

THE IMPACTS OF FOOD TABOOS AND PREFERENCES ON FOOD SECURITY IN DEVELOPING COUNTRIES: EVIDENCE FROM ETHIOPIA

DOPADY POTRAVINOVÝCH TABU A PREFERENCIÍ NA POTRAVINOVÚ BEZPEČNOSŤ V ROZVOJOVÝCH KRAJINÁCH: DÔKAZY Z ETIÓPIE

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I. Introduction

Food norms are written and unwritten standards that govern people's economic behavior.⁽¹⁾ They instruct individuals of a society about the dos and don'ts concerning production, distribution, and consumption of food. Written food norms are part of laws and enforced by the state through the law enforce-

ment agencies⁽²⁾, whereas unwritten food norms are handled through informal social control mechanisms.⁽³⁾ An example of informal social control is the use of positive and negative sanctions by kin or wider society as admiration and social exclusion for conformists and deviants, respectively.⁽²⁾ Within this context, food taboos and preferences (FTP) are specific

Abstract (EN)

Food norms are embodied within all the essential components of food security; availability, access, utilization, and stability. However, the adverse economic influences of these norms are largely under-researched in developing countries. Unique in its scope, this study thus investigates the impacts of food taboos and preferences (FTP) on food security in Ethiopia, one of the world's food-insecure nations combined with a culture of strict food norms. On the basis of a qualitative research design with semi-structured in-depth interviews, primary data was collected from eleven key informants of pertinent multidisciplinary backgrounds, experts and decision-makers. The empirical evidence revealed that religious and secular-based FTP have put significant restrictions on the efficient utilization of the existing edible resources in the country. For example, during Orthodox Christian (OC) and Muslim fasting days, the overall food supply chain undergoes economic turbulence. Particularly, the economic challenge of OC fasting is expressed by (1) a decrease in consumption and supply of non-vegan foods, (2) the temporary closure of butcher and dairy shops, (3) an increase in the demand and price of vegan foods, and (4) an overall reduction in consumption and economic transactions. Moreover, the tradition of animal consecration at home has made many Ethiopians to rarely depend on supermarkets, groceries, and other licensed meat shops. In turn, this impedes the country's endeavor of attracting local and foreign private investors in the general food sector. It also alienates people from access to food labels, meat quality controls, price, size, and choice advantages, all of which are essential for better, adaptive, and stable food utilization. The results discovered in this thesis enrich our understanding on the role of food norms in the economic systems. Particularly, the study sheds light on the indispensable need to consider the subject of FTP in policies and programs aiming to end food insecurity.

Keywords (EN)

Food Security; Food Taboos; Food Preference; Culture; Ethiopia

Abstrakt (SK)

Potravinové normy sú súčasťou všetkých základných zložiek potravinovej bezpečnosti a to: dostupnosti, prístupu, využitia a stability. Negatívne ekonomické vplyvy týchto noriem sú však v rozvojových krajinách doposiaľ nedostatočne preskúmané. Predkladaná štúdia sa preto zaoberá dopadmi potravinového tabu a preferencií na potravinovú bezpečnosť v Etiópii, ktorá patrí ku krajinám nedostatočne zabezpečenými potravinami v kombinácii s kultúrou prísnych potravinových noriem. Na základe kvalitatívneho výskumu, použitím pološtruktúrovaných rozhovorov, boli zhromaždené primárne údaje od jedenástich kľúčových informátorov z relevantných multidisciplinárnych prostredí, odborníkov a osôb s rozhodovacími právomocami. Empirické dôkazy odhalili, že náboženské a sekulárne potravinové tabu a preferencie zaviedli výrazné obmedzenia na efektívne využitie existujúcich zdrojov jedla v krajine. Napríklad počas dní pôstu ortodoxných kresťanov a moslimov prechádza celkový potravinový reťazec hospodárskymi turbulenciami. Ekonomické výzvy počas pôstu ortodoxných kresťanov sú spôsobené najmä (1) poklesom spotreby a ponuky nevegánskych potravín, (2) dočasným zatvorením mäsiarstiev a mliekarní, (3) zvýšením dopytu a cien vegánskych výrobkov a (4) celkovým znížením spotreby a ekonomických transakcií. Tradícia posvätenia domácich zvierat navyše spôsobila, že množstvo etiópcanov nie je závislých od supermarketov, potravín a iných licencovaných obchodov s mäsom. To zasa bráni prilákaní miestnych a zahraničných súkromných investorov do potravinárskeho sektoru. Takéto praktiky tiež pôsobia ako prekážka pre ľudí pri oboznamovaní sa s označením potravín, kontrolou kvality mäsa, cenou, veľkosťou a výhodami výberu, čo sú všetko nevyhnutné predpoklady pre lepšie, adaptívnejšie a stabilnejšie využitie potravín. Výsledky štúdie prispievajú k pochopeniu úlohy potravinových noriem v ekonomických systémoch. Štúdia ozrejmuje predovšetkým nevyhnutnú potrebu zvážiť tému potravinových tabu a preferencií v politikách a programoch zameraných na odstránenie potravinovej neistoty.

