

Mapping Report on Challenges



POLAND



**Improving Farmers' Wellbeing
through Social Innovation**

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Authors: Adam Czarnecki (IRWiR PAN), Michał Dudek (IRWiR PAN), Ryszard Kamiński (KPODR), Łukasz Komorowski (IRWiR PAN), Monika Stanny (IRWiR PAN) and Elwira Wilczyńska (IRWiR PAN).



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1.

Introduction

This paper is part of a larger Horizon 2020 Thematic Network entitled 'FARMWELL'. This project aims at mapping social innovations in farming and making these social innovations more accessible for farmers and the larger community, with the prime purpose of improving the overall wellbeing of individual farmers, farming households and the larger rural community. With this purpose in mind, six European countries (Belgium, Greece, Hungary, Italy, Poland and Romania) have systematically mapped the main social challenges they are being confronted with. Based on this mapping exercise, a set of social challenges have been selected for deeper elaboration and analysis. In addition, a set of social innovations have been mapped that aim at improving the wellbeing of individual farmers, farming households and rural communities.

This research which took place in the first half of 2021 is meant to provide a systematic evidence base upon which social innovations in farming can be analysed further on their effectiveness and made more accessible through innovate communication.



In addition, these papers should enable a productive exchange of ideas and insights between different European countries and partners involved in the FARMWELL project.

This paper presents a case-study on Poland. After this introduction, PART 2 'Methodology/data gathering' will present the main methodological steps undertaken in mapping and analysing these social challenges and innovations. PART 3 'Description of main challenges' will provide a general introduction to the main challenges Poland is being confronted with. In part 4 'Analysis of selected theme(s) in social challenges', a limited number of social challenges is being selected and delved into in a systematic manner and based in primary data gathering. Part 5 then gives a concise summary of the main arguments and insight being put forward in the paper. The paper is finally concluded with a table that provides 10 important social challenges in Poland that have the explicit aim of improving the overall wellbeing of individual farmers, farming households and rural communities.

This paper enables a productive exchange of ideas and insights between different European countries and partners in the FARMWELL project.

2.

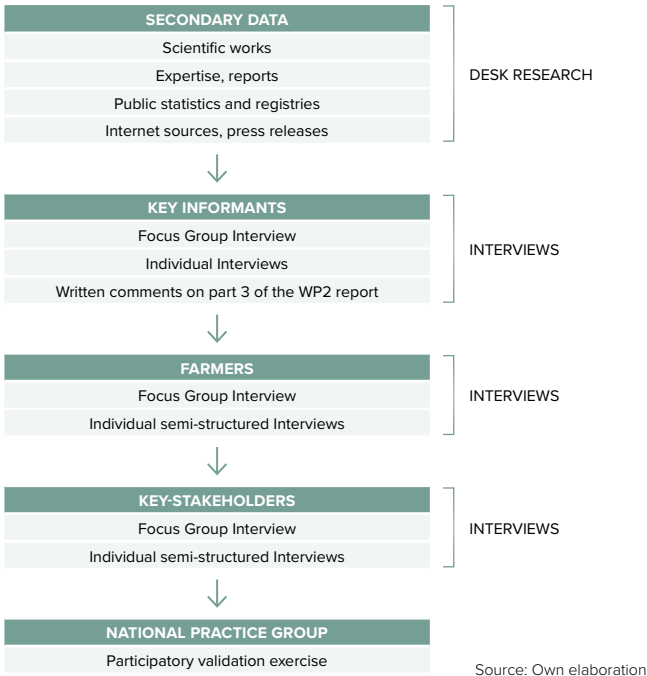
Methodology/ data gathering

2.1. The data-gathering strategy



A range of varying sources of information was combined and applied to gather the relevant/required data to meet the objectives of WP2 and finalise the WP2 mapping report for Poland (see: Figure 1).

Figure 1: Data sources and data collection techniques



In order to gather the data needed to provide the socio-demographic and socio-economic characteristics of the farming population as well as to depict the evolution of the farming sector in Poland (section 3 of the WP2 report) the desk research was carried out in the first phase of the data collection process including the review of relevant scientific literature, reports, expertise (delivered by public bodies, NGOs and other organisations, independent experts) and press releases. It was supplemented by the statistical analyses and the quantitative data collected from public statistics and related public registries at the national and regional levels. The same sequence of data collection methods was used to create a wider background and describe the four selected social challenges identified at this phase of the project proceedings. In the next phase, the preliminary version of part 3 of the WP2 report (with all its required sections) was discussed and supplemented by so-called key-informants during the Focus Group Interview (FGI), individual interviews and from their individual comments on the written part 2 of the report. As a result, this part of the report was enriched by their comments, remarks and clarifications.

As for part 4 of the WP2 report on the social challenges, first, the FGI and some individual interviews with farmers were conducted to learn more about farmers' viewpoint on social challenges they face, effects of those challenges on farmers' and farming families'/communities' wellbeing and the coping strategies and solutions used by this group of stakeholders to tackle and/or mitigate those challenges (incl. their effects). After part 4 of WP2 was supplemented with a new portion of information from farmers, another FGI – this time with key stakeholders was carried out to add relevant clarifications and new pieces of information gathered from different (non-farmer's) perspectives. As a final phase, the participatory validation exercise of what has been collected and analysed so far, was done through the engagement of the national practice group (PG's first meeting participants: total – 19; farmers – 13; female farmers – 5; other stakeholders – 6 – those who represented farming organisations, local and regional public authorities, Ministry of Agriculture and Rural Development, health care institutions, Agricultural Social Insurance Fund, and the research/scientific institutions).

2.2. The approach to select surveyed farmers

Figure 2: Location of the surveyed region (Kujawsko-Pomorskie) in Poland



Source: Own elaboration.

To gather the data about social challenges, their impacts as well as the related coping strategies and solutions (social innovations) implemented by farmers, a spatial (regional) approach has been employed and followed. This means that a specific region (Kujawsko-Pomorskie; see: Figure 2) has been selected to reach the farmers, farming organisations as well as other stakeholders (incl. key-informants) to learn more about the topic of the study.

In order to be as representative as possible in reflecting the specificity of the region in social, demographic and economic terms, a range of criteria has been used to select the surveyed farmers and other stakeholders. These included: farmers' different age and gender, farms' different size and economic/production profile as well as farms' and farm households' different locations in the region (e.g. peri-urban, peripheral).

The spatially-driven approach used to select farmers to the survey posed certain limitations on the possibilities of extrapolating the obtained findings to the wider national context. The selection of one case-region – Kujawsko-Pomorskie, albeit reflecting a variety of social, demographic and economic characteristics typical also for other regions of the country, to some extent narrowed potential generalisations, which was mainly due to the significant inter- and intraregional differences in respect to the topic in question. On the other hand, by implementing a range of farm- and farmer-selection criteria, it enabled the authors to depict the complexity of social and economic qualities of the Kujawsko-Pomorskie region. What is more, key-stakeholders involved in the study who represented institutions from outside the Kujawsko-Pomorskie region (e.g. expert from the Institute for Rural Health, officials from the Ministry of Agriculture and Rural Development) have proven the importance and universal character of the identified social challenges for the wider rural context in Poland.

To gather the data about social challenges, their impacts as well as related coping strategies and solutions implemented by farmers, a spatial approach has been employed and followed.

2.3. Time and place of data gathering

Besides the data available from the desk research as well as the public statistics and registries gathered mainly in March and April 2021 (which was in line with the WP2 time table), the following data were collected in respect to time and place. 1) The data from the FGIs with key-informants was gathered during the online meeting at the end of April 2020; 2) The data from the FGIs with farmers was gathered during the online meeting conducted at the end of May 2021; 3) The data from FGIs with key-stakeholders was gathered during the online meeting conducted in mid-June 2021. In addition, the supplementary data needed to improve the report were gathered throughout the completion of WP2 report – these were direct interviews, talks and comments on the report and its subsequent parts made by email, telephone and during face-to-face talks with key-informants, farmers and key-stakeholders.

Through a series of interviews with key informants four main social challenges/problems were identified:

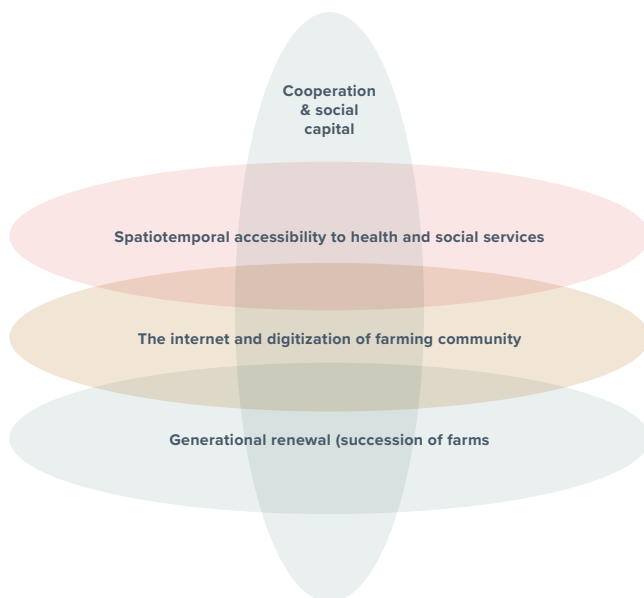
- *Spatiotemporal accessibility to health and social services;*
- *The internet and digitization of the farming community;*
- *Generational renewal (succession of farms) and*
- *Cooperation/social capital”*

2.4. The logic behind the selection of social challenges

Through a series of interviews with key informants (incl. farmers) four main social challenges/problems were identified: “Spatiotemporal accessibility to health and social services”; “The internet and digitization of the farming community”; “Generational renewal (succession of farms)” and “Cooperation/social capital”. The structure of these problems is as follows: the first three challenges are, to some extent, overlapping horizontal issues while the fourth one is vertical. Such conclusions are the outcome of the series of interviews with key-informants. Based on this source of information, it turned out that the cooperation (or lack of the cooperation, weak social capital) is a critical problem and the fundamental precondition to each of the three

former social challenges. What is more, the data gathered from FGIs with farmers and the key-stakeholders have confirmed this preliminary finding to be very relevant for the social challenges in the Polish rural context. The interviewees mentioned the need and importance of cooperation between farmers, farming families, neighbours, relatives, wider rural community and institutions, organisations, formal and informal groups. For instance, cooperation among close neighbours and farmers was mentioned in the case of temporary replacement of sick farmers unable to work on a farm, car sharing to reach the distantly located health care services (especially for non-mobile, disabled or older farmers); the need for cooperation between family members or other farmers to deal with the lack of capacities or competences to efficiently use online/internet services by older, less educated farmers; the need for cooperation to help farmers with no successors to carry out the production activity to overcome hardships of the generational change and generational renewal problems. In other words, the rationale behind choosing the two challenges (topics) was entire of a content-related nature seeing the cross-cutting relationship between the generational renewal (one of three horizontal challenges) and the cooperation (a vertical challenge) (see: Figure 3).

