New tasks for land management works and land consolidation in Poland

Jacek M. PIJANOWSKI, Edyta SOBAŚ, Jarosław TASZAKOWSKI, Poland

Key words:
Development of rural areas, land management, land consolidation, social participation, villages renewal, protection of the landscape

SUMMARY
The article presents the results of research and implementation works, carried out in 2011-2015 in Małopolska (one of the 16 Polish regions), as a part of two independent Polish-German projects, concerning an integrated development of rural areas (IDRA). The first project was aimed at the development of guidelines for the improvement of administrative structures responsible for development of rural areas at the regional level. The second one expanded these studies and was aimed at the development of the rules of participation of local communities in the preparation of proceedings for IDRA with much wider material scope.

The main assumption of the study was to achieve the objectives not on the basis of analyzes and of theoretical comparisons, but in parallel to the development of modular concepts of proceedings for IDRA on particular objects. The works within the first project (2011-2012) took place in the district of Tarnow, and the partners were institutions from Thuringia. Within the second project (2014-2015) implemented in the district of Brzesko, the partners were institutions and experts from Bavaria (Lower Franconia).

Basing on the results of the study, the recommendations concerning new tasks for the agricultural-arrangement works in Poland were developed, as an important tool supporting the socio-economic changes in rural areas in Poland.

Artykuł prezentuje wyniki prac badawczo-wdrożeniowych, zrealizowanych w latach 2011-2015 w Małopolsce (jednym z 16 regionów Polski), prac badawczo-wdrożeniowych, w ramach dwóch niezależnych projektów polsko-niemieckich, dotyczących zintegrowanego rozwoju obszarów wiejskich (IDRA). Pierwszy z nich miał na celu wypracowanie założeń dla poprawy struktur administracji odpowiedzialnej za rozwój obszarów wiejskich na poziomie regionalnym. Drugi poszerzał te badania i miał na celu wypracowanie zasad udziału społeczności lokalnych w przygotowaniu postępowań dla IDRA o znacznie szerszym zakresie rzeczowym.


Na podstawie wyników badań, opracowano zalecenia dotyczące nowych zadań prac urządeniowo-rolnych w Polsce, jako ważnego narzędzia wspomagającego przemiany społeczno-gospodarcze na obszarach wiejskich w Polsce.
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1. INTRODUCTION

Along with the socio-economic changes in the end of the 80s of the twentieth century, the conditions for the development of rural areas and agriculture in Poland have changed fundamentally. Reconstruction of the economy significantly increased the unemployment rate, which struck the rural population in particular. Because of the poor infrastructure in rural areas and insufficient amount of non-agricultural jobs, farms in many parts of the country have the function of the social buffer. The average size of agricultural use (AU) in a farm in Poland in 2016 amounted to approximately 10.59 ha\(^1\). While the number of farms was 1.4 million in 2015, with more than half of the farms producing only or mainly for their own needs. In 2015 in Poland there were about 1.38 millions of farms with a size greater than 1 ha. The most farms (73.2%) were in the area group 1-10 ha AU (approx. 1.03 mln of farms)\(^2\). The experts estimate, that about 370,000 small farms (i.e. about 16% of all farms) will disappear by the end of 2020.

Characteristic for rural areas in the south-eastern Poland is fragmentation and low average size of family farms (approx. 4 ha), which according to the standards of Western European agriculture show considerable deficits as regards the area of owned or leased land, the level of mechanization and financial resources. Typical for this part of Poland settlement in the form of linear village and scattered buildings hinder the construction and increase the costs of infrastructure. In recent years there has been a rapid decline in the population living mainly from agriculture. The rural population derives income from many sources, especially from hired work. The remaining, significant part of the rural population lives off pensions, especially in households of the former owner of the farm. Due to the lack of non-agricultural (mostly large) employers, in most communes the possibility of non-agricultural employment is limited.