Kľúčové slová (SK)

potravinová bezpečnosť, potravinové tabu, potravinové preferencie, náboženstvo, kultúra, Etiópia

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components of food norms⁽¹⁾ Consecutively, they refer to the prohibition of a particular food or drink from consumption and the selection of what is most important from the socially recognized food.⁽⁴⁾⁽⁵⁾

FTP are neither absolute nor static⁽¹⁾ They constantly change depending on society's demand, research findings, change in people's awareness, and adaptation.⁽⁷⁾ In many Western societies, for instance, people used to consider entomophagy as unpleasant or taboo.⁽⁸⁾ However, today this attitude is gradually changing following the growing and consistent research findings of the health, environment, and sustainability benefits of insect diets.⁽⁸⁾ Furthermore, FTP are the outcomes of religious and secular factors.⁽⁹⁾ Therefore, they differ across societies and so does their impacts on countries' food security vary.⁽¹⁾⁽⁹⁾

Food security is comprehended based on four major components, namely food availability, access, utilization, and stability⁽¹⁰⁾. All these constituents are overwhelmingly impacted by food taboos and preferences. These impacts, on the one hand, can be both positive and negative, though this thesis focused on the latter. On the other hand, they tend to be more powerful and overt in societies with strong social norms. In this regard, Ethiopia serves as an illustrative case within this study, being one of the world's most food-insecure nations with persistent food norms. The strict nonscientific FTP that are deeply rooted in the country's religious, cultural, and traditional beliefs are believed to have adverse impacts on its food security thereby further worsening the prevailing food insecurity of the country.⁽¹¹⁾⁽¹²⁾

For over three decades, Ethiopia has been extensively quoted across the world as an instance of chronic food insecurity.⁽¹³⁾ This seems to be due to the 1984 - 85 ravage famine, which killed and internally displaced 1.2 and 2.5 million people respectively.⁽¹⁴⁾ However, since the end of the 1990s, the country has managed to become one of the fastest economically growing nations in the world with an average 8 percent GDP boost.⁽¹³⁾ The effort has paid off in the country and reduced its Global Hunger Index (GHI) by a total of 26.8 within 18 years, 2000 - 2018.⁽¹⁵⁾ But the progress is not left without criticism. It is stated that the success gained at the macroeconomic level is not properly trickling-down to reach the destitute and help them break the vicious circle of poverty.⁽¹³⁾ Hence, the country has remained among the top 20 globally food-insecure nations.⁽¹⁵⁾ Thus, the Ethiopian government has endorsed a set of national strategic policies to become among the lower-middle-income

countries by 2025⁽¹⁶⁾ and to achieve the "no poverty" and "zero hunger" goals of the Agenda 2030⁽¹⁷⁾, which involves sustainable food security⁽¹⁶⁾.

Fundamental to national food security yet often overlooked by concerned authorities are food norms.⁽¹⁾ As FAO exposed, nonscientific based normative food restrictions are among the reasons for the poor utilization of the existing nutritional plant and animal species in some African countries⁽¹⁾ In fact, countries with rich biodiversity have a potential comparative advantage of food availability and access over others with more limited resources⁽¹⁸⁾ However, the presence of rich animal and plant species does not necessarily mean more food. The case of Ethiopia is a good illustration. Ethiopia is among the top-ranked most biodiverse African countries.^{(19), (20)} The comprehensive weather conditions, which range from tropical to cool zones and elevation as high as Mt Ras Dejen, 4533 meters above sea level, and as deep as the Denakil Depression, 116 meters below sea level⁽¹⁾, have made the country a home for 6000 plant, 861 bird, 200 fish, 201 reptile, 1225 arthropod, 63 amphibian, and 284 wild mammal species.⁽¹⁹⁾ Some wild animals and insects are not properly registered yet. However, the number of animals and plants species recognized in the mainstream food culture are extremely limited for reasons related to religion, lack of awareness, and belief-based FTP.⁽¹¹⁾⁽¹²⁾

In the fight against food insecurity in Ethiopia, the core political and economic bottlenecks and the way forward have been debated for decades in academic and non-academic discourses.⁽¹³⁾ Therefore, this paper deviates from this widely argued conventional outlooks and instead focused on investigating one of the least uncovered but equally important drivers of food security, namely food norms.^{(1), (9), (21)} Specifically, this thesis addresses the impacts of culturally and religiously based FTP on Ethiopian food security.