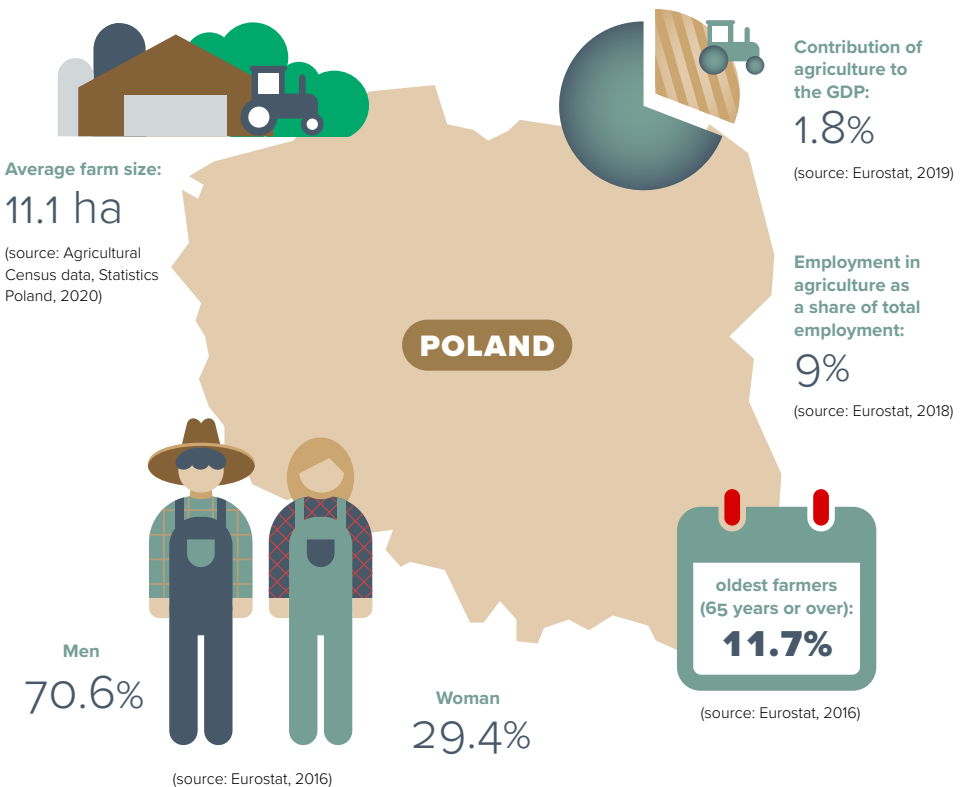
Figure 3: The relationships between the social challenges identified



Source: Own elaboration

3.

Description of main social challenges – national level



3.1. An overview of the socio-demographic characteristics of the farming population

Of the 15.4 million people living in rural Poland in 2020 (40% of the overall population) (CSO, 2020a), the “farming population” can be estimated at about 4.2 million¹, accounting for over a quarter of the country’s rural residents. However, it needs noting that, unlike the non-farming (landless) population, the farming population has steadily decreased as a result of the ongoing deagrarianisation (Halamska, 2011; Rosner & Stanny, 2018). The pace at which farms cease to operate, and consequently the rate in the decrease of the farming population, has been quite rapid, although not fast enough to make the economic and employment structures in Polish agriculture comparable to those observed in other EU countries². The scale and dynamics of deagrarianisation have been determined by several factors starting from the restructuring of the rural economy, to a demographic change, all the way to historical determinants. These factors have affected Polish regions to a different extent, also due to the varied impact of cities on the rural hinterland. Recently, there has been a considerable decrease in the number of farms and the size of farming population, in particular, in the south and south-east Poland, with a prevalence of urban and densely-populated areas as well as with a typical fragmented and scattered agrarian structure with the prevalence of small farms³.

Like the rest of Poland’s rural population, the farming population is ageing. This trend has been intensified by a declining rate of natural increase (RNI), caused mainly by a decreasing birth rate. The decline of the farming population is also reflected in ongoing internal mobility tendencies. These comprise the outflow of rural people from the well-developed agricultural regions, areas historically associated with nationalised farming (state farms), and those remote from the largest cities and metropolitan regions (Stanny & Strzelecki, 2020).

¹ Public statistics lack current data on the Polish farming population. That is why estimating the size of this group has been based on the assumption that the proportions of the working-age population (15 years and over), about which more detailed information is gathered, roughly correspond to the ratios for the whole population living in rural areas (CSO, 2020b). In 2019, the proportion of people aged 15 and over and tied to farms was 27% of the overall number of rural residents of working age (CSO, 2020b).

² According to Eurostat data, the primary sector (agriculture, forestry and fishing) in the EU-28 accounted for 4.5% of all those employed. In Poland, it was 9.2%. The primary sector’s share in GVA (Gross Value Added) was around 2.6% in Poland, compared to the UE-28 average of 1.2% (Eurostat, 2019).

³ From 2010 to 2016, the number of farms in South and South-East Poland decreased by 9% (by 31,700). These were mainly farms of up to five hectares (Bożek & Szewczyk, 2019). An intensification of deagrarianisation (a withdrawal from farming) and the development of off-farm economic activities in this region is highlighted in the Rural Development Monitoring (Stanny, Rosner & Komorowski, 2018).

Poland's farming population differs from its non-farming counterpart in terms of age and gender. Public statistics data on the population aged 15 and over showed the farming population was relatively young (CSO, 2020b). This was proven by the higher proportion of people aged between 15 and 29 (26.1%) compared to the non-farming population (21.0%) and a smaller proportion of people aged 65 and over, i.e. 13.4% (compared to 21.9%). The differences in age structure between farming and non-farming populations were coupled with a higher fertility rate in farming families, more intensive outmigration of middle-aged people (30-44 years old) motivated by earning a living off-farm, and the emergence of new non-farming households formed by people retired from agriculture (Sikorska, 2013). Also, the gender structure differed between the two populations. Males formed a small majority (53.0%) in the former group and women were the majority (51.8%) in the latter, which was the effect of the masculinisation of farming as well as the greater spatial and social mobility of young women, who often move to urban areas for an education and a professional career.

3.2. Socio-economic characterisation of the farming population

When characterising the farming population in Poland, one needs to bear in mind that this is a highly diverse group. Its size varies depending on the definition of a family farm, and also the farm's function for its users (Sikorska, 2014). In the most general approach, defined only by the fact of owning a farm⁴, the farming family group included about 1.4 million households (CSO, 2020a). Over two-thirds of them were families with farms of little economic potential that did not focus on market-oriented production (Zegar, 2018). The population tied to such farms obtained the greater part of their income from other sources (mainly paid work outside farming, and also retirement and disability benefits), while the farming assets at their disposal played only an auxiliary role. On the other hand, less than 1/3 of all families with farms made their living mainly from farming. This category is considered as farming households⁵. They utilise almost 2/3 of the country's arable land (the average farm owning 19.6 ha of arable land), over 4/5 of the total headage of animals (with an average of 12.1 livestock units per farm), made up 1/2 of the workload in Polish agriculture and 3/4 of overall agricultural production (€38,700 per farm on average) (Zegar, 2019). Besides the overall picture of Polish farmers, it should be stressed that there exists a significant

⁴ In Poland, family farms are often identified with private farms, i.e. technically and economically distinct entities, under separate management by a private individual, where agricultural activity is pursued (CSO, 2020a).

⁵ Households in which income generated by running a private farm was the only or main source of making a living (CSO, 2020c).

regional differentiation in respect to the socio-economic characteristics of farming families in the country.

In 2019, farming households in Poland comprised an average of 3.6 people. They were larger than the average household in the country (2.6 people), and other socio-economic groups' households, including the households of paid workers (3.1), the self-employed (3.0) and retirees (1.8). The income of the farming population (i.e. those mainly making a living from agriculture) is low compared to the income of other socio-economic groups. This group's internal diversity of wealth was also significant. The Gini index reached the relatively high level of 0.54⁶ among farming households. Due to frequently insufficient production assets and the unique nature of farming operations (e.g. constantly rising production costs, changeable natural and climatic conditions, market unreliability involving the outflow of the economic surplus), a relatively high level of poverty is observed in the farming population (Dudek, 2017).

A very important issue in this regard, as stressed by the key-informant no. 1: *Expert (rural sociologist) from the Nicolaus Copernicus University in Toruń*, is the significant polarization of the farming community. The Gini coefficient is one of the highest in Europe, and this has further consequences, for instance, for the community life. The farming community is not homogeneous; there are different worlds, lifestyles, elements of the peasant mentality (post-peasant remnants) which affect how the farming activity is carried out; one can distinguish three types of farmers in Poland: small-farm owners, medium-scale ones and large-scale farmers. This simple typology follows an economic, as well as a social logic, e.g. different lifestyles being a consequence of tradition.

In 2019, the extreme poverty rate in farming households was 9.8% (5.6 pp higher than average)⁷. In 2019, farming families' average per capita disposable income was PLN 1,667, or 76% of the income of the self-employed, 90% of paid workers' income, and 91% of retired people's income⁸. It needs to be noted that the income disparity between farmers and other socio-economic groups has recently decreased due to relative income growth in farming and transfers made to farmers through the CAP (Chmielewska & Zegar, 2020; Kalinowski, 2019).

⁶ The Gini index was 0.30 for paid worker households, 0.37 for the self-employed, 0.22 for pensioners, and 0.26 for disable people households (CSO, 2020c).

⁷ The extreme poverty rate in socio-economic groups concerns the percentage of people in households (CSO, 2019a).

⁸ In the case of average disposable income calculated on the basis of the OECD equivalence scale, the income relationships of farmer households were different compared to the other socio-economic groups, i.e. the figure was PLN 2,886, accounting for 97% of paid worker incomes, 80% of the incomes of the self-employed, and 121% of pensioner and disability people incomes (CSO, 2020c).

3.3. An overview of the evolution of the farming sector

Polish agriculture has long been undergoing dynamic structural changes, which were initially caused by a transformation of the economy after the socialist era, and later the process of European integration and inclusion in the EU CAP mechanisms.

Polish agriculture has long been undergoing dynamic structural changes, which were initially caused by a transformation of the economy after the socialist era, and later the process of European integration and inclusion in the EU CAP mechanisms. Economic development and modernisation has taken place in agriculture over the past three decades thanks to support from foreign investment (FDI) as well as funding from the EU (Wigier, 2019). As a result, the Polish agri-food sector has grown to become one of the most important in Europe and is a significant component of the national economy, oriented on export, especially to the EU market⁹. From 2004 to 2019, Polish exports of agri-food products grew six times, from €5.2 billion to €31.5 billion. This accounted for 13% of Poland's overall exports of goods in 2019¹⁰.