Rural areas in Poland will be subject to profound changes. The reasons for these transformations – beside the rapid advances in agricultural technology – are the progressive changes in the agrarian structure. Great importance for these transformations will have demographic processes and migration movements, availability of jobs, new habits of residents, as well as the increasingly diverse requirements of the society with respect to the land use, landscape and the space. The situation of peripheral rural areas is far different from the suburban villages. Therefore, it is difficult to determine a single pattern of development. The solutions to the problems of rural areas will be created by the new strategic document of the Ministry of Agriculture and Rural Development of Poland – "Pact for rural areas", which will come into force from 2017. This document will aim to sustainable rural development, taking into account the different purposes and competitive expectations. Thus understood development will include beside economic objectives of agriculture also socio-economic aspects, development objectives of settlements, infrastructure, environment, landscape, cultural heritage, water management and non-agricultural economic development.

In the spatial dimension at the same time will be needed respectively wide scope and ways of elaboration of the phase of changes planning, based on modern Landmanagement – which is not included in the project of this document. It is therefore important to consider the possibility of introducing in Poland the IDRA mechanism, which functions in the most countries and regions of Western Europe for many years.

An important role in the development processes will play land, as the economic value – its ownership, mobility, availability and its use. An important problem of Polish rural areas was the possibility of universal acquisition and marketing of agricultural land for construction purposes. In order to eliminate this process since April 2016 has been implemented the law preventing speculation of agricultural land and its purchase by a person not being a farmer [Ustawa 2016]. This was an important step for the possibility of "healing" the spatial planning law – also essential for development of rural areas.

2. DESCRIPTION OF THE RESEARCH

The research presented in the framework of article involved the creation of assumptions to proceedings for IDRA in selected villages in Małopolska using the legal basis and methods used in Thuringia and Bavaria. They are described in later sections. The objective was to verify whether this methodology can help to solve problems of development of rural areas, and whether it is possible to implement it in Poland.

2.1 A general description of the project with Thuringia

The aim of the project carried out with Thuringia under the name "Improvement of the actions of regional administration responsible for land consolidation in Malopolska" was to develop model solutions on the effectiveness of the voivodeship actions in terms of improvement of rural areas structures, using the so-called agricultural arrangements – as an essential element of regional development. The point was in the first place to make assessment and prepare recommendations to improve the functioning of the broadly understood administration responsible for the development of rural areas.

The basis to achieve the objective of the project was development by experts from the Office of the Rural Areas Development and Agricultural Equipment in Meiningen, in cooperation with the Office of the Marshal of the Małopolska Region and the University of Agriculture in Krakow of „The Integrated Rural Areas Development Plan (IRADP) for the preparation of the agricultural-arrangement proceedings together with the implementation of investment projects in agricultural and forestry production space and projects in the scope of development and renewal of rural areas for villages Nieciecza and Czyżów”.

Villages Nieciecza and Czyżów are located in the Żabno commune. Nieciecza covers an area of 490 hectares and has a population of 750, while Czyżów 199 hectares and 107 inhabitants. The analyzed area extends along the valley of the Dunajec, which is dominated by good and very good soils. Climatic conditions and one of the longest growing seasons in Poland are particularly suitable for growing fruit, vegetables and cereals. In areas with poor soils the afforestation can be observed, less frequently setting-aside. In the both villages, the agriculture is dominated by small and highly fragmented farms. The most of agricultural transport roads are in poor condition. In the both villages occur floodings of farmlands and habitats, which is caused by inadequate state of maintenance of drainage devices. The settlement structure in Nieciecza has a rather compact form, with the trend of development
along the communal roads, what also characterizes Czyżów.

The joint work included in the first place the phase of the study of the available plans and documents related to the Żabno commune. In addition, the letters were sent to various offices, asking for information on existing and approved plans or investment plans in the project area. In the second phase, the experts conducted a specific survey of the existing condition of the area of proceedings, which showed mentioned above serious structural problems of the agricultural land. The works included the additional polls among parties representing the public interests and collecting the further necessary documents and supplementary information in selected offices. An important element of the work was meeting with residents, informing about the conducted survey and possible agricultural-arrangements proceedings in the future. In the third phase, a IRADP document was prepared with attachments, according to the extent applicable in Thuringia. In the fourth phase, during the meeting the information about the prepared IRADP was presented and explained to the representatives of entities representing the interests of the public, representatives of trade unions of farmers and residents of villages covered by the elaboration, which met with a very high approval. Extremely valuable is the fact, that within the project Malopolska was supported by the experts and specialists from Thuringia, who 26 years ago, on the basis of the Bavarian patterns very quickly created a modern agricultural-arrangements administration and on the legal basis of the Federal Republic of Germany (Flurbereinigungsgesetz) elaborated a whole series of regional guidelines [Freistaat Thüringen 2011].