II. Problem Statement

Scientific based FTP are positively recommended from health and sustainability perspectives^{(4), (5)}. However, those FTP that depend on non-scientific roots, which are widespread in Ethiopia, are thought to have some adverse implications on food security.^{(11), (12), (13)}. Just to mention a few, taken-for-granted food taboos and preferences can cause unconsulted food bans, poor dietary choices, and inconsistencies on production and consumption patterns which are all related to the main components of food security.⁽¹⁾ For example in Ethiopia, fasting is a dominant religious ritual that significantly affects the overall food demand and supply chains, food choices, and the frequency of daily calorie intakes.⁽²³⁾ After all, fasting constitutes a major reason that Ethiopians belong to one of the most vegetarian people in the world.⁽²²⁾ This is because it imposes strict

⁽¹⁾ Alonso, Cockx, and Swinnen (2017)

⁽²⁾ Clinard and Meier (2011)

⁽³⁾ Chekroun (2018)

⁽⁴⁾ Smith (2008)

⁽⁵⁾ Meyer-Rochow (2009)

⁽⁶⁾ Onuorah and Ayo (2003)

⁽⁷⁾ Schuurmans (2014)

⁽⁸⁾ Schulz (2020)

⁽⁹⁾ HLPE (2017)

⁽¹⁰⁾ FAO (2008)

⁽¹¹⁾ Seleshe, Jo, and Lee (2014)

⁽¹²⁾ Hopf (2017)

⁽¹³⁾ Cheru, Christopher, and Oqubay (2019)

⁽¹⁴⁾ Gill (2010)

⁽¹⁵⁾ WFP and CSA (2019)

⁽¹⁶⁾ WB (2019)

⁽¹⁷⁾ UN (2015)

⁽¹⁸⁾ FAO (2019a)

⁽¹⁹⁾ EBI (2014)

⁽²⁰⁾ Crummev and Mehretu (2019)

rules on what and when to eat. However, the particulars vary depending on the specific guides of each religion, in this case OC and Islam.

For Ethiopian OC, fasting goes accompanied with abstinence from consumption and selective food proscription.^{(23), (24)} The practice has been in force since the 4th century when Christianity was introduced in Ethiopia.^{(24), (25)} The Ethiopian Orthodox Tewahedo Church (EOTC) defines fasting as a sacred sacrament whereby the believers get spiritually connected and seek salvation through reducing physical comfort as per Saint Paul's Biblical guidance to "chastise the body and bring it under subjection" (1 Cor. 9:27 King James Version). During these days, believers abstain from taking any food and drink before 3.00 pm, after which their diet includes only vegan food.^{(23), (24)} In other words, during the fasting days, the consumption of any type of meat, including fish and animal products like egg and dairy, is strictly prohibited. The fasting counts at least half of the days in a year, although the exact number of days depends on who practice them, laymen or clergy. Unlike OC, fasting in Islam is not food-specific.⁽²⁶⁾ Instead, it is manifested by a willful renounce of any types of foods, drinks, smokes, and sexual activities from sunrise to sunset during each fasting day.⁽²⁶⁾ Ramadan, a tribute to Nebyu Muhammad's first revelation, is the most popular one-month fasting and practiced by all healthy and non-traveling adult Muslims worldwide.

Numerical evidence on how many OCs and Muslims adhere to fasting in Ethiopia is incomplete. Nonetheless, the centuries-old footprints of the two religions on the overall social structure of the country in combination with the large number of followers have made the effect of fasting to appear explicitly on the production and consumption of some food items.^{(11), (12), (25)} A recent national quantitative study by D'Haene et al. revealed that OC fasting has an adverse impact on milk consumption and production patterns. Not only OCs but also the followers of other religions are impacted, due to a spillover effect described in the study. Another similar study⁽²⁴⁾ also came up with the same results on biscuit production and consumption.

Additionally, there is evolving evidence in academic literature that demonstrates how granted FTP in different societies can affect food security by constraining people to get essential micronutrients. For instance, in some rural areas of Ethiopia, pregnant women have no free dietary choice due to belief-based food taboos.⁽²⁷⁾ Particularly, in the central Ethiopia rural Arsi district, pregnant women limit the consumption of green leafy vegetables and dairy products.⁽²⁷⁾ In their belief, this food taboo reduces possible childbirth complications and pains through losing weight during pregnancy. However, the practice is neither encouraged nor enacted by the law. Similar studies on the impacts of food taboos among pregnant women

are also conducted in Nigeria⁽²⁸⁾, Ghana⁽²⁹⁾, Malawi⁽³⁰⁾, and Nepal⁽³¹⁾. Some of these research findings showed that the existing belief-based food taboos might be detrimental to the health of both the pregnant women and fetuses. This is because the taboos can prevent them from getting the proper proteins and other micronutrients.