The restructuring and modernisation of Poland's food industry has contributed to the concentration of food production and increased the industry's international competitiveness. It has been accompanied by deep structural changes. The economically strong and development/market-oriented farms have developed, estimated at over 200,000 (about 15% of all farms in Poland) (Adamski et al., 2019). This group of farms has concentrated land and capital, and has a substantial share in global agricultural production. The trend of the growing number and proportion of the largest farms has changed the structure of farms in terms of arable land area, volume of production, and the use of farmland¹¹.

⁹ Poland came in seventh place among the EU's major food exporters (Szczepaniak & Wigier, 2020).

¹⁰ In 2019 the positive balance of trade in agri-food products stood at EUR 10.4 billion (Szczepaniak, Ambroziak & Drózd, 2020).

¹¹ In the years 2006-2016, only the number of farms with over 20 ha of arable land increased in Poland (by 26%, i.e. from 106,000 to 134,000), and the area of these farms grew from 5.0 to 6.4 million ha of arable land (Poczta, 2020).

Also, as a result of economic restructuring, urbanisation and strong market pressure towards the concentration of resources and production, a large number of farms in Poland have ceased to operate. Consequently, from 2004 to 2016 the number of farms dropped by 465,000 (25%), from 1,850,000 to 1,385,000. The decrease was the highest among small farms (up to 5 ha), however, these still formed a vast majority of farm units (52.5%). From 2010 to 2020 the average farm size in Poland increased slightly from 9.8 ha to 11.1 ha (CSO, 2020d).

The most recent years have shown a simplification and specialisation of agricultural production – the result of a drive for growth in production effectiveness and the increase of economies of scale. The number of farms with mixed (crop-animal) production has thus dropped, while the group of specialised farms has grown (especially in field crops). Also, there has been a growing proportion of farms pursuing crop production and withdrawing from animal production. Despite the diminishing number of operators of the latter type of production, this group has seen a concentration of headage and an increasing scale of production (Wrzaszcz, 2018).

3.4. The main social challenges and needs facing the farming population

3.4.1. Spatiotemporal accessibility of health and social services

As stressed by the key-informant no. 1, the unsatisfactory transportation accessibility of rural and farming population to services should be emphasized strongly, because it is intimately connected to other important issues, e.g. access to the labour market, development of rural entrepreneurship, also off-farm.

3.4.1.1. HEALTH SERVICES

Similar to other European countries, Poland's healthcare system has a clear urban-centric pattern (Stępnik et al., 2017). This is true not only of hospitals and ambulance services but also for specialist medical services and pharmacies. The study on healthcare accessibility took into account the supply of a "basket of specialist medical services" that included nine selected categories (medical fields) (Stępnik et al., 2017). Unsurprisingly, things are worst in rural areas, and looking at the demographics (depopulation + ageing) – in areas with population decline and an advanced ageing.

The location of general practitioners is relatively evenly distributed and thus, accessible, but even in this case there is a noticeable concentration of services in larger settlements (towns, central villages). This pattern has been shaped historically, but it is also justified by the economic rationality of managing public resources. It can be seen as a spatial dysfunction of the health care system which inflicts a handicap on rural people living in less-densely populated regions, with scattered settlements including farmers with their farmsteads remote from larger settlements and main roads.

A high concentration of hospital accident and emergency (A&E) departments in urban centres clearly results in serious barriers to reach these services by rural residents among all the categories considered in the study (i.e. cores of functional urban area (FUA), FUA outer zones, other urban areas and rural areas). There are counties, usually in the borderland between provinces, without a hospital or A&E department. The population of rural municipalities and FUA outer zones is characterised by the poorest access to this kind of service. Similarly, the greatest barriers are found in “stagnating” and “depopulating” municipalities (according to the demographic typology) (Stępnik et al., 2017). Those differences in accessibility increase noticeably in the case of hospitals and specialist clinics. Residents in towns/cities travel on average less than five minutes to such services, whereas it can take over 30 minutes for rural residents (Stępnik et al., 2017).

In respect to primary care providers (PCPs), the situation of rural people is better than for the above-mentioned services, which is mainly due to the greater number of PCPs and their more even spatial distribution (Stępnik et al., 2017).

The spatial pattern formed by pharmacies is also urban-centric. In Poland, there are 462 rural municipalities without a single pharmacy, and 92 municipalities with neither a pharmacy nor a dispensary. People in rural municipalities have to travel the farthest to the nearest pharmacy (about nine minutes on average), compared to two minutes in FUA cores and other towns. Also, the best situation is found in municipalities with population growth, and the worst in depopulating ones (Stępnik et al., 2017).

In addition, as stressed by the key-informants no. 2 – *Expert (agricultural economist) – Institute of Agricultural and Food Economics-National Research Institute* and no. 3 – *Representative of the Kujawsko-Pomorskie Chamber of Agriculture*, while access to health services in rural areas seems to be provided quite evenly (at least in the region of Kujawsko-Pomorskie), the farmers’ (patients’) complaints usually concern the quality of services/advice and the waiting time for specialist health services. These circumstances have had a significant impact of how long it takes for farmers to recover from illness or injury. That is why it is so important, as proposed by the key informant

no. 3, to arrange and introduce a system of replacing farmers in the case of farmer's inability to work at a farm due to health problems, tiredness, need for rest/relaxation and holidays. Such a system works in other EU countries and is supported by CAP. In Poland, a farmer works practically all the time, there is no chance of holidays, rehabilitation or health improvement. If the farmer's family (spouse, parents and/or children) is working on the farm, hiring employees from outside the family is a real alternative. Temporary employment is a difficult matter mainly because the farmer's work is becoming more and more specialised (it requires certain competences and skills to operate machinery and to take care of animals). Even though the decision to carry out certain works is made by the farmer himself, not all work has to be done by himself. In the EU, various instruments and tools are used to provide such a support, funded mainly from the social security system. In Poland, launching a similar system of farm replacement should be considered.

The farmers' (patients') complaints usually concern the quality of services/ advice and waiting time for specialist health services.

3.4.1.2. SOCIAL SERVICES

The structure of welfare assistance in Poland covers all territorial/administrative levels, although the services provided at the county- and municipal-levels are usually considered as the most important for individuals and rural families.

The greatest accessibility to the county family assistance centres is unsurprisingly found in the county towns, while the lowest accessibility is found in rural locales from which it takes over 40 minutes to reach the nearest county authorities. Also, the wide range of the maximum travel time from 48 minutes to over 85 minutes depending on the region is worth stressing. Then, the most favourable accessibility index is found in municipalities with population growth, while the worst – in depopulating ones (Stępniaik et al., 2017).

In the case of basic welfare assistance services provided locally, the temporal accessibility has a highly mosaic-like pattern, although it should be stressed that the highest level of accessibility is mainly in cores of the urban regions, while functionally, accessibility is the lowest (about 10 minutes' travel on average) in rural municipalities, followed by FUA outer zones (Stępnik et al., 2017).

Access to the pre-school units (nurseries) is largely determined by their concentration in urban areas.

In terms of national insurance, services are provided by local offices and regional branches of the ZUS (general national insurance) and KRUS (farmers' national insurance). As analyses show, both types of services reveal a similar spatial distribution. In all cases (local ZUS and KRUS offices and regional branches), the worst situation in terms of accessibility is found in rural municipalities, especially as regards KRUS regional branches (an average of about 75 min) which matters for farmers (Stępnik et al., 2017).

Access to the pre-school units (nurseries) is largely determined by their concentration in urban areas. While the residents of the largest cities have at least a few available institutions of a kind to be chosen, rural residents (especially in eastern and central Poland) have a highly limited choice in this respect; for many rural municipalities accessibility is low and travel times are longer than 20 minutes – the situation is worst for peripheral and agricultural municipalities. In the case of almost 2,000 municipalities, their residents need to travel to the nearest nursery (which means that it is not located at a walking distance), favouring only a small proportion of the local community (Stępnik et al., 2017).

The most dense network of educational units is observed for kindergartens and primary/elementary schools, but their spatial distribution is not even and shows great regional differentiation. The smallest number of such institutions is noted in regions with low demographic potential, dynamic and intense

depopulation and aging, and with poor demographic and economic prospects. In the case of secondary schools, they concentrate in southern Poland and urban centres. The spatial distribution of other schools (upper secondary education) corresponds to the urban network in Poland, with the largest clusters of secondary schools, vocational secondary schools in regional capitals and other cities. The spatial pattern of municipalities with the best accessibility expressed in the average travel time to the nearest kindergartens and schools is definitely island-like, corresponding to the urban network. The worst accessibility is observed in peripheral areas, especially those located in the eastern part of the country. Such a low level of accessibility results from a poorly developed network of pre-school units and school institutions in more remote and underdeveloped areas (Stępniański et al., 2017).

What is more, as stressed by the key-informant no. 1, the lower level of education among rural people leads to various unfavourable social phenomena, such as the mismatch between the level of life aspirations and the real opportunities among farmers' children arising from the level of education – the so-called “toothless optimism” of this youth, which is partly an effect of the low availability and accessibility of rural and farming population to high-quality education.

3.4.2. The Internet and digitization

Internet accessibility¹² in rural households is improving steadily, and stood at 89.3% in 2020, according to public statistics (whereas it was 77.8% in 2016, and 18% in 2005). In the same period, internet accessibility outside rural areas increased from 36% to 89.7% in small towns and to 92.1% in large cities (CSO, 2017, 2020e). This tendency comprises not just a growing number of rural households with internet access, but also a levelling off of differences in the access between urban and rural areas (Batorski, 2015).

Besides the physical access to the internet it is worth referring to the access to the broadband internet which can be translated into how rapidly data can be transferred. In 2019, land-line internet offering of at least 30 Mb/s was connected to 30% of buildings in rural municipalities, to 43% in urban-rural municipalities, and to 62% in urban ones (OEC, 2019). The Office of Electronic Communications (UKE) predicts that once spending in the Digital Poland Operational Programme 2014-2020 is complete, this index will have doubled for rural areas.

¹² Central Statistical Office defines internet accessibility as having an internet connection via any device (including portable devices like smartphones).

Alongside providing ICT infrastructure, it is important to undertake measures aimed at improving the population's digital skills and competences. Research shows that the group most in danger of digital exclusion (i.e. limited internet access and abilities to use it) are people aged over 50 (Gacka, 2017; Szmigielska, Bąk & Hołda, 2012). In Poland, 81.4% of people aged 16-74 used the internet regularly (2020); this proportion became smaller with older age (99.2% of users in the 16-24 age group, and 40.4% in the 65-74 age group) (CSO, 2020e). Based on how economically active people were, besides retirees, farmers were the group who used the internet relatively the least (a third of farmers did not use the Internet at all), but the proportion of this group has gradually decreased over the past few years (CSO, 2020e). What is more, rural residents (including farmers) use the Internet less frequently, and stop using it after reaching retirement age more often than individuals from other socio-occupational groups (Batorski, 2015).

