



LAND CONSOLIDATION DEVELOPMENT – DISCUSSION OF A NEW APPROACH RECOMMENDED FOR POLAND

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Summary

The article is an opinion in the ongoing discussion on the directions of the legislative changes in the field of rural structures in Poland, expressed mainly in connection with the forthcoming EU programming period 2014–2020. In the very centre of discussion is a new approach to planning and implementing investment activities related to land consolidation (defined as “land consolidation development”) in Poland.

If investments in post-consolidation development are realized in coordination with water engineering, land improvement and flood control, then even under Rural Development Programme (RDP) for 2007–2013 more funds can be raised for improving rural structures. A prerequisite for this is to create integrated guidelines for land consolidation projects.

Keywords

rural development • post-consolidation development • land consolidation • rural structures

1. Introduction

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 Ministra Rolnictwa i Rozwoju Wsi... 2008a; hereafter referred to as: The Regulation of RDP on land consolidation]. The issue is also presented in The Act of 29th of July 2011 amending the act on consolidation and exchange of land [Ustawa... 2011], but mainly in the context of how to fully use EU funds for land consolidation carried out as part of The Regulation of RDP on land consolidation.

However both legal acts define only the entity that carries out post-consolidation development works, who is a starosta (district governor), and the scope of works (described below), but the acts do not specify the activities required to prepare a post-consolidation development plan. Therefore it should be concluded that the legislator

decided to leave up to starosta the question of how to prepare a plan and how to put it into operation.

The above-mentioned legal acts do not regulate many vital issues, such as:

- Should a plan of post-consolidation development be comprehensive or is it allowed to formulate separate (partial) plans concerning access roads to rural and forest areas, land improvement structures and the remaining elements of land consolidation?
- Which institutions should approve a post-consolidation development plan?

Leaving these questions unanswered means that land consolidation works might be ineffective and puts into question the durability and functionality of investments realized after these works.

Another problem is that the investments realized as part of post-consolidation development are perceived by the legislator only as a process that allows a consolidation participant to take possession of consolidated lands and not as an important element of rural development.

The article presents the results of an analysis of a current model of implementing post-consolidation development in Poland and formulates a proposition of a new approach to technical and legal aspects of post-consolidation development being a part of current EU programming period (2007–2013). And this proposition, the author hopes, can contribute to the discussion on organizational and legal aspects of rural structures in Poland in the next period of programming (2014–2020).

2. Objective and method

The goal of the article is a presentation of a new approach to planning and realization of the post-consolidation development (*zagospodarowanie poscaleniowe*) in Poland, especially with respect to investments in rural roads network and in land improvement and water resources.

The methodological basis of the study was an analysis of current legal conditions in Poland concerning land consolidation and exchange and of support for rural development with financial aid of European Agricultural Fund for Rural Development.

An important part of the study was also the analysis of consolidation proceedings records and of post-consolidation development plans for the following objects in Małopolskie Voivodeship: Ilkowice, Łukowa, Marcinkowice, Przybysławice and Wola Przemkowska.

3. Post-consolidation development – synthesis of a current model issues

The post-consolidation development is defined in the article 1, section 2, clause 1 of The Act of 29th of July 2011 amending the act on consolidation and exchange of land [Ustawa... 2011] in the following words: “the works defined in an approval decision about the land consolidation, enabling a consolidation participant to take possession of lands sectioned off in the consolidation process, and consisting in:

- a) construction or reconstruction of access roads to agricultural and forest lands and access roads to settlements of a consolidation participant,
- b) route adjustment and improvement of technical parameters of land improvement structures,
- c) elimination of redundant boundary strips and roads and implementing land rehabilitation measures that make mechanized cultivation possible”.

These works are planned and carried out by a starosta as one of his governmental administration tasks, and they are financed by state budget funds, subject to provisions of article 3, sections 5–7, and article 4, section 2 of The Act of 26th of March 1982 on consolidation and exchange of land [Ustawa... 1982], which allows the use of EU funds, other public resources, state earmarked funds, resources of local government units (LGU), resources of a landholder taking part in land consolidation process or money of a motorway investor [Ender et al. 2012].

