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THE PHENOMENON OF SELF-AFFORESTATION OF AGRICULTURAL LANDS IN UKRAINE

Extension of the forest area in Ukraine is one of the indicators confirming achievement of the goals of sustainable development. Therefore, the issue of protection, reclamation and rational use of forest ecosystems is rather actual. The process of self-afforestation taking place on agricultural lands, which are not used according to their intention because of their investment unattractiveness, lack of costs or other reasons, and thus, they are self-sown with forest plants, is one of the ways of the forest-covered area extension in Ukraine.

Those processes have both positive and negative consequences. On one hand, new forest ecosystems are created, and they are of ecological and forest economic value, whereas on the other hand, the plots with young forests belong to the category of agricultural lands and legally they cannot exist as forest lands of the forest fund of Ukraine and should be extracted.

The goal of the research is to substantiate the expedience of protection of the self-sown forests under spatial planning as an important constituent of sustainable management of the land resources of Ukraine.

There is no reliable information on the number of land plots with self-sown forests on agricultural lands. Therefore, it is expedient to make inventory of them by using the tools of satellite remote sensing, GPS and GIS (Fig. 1, 2).



Fig. 1. Self-afforestation forest on pasture (state property)



Fig. 2. Self-afforestation forest on arable land (private property)

It is obvious that Ukraine experiences the problem of self-sown forests on agricultural lands. It should be regulated at the national level, however, the final decisions on the land plots employment should be made at the local level while making spatial planning of the territorial communities. The authors of the research propose a conceptual model to plan employment of agricultural lands with self-sown forests (Fig. 3), which involves the following components, namely inventory of land plots, land zoning, project measures.

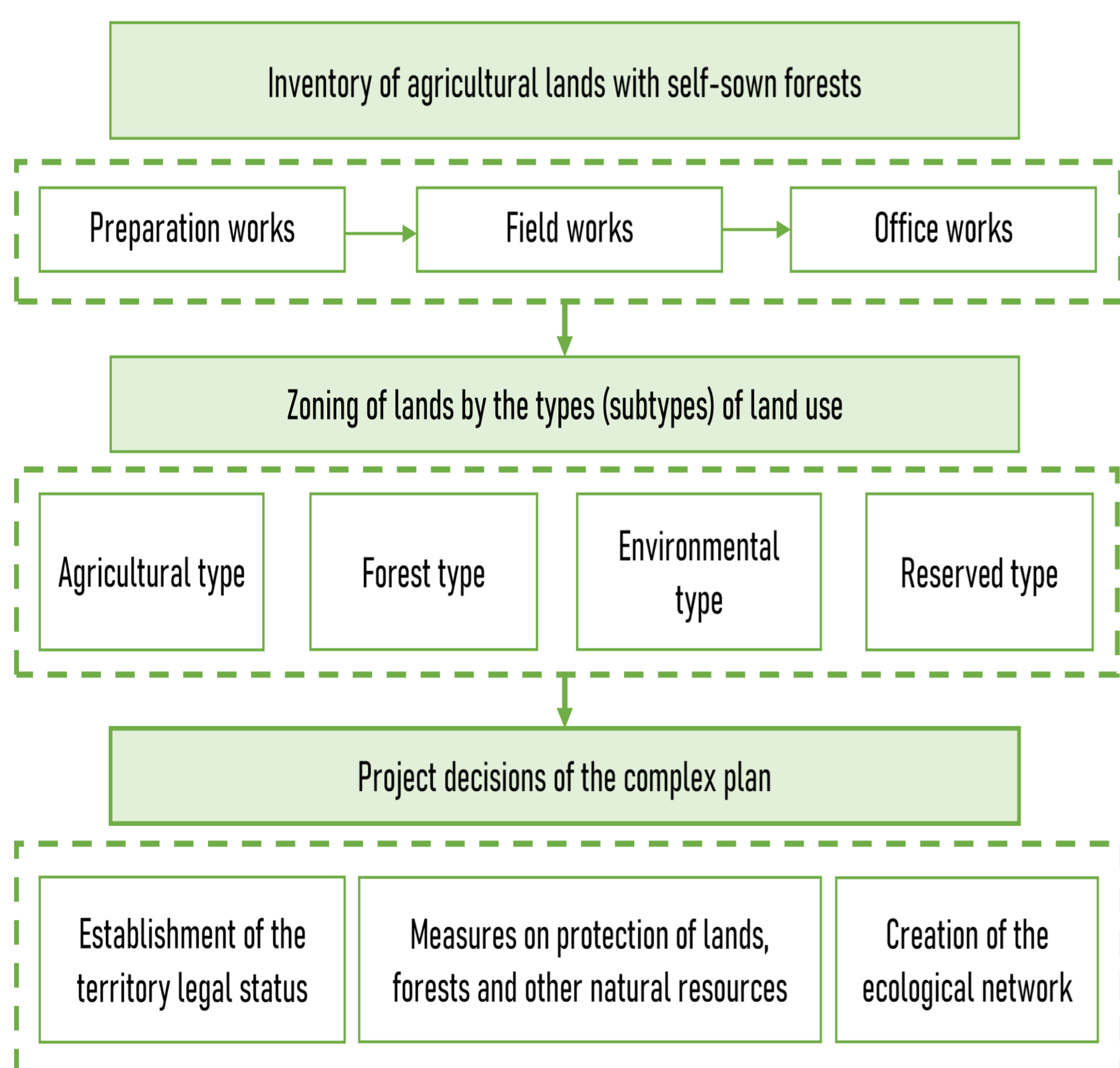


Fig. 3. Conceptual model of planning the use of agricultural lands with self-sown forests to secure sustainable management of the land resources of Ukraine

Basing on the research results, the following conclusions are made:

1. A self-sown forest is one of the ways to recover the natural ecosystems and to improve the territory biodiversity. Therefore, management of the self-sown forests on agricultural lands in favor of their protection should be the important principle of the national policy, spatial planning, as well as sustainable management of the natural resources of territorial communities.
2. Inventory of lands and forests using the data of satellite remote sensing is an important component of spatial planning and management of the land resources with self-sown forests. The mandatory condition of inventory of the self-sown forests on agricultural lands supposes conducting the soil, geo-botanic and other examinations to get information on the land quality.
3. The authors propose a conceptual model of planning the use of agricultural lands with the self-sown forests, which supposes inventory of land plots, zoning of lands with identification of the types of land use, project measures on employment and protection of the plots with the self-sown forests.
4. Solution of the problem of self-sown forests on agricultural lands requires a complex approach with consideration of the legal, economic, social, ecological aspects. However, the ecosystem value of the forest ecosystems should be the primary criterion while determining the direction of use of the agricultural lands with the self-sown forests.