Recent studies show that the internet is becoming increasingly widespread as a source of information/knowledge, especially among young farmers. They often use it to search for non-specialist (private) content as well as specialised information related to their production profile (IRWiR PAN, 2019). As mentioned by key-informant no. 2, the internet and digitization offer very unique opportunities for initiating, implementing and disseminating social innovations – also by overcoming spatial dispersion (of population and settlements) and distance. Information and communications technologies create opportunities for further developing farming (e.g. precision farming (Lorencowicz, 2018), sales platforms, farm management). Thus, the support for ICT infrastructure should undoubtedly be continued, not excluding last mile access and internet user competence.

In respect to the accessibility improvement to social aid services through the usage of new technologies, it is important to mention, as stressed key-informant no. 4: *County Family Assistance Centre (Tuchola county)*, that since 2019, it is possible to submit applications for co-financing support actions for disabled people from the State Fund for Rehabilitation of Disabled Persons (PFRON) using the so-called Support Handling System (SOW). The aim of this tool is to support the assistance offered to disabled people (also rural residents and farmers) and institutions acting on their behalf in applying for PFRON funds through the IT system. It is possible – via the Internet – to get an access to information, supplement, sign and submit applications, make any possible clarifications and familiarise yourself with the contract template. Access to the System is free of charge. Based on the latest observations, however, this opportunity is mainly utilised by young people who want to benefit from the possibility of funding studies at universities. Elderly people with disabilities make use of it less frequently, which may be explained by lack of access to a computer, Internet or other communication competence problems.

3.4.3. Generational renewal

Generational change is one of the major challenges for the farming population in Poland. Regardless of the fact that Polish farmers are often described as being among the youngest in the EU (MRiRW & IERiGŻ-PIB, 2019), the problem of generational renewal should be considered in many aspects and from a long-term perspective.

Despite the existence of a large group of young farmers¹³, the population's ageing is noticeable among farm owners/managers/users and also among other people employed in the farming sector. The fertility rate in the rural and farming population is dropping¹⁴, and many rural municipalities suffer from depopulation (Stanny, Rosner & Komorowski, 2018). These processes will soon intensify, leading to growing problems in starting a family, getting a job (Stanny & Strzelecki, 2020) and developing production in farms (Gorlach & Drąg, 2019). However, the lack of farm successors as the reason for farm shutdown is secondary in relation to the decreasing attractiveness of incomes and careers in farming (Zegar, 2020).

Despite the existence of a large group of young farmers, the population's ageing is noticeable among farmers and other people employed in the farming sector.

Generational changes in agriculture are closely linked to farm succession, which is a complex process spread over time and affecting the situation of the whole farming family. Generational renewal in farms involves challenges related to the family's financial, legal and psychological situation as well as intergenerational collaboration with the aim of fulfilling the needs and expectations of those withdrawing from farming and those who are starting it (Ginter, Kaluza & Nieweglowski, 2016). For this reason, it is necessary to provide adequate expert and social support for the farming

¹³ According to Eurostat data, in 2016 the proportion of people aged up to 40 among all farm managers in Poland was 20.3%, whereas the EU-27 average was 10.7% (Eurostat, 2016).

¹⁴ The fertility rate in rural Poland decreased from 2.58 to 1.43 in the period 1990-2019 (CSO, 2019b).

population in planning and completing the transfer of farms.

In addition, as stressed by key-informant no. 1, culture and tradition are still important and have a clear impact on how agriculture and farming activities look like in Poland, which is best seen in the case of generational exchange through family/social conflicts resulting from the fact that the succession of farms is largely dependent not upon the administrative procedures but the tradition itself (rooted traditions, passed down from generation to generation). Thus, culture and tradition still impact on the development opportunities of farms, the life situation of farmers and their families, farmers' attitudes towards innovation and the opportunities for disseminating the innovations across rural areas. Generally speaking, culture and tradition influence considerably the possibilities of successfully carrying out modernisation, reforming the agricultural sector and improving wellbeing among farming families.

The succession of farms is a complex issue due to the often difficult relations between the members of a farming family.

What is more, as stressed by key-informant no. 3, the succession of farms is a complex issue also due to the often difficult relations between the members of a farming family, which often translates into significant financial expectations of the young farmer's siblings. The way to facilitate farm succession was through EU support that provided structural pensions (early retirement), young farmer bonus/support scheme. Unfortunately, in the case of Polish farmers these funds were most often used for the purchase of new equipment and farm inputs, while the purchase of land from parents and siblings by using these funds was only used to a marginal extent (although in Western Europe it is used quite often).

Furthermore, as underlined by the same key-informant, transferring the farm is emotional for farming families. Conflict might also emerge from different perceptions of running a farm and the difference in the level of

education between the representatives of different generations. A typical source of conflicts was the divergence: a young educated farmer versus his experienced parents, who have been running the farm for all their professional lives. The inability to directly implement – due to the “generational obstacle” – new technologies and production techniques among young farmers was often a cause of frustration and conflicts in farming families. The older generation handing over the farm often significantly delayed the moment of an actual succession.

For the large part of the farming population, generational renewal therefore is a troubled process. This is especially true for people who own farms with little economic potential (with a limited or non-existent production function). Such farms are characterised by stagnation and limited fixed-asset renewal, and their prospects for development are poor. Merely apparent succession is not uncommon (Wojewodzic, 2013a), consolidating the less-than-optimal utilisation of productive factors, which contributes to negative external effects (Wojewodzic, 2013b). In many cases, generational renewal is about people who do not aspire to maintain agricultural production and/or about the future users who do not have relevant, professional knowledge and qualifications¹⁵. Thus, generational changes in Polish agriculture are consequently coupled with the emergence of farms that only exist on paper.

3.4.4. Social capital/cooperation

Researchers point out that Poland is among the countries with the lowest indicators of social capital (Halamska, 2008) and trust (Domański, 2018) in Europe. At the national scale, rural areas are behind cities/towns in respect to several issues: social trust, participation in public organisations, readiness for cooperation, and sense of agency (CBOS, 2018a; Tarkowski, 2017).

The average value of social trust in Polish society is -0.66 at present, which proves a distrustful attitude that predominates over an open attitude and trust. This indicator is lowest for rural residents (-0.88), standing at -0.90 for farmers. Despite a reserved attitude towards strangers, Poles trust people from their closest surroundings: family (98%), friends (95%), associates (88%) and neighbours (80%). Then, rural areas report the highest proportion of people who trust their neighbours (82%) and people who are active in community work (70%). Moreover, farmers show the highest trust towards their associates (90%).

¹⁵ Polish farmers' current education level is inadequate, and often constitutes a barrier to implementing innovative organisational, production and marketing solutions as well as practices that are neutral or beneficial for the climate and the environment (Zegar, 2018).

As stressed by key-informant no. 1, strong social ties observed in typical farming communities have been weakening; there is a break in the solidarity of farmers considered as a professional layer; clientelism rules appear, and sometimes also the clan rules still have an impact on how the farming/rural community life looks like.

Strong social ties observed in typical farming communities have been weakening.

Trust in interpersonal relations does not translate into the level of trust in the public sphere, which averages 11.86. It is slightly higher for rural residents (12.04), and the highest for farmers (13.60) (CBOS, 2018b). In terms of active participation in civic organisations, rural Poland comes second to last, only ahead of large cities. Community work in local organisations is declared by 43% of all Poles, 38% of rural residents and 44% of farmers (CBOS, 2018b). The rural communities are distinguished by relatively low trust in organised forms of assistance, and their members are often active in this area outside any formal structures (Burdyka, 2020; Michalska, 2008). However, even after accounting for informal activity, rural residents come last in Poland, with 49% involved in community work, where the national average is 51% (55% in the largest cities) (CBOS, 2020b).

On the other hand, as mentioned by key-informant no. 2, besides the low trust in formal organisations, numerous local social associations operating in the Polish countryside are of a significant importance for the rural/farming community functioning; among them voluntary fire services, farmer wives' association (rural housewives' association), popular sports teams, rural youth unions, village councils and parish/church councils are the most important ones.

Readiness to cooperate with people from outside their family is more common for urban than for rural residents (CBOS, 2018b). Despite the high values of indicators

measuring openness to cooperation, respondents do not always notice a need for cooperation (CBOS, 2018b). In this regard, as mentioned by key-informant no. 1, farmers' engagement in the community life has recently stagnated (after years of growth), while the engagement for Poles, in general, has been clearly growing. In the local communities the problem is that the same people are still active among farmers; those developers/activist are aging and thus, they gradually leave the rural elite. That is also one of the reasons why farmers are no longer represented in local communities.

Generally speaking, the level of social capital in socialising and neighbourly relations is higher in rural Poland than in towns/cities (Bieńkuńska & Piasecki, 2018), and correlates with lower trust in strangers and a lower level of openness to cooperation. The farmers show a relatively high level of trust in public institutions and associations, and also often participate in community organisations (Bieńkuńska & Piasecki, 2018). Social engagement, mainly among family and the neighbourly community, prevents the formation of larger structures that could fill the gaps created by infrastructure deficiencies or represent farmers' interests. Thus, despite the positive symptoms in certain aspects of the social participation and engagement, in general, the level of community activity is low which results from a lack of a sense of subjectivity, empowerment and agency (Szymczak, 2016). As a result, the main challenge is still to increase social capital among farmers as well as to fulfil their need for cooperation which is due to the fact that farms constitute the weakest link in vertical food chains, as mentioned by key-informant no. 2. This objective can be reached by supporting the social capital through the adaptation and implementation of already-known solutions or newly created social innovations.

The main challenge is still to increase social capital among farmers as well as to fulfil their need for cooperation.

4.

Analysis of selected themes in social challenges

The following four social challenges have been identified:

- Spatiotemporal accessibility of health and social services,
- The internet and digitization,
- Generational renewal, and
- Social capital/cooperation.

4.1. Spatiotemporal accessibility of health care and social services

A. Social challenge identified: *Spatiotemporal accessibility of health care and social services*

The spatiotemporal accessibility of health and social services is definitely not a personal issue but an issue of societal concern impacting rural societies; among them farmers, their families as well as the farming communities as a whole.

Given the specificity of the origins/roots of the challenge which largely result from spatial characteristics and related mobility, availability and accessibility obstacles, the rural society (incl. farmers) is disadvantaged compared to the urban population, especially the communities living in remote border regions. According to the empirical data, in Poland, the lowest accessibility to health and social services is observed in the countryside, peripheral regions as well as declining and ageing local communities. Low availability and accessibility of health and social services create barriers in satisfying basic needs by farming families, which negatively affects farmers' physical and mental health conditions (in mid- and long-term perspectives) or even increased the likelihood of life-threatening situations (due to limited access to emergency services), for instance as a result of work accidents.