Much earlier, in 2008, in The Regulation of RDP on land consolidation, paragraph 4, section 1, clause 2, a broader definition of post-consolidation development was introduced, according to which, in relation to organizing the agricultural production environment, the following tasks can be subsidized:

- construction or reconstruction of access roads (to agricultural and forest lands) marked off during the consolidation proceedings and access roads to settlements of a consolidation participant, including construction of culverts,
- route adjustment and improvement of technical parameters of land improvement structures that are indispensable to facilitation of land development,
- adaptation of newly marked off land plots (parcels) to rational agrotechnical procedures, including elimination of redundant boundary strips and roads and implementing land rehabilitation measures that make mechanized cultivation possible,
- preparation of design and cost documentation, geodesic services and construction supervision related to facilitation of post-consolidation development.

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 lands or even local floods occurring in Poland it seems extremely dangerous that measures aimed at accurate identification of local and regional water conditions and at solving the problems associated therewith cannot be included in the post-consolidation development plan.

It is mostly the question of investments ensuring the outflow of water from areas under post-consolidation proceedings to surface water reservoirs – investments in which local and regional topographical and hydrological conditions and technical efficiency of land improvement structures would be taken into account (Figure 1). Unfortunately, according to the letter of law, post-consolidation development plans are limited to construction or development of rural transport network and to route adjustment and improvement of technical parameters of land improvement structures that are indispensable to facilitation of land development. It is so though the problems

related to water engineering and land improvement network are often included in land consolidation plan guidelines, which must be annexed to application for financing works carried out as part of The RDP for 2007–2013.



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Fig. 1. Examples of results of inefficient management of land improvement system

In The Act on consolidation and exchange of land and in The Regulation of RDP on land consolidation there are no provisions for connection and/or coordination of planning and implementing post-consolidation development with the investments provided for in The Regulation of the Minister of Agriculture and Rural Development of 25th of June 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 rural water resources management” included in the Rural Development Programme for 2007–2013 [Rozporządzenie Ministra Rolnictwa i Rozwoju Wsi... 2008b; hereafter referred to as: The Regulation of RDP on water resources]:

The outline of the Action no. 125 of RDP for 2007–2013, defined by this regulation, allows the realization of such investments as [Ministerstwo... 2011]:

- improvement of soil quality by regulation of water conditions,
- increase of water retention capabilities,
- improvement of flood control on arable lands.

In practice, however, there were no cases of planned joint investments provided for in The Regulation of RDP on land consolidation and in Regulation of RDP on water resources. This statement is confirmed by the following case studies:

- In the Ilkowice object a new drainage ditch of 300 m in length is necessary. In the prevailing part of the precinct existing ditches need cleaning.
- In the Łukowa object improvement of the existing ditches or digging of new drainage ditches of about 1–1.5 km is badly needed, which would enable to channel water to the Żabnica river from the north part of the village.

- In the Marcinkowice and Przybysławice objects the existing ditches will fulfil their functions only if they are unclogged. Within the scope of the post-consolidation development in Przybysławice a new drainage ditch of 200 m, necessary to take up new water level, was built (Sectoral Operational Program “Restructuring and modernization of the food sector and rural development” – SOP-RURAL) as well as ditches along some new roads. However no additional but necessary investments in the land improvement of the south part of Przybysławice were made.
- In the Wola Przemyskowska object there is a great need of cleaning and improving technical conditions of existing land improvement structures. But as part of the post-consolidation development only a regulation of the existing channel Drwień was possible, which is the key outlet of water from the west part of the village to the Vistula river.

The absence of legal obligation to coordinating all kinds of flood prevention activities in the area intended for land consolidation – including construction of a system that slows down rain and thaw water outflow and enables its retention and of systems of bypassing village settlement units – has no economic justification, because it allows to invest public funds in post-consolidation development without eliminating or minimizing the risk of waterlogging or floods.



