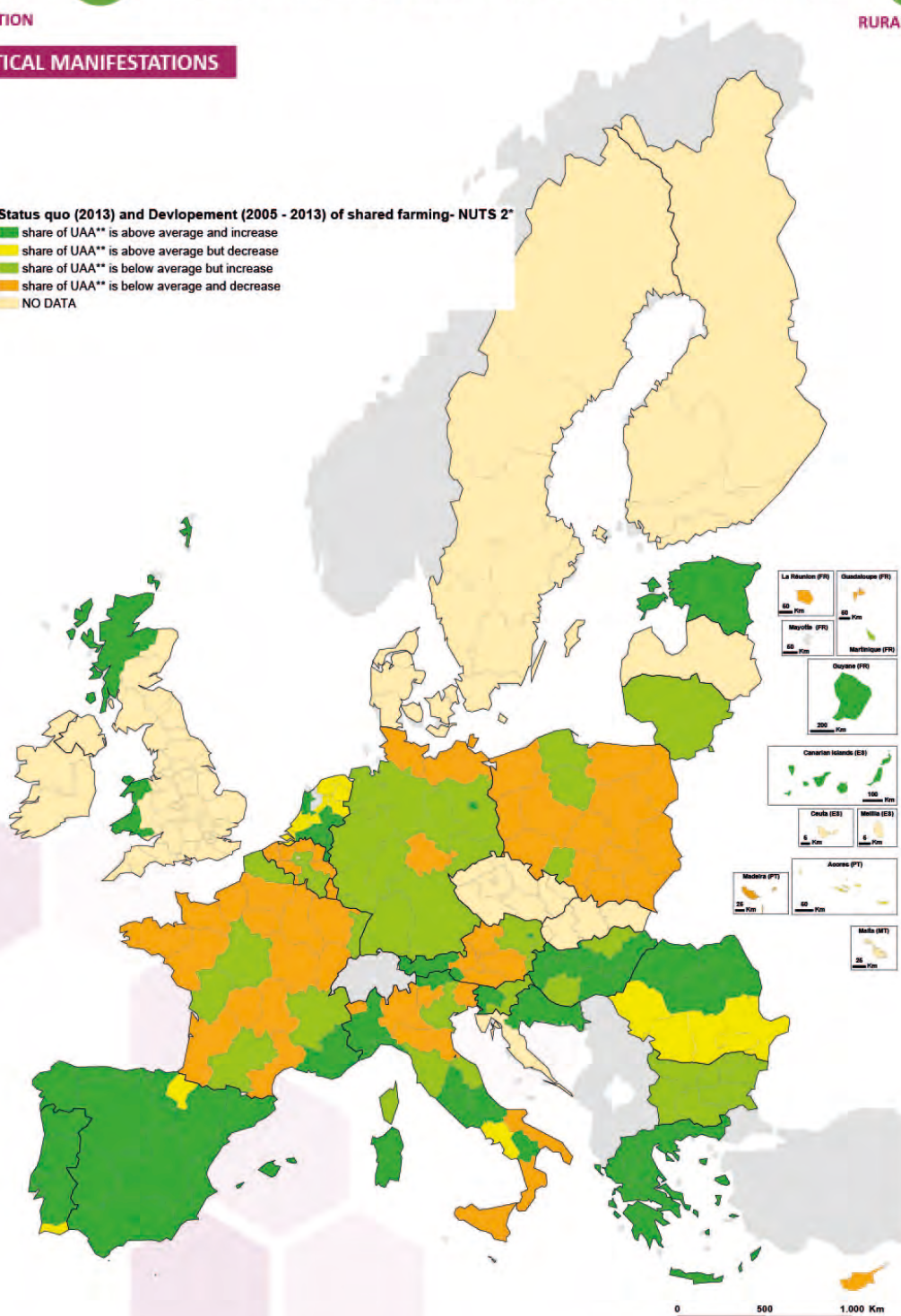


RURALIZATION

STATISTICAL MANIFESTATIONS

Status quo (2013) and Development (2005 - 2013) of shared farming- NUTS 2*

- share of UAA** is above average and increase
- share of UAA** is above average but decrease
- share of UAA** is below average but increase
- share of UAA** is below average and decrease
- NO DATA



*for Germany values are displayed for NUTS 1
 **UAA = utilised agricultural area per spatial unit

Used Eurostat Datasets: ef_mptenure / ef_m_farmang



source of shapes and data: EUROSTAT
 geographical projection: Mercator (sphere)



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13

COUNTERACTING UNEQUAL DEVELOPMENT AND RURAL DECLINE



Efforts to halt the vicious circle (less population, less services, less infrastructure, less population etc.) which marginalises rural areas

TYPE

- ☒ Megatrend
- ☐ Trend
- ☐ Weak signal

TOPICS

- Demographics
- Economic development
- Farms
- Food
- Governance
- Housing
- Infrastructure
- Policy
- Regional development
- Rural services
- Science, education and knowledge
- Values
- Work

SCALE



DOMAIN

Social

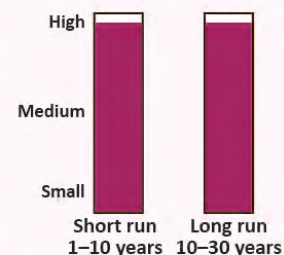


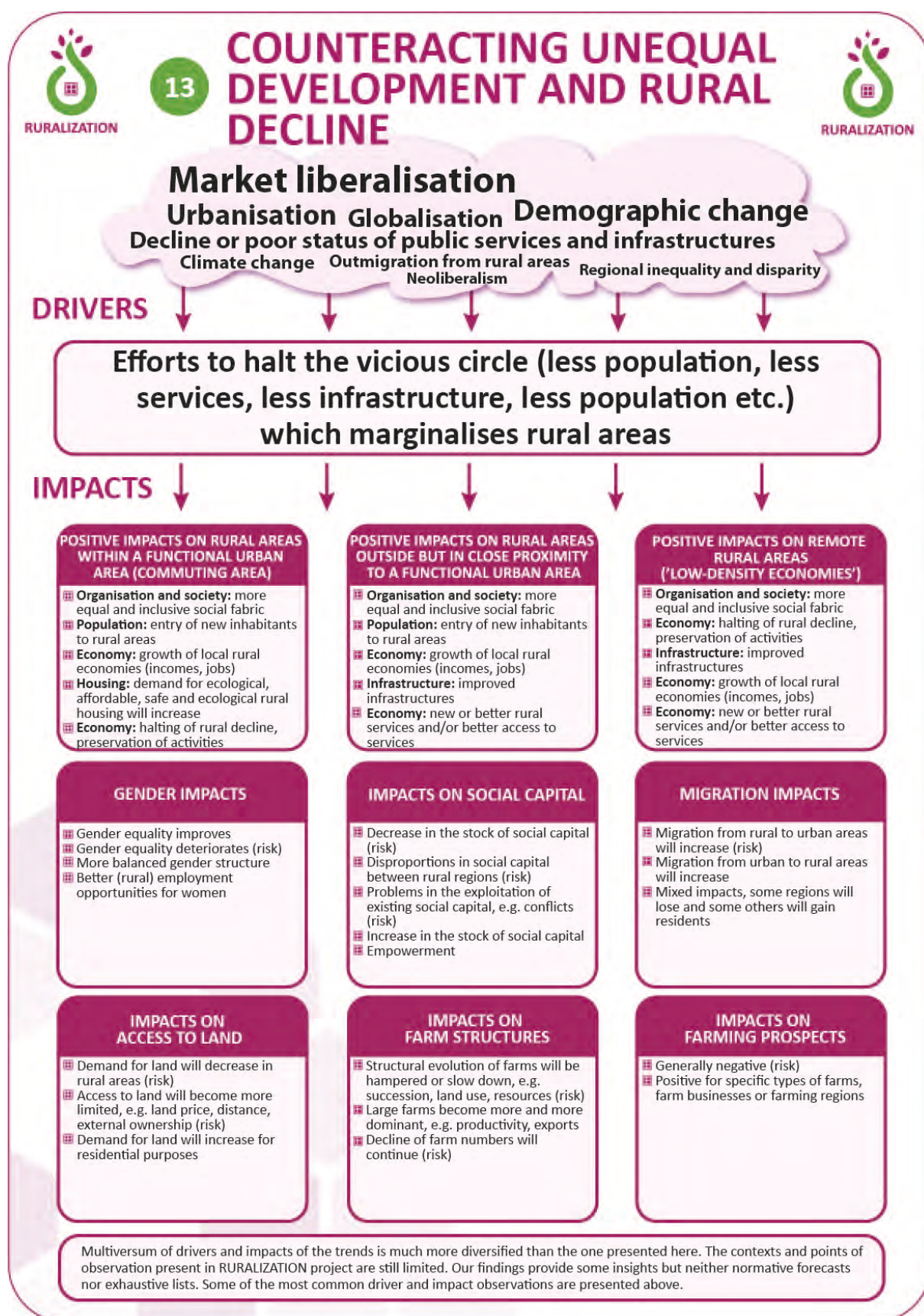
MOSTLY AFFECTED SECTOR

Public services



SIGNIFICANCE FOR RURAL AREAS







RURALIZATION

13

COUNTERACTING UNEQUAL DEVELOPMENT AND RURAL DECLINE

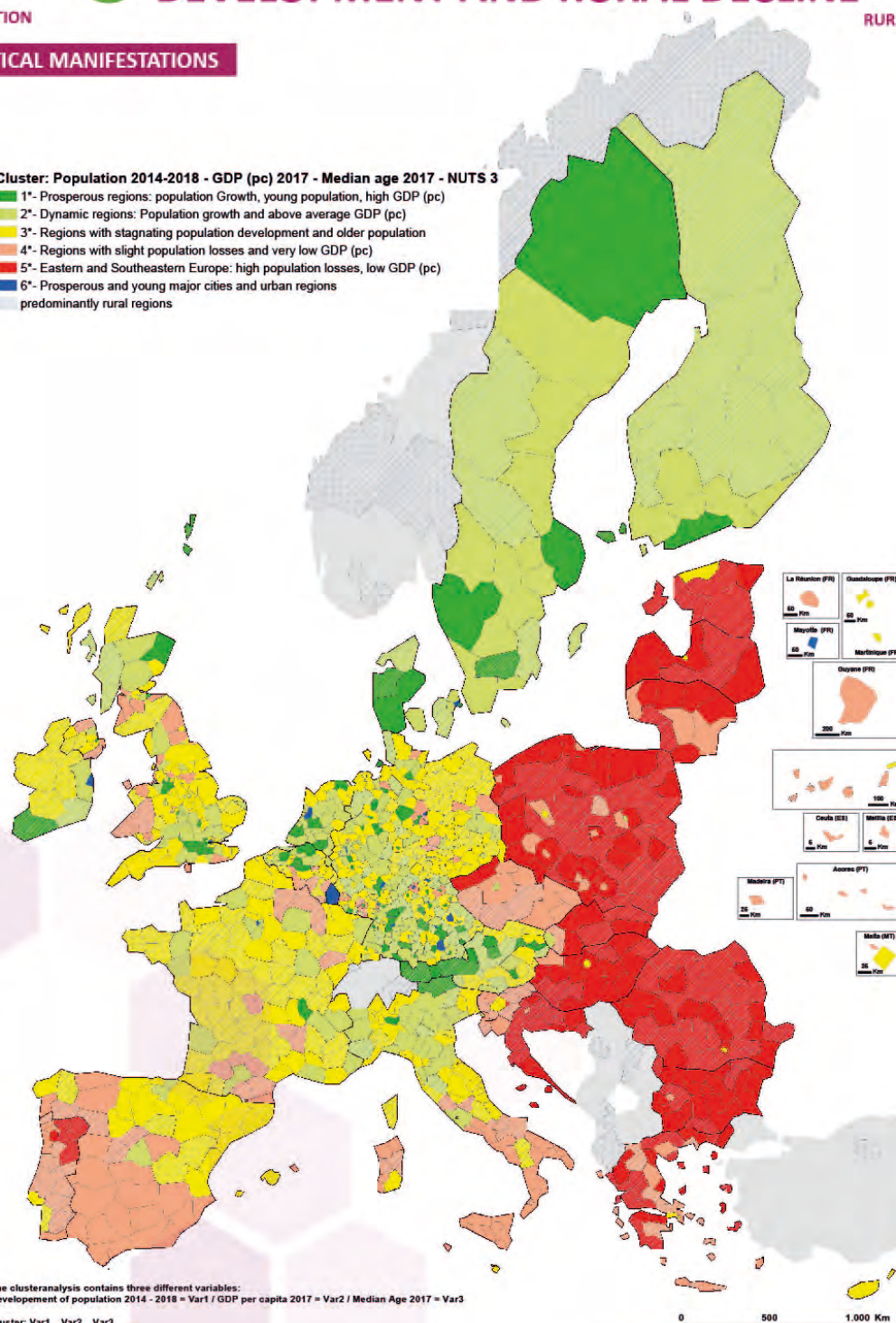


RURALIZATION

STATISTICAL MANIFESTATIONS

Cluster: Population 2014-2018 - GDP (pc) 2017 - Median age 2017 - NUTS 3

- 1*- Prosperous regions: population Growth, young population, high GDP (pc)
- 2*- Dynamic regions: Population growth and above average GDP (pc)
- 3*- Regions with stagnating population development and older population
- 4*- Regions with slight population losses and very low GDP (pc)
- 5*- Eastern and Southeastern Europe: high population losses, low GDP (pc)
- 6*- Prosperous and young major cities and urban regions
- predominantly rural regions



The clusteranalysis contains three different variables:
Development of population 2014 - 2018 = Var1 / GDP per capita 2017 = Var2 / Median Age 2017 = Var3

Cluster	Var1	Var2	Var3
1*	+++	++	younger
2*	++	+	average
3*	+	o	older
4*	--	--	average
5*	--	--	younger
6*	+++	+++	younger

Used Eurostat Datafiles: demo_r_gind3 / demo_r_pjanind3 / nama_10r_3gdp



source of shapes and data: EUROSTAT
geographical projection: Mercator (sphere)



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14

CREATIVE ECONOMY



Nests of artists, creative work and creative class in the countryside

TYPE

- ☐ Megatrend
- ☐ Trend
- ☒ Weak signal

TOPICS

- ☒ Housing
- ☒ Regional development
- ☒ Tourism
- ☒ Work

SCALE



DOMAIN

Social

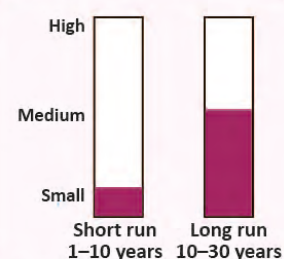


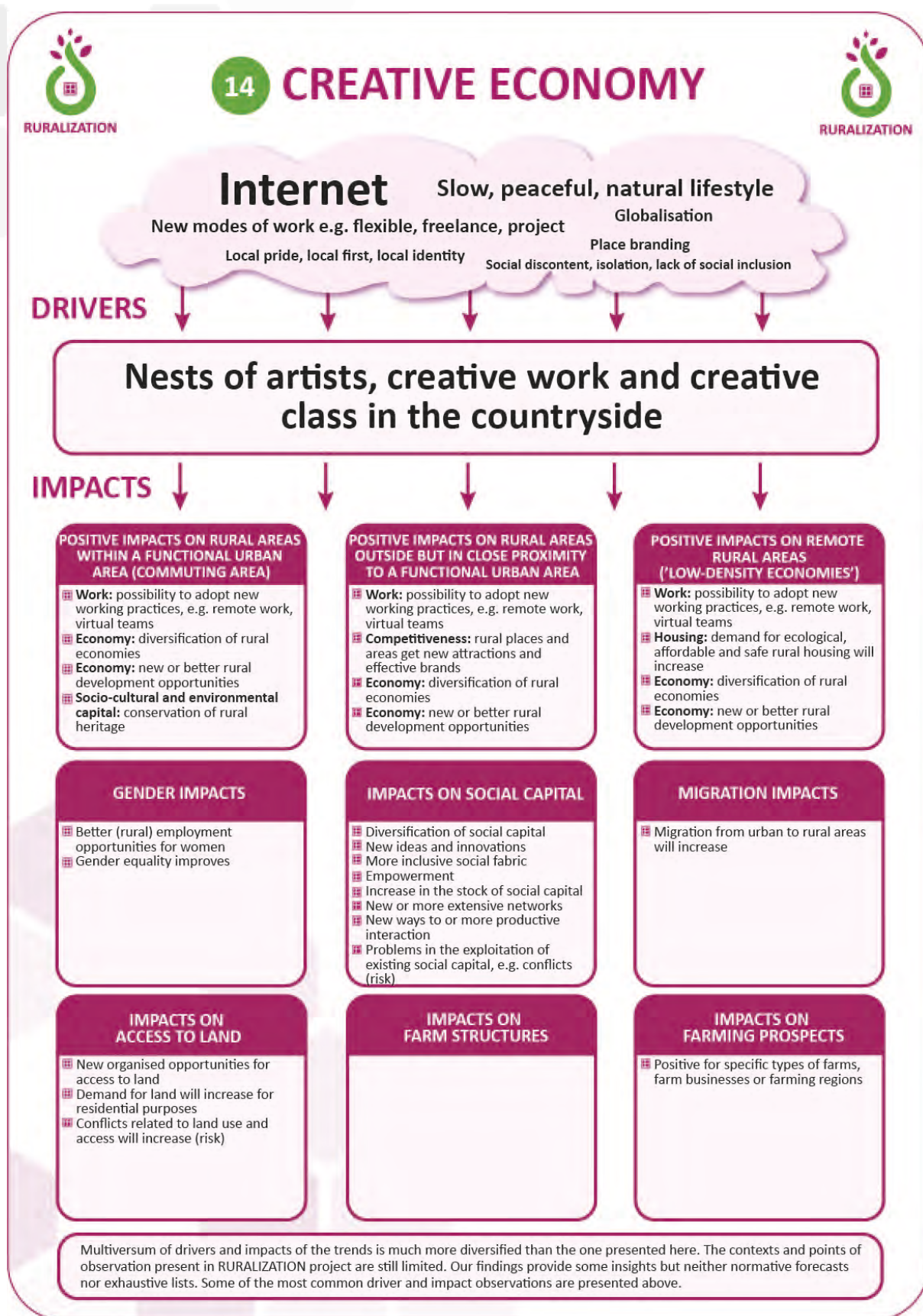
MOSTLY AFFECTED SECTOR

Private services



SIGNIFICANCE FOR RURAL AREAS







RURALIZATION

14

CREATIVE ECONOMY

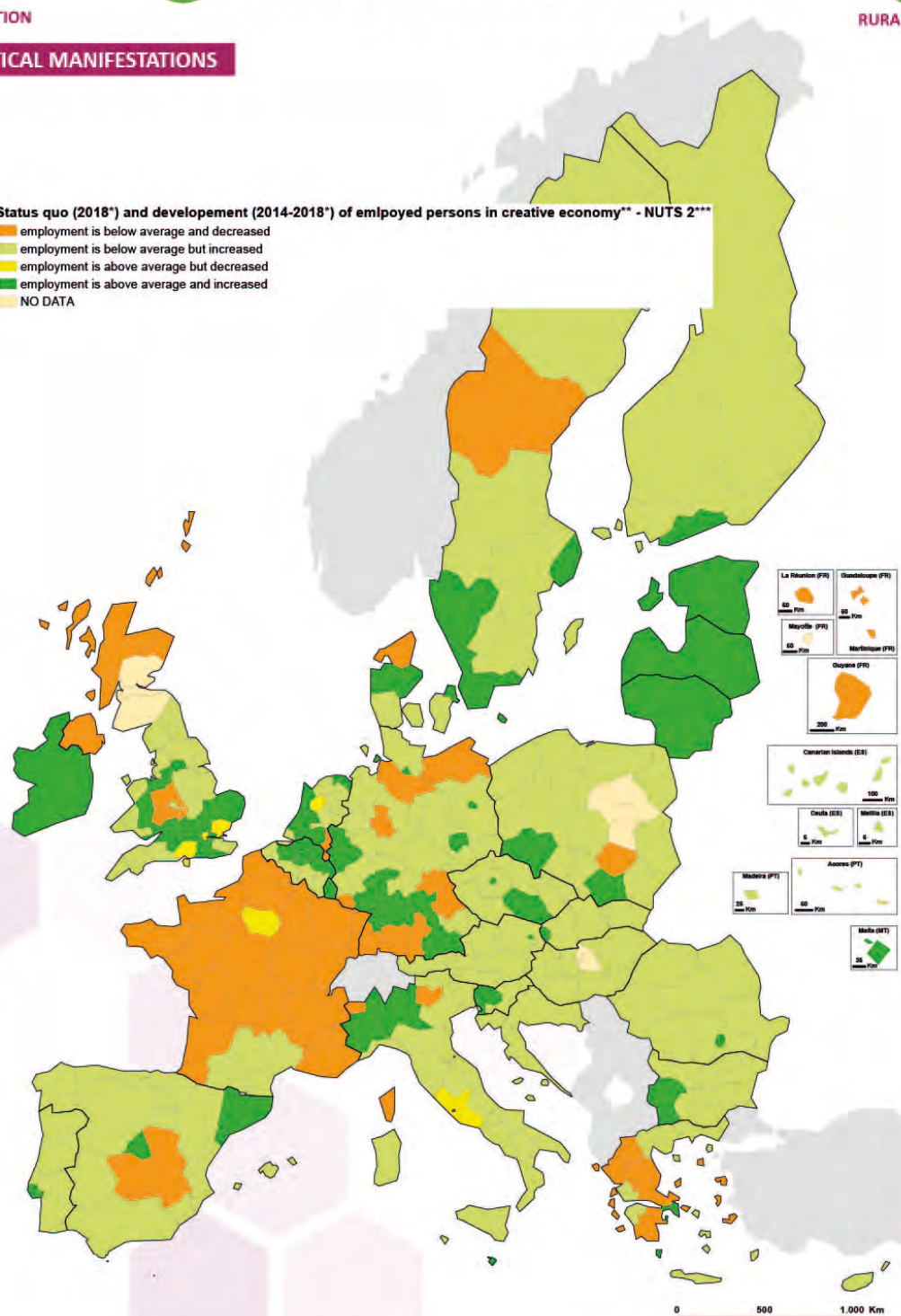


RURALIZATION

STATISTICAL MANIFESTATIONS

Status quo (2018*) and development (2014-2018*) of employed persons in creative economy** - NUTS 2***

- employment is below average and decreased
- employment is below average but increased
- employment is above average but decreased
- employment is above average and increased
- NO DATA



The reference year for the EU-28 Share in Employment in the creative economy is 2017, due to missing values from Italy and UK for Italy and UK the year 2017 is reference instead of 2018

**the values of creative economy contain the following NACE-Sectors: 58, 59, 60, 62, 73, 74

***for Ireland and Lithuania values are displayed on member state level

Used Eurostat Datafiles: sbs_r_nuts06_r2 / nama_10r_3empers



source of shapes and data: EUROSTAT
geographical projection: Mercator (sphere)



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RURALIZATION

15

DEGROWTH



RURALIZATION



**Antithesis to economic growth paradigm;
emphasis in social and ecological well-being**

TYPE

- ☐ Megatrend
- ☐ Trend
- ☒ Weak signal

TOPICS

- ☒ Economic development
- ☒ Socio-economic models
- ☒ Values

SCALE



DOMAIN

Economic



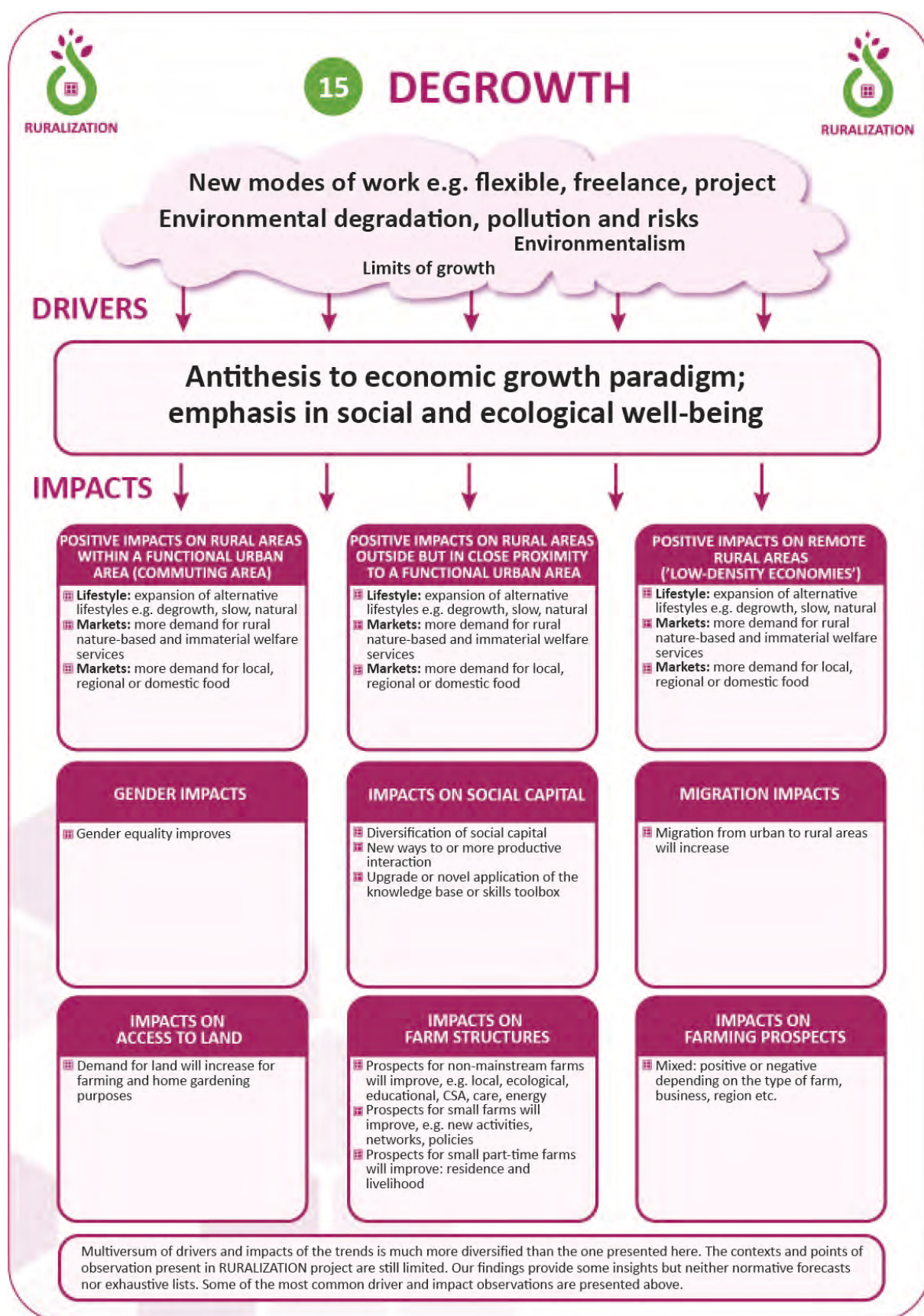
MOSTLY AFFECTED SECTOR

Private services



SIGNIFICANCE FOR RURAL AREAS







16

DIGITAL ECONOMY



Economic activities facilitated by digital technologies and tools; provides productivity gains and platforms for new economic activities

TYPE

- ☐ Megatrend
- ☒ Trend
- ☐ Weak signal

TOPICS

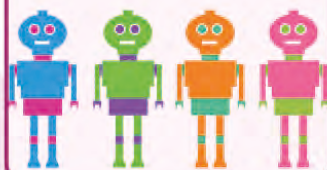
- ☒ Farms
- ☒ Regional development
- ☒ Socio-economic models
- ☒ Rural services
- ☒ Technology
- ☒ Economic development
- ☒ Science, education and knowledge

SCALE



DOMAIN

Technological

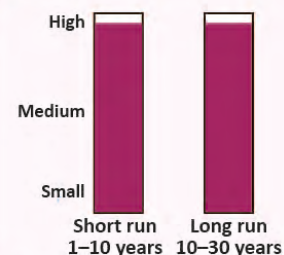


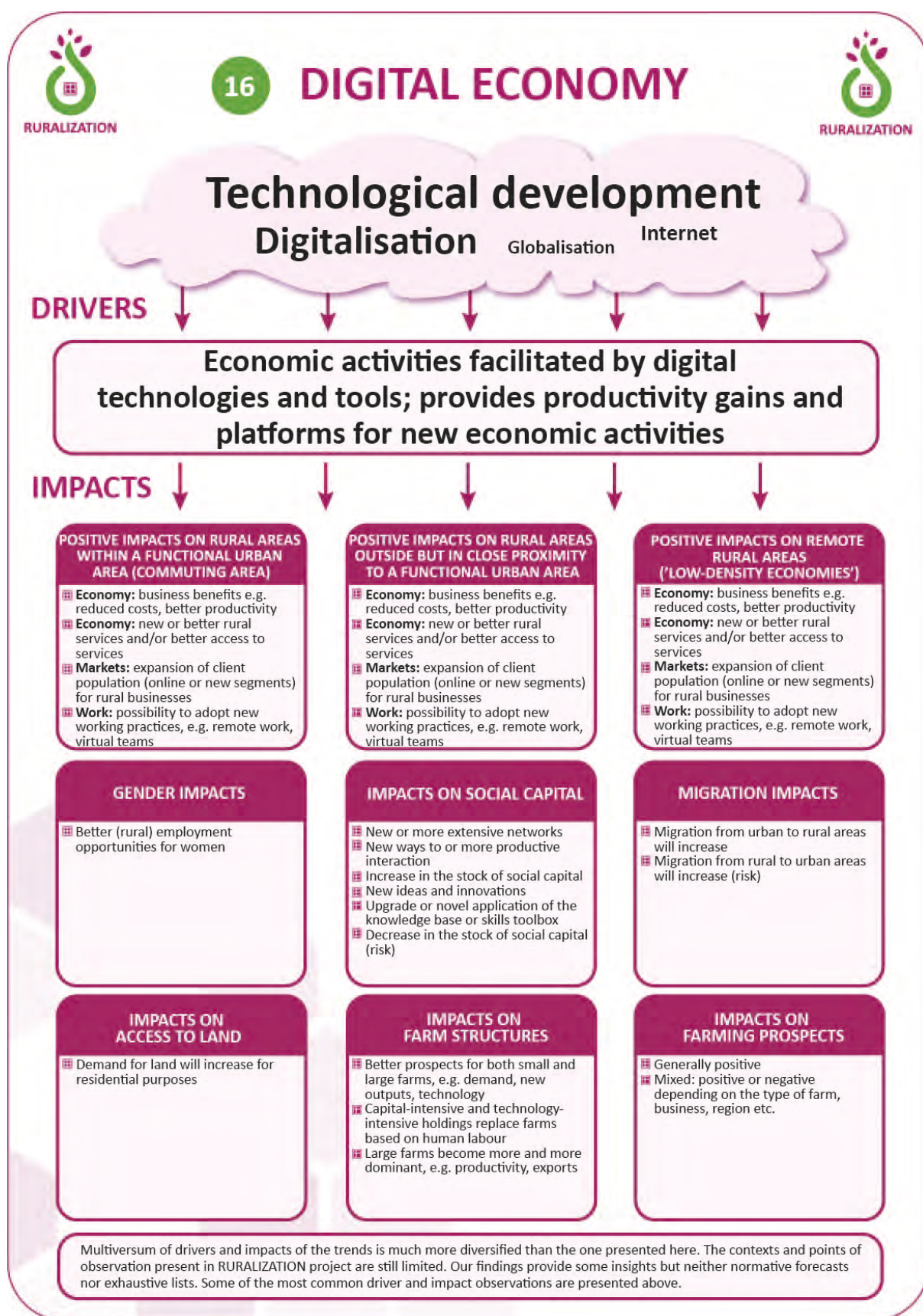
MOSTLY AFFECTED SECTOR

Private services



SIGNIFICANCE FOR RURAL AREAS







RURALIZATION

16

DIGITAL ECONOMY

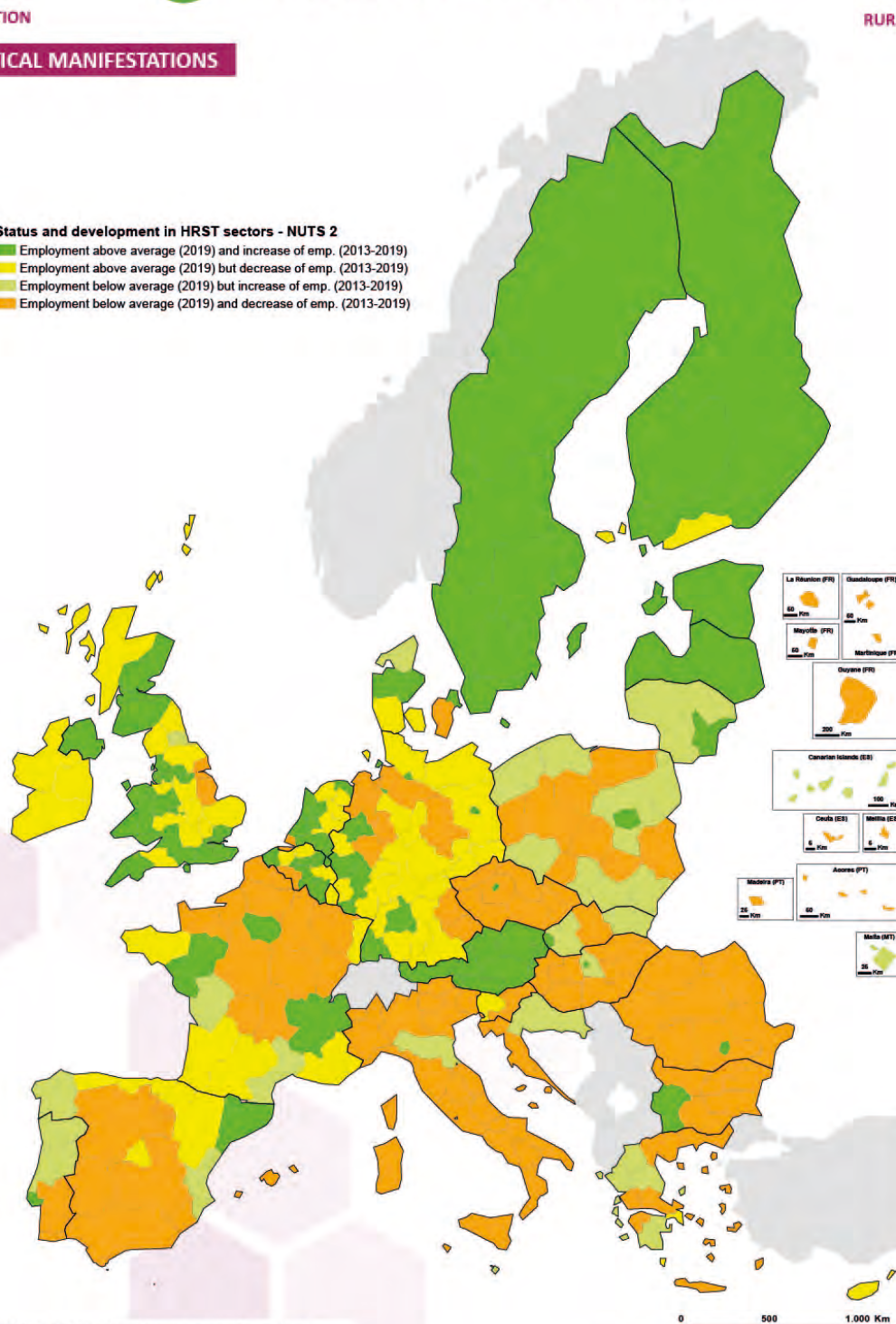


RURALIZATION

STATISTICAL MANIFESTATIONS

Status and development in HRST sectors - NUTS 2

- Employment above average (2019) and increase of emp. (2013-2019)
- Employment above average (2019) but decrease of emp. (2013-2019)
- Employment below average (2019) but increase of emp. (2013-2019)
- Employment below average (2019) and decrease of emp. (2013-2019)



HRST stands for share of human resources in science and technology

For the status quo (2019) values are compared with the EU-28 average
For the development (2013-2019) it is determined, if there is an increase or a decrease of the share of employment in science and technology comparing the year 2019 with the year 2013

Used Eurostat Datafile: hrst_st_cat



source of shapes and data: EUROSTAT
geographical projection: Mercator (sphere)



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17

DIVERSIFICATION OF RURAL ECONOMY



Many rural regions have diversified economies and the importance of non-agricultural activities has increased

