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#### **BOOK REVIEW**

# **CLIMATE CHANGE AND INSURANCE OF AGRICULTURE**

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The monograph "Climate Change and Insurance of Agriculture", by dr Vladimir Njegomir, PhD, dr Boris Marović, PhD, dr Radovan Pejanović, PhD and dr Bogdan Kuzmanović, PhD, represents a significant contribution to domestic scientific and professional literature on the complex problem of agricultural insurance. The monograph is the result of many years of research by its authors in this field. Climate change is one of the most significant risks the agricultural production is facing today, and, in such circumstances, insurance of agriculture is especially important. The authors point out that, when writing this book, they intended to present all the relevant aspects of climate change and its impact on agricultural production, ways of managing production risks and the tendency of arranging agricultural insurance worldwide and in Serbia under such conditions. The publisher of the monograph "Climate Change and Insurance of Agriculture" is the "Princip Pres", Belgrade. The monograph was published in April 2017, and has 348 pages and 19 chapters.

The first chapter of the monograph includes the definition and characteristics of agricultural production in Serbia and worldwide. The authors emphasize the specificity of agricultural production (such as, above all, its organic character) which causes the technology, organization and economy of cultivation adapt to the biological properties of the plants and animals. The agricultural production,



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thus, largely depends on the natural conditions (soil characteristics, climate, etc.) therefore, it faces larger risks and the need for economic protection. In this chapter, the authors acquaint the readers with the agribusiness as the concept of modern agricultural production based on market principles. They emphasize the importance of agriculture in Serbia and in the world, i.e. its impact on the economic power of the state. Also, the authors point out that the unsustainable development of agriculture is to a significant degree caused by the current climate change. In particular, they state that the current concept of the "unsustainable development" - based on the profit economy interests and the dominance of multinational companies - has led to negative effects that resulted in climate change and food health and safety issues. In the second chapter of the monograph, the authors define and name the types of agricultural production risks, as well as their determinants and/or the likelihood of occurrence of a particular loss event and the degree of adversity of its consequences. The authors also address the subjects related to the risk concept and/or the impact of agricultural production risk on the economic development of countries, regions and the world. They classify the risks of agricultural production into regulatory or institutional, market or price and product risks.

The third chapter of the monograph deals with climate change and its effects. This chapter presents the trends in climate change, its causes and consequences and/ or the catastrophic events that can be caused by it. Also, the economic implications of climate change and their impact on agricultural production are presented. This chapter shows the influence of agriculture on the emergence of climate change, its adaptation, and the possible contribution of agricultural production to the reduction of climate change. The authors highlight the significance of food safety in changing climate and present global solutions for climate change issues; they also cite the agreements that have been made to that purpose. The fourth chapter includes the catastrophic damages in Serbia's agriculture, caused by the climate change. More precisely, the authors classify and describe the hazards/risks that can affect the agricultural production and are caused (to a lesser or greater extent) by a climate change. These are floods, drought, extreme temperatures, and storms, precipitations with hail, soil erosion, landslides, frost and fire.

In the chapter five, the authors emphasize the importance of risk management in agriculture and describe its possible implementation processes. They also elaborate on the implementation, monitoring and audit of the risk management processes. In the sixth chapter, the authors classify methods of managing the agricultural production risks into primary protection measures (prevention and reduction) and measures designated to finance the consequences of occurrence of production risks. The primary protection measures include diversification, vertical integration, irrigation and drainage, as well as crop rotation. Speaking about the measures intended for financing the consequences of occurrence of production

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risks, the authors emphasize the role of the state, insurance and micro insurance. In the chapter seven, they describe in detail insurance as a key risk management mechanism. They also define the most important characteristics of insurance and risk, describe the insurance and reinsurance market worldwide and in Serbia and define the entities on the market and the basic elements of insurance and insurance policies. Also, this section presents the types of insurance, the economic benefits of insurance arrangements and the costs of applying economic protection of production.

In the chapter eighth of the monograph, the authors elaborate in detail the insurance of agriculture as a special type of insurance, emphasize its significance and state the conditions and limitations of the insurability of certain agricultural risks. They also state the subject-matters of agricultural insurance, its types and characteristics, both analytically (observed as insurance of crops and fruit and animals) and as insurance of agricultural farms, as their synthesis. This chapter also provides an analysis of agricultural insurance in Serbia, as well as a comparative analysis of state subsidies for agricultural insurance in Serbia and the region. The characteristics of agricultural insurance, as a property insurance line, are presented in chapter nine, by all relevant aspects. The characteristics of reinsurance of agricultural production risks are described in chapter ten. Here, the authors emphasize reinsurance of agriculture as a key risk transfer form of insurance companies, stating the types of reinsurance contracts, reinsurance functions, as well as reinsurance implementation restrictions.

In the chapter eleven of the monograph, the authors present the insurance of agriculture under the conditions of climate change, from the aspect of risk eligibility, insurance obligations, effects of climate change on the risks re-insurability and alternative mechanisms of risks transfer under the conditions of climate change. Also, in this chapter, the authors emphasize the necessity to introduce public-private partnerships in the insurance of agriculture under the conditions of climate change, because of catastrophic losses with financial amounts often exceeding the capacities of insurance and reinsurance companies.

In the chapter twelve of the monograph, the authors present key results of the survey related to the insurance of agriculture and its practical (non-)application by agricultural producers in AP of Vojvodina and the Republic of Serbia. In chapter thirteen, the results of the regression analysis of the conducted survey are presented. The ensuing chapters contain notes, literature, attachments, vocabulary of professional terms and the last, nineteenth chapter, includes the biographies of the authors of the monograph.

According to the opinion of the reviewers, this monograph is a quality and professional reading, with the analytical elaboration of a number of issues caused by climate change, especially from the aspect of agricultural production and with the emphasis on significance and role of agricultural insurance as a way of solving

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those issues. Also, according to the opinion of the reviewers, the book elaborates on the effects of climate change on the food safety and health.

According to the author, the monograph "Climate Change and Insurance of Agriculture" is intended primarily for agricultural producers, insurance companies, domestic economic policy makers as well as for students and all those who want to become familiar with the impact of climate change on agricultural insurance.

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