Figure 1. A picture speaks more than words – snapshots of the work of experts from Thuringia in Malopolska (phot. J.M. Pijanowski)

The project of Malopolska and Thuringia should be described as a very important "first step", with the task to investigate the possibility of implementing similar solutions on Polish ground.
After the political transformation of 1989/1990 (as mentioned) on a similar principle Bavaria supported Thuringia to build effective administrative structures, responsible for development of rural areas. Since Thuringia is a Partner Region of Malopolska, the first attempt was made to implement its solutions on the ground of Malopolska/Poland.

2.2 A general description of the project with Bavaria

Within the second project under the name „Integrated rural development programming in Malopolska on the basis of Bavarian patterns” it was reached to the sources – that is, to the experiences of Bavaria, as one of the precursors and advocates of IDRA in Europe. The project focuses on a new, integrated approach to planning the development of rural areas implemented with the participation of local communities, including simultaneously:

- mobilization of the community and strengthening the sense of community,
- creation of public-private partnerships for the preparation and implementation of integrated development concept and
- combining a wide range of activities as: local development strategies, village renewal, agricultural arrangements, nature and landscape conservation and management of agricultural water resources.

Within the project, the experts from the Office of the Rural Areas Development in Würzburg and from the Association of the Rural Areas Development of Lower Franconia, as well as experts from the University of Agriculture in Krakow elaborated in collaboration with the Office of the Marshal of the Malopolska Region „The concept of proceedings for IDRA, including recommendations for the future proceedings”. The study was created on the basis of works carried out in the Strzelce Wielkie village.

Strzelce Wielkie is located in the Szczurowa commune and occupy an area of 1,708 hectares and is inhabited by approx. 820 inhabitants. Most of the rural population is employed outside the agriculture. The big problem is the danger of flooding, which occurs in particular in the period from March to July, due to the surrounding village small rivers Uszewka and Gróbka. The second reason is the seasonal water release from the forest located in the north of the village. Through the project area runs a creek bed Młynówka, cut off from the water supply in the 70s of the twentieth century. Its course is still preserved only in part, and to the south only its relics can be found. Młynówka was originally powered by water drawn from the forest. In Strzelce Wielkie the stream flowed into the village pond, and then by the non-existent today mill flowed into the northern part of the village. In the north-western part of the project area the Natura 2000 site and „Bratucicki Protected Landscape Area” are located. In Strzelce Wielkie there are also natural and cultural monuments, including a number of wooden houses and other buildings and parts of them, which are protected. The village is a multiroad one surrounded by small hamlets.

An important feature of the method of Bavaria used in Strzelce Wielkie is intensive preparation phase of such proceedings together with the residents of the area it covers, who (later) as a community of participants in the proceedings – according to the Federal Law on agricultural arrangements [Flurbereinigungsgesetz 1976] – in principle they decide themselves on the basis of the Bavarian agricultural arrangements law [Bayerisches Gesetz 1994] on carrying out investment activities. The following motto applies here: „Together we

3 It should be noted that similar rules were in force in interwar Poland – the reclamation companies or associations, being the main investor of the projects were created.
think, together we plan, together we shape!”. Bavarian methodology of carrying out proceedings is also characterized by co-operation of agricultural-arrangement department with private experts. Activities from the scope of landscape and ecology shaping and village renewal are commissioned to them.

Therefore the work of the project was carried out in three working groups (WG):

- WG „Agricultural arrangements and agriculture”,
- WG „Landscape and nature”,
- WG „Village renewal and development”.

In the first phase the work involved discussing of existing problems and the objectives necessary to achieve. Experts and institutions worked on this together. Next in WG in the first step "The current state" (it is) and "The desired state" (should be) were prepared. Later, together with experts the "problems" (in achieving the desired state) and "Solutions" were identified, which constituted the basis for determining actions and investments. The following sections present the scope and results of these activities in three areas of planning WG.