The points covered in this section are just a few examples to emphasize the importance of the topic under discussion. However, the details on the adverse impacts of nonscientifically based FTP on food security are commonly given less attention in academic and non-academic studies in developing countries. In Ethiopia, the few existing studies related to the subject are neither exhaustive nor taking food security sufficiently into account. They mainly focused on the impacts of OC fasting on the production and consumption of certain food items such as milk⁽²³⁾, biscuit⁽²⁴⁾, and meat⁽¹¹⁾. Furthermore, policy cycles aiming to enhance food security are more biased towards the technology, market, and political subjects than the food norms⁽¹⁾. Therefore, this study addressed the aforementioned literature gap by investigating the adverse impact of nonscientifically based FTP on food security through collecting evidence from Ethiopia.

III. Conceptual Definitions

3.1 Food Security

The meaning of food security unfolds more prominently in the international dialogue during the 1970s, although there were already some concerns and discussions about the subject in the 1940s.⁽³³⁾ Initially, only few variables such as production and supply were used to operationalize the concept. However, through time the meaning of food security started to expand and became multi-dimensional. The breakthrough for the contemporary comprehensive definition of food security, the one adopted in this thesis, goes back to the World Food Summit of 1996. In the meeting, it is put forward that "food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life"⁽³³⁾ (World Food Summit, 1996). Based on this definition, food security comprises four essential components; food availability, access, utilization, and stability of food.⁽¹⁰⁾ Besides, humans' ways of life or cultures, which are expressed in the form of food norms impacts each of the four components of food security.⁽¹⁾

Food availability refers to whether people have sufficient and nutritious food to eat, gained either through their own production or external sources.⁽³⁴⁾ It is particularly concerned with the production, distribution, and exchange of food items. Like-

⁽²¹⁾ Olum, Okello-uma, Tumuhimbise, Taylor, and Ongeng (2017)

⁽²²⁾ Rogers (2020)

⁽²³⁾ D'Haene, Desiere, D'Haese, Verbeke, and Schoors (2019)

⁽²⁴⁾ Belwal and Tafesse (2010)

⁽²⁵⁾ Esler (2019)

⁽²⁶⁾ Sadeghirad, Motaghpisheh, Kolahdooz, Zahedi, and Haghdoost (2012)

⁽²⁷⁾ Zerfu, Umeta, and Baye (2016)

⁽²⁸⁾ Abidoye and Akinpelumi (2010)

⁽²⁹⁾ Aikins (2014)

⁽³⁰⁾ Maliwichi-Nyirenda and Maliwichi (2017)

⁽³¹⁾ Christian et al. (2007)

⁽³²⁾ Maxwell (1996)

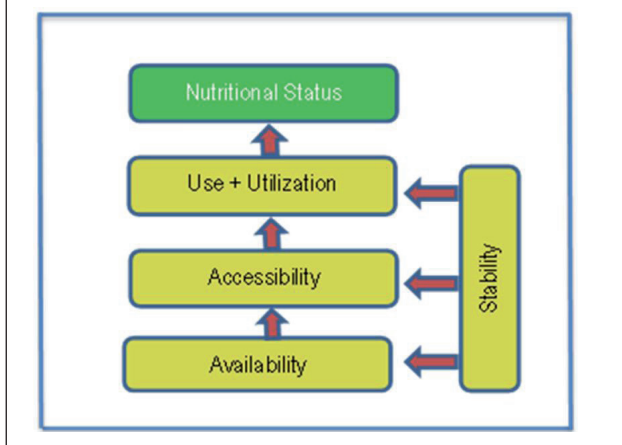
⁽³³⁾ World Food Summit (1996)

⁽³⁴⁾ WFP (2009)

wise, individuals' and households' ability to acquire a healthy and nutritious diet is related to food access. Food availability does not necessarily guarantee accessibility nor does accessibility ensure utilization⁽³⁴⁾ After all, affordability, allocation, and cultural factors also affect accessibility and utilization.

Food security is maintained when the source of the food is stable. As shown in Figure 3.1, food stability affects all other components of food security. Hence, the attainment of one or two of the food security components does not ensure an individual or a group to declare food security. Instead, all the four components have to be successfully maintained.^{(10), (33), (34)}

Figure 1: A framework illustrating the relationship between the four components of food security⁽³⁵⁾



3.2 Food Taboos and Preferences

The conceptual definitions of FTP adopted in this article are not different from their conventional meanings. Food taboos are socially or religiously based norms or laws that prohibit people to consume certain types of food.⁽⁵⁾ For the purpose of this study, temporary food prohibition that results from fasting and other normative restrictions are also considered and included in the definition. Conversely, food preference is the choice of a particular food or drink over others based on norms or laws.⁽⁴⁾ Otherwise stated, it is the selection of what is most important from the available and socially recognized foods.