TYPE

- ☐ Megatrend
- ☒ Trend
- ☐ Weak signal

TOPICS

- ☒ Regional development
- ☒ Economic development

SCALE

European



DOMAIN

Economic

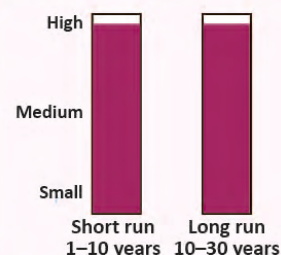


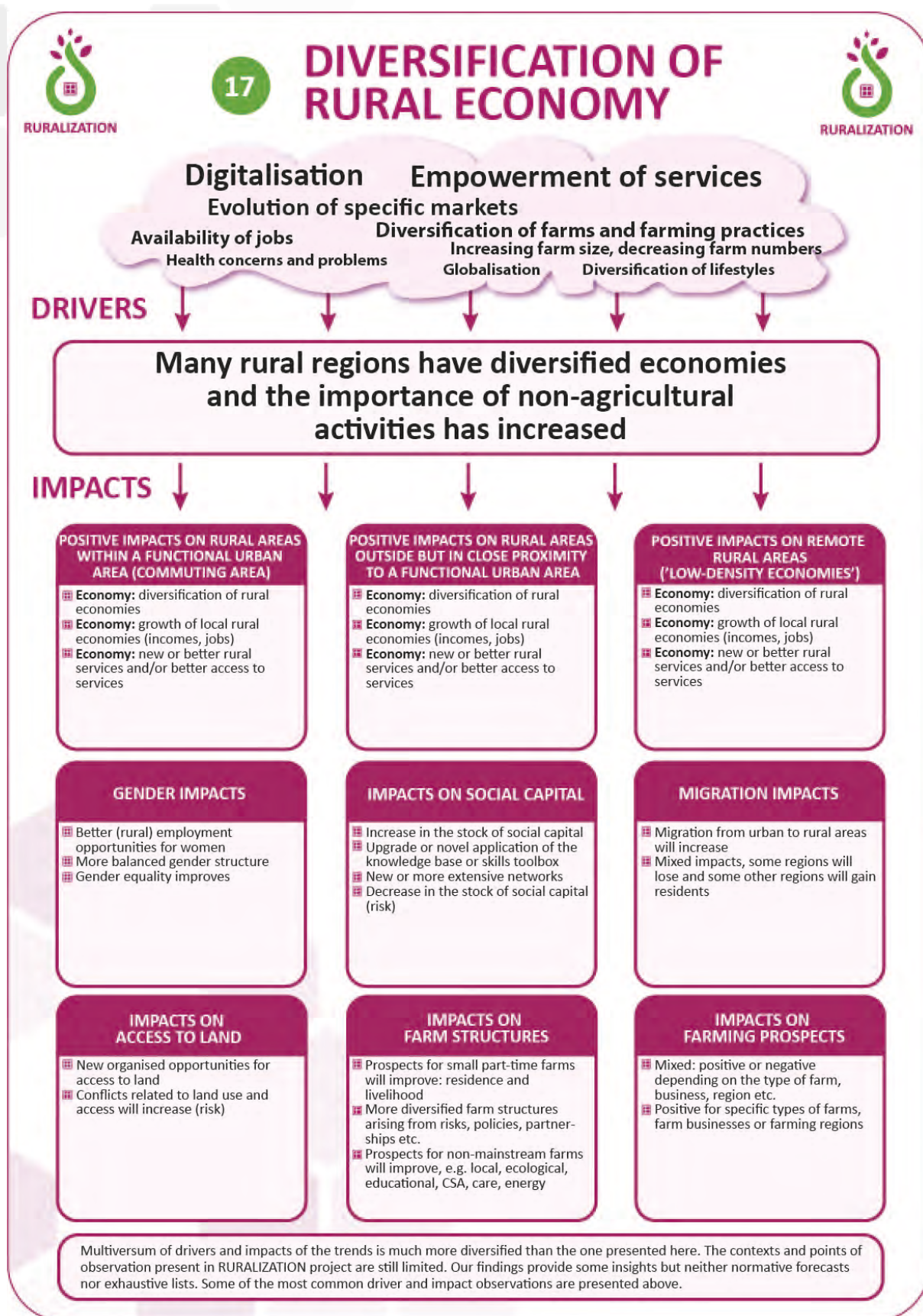
MOSTLY AFFECTED SECTOR

Private services



SIGNIFICANCE FOR RURAL AREAS







RURALIZATION

17

DIVERSIFICATION OF RURAL ECONOMY

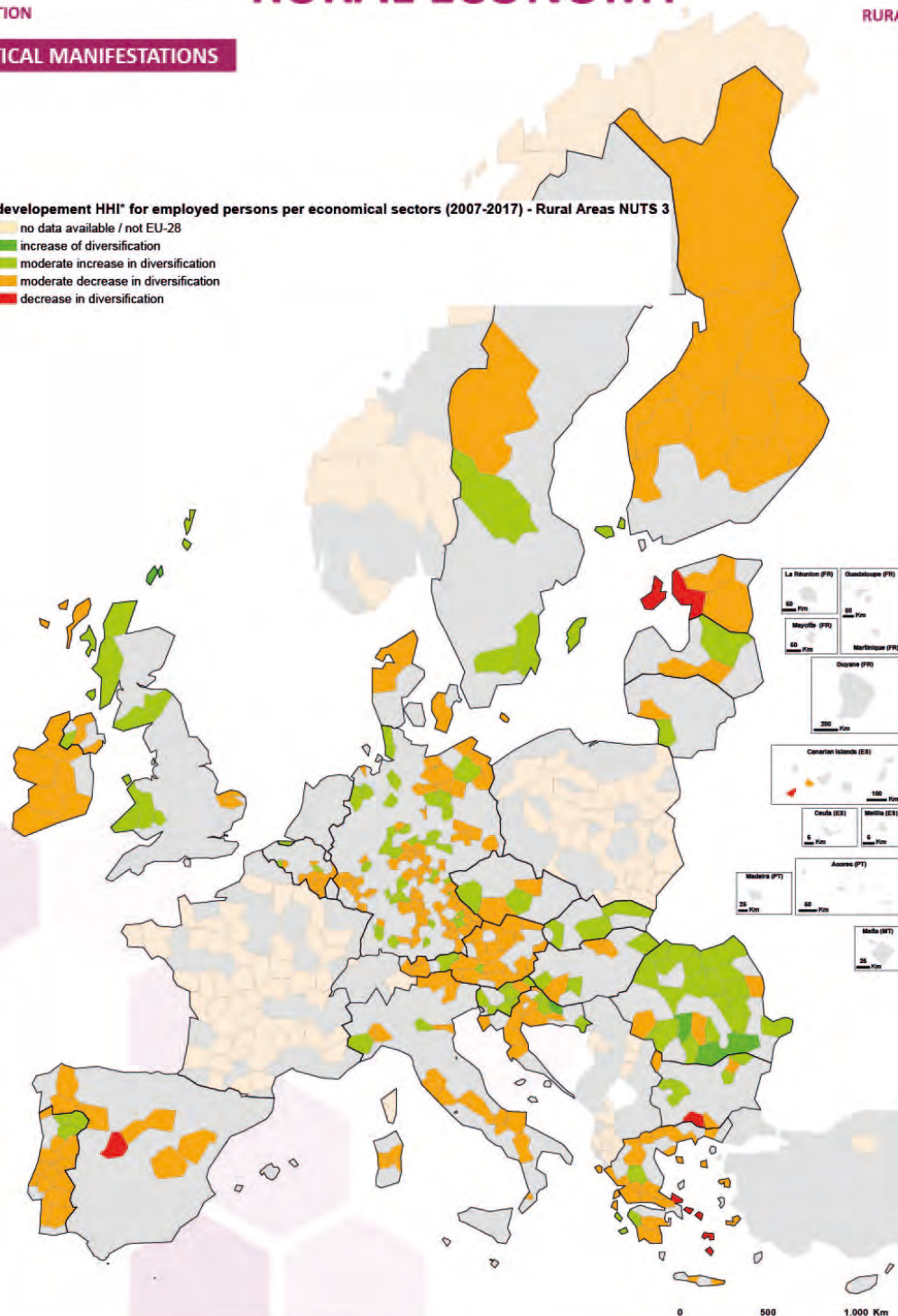


RURALIZATION

STATISTICAL MANIFESTATIONS

development HHI* for employed persons per economical sectors (2007-2017) - Rural Areas NUTS 3

- no data available / not EU-28
- increase of diversification
- moderate increase in diversification
- moderate decrease in diversification
- decrease in diversification



*HHI stands for Herfindahl-Hirschman Index.
The HHI is a statistical value, that measures the degree of concentration.
The lower it is, the lower is the concentration between the compared variables.
To calculate the HHI the employed persons were differentiated in the
NACE-activity groups: A / B-E / F / G-J / K-N / O-U

Used Eurostat-Data: NAMA_10R_3EMPERS

source of shapes and data: EUROSTAT
geographical projection: Mercator (sphere)



*The project RURALIZATION has received
funding from the European Union's Horizon
2020 research and innovation programme
under grant agreement 101076427



18

DIVERSIFICATION/ SPECIALISATION OF FARMS



Diversification (on-farm and off-farm) and specialisation are the two main farm business and livelihood strategies

TYPE

- ☐ Megatrend
- ☒ Trend
- ☐ Weak signal

TOPICS

- ☒ Farms
- ☒ Technology
- ☒ Energy
- ☒ Environment
- ☒ Regional development
- ☒ Values

SCALE



DOMAIN

Economic

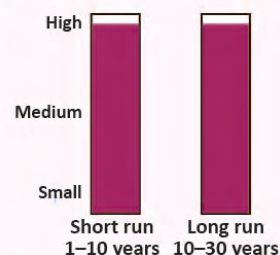


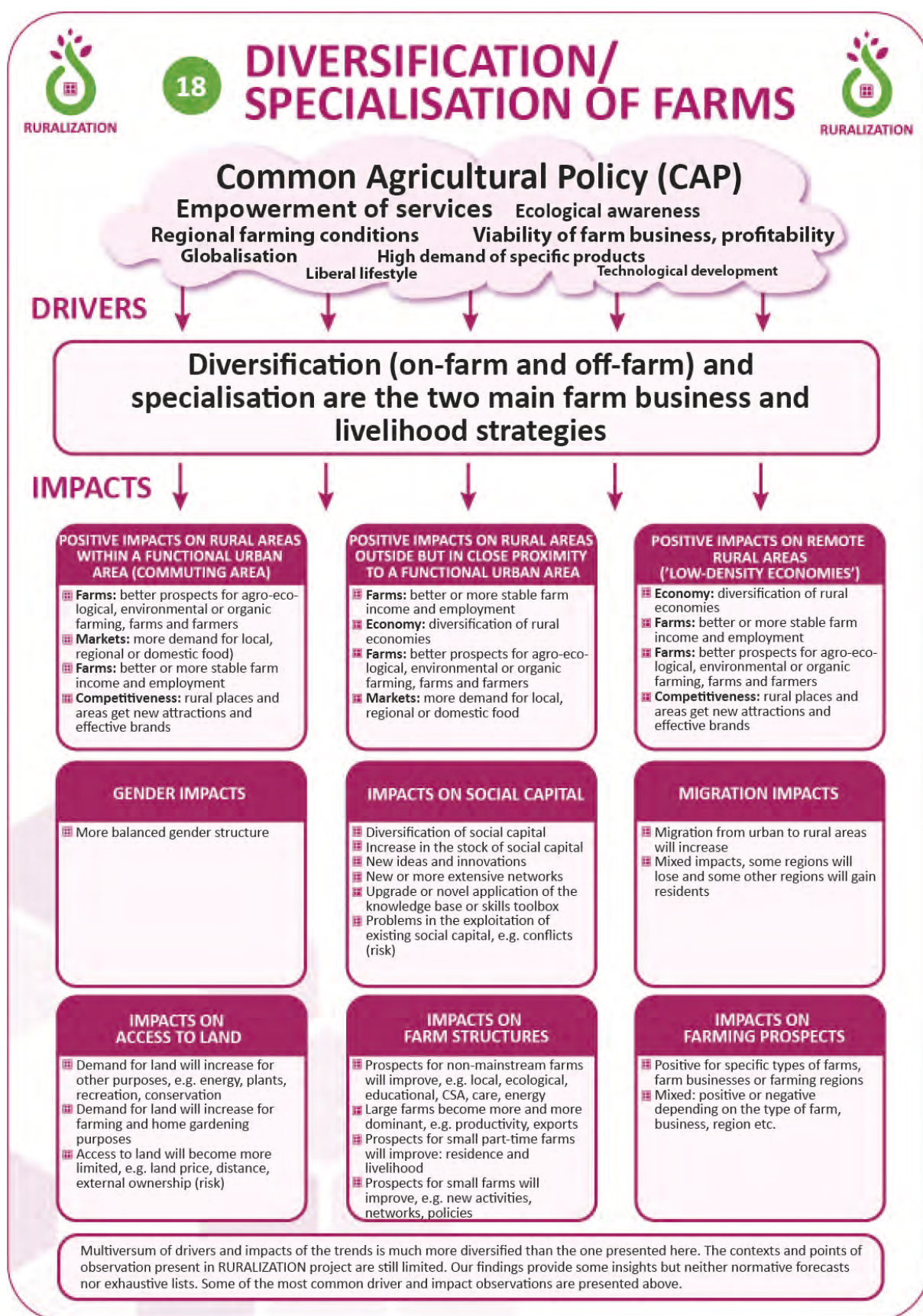
MOSTLY AFFECTED SECTOR

Primary production



SIGNIFICANCE FOR RURAL AREAS







RURALIZATION

18

DIVERSIFICATION/ SPECIALISATION OF FARMS

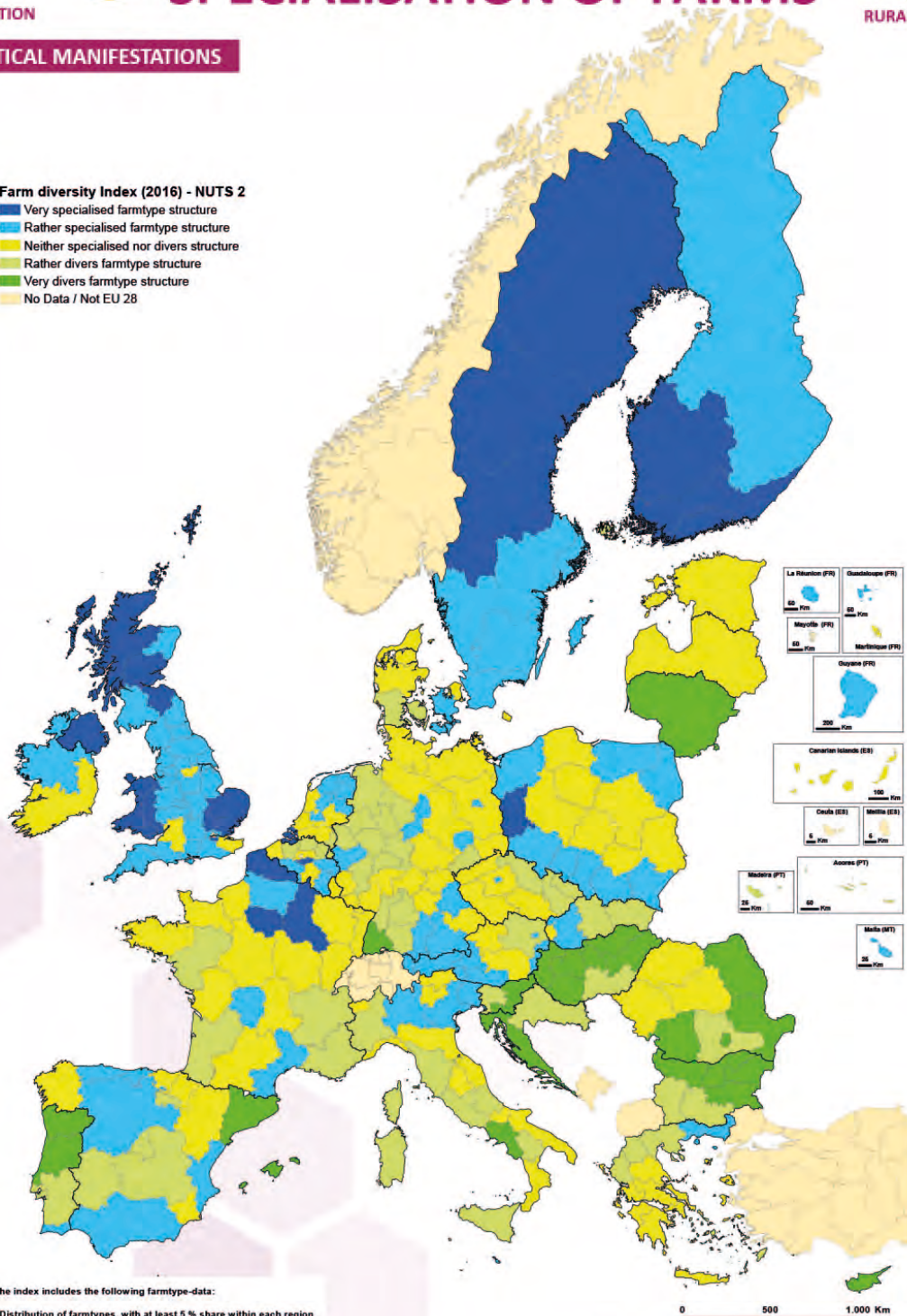


RURALIZATION

STATISTICAL MANIFESTATIONS

Farm diversity Index (2016) - NUTS 2

- Very specialised farmtype structure
- Rather specialised farmtype structure
- Neither specialised nor divers structure
- Rather divers farmtype structure
- Very divers farmtype structure
- No Data / Not EU 28



The index includes the following farmtype-data:

- Distribution of farmtypes, with at least 5 % share within each region
- Percentage of the farmtype with the highest share within each region
- Share of the farmtype general field cropping (FT 16)
- Summarized share of the following farmtypes:
 - various permanent crops combined (FT 38)
 - mixed cropping (FT 61)
 - various crops and livestock combined (FT 84)

Used Eurostat Datafile: eF_m_farmang



source of shapes and data: EUROSTAT
geographical projection: Mercator (sphere)



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19

DIY MOVEMENT



Do-It-Yourself is a polymorphic phenomenon featuring home crafting, repair, on-demand development, self-production, bricolage and community-supported innovations

TYPE

- ☐ Megatrend
- ☐ Trend
- ☒ Weak signal

TOPICS

- ☒ Lifestyle
- ☒ Farms
- ☒ Food
- ☒ Networks and collaboration

SCALE



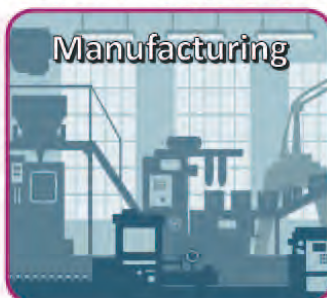
DOMAIN

Economic

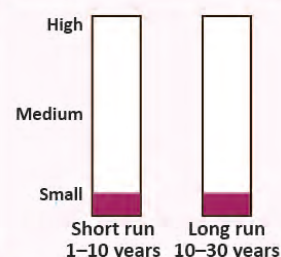


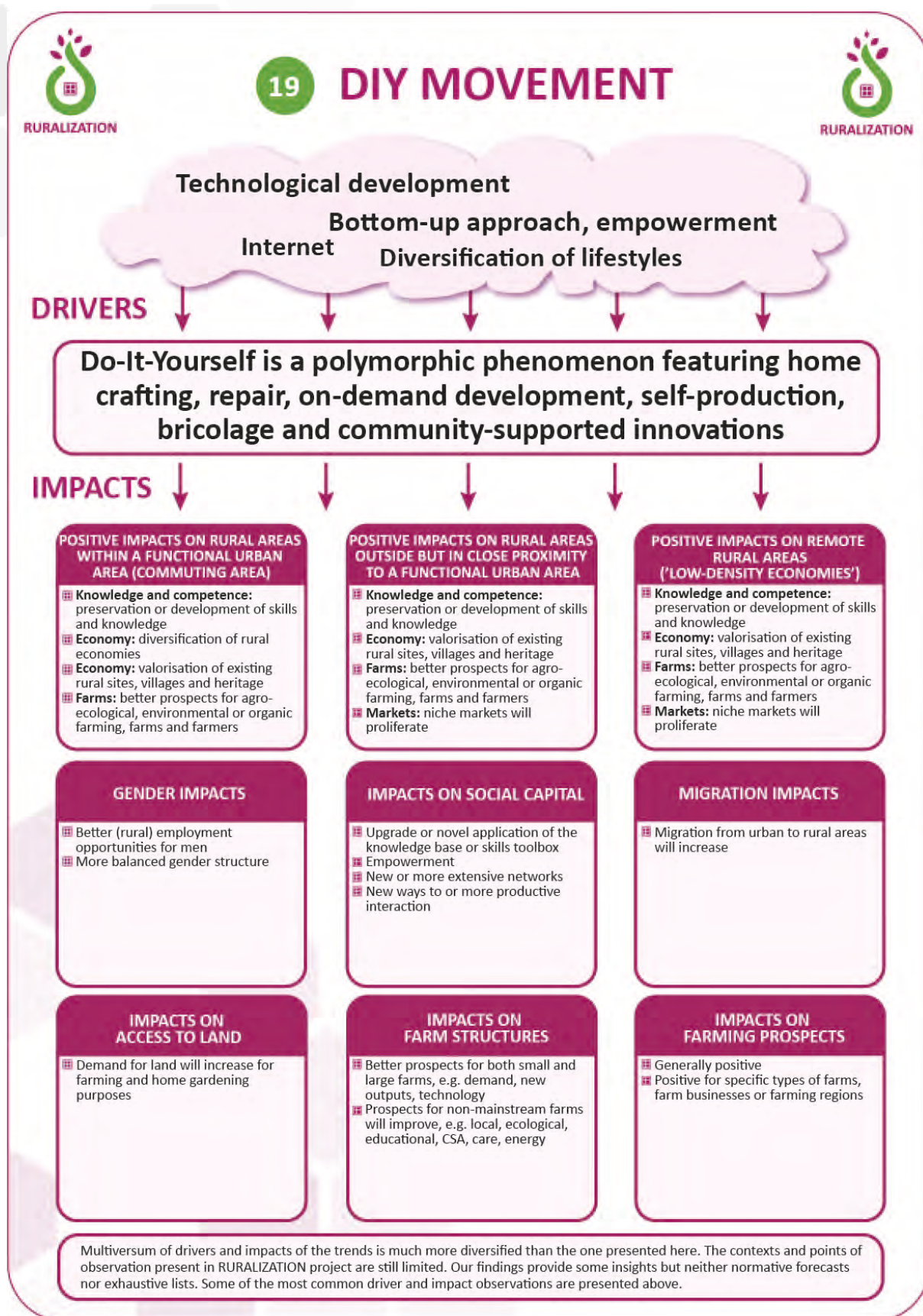
MOSTLY AFFECTED SECTOR

Manufacturing



SIGNIFICANCE FOR RURAL AREAS







20

e-COMMERCE



Online markets remove the need for a physical presence and allow reach of distant customers

TYPE

- ☐ Megatrend
- ☒ Trend
- ☐ Weak signal

TOPICS

- ☒ Food
- ☒ Technology
- ☒ Trade

SCALE



DOMAIN

Economic

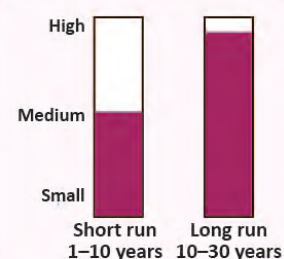


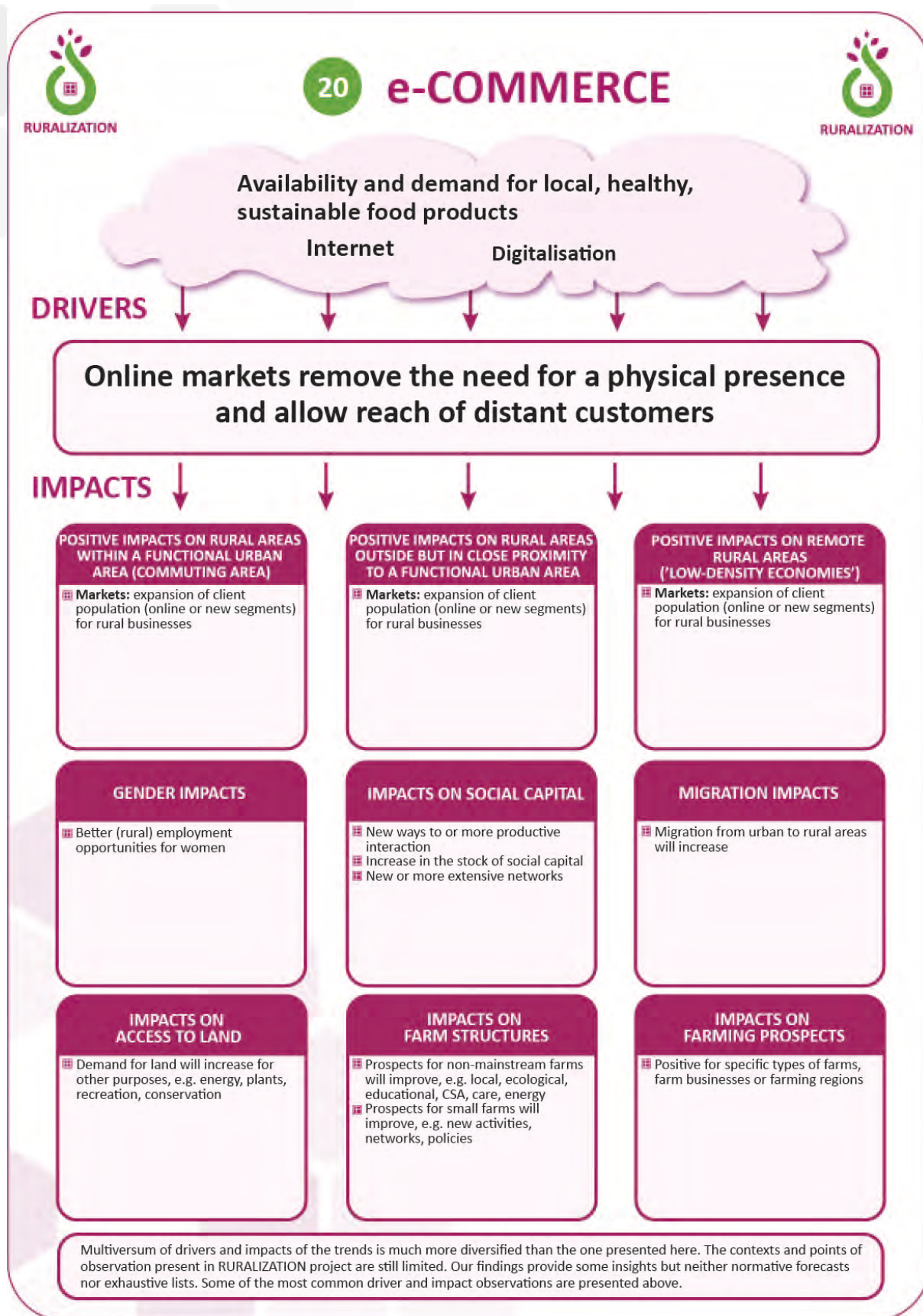
MOSTLY AFFECTED SECTOR

Primary production



SIGNIFICANCE FOR RURAL AREAS







RURALIZATION

20

E-COMMERCE

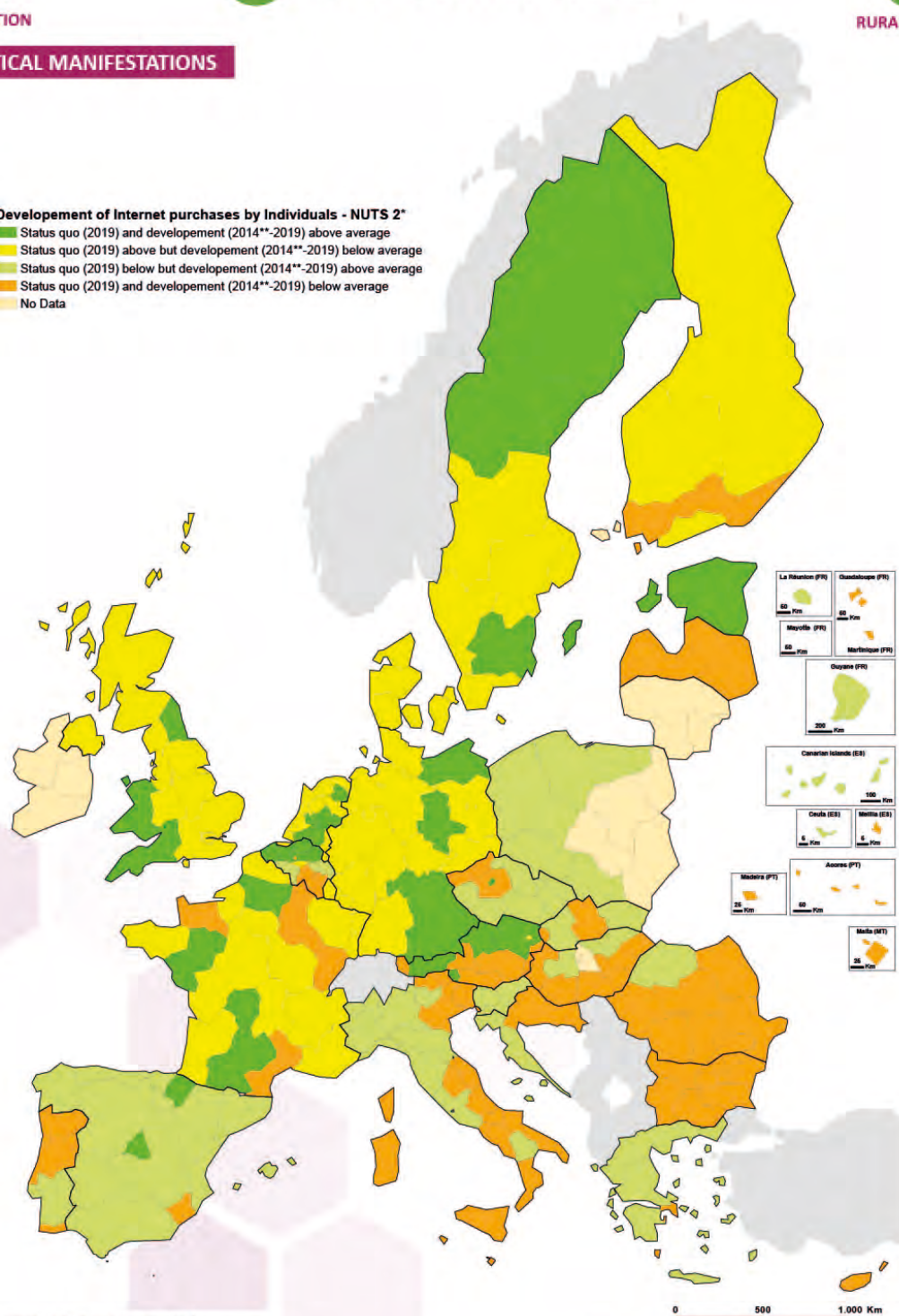


RURALIZATION

STATISTICAL MANIFESTATIONS

Development of Internet purchases by Individuals - NUTS 2*

- Status quo (2019) and development (2014**-2019) above average
- Status quo (2019) above but development (2014**-2019) below average
- Status quo (2019) below but development (2014**-2019) above average
- Status quo (2019) and development (2014**-2019) below average
- No Data



The values for status quo and development are calculated with the share of people using e-commerce within the last three months

* For Germany, Greece, Poland and UK NUTS 1 is displayed
 ** For Slovenia the year 2015 is used instead of 2014

Used Eurostat Datafile: ISOC_R_BLT12_J



source of shapes and data: EUROSTAT
 geographical projection: Mercator (sphere)



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RURALIZATION

21

ECOVILLAGES



RURALIZATION



Settlement communities aiming at integration of all four dimensions of sustainable development: economic, social, environmental and cultural

TYPE

- ☐ Megatrend
- ☐ Trend
- ☒ Weak signal

TOPICS

- ☒ Housing
- ☒ Socio-economic models

SCALE



DOMAIN

Social

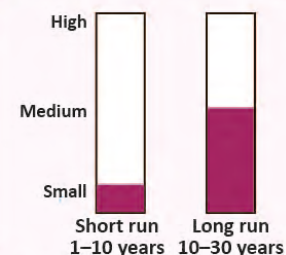


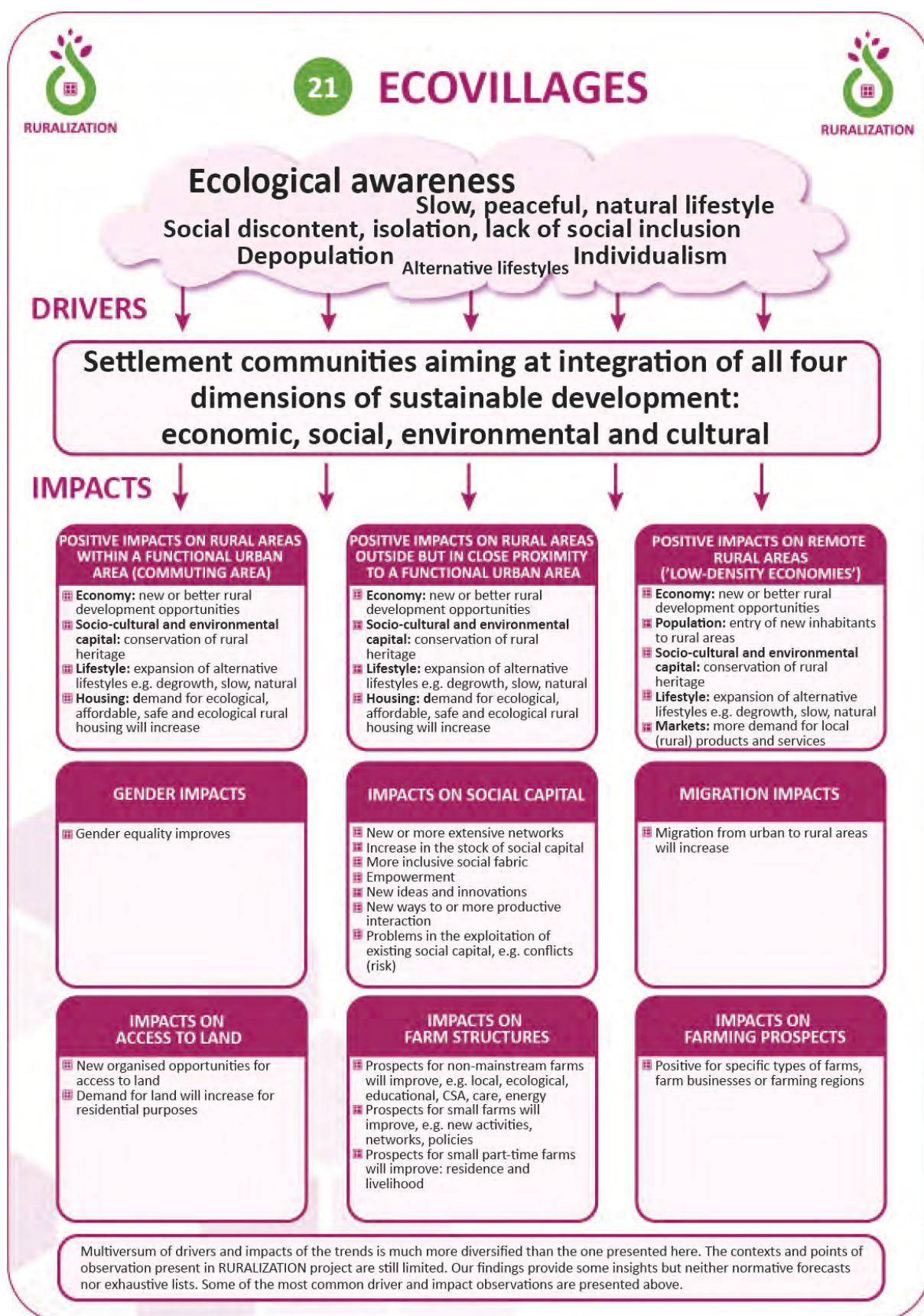
MOSTLY AFFECTED SECTOR

Private services



SIGNIFICANCE FOR RURAL AREAS







RURALIZATION

22

EDUCATIONAL FARMS



RURALIZATION



Co-operation between farms and schools contributes to demonstrative and participatory education about food, environment, technology etc.