Photo by J.M. Pijanowski

Fig. 2. Road scoured by water as a result of lack of proper drainage of adjacent areas

The consequences of this kind of neglect always lead to a decrease in effectiveness of land consolidation, and especially they increase the risk of quick devastation of rural roads constructed after consolidation process (Figure 2) and farmland flooding. In extreme cases the neglect may also result in flood hazard in built-up areas [Magel 2003, Woch et al. 2011].

4. Discussion of a new approach to consolidation development

In order to create a new and long-lasting (in the infrastructural and functional sense) structure of rural production environment, it is necessary to prepare, in compliance

with integrated guidelines for a proceedings plan, post-consolidation development plans devised in accordance with The Regulation of RDP on land consolidation, but with simultaneous, coordinated preparation of comprehensive land improvement and flood control plans developed in accordance with The Regulation of RDP on water resources [Pijanowski J.M. 2007].

Current provisions of The Regulation of RDP on land consolidation already allow planning of all necessary works in the post-consolidation development before initiation of the proceedings. In accordance with the provisions of paragraph 5, section 1: “eligible costs, referred to in paragraph 4, section 1, include general costs, directly related with the preparation and realization of the project, incurred to:

- 1) preparation of the technical documentation of the project, including:
 - a) guidelines for a land consolidation plan,
 - b) cost estimates,
 - c) architectural or building designs,
 - d) geodesic and cartographic documentation, geological or hydrological, (...)
- 3) analysis and assessment of geodesic and cartographic materials with respect to the possibility of using them in the consolidation project,
- 4) urban, architectural, construction and maintenance supervision,
- 5) services related to project management, including financing and accounting services, (...)
- 7) investor’s supervision”.

From practical point of view in many cases it would be possible to coordinate, in compliance with the current legal order, planning and realization stages of above-mentioned investments with provisions of The Regulation of RDP on water resources. It could be done on condition that a starosta would closely cooperate with a Voivodeship Land Melioration and Water Units Board (Wojewódzki Zarząd Melioracji i Urządzeń Wodnych, hereafter referred to as VLMWUB). According to provisions of paragraph 4, section 1 of this Regulation: “The aid is provided in the form of partial refund of costs related with the project realization and incurred to:

- 1) construction or renovation of the following specific land improvement structures:
 - a) ditches with their functional structures,
 - b) pipelines of diameter less than 0.6 m,
 - c) drainage,
 - d) embankments in irrigated areas,
 - e) gravity irrigation systems,
 - f) phytomelioration and agromelioration,
 - g) anti-erosion systems,
 - h) initial development of meliorated meadows and pastures,
- 2) construction or renovation of basic land improvement structures and development of longitudinal and transverse cross sections as well horizontal layout of natural

stream channels, which is outside the scope of water maintenance activities, including:

- a) impoundment, sluice and water intake structures,
- b) barrages and water reservoirs,
- c) channels with their functional structures,
- d) pipelines of diameters below 0.6 m,
- e) flood control structures,
- f) regulation structures,
- g) pump stations, save for stations used for pressure irrigations,
- h) structures for controlling water erosion,
- i) access roads indispensable for proper use of meliorated lands and for maintenance of basic land improvement structures,
- (...)

4) purchase of lands for investments necessary to carry out the project (...)."