IV. Study Area and Research Design

4.1 Background of the Study Area

Ethiopia, the study site around which this study revolves, is also known as “land of origins.” The country is a landlocked and located in the Horn of Africa, bordering Kenya in the South, Eritria in the North, Somali in the East, Djibouti in Northeast, South Sudan in the West and Sudan in Northeast. It has a total land size of 1.1 million square kilometer and diverse geographic and climatic conditions.⁽¹⁵⁾ As of 2020, the country has a total of 114.5 million people with a 2.57 percent

population growth rate, making it the second most populous nation of the African continent after Nigeria.⁽³⁶⁾ Ethiopia has around eighty different ethnic groups although over 60 percent is only from the two largest ethnic groups, namely Oromo and Amhara.⁽³⁷⁾ Almost all ethnic groups have their own legally recognized language that they use as a mother tongue, while Amharic is the federal government’s working language.

Religion has a strong public support base in Ethiopia.⁽²⁵⁾ Article 11 of the Ethiopian Constitution stipulates the separation of state and religion. Hence, the country is officially a secular state. Citizens are thus granted the constitutional right to religious choice, though informal pressure among family members and closer kin to perpetuate the religion of their parents is common among all religious categories. According to the Central Statistics Agency of Ethiopia,⁽³⁸⁾ 97 percent of the Ethiopians associate themselves with one of the main religious categories, namely OC (43.5 percent), Islam (34 percent), and Protestant (18.5 percent) and Catholic Christians (1 percent). Introduced in the 4th and 7th centuries respectively, OC and Islam have played paramount roles in the state formation.⁽³⁷⁾ Especially, the EOTC has a strong influence on the overall socio-economic and political culture of the county. It is hardly possible to comprehend the Ethiopian overall history, culture, and social institutions independent of the EOTC.⁽²⁵⁾ The Church used to function complementarily with the state for centuries until the first secular government was established in 1974.^{(25), (37)}

Ethiopia is a historically rich and culturally diverse country. Sub-cultures are very common among the different ethnic groups.^{(12), (37)} Group life is highly valued, which goes at the expense of individualism. In fact, strong solidarity is essential to people’s livelihood strategy in the country. in relation with this social cohesion, norms are very powerful, particularly in the countryside.⁽¹²⁾ Religion is plays a catalyst role in ensuring that people are still connected to each other and adhered to the shared core spiritual values. So, in practice, there are no clear cut boundaries between religious and non-religious lifestyles.⁽²⁵⁾ After all, many of the country’s secular cultural components originate from EOTC influence. There are many religious and secular rituals and holidays the people attend and express their religious and/or secular value, honor, and sentiment (Esler, 2019; Hopf, 2017). The country’s ability to maintain its sovereignty during colonial times has granted an opportunity to safeguard many of its indigenous knowledge.^{(12), (37)}

Agriculture is the engine of Ethiopia’s economy and it has a substantial spillover effect on other sectors.⁽¹³⁾ In 2015-16, agriculture in Ethiopia contributed 36.7 percent of the national GDP, 72.7 percent of the total employment, and 90 percent of the total export.⁽¹⁴⁾ Moreover, the sector is characterized by low productivity, the dominance of family-based subsistence farmers, labor-intensive farming, high dependency on rain, and exposure to the adverse impacts of the reoccurring drought of the region.^{(13) (15)}

Since the beginning of the 1990s, the Ethiopian government has shown immense interest in the Asian based developmental

⁽³⁵⁾ Napoli (2011/12)

⁽³⁶⁾ Worldometer (2020)

⁽³⁷⁾ Adamu (2013)

state philosophy.⁽³⁹⁾ In line with this philosophy, the Ethiopian government is in control of major economic assets, including land, and plays a pivotal role in the main economic activities.⁽¹³⁾ However, private sectors are not completely banned, as was the case under the socialist Derge Regime (1974 - 1987). Instead, the government encourages private sectors to engage in different economic activities, albeit few giant national projects like telecom and national aviation industries remain under the sole control of the state.^{(13), (39)}

Agricultural Development Led Industrialization (ADLI) is the national economic policy targeting the countryside. It is based on the logic that a higher efficiency and effectiveness of agriculture are the safe ways for the country's transition to industrialization. Indeed, from developed countries' experience, technology and capital supported agricultural productivity facilitates rural transformation.⁽⁴⁰⁾ In the long run, this process involves a decrease of agriculture as a factor of income and agriculture's contribution to the national GDP, compared to industry and service sector economic activities.⁽⁴¹⁾ This process also holds a gradual decline in the number of people engaged in the agricultural sector.⁽⁴²⁾ The idea has also been discussed in the Arthur Lewis structural model, where the process is noted as an ideal opportunity to get idle labor which can in turn be used to fill the labor gap in other sectors.⁽⁴³⁾ However, its pertinence in developing countries has been doubted, due to a number of contextual factors.⁽⁴³⁾