TYPE

- ☐ Megatrend
- ☐ Trend
- ☒ Weak signal

TOPICS

- ☒ Farms
- ☒ Science, education and knowledge

SCALE



DOMAIN

Social

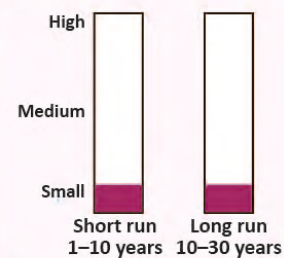


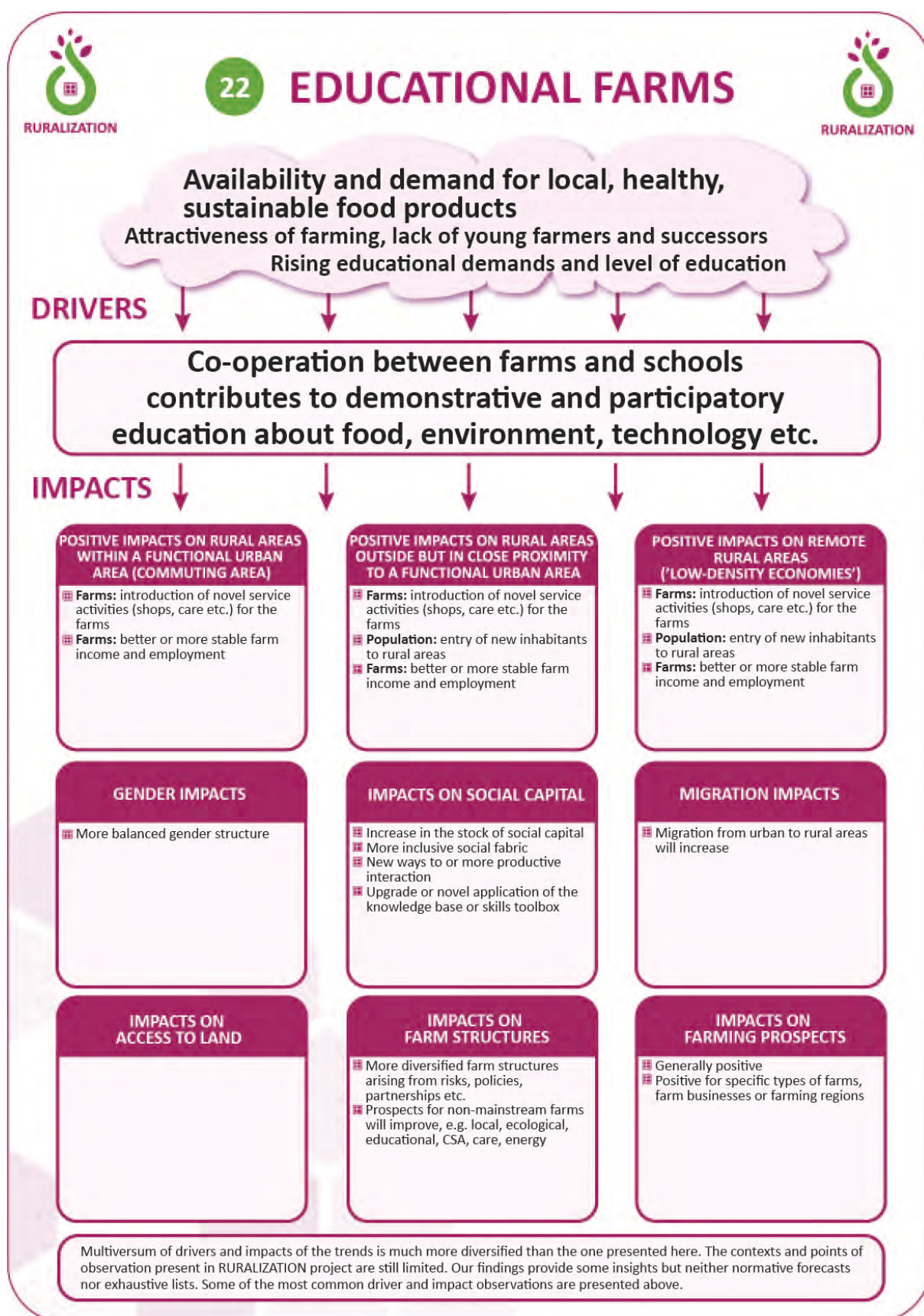
MOSTLY AFFECTED SECTOR

Primary production



SIGNIFICANCE FOR RURAL AREAS







RURALIZATION

23

FOOD SECURITY



RURALIZATION



Availability of food for all at all times is constantly challenged by the weather, diseases, crises, markets, policies and inequality

TYPE

- ☐ Megatrend
- ☒ Trend
- ☐ Weak signal

TOPICS

- ☒ Food
- ☒ Governance
- ☒ Policies
- ☒ Uncertainty and risks

SCALE



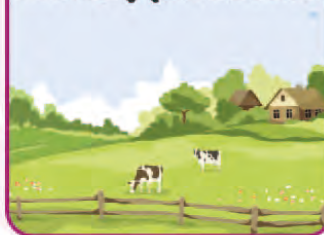
DOMAIN

Social

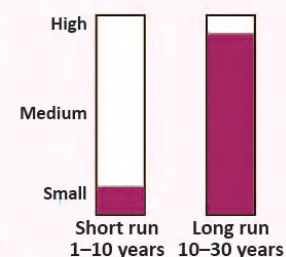


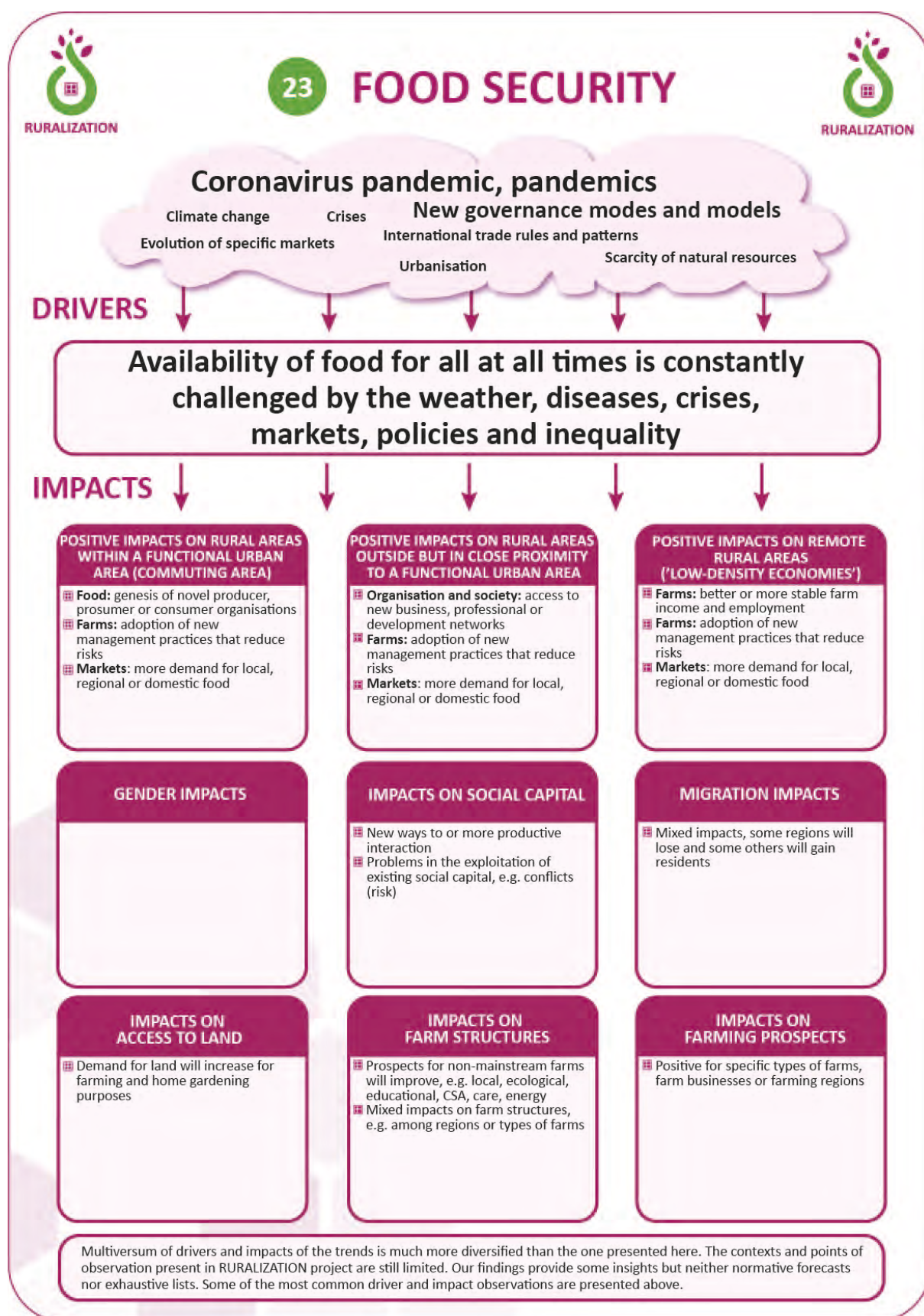
MOSTLY AFFECTED SECTOR

Primary production



SIGNIFICANCE FOR RURAL AREAS







RURALIZATION

24

FOOD SOVEREIGNTY



RURALIZATION



Antithesis to corporate food regime; emphasis in culturally embedded food systems governed by producers and consumers

TYPE

- ☐ Megatrend
- ☐ Trend
- ☒ Weak signal

TOPICS

- ☒ Food
- ☒ Governance
- ☒ Policy
- ☒ Networks and collaboration
- ☒ Socio-economic models

SCALE



DOMAIN

Political

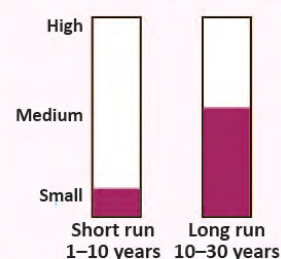


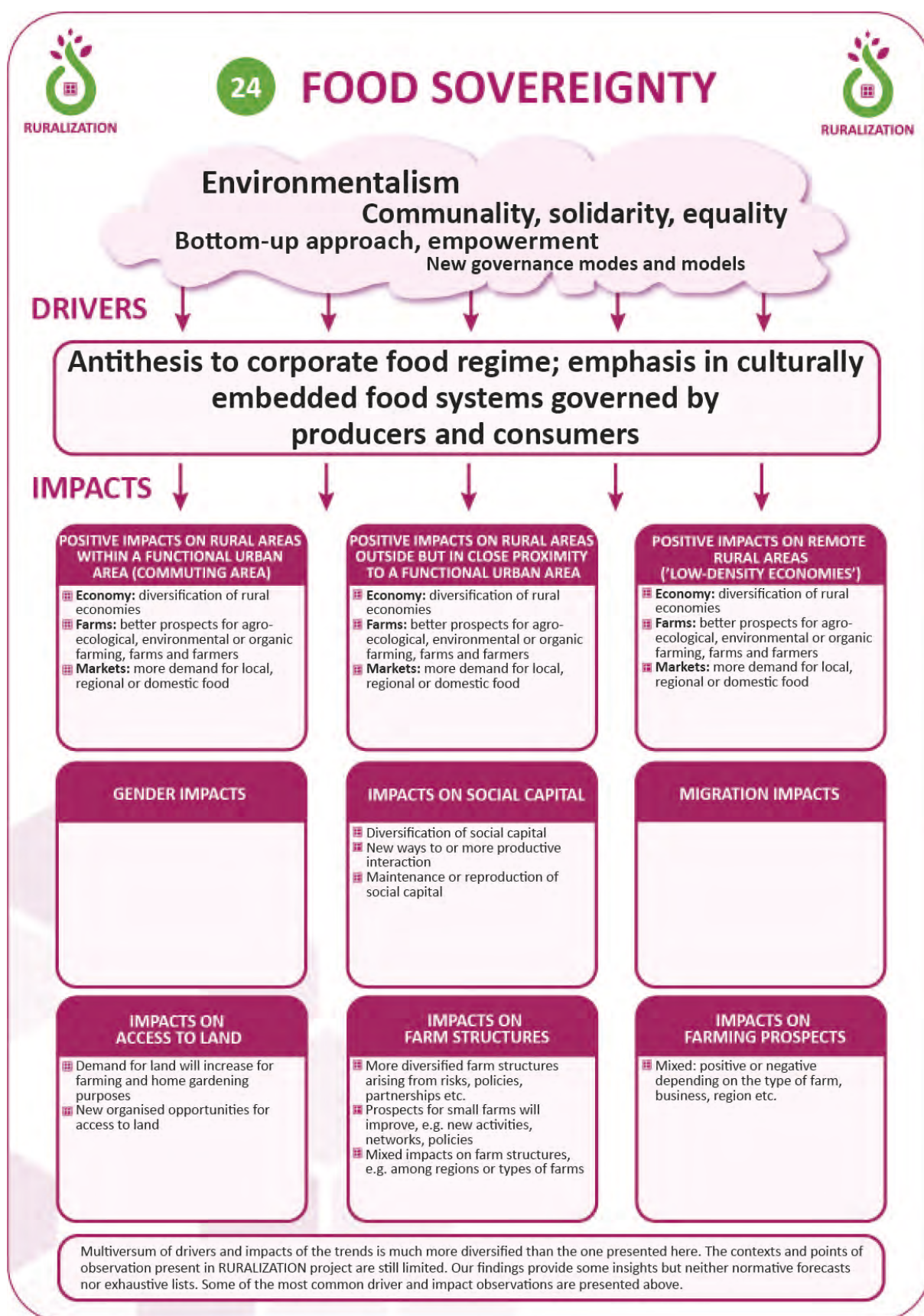
MOSTLY AFFECTED SECTOR

Primary production



SIGNIFICANCE FOR RURAL AREAS







RURALIZATION

25

FOOD TOURISM



RURALIZATION



Touristic activities organised around food: routes, tours, festivals, visits, cookery experiences, local specialties etc.

TYPE

- ☐ Megatrend
- ☒ Trend
- ☐ Weak signal

TOPICS

- ☒ Food
- ☒ Tourism
- ☒ Regional development

SCALE



DOMAIN

Economic



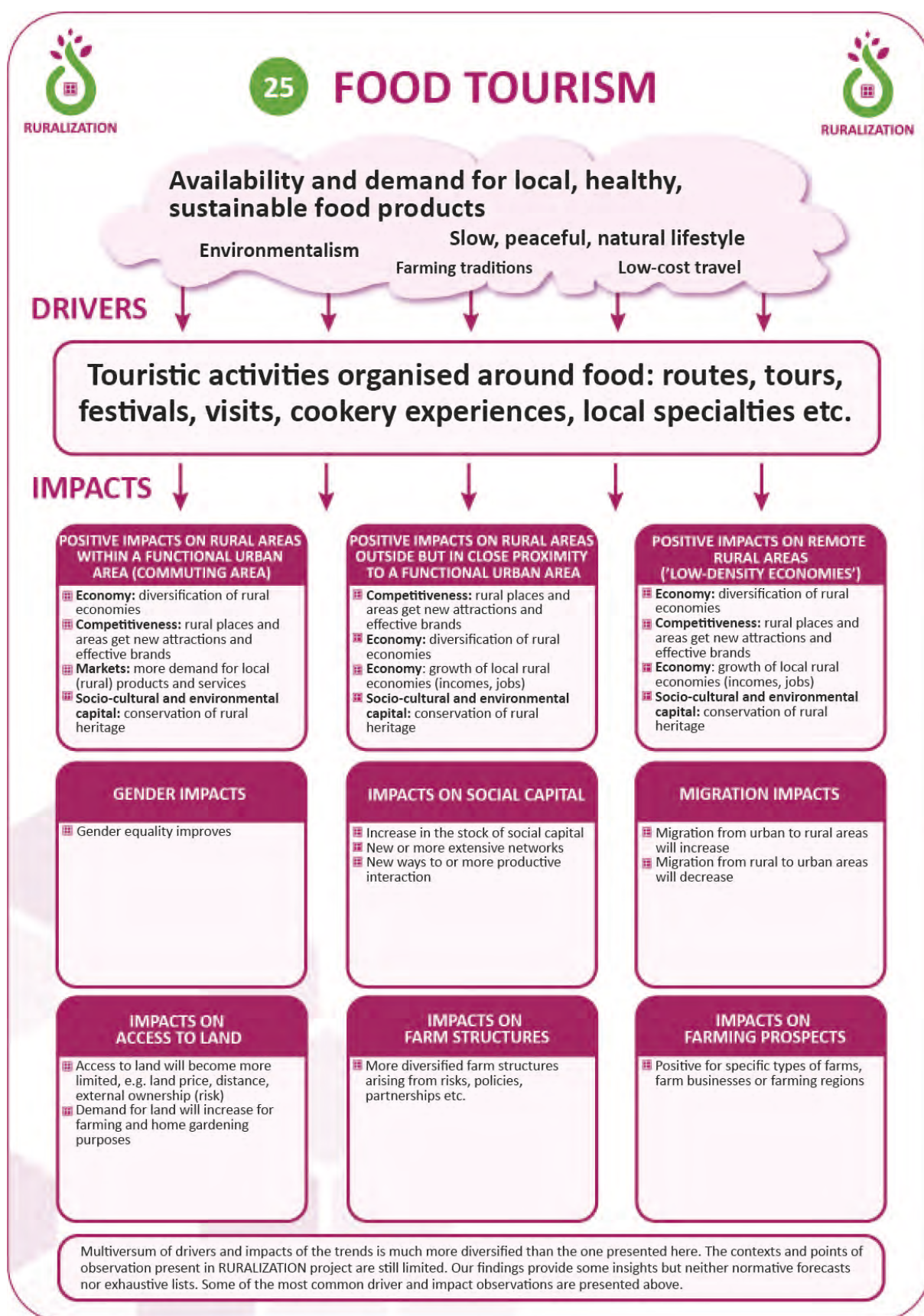
MOSTLY AFFECTED SECTOR

Primary production



SIGNIFICANCE FOR RURAL AREAS







26

GROWING FOOD DEMAND



Global food demand increases and is expected to increase further along with population growth

TYPE

- ☒ Megatrend
- ☐ Trend
- ☐ Weak signal

TOPICS

- ☒ Demographics
- ☒ Food
- ☒ Resource scarcity

SCALE



DOMAIN

Economic

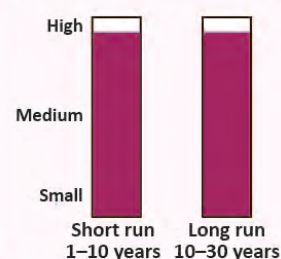


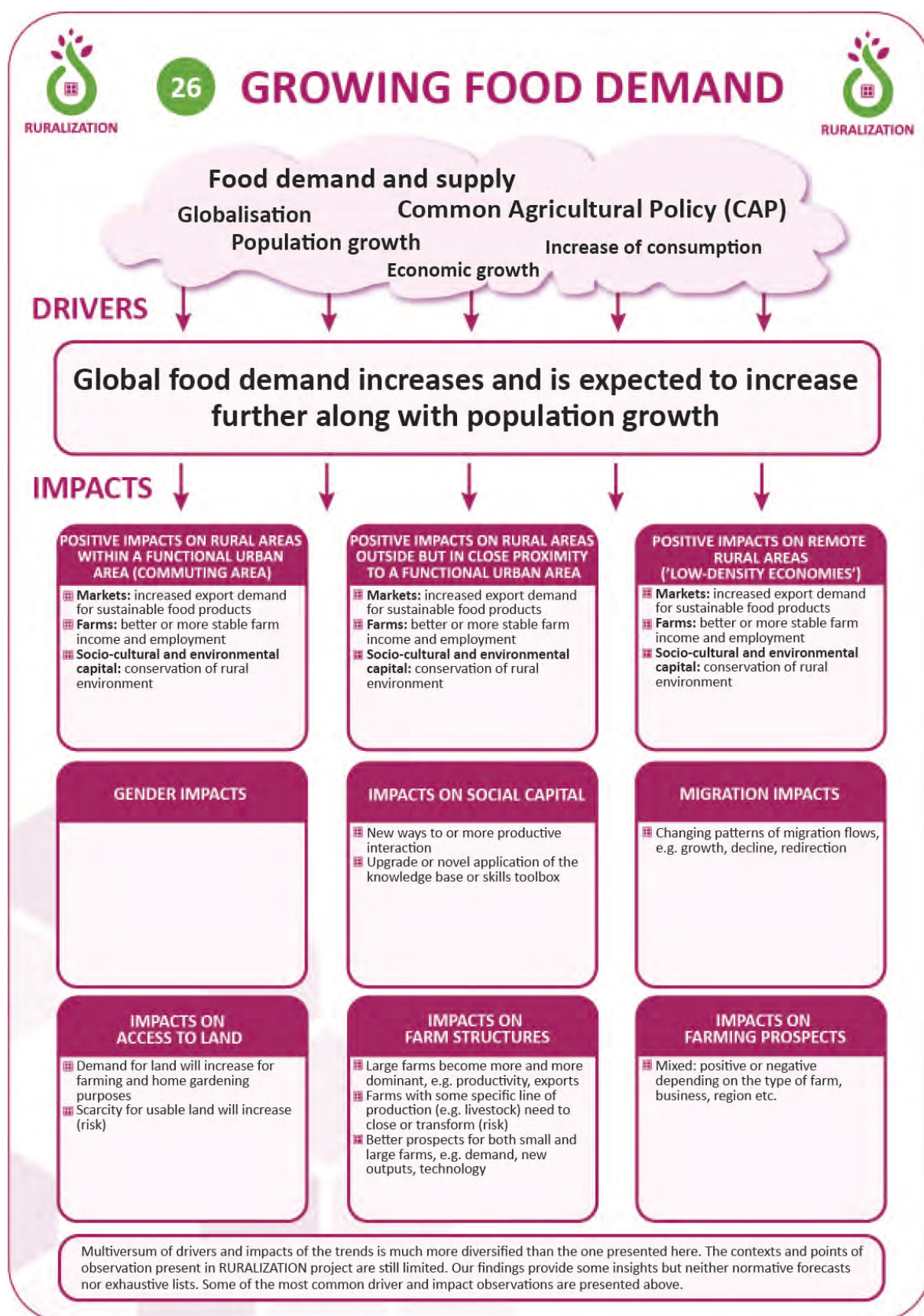
MOSTLY AFFECTED SECTOR

Primary production



SIGNIFICANCE FOR RURAL AREAS







RURALIZATION

26

GROWING FOOD DEMAND

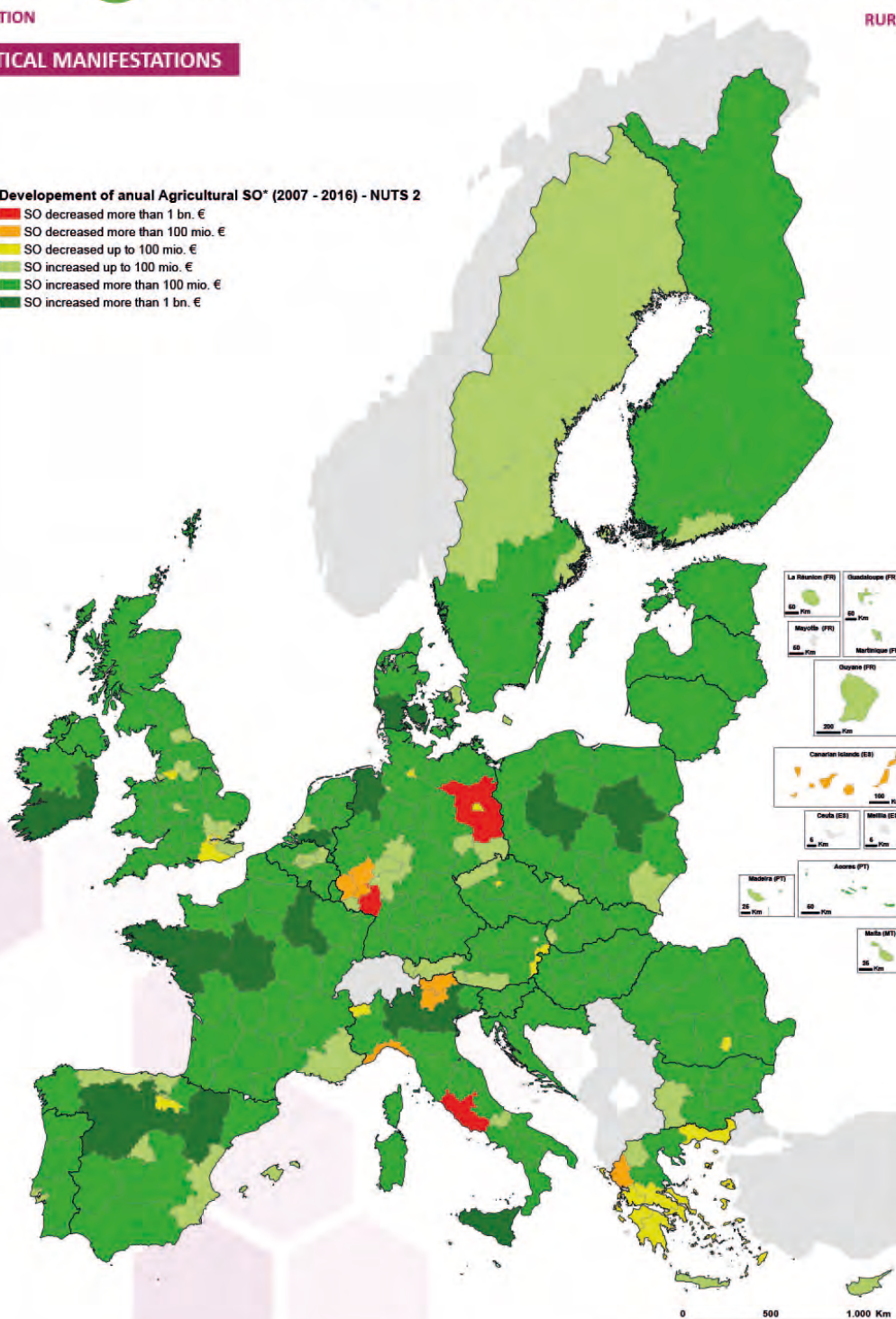


RURALIZATION

STATISTICAL MANIFESTATIONS

Development of annual Agricultural SO* (2007 - 2016) - NUTS 2

- SO decreased more than 1 bn. €
- SO decreased more than 100 mio. €
- SO decreased up to 100 mio. €
- SO increased up to 100 mio. €
- SO increased more than 100 mio. €
- SO increased more than 1 bn. €



*SO stands for Standard Output which expresses the economic performance in agriculture
no data for Ceuta (ES), Mayotte (FR) and Melilla (ES)

Used Eurostat Datafile: eF_m_farmang



source of shapes and data: EUROSTAT
geographical projection: Mercator (sphere)



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funding from the European Union's Horizon
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under Grant Agreement 817642



27

HERITAGE TOURISM



Historical attractions based on nature, industries, buildings, milieus, culture, food etc.

TYPE

- ☐ Megatrend
- ☐ Trend
- ☒ Weak signal

TOPICS

- ☒ Networks and collaboration
- ☒ Regional development
- ☒ Tourism

SCALE

European

DOMAIN

Economic

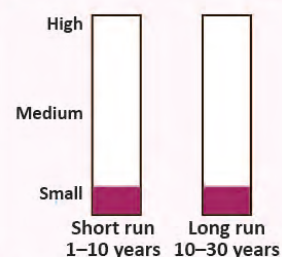


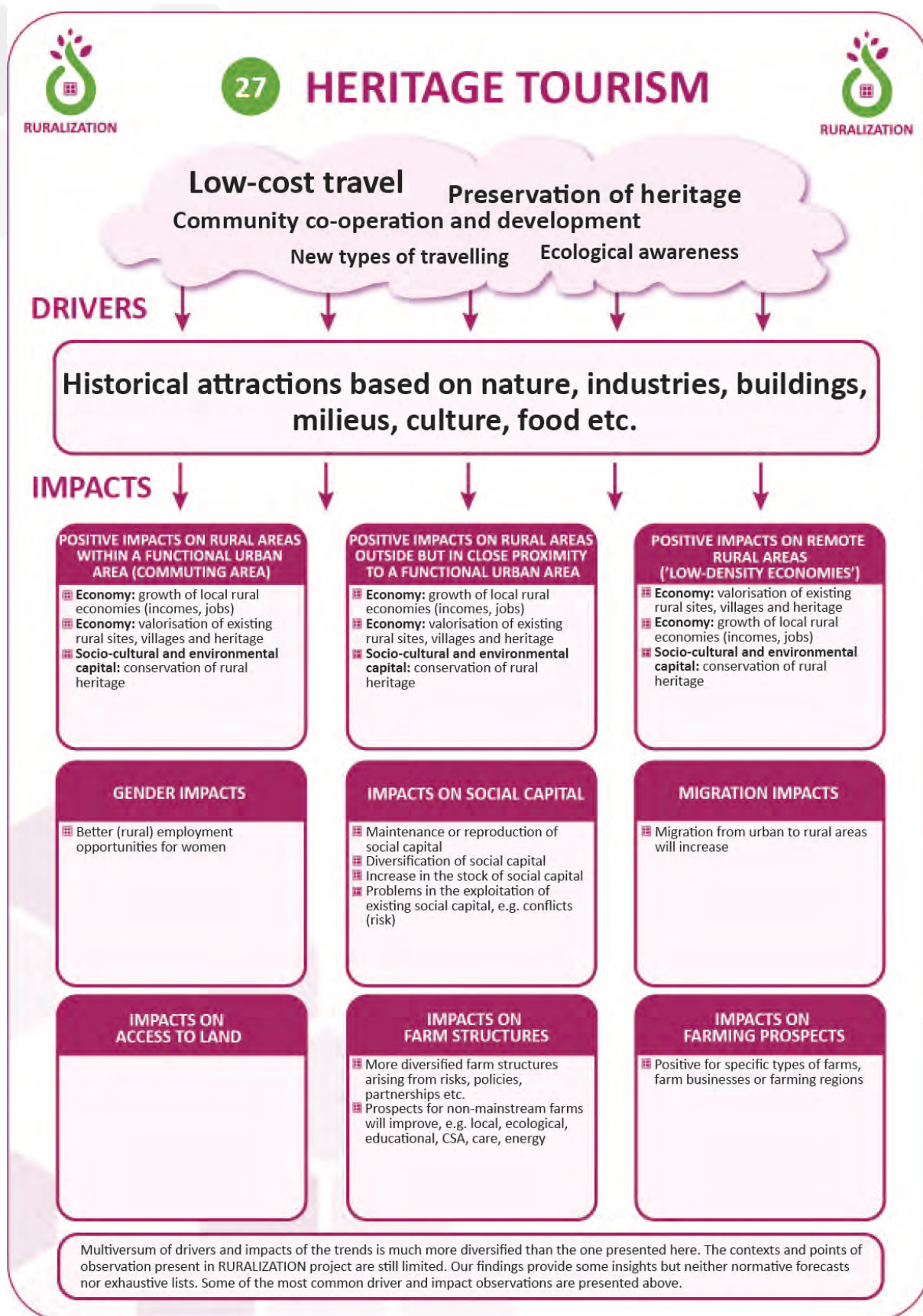
MOSTLY AFFECTED SECTOR

Private services



SIGNIFICANCE FOR RURAL AREAS







28

INFRASTRUCTURES, ACCESSIBILITY AND CONNECTEDNESS OF REGIONS



Availability and quality of roads, railways, water, electricity, telecommunications etc. necessary for settlements and economic activities

TYPE

- ☒ Megatrend
- ☐ Trend
- ☐ Weak signal

TOPICS

- ☒ Farms
- ☒ Food
- ☒ Infrastructure
- ☒ Mobility and traffic
- ☒ Policy
- ☒ Regional development
- ☒ Rural services
- ☒ Technology

SCALE

European

DOMAIN

Economic

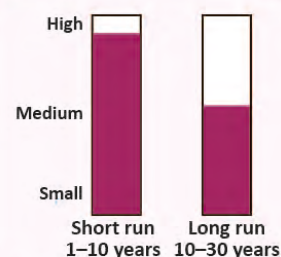


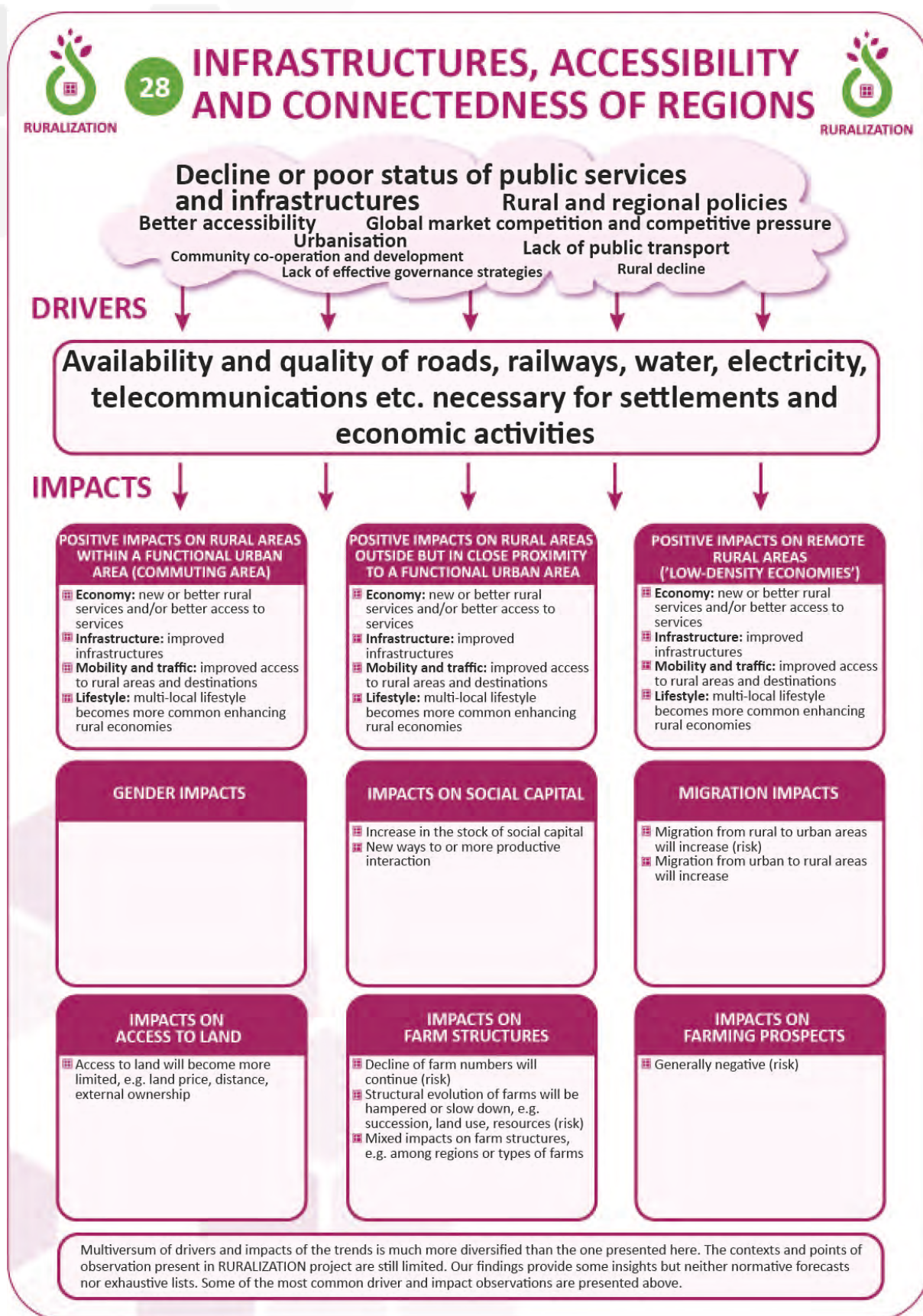
MOSTLY AFFECTED SECTOR

Public services



SIGNIFICANCE FOR RURAL AREAS







RURALIZATION

28

INFRASTRUCTURES, ACCESSIBILITY AND CONNECTEDNESS OF REGIONS

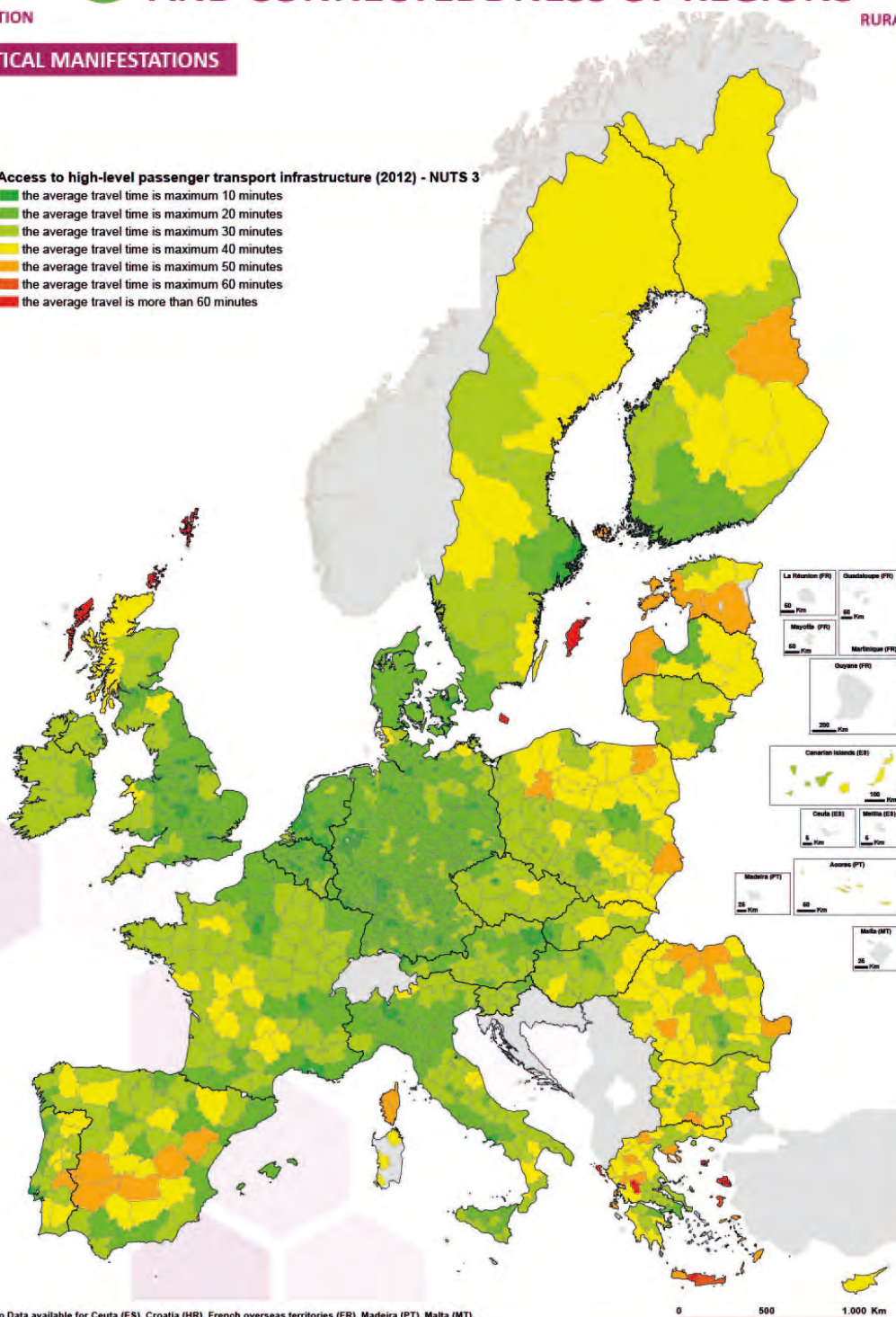


RURALIZATION

STATISTICAL MANIFESTATIONS

Access to high-level passenger transport infrastructure (2012) - NUTS 3

- the average travel time is maximum 10 minutes
- the average travel time is maximum 20 minutes
- the average travel time is maximum 30 minutes
- the average travel time is maximum 40 minutes
- the average travel time is maximum 50 minutes
- the average travel time is maximum 60 minutes
- the average travel is more than 60 minutes



No Data available for Ceuta (ES), Croatia (HR), French overseas territories (FR), Madeira (PT), Malta (MT), Melilla (ES), parts of Estonia (EE) and parts of Sardinia (IT)

The traveltime is based on the ICON indicator, defined as relative connectivity to available transport network. For further information about the ICON please have a look at the ESPON TRACC Final Report.

Copyright: © MCRIT / Provider: MCRIT, TRANSTOOLS Transport Network / Publication: ESPON TRACC Final Report

Used ESPON Datafile: TRACC_RE_TT_1



source of shapes: EUROSTAT
geographical projection: Mercator (sphere)



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RURALIZATION

29

INTEGRATION OF IMMIGRANTS



RURALIZATION



Integration of immigrant to local labour market and civic society promotes inclusive social fabric and the possibility to make a societal contribution

TYPE

- ☐ Megatrend
- ☐ Trend
- ☒ Weak signal

TOPICS

- ☒ Farms
- ☒ Migration
- ☒ Networks and collaboration
- ☒ Policy
- ☒ Regional development
- ☒ Work

SCALE



DOMAIN

Social

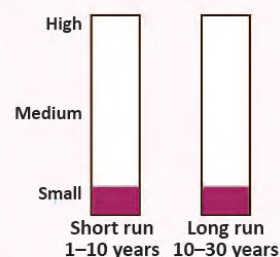


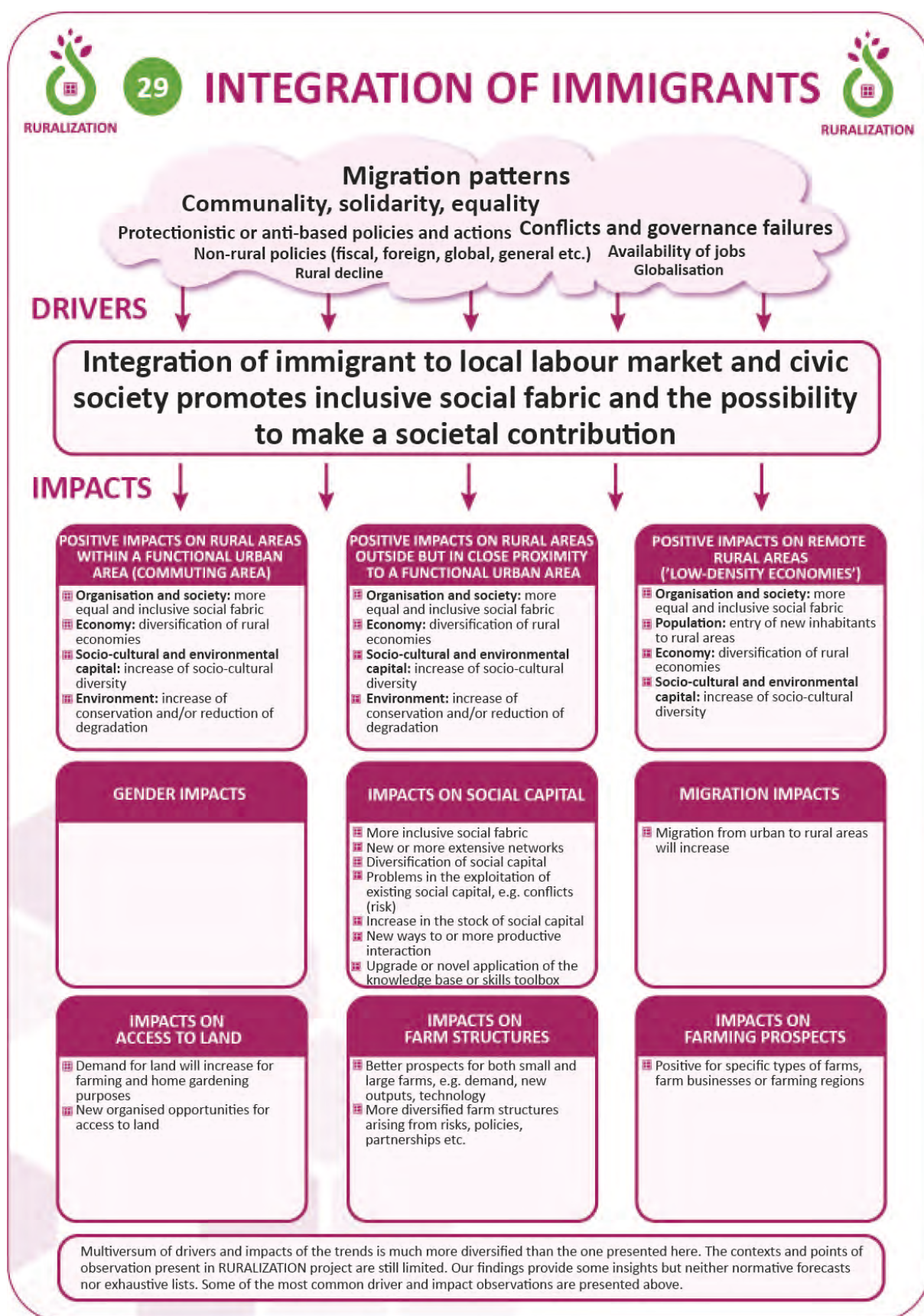
MOSTLY AFFECTED SECTOR

Public services



SIGNIFICANCE FOR RURAL AREAS







30

LOCAL PARADIGM



Territorial, holistic and integrative approach to promote decentralisation and local autonomy, governance, media, business, specialities etc.