It is important to consider spatiotemporal accessibility more broadly, not just through the travel time and distance, but also through the waiting time for a visit at a physician, specialist etc. (it concerns public health care services, covered by the insurance, free of charge). Among the most vulnerable groups, in this context, one may mention retired and/or pre-retired farmers, farmers suffering from chronic illnesses, disabled farmers, impoverished farmers, farmers without their own means of transportation, especially when the public transportation is inefficient or non-existent and farmers living in the deep peripheries.

According to the empirical data, in Poland, the lowest accessibility to health and social services is observed in the countryside, peripheral regions as well as declining and ageing local communities.

A stressful life leads to serious diseases that limit the farmer's ability to work efficiently on a farm.

It is a common practice that a farmer continues working despite he/she feeling unwell (e.g. in fever due to the infection).

B. Impact of a social challenge

a) individual farmers and farming families:

- **Mental wellbeing**

The interpersonal contact between a doctor and a patient is sometimes not good. The visit/appointment lasts a very short time and often the farmer is not provided with sufficient explanation – there is not enough time, attention, and interest from the part of a doctor to a patient's problems. Then, given the significantly lower health care taxation for farmers than for non-farmers, some farmers feel they are treated not well by doctors who may think "they pay not much but they expect much/they are demanding" – it contributes to stress and causes humiliation of farmers.

- **Physical wellbeing**

A stressful life leads to serious diseases that limit the farmer's ability to work efficiently on a farm. It results in serious diseases, such as a heart attack, that force farmers to suspend all their activities. If there is a successor at the farm household, he/she takes over the activities and the actual management and responsibility to manage the farm. If not, the farmland is leased to others.

- **Social wellbeing**

For some individuals – those non-mobile (without a car), elderly, disabled ones – the distance and the resulting low spatiotemporal accessibility is a problem. In some cases, those who need to make an appointment with a specialist and, at the same time, do not own a car and/or are unable to travel, quit to see the doctor and stay home.

b) farming community and wider rural community:

- It is a common practice that a farmer continues working despite he/she feeling unwell (e.g. in fever due to the infection). The consequence is that he/she is not in good health after being infected which probably has a negative impact on his/her health in a long-term perspective.

- The long list of patients intending to see the doctor and the resulting long waiting time for such an appointment – to a lesser extent in the case of a local physician, and to a significantly greater extent in the case of a specialist – is considered as a common accessibility problem for farmers and their communities. It makes the atmosphere more tense and stressful among the patients, especially for farmers as in a traditional understanding of farmer’s work ethic in which “they are at work all the time” and “cannot be sick at all”. Given the above, receiving help is so important/ critical if the waiting time is long and the disease or injury is serious. Otherwise, the farming activity cannot be conducted efficiently, while in the more serious cases, the operation on a farm should be suspended.
- The most spatially accessible specialists, rehabilitation centres (which are of great importance for farmers due to their work/occupational diseases) and hospitals in the nearby town (county-level) do not satisfy the farmers’ needs in terms of quality. This situation forces them to travel long distances to be examined which in some cases creates serious obstacles for rural communities to access those services, leading to the lower degree of the usage of such service and the increasing deterioration of the health conditions of members of those communities. Without a possibility to access and use such rehabilitation services, it becomes impossible or at least hard to get back to work on a farm and work efficiently.
- The relatively low coverage and access to health care services during nights, weekends, and public holidays unlike the coverage of ordinary, weekdays services are provided more often by non-local units. In case of urgent need to see the doctor in these specific time periods, farmers and their families are forced to travel to the nearest town (county-level) or even to the regional centre/city thus, they become less accessible.

The most spatially accessible specialists, rehabilitation centres and hospitals in the nearby town do not satisfy the farmers’ needs in terms of quality. This situation forces them to travel long distances to be examined which in some cases creates serious obstacles for rural communities to access those services.

An aerial photograph of a rural landscape. The top half of the image shows a vibrant yellow field, likely rapeseed, with distinct rows. The bottom half shows a lush green field, possibly a crop like corn or soybeans, also with visible rows. The two fields are separated by a diagonal line, creating a strong geometric pattern. The overall scene is bright and clear, suggesting a sunny day.

C. What are the main causes of the problems identified?

- Ineffective organization/management of the health care system (incl. management at the county and local levels), lack of sufficient funds (e.g. manifested in the lack of accessible rehabilitation centres).
- Insufficient funding and lack of income and standard of living incentives in the case of the health care sector restrain physicians and specialists from moving into the countryside and/or county towns. This results in a low-quality and low range of specialists available and accessible in an acceptable distance by farmers, their families and the local communities. Similar to the causes of labour shortages, insufficient funding also results in relatively poor quality equipment in the health care centres at the local- and county levels.
- The specificity of rural regions which are often low-density, low-capacity, underdeveloped and distantly located disadvantaged areas creates obstacles in accessing high-quality health care services located in urban centres.

D. How do farmers/farming deal with the negative impact on wellbeing?

- For some individuals who are less- or non-mobile (without a car), car-sharing, car-pooling is often practised, e.g. a mutual help in which a neighbour is a car driver and the costs of travel are shared between the travellers to the town/city (to the health and social services).
- The solution to tackling the problem of low accessibility to health care services is to use services provided by the private sector (chargeable). It is a common practice to use dentist services from the private sector.
- If the waiting time (time accessibility) is long and the disease or injury is serious there is a need for substitute/replacement from the part of family members, neighbours or farming associations. As a result, a recommendation towards the implementation of the work substitution system, at the local scale, is made.
- There is a recommendation to better manage the appointments in the local health care centre by scheduling each of the patients to a specific time/date.
- Another solution to tackle the problem of a long waiting time to see the doctor/specialist is to call the emergency (even though there is no need, in fact, to do so) or to travel to the emergency at the county/regional hospital and ask to be admitted.
- The low-quality services provided by hospitals and health care centres at the county level prompts people to bypass a town and go directly to the regional city. There is a recommendation to increase funding for county-level hospitals and health care centres. This would generate financial incentives and supplement doctors' incomes in order to maintain sufficient and high-quality staff members on the spot as it would be easier for a specialist to commute from a large city to the county town to see his/her patients than for a group of patients to travel from the countryside to the large city to see the doctor.

The solution to tackling the problem of low accessibility to health care services is to use services provided by the private sector.

4.2. The internet and digitization

A. Social challenge identified: *The internet and digitization*

Internet accessibility in rural households is improving steadily, and stood at 89.3% in 2020, according to public statistics. A levelling off of differences in the access between urban and rural areas is observed. In 2019, land-line internet offering at least 30 Mb/s was connected to 30% of all buildings in rural municipalities, to 43% in urban-rural municipalities, and to 62% in urban ones.

In Poland, 81.4% of people aged 16-74 used the internet regularly. This proportion became smaller with older age. Farmers were the group who used the Internet relatively the least (a third of farmers did not use the Internet at all), but the proportion of this group has gradually decreased over the past few years.

The internet is becoming increasingly widespread as a source of information/knowledge, especially among young farmers. They often use it to search for non-specialist (private) content as well as specialised information related to their production profile. Information and communications technologies create opportunities for developing farming (e.g. precision farming , sales platforms, farm management).

The internet and digitization offer very unique opportunities for initiating, implementing and disseminating social innovations – also by overcoming spatial dispersion (of population and settlements) and the distances.

Farmers were the group who used the Internet relatively the least.

B. Impact of social challenge

a) individual farmers and farming families:

Mental, physical and social wellbeing

- New technology also contributes indirectly to farmers' health and wellbeing, as a lot of hard work has been replaced by computers or machines.

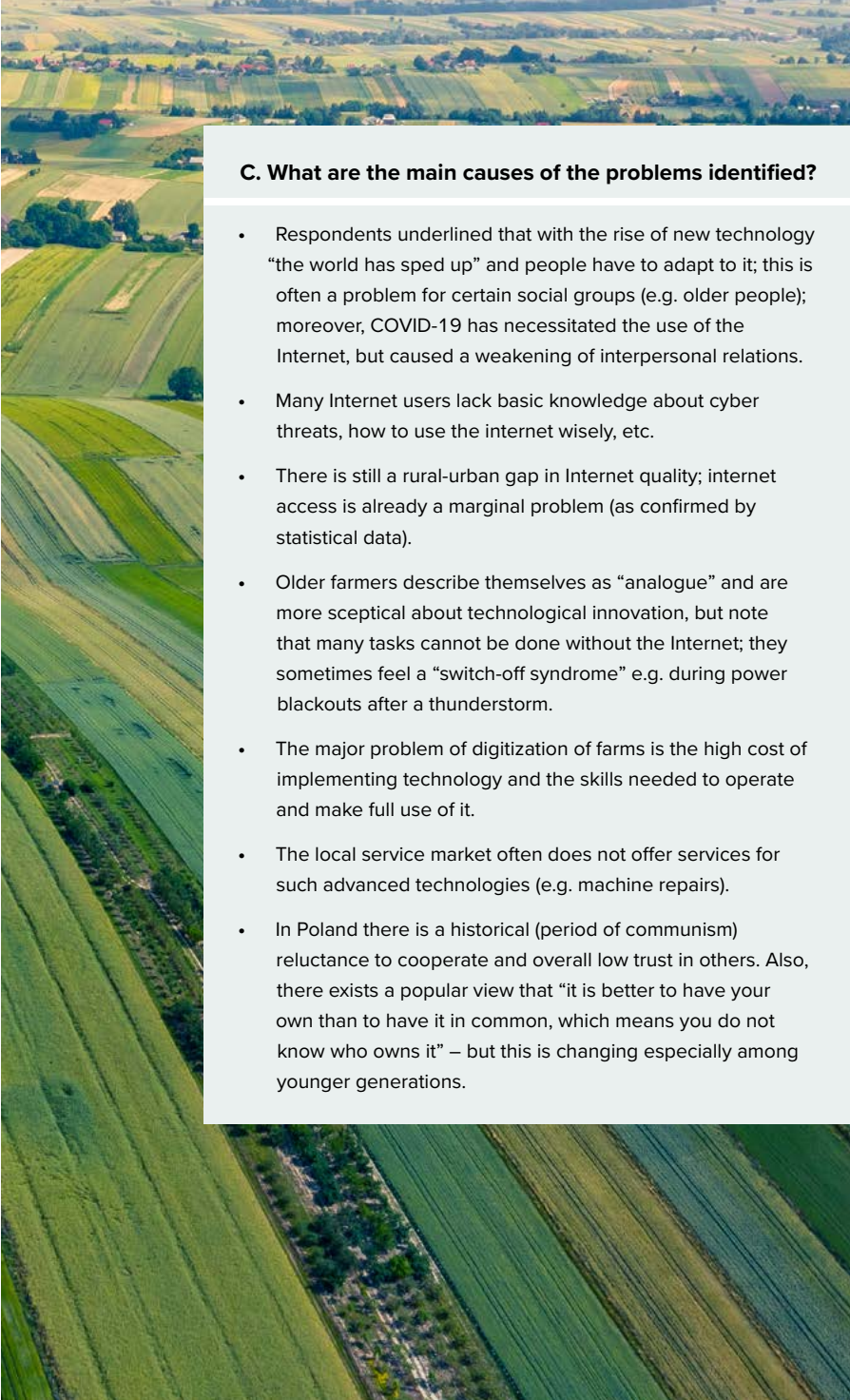
- The young farmers use apps, the internet, automated production more often than older farmers. However, even older farmers believe that “modern agriculture cannot cope without new technology in competition with agriculture that is using it”.
- The development of the local economy has not kept pace with the development of technology – e.g. the servicing of modern machinery is often a problem because it requires a visit of specialists from a different part of the country; local repairers do not have the tools and knowledge for this type of repair.
- The Internet helps save time and fuel, as it replaces traditional ways of solving matters (visiting the office, shopping).
- There was also a more far-reaching view that technology makes many things easier, but limits creativity and personal inventiveness.
- New technology has made the farming profession simpler, e.g. applying for subsidies, banking; but it also brings benefits to the farmer as a rural resident, e.g. communicating with other people.

b) farming community and wider rural community:

- The countryside has increasingly better access to fiber-optic internet, which is very desirable, especially during the remote learning period during COVID-19 when networks are overloaded.
- The threats of digitization were also mentioned, e.g. young people who spend too many hours online, which isolates them from their peers; this problem also increasingly affects older people.
- The respondents also pointed out the problem of safety in using social media, the lack of privacy, etc.
- They also noted that excessive computer use may cause health problems in the long-term; this was mainly highlighted in the context of the current pandemic situation, remote working, and learning.