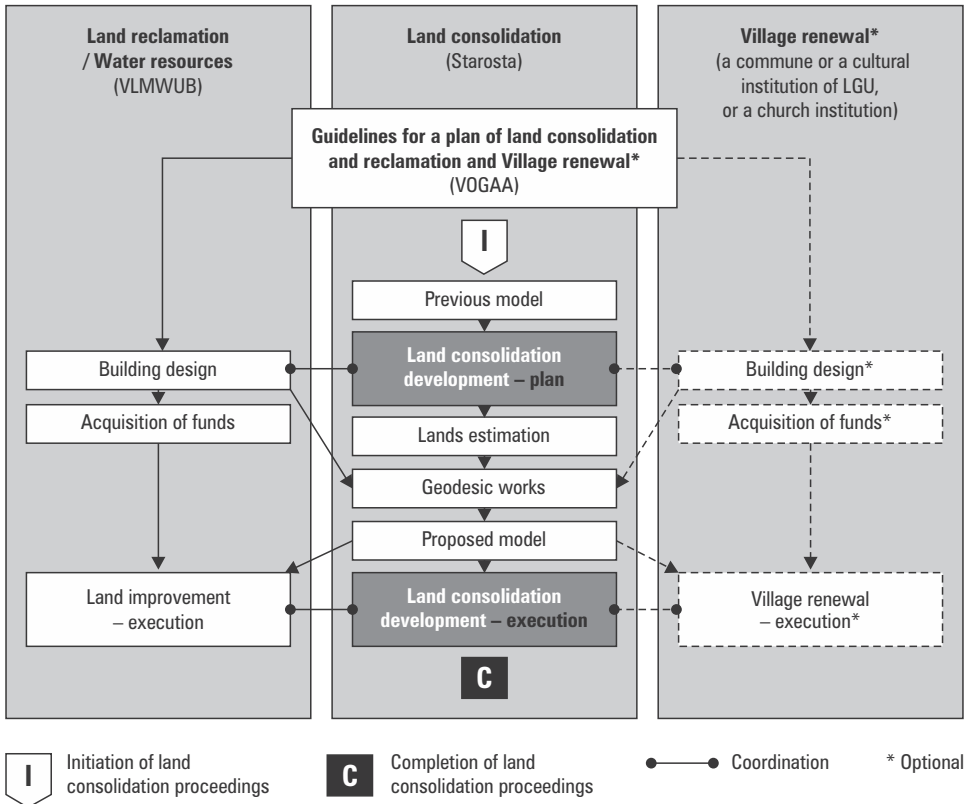
Many investments listed above are a whole range of important complementary actions or even actions conditioning investments made as part of the post-consolidation development based on The Regulation of RDP on land consolidation, and it seems reasonable that a legal framework for coordinating investments provided for in the regulations during planning and realization stages and before the next EU programming period, that is before 2014, should be established and proper technical and organizational instructions or directives should be adopted. Moreover, many investments that could be realized as part of The Regulation of RDP on water resources are essential for agriculture, which is why these investment should be coordinated with land consolidation works.

It is suggested that all the activities provided for in both regulations are called "land consolidation development".

The very important positive aspect of realizing land consolidation development in the proposed form is that more funds could be used in the current post-consolidation development based on The Regulation of RDP on land consolidation (it is now 900 euro per ha of land under consolidation procedure) with funds allocated for investments realized in accordance with The Regulation of RDP on water resources.

Figure 3 shows a diagram of the proposed model of coordinated land development proceedings adopted according to The Regulation of RDP on land consolidation and carrying out tasks provided for in The Regulation of RDP on water resources.

Integrated guidelines for a land consolidation and reclamation plan should be an obligatory document prepared before initiation of the proceedings and optionally the actions related to Renewal of rural areas programme should be included. As it is desirable from the public interest point of view, the scope of the guidelines should be legally sanctioned. The proposed working title of the document should be: "Guidelines for a plan of land consolidation and reclamation and Village renewal". It is also suggested that a Voivodeship Offices of Geodesy and Agricultural Areas (Wojewódzkie Biura Geodezji i Terenów Rolnych, hereafter referred to as: VOGAA) should be responsible for the preparation of a plan.



Developed by G. Korta and J.M. Pijanowski at 2012

Fig. 3. Coordinated implementation of land consolidation carried out in accordance with The Regulation of RDP on land consolidation with completion of tasks provided for in The Regulation of RDP on water resources with the optional inclusion of the Village renewal programme

The diagram presented in Figure 3 takes into consideration legal conditions of the current period of EU programming, namely designing and execution of works related with land consolidation and land consolidation development, land improvement and water resources and (optionally) Village renewal, which are carried out by three separate institutions, that is respectively: a starosta, VOGAA and a commune (or a cultural institution of LGU, or a church institution). This separation of institutions also applies to financing of investments, which comes from three different actions provided for in The RDP for 2007–2013, complemented with own budgets funds of aforementioned institutions.