TYPE

- ☐ Megatrend
- ☒ Trend
- ☐ Weak signal

TOPICS

- ☒ Communication
- ☒ Food
- ☒ Governance
- ☒ Housing
- ☒ Policy
- ☒ Regional development
- ☒ Rural services
- ☒ Socio-economic models
- ☒ Trade

SCALE



DOMAIN

Social



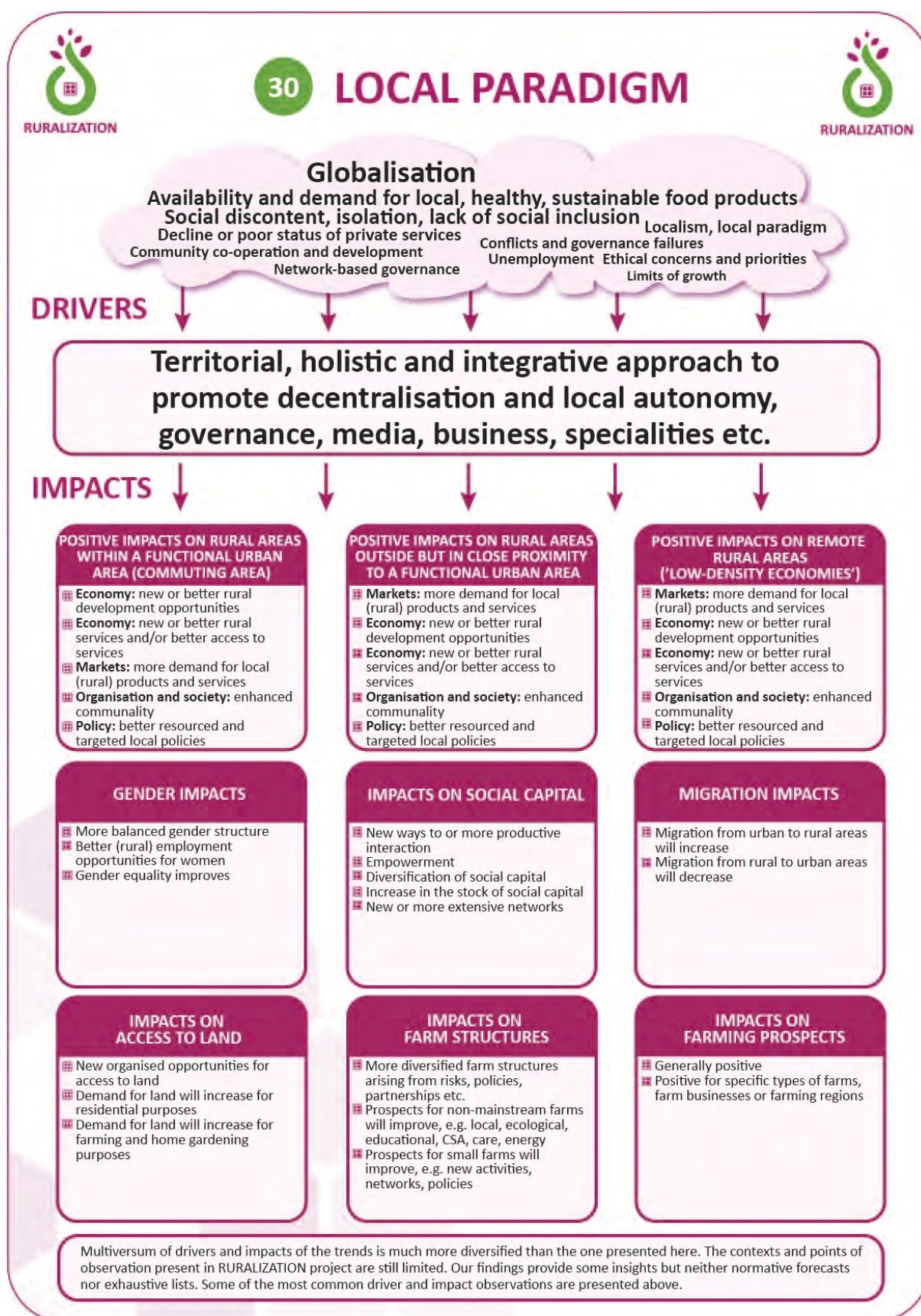
MOSTLY AFFECTED SECTOR

Public services



SIGNIFICANCE FOR RURAL AREAS







31

MANIFESTATIONS OF NEW TECHNOLOGIES



Artificial intelligence, automation, robotics, block-chain, big data, virtual and augmented reality, internet of things etc. and their applications

TYPE

- ☐ Megatrend
- ☒ Trend
- ☐ Weak signal

TOPICS

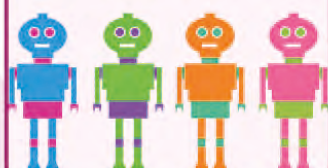
- ☒ Farms
- ☒ Mobility and traffic
- ☒ Regional development
- ☒ Socio-economic models
- ☒ Technology
- ☒ Uncertainty and risks
- ☒ Work

SCALE



DOMAIN

Technological

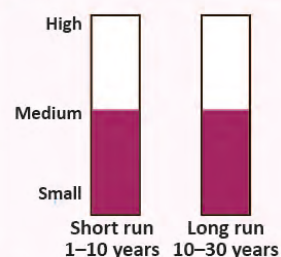


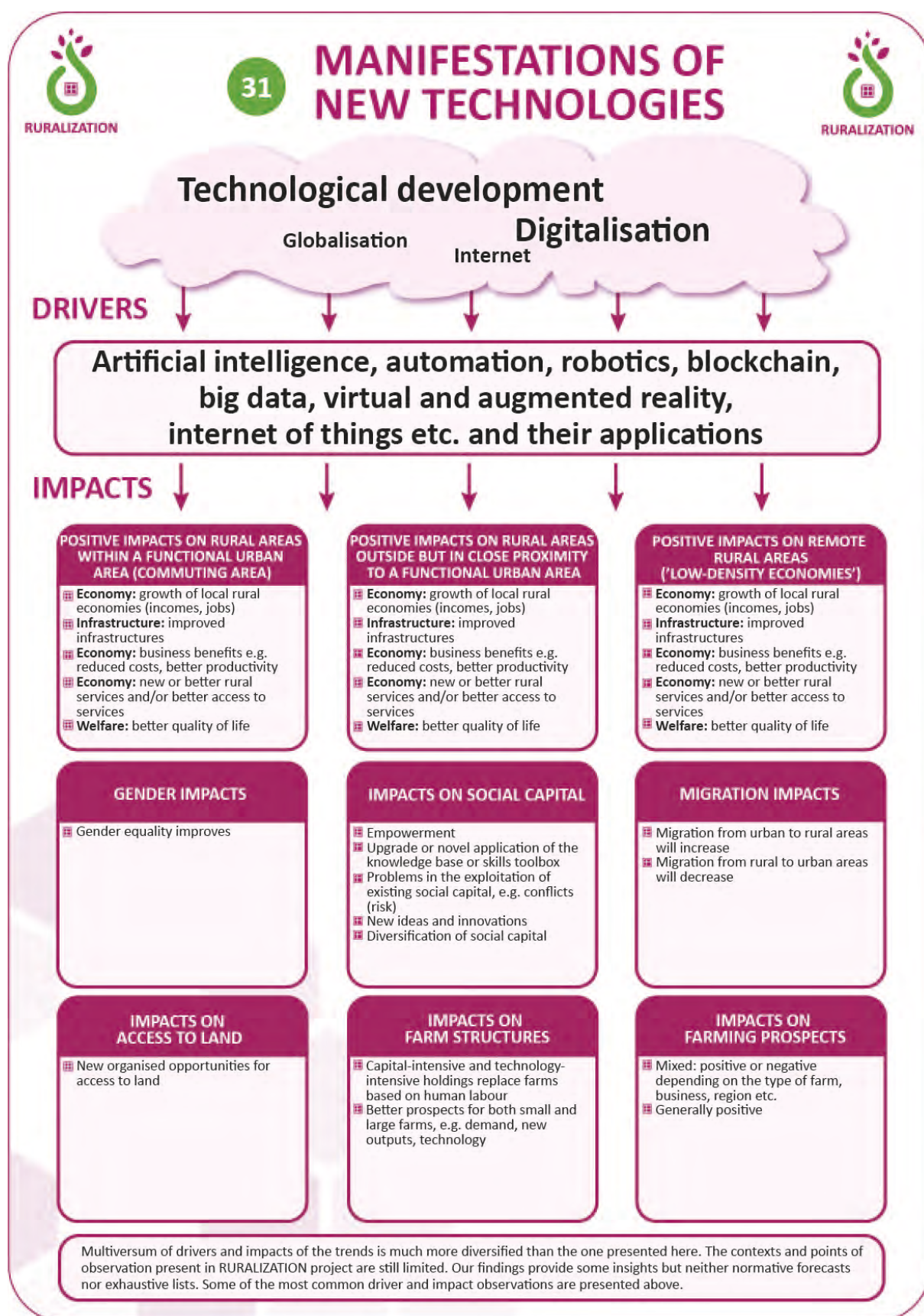
MOSTLY AFFECTED SECTOR

Private services



SIGNIFICANCE FOR RURAL AREAS







RURALIZATION

31

MANIFESTATIONS OF NEW TECHNOLOGIES

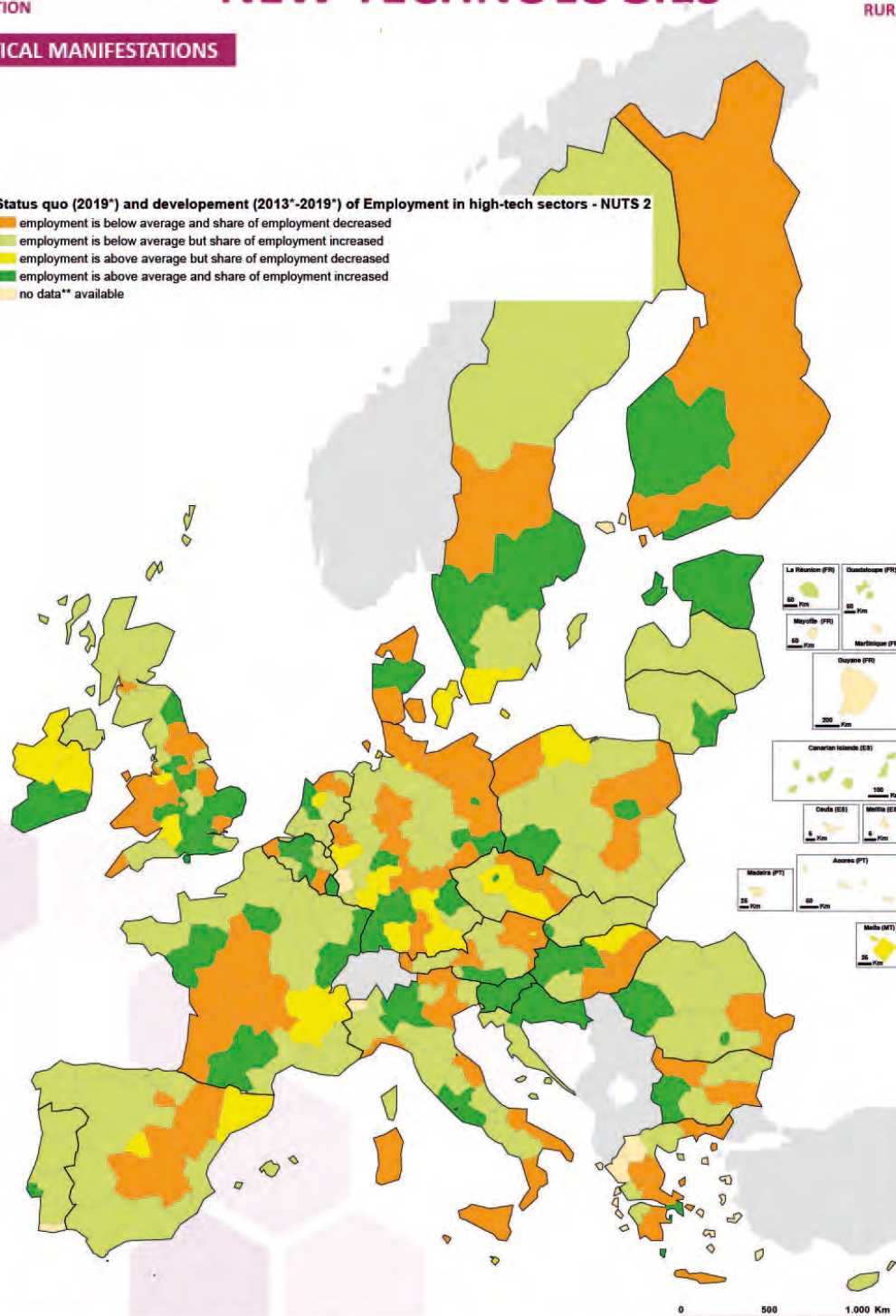


RURALIZATION

STATISTICAL MANIFESTATIONS

Status quo (2019*) and development (2013*-2019*) of Employment in high-tech sectors - NUTS 2

- employment is below average and share of employment decreased
- employment is below average but share of employment increased
- employment is above average but share of employment decreased
- employment is above average and share of employment increased
- no data** available



*for the following regions other times and timespans are displayed:

2010-2017: PT18 / 2010-2019: ITF2

2012-2019: AT11, FRY1, PL52, RO22

2013-2017: FRM0, UKD1 / 2013-2018: EL51, FRI2, RO41

**DEB2, EL41, EL42, EL53, EL54, EL52, ES63, ES64, FI20, FRY2, FRY3, FRY5, ITC2, PT15, PT20, PT30

Used Eurostat Datasets: TGS00039 / nama_10r_3empers



source of shapes and data: EUROSTAT
geographical projection: Mercator (sphere)



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32

MEANING AND EXPERIENCE ECONOMY



Markets of stories, meanings, experiences, roles, identities and uniqueness may supersede traditional livelihood and business conceptions

TYPE

- ☐ Megatrend
- ☒ Trend
- ☐ Weak signal

TOPICS

- ☒ Economic development
- ☒ Farms
- ☒ Food
- ☒ Lifestyle
- ☒ Socio-economic models
- ☒ Tourism
- ☒ Uncertainty and risks
- ☒ Values

SCALE



DOMAIN

Social

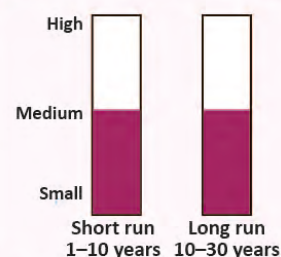


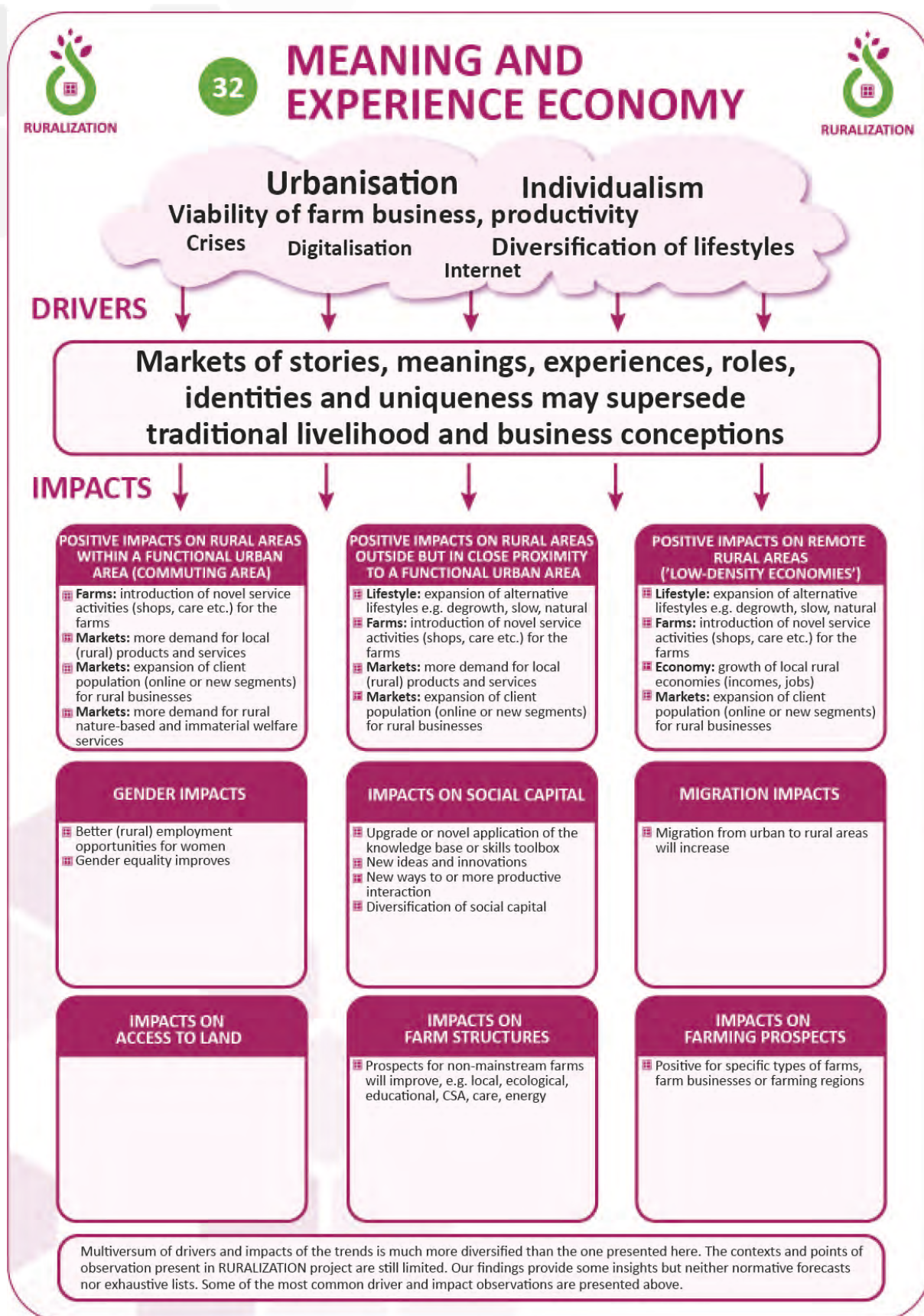
MOSTLY AFFECTED SECTOR

Private services



SIGNIFICANCE FOR RURAL AREAS







33

MICRO- AND SMALL UNITS



Small farms, businesses, neighbourhoods and civic organisations offer various benefits: affordability, familiarity, flexibility, autonomy, participation

TYPE


- ☐ Megatrend
- ☐ Trend
- ☒ Weak signal

TOPICS

- ☒ Economic development
- ☒ Farms
- ☒ Governance
- ☒ Housing
- ☒ Policy
- ☒ Regional development
- ☒ Values


SCALE

European




DOMAIN

Economic

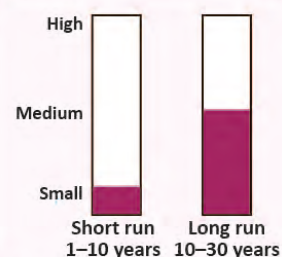


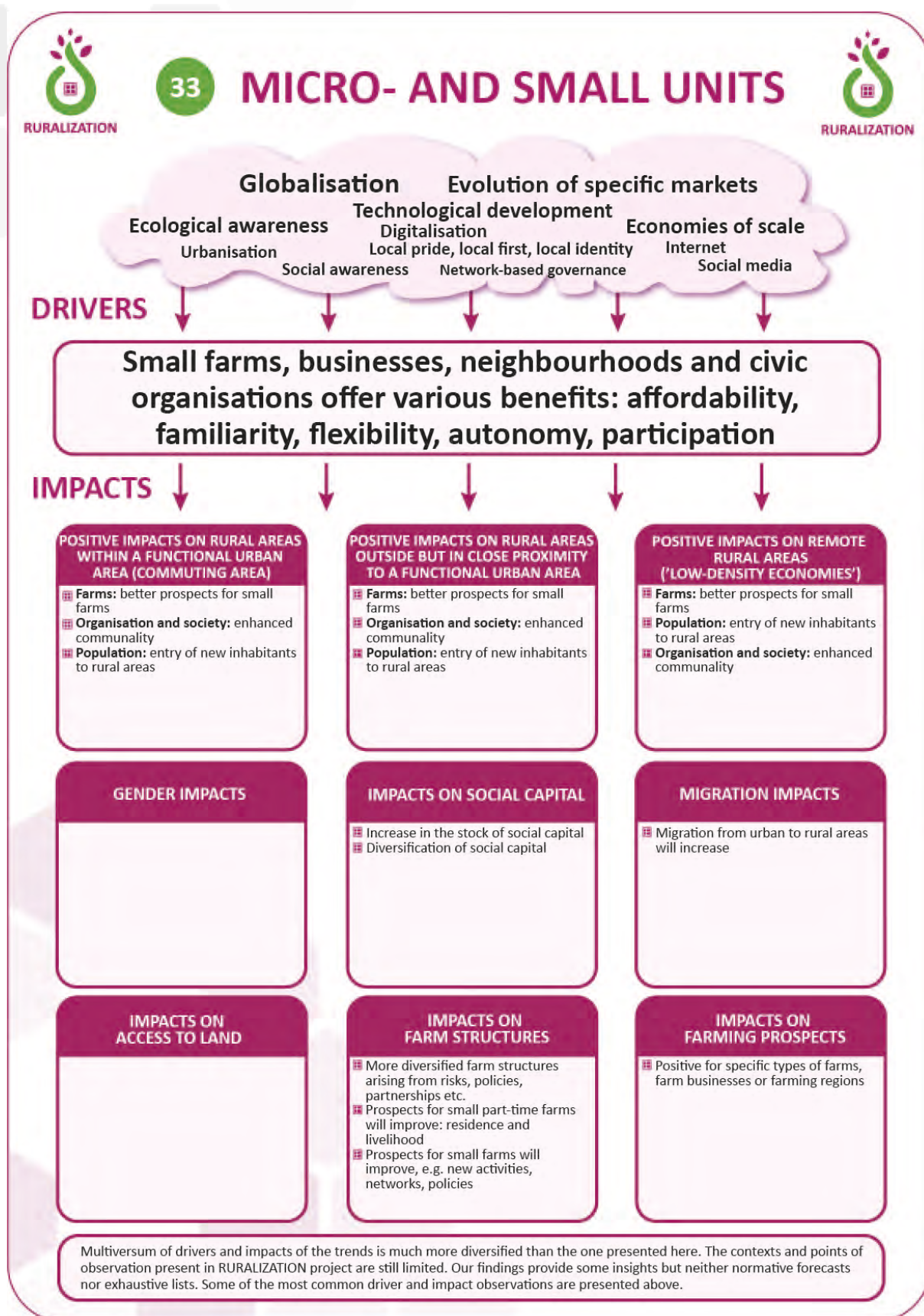
MOSTLY AFFECTED SECTOR

Private services



SIGNIFICANCE FOR RURAL AREAS







RURALIZATION

33

MICRO- AND SMALL UNITS

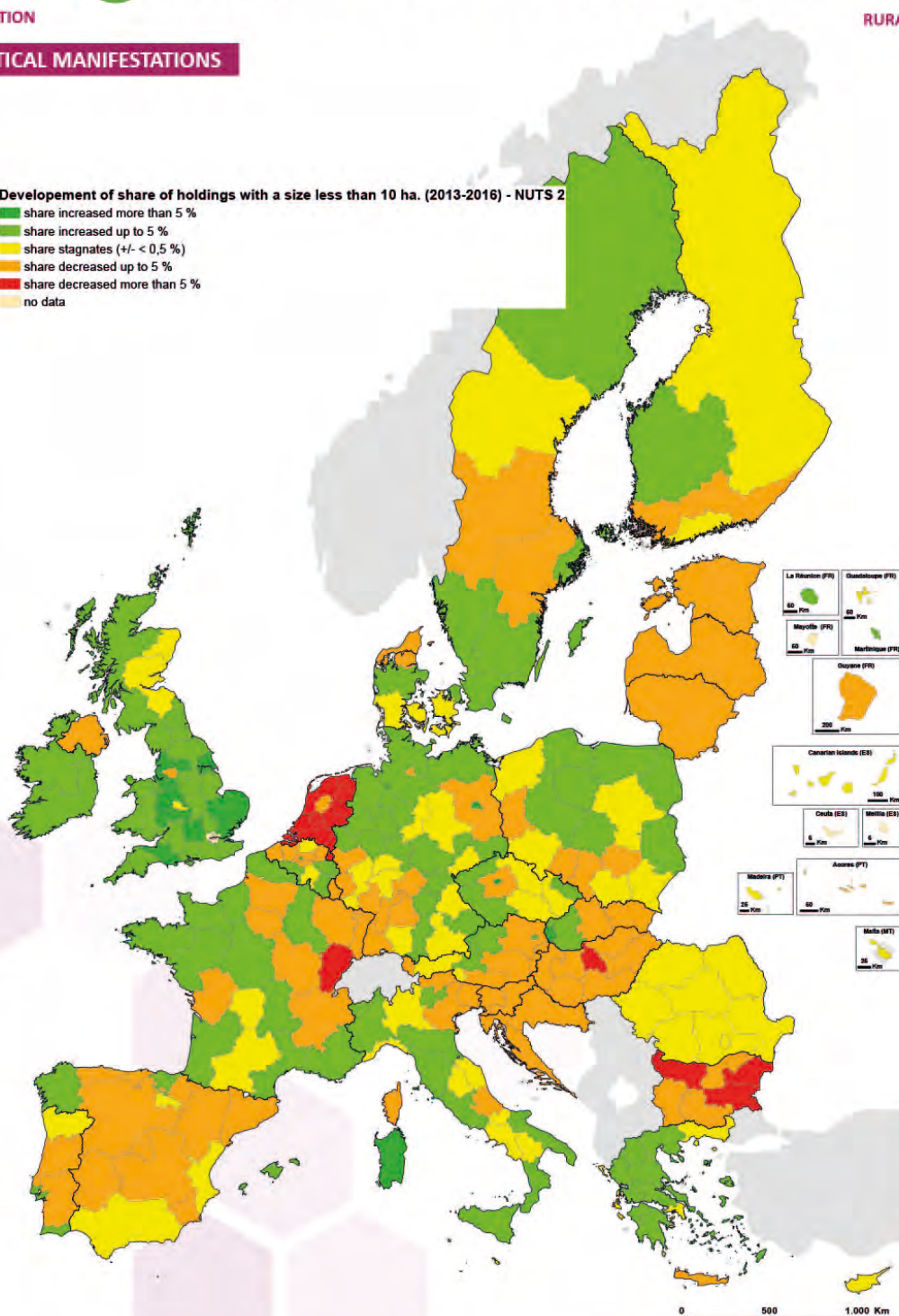


RURALIZATION

STATISTICAL MANIFESTATIONS

Development of share of holdings with a size less than 10 ha. (2013-2016) - NUTS 2

- share increased more than 5 %
- share increased up to 5 %
- share stagnates (+/- < 0,5 %)
- share decreased up to 5 %
- share decreased more than 5 %
- no data



Used Eurostat Datafile: ef_m_farmang



RURALIZATION



source of shapes and data: EUROSTAT
geographical projection: Mercator (sphere)

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RURALIZATION

34

MIGRATION PATTERNS



RURALIZATION



National and international migration flows modify both the point of departure and the point of arrival

TYPE

- ☒ Megatrend
- ☐ Trend
- ☐ Weak signal

TOPICS

- ☒ Demographics
- ☒ Migration
- ☒ Policy
- ☒ Regional development
- ☒ Uncertainty and risks
- ☒ Work

SCALE



DOMAIN

Social

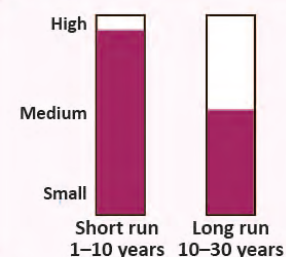


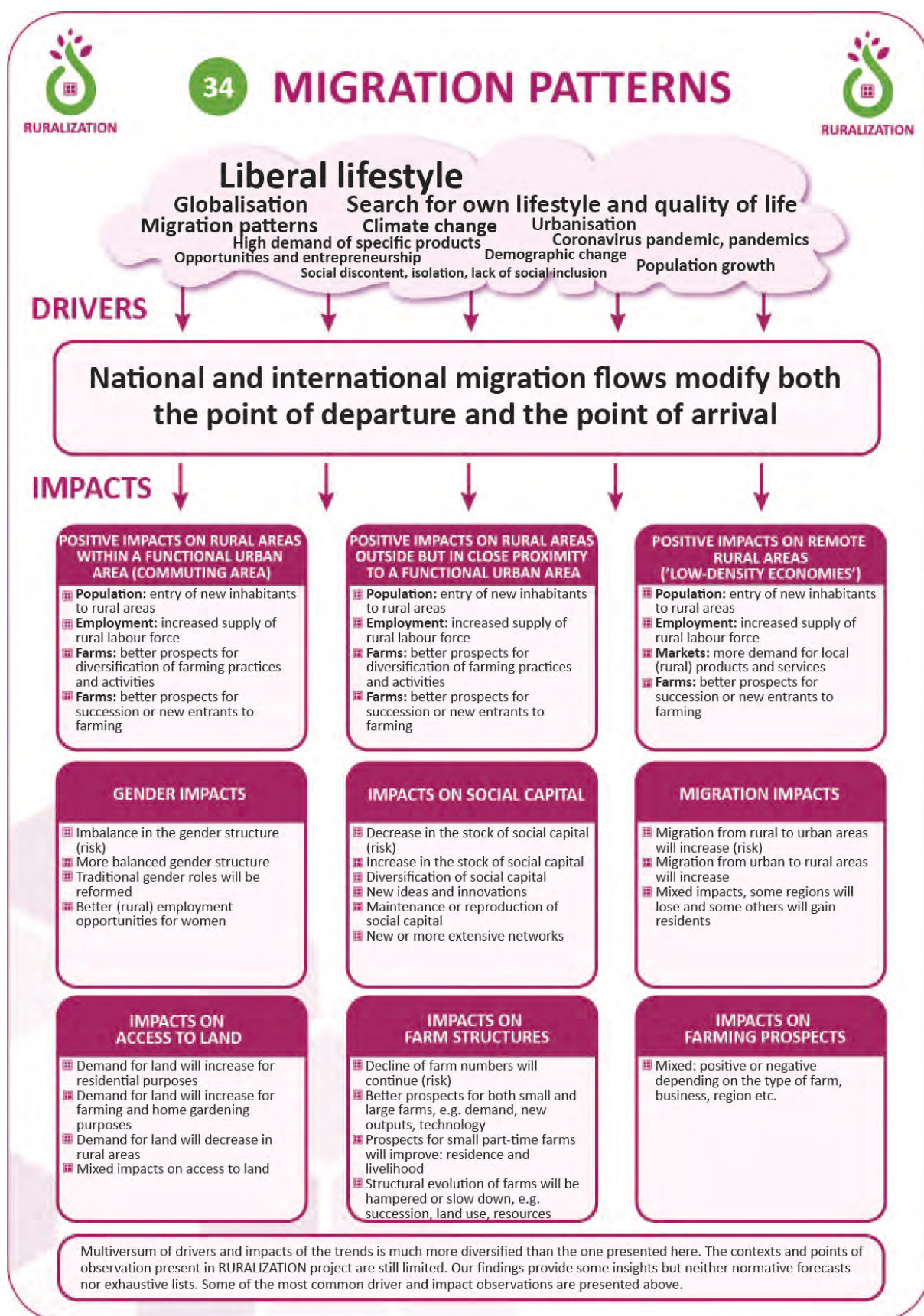
MOSTLY AFFECTED SECTOR

Public services



SIGNIFICANCE FOR RURAL AREAS







RURALIZATION

34

MIGRATIONS PATTERNS

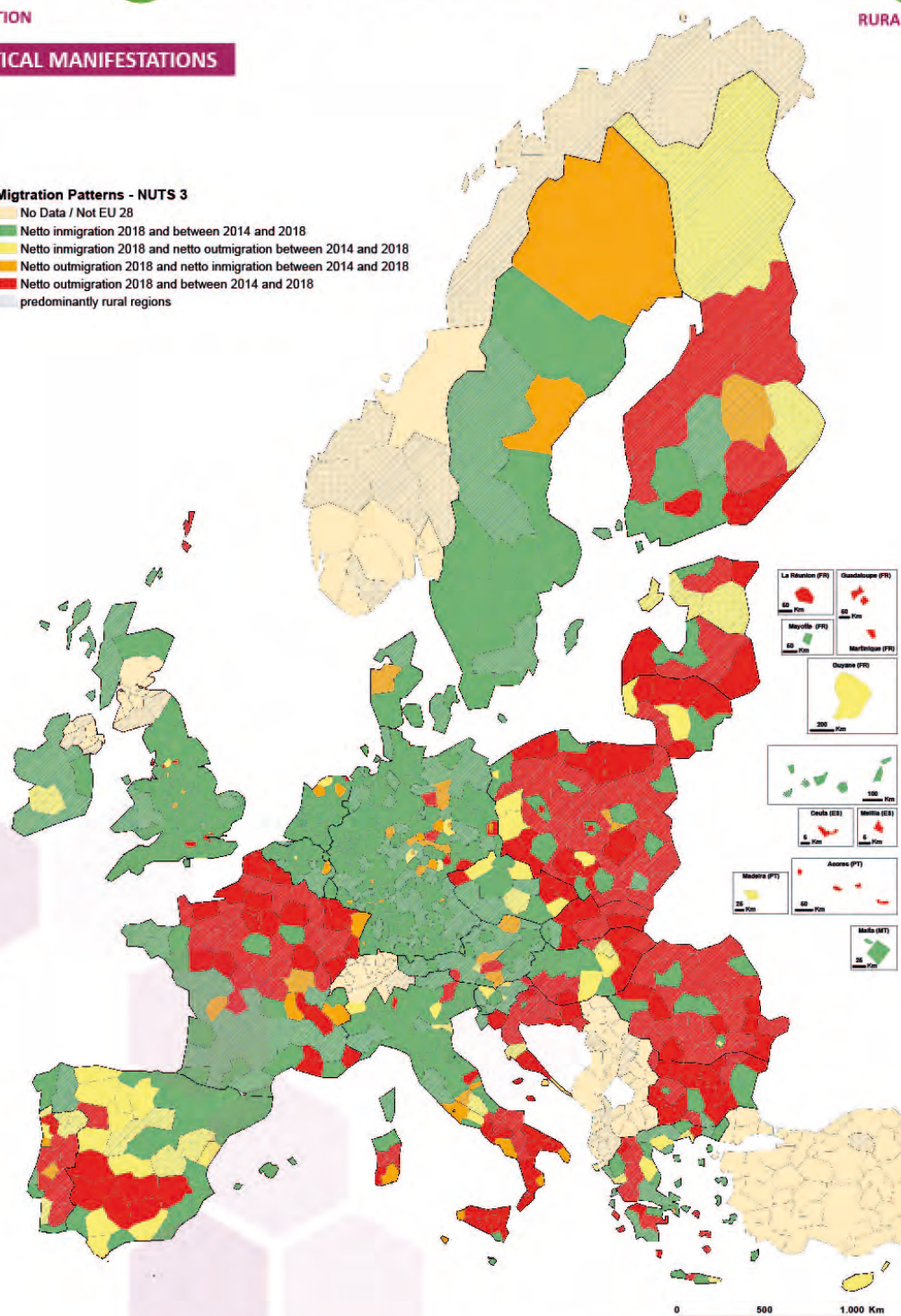


RURALIZATION

STATISTICAL MANIFESTATIONS

Migration Patterns - NUTS 3

- No Data / Not EU 28
- Netto immigration 2018 and between 2014 and 2018
- Netto immigration 2018 and netto outmigration between 2014 and 2018
- Netto outmigration 2018 and netto immigration between 2014 and 2018
- Netto outmigration 2018 and between 2014 and 2018
- predominantly rural regions



The values for the in- and outmigration between 2014 and 2018 are summarized values of the absolute values for the net migration plus statistical adjustment for the years 2014, 2015, 2016, 2017 and 2018

Used Eurostat Datafile: demo_r_gind3



source of shapes and data: EUROSTAT
geographical projection: Mercator (sphere)



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35

MULTI-LOCAL LIVING



Seasonal or periodic living in urban and rural residences

TYPE

- ☐ Megatrend
- ☐ Trend
- ☒ Weak signal

TOPICS

- ☒ Housing
- ☒ Lifestyle
- ☒ Mobility and traffic
- ☒ Policy
- ☒ Regional development
- ☒ Settlement system
- ☒ Work