The young farmers use apps, the internet, automated production more often than older farmers. However, even older farmers believe that “modern agriculture cannot cope without new technology in competition with agriculture that is using it”.

New technology has made the farming profession simpler but it also brings benefits to the farmer as a rural resident.



C. What are the main causes of the problems identified?

- Respondents underlined that with the rise of new technology “the world has sped up” and people have to adapt to it; this is often a problem for certain social groups (e.g. older people); moreover, COVID-19 has necessitated the use of the Internet, but caused a weakening of interpersonal relations.
- Many Internet users lack basic knowledge about cyber threats, how to use the internet wisely, etc.
- There is still a rural-urban gap in Internet quality; internet access is already a marginal problem (as confirmed by statistical data).
- Older farmers describe themselves as “analogue” and are more sceptical about technological innovation, but note that many tasks cannot be done without the Internet; they sometimes feel a “switch-off syndrome” e.g. during power blackouts after a thunderstorm.
- The major problem of digitization of farms is the high cost of implementing technology and the skills needed to operate and make full use of it.
- The local service market often does not offer services for such advanced technologies (e.g. machine repairs).
- In Poland there is a historical (period of communism) reluctance to cooperate and overall low trust in others. Also, there exists a popular view that “it is better to have your own than to have it in common, which means you do not know who owns it” – but this is changing especially among younger generations.

D. How do farmers/farming deal with the negative impact on wellbeing?

- By organising various “offline” village events, meetings, encouraging different groups of inhabitants to get out of their homes;
- Teaching the youngest generations to use new technology wisely, to balance the use of the Internet with traditional relationships. This is driven by the idea that “people should control technology and not technology control people”;
- The cooperation and the use of agricultural services is an opportunity for the implementation of new solutions by the greatest possible number of farmers; this is an opportunity for smaller farms which do not have the resources to invest in machinery;
- The use of additional external funds for farm development should be further developed and encouraged.

4.3. Generational renewal

A. Social challenge identified: *Generational renewal*

Generational change is one of the most significant challenges for the farming population in Poland. Despite young farmers still being constituting a major and significant group, the farming population is ageing and many rural municipalities suffer from depopulation.

It is believed that in recent years the so-called “young farmer problem” has been intensified, leading to growing difficulties in starting a family and developing production in farms. This is visible, especially in the group of small agricultural holdings which are still dominant in Poland. Due to the limited size and poor equipment, young people are reluctant to continue the family tradition and take over their legacy only formally (on paper). In case of many new owners (successors) from farming families, a non-agricultural professional career has been chosen and the land is often rented to larger and commercial farms.

The farming population is ageing and many rural municipalities suffer from depopulation.

The issue of farm transfer is controversial and difficult. It sometimes results in serious family conflicts.



“If the farm has a chance to increase the size or a labour input, the young one sees opportunities. And if not, it is only natural that these large farms will be even bigger and the small ones will just disappear.”

The issue of farm transfers has always been emotional for Polish farming families. Succession processes are hereby related to the family's financial, legal and psychological situation as well as the appropriate shaping of intergenerational collaboration with the aim of fulfilling the needs and expectations of those withdrawing from farming and those who are starting it.

B. Impact of social challenge

a) individual farmers and farming families:

- **Mental wellbeing**

Lack of successors on farms increases the level of uncertainty of families, particularly the older generation. They do not know what will happen in the future with their farms.

- **Physical wellbeing**

Farmers are ageing because of the limited numbers of young people entering the agricultural sector.

- **Social wellbeing**

The issue of farm transfer is controversial and difficult. It sometimes results in serious family conflicts.

b) farming community and wider rural community:

- Lower chances of intergenerational transfer in small farms with limited potential for growth results in shutdown. As a result, the structural changes in the agricultural sector will take place by a growing concentration of land and other agricultural assets. Describing the above-mentioned process one farmer said: “If the farm has a chance to increase the size or a labour input, the young one sees opportunities. And if not, it is only natural that these large farms will be even bigger and the small ones will just disappear”.
- The number of active farms (especially small ones) in the villages is shrinking.
- The level of agricultural production is decreasing in favour of other rural businesses, e.g. production of solar energy.

C. What are the main causes of the problems identified?

- There are not many young people willing to take over the farm in the future. As it was stated by one of the respondents “I have three daughters aged 13, 9 and 2. For the time being I could only think about the future. I could wait on a good son-in-law or will end up as some others renting the land”.
- Agriculture is strongly linked with a high level of risk and uncertainty (unstable weather and climatic conditions, high price volatility, often changes in the agricultural policy). Young people want to have a stable job and income. As one farmer highlighted: “...I think that now the circumstances of running the farm are all so uncertain, these prices, selling conditions, and weather conditions, our weather anomaly, right? All this is uncertain and our young people prefer to go to work somewhere else and, proverbially, have a certain payment every month. And now, from our point of view, nothing is certain about the farm”.
- The main reason for not following their fathers’ footsteps by young people from farming families are the lower incomes in agriculture compared to other branches of the economy. This situation refers especially to small agricultural holdings. According to one middle-aged farmer: “I believe that the matter is simpler. Young people simply want to earn more money. Today there is an alternative – a rich labour market. They are young, well-educated, they know languages, they travel, they know what was going on in the West. People want to earn more money. And it is known that small farms do not bode well. Let’s face it!”. In turn, according to another farmer: “Very weak farms have no successors. Nobody wants to stay in the trash, so even this owner does not even persuade his offspring to stay. I don’t want them to follow his difficult fate”. Referring to the farm profitability as a key to generational changes in agriculture one respondent highlighted “...so with willing [to take over the farm], in my opinion, there is no major problem. If there is no son, there will be a son-in-law. If they feel there is money out of it, they will stay”.



“All this is uncertain and our young people prefer to go to work somewhere else and, proverbially, have a certain payment every month. And now, from our point of view, nothing is certain about the farm.”

Choosing a right successor or taking a decision to stay on farm is a challenge not only for the farmers (for the older generation, for the parents) but also for their children.



“Observing my community, mine and not only my neighbourhood, I can see that some farmers do not even want these kids to stay in the countryside, to get tired, to work so hard.”

- Choosing a right successor or taking a decision to stay on farm is a challenge not only for the farmers (for the older generation, for the parents) but also for their children. Both of them often have not decided yet what to do with the farm and which career path to follow. As one respondent said: “We also have three daughters and we are already this age, in our 50s, and we are constantly wondering. What will we do when we retire? Will any of the girls want to take on this farm job? They [daughters] are still learning and are away from home. They see it as such light, pleasant work. They see that we get the subsidies. Money flows from here and out there. Sometimes they look at a bill to pay, for some fertilizer or fuel, or whatever. And then they also wonder. Well, I really don’t know what we’re going to do.”
- Some farmers do not want their children to stay on the farm. As experienced people they perceive farming as an unprofitable business and very hard work which is not particularly good for the future for their descendants: “...observing my community, mine and not only my neighbourhood, I can see that some farmers do not even want these kids to stay in the countryside, to get tired, to work so hard”.
- Farmers are too young to transfer their farms or perceive themselves as too young to retire. Some of them have transferred only part of the farm in order to get financial support under the CAP. At the same time, young successors want to start to run the farm: “...these parents are in their fifties. For example, I also signed over some to my son. I am not able to leave completely because I am still too young. He already has started to work. This will be his future one day”.
- Some of the large and highly commercial farms have problems with their successors. Due to a very good income, their owners have educated their children to other, more prestigious and highly-paid professions.
- Rural areas in Poland are not considered as attractive places to stay for many young people. There is poor quality of public services and technical infrastructure (e.g. health care, education). The central and local government as well as the

society should create better conditions to live in the villages and better recognize the young people's needs.

- Many people from the rest of the society perceive farmers in a stereotypical manner. The farming profession is not respected enough. According to one older farmer: "It [respect for the farming profession] has improved a lot in recent years. However, there is an element of such envy of non-farmers towards farmers, because farmers only get money from everywhere. They [farmers] can't get enough".
- Pensions offered by the state for older farmers are too low and the social insurance system is uncertain. This is one reason for the reluctance to pass the farm to the children.

D. How do farmers/farming deal with the negative impact on wellbeing?

- Farmers use the CAP instruments aimed at structural changes in agriculture. However, this aid (e.g. for setting up of young farmers) is often misused, because young successors do not stay on farms or further develop agricultural production. As a consequence, the older generation acquires financial premiums and actual transfers are being delayed.
- One of possible manners to deal with the problem of farm succession is not to focus on those problems and simply do the job. "I will put it as a peasant, if I may. I try not to think about it. I live so that what I do is well done. If something, God forbid, will happen, let my children worry about what to do with it [the farm]. I will not bother myself with any additional troubles". Doing the job on the farm often means something more than typical, every day work. A special devotion and passion related to farming passed from one to the subsequent generation could be an effective solution to socialise and up-bring a good successor. In this context the same interviewee said: "A farmer is not a profession. This is a lifestyle. If someone doesn't love it, should not even touch it..."



"A farmer is not a profession. This is a lifestyle. If someone doesn't love it, should not even touch it..."