In preparing the guidelines, broad agreements about plans, intended investments, restrictions concerning the area subjected to proceedings, must be negotiated. It is also

indispensable that the guidelines are consulted with the following, adequate local institutions (not mentioning those listed in Figure 3):

- Regional Board of Water Management (Regionalny Zarząd Gospodarki Wodnej),
- Regional Directorate of Environmental Protection (Regionalna Dyrekcja Ochrony Środowiska),
- Voivodeship Roads Authority (Zarząd Dróg Wojewódzkich),
- District Roads Authority (Powiatowy Zarząd Dróg),
- Regional Directorate of State Forests (Regionalna Dyrekcja Lasów Państwowych),
- Agricultural Advisory Centre (Ośrodek Doradztwa Rolniczego).

Aims and plans of the above-mentioned institutions should be included in the guidelines.

Extensive public consultations with inhabitants and farmers during village meetings and with the participation of these institutions are also extremely important.

The backbone of the presented model is land consolidation. Before its initiation VOGAA in collaboration with a starosta, VLMWUB and optionally with a commune should create “Guidelines for a plan of land consolidation and reclamation and Village renewal”. After the initiation of proceedings and after taking inventory of the “previous model” the following plans should be worked up:

- consolidation development plan prepared by VOGAA as the consolidation executor,
- building design “Land improvement / water resources” prepared by VLMWUB,
- investment plan as part of the Village renewal (optionally).

Mandatory preparation of consolidation development plan in the first stage of proceedings allows the plan to address infrastructure and water relation problems described in “Guidelines for a plan of land consolidation and reclamation and Village renewal” even before implementing “Lands estimation” and a plan of “New model” and its “Geodesic works” [Thomas 2010, Thöne 2000].

The approach should bring two major benefits:

- Firstly, project team working on “Consolidation development” and building design team working on “Land improvement and water resources” will focus on creating technically appropriate road network (its construction and expansion) as well as on water engineering and land improvement structures, without paying too much attention to property relations.
- Secondly, it will lead to identification of areas, which due to their water conditions:
 - should be excluded from agricultural production (buffer zones, permanent wetlands and others), or
 - should be intended for water engineering and land improvement or flood control structures,
 which would be an important directive for establishment of a “new model” [Gniadek et al. 2013].

When coordinating “Guidelines for a plan of land consolidation and reclamation and Village renewal” with local development plan, it would be possible to take into account, while carrying out land consolidation, also new areas intended for building, commercial, utility and other public purposes [Magel 2001].

5. Conclusions

In the light of achievements of Polish science, which for many years has been calling for adoption of a law on rural development that would made comprehensive and not isolated actions obligatory, the author of the article is aware that the diagram presented in Figure 3 should have been put into practice long ago [Litwin 2008, 2010, Pijanowski Z. 2008, Weiss and Pijanowski Z. 2005, Wilkowski 2004, Woch 2010].

In our country there are many examples of post-consolidation development plans, in which a plan of rural road network had no connection with management of water problems.

However without at least provisional specification and legal sanctioning of the indispensable (from the public interest point of view) coordination of technical plans of investments realized in Poland as part of the aforementioned actions of The RDP for 2007–2013 within the scope of (proposed as the final solution) “Guidelines for a plan of land consolidation and reclamation and Village renewal”, there will always be a risk that a bulk of planning work and considerable financial outlays – mainly for rural road network – can be wasted in a very short time. Therefore necessary legal actions should be taken as quickly as possible.

Unfortunately in Poland there are no examples of realized plans of this kind, in which in the stage of preparing guidelines to a proceedings plan and in the stage of preparing a post-consolidation development plan the possibilities opened by both described regulations (on land consolidation and on water resources) would be combined and in which starosta would closely cooperate with a locally competent VLMWUB.



Photo by J.M. Pijanowski

Fig. 4. Examples of badly located dirt roads – probably without prior analysis of water conditions

One should begin to see in land consolidation in Poland what has been previously overlooked, namely the benefits it can bring to local community, such as new road and land improvement infrastructure and better flood control.

Land consolidation that puts emphasis on visible benefits in rural infrastructure could arouse interest of farmers for the works, because it would considerably improve the farming conditions and would open up an opportunity for using modern rural technology.

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