SCALE



DOMAIN

Social



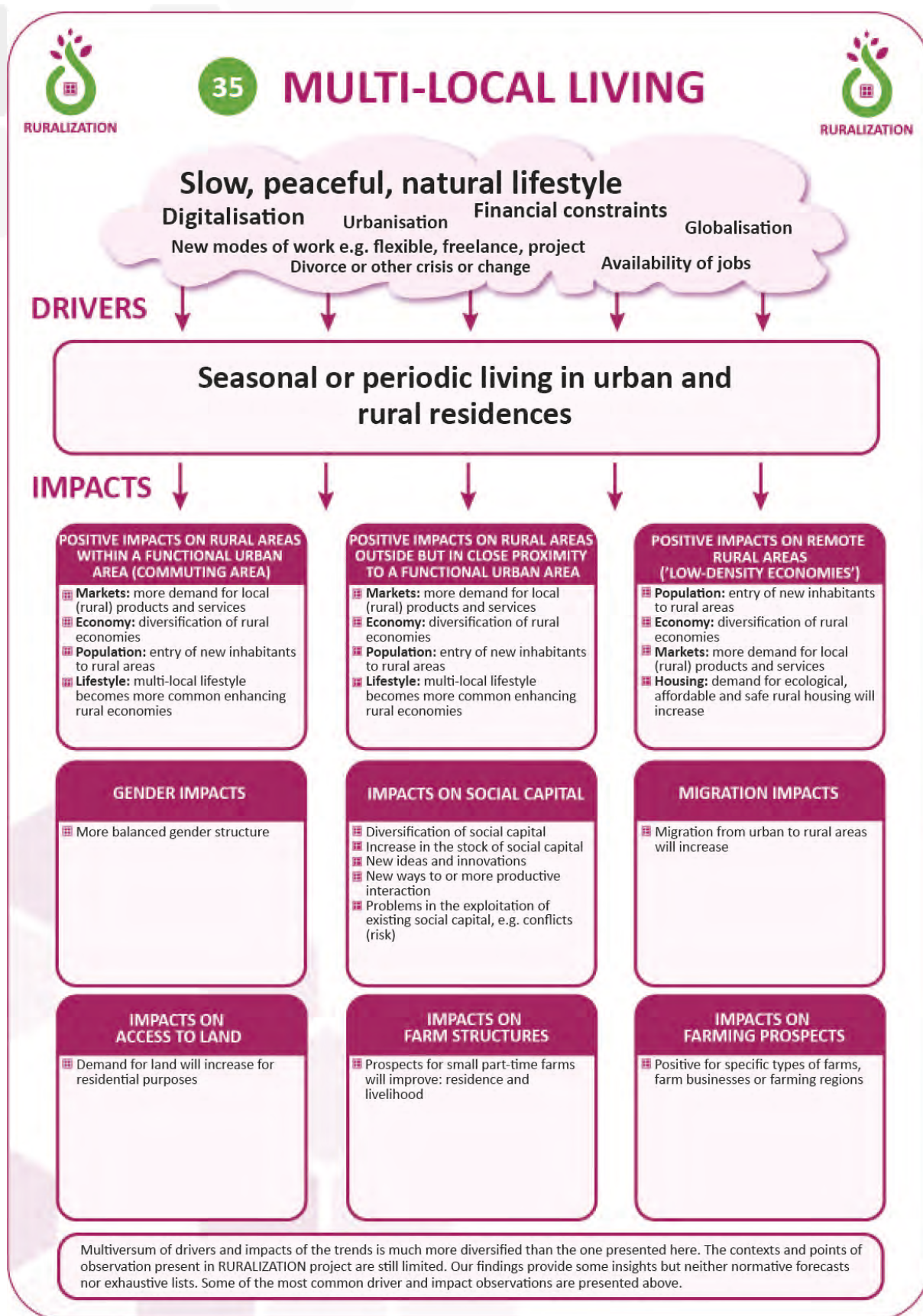
MOSTLY AFFECTED SECTOR

Private services



SIGNIFICANCE FOR RURAL AREAS







36

MULTIFUNCTIONAL FORESTS



Use of forests for economic, social, environmental and cultural purposes: timber, fuel, food, health, recreation, conservation, carbon sink, hiking, education

TYPE

- ☐ Megatrend
- ☒ Trend
- ☐ Weak signal

TOPICS

- ☒ Economic development
- ☒ Energy
- ☒ Environment
- ☒ Farms
- ☒ Forests
- ☒ Policy
- ☒ Sustainability transition

SCALE



DOMAIN

Economic

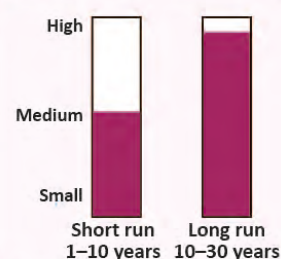


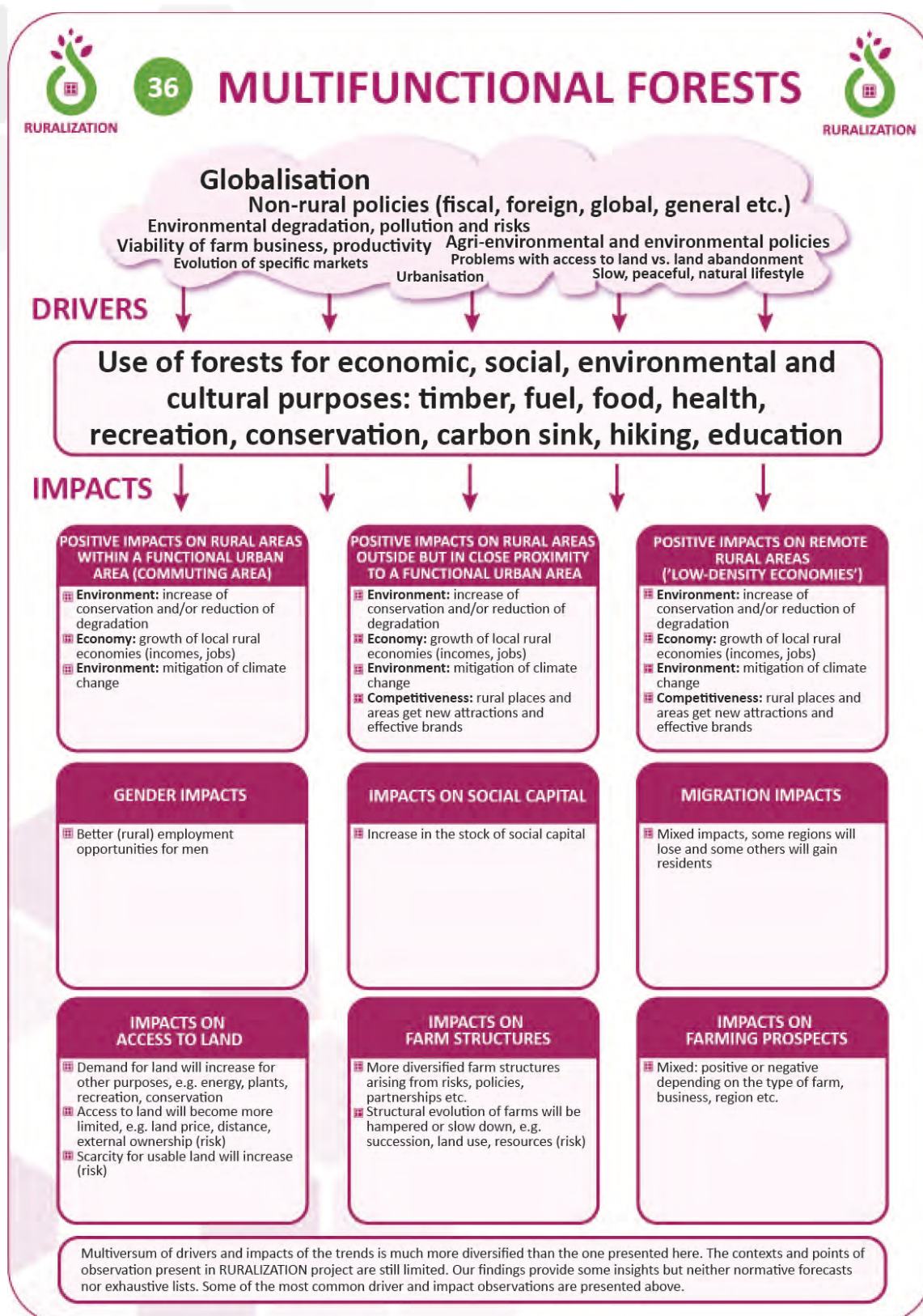
MOSTLY AFFECTED SECTOR

Primary production



SIGNIFICANCE FOR RURAL AREAS







RURALIZATION

36

MULTIFUNCTIONAL FORESTS

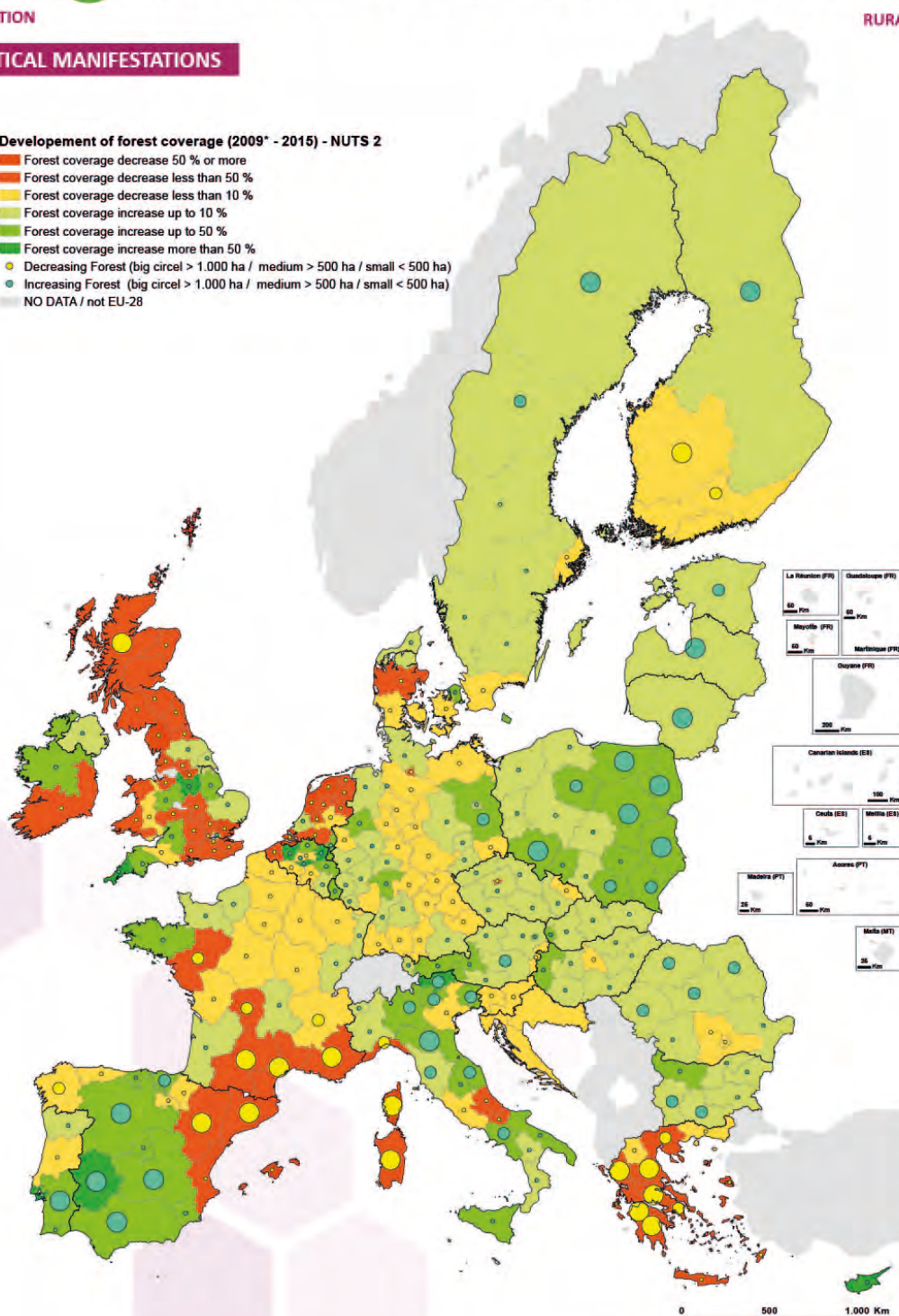


RURALIZATION

STATISTICAL MANIFESTATIONS

Development of forest coverage (2009* - 2015) - NUTS 2

- Forest coverage decrease 50 % or more
- Forest coverage decrease less than 50 %
- Forest coverage decrease less than 10 %
- Forest coverage increase up to 10 %
- Forest coverage increase up to 50 %
- Forest coverage increase more than 50 %
- Decreasing Forest (big circle > 1.000 ha / medium > 500 ha / small < 500 ha)
- Increasing Forest (big circle > 1.000 ha / medium > 500 ha / small < 500 ha)
- NO DATA / not EU-28



*for Bulgaria, Cyprus and Romania the year 2012 is reference
Used Eurostat Datafile: lan_use_oww



source of shapes and data: EUROSTAT
geographical projection: Mercator (sphere)



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37

NATURAL AND CULTURAL HERITAGE



Natural and cultural heritage carry on valuable environments, fabrics and artefacts from the past which contribute to identity and attractiveness of places

TYPE

- ☐ Megatrend
- ☐ Trend
- ☒ Weak signal

TOPICS

- ☒ Environment
- ☒ Farms
- ☒ Governance
- ☒ Housing
- ☒ Networks and collaboration
- ☒ Regional development
- ☒ Values

SCALE



DOMAIN

Social

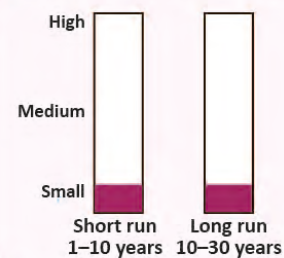


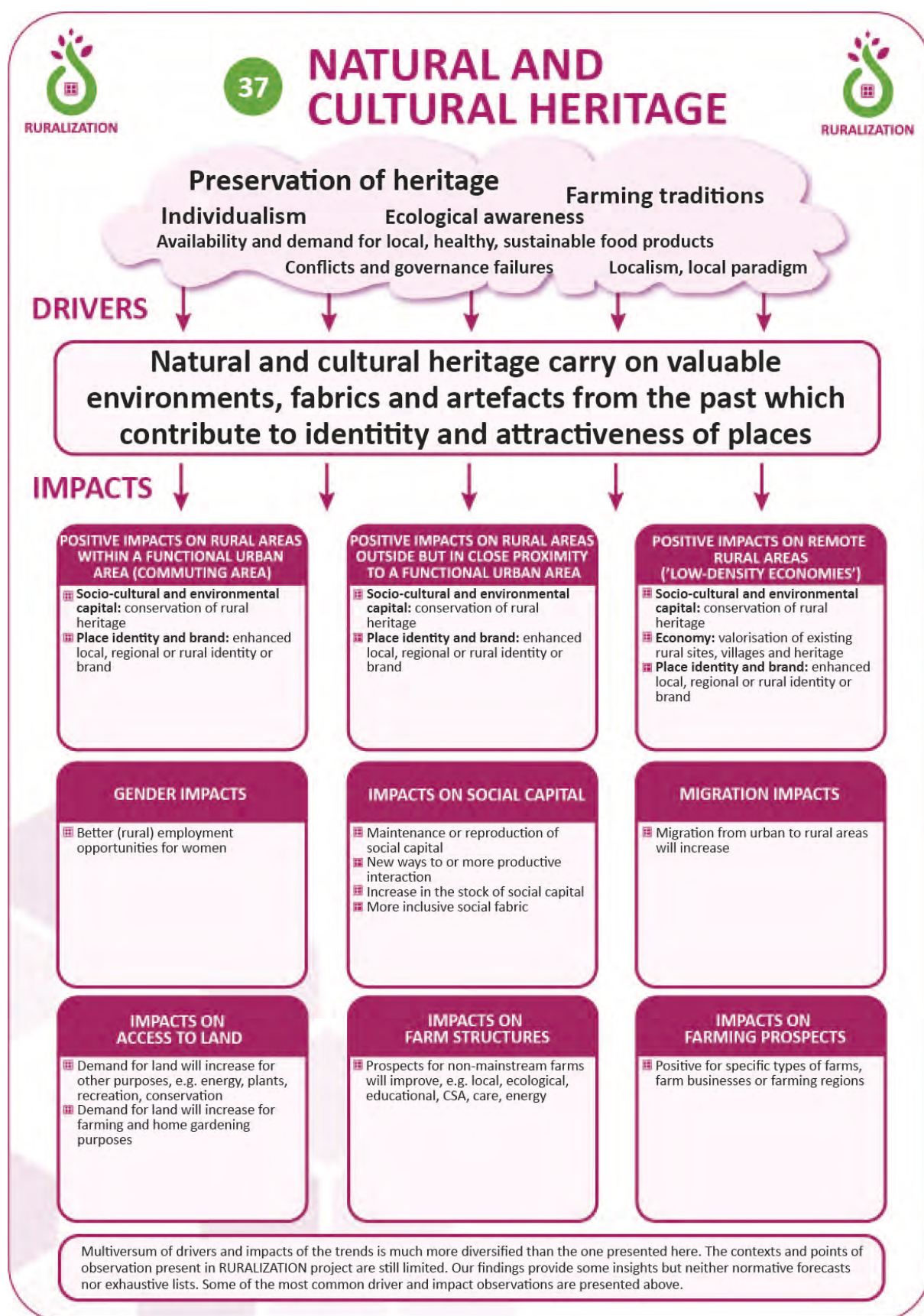
MOSTLY AFFECTED SECTOR

Private services



SIGNIFICANCE FOR RURAL AREAS







38

NEW GOVERNANCE MODELS



The challenge of finding an appropriate governance model for contradictory topics related to regions, use of land and natural resources, advocacy etc.

TYPE

- ☐ Megatrend
- ☐ Trend
- ☒ Weak signal

TOPICS

- ☒ Demographics
- ☒ Food
- ☒ Geopolitics
- ☒ Governance
- ☒ Housing
- ☒ Lifestyle
- ☒ Networks and collaboration
- ☒ Policy
- ☒ Regional development
- ☒ Uncertainty and risks

SCALE



DOMAIN

Political

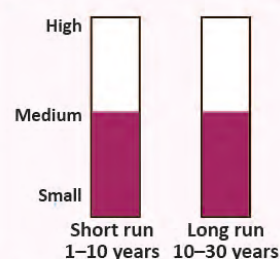


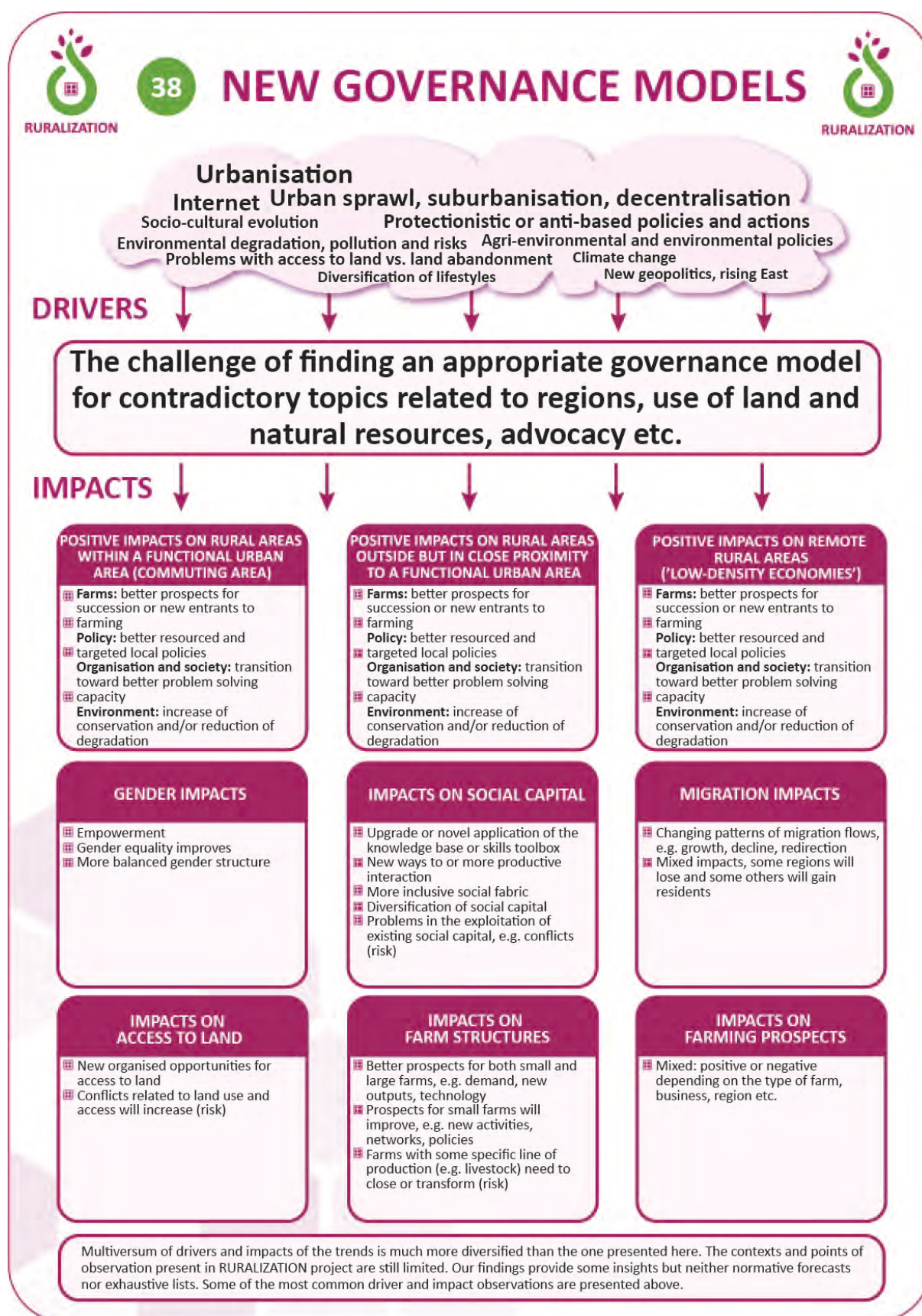
MOSTLY AFFECTED SECTOR

Primary production



SIGNIFICANCE FOR RURAL AREAS

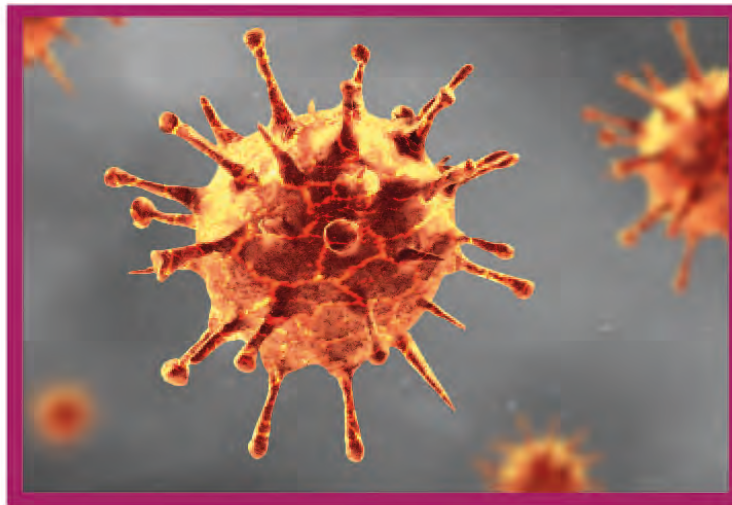






39

PANDEMICS AND EPIDEMICS



More frequent or more dangerous epidemic diseases would affect whole societies and could increase preference for safe rural living environments

TYPE

- ☐ Megatrend
- ☐ Trend
- ☒ Weak signal

TOPICS

- ☒ Food
- ☒ Housing
- ☒ Regional development
- ☒ Uncertainty and risks

SCALE



DOMAIN

Social

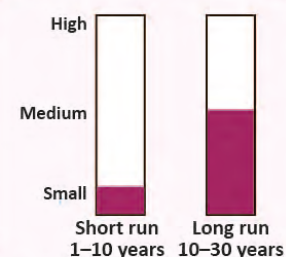


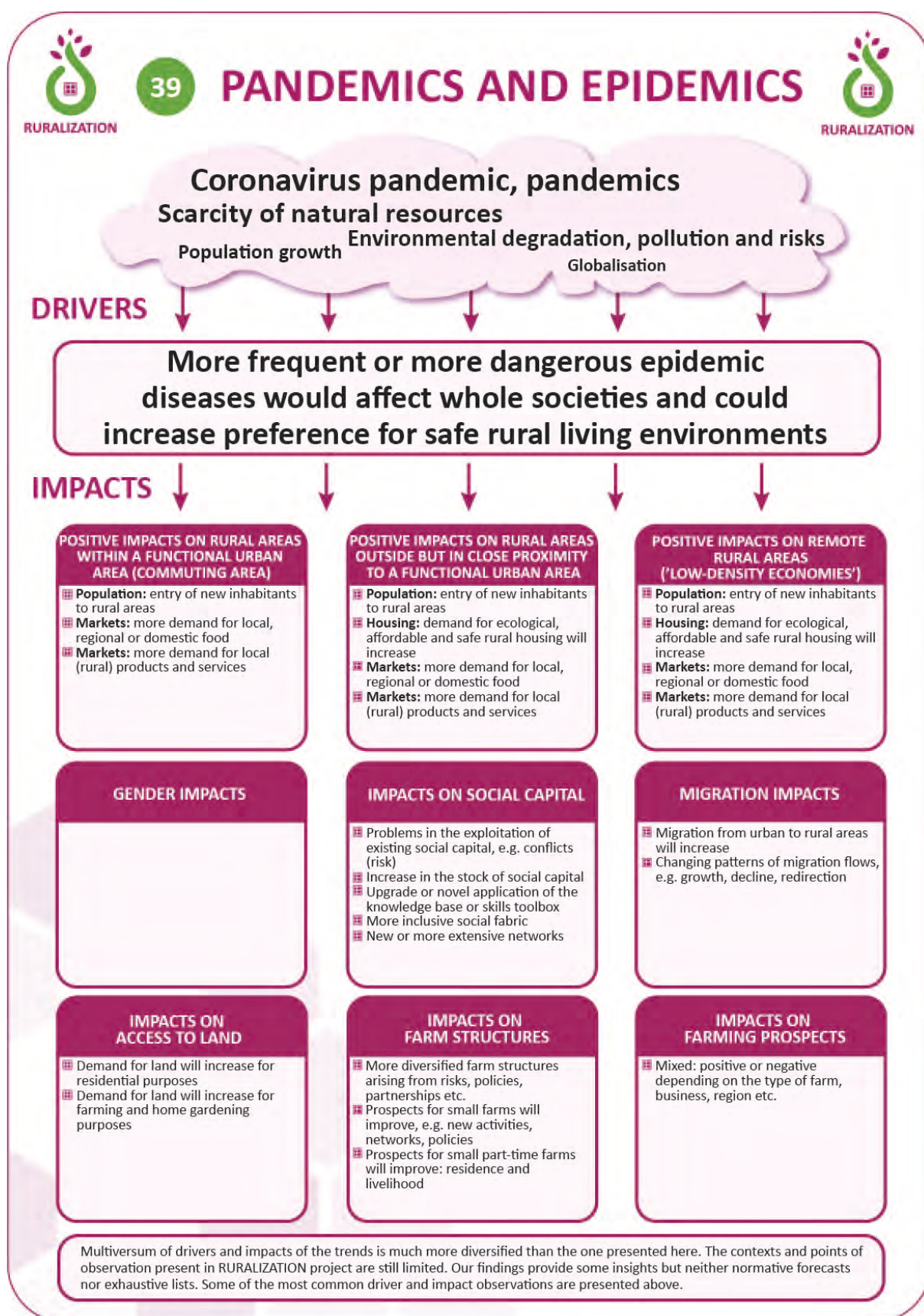
MOSTLY AFFECTED SECTOR

Public services



SIGNIFICANCE FOR RURAL AREAS







RURALIZATION

40

PLACE BRANDING



RURALIZATION



Development, management and communication of images, affections and brands related to specific places

TYPE

- ☐ Megatrend
- ☐ Trend
- ☒ Weak signal

TOPICS

- ☒ Communication
- ☒ Lifestyle
- ☒ Food
- ☒ Regional development
- ☒ Tourism
- ☒ Trade

SCALE



DOMAIN

Economic

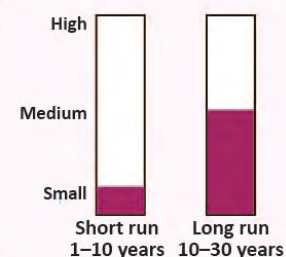


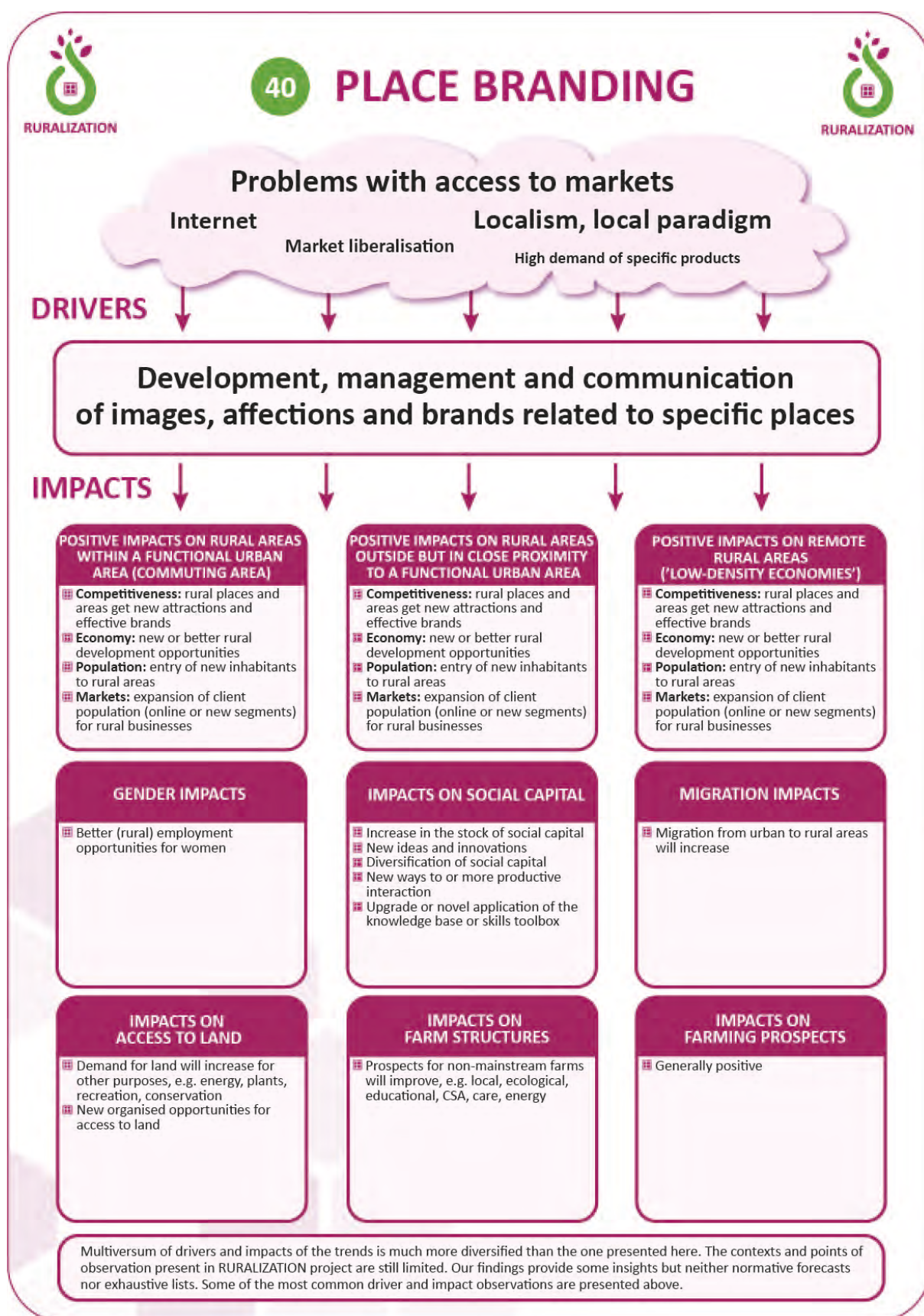
MOSTLY AFFECTED SECTOR

Private services



SIGNIFICANCE FOR RURAL AREAS







41

POLICY INCIDENCE AND EFFECTIVENESS



The challenge of effective policy design and delivery in service of several objectives while also facing large diversity of contexts

TYPE


- ☐ Megatrend
- ☒ Trend
- ☐ Weak signal

TOPICS

- ☒ Environment
- ☒ Farms
- ☒ Food
- ☒ Governance
- ☒ Policy
- ☒ Regional development
- ☒ Rural services
- ☒ Uncertainty and risks

SCALE

European



DOMAIN

Political

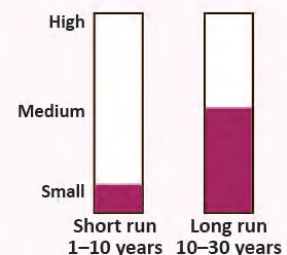


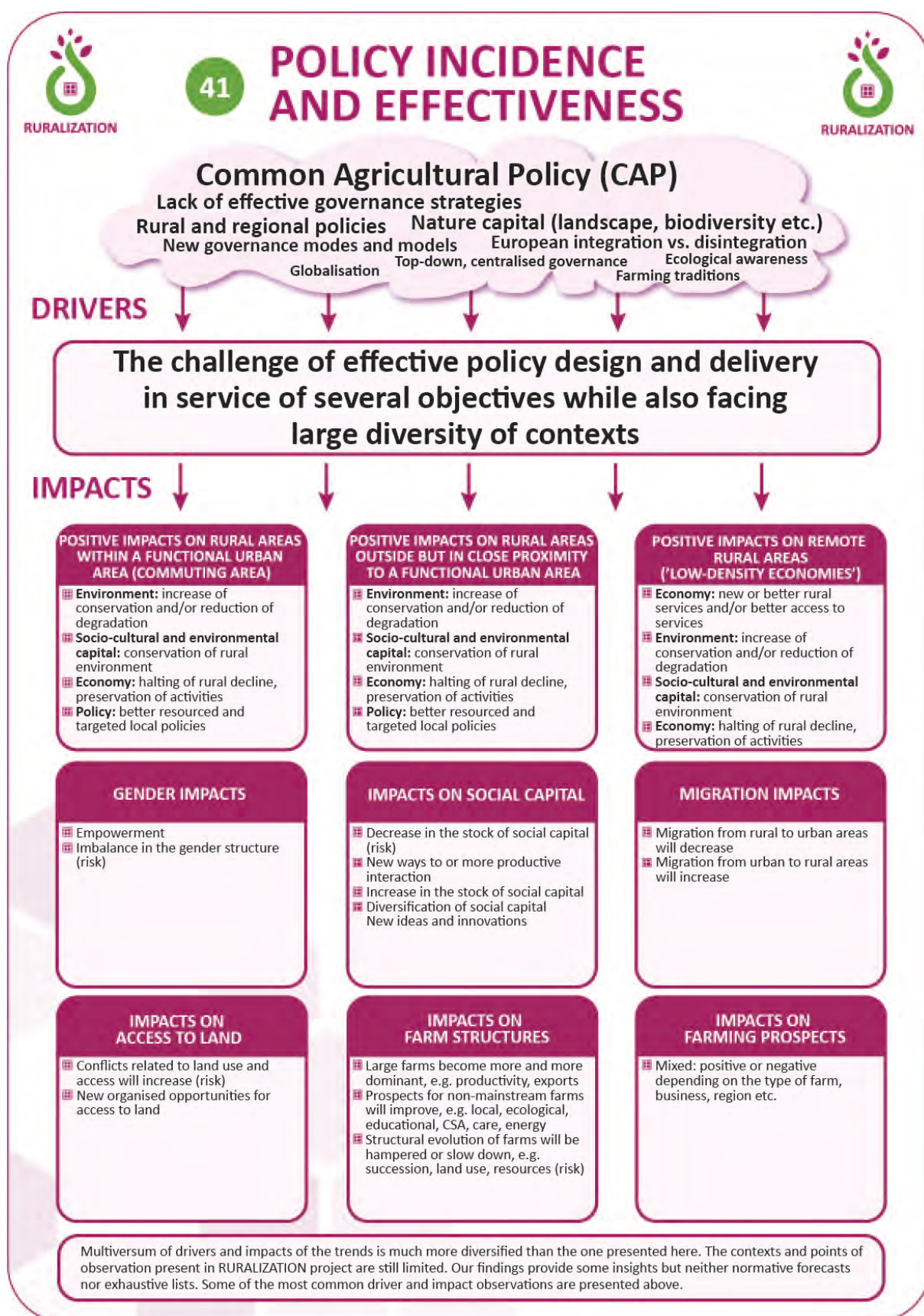
MOSTLY AFFECTED SECTOR

Primary production



SIGNIFICANCE FOR RURAL AREAS







42

POP-UP CULTURE AND GIG ECONOMY



Pop-up restaurants, shops, cinemas, art projects, camps, charity events etc. and short-term work engagements or stays

TYPE

- ☐ Megatrend
- ☐ Trend
- ☒ Weak signal

TOPICS

- ☒ Housing
- ☒ Lifestyle
- ☒ Migration
- ☒ Mobility and traffic
- ☒ Rural services
- ☒ Tourism
- ☒ Work