- Farmers treat the work on farm not only as a source of income but also as a life vocation. Agricultural holdings (land, animals, buildings etc.) create a special, intangible and sentimental value. As one women farmer (middle-aged) indicated:” Does anyone lead [a farm] further somewhere or [it]is developing. I think this is also to some extent a sentiment to the fact that from generation to generation the farm is passed on”. Another respondent (middle-aged) adds: “This is how I feel. I just like doing it. I have liked it since I was a child and I cannot imagine to be anywhere else. ... If someone does not like their job, then even with more money they will not do it well”.
- Farmers who do not have successors or do not know what to do consider renting the land for a long term. In the Kujawsko-Pomorskie region they are given attractive offers by the photovoltaic farms.

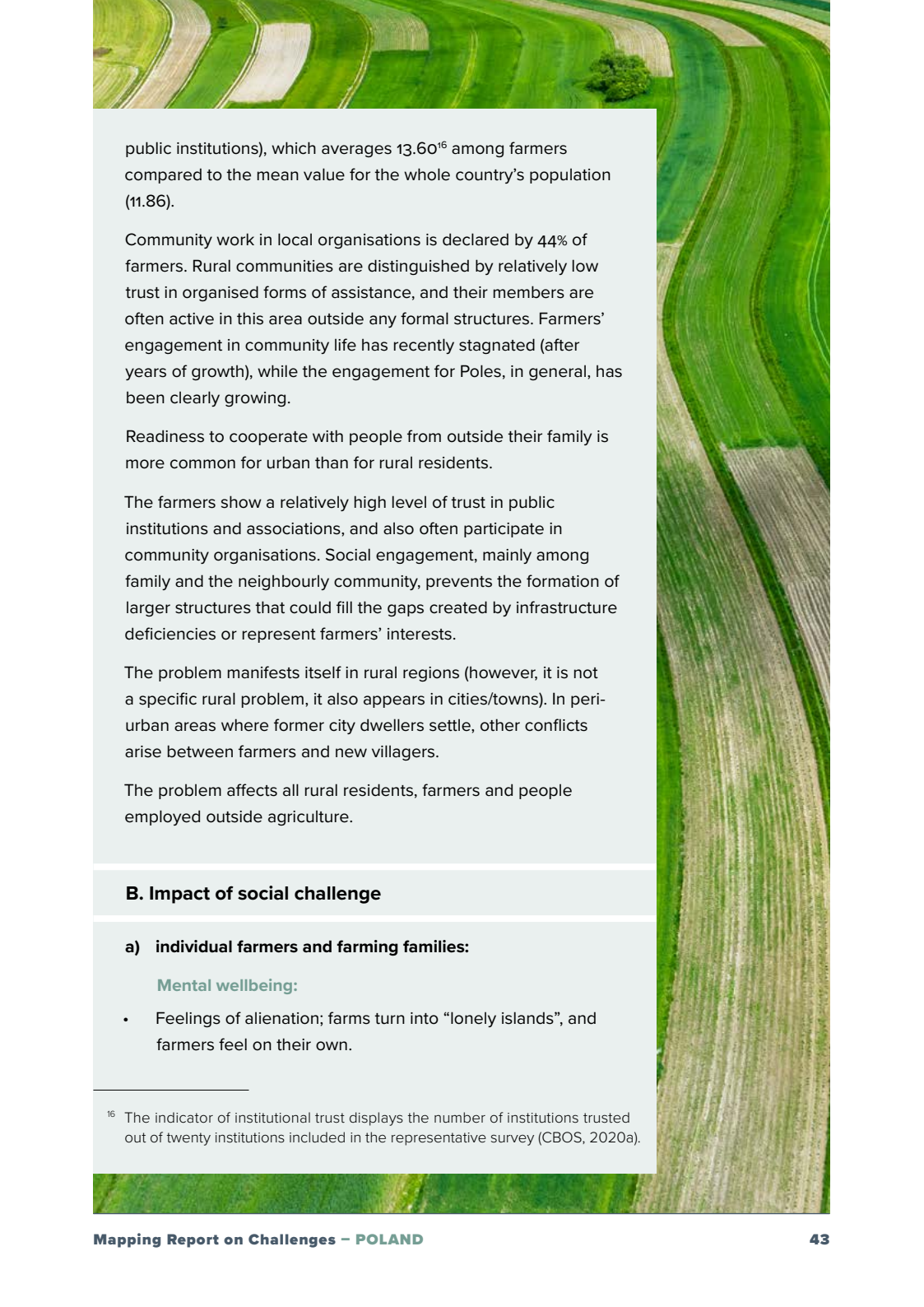
4.4. Social capital/cooperation

A. Social challenge identified: *Social capital/cooperation*

Poland is among the countries with the lowest indicators of social capital and trust in Europe. At the national scale, rural areas are behind cities/towns in respect to several issues: social trust, readiness for cooperation, and sense of agency. The average value of social trust in Polish society is -0.66 at present, which proves a distrustful attitude that predominates over an open attitude and trust. This indicator is lowest for rural residents (-0.88), standing at -0.90 for farmers.

Rural areas report the highest proportion of people who trust their neighbours (82%) and people who are active in community work (70%). Moreover, farmers show the highest trust towards their associates (90%). Trust in interpersonal relations does translate into the level of institutional trust (government and

Poland is among countries with the lowest indicators of social capital and trust in Europe.



public institutions), which averages 13.60¹⁶ among farmers compared to the mean value for the whole country's population (11.86).

Community work in local organisations is declared by 44% of farmers. Rural communities are distinguished by relatively low trust in organised forms of assistance, and their members are often active in this area outside any formal structures. Farmers' engagement in community life has recently stagnated (after years of growth), while the engagement for Poles, in general, has been clearly growing.

Readiness to cooperate with people from outside their family is more common for urban than for rural residents.

The farmers show a relatively high level of trust in public institutions and associations, and also often participate in community organisations. Social engagement, mainly among family and the neighbourly community, prevents the formation of larger structures that could fill the gaps created by infrastructure deficiencies or represent farmers' interests.

The problem manifests itself in rural regions (however, it is not a specific rural problem, it also appears in cities/towns). In peri-urban areas where former city dwellers settle, other conflicts arise between farmers and new villagers.

The problem affects all rural residents, farmers and people employed outside agriculture.

B. Impact of social challenge

a) individual farmers and farming families:

Mental wellbeing:

- Feelings of alienation; farms turn into “lonely islands”, and farmers feel on their own.

¹⁶ The indicator of institutional trust displays the number of institutions trusted out of twenty institutions included in the representative survey (CBOS, 2020a).

The traditionally strong social ties observed in typical farming communities have been weakening; there is a break in the solidarity between farmers.

- Lack of trust in neighbours, belief in the jealousy and evil intentions of other farmers. The impression of unhealthy competition between farmers.

Physical wellbeing:

- Due to limited access to medical services and the exclusion of transport, farmers must rely on neighbourly help to deal with illness or accidents. The disappearance of local ties reduces the readiness to provide support and care for dependent people.

Social wellbeing:

- Inability to meet the need for social integration.
- Rural residents need to participate in events integrating the community, but there are no institutions that would allow them to spend time together. Until recently, the church played this role – the villagers could meet before or after the service and cultivate relationships. Currently, fewer and fewer people go to mass, limiting the possibility of having Sunday social meetings. There is also a lack of more formalized opportunities for spending time together, e.g. cultural events, festivals, film screenings, etc. Local government bodies are not involved in organizing them, and there are not enough grassroots initiatives.

b) farming community and wider rural community:

- The traditionally strong social ties observed in typical farming communities have been weakening; there is a break in the solidarity between farmers.
- Agricultural producer groups face difficulties developing on an unsatisfactory scale. Many groups dissolve quickly, and groups composed of related farms have the best chance of survival.
- Farmers see the benefits of cooperation, such as sharing modern agricultural machinery that individual farmers cannot afford to buy. However, they are unable to reach agreements with each other to achieve common goals.

C. What are the main causes of the problems identified?

- Clan rules are deeply rooted in rural communities and still have an impact on how farming/rural community life looks like;
- Clientelism weakens the trust in public institutions;
- Aversion to cooperatives resulting from the experiences of the Polish People's Republic, when authorities imposed this type of solutions on farmers from above, e.g. state farms; it is essential to emphasize that these undertakings did not bring the desired effect; therefore, they shaped an attitude of reluctance towards cooperatives;
- The education system does not develop cooperation and teamwork skills.

D. How do farmers/farming deal with the negative impact on wellbeing?

- Farmers organize meetings involving most of the local dwellers. Our informants indicated the organization of film screenings, cooperation in the organization of a culinary festival, attempts to persuade neighbours to pay taxes in the village administrator's office instead of online transfer to be able to exchange comments and information.
- In cooperation with the Kujawsko-Pomorski Agricultural Advisory Centre in Minikowo, farmers engage in extending the traditional activities of their farms with care functions. The wards staying on the farm (8 hours a day, five days a week) are included in the life of the farm – they grow vegetables or flower beds, help with the care of small animals, learn handicrafts, stay under the constant maintenance of a psychologist and professional caregivers. Owing to the inclusion of older people or people with intellectual disabilities in work on the farm, farmers establish contacts with dependent residents of the immediate vicinity and their families, and neighbourly bonds are formed based on mutual trust.

The education system does not develop cooperation and teamwork skills.

5.

Conclusion

Based on an analysis of socio-demographic and economic characteristics of Polish agriculture as well as ongoing changes in this sector, four main social challenges farmers and farming communities have been recently facing were identified: 1) “Spatiotemporal accessibility to health and social services”; 2) “The Internet and digitization”; 3) “Generational renewal (succession of farms)” and 4) “Cooperation/ social capital”.

The findings of this study have supported the proposed structure of the social challenges in which “Cooperation/social capital” is a critical factor and resource which greatly determines and links the remaining three challenges. It has been proven not only by the results of the desk-research but first and foremost by views and opinions formulated by key-informants, farmers and key-stakeholders over the course of the WP2 proceedings.

As far as it concerns social challenge no. 1, it is worth noting that the spatiotemporal accessibility of health and social services is a societal concern impacting not only farmers but whole rural communities. The rural society (incl. farmers) is disadvantaged compared to the urban population in respect to the spatial, temporal and cost accessibility as well as the quality (of the most accessible) different types of health and social services. Such conditions hinder the extent to which the basic needs of farming families are met, which consecutively may negatively impact on farmers’ physical and mental health, e.g. some of the non-mobile farmers without others’ help even stop

seeing a doctor. As shown in our analysis, it is strongly needed to consider the spatiotemporal accessibility more broadly including the waiting time for a visit at a physician specialist. The time factor also plays an important role in farmer's mental wellbeing, especially when the appointment lasts a very short time and the patient is not provided with sufficient explanation, e.g. there is not enough time, attention, and interest from the part of a doctor to a patient's problems. All these circumstances add to the stereotype that a farmer is at work all the time and he/she cannot be sick at all. Hence, farmers make attempts to overcome these system/structural obstacles by: using services provided by the private sector, by-passing service centres at the local and county levels, offering car-sharing solutions to non-mobile individuals. It is also recommended to implement a work substitution system as well as to increase funding for county-level hospitals and health care centres to create financial incentives and supplement doctors' incomes in order to maintain sufficient and high-quality staff members on the spot.