2.2.1 Agricultural arrangements and agriculture

On the project area the agricultural-arrangement proceeding has not yet been carried out (land consolidation). The agricultural plots are generally irregular and small, not meeting the demands of modern mechanization. The current form of settlement has buildings which hinder the access to the agricultural land lying behind it. There is no action plan on water-drainage devices. A large percentage of the agricultural parcels do not have access to a public road. The major part of the existing roads needs to be repaired and it is often too narrow. Along the waters and ditches there are no roads necessary to maintain the water-drainage devices. In the south-eastern part of the project area repeatedly occur floodings on large areas, what is caused by insufficient possibility of outflow of water. A large part of the ditches is very neglected in their maintenance. Also drainages require cleaning. Because of these problems Strzelce Wielkie is characterized by expanding area of fallow land (about 260 ha, i.e. approx. 25% of all AU) and succession of coincidence seedling on the surface of approx. 130 hectares (about 12% AU). Therefore, in the area of the Natura 2000 network, dry grasslands are plowed and then sown with corn, which threatens the population of modraszek butterfly (Maculinea).

The results of the work in „Agricultural arrangements and agriculture” WG show, that unfavorable shape of plots, dispersion of ownership and inadequate infrastructure and water problems can be significantly improved in the course of agricultural-arrangement proceedings (land consolidation together with post-consolidation development), which will strengthen the economic situation of farms. Land currently set aside or excluded from agricultural production will become areas for potential enlargement of farms AU by the way of purchase or lease.

According to WG statements the key investment should be Młynówka revitalization. This will lead to the improvement of flood protection and ecology of the watercourse, and thanks to it the historic cultural landscape of villages and agricultural land in connection with a historical buildings will be reproduced, which may be a potential for the development of tourism.

2.2.2 Landscape and nature

The characteristic feature of the cultural landscape of the Polish countryside, with its valuable
protected areas is a strong relationship with the agricultural land development. The state of the agrarian structure at the most of the south-eastern area of Poland corresponds to conditions that prevailed in the landscape of Europe before the mechanization of agriculture. The processes of changes in the structure of farms in the Strzelce Wielkie, appearing and developing gradually, require anticipating concepts, for the preservation and development of the cultural landscape. To do this, the sustainable management of all arable land, meadows and woodlands is needed. Agricultural-arrangements proceedings can make a significant contribution to this.

As follows from the agreement with the Regional Directorate of Environmental Protection, thanks to the implementation of the planned roads in the Natura 2000 area, the disappearance of valuable habitats of plants and animals will be minimized. Better access roads to cultivation complexes (restoration / optimization of agricultural activities), improving of economic conditions, creating ecological bridges between biotopes along roads and surface waters, planting rows of roadside trees and the creation of zones of nature conservation in the village will have significantly positive impact on the environment. Therefore, any significant negative effects of agricultural arrangements on the environment should not be expected – provided regard to the protection requirements with respect to acting area network Natura 2000. Thanks to the investment activities the most important species and habitats in this area can be much more supported and developed than the threatened ones. Only within the concept of agricultural-arrangements proceedings the suitable areas for the implementation of pro-environmental projects fit within the logic of a comprehensive development can be identified. In the Strzelce Wielkie the center of gravity of goals and projects for the landscape management is determined by the preservation and development of open living spaces of particular importance for species protected by the community legislation (in particular species-rich extensive meadows) and revitalization of waters together with the accompanying structures of aquatic and terrestrial habitats. The realization of these goals will allow carrying out the entire procedure in a virtually harmless way for the environment.
Also, for that reason within the project the impact of planned agricultural infrastructure on nature is balanced. For example, in the Area of Priority 1 construction of approx. 1 km of asphalt roads and approx. 1.2 km of new dirt roads was planned. At the same time liquidation of approx. 1.3 km of existing dirt roads was planned. Construction of roads is planned for intensively used agricultural areas, but also concerns the areas extensively used, landscape elements and biotopes structures, which were classified as replaceable or necessary to maintain. Taking into account the above, the equalization needs were defined to compensate for the construction of road for approx. 0.9 hectares. With the elimination of replaceable dirt roads 0.1 hectares balances further of surface alignment. With proper design of the road network taking into account the structure of valuable biotopes it would be possible to compensate for the reduction of land for a total of approx. 0.8 hectares (Table 2).