SCALE



DOMAIN

Economic

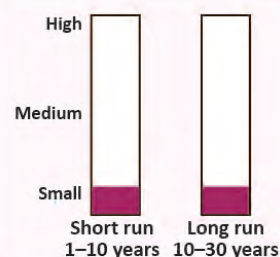


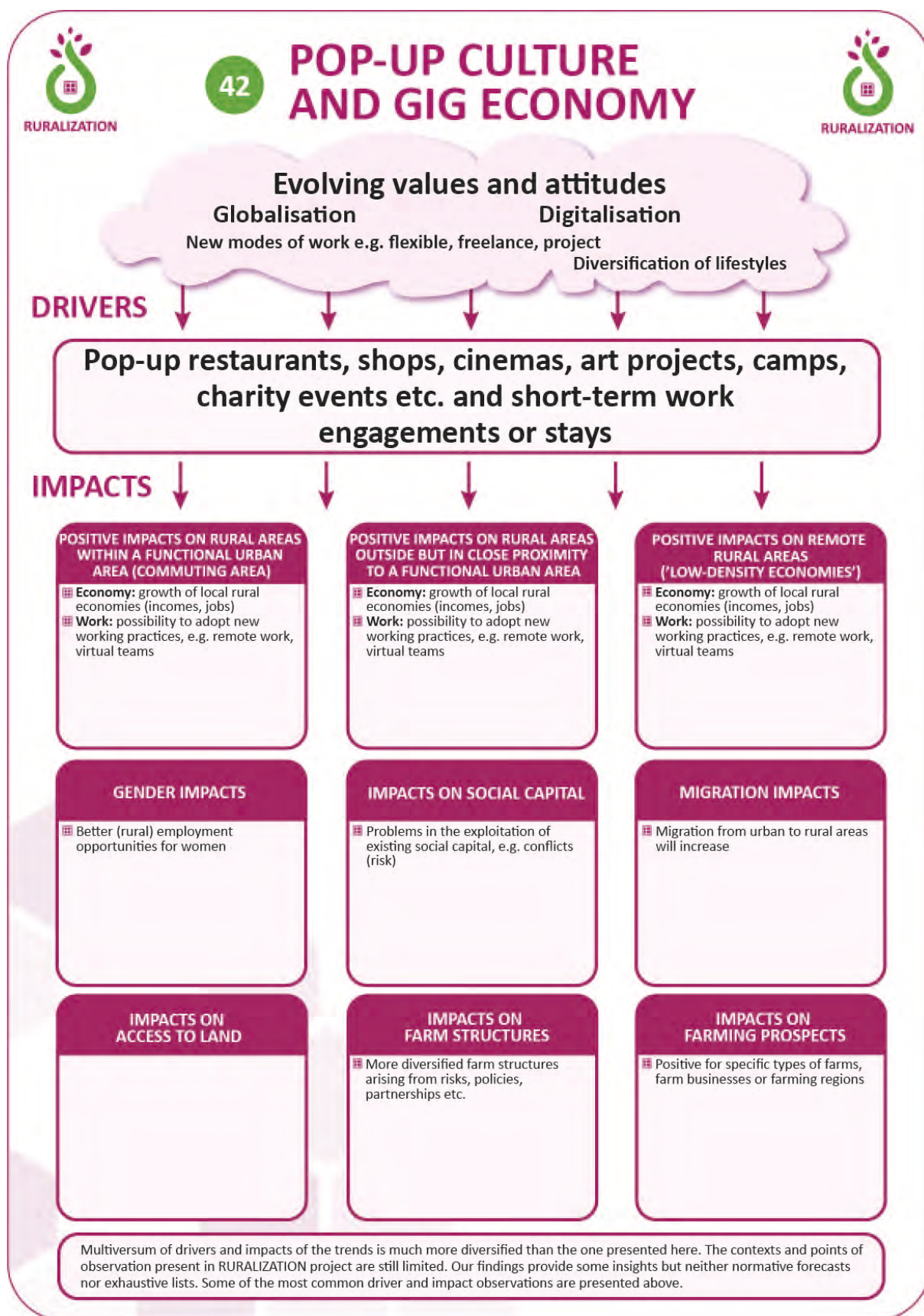
MOSTLY AFFECTED SECTOR

Private services



SIGNIFICANCE FOR RURAL AREAS







RURALIZATION

43

PUBLIC GOODS



RURALIZATION



Non-excludable and non-rivalrous goods open to all: national security, air, landscape, public media, many ecosystem services

TYPE

- ☐ Megatrend
- ☐ Trend
- ☒ Weak signal

TOPICS

- ☒ Environment
- ☒ Governance
- ☒ Policy
- ☒ Regional development
- ☒ Trade

SCALE



DOMAIN

Social

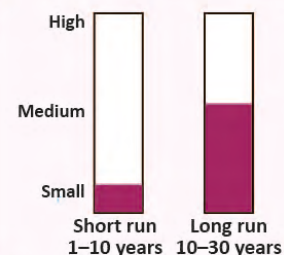


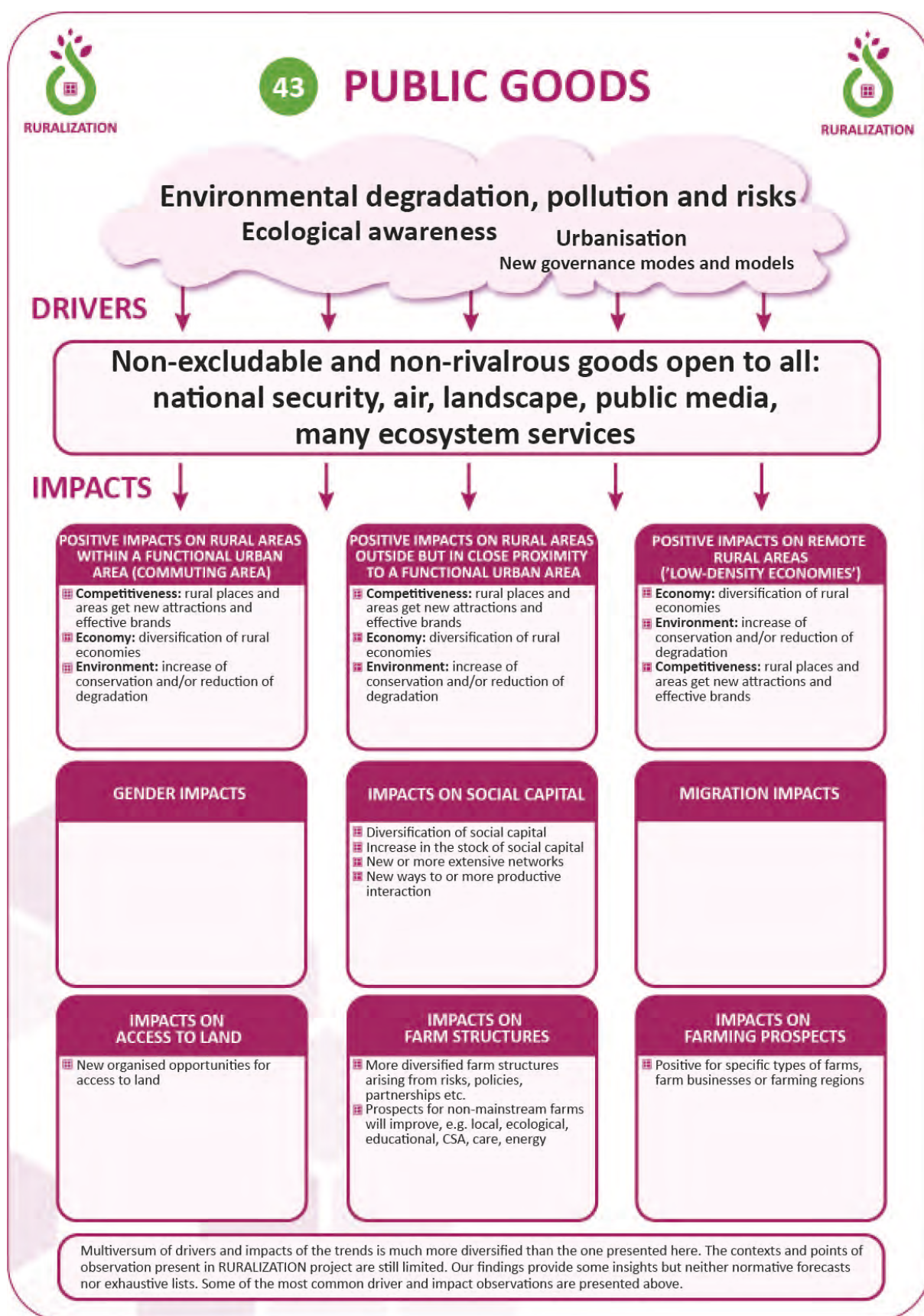
MOSTLY AFFECTED SECTOR

Public services



SIGNIFICANCE FOR RURAL AREAS







RURALIZATION

44

REMOTE WORK



RURALIZATION



Working from outside of a traditional office environment e.g. from home or in rural hubs, which saves commuting time and the environment

TYPE


- ☐ Megatrend
- ☒ Trend
- ☐ Weak signal

TOPICS

- ☒ Environment
- ☒ Housing
- ☒ Infrastructure
- ☒ Mobility and traffic
- ☒ Technology
- ☒ Work

SCALE

European



DOMAIN

Economic

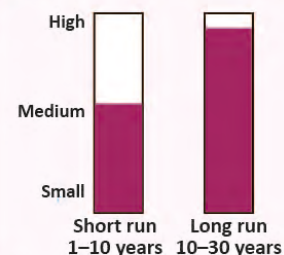


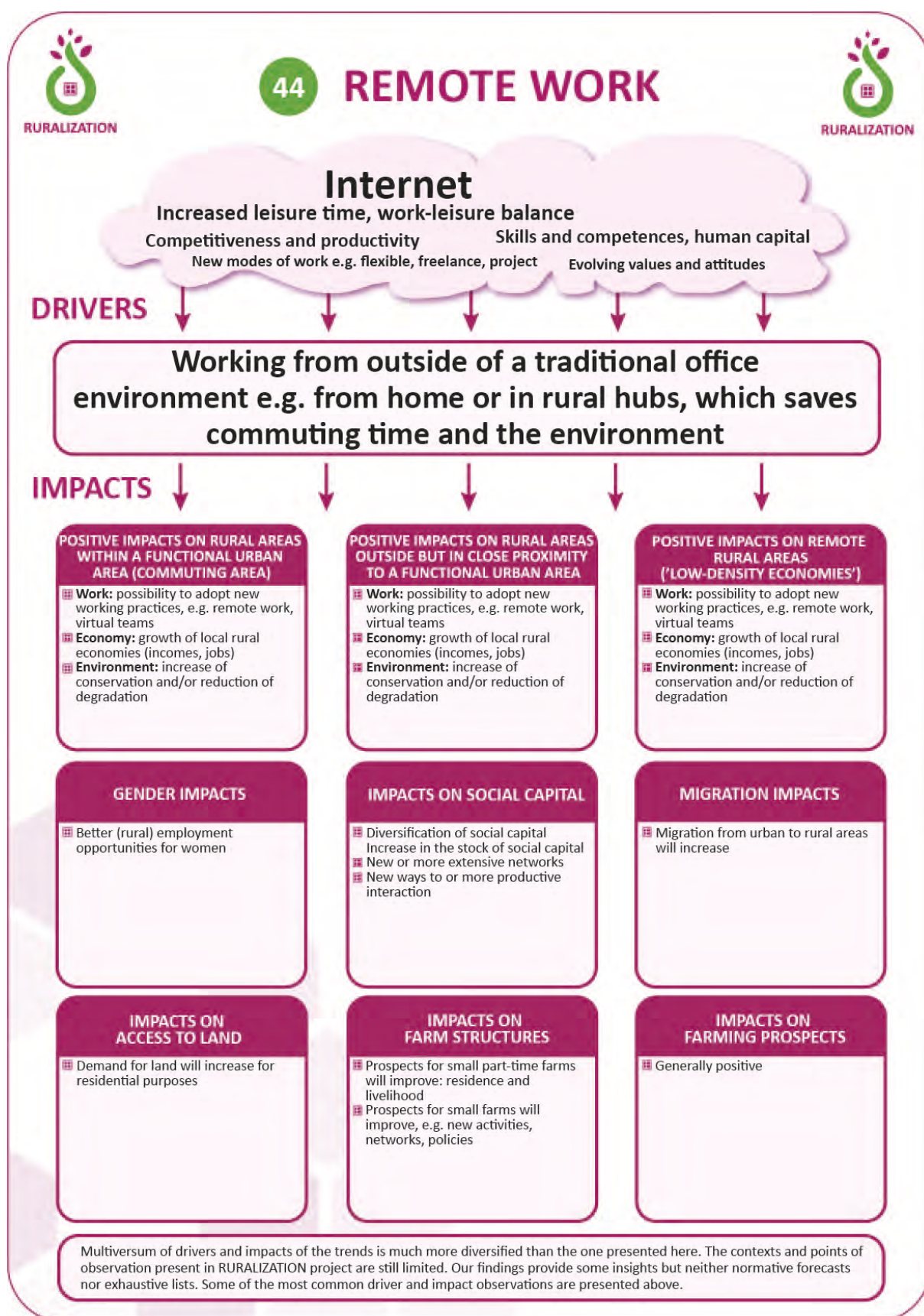
MOSTLY AFFECTED SECTOR

Private services



SIGNIFICANCE FOR RURAL AREAS







RURALIZATION

44

REMOTE WORK

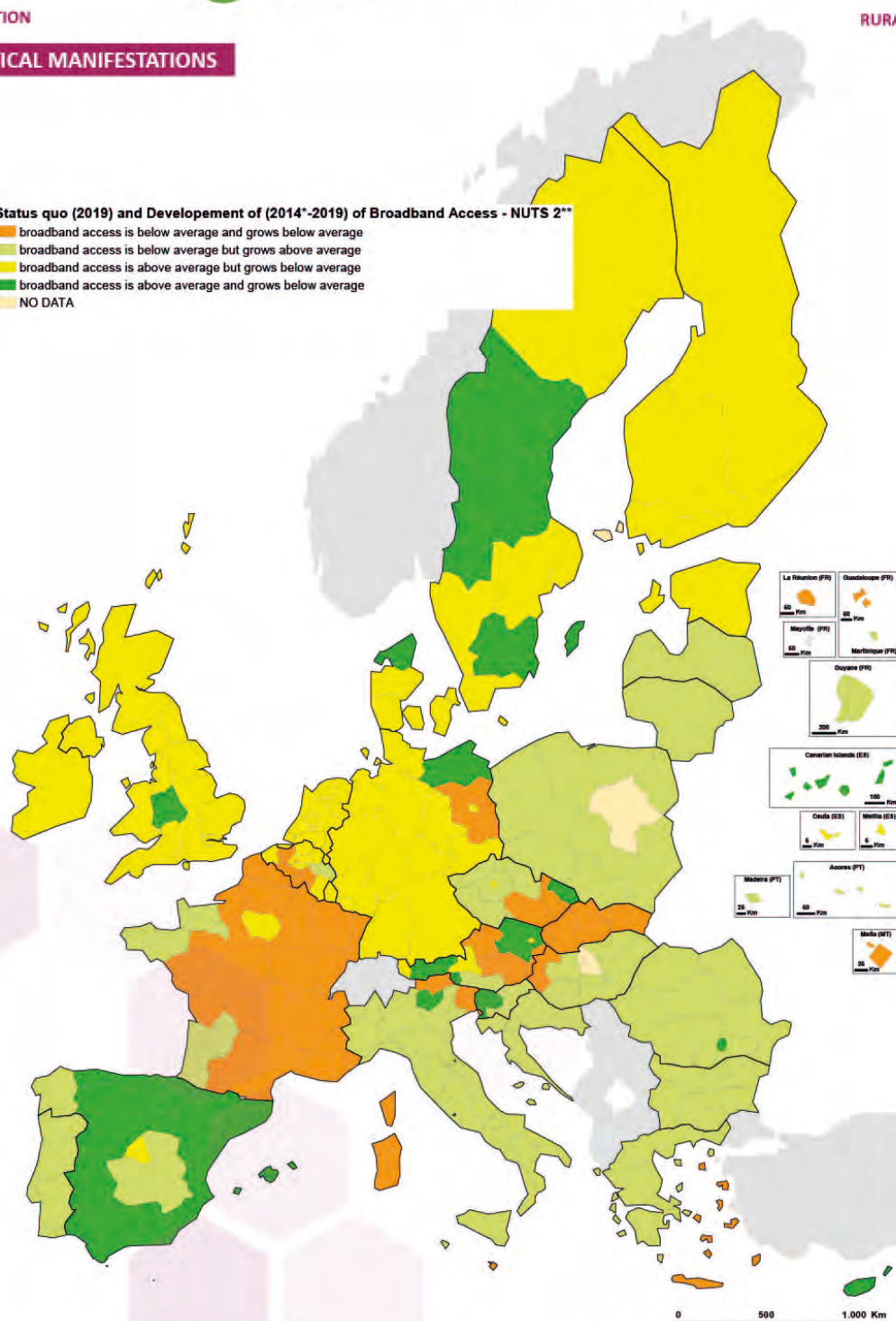


RURALIZATION

STATISTICAL MANIFESTATIONS

Status quo (2019) and Development of (2014*-2019) of Broadband Access - NUTS 2**

- orange broadband access is below average and grows below average
- light green broadband access is below average but grows above average
- yellow broadband access is above average but grows below average
- dark green broadband access is above average and grows below average
- light orange NO DATA



*for the overseas territories of France 2015 is reference and not 2014

**for Germany, Greece, Ireland, Lithuania, Poland and UK values are displayed on NUTS 1 level

Used Eurostat Datafile: isoc_r_broad_h

source of shapes and data: EUROSTAT
geographical projection: Mercator (sphere)

"The project RURALIZATION has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement 817642."



45

RESILIENCE



Capability of various systems (e.g. food, energy) to meet their purpose in all situations asks for maintenance of diversity and adaptive capacities

TYPE

- ☐ Megatrend
- ☐ Trend
- ☒ Weak signal

TOPICS

- ☒ Energy
- ☒ Farms
- ☒ Food
- ☒ Infrastructure
- ☒ Policy
- ☒ Technology
- ☒ Regional development
- ☒ Socio-economic models
- ☒ Uncertainty and risks

SCALE



DOMAIN

Political

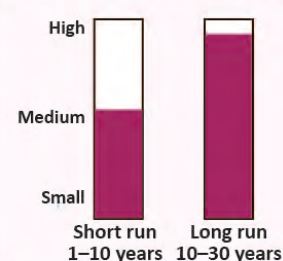


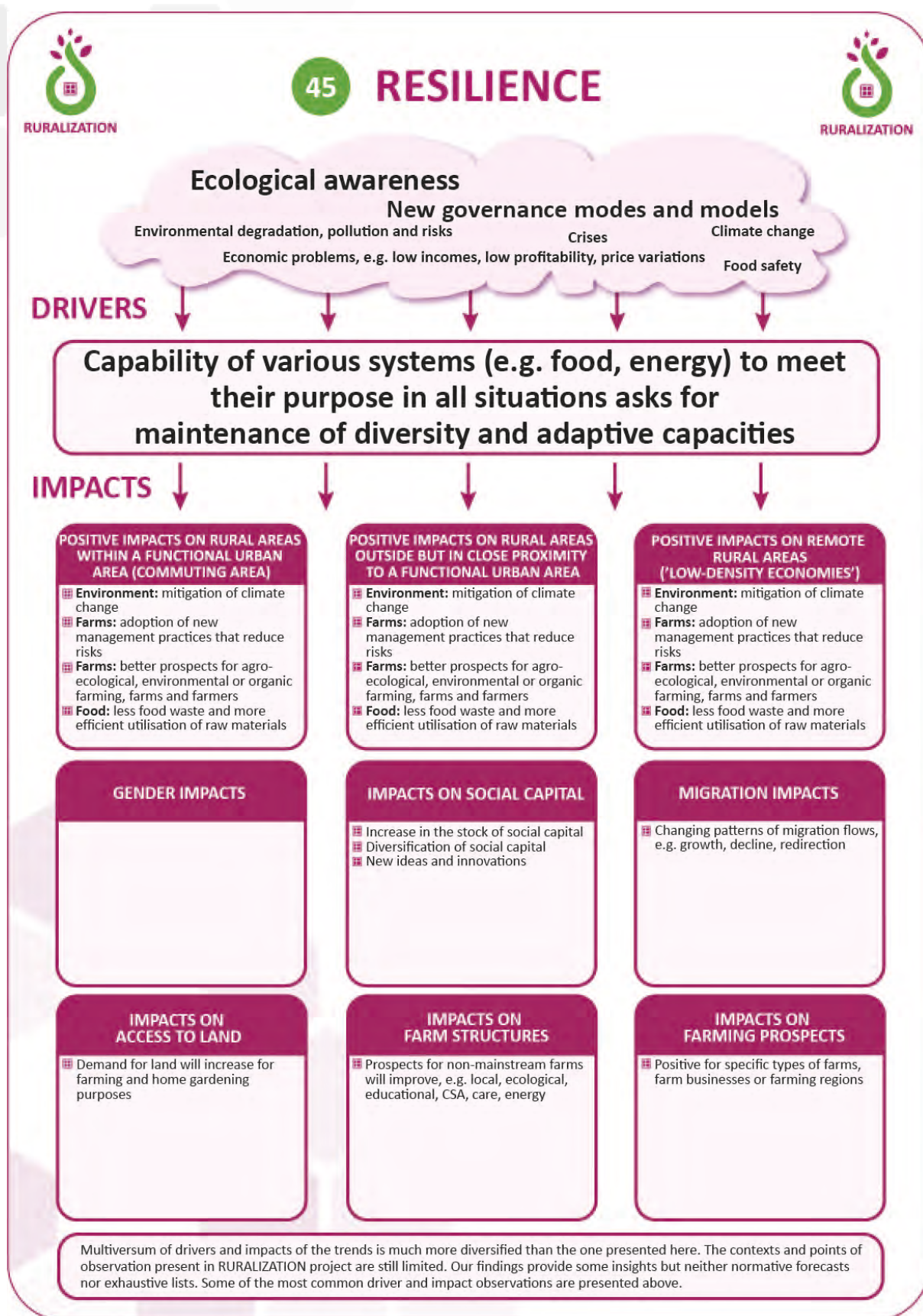
MOSTLY AFFECTED SECTOR

Primary production



SIGNIFICANCE FOR RURAL AREAS







46

RURAL ARTISANS



Artisanal and craft production of food, beverages and traditional products maintain small businesses and vitality of the rural areas, skills and cultures

TYPE

- ☐ Megatrend
- ☐ Trend
- ☒ Weak signal

TOPICS

- ☒ Food
- ☒ Lifestyle
- ☒ Regional development
- ☒ Tourism
- ☒ Trade
- ☒ Work

SCALE



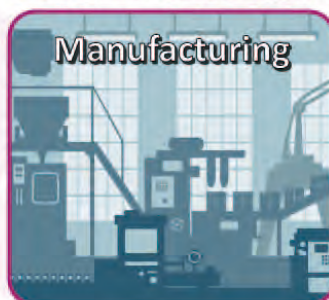
DOMAIN

Economic

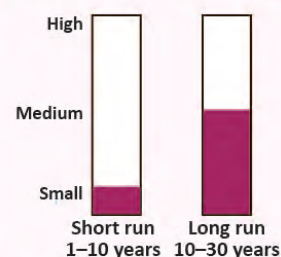


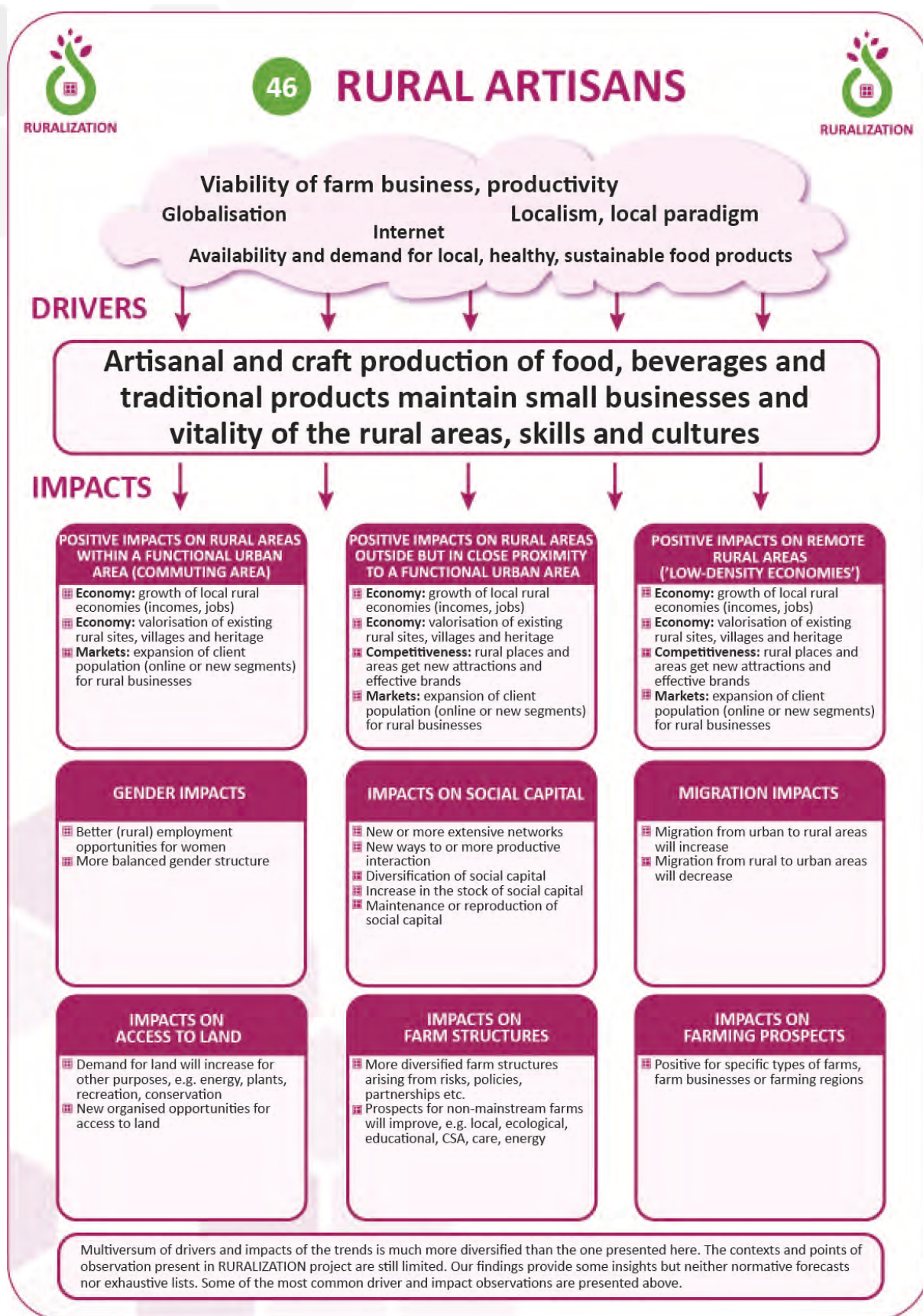
MOSTLY AFFECTED SECTOR

Manufacturing



SIGNIFICANCE FOR RURAL AREAS







47

RURAL BUSINESS SUCCESSION



Large share of farmers and rural entrepreneurs will retire soon providing opportunities for young people to take over their businesses

TYPE

- ☐ Megatrend
- ☒ Trend
- ☐ Weak signal

TOPICS

- ☒ Demographics
- ☒ Farms
- ☒ Policy

SCALE

European



DOMAIN

Social

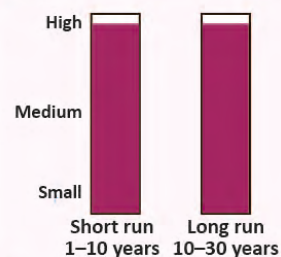


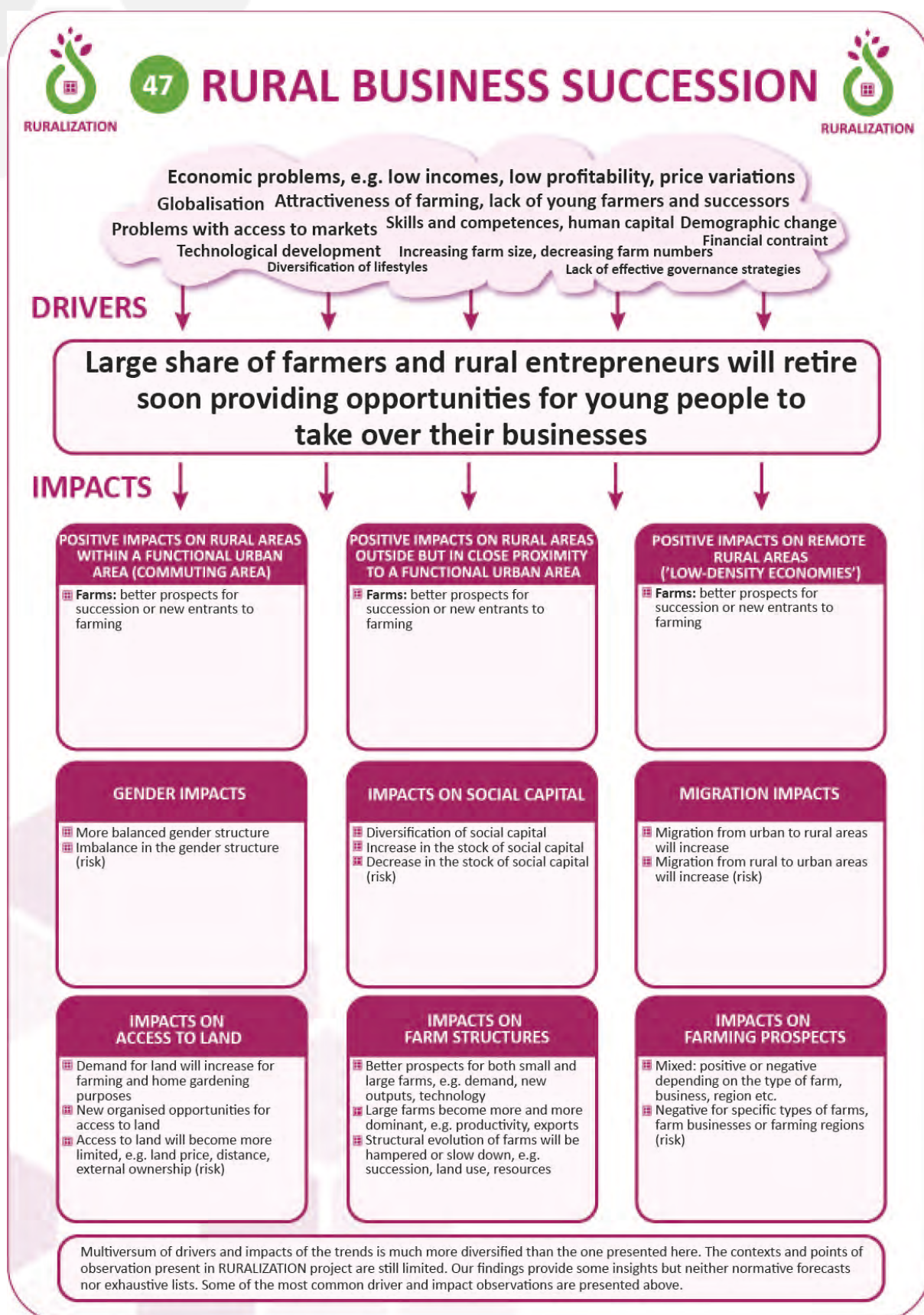
MOSTLY AFFECTED SECTOR

Primary production



SIGNIFICANCE FOR RURAL AREAS







RURALIZATION

47

RURAL BUSINESS SUCCESSION

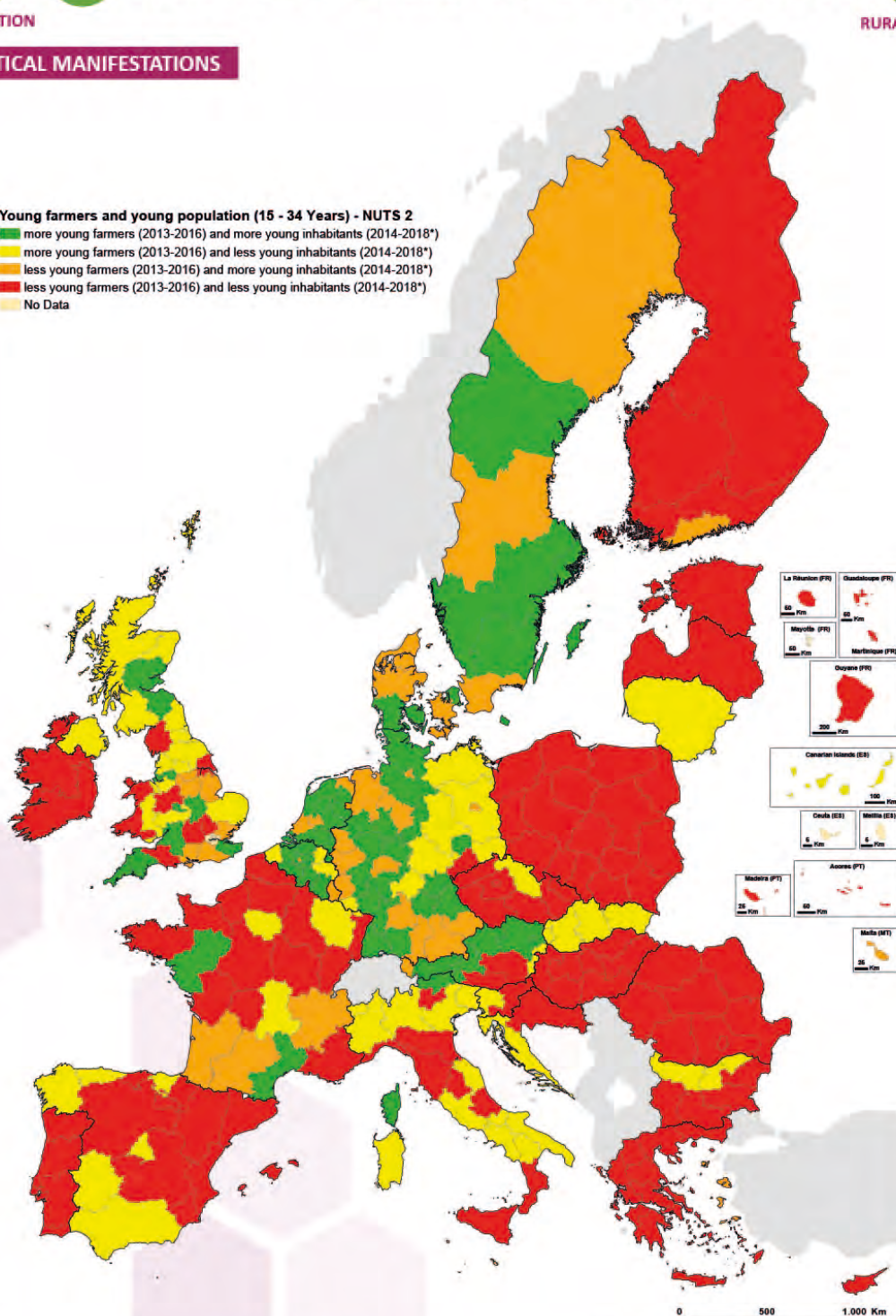


RURALIZATION

STATISTICAL MANIFESTATIONS

Young farmers and young population (15 - 34 Years) - NUTS 2

- more young farmers (2013-2016) and more young inhabitants (2014-2018*)
- more young farmers (2013-2016) and less young inhabitants (2014-2018*)
- less young farmers (2013-2016) and more young inhabitants (2014-2018*)
- less young farmers (2013-2016) and less young inhabitants (2014-2018*)
- No Data



*For the following countries and NUTS 2 Regions the reference is 2017 not 2018:

France / Ireland / Lithuania
HU10 / PL11 / PL12 / PL31 / PL32 / PL33 / PL34 / UKM2 / UKM3

Used Eurostat Datasets: demo_r_pjangroup / ef_m_farmang



source of shapes and data: EUROSTAT
geographical projection: Mercator (sphere)



*The project RURALIZATION has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement 101075642



RURALIZATION

47

RURAL BUSINESS SUCCESSION

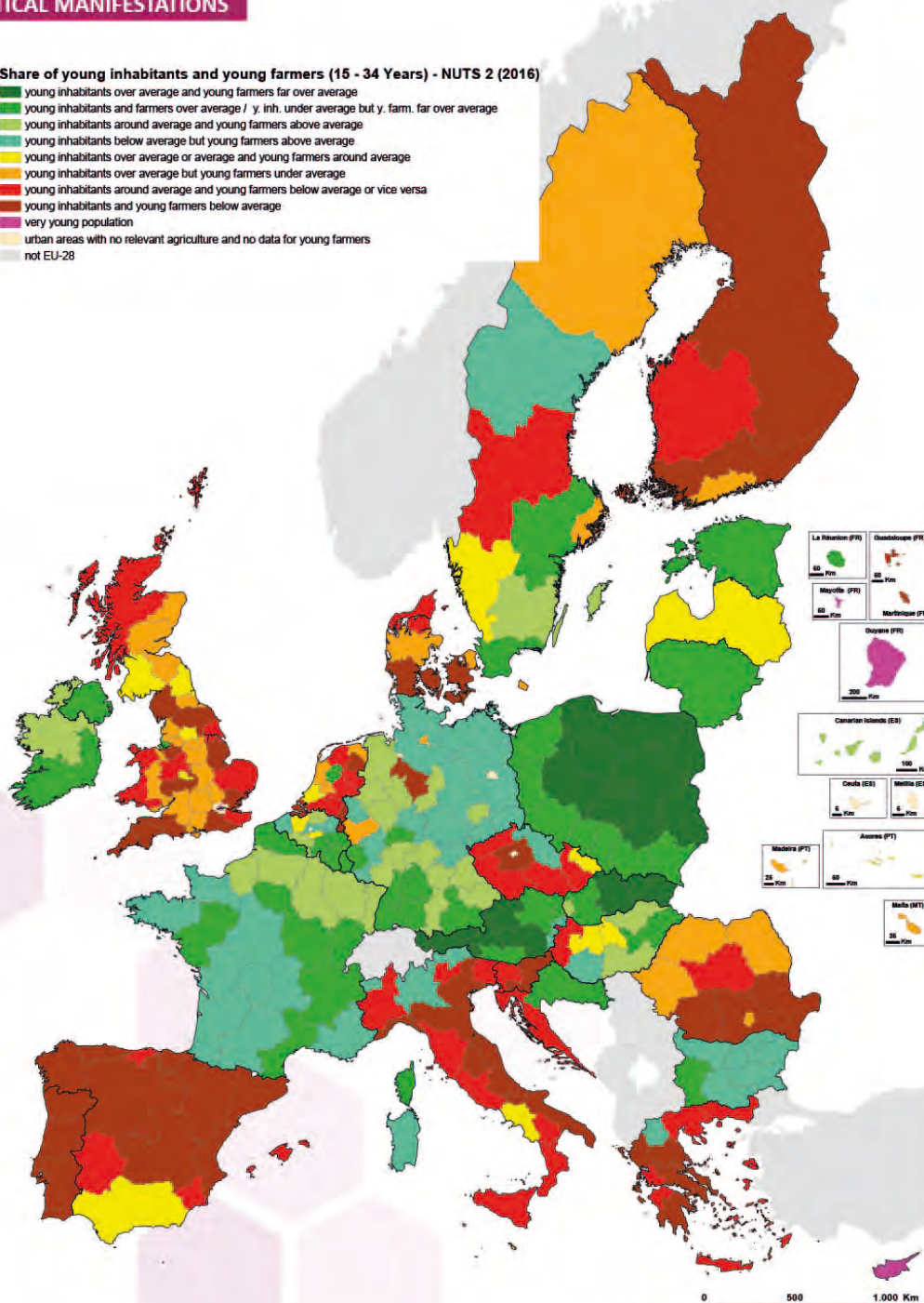


RURALIZATION

STATISTICAL MANIFESTATIONS

Share of young inhabitants and young farmers (15 - 34 Years) - NUTS 2 (2016)