4.2 Research Methods and Samples

The main research question of the study demands an understanding and description of thoughts, experiences, and concepts. In other words, the topic of the thesis is tangled to the society's socio-cultural and religious variables. Accordingly, it requires rich data to properly address the thesis' ultimate objective. In a study of the aforesaid features, qualitative research is more appropriate than quantitative study.^{(44), (45)}

Therefore, this exploratory study employed a cross-sectional qualitative research design, with semi-structured in-depth interviews as the main method of data collection. Cross-sectional design means that the data are collected at a single point in time.⁽⁴⁶⁾ Hence, this research did not examine the over-time changes of the subject, as is the case in longitudinal studies. Specifically, in-depth interviews were used because of the relative flexibility of the method.⁽⁴⁷⁾ In-depth interviewing enabled both the researcher and interviewees to thoroughly discuss the themes in one-to-one interviews.⁽⁴⁸⁾ In addition, the study was supplemented with pertinent research findings and reports cited from academic books, journal articles, web-pages, and gov-

⁽³⁸⁾ CSA (2010)

⁽³⁹⁾ Clapham (2018)

⁽⁴⁰⁾ Bhandari and Ghimire (2016)

⁽⁴¹⁾ Arendonk (2015)

⁽⁴²⁾ Dennis and Talan (2007)

⁽⁴³⁾ Todaro and Smith (2015)

⁽⁴⁴⁾ Taylor, Bogdan, and DeVault (2016)

⁽⁴⁵⁾ Flick (2018)

⁽⁴⁶⁾ Payne and Payne (2004)

⁽⁴⁷⁾ Wertz, Charmaz, McMullen, Anderson, and McSpadden (2011)

ernmental and non-governmental reports. Reliable information and research findings obtained from these sources were combined with the primary data to substantiate and enhance the analysis and discussions.

Primary data were collected from 11 key informants who are different stakeholders, experts, and decision-makers that can properly judge the ongoing issues. The selection of the samples was done by the researcher in between December 13, 2019 to January 25, 2020. To identify the right units of analysis, all the key informants were purposively selected based on professional experience, educational background, and international exposure criteria. Because Ethiopian food norms are related to religion, culture, history, and traditional belief,^{(12), (24), (25)} the samples were chosen from various multidisciplinary backgrounds. All the key informants were from Ethiopian origin and the majority used to live in the national capital, Addis Ababa. The sample size was determined based on the level of data saturation, though a balance is made to include key informants from all the aforesaid selection criteria. The interview with the key informants took place virtually from mid-February to the end of May 2020.

V. Findings

5.1 The Mainstream Food Taboos and Preferences

From the evidence collected, it is noted that within the mainstream Ethiopian food norms, food prohibitions or taboos are expressed in different forms. The first and most common are unconditional food taboos. These taboos represent those foods, which are completely banned from the country's mainstream food menu through existing norms for religious or secular reasons. Examples include pork, donkey and horse meat, and seafood except fish.

The second types are conditional food taboos. According to the key informants some foods can remain in the taboo lists unless they fit into the religiously and/or culturally defined normative standards. One notable example is the need to pray before slaughtering edible animals. "Religiously permitted animals have to be consecrated based on the religion's tradition to be part of the diet. Otherwise, they remain in the taboo food lists", said the OC and Muslim religious leader key informants. Consequently, Ethiopian OCs and Muslims do not share meat-related dishes. Alternatively, the vast majority of Ethiopians prefers to buy living animals and bless them in their homes. In a further clarification the sociologist key informant said:

Buying chicken, sheep, and goat meat in supermarkets or other groceries is considered an act of dishonoring the tradition, especially in the countryside. Eatable animals have to be blessed at home. It is one of the most valued rituals of meat consumption among Ethiopians.

Fasting based abstinence is the third type. During Ethiopian OC and Muslim fasting days, what to eat and when to eat are

⁽⁴⁸⁾ Rubin and Rubin (2004)

⁽⁴⁹⁾ Abaidia, Daab, and Bouzid (2020)

precisely defined by the dogmas of each of the religion as described in section 2. For instance, OCs fast at least half of the days in a year, fragmented in different days and seasons. This includes almost every Wednesday and Friday, and the 55 consecutive days of Lent fasting before Easter. During all these and other fasting days, OC believers abstain from taking any food or drink before 3.00 pm, after which their diet includes only vegan food.^{(23), (24)} Similarly, during Ramadan, (Ethiopian) adult and healthy Muslims abstain from foods, drinks, smokes, and sexual activities from sunrise to sunset for one month.⁽⁴⁹⁾ Ramadan is the most popular one-month fasting and practiced by all healthy and non-traveling adult Muslims worldwide, including Ethiopian. According to the OC and Muslim religious leader key informants, deviation from these spiritually defined fasting in both religions is equally as condemned as eating taboo foods.