Table 1. Interference balance of agricultural roads in natural areas for the selected Priority Area in Strzelce Wielkie (Source: Elaborated by R. Schäffner and B. Faschingbauer 2015, published in [Pijanowski and Zedler (ed.) 2015])

<table>
<thead>
<tr>
<th>Road surface</th>
<th>Evaluation</th>
<th>Area in m²</th>
<th>Factor</th>
<th>Compensation in m²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asphalt</td>
<td>0 Arable land / intensive grassland</td>
<td>1,004</td>
<td>1.0</td>
<td>1,004</td>
</tr>
<tr>
<td></td>
<td>1 (areas needed to preservation)</td>
<td>463</td>
<td>3.0</td>
<td>1,389</td>
</tr>
<tr>
<td></td>
<td>2 (areas worth preservation)</td>
<td>902</td>
<td>1.5</td>
<td>1,353</td>
</tr>
<tr>
<td></td>
<td>3 (replaceable areas)</td>
<td>444</td>
<td>1.0</td>
<td>444</td>
</tr>
<tr>
<td>Crushed stone</td>
<td>0 intensive grassland</td>
<td>5</td>
<td>0.5</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>–</td>
<td>3.0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>–</td>
<td>1.5</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>7</td>
<td>1.0</td>
<td>7</td>
</tr>
<tr>
<td>Dirt road</td>
<td>1</td>
<td>469</td>
<td>3.0</td>
<td>1,407</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>1,610</td>
<td>1.5</td>
<td>2,415</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>111</td>
<td>0.0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Sub-total</strong></td>
<td></td>
<td><strong>2,418</strong></td>
<td><strong>0.5</strong></td>
<td><strong>1,209</strong></td>
</tr>
<tr>
<td><strong>The sum of the needs of the compensation area for the Priority Area</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>9,231</strong></td>
</tr>
<tr>
<td><strong>Reduction of the need of compensation area</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>-981</strong></td>
</tr>
<tr>
<td><strong>The sum taking into account the measures to mitigate roads interference</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>8,250</strong></td>
</tr>
</tbody>
</table>

2.2.3 Village renewal and development

Works of „Village renewal and development” WG were based on the active participation of citizens of all the generations in elaboration of development goals, in planning future investments and intangible assets. The works also included the urban and the socio-cultural sphere. The planning range extended not only to the village but also to the hamlets and other buildings. WG survey included on-site verification, mapping, photographic and sketch documentation. The survey covered mainly qualitative and quantitative description of the types of buildings, taking into account: the function and use of the buildings; the layout of
locations of historical and contemporary buildings; the concentration of vacancies and buildings, which will soon become empty, the concentration of buildings in poor condition and the age of residents of buildings.

During the analysis of urban development, it turned out that the built-up area, as specified in the planning documents exceeds the actual demand for building plots of 14,000% (!). They are indeed partially built-up, however, such area in any way is not related to the expected - even under the most optimistic estimates – construction activity.

At the completion of works all three of WG and experts have identified targets according to which the development should follow in Strzelce Wielkie:
- The development objective 1: Improvement of living conditions.
- The development objective 2: Preservation of local distinctiveness (identification) of the village.
- The development objective 3: Protection and care of nature and landscape.
- The development objective 4: Strengthening of agriculture and structural improvement of the agricultural land.

3. DISCUSSION OF THE RESULTS OF RESEARCH

The studies show, that in Thuringia the planning process of structural transformation by the administration for the development of rural areas takes very wide agricultural production area and includes primarily the water supply, land reclamation and roads infrastructure and the improvement of spatial structure of farms (agricultural and settlement areas). The activities towards the development and protection of the landscape and nature are also planned. The works are carried out by agricultural-arrangement administrative personnel, who in the first phase notify about them all institutions which may be interested in actions, and the local community. Apart from these activities, the commune can commission a study of the plan for renewal of the village to external experts.