- young inhabitants over average and young farmers far over average
- young inhabitants and farmers over average / y. inh. under average but y. farm. far over average
- young inhabitants around average and young farmers above average
- young inhabitants below average but young farmers above average
- young inhabitants over average or average and young farmers around average
- young inhabitants over average but young farmers under average
- young inhabitants around average and young farmers below average or vice versa
- young inhabitants and young farmers below average
- very young population
- urban areas with no relevant agriculture and no data for young farmers
- not EU-28



Used Eurostat Datasets: demo_r_pjangroup / ef_m_farmanag



source of shapes and data: EUROSTAT
geographical projection: Mercator (sphere)



"The project RURALIZATION has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement ID 817642"



48

RURAL ENERGY COMMUNITIES



Community owned wind farms, solar energy systems and bioenergy plants contribute to multidimensional sustainable development

TYPE

- ☐ Megatrend
- ☐ Trend
- ☒ Weak signal

TOPICS

- ☒ Energy
- ☒ Governance
- ☒ Networks and collaboration
- ☒ Policy
- ☒ Rural services
- ☒ Sustainability transition

SCALE



DOMAIN

Economic

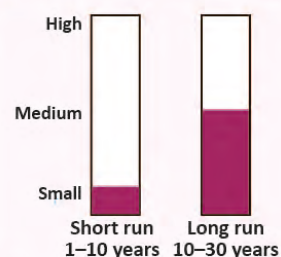


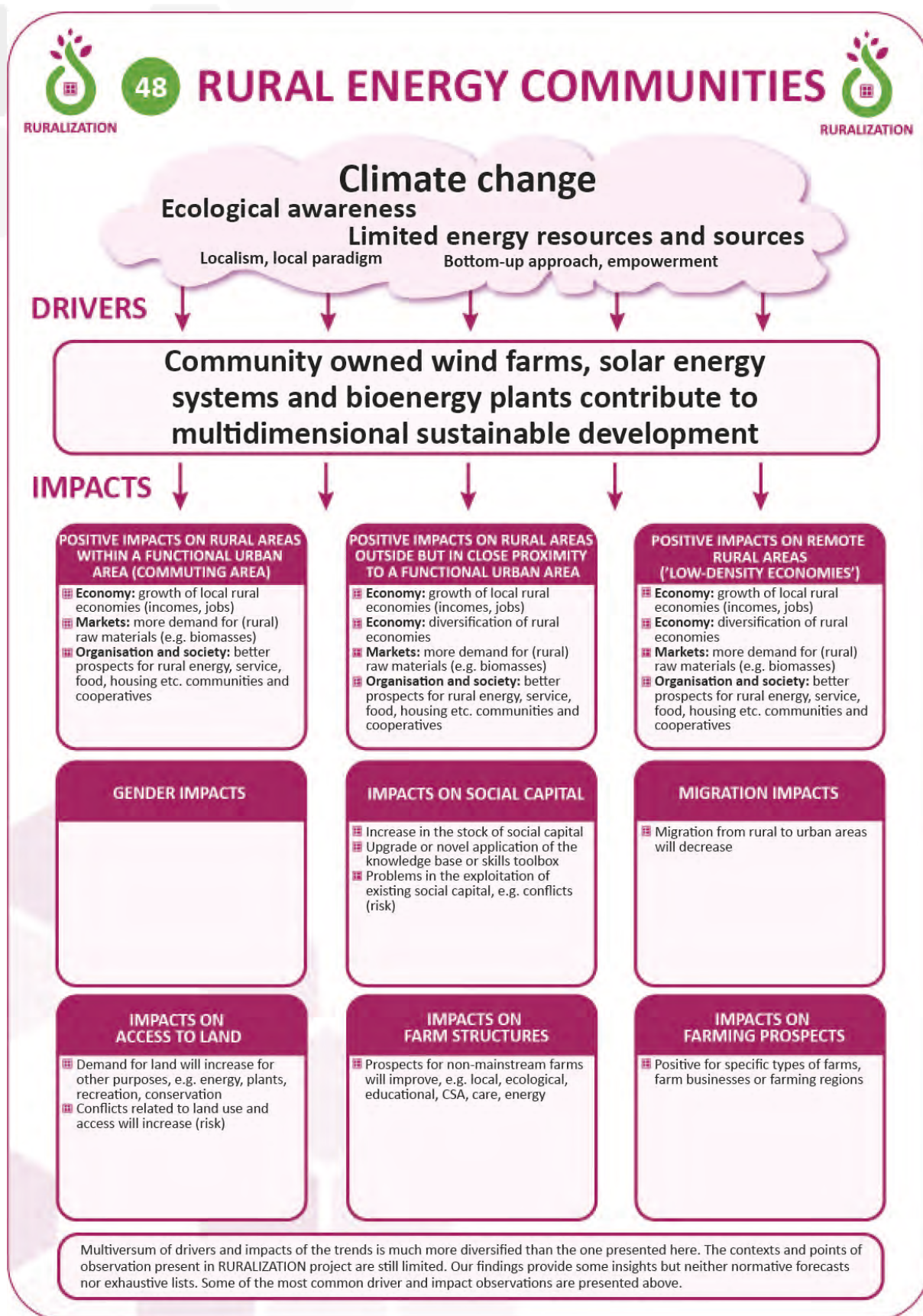
MOSTLY AFFECTED SECTOR

Private services



SIGNIFICANCE FOR RURAL AREAS







49

RURAL HUBS



Multi-purpose spaces offering coworking and meeting facilities, broadband access, workstations, activity arenas and possibly some business services

TYPE

- ☐ Megatrend
- ☐ Trend
- ☒ Weak signal

TOPICS

- ☒ Infrastructure
- ☒ Networks and collaboration
- ☒ Regional development
- ☒ Rural services
- ☒ Science, education and knowledge
- ☒ Work

SCALE



DOMAIN

Social

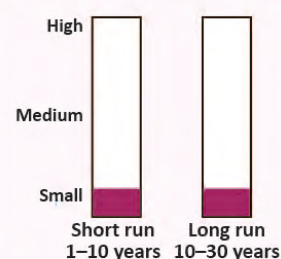


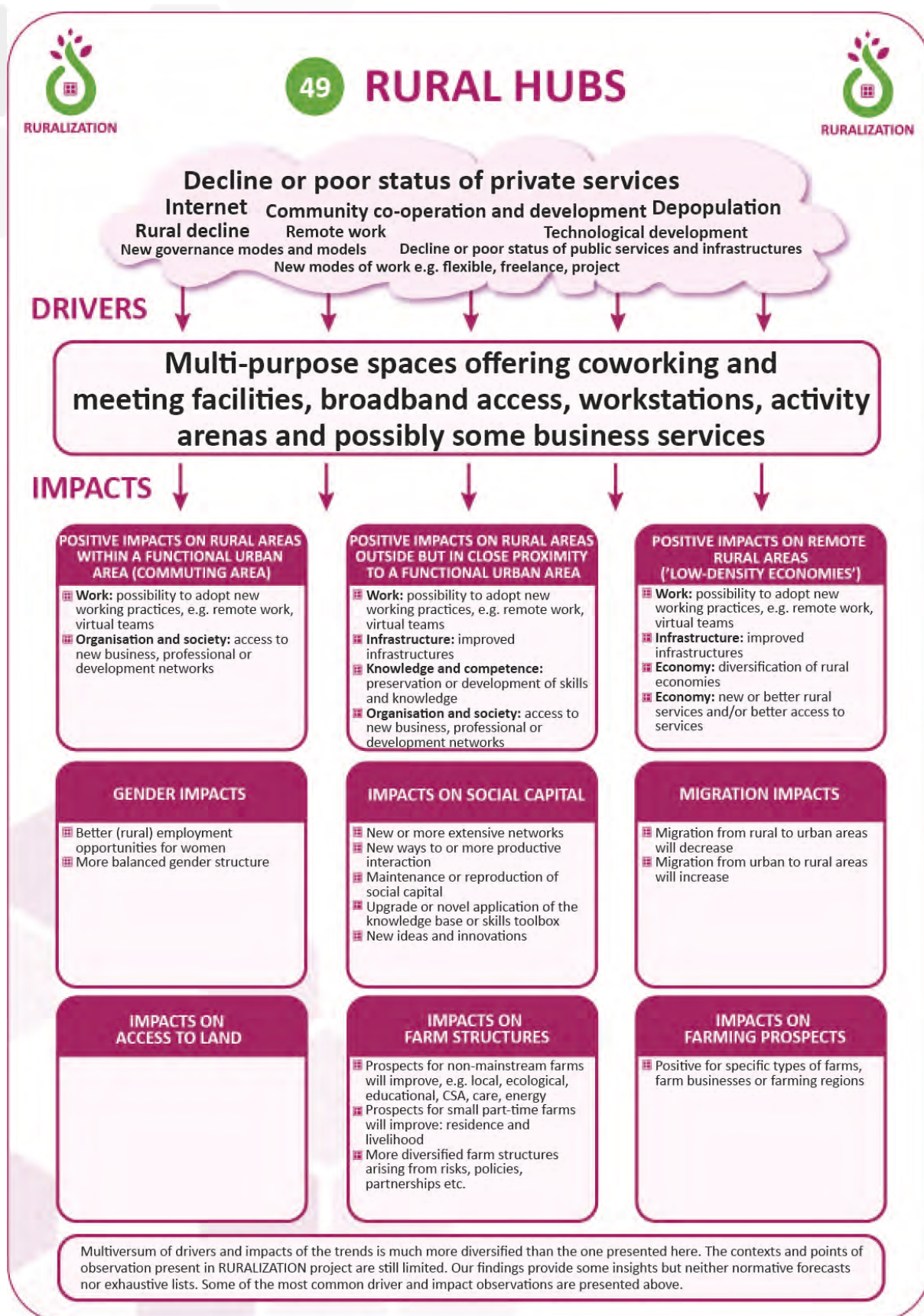
MOSTLY AFFECTED SECTOR

Private services



SIGNIFICANCE FOR RURAL AREAS







50

RURAL IN THE SOCIAL MEDIA



Presence, visibility and profiling of the rural activities, actors, places and communities in the social media platforms

TYPE

- ☐ Megatrend
- ☒ Trend
- ☐ Weak signal

TOPICS

- ☒ Communication
- ☒ Lifestyle
- ☒ Networks and collaboration
- ☒ Rural services
- ☒ Tourism

SCALE

European

DOMAIN

Social



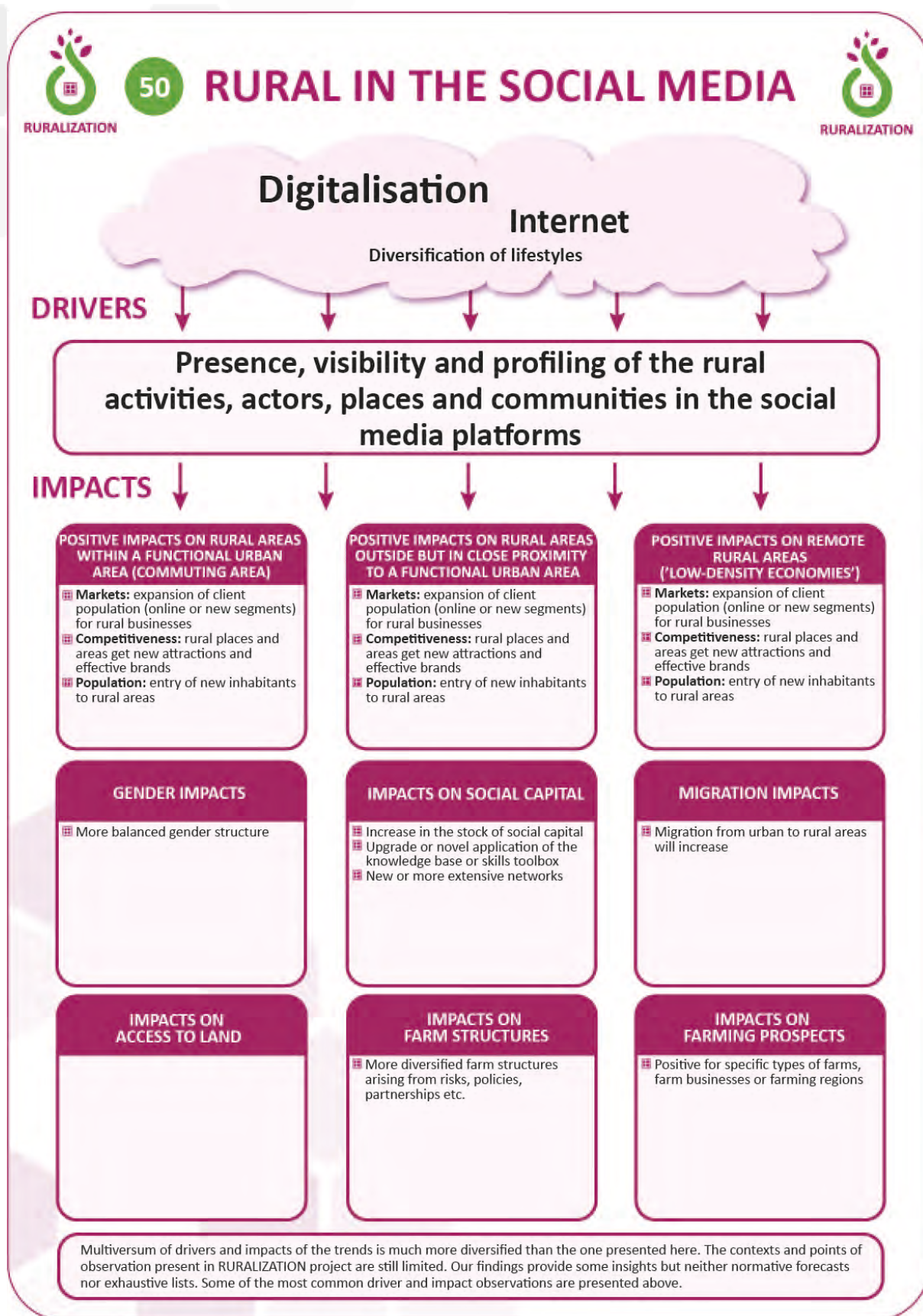
MOSTLY AFFECTED SECTOR

Private services



SIGNIFICANCE FOR RURAL AREAS







51

RURAL LIFESTYLE



Rural idyll, space, nature, peace, animals, housing, safety, traditions and communities contribute to social welfare and attract new residents

TYPE

- ☐ Megatrend
- ☐ Trend
- ☒ Weak signal

TOPICS

- ☒ Communication
- ☒ Lifestyle
- ☒ Migration
- ☒ Regional development
- ☒ Rural services
- ☒ Values

SCALE



DOMAIN

Social

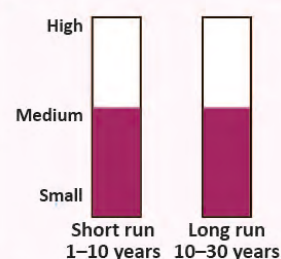


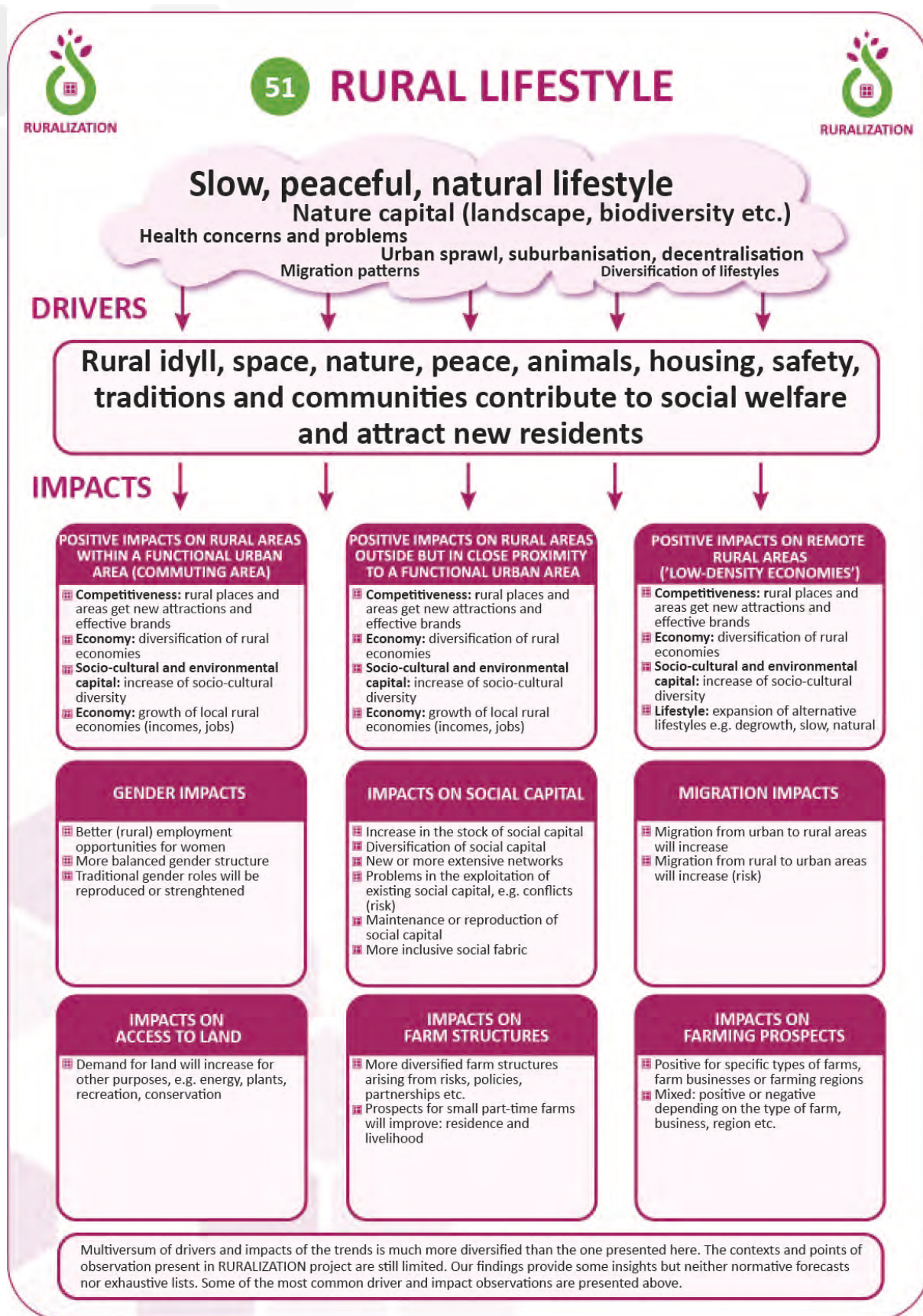
MOSTLY AFFECTED SECTOR

Private services



SIGNIFICANCE FOR RURAL AREAS







RURALIZATION

51

RURAL LIFESTYLE

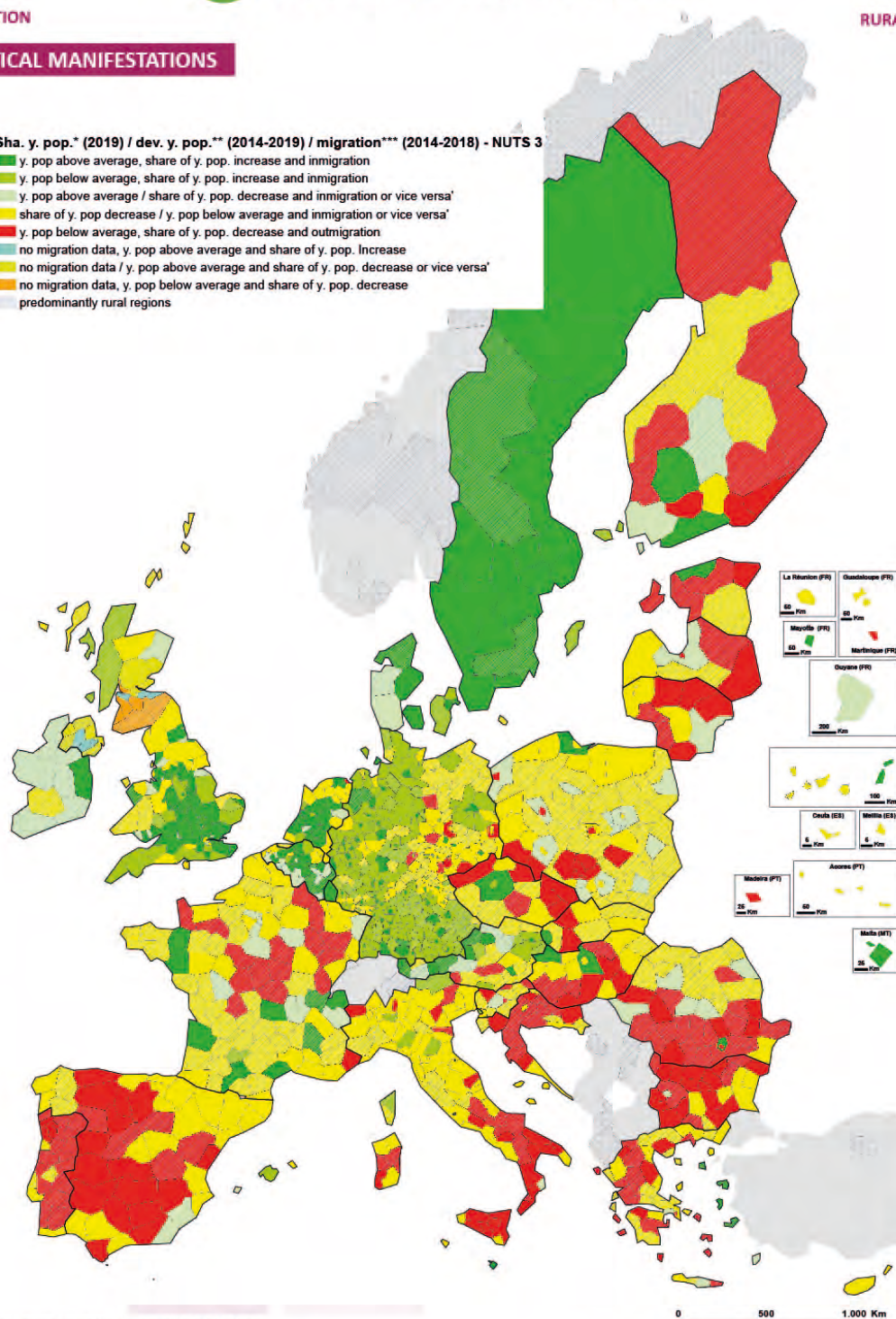


RURALIZATION

STATISTICAL MANIFESTATIONS

Sha. y. pop.* (2019) / dev. y. pop.** (2014-2019) / migration*** (2014-2018) - NUTS 3

- y. pop. above average, share of y. pop. increase and immigration
- y. pop. below average, share of y. pop. increase and immigration
- y. pop. above average / share of y. pop. decrease and immigration or vice versa'
- share of y. pop. decrease / y. pop. below average and immigration or vice versa'
- y. pop. below average, share of y. pop. decrease and outmigration
- no migration data, y. pop. above average and share of y. pop. increase
- no migration data / y. pop. above average and share of y. pop. decrease or vice versa'
- no migration data, y. pop. below average and share of y. pop. decrease
- predominantly rural regions



*share of young population compared to the EU-28 average

**development of young population compared to the EU-28 average

***the values for the in- and outmigration between 2014 and 2018 are summarized values of the absolute values for the net migration plus statistical adjustment for the years 2014, 2015, 2016, 2017 and 2018

*the expression vice versa always only counts for the last two statistical values that are listed

Used Eurostat Datafiles: demo_r_pjangroup / demo_r_gind3

source of shapes and data: EUROSTAT
geographical projection: Mercator (sphere)

The project RURALIZATION has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement 101076402.



RURALIZATION

51

RURAL LIFESTYLE

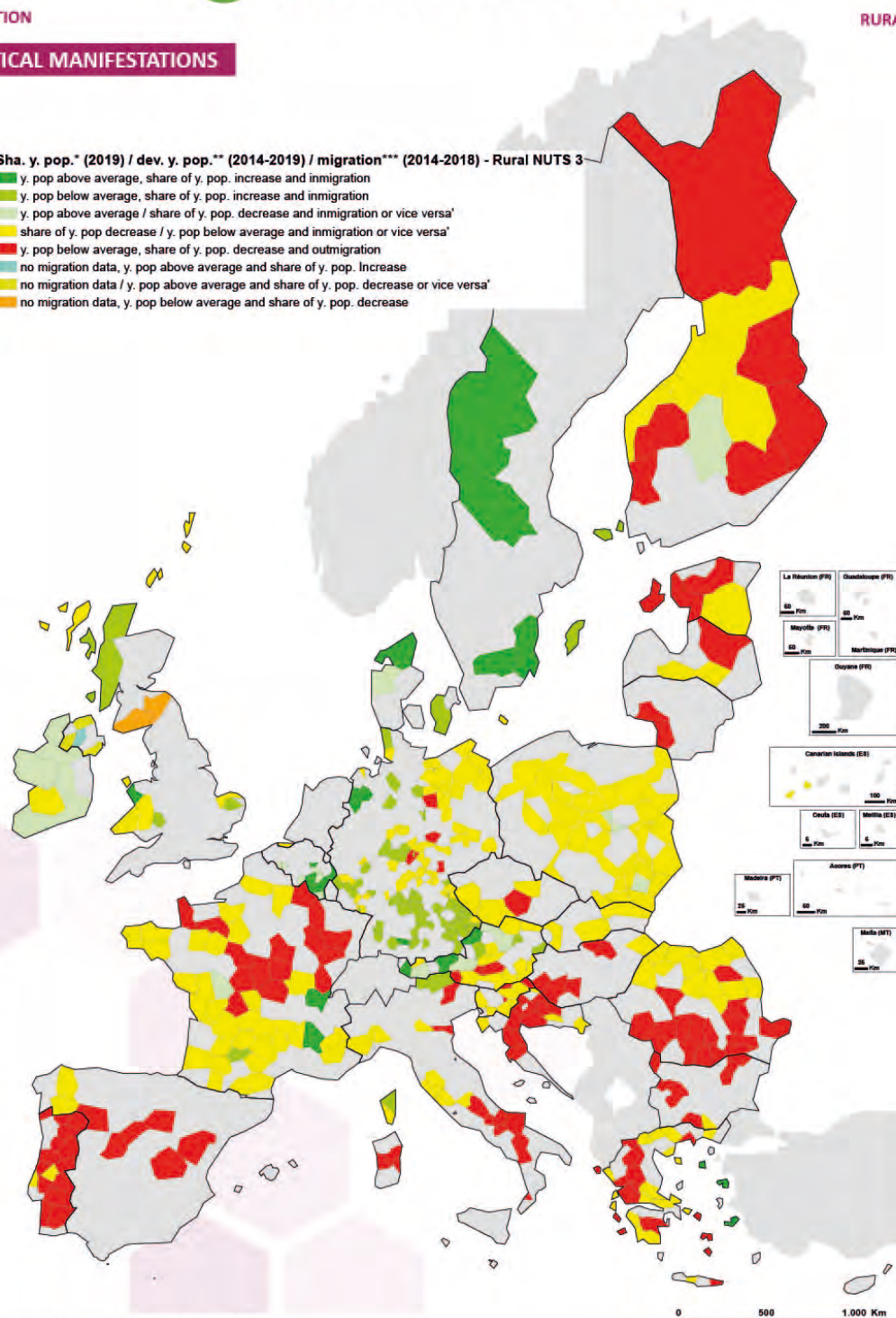


RURALIZATION

STATISTICAL MANIFESTATIONS

Sha. y. pop.* (2019) / dev. y. pop.** (2014-2019) / migration*** (2014-2018) - Rural NUTS 3

- y. pop above average, share of y. pop. increase and immigration
- y. pop below average, share of y. pop. increase and immigration
- y. pop above average / share of y. pop. decrease and immigration or vice versa'
- share of y. pop decrease / y. pop below average and immigration or vice versa'
- y. pop below average, share of y. pop. decrease and outmigration
- no migration data, y. pop above average and share of y. pop. Increase
- no migration data / y. pop above average and share of y. pop. decrease or vice versa'
- no migration data, y. pop below average and share of y. pop. decrease



*share of young population compared to the EU-28 average

**development of young population compared to the EU-28 average

***the values for the in- and outmigration between 2014 and 2018 are summarized values of the absolute values for the net migration plus statistical adjustment for the years 2014, 2015, 2016, 2017 and 2018

*the expression vice versa always only counts for the last two statistical values that are listed

Used Eurostat Datafiles: demo_r_pjangroup / demo_r_gind3

source of shapes and data: EUROSTAT
geographical projection: Mercator (sphere)

The project RURALIZATION has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement 817642.



52

RURAL TOURISM



Touristic activities, resorts, routes and attractions in the rural environment: farm holidays, festivals, hiking, fishing, hunting, horseback adventures etc.

TYPE

- ☐ Megatrend
- ☒ Trend
- ☐ Weak signal

TOPICS

- ☒ Farms
- ☒ Food
- ☒ Mobility and traffic
- ☒ Regional development
- ☒ Rural services
- ☒ Tourism

SCALE



DOMAIN

Economic

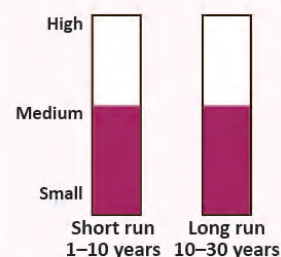


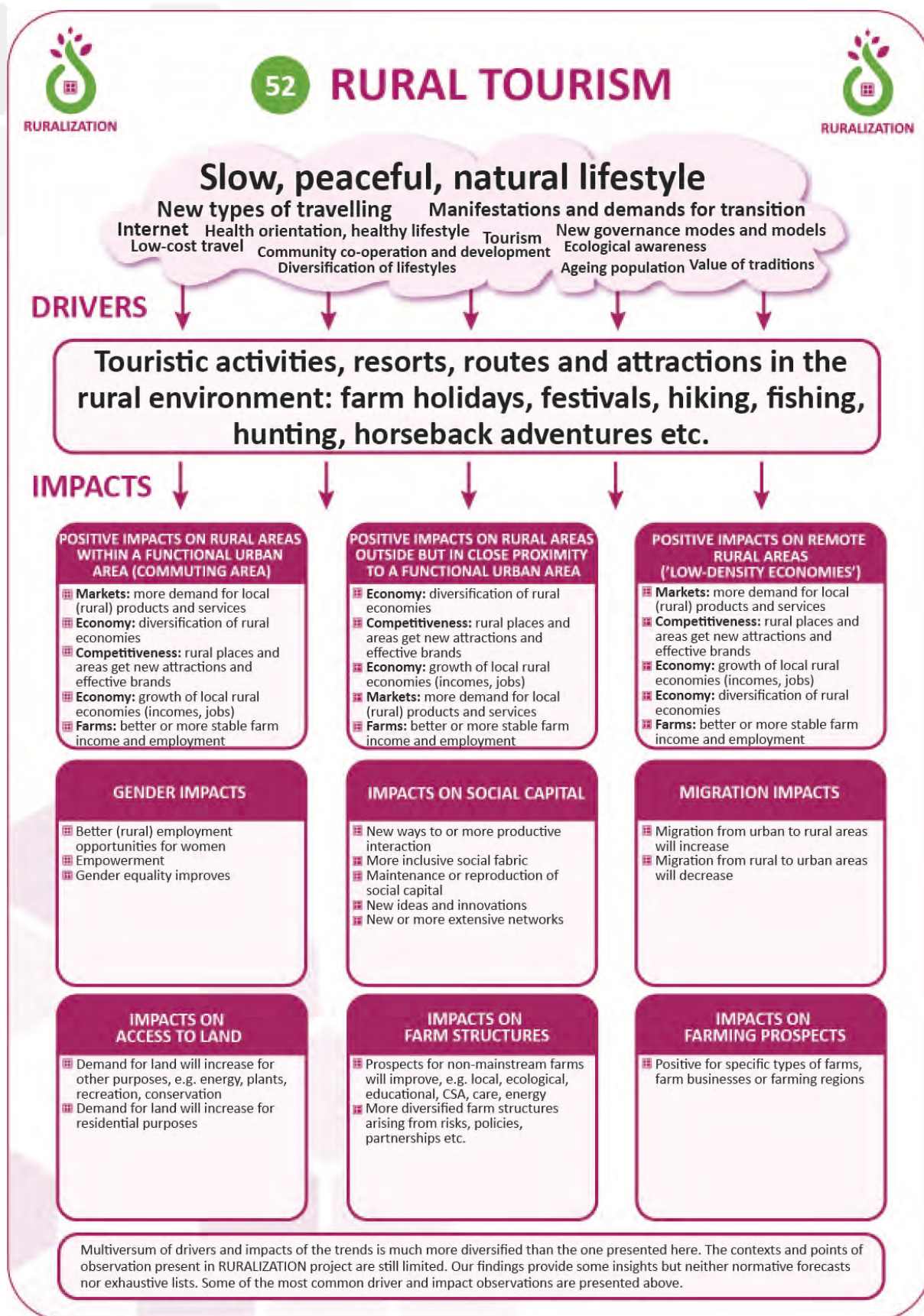
MOSTLY AFFECTED SECTOR

Private services



SIGNIFICANCE FOR RURAL AREAS







RURALIZATION

52

RURAL TOURISM

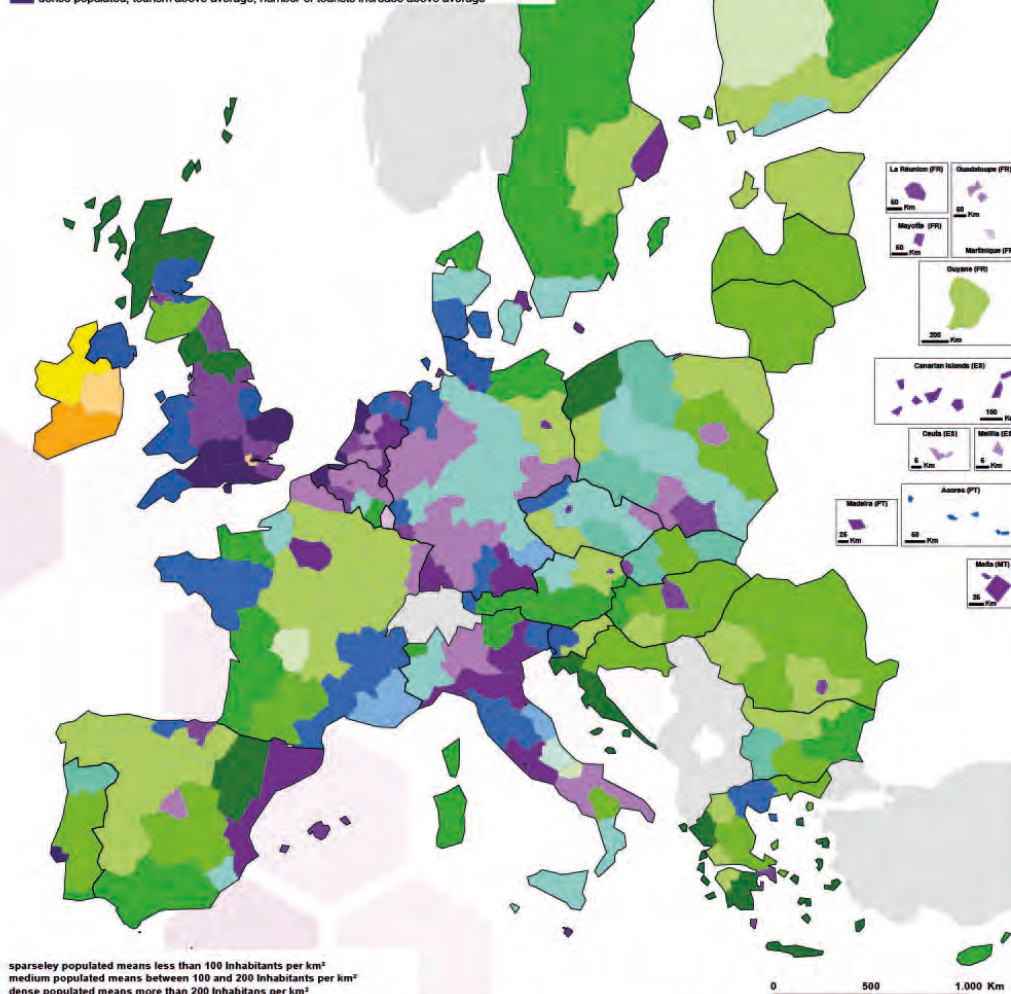


RURALIZATION

STATISTICAL MANIFESTATIONS

Status quo (2019*) and Development (2012**–2019*) of Touristic tourist overnight stays - NUTS 2

- No Data / not EU-28
- sparseley populated, tourism below average, number of tourists decrease
- sparseley populated, tourism below average, number of tourists increase below average
- sparseley populated, tourism below average, number of tourists increase above average
- sparseley populated, tourism above average, number of tourists decrease
- sparseley populated, tourism above average, number of tourists increase
- sparseley populated, tourism above average, number of tourists increase above average
- sparseley populated, tourism below average, no further data
- sparseley populated, tourism above average, no further data
- medium populated, tourism below average, number of tourists decrease
- medium populated, tourism below average, number of tourists increase below average
- medium populated, tourism below average, number of tourists increase above average
- medium populated, tourism above average, number of tourists decrease
- medium populated, tourism above average, number of tourists increase
- medium populated, tourism above average, number of tourists increase above average
- medium and dense populated, tourism above average, no further data
- dense populated, tourism below average, number of tourists decrease
- dense populated, tourism below average, number of tourists increase below average
- dense populated, tourism below average, number of tourists increase above average
- dense populated, tourism above average, number of tourists decrease
- dense populated, tourism above average, number of tourists increase
- dense populated, tourism above average, number of tourists increase above average



sparseley populated means less than 100 inhabitants per km²
 medium populated means between 100 and 200 inhabitants per km²
 dense populated means more than 200 inhabitants per km²

*for Greece the year 2018 and for UK the year 2016 is reference instead of 2019

**for the following NUTS-Regions 2014 is reference instead of 2012:

FRY1, FRY5, PL71, PL72, PL81, PL82, PL84, PL85, PL92, PT20, PT30

for Ireland only values for 2019 where available

for UK16 and UK17 only values for 2016 where available

Used Eurostat Datasets: TGS00111 / DEMO_R_D3DENS / demo_r_gind3

source of shapes and data: EUROSTAT
 geographical projection: Mercator (sphere)



The project RURALIZATION has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement 1017642.