Concerning food preference, it is found that religion, culture, and commonly held public perceptions mark the boundary between taboo and non-taboo foods. Scientific or health-based perspectives have limited influence on people's food preferences. Foreign and taboo foods are hardly seen on any of the mainstream food menus. The exceptions are a few high-class hotels and restaurants, which have international customers and thus offer foreign foods and cuisines that are not indigenous and often unfamiliar to the majority of Ethiopians. The interviewee from rural development discipline underlined:

Many people are scared to move beyond the psychologically and culturally drawn mainstream food wall. Food venture and scientific analysis of the nutritional content of the food are not common among the general public. The exceptions are some Ethiopian Diasporas, few educated people, and sick people with medically defined food prescriptions.

From the socially recognized food lists, people's daily choices are made based on palatability, accessibility, and income levels. As the sociologist key informant describes it:

If not constrained by economic limitations, the consumption of meat with alcoholic drinks is the dream food choice for most Ethiopians. Consumption of meat is an expression of high economic and social class which is an extension of centuries-old Ethiopian royal families' food choices. Conversely, the poor are pushed to different types of staple vegan foods such as grains, cereals, pulses, and some vegetables and fruits.

According to the diaspora key informant, "the rich-poor food categorization in Ethiopia is in favor of the poor. The poor eat healthy organic vegan food, which are scientifically recommended, whereas the rich mostly consume meat, dairy products, and too many alcoholic drinks." The relatively low price of vegan food compared to non-vegan foods in the country has made the rich-poor food classification to appear as described above. "The cause for the high price of meat and dairy products in the country is the acute shortage of supply," said the economist key informant.

As noticed from the interviewees' response, seasons, stereotypes, lack of awareness, and misconceptions are also among the factors which influence food preferences. It is also noted that summer and spring are relatively the most challenging seasons for many subsistent farmers in Ethiopia. They face chronic food shortages and have very limited food choices. Conversely,

in autumn and winter after the farmers start to collect the fruits of their harvest, they have relatively diversified diet.

Furthermore, since a long time, stereotypes and beliefs have been preventing Ethiopians from the consumption of certain types of edible plant and animal species, as revealed by five research participants. According to the sociologist key informant:

People in the South are heavily dependent on different types of tubers, leaves, and other plant species. This is the result of the rich biodiversity of the region and the easy accessibility of the plants. But, eating some of these vegan foods has been negatively stereotyped, though the labeling is decreasing gradually.

In addition to this point, the nutrition key informant said: "still today some people in the North associate goat meat with bad spirits which can cause sickness."

5.2 The Impacts of Food Taboos and Preferences on Food Security

The interviewees were asked to describe and explain the adverse impacts of the prevailing FTP on the country's food security. We begin the analysis from the response of the economist key informant who stated the following about fasting: "the core concept of fasting is abstinence from food and drinks. In a basic economic view, if there is no consumption, there will not be production. Hence, the entire food supply chain from production to consumption will be adversely impacted."

OC fasting is food-specific. It bans meats and other foods of animal origin. Thus, during fasting days, the consumption of prohibited foods and drinks significantly drops in many parts of the country. The subject is consistently discussed in detail by some scholarly studies. According to the key informants, to maintain the profit, some companies limit the production of less demanded foods and drinks. Others divert their businesses to vegan food. Elaborating on the situation, the key informants in Addis Ababa University stated:

During OC fasting days, many local and village butchery and dairy shops and some restaurants temporarily close until the fasting is over. Some others divert to the provision of vegan products. Non-fasting people including the followers of other religions would have very limited access for the band foods due to shortage of supply. OC owned shops who fail to adhere to the church's command can lose customers in non-fasting days as part of the public informal social control sanctions.