This is a very advanced range of work compared to the practice followed in Poland based on outdated regulations of the Law on land consolidation of 1982 [Ustawa 1982]. Here, the regional administration is developing only the so-called assumptions to land consolidation project, which include only the infrastructure investments within the scope of so-called post-consolidation development⁴, enabling taking possession by the participants of the land consolidation of the land separated for them [Pijanowski 2014]. Measures for the protection of landscape and nature can be taken into account, but only as the protection of areas. Village renewal in Poland is a separate investment implemented by the commune and cultural or church institutions. The lack of uniform standards of preparing post-consolidation development plans is a grave problem in Poland [Noga 2001]. In view of increasing frequency of water-logging of arable land or even local floods, it seems extremely dangerous that measures aimed accurate identification of local and regional water conditions and at solving

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⁴ For the first time post-consolidation development (road network and land improvement structures) was defined in The Regulation of the Minister of Agriculture and Rural Development of 24th of April 2008 on detailed conditions and procedures of providing financial aid within the project: "Improvement and development of infrastructure related to development and adaptation of agriculture and forestry by land consolidation” included in the Rural Development Programme for 2007-2013 [Rozporządzenie 2008]. The issue is also presented in the Act of 29th of July 2011 amending the act on consolidation and exchange of land [Ustawa 2011].
the problems associated there cannot be included in the post-consolidation development plan. An important reason for this situation, found as a result of the Małopolska and Thuringia project was the fact of an improper division of competences between the authorities responsible for land consolidation, drainage / water resources and village renewal. Figure 3 shows highly complicated and inefficient division of competences theoretically allowing implementation of procedures for IDRA in Poland [Pijanowski 2014].

Bavaria worked out a very advanced process of preparation for the IDRA proceedings. A significant difference in comparison to Thuringia lies in the approach to the planning process, which from the beginning to the end is carried out with the involvement of residents. Bavarian methodology of proceedings is also characterized by cooperation of agricultural-arrangements body with private experts. Basically their work is the activity in the field of landscape design and ecology and rural renewal. Generally IDRA in Bavaria includes planning, preparation and execution of all activities, which are appropriate to preserve and improve the housing, economic and recreational functions of rural areas, and for long-term

Figure 3. The theoretical model of coordination of existing administrative bodies in Poland, which would allow implementation of procedures for IDRA according to Thuringia model (Source: Elaborated by G. Korta and J. M. Pijanowski 2012, published in [Pijanowski 2014])
support and improvement of living conditions outside urban areas. Therefore, in Bavaria the agricultural-arrangements administration (alongside with the commitment to the transformation of property relations) received the competence and the task of self-planning and implementation of projects for the countryside and village renewal [Pijanowski and Zedler (ed.) 2015].

The scope of the above-discussed work carried out on the objects of research is summarized in Table 2, which also contains a reference to the methodology currently used in Poland.

Table 2. Summary of the main stages of work in Malopolska with Thuringia and Bavaria projects and the comparison with the stages of the creation of assumptions to a project of land consolidation, currently implemented in Poland (Source: own study)

<table>
<thead>
<tr>
<th>FEDERAL REPUBLIC OF GERMANY</th>
<th>POLAND</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thuringia</td>
<td>Malopolska⁵</td>
</tr>
<tr>
<td>Bavaria</td>
<td></td>
</tr>
</tbody>
</table>

| Decision / application for undertaking the work | Written information by the arrangement-agricultural body for institutions representing public interests about ongoing planning works procedure for IDRA. |
| Decision / application for undertaking the work | Written correspondence and consultations with institutions representing the public interests. |
| Written information by the arrangement-agricultural body for institutions representing public interests about ongoing planning works procedure for IDRA. | |
| Written correspondence and consultations with institutions representing the public interests. | |
| • Analysis of the existing planning documents, spatial development plans | • Presentation of the project on the village meeting in Strzelce Wielkie and creation of working groups (WG). |
| • Presentation of the project at the meeting of inhabitants of Nieciecza and Czyżów. | • Works with residents and experts and joint analysis development SWAT. |
| • Introduction to analysis "The current state" (it is) and "The desired state" (should be). | • Meeting with the initiating group to discuss the principles of the assumptions for the land consolidation project. |
| • Discussion of problems and limitations. | • Development of the concept of assumptions by the initiating group. |
| Consultative meeting with institutions representing the public interests. | • Current consultation with all local actors. |
| Administration survey works. | Administration survey works. |
| WG, the administration and experts survey works. | |
| Development of the concept by the administration. | Development of the concept: |
| • Current consultation with all local actors. | • Works of WG and experts over the next steps: "Problems" and "Solutions.". |
| Village meeting aimed at the presentation of the concept of the plan of roads and water-drainage devices developed by the administration. | • Presentation of the partial results of all WG and submission of plans developed by the administration and experts. |
| Village meeting aimed at the presentation of the concept of the plan of roads and water-drainage devices developed by WG, the administration and experts. | • Arrangements with the institutions responsible for water management and land reclamation. |
| Village meeting aimed at the presentation the final concept of the assumptions of the land consolidation project developed by the administration. | |