53

SEARCH FOR BETTER QUALITY OF LIFE



Stress, crime, pollution, loneliness and other discomforts drive people to search for alternative pathways to better life

TYPE

- ☐ Megatrend
- ☒ Trend
- ☐ Weak signal

TOPICS

- ☒ Lifestyle
- ☒ Migration
- ☒ Regional development
- ☒ Values
- ☒ Work

SCALE



DOMAIN

Social

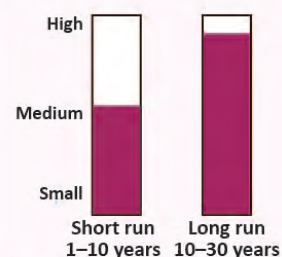


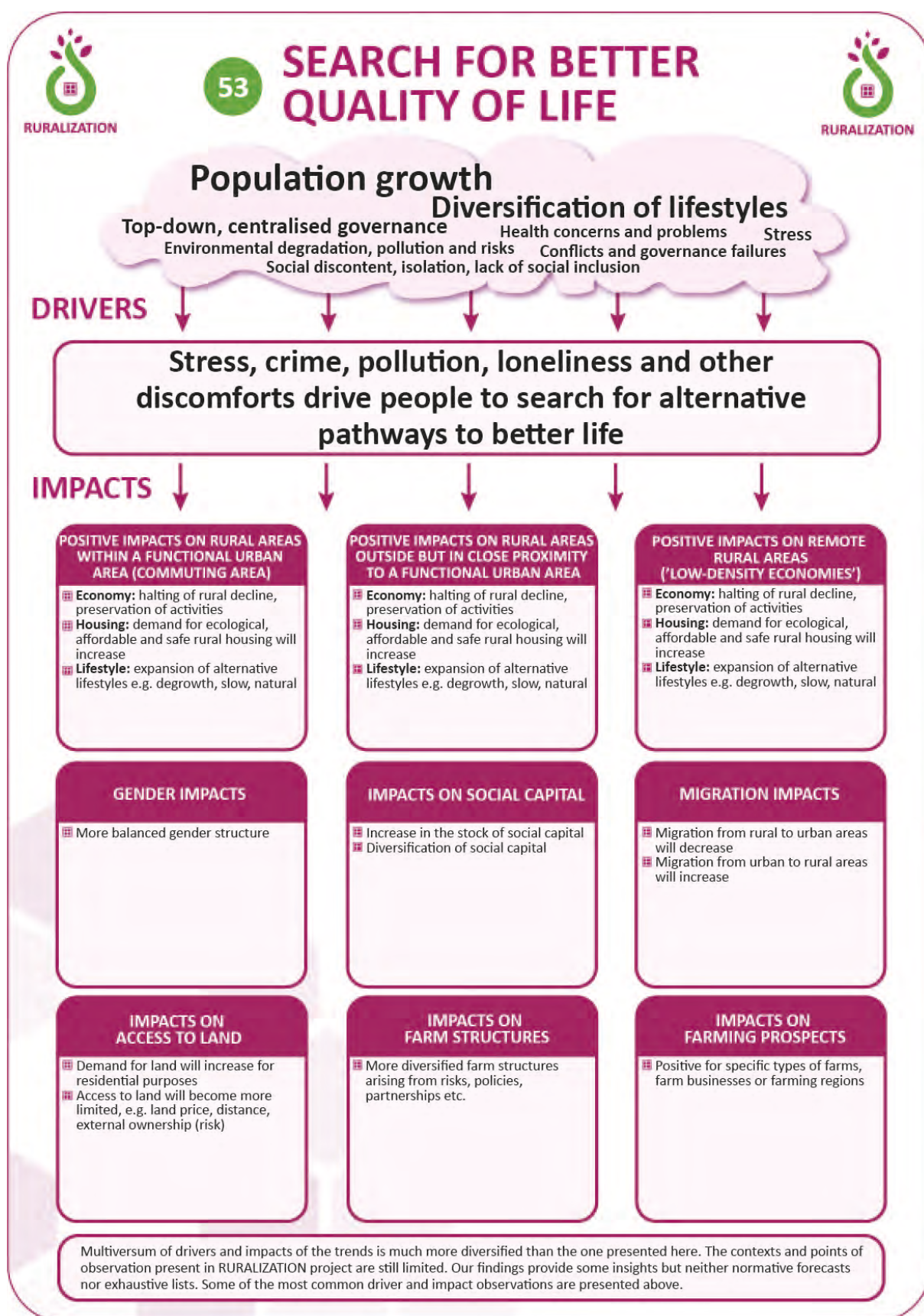
MOSTLY AFFECTED SECTOR

Public services



SIGNIFICANCE FOR RURAL AREAS







RURALIZATION

54

SELF-SUFFICIENCY



RURALIZATION



Better self-sufficiency at various levels (individual, household, farm, region, nation, Europe) in food, energy, competences etc. increases costs but reduces risks

TYPE

- ☐ Megatrend
- ☐ Trend
- ☒ Weak signal

TOPICS

- ☒ Energy
- ☒ Food
- ☒ Lifestyle
- ☒ Policy
- ☒ Socio-economic models
- ☒ Values
- ☒ Uncertainty and risks

SCALE



DOMAIN

Social

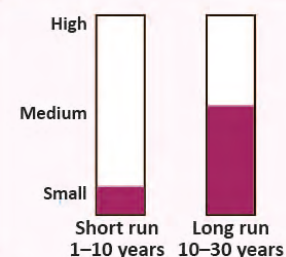


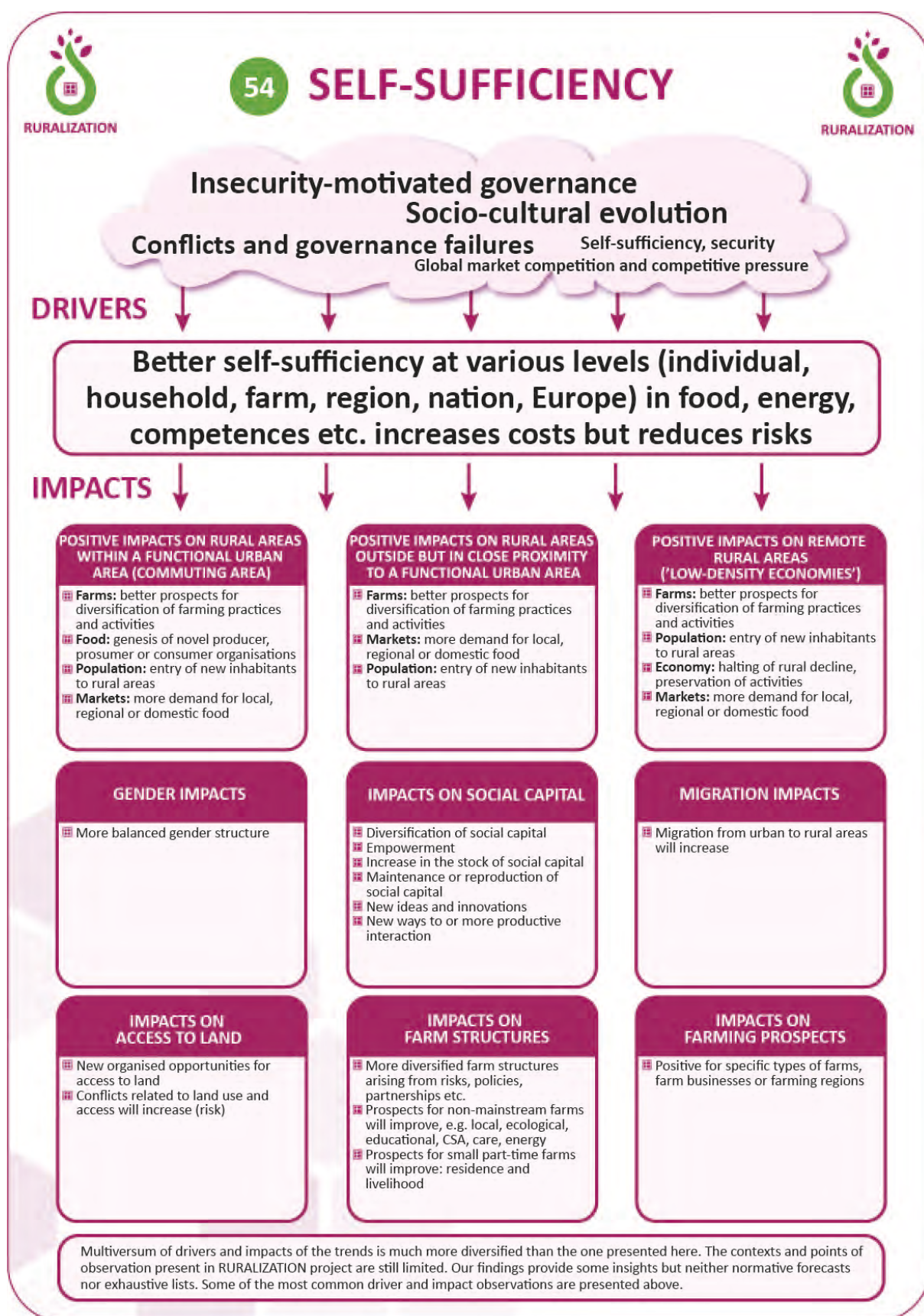
MOSTLY AFFECTED SECTOR

Primary production



SIGNIFICANCE FOR RURAL AREAS







55

SHARING ECONOMY



Modern non-profit or commercial sharing economy is based on internet platforms and allows limited and low-cost access to many resources: rooms, vehicles, tools etc.

TYPE

- ☐ Megatrend
- ☐ Trend
- ☒ Weak signal

TOPICS

- ☒ Governance
- ☒ Housing
- ☒ Lifestyle
- ☒ Networks and collaboration
- ☒ Resource scarcity
- ☒ Socio-economic models
- ☒ Values

SCALE



DOMAIN

Economic

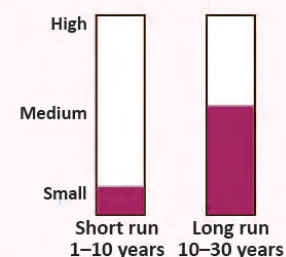


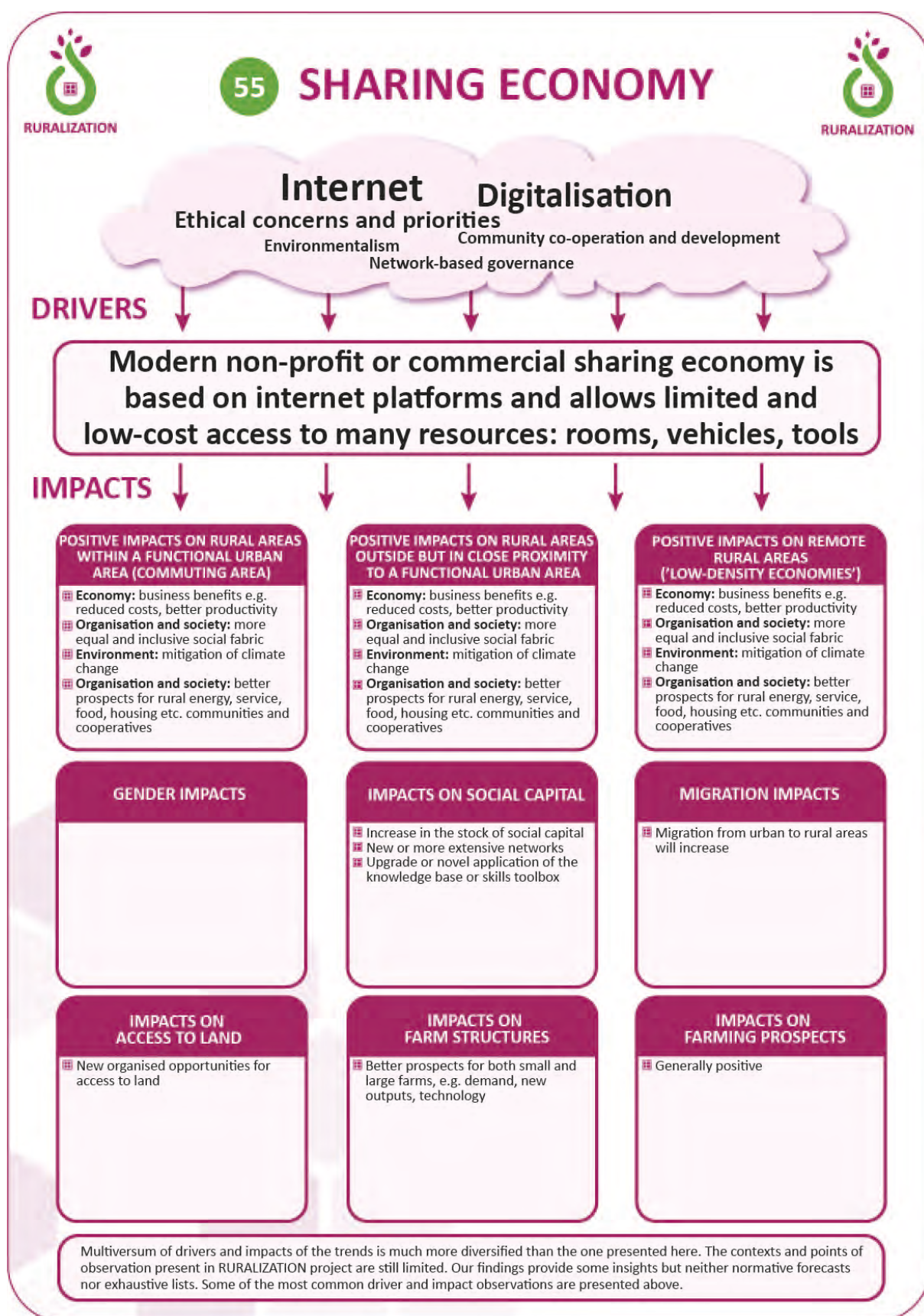
MOSTLY AFFECTED SECTOR

Private services



SIGNIFICANCE FOR RURAL AREAS

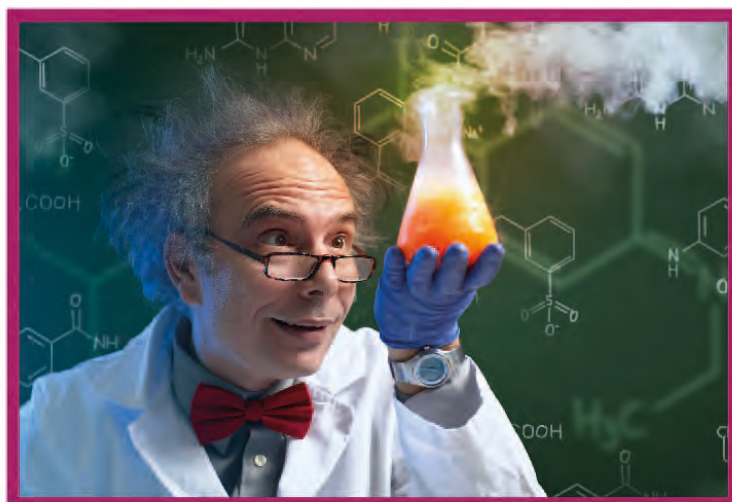






56

SMART SOLUTIONS IN RURAL SPACE



Maintaining capacity for continuous innovation is essential in rural areas to bring up 'smart' villages, power grids, schools, machines, land use practices etc.

TYPE

- ☐ Megatrend
- ☐ Trend
- ☒ Weak signal

TOPICS

- ☒ Economic development
- ☒ Energy
- ☒ Environment
- ☒ Farms
- ☒ Food
- ☒ Regional development
- ☒ Rural services
- ☒ Science, education and knowledge
- ☒ Technology

SCALE



DOMAIN

Social

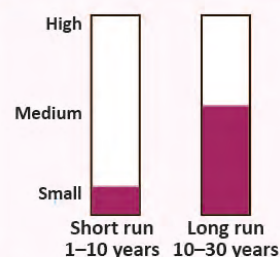


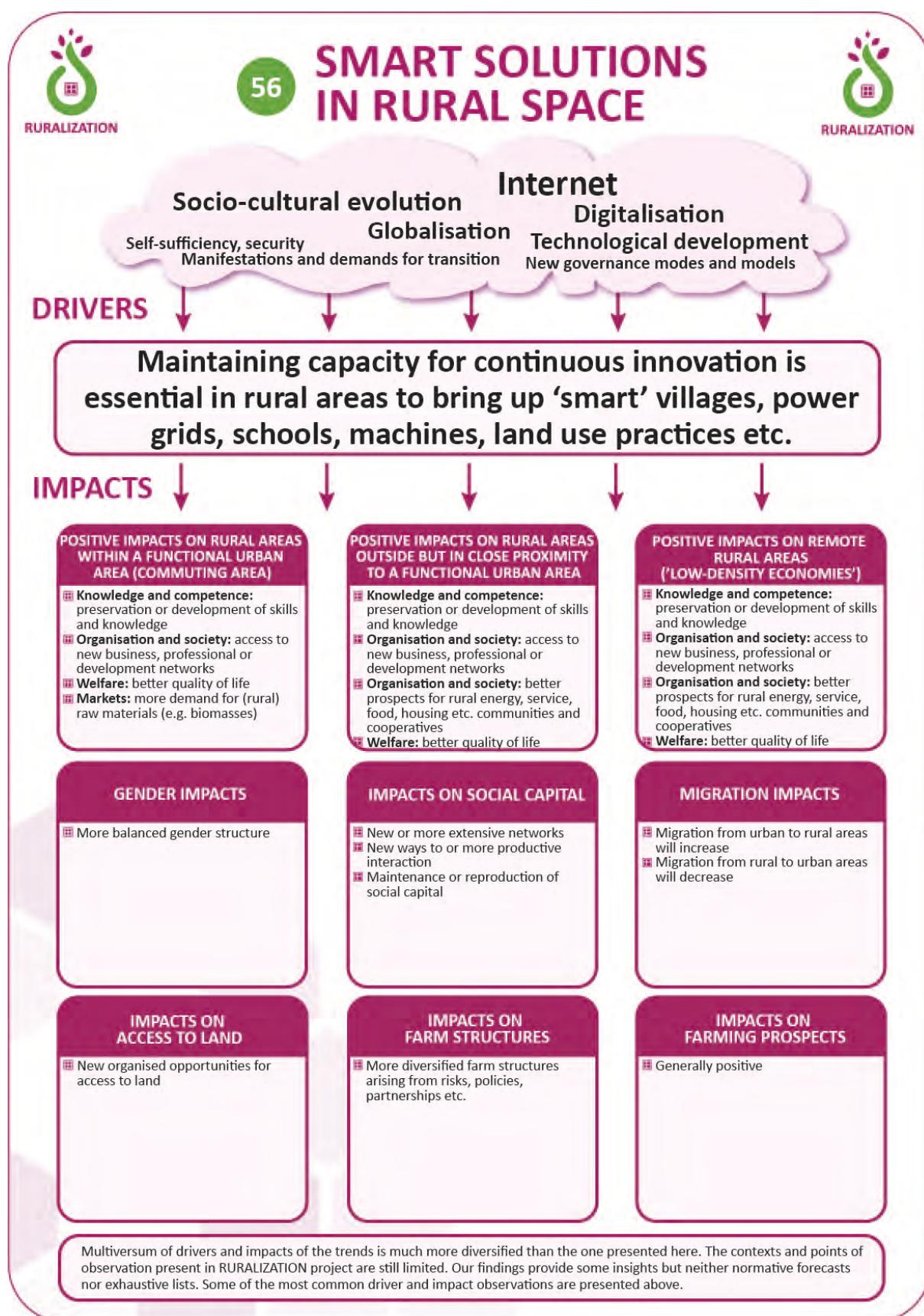
MOSTLY AFFECTED SECTOR

Public services



SIGNIFICANCE FOR RURAL AREAS







57

SOCIAL ENTERPRISES AND ENTREPRENEURS



Rural areas provide fabrics for many kinds of social enterprises to improve health, rehabilitation and social inclusiveness

TYPE

- ☐ Megatrend
- ☐ Trend
- ☒ Weak signal

TOPICS

- ☒ Demographics
- ☒ Economic development
- ☒ Farms
- ☒ Forests
- ☒ Rural services
- ☒ Science, education and knowledge
- ☒ Work

SCALE



DOMAIN

Social

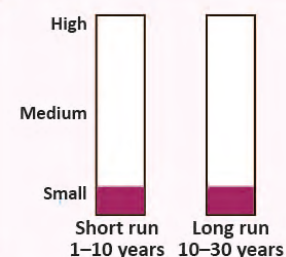


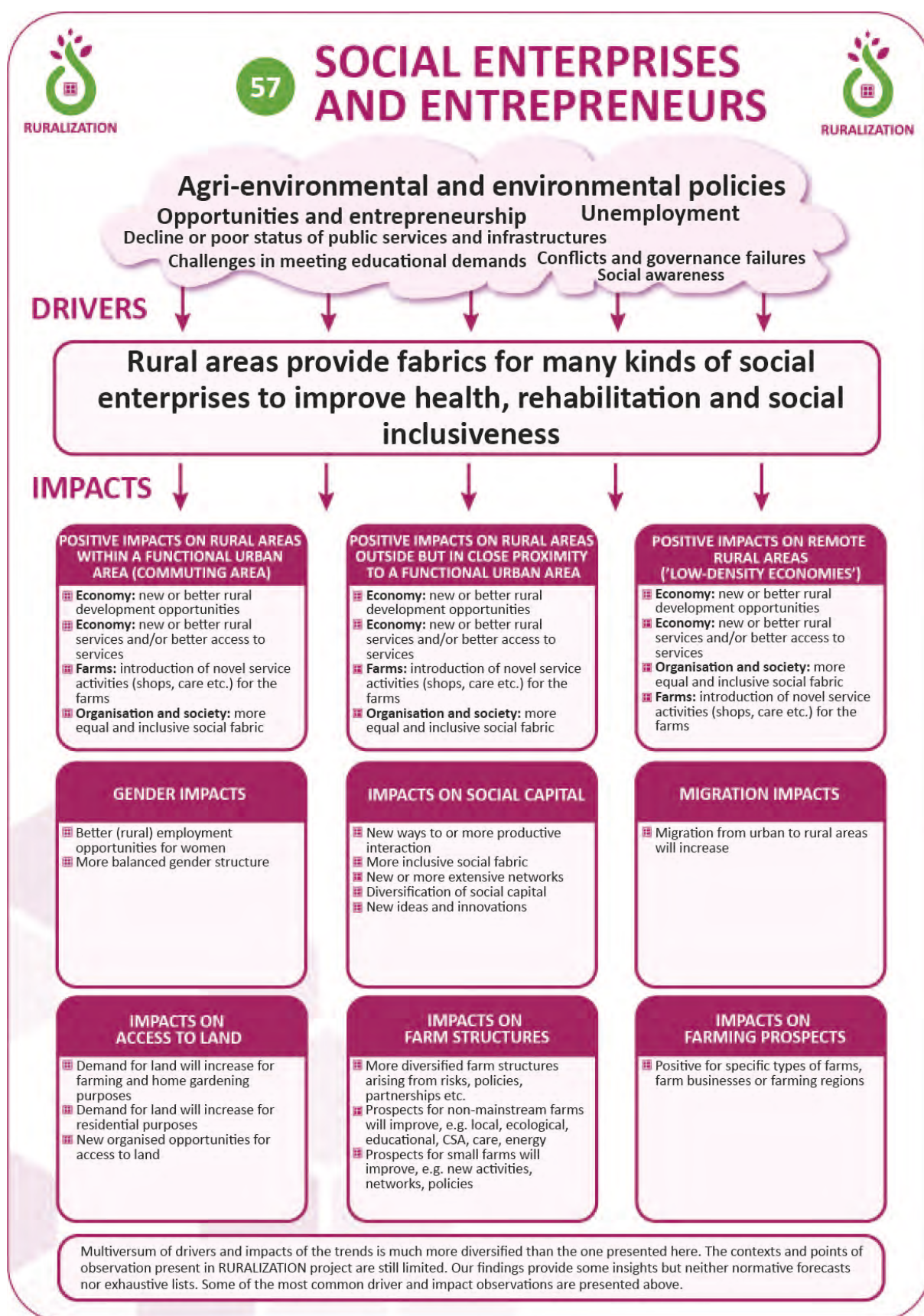
MOSTLY AFFECTED SECTOR

Primary production



SIGNIFICANCE FOR RURAL AREAS







58

SUSTAINABILITY TRANSITION



Economic activities facilitated by digital technologies and tools; provides productivity gains and platforms for new economic activities

TYPE

- ☒ Megatrend
- ☐ Trend
- ☐ Weak signal

TOPICS

- ☒ Farms
- ☒ Energy
- ☒ Regional development
- ☒ Policy
- ☒ Technology
- ☒ Forests
- ☒ Socio-economic models
- ☒ Environment

SCALE

European



DOMAIN

Environmental

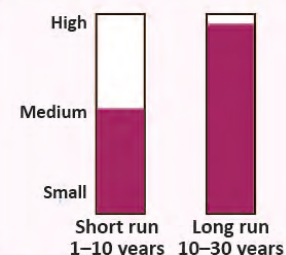


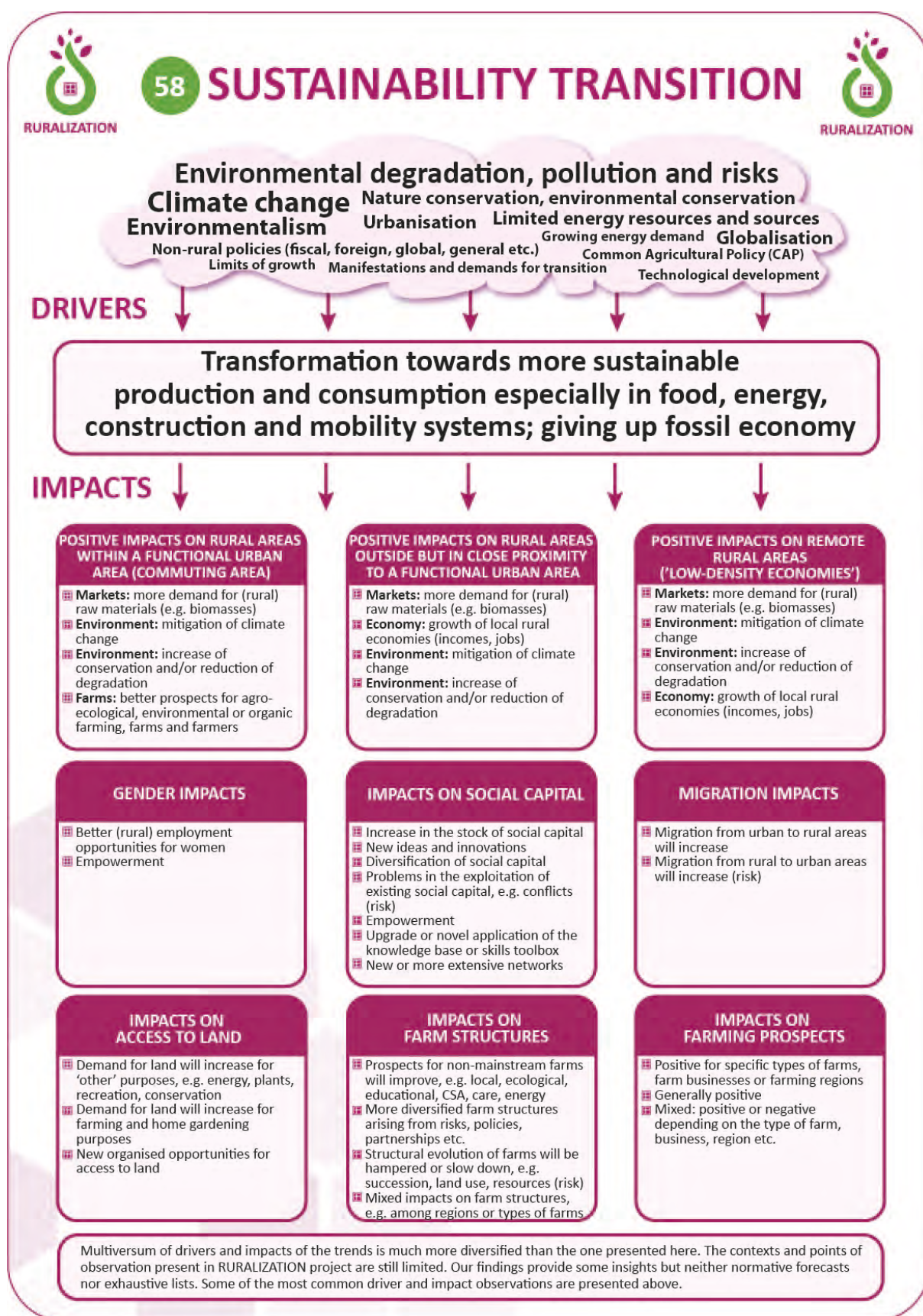
MOSTLY AFFECTED SECTOR

Primary production



SIGNIFICANCE FOR RURAL AREAS







RURALIZATION

58

SUSTAINABILITY TRANSITION

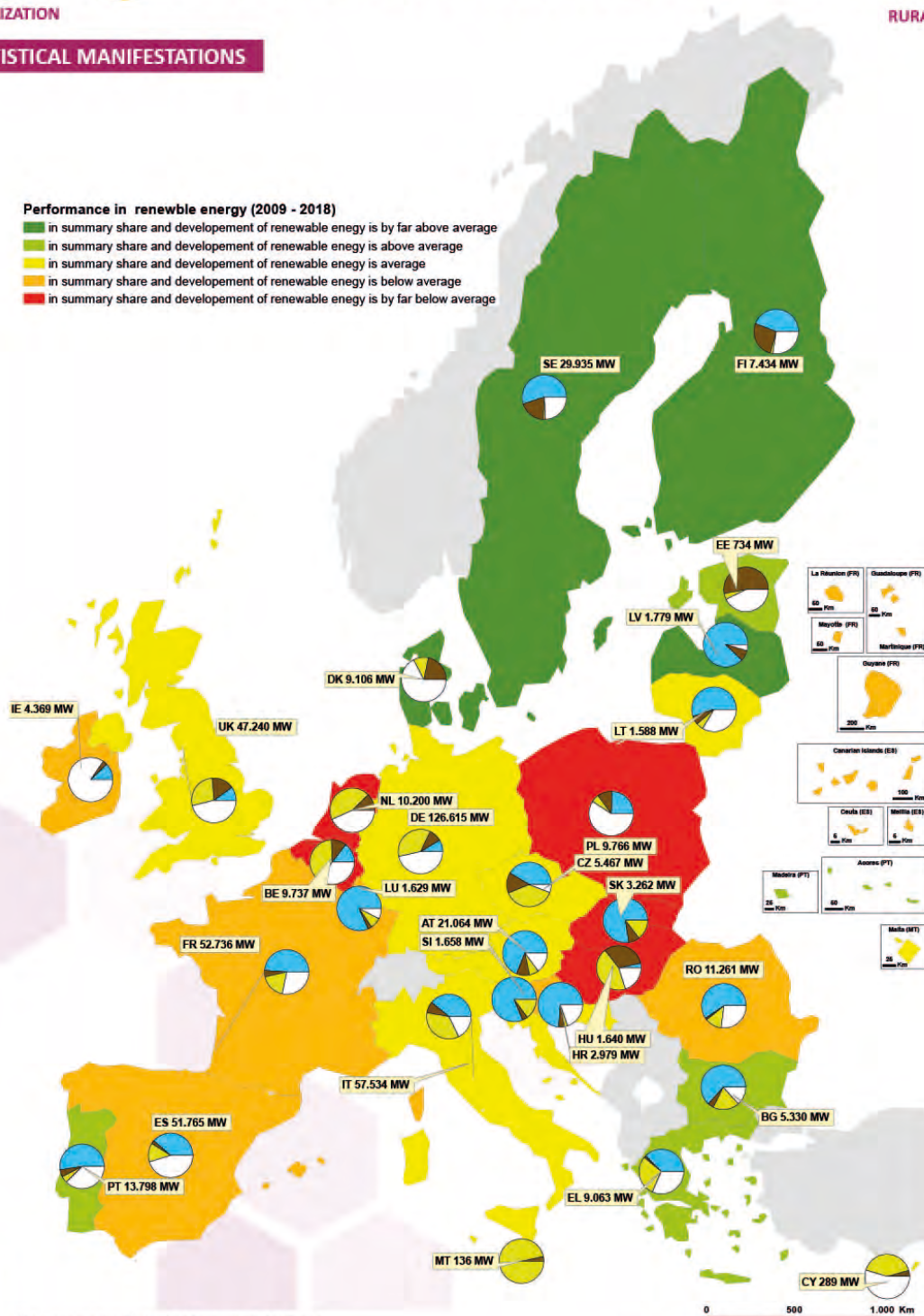


RURALIZATION

STATISTICAL MANIFESTATIONS

Performance in renewable energy (2009 - 2018)

- in summary share and development of renewable energy is by far above average
- in summary share and development of renewable energy is above average
- in summary share and development of renewable energy is average
- in summary share and development of renewable energy is below average
- in summary share and development of renewable energy is by far below average



The performance includes share and development of production of electricity in renewable energies compared to the EU-28 average

The pie chart shows the share of renewables per energy source 2018:

Blue stands for Hydro / Dark-yellow stands for Sun / White stands for Wind / Brown stands for Other

The value MW stands for absolute Megawatts production capacity of renewables per country

Used Eurstat Datasources: nrg_ind_ren / nrg_inf_eporw



source of shapes and data: EUROSTAT
geographical projection: Mercator (sphere)



"The project RURALIZATION has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement 817642"



59

TECHNOLOGY-INTENSIVE FARMING



Technology provides productivity and environmental benefits but some applications (e.g. genetic modification, lab-grown food) raise ethical, cultural or economic doubts

TYPE

- ☐ Megatrend
- ☒ Trend
- ☐ Weak signal

TOPICS

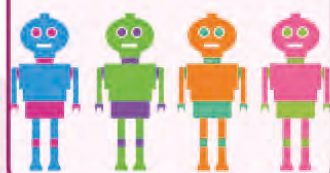
- ☒ Economic development
- ☒ Environment
- ☒ Farms
- ☒ Food
- ☒ Science, education and knowledge
- ☒ Technology

SCALE



DOMAIN

Technological

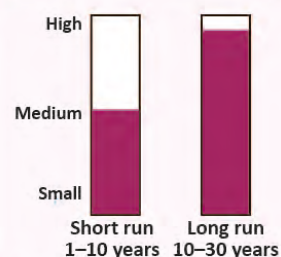


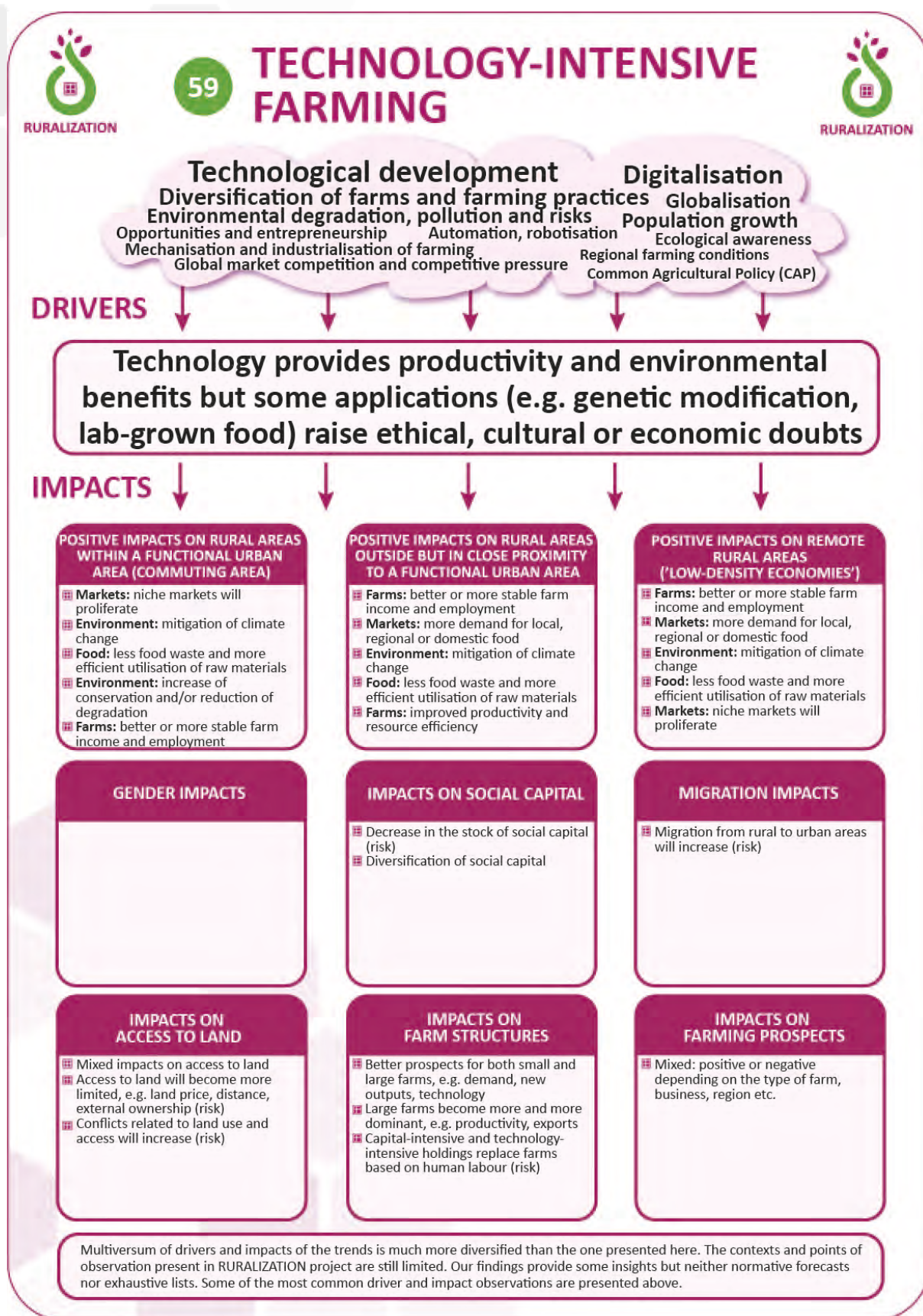
MOSTLY AFFECTED SECTOR

Primary production



SIGNIFICANCE FOR RURAL AREAS







60

TRANSPARENCY OF THE FOOD SYSTEM



Transparency of the food system in terms of origins, production methods, compliance (laws, standards) and distribution of value added in the food chain

TYPE

- ☐ Megatrend
- ☒ Trend
- ☐ Weak signal

TOPICS

- ☒ Farms
- ☒ Food
- ☒ Governance
- ☒ Trade
- ☒ Uncertainty and risks
- ☒ Values

SCALE

European



DOMAIN

Social



MOSTLY AFFECTED SECTOR

Primary production



SIGNIFICANCE FOR RURAL AREAS

