## Macedonia case study

## Land consolidation (re-parcelling) as one of the modes for the enlargement of agricultural land in Macedonia

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With a little over 50% of its land valuation completed, Macedonia is at the very first stage of the land consolidation process. The primary results to be achieved are:

- improved land profitability
- higher yields
- reduction of unproductive frontier areas
- clarification of all relevant legal aspects and reduction of disputes
- conditions for recording new and updating real estate records

The implementation of the land consolidation process affords a new survey and real estate cadastre. The number of cadastre lots will be radically reduced.

The land consolidation impacts certain changes with respect to the social structure of the country side creating more favourable conditions for young people to remain in the villages.

Through the process of land consolidation state-owned areas will be enlarged by the discovery of the usurped areas by illegal owners and their regulation.

In certain areas, parallel to land consolidation hydro-technical melioration will take place in order to drive out the surplus water and the area of the canal network will be expanded. Road surfaces, particularly farm roads, will be increased.

In the period over the next three years, for the entire country which has to be land consolidated, each area will have to undergo a number of legal, geodetic and economic technical tasks and during that time a very large number of people in land consolidation and other activities will have to be contacted and large technical and other works will have to be performed in hundreds of thousands cadastral lots.

For example, presently there are 1,706 cadastral communities with 3,585,716 cadastral lots. The total land covering 2,543,216 ha is divided as follows:

Arable land	707,526.6 ha
Pastures	655,359.1 ha
Forests	923,416.9 ha
Lakes	51,448.6 ha
Non-productive land	204,367.4 ha
Swamp-land	1,097.4 ha

For the Zletovo region in the eastern part of Macedonia, a water-accumulation project for solving the severe drinking-water problem and irrigation is ready for implementation. Prior to the start of this project, land consolidation should take place (the land valuation has been completed).

To underline the need for re-parcelling land in this region, here is the current land data: the Zletovo community covers an area of 1,039.2106 hectares over 3,107 cadastral lots. Of this, 128.1159 ha is arable land, and 911.0947 ha non-productive land. Cadastral cultures in this community are:

Vineyards	38.3663 ha
Plough fields	243.2507 ha
Orchards	4.8542 ha
Gardens	22.2559 ha
Grass fields	11.2315 ha
Pastures	436.2912 ha
Forests	149.4588 ha
Rice paddies	5.3861 ha

Another important region is Pelagonia, the largest wheat-growing area in Macedonia and thus with great geo-strategic importance to the country. Because of the uniformity of the land structure and value, it is expected that land consolidation would be performed with minimal problems in relation to geodetic and legal aspects.

At this point I would like to give an example through the post-graduate work of Petar Popovski, agricultural engineer, titled Managing agricultural land in cadastral community Kukurechani – Bitola (Pelagonija region) for modern agricultural production, published 1984 by the Faculty of Agriculture, University Cyril & Methody in Skopje. Taking into account the conditions in general and the legislature at the time, the author concludes that the best way to manage the land in that community he studied is through grouping of cultures i.e. functional land consolidation (re-parcelling). To this day there is still no legislature for land consolidation in terms of area, so the functional consolidation can be implemented quickly and give positive effects in terms of use of the agricultural land and the use of water, labour and assets.

The Kukurechani community covers an area of 1,854.2360 hectares over 5,417 cadastral lots. Of this, 1,681.0918 ha is arable land, and 173.1442 ha non-productive land. Cadastral cultures in this community are:

Vineyards	35.0096 ha
Plough fields	1,252.1416 ha
Orchards	2.4032 ha
Gardens	10.1000 ha
Grass fields	163.2660 ha
Pastures	227.3664 ha
Forests	80.4000 ha

The author emphasises that with the functional consolidation the problems of unplanned production in the individual sector are overcome, and for all grouped lands 4-year culture cycles are scheduled and markets secured. The financial results from this show positive effects in conditions without irrigation and better effects with irrigation. The positive financial effects are mainly results of the changed production structure but also due to the increased yields per unit area and decreased production costs.

One can therefore conclude that, in conditions without legislature regulating reparcelling the land area, functional consolidation can be recommended for all regions, to give greatly improved production results.

The committees for land consolidation, especially geodetic organisations, will have to undertake a huge technical task and effort to overcome the traditional resistance of the small land owners towards land consolidation. They will have to promote land consolidation and convince the landowners that this will greatly improve their working and living conditions.

At the end, I can only hope that the land consolidation in Macedonia will be able to actually start soon - with appropriate administration, research and the implementation of newest technologies for which experienced expertise and funding will be necessary.

Thank you.