Cooperation/social capital is a critical factor and resource which greatly determines and links main social challenges farmers and farming communities have been facing.

In respect to social challenge no. 2, it should be stressed that although the Internet coverage and accessibility in rural households have gradually improved and differences in terms of internet access between urban and rural areas has decreased, the farmers were the socio-occupational group who used the Internet relatively the least. This situation may significantly limit the economic and social development opportunities for farmers and their families, considering the role of the Internet and new communication technologies as a source of information/knowledge and its unique role in creating opportunities for developing the farming activity (e.g. precision farming, sales platforms, farm management) as well as for initiating, implementing and disseminating social innovations. On the other hand, it is worth stressing that farmers recognise different, mainly mental and social wellbeing threats resulting from digitization such as social isolation

of the youth and some Internet elderly users from their peers, safety problems in using social media, lack of privacy, mental problems from the use of Internet in the long-term perspective. To tackle the threats and related problems farmers along with other rural residents undertake actions to re-integrate the rural community by organising various “offline” village events, meetings and encouraging different groups of inhabitants to get out of their homes. They recommend teaching the youngest generations to use new technology wisely in order to balance the use of the Internet with traditional face-to-face relationships.

Generational renewal is considered as one of the most significant problems for the farming population in Poland even though Polish farmers are among the youngest in the EU.

As far as it concerns social challenge no. 3 (generational renewal), it must be stressed that it is considered as one of the most significant problems for the farming population in Poland even though there is a common view that Polish farmers are among the youngest in the EU. Despite this group of young farmers still being prominent in public statistics, the farming population is ageing and many rural municipalities suffer from depopulation. The so-called “young farmer problem” is visible especially in the group of small farms. Due to the limited size of the farm and poor equipment, young people are reluctant to continue the family tradition and take over the farm. Succession involves challenges related to the family’s financial, legal and psychological situation as well as the farmer’s and farming families’ health and wellbeing. For instance, it is worth stressing that the lack of successors on farms increases the level of uncertainty of families, particularly the older generation. Farmers also suffer from chronic physical diseases because of the limited number of young people entering the agricultural sector that can decrease the workload. In respect to mental wellbeing, the issue of generational change in a farm sometimes brings about serious family conflicts. In order to overcome this social problem, farmers make use of the CAP instruments aimed at structural changes in agriculture although it must be said – this aid is often

misused. As a consequence, the older generation acquires financial premiums and delays actual transfers. It is not surprising that the creation and implementation of effective and successful solutions to that problem (at least some mitigating coping strategies) are dependent upon community and institutional trust, size, and the strength of local social capital as well as the cooperation among farmers and other members of the local/rural community (intergenerational cooperation).

Farmers' low institutional trust leads to numerous problems in regard to their mental, physical and social wellbeing ...

In respect to social challenge no. 4, it is worth mentioning that Poland is among the countries with the lowest indicators of social trust, participation in public organisations, readiness for cooperation, and sense of agency compared to other EU countries. Even though Polish rural areas report the highest proportion of people who trust their neighbours, people active in the community work and farmers who show the highest trust towards their associates, it does not translate into high institutional trust (incl. public institutions and associations). As a result, it prevents the formation of larger structures that could fill the gaps created by infrastructure deficiencies or represent farmers' interests in different aspects of their daily life. This, undoubtedly, leads to numerous problems in regard to farmers' mental, physical and social wellbeing, such as feelings of isolation and alienation, deepened distrust towards neighbours, a decrease in readiness to provide support and care for dependent people, a break in solidarity between farmers, and the inability to reach agreements with each other to achieve common goals. Hence, to deal with this problem, farmers tend to arrange local meetings attempting to involve most of the local dwellers (also non-farmers). In addition, in cooperation with the Kujawsko-Pomorski Agricultural Advisory Centre, farmers engage in extending the traditional activities of their farms with care functions. By including elderly or disabled people in the work on the farm, farmers establish new, closer contacts and neighbourly bonds are formed based on mutual trust.

6.

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Annex:

Social Innovations Table

This annex provides an overview of 10 relevant social innovations and national organizations in farming.

Title of social innovation	Coordinator (lead partner) <i>Keywords: type of organisation</i>	Country (of the coordinator)	Objective (Which social challenge does the innovation attempt to tackle?)	Activities	Key target group(s)
“GREEN CARE FARMS”	Kujawsko-Pomorski Agricultural Advisory Centre in Minikowo (Kujawsko-Pomorskie region) <i>Advisory institution</i>	Poland	Increasing the availability of social services in rural areas [access to social services]	Establishment and functioning of care farms – care places based on family farms; day care in small groups of 4-7 people; course and training for staff – obtaining / increasing qualifications; advisory support for functioning and psychological support for participants	Dependent people (requiring help in everyday activities) – mainly the elderly and the disabled (Kujawsko-Pomorskie region)
“CARE IN THE BARNYARD” <i>(care farms in Kujawsko-Pomorskie region)</i>	Kujawsko-Pomorski Agricultural Advisory Centre in Minikowo (Kujawsko-Pomorskie region) <i>Advisory institution</i>	Poland	Increasing the availability of social services in rural areas [access to social services]	Establishment and functioning of care farms – care places based on family farms; day care in small groups of 5-7 people; course and training for staff – obtaining / increasing qualifications; advisory support for functioning and psychological support for participants	Dependent people (requiring help in everyday activities) – mainly the elderly and the disabled (Kujawsko-Pomorskie region)
“INDEPENDENTLY (NOT ONESELF)” <i>(supporting people with disabilities)</i>	County Family Support Centre in Tuchola (Kujawsko-Pomorskie region) <i>Institution of social welfare/aid</i>	Poland	Increasing the use of social innovations to improve the effectiveness of selected aspects of public policies (implementation and testing of the model of empowering adults with intellectual disabilities) [access to social services]	Functioning and conducting therapeutic activities in 3 Open Integration Points (daily), 1 Training Apartment and 1 Supported Apartment (24 hours a day); improving the qualifications of the staff through training and course	Adults with intellectual disabilities (Tuchola district, Kujawsko-Pomorskie region)

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“VILLAGE E-BOX”	Kujawsko-Pomorski Agricultural Advisory Centre in Minikowo (Kujawsko-Pomorskie region) <i>Advisory institution</i>	Poland	Development of short food supply chains [cooperation; Internet and digitization]	Establishing a group of small food producers (including farmers); retrofitting the infrastructure, creating a quality system, creating an internet platform, conducting sales through 3 channels – farm shops, a platform and purchasing groups	Entrepreneurs and farmers producing food (Kujawsko-Pomorskie region)
HOME HOSPICE IN RURAL AREAS (mobile hospice)	Fundacja Hospicjum Proroka Eliasza/ Prophet Elias Hospice Fund (FHPE) (Podlaskie region) NGO	Poland	Depopulation, ageing, lack of social services, not adequate type of social and medical care (too long distances, lack of public transportation, high costs of services in depopulated areas) [access to social and medical services]	Visits of doctors, nurses, carers, psychotherapists, dieticians, rehabilitants at patient's home; medical and social care	Elderly people, residents of rural areas, people diagnosed with fatal diseases and members of their families (Podlaskie region)
“SILENT GUIDE” (a pilot project to adapt e-administration to the needs of the deaf and hard of hearing people)	Likejon Fund (Lubelskie region) NGO	Poland	Increase of use of e-administration services incl. social services [access to social services; Internet and digitization]	Launching innovative support mechanisms for local government units; producing, developing and implementing PJM (Polish Sign Language) films for the deaf and hard of hearing people; films were posted on the websites of the offices using a specialized video platform; the films are to explain how to deal with the most important matters and fill in forms for social service/welfare offices, labour offices; undertaking activities to adjust and extend the access to e-administration/e-public services	Disabled people – deaf and hard of hearing farmers and other rural people suffering from the same health problem (Lubelskie Region)

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“ACTIVE THROUGH @” (intergenerational improvement of digital competences)	Chmielno municipality/ Municipal Centre for Culture, Sport and Recreation in Chmielno (Pomorskie region) <i>Public administration/ local government</i>	Poland	Increase of motivation, competences, skills, practical knowledge and lowering fears of using the Internet and new technologies; increasing social competences and cooperation; encouraging rural residents to take initiatives in the field of rural development through the development of digital and social competences of the project recipients: seniors and the young [cooperation; Internet and digitization]	A range of activities were conducted within the initiative: information meetings, training and workshop classes, creation of youth digital volunteering; social interactions	The elderly and the young (incl. farmers and their families) living in rural areas (Pomorskie region)
BUS STOPS WITH HISTORY AND THE MAŁKOCIN SCANSÉN SERVICE	Village of Małkocin/ Stargard municipality (Zachodniopomorskie region) <i>Public administration/ local government</i>	Poland	Improving safety and comfort of waiting for the bus; reducing public transport exclusion and strengthening local identity and community participation in the decision-making process [access to social services; Internet and digitization]	Renovation of bus stops, enriching them with information about the history of the village; implementation of a digital passenger information system integrated with the Szczecin Metropolitan Area transportation system; flexible timetables regularly consulted with local people	Residents of the village and surrounding area, including people excluded from transport (children and the elderly) (Zachodniopomorskie region)

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“OSTOJA NATURE” (“A Refuge of Nature”)	Agricultural Production Cooperative “Ostoja Nature” (Warmińsko-Mazurskie region) <i>Cooperative</i>	Poland	Environmentally-friendly production of high-quality food and its distribution without intermediaries, using innovative methods and respecting traditional solutions [cooperation; Internet and digitization; generational renewal]	“Ostoja Nature” consists of a group of producers creating high-quality food. The cooperative had developed and started the implementation of several strategies in Tomaszyn: 1) Ostoja Nature Village 3.0; Bio Hub; 2) Waste-free, self-sufficient habitat for rural households; 3) Passive, rain based, 4) “Ost-Oya” irrigation system; 5) Passive greenhouse; the cooperative is developing a YouTube channel “Ostoja Nature TV”, where it posts educational, promotional and entertaining content	Farmers in the vicinity, buyers of products, agricultural companies, subscribers of the YouTube channel (Warmińsko-Mazurskie region)
SUPPORT OF “TRUE IMAGE” OF FARMERS IN THE SOCIETY	Rolnik NIEprofesjonalny (“UNprofessional Farmer”) (based in Kujawsko-Pomorskie region) <i>Farmer</i>	Poland	Generational renewal (succession of farms); cooperation, trust and social capital; internet and digitization [generational renewal; cooperation; Internet and digitization]	Providing detailed information about farmers’ work in a modern way, especially via the Internet and social media (YouTube channel, Instagram); sharing his individual experience on farming and farmers; breaking the stereotypes about farmers and giving an alternative for young farmers to supplement their traditional farming work	The society, young people willing to work in agriculture (Kujawsko-Pomorskie region)