4. CONCLUSIONS AND RECOMMENDATIONS ARISING FROM THE RESEARCH

Significant findings arising from the research and implementation, accompanying the preparation of proceedings for IDRA in Nieciecza, Czyżów and Strzelce Wielkie are summarized in the following paragraphs:

⁵ Far different method of preparatory work is characterized by the methodology of Lower Silesia, which is just as advanced as the methods of Thuringia.
1. In the light of the problems and challenges facing rural areas in Poland, it is essential to introduce as quickly as possible to the common practice the procedures for IDRA according to the methodology used in Bavaria.

2. An important argument in favor of the Bavarian approach is its complexity, enabling sustainable spatial and structural development of rural communities. The point is the especially wide (integrated) activity involving planning, preparation and carrying out all actions needed locally to preserve and improve the economic (including agriculture) housing, natural and cultural functions of these areas, as a way to a lasting improvement in working and living conditions outside the urban areas. Especially important is the possibility of liquidation (minimization) of the problems within the scope of water management, construction of rural roads and land consolidation.

3. It is equally important that the IDRA process is implemented in Bavaria using a participatory approach, i.e. the full involvement of local communities, associations and others. The project results in Strzelce Wielkie show that with such an approach social / human capital and attachment to the inhabitants own village has been strengthened.

4. The preparation phase of model procedures for IDRA in Malopolska (especially according to the Bavarian methodology) showed that
   - this methodology can be successfully applied in Poland,
   - large number of problems can be solved only in the framework of proceedings for IDRA,
   - actions and knowledge of various institutions and experts is necessary; also a responsible coordinating institution is necessary.

5. Competences in strategic planning of agricultural-arrangements proceedings, development of programs, initiating proceedings and approval of plans, technical project works and investment works are currently in Poland in different hands (Figure 3). It is necessary to shorten the decision-making way and enhance the efficiency of administration preparing and leading the proceedings for IDRA (the aforementioned coordinating institution). Improvement of the situation will be associated with the new organization of the agricultural-arrangement administration in Poland, in the direction of strong regional or sub-regional offices. Figure 4 presents as an example the general structure of such office in Bavaria.

<table>
<thead>
<tr>
<th>The central services</th>
<th>Specialist services</th>
<th>A comprehensive development of rural areas and village renewal</th>
</tr>
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Figure 4. Organizational chart of offices for the development of rural areas in Bavaria (source: own study based on [Pijanowski and Zedler (ed.) 2015])

7. The urgency of the land consolidation works is different in different regions of Poland. In
the framework of strengthening of local governments the amended agricultural-arrangement law could give provinces more competences in this area, comparable to the Federal Republic of Germany.

8. The act on consolidation and exchange of land of 1982, despite the amendments, does not provide substantive, organizational and legal framework for action, required in the proceedings for IDRA. It should be amended as soon as possible.

9. The definition of land consolidation (agricultural arrangements) should be changed. The purpose of the investigation should enable implementation of procedures for IDRA. The projects in the field of road construction, village renewal, maintenance and management of landscape and water management should be named in the new Act. Individual projects should also be mentioned in the principles of support.

10. Landmanagement is one of the carriers of procedures for IDRA. Besides the classic tasks of land consolidation and the improvement of the plots parameters for rational agricultural management, there is a need for the expansion of tasks concerning the coordination of intended plans. In particular, there is a need of prior acquisition of area for public purposes (e.g. environmental protection, water management).

11. Problems encountered in the proceedings for IDRA are varied and go beyond a small group of people, therefore they can be solved only through the consistent inclusion of inhabitants to the planning process, and preferably by the activating work of inhabitants.

12. The scope of IDRA planning covers many professional aspects (technical and legal). The inclusion of agricultural arrangements into the spatial management and defining the objectives of the planning of agricultural arrangements should be statutory regulated. The procedure of plans arrangements should be here prescribed and the inclusion of institutions representing the public interests.

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