Some key informants do not confine the adverse economic implication of fasting to the reduction of consumption. "The booms and busts on the consumption of certain products can have a discouraging effect on the country's attempt of attracting local and foreign investors in the sector," said the economist key informant. He also added that the economic consequences of OC fasting can be worse on easily perishable products like meat, milk, butter, yogurt, and others. According to FAO, with over "57 million cattle, 30 million sheep and 23 million goats, and 57 million chicken, as well as camels, equines and a small number of pigs", Ethiopia is among the top-ranked African countries in livestock population.⁽⁵⁰⁾ However, the meat and dairy supply-chains are very poor and not

developing.^{(51), (52)} The sector is not a preferred business by local and foreign investors. “Throughout Ethiopia, including the urban regions like Addis Ababa, dairy is mainly distributed and consumed in a traditional way.”⁽⁵²⁾ Among other reasons, this is due to the market constraints that are often caused by fasting-induced inconsistencies in demand and supply.⁽²³⁾ The few existing dairy and meat processing plants in the country are largely concentrated in the national capital, Addis Ababa.⁽⁵¹⁾

Likewise, the impact of OC fasting on the price and supply of substitutive vegan foods has also been conferred by the research participants. According to the economist key informant, “the price of vegan foods increases as a result of high demand during OC fasting days. The demand increases because vegan foods are the major substitutive of non-vegan fasting foods. Hence, a shortage of supply in vegan foods is created, and this is a common experience in many parts of the country.” From the sociologist key informant viewpoint, OC fasting has also a spillover effect on the consumption of some vegan foods, particularly on alcoholic drinks. As he puts it, “many people in Ethiopia drink alcohol after they eat protein-rich foods, commonly meat. Thus, the consumption of alcohol goes down during OC fasting.” The fasting wave of influence can go broader. As the diaspora key informants stated, “economic sectors are interdependent. When one sector is affected, there is a high possibility to see ripple effects on other sectors.”

Muslims’ fasting has also economic outcomes. According to the interviewees, it encounters a decline in business transactions but in a different form than stated for OC fasting. The details are explained by a key informant in AAU of the department of philosophy:

Muslims’ fasting is followed by abstinence from all form of foods and drinks for half of the hours of each fasting day, from sunrise to sunset. This reduces consumption. Although shops remain open there is some unevenness in opening and closing hours among Muslim owned businesses.

Fasting is one of the religious rituals, supposed to be practiced on the individual believer’s free will. However, the result of this study reveals the existence of strong informal societal pressures on non-fasting OCs and Muslims. It is reported by all research participants that many of the informal pressure comes from family, peers, neighbors, and church leaders. “This is one of the manifestations of the strong value of religion and social bond among people in the country,” said the sociologist key informant.

Abstinence from food and drinks for some hours is part of religious commitment during fasting days. The interviewees have provided contrasting views on its socio-economic and health implications. While the OC religious leader key informant said, fasting gives people spiritual and psychological satisfaction and inspires them for work; a nutritionist expert came up with a different view. According to her:

To my knowledge, elderly people, some children, pregnant women, and people with preexisting medical cases also involve in fasting. These are people who need special dietary care. I also know

⁽⁵⁰⁾ FAO (2019b)

⁽⁵¹⁾ Abebe, Zelalem, Mitiku, and Yousuf (2020)

⁽⁵²⁾ Soethoudt, Riet, Sertse, and Groot (2013)

some people who ignore their medical prescriptions during fasting days, exposing themselves to poor health conditions.

A few research participants have also revealed the possible impacts of fasting on the farm productivity. According to the economist key informant:

In Ethiopia, almost all the people in the countryside make their livelihood from agriculture or related occupations. Technologies are limited, farming is labor-intensive. Women, children, men, all have roles. They work for hours or a full day with an empty stomach during fasting days. Many do not even drink water for many hours during fasting days as a religious commitment. I understand what it means spiritually but from the scientific perspective, the productivity of labor depends on healthy and mental fitness, which involves a healthy and timely diet.

Most famous Ethiopian cuisine preparations and cooking have structured and explicitly defined normative guides. Moreover, it is implied that these guides demand a great deal of time and leave little room for adaptability. The food recipes are more common and consistent. A couple of research participants have reflected their thoughts on the adverse impact of these food utilization normative guides on dietary diversification and efficiency of labor productivity. The diaspora key informant said:

Many of the famous Ethiopian cuisines are time-demanding. If we see one of the top national cuisines, Doro wot (traditional cuisine made of chicken), it takes a minimum three to four hours, just for cooking. This costs time, reduces efficiency, and discourages people to regularly cook and include it in their daily food menus.

According to almost all key informants, the tradition of animal consecration at home has reduced people’s trust in supermarkets, governmental, and non-governmental licensed shops that deliver meat and meat-related foods with labels. For some of the informants (historian, economist, sociologist, and nutritionist), this phenomenon might discourage the expansion of supermarkets and groceries and thereby reduce people’s chance of getting food labels.

Studies on the impacts of Ethiopian food norms on the expansion of supermarkets and groceries are insufficient. However, adequate evidence shows that the food supply chain in Ethiopia is traditional and unstable.⁽⁵²⁾ Supermarkets are a recent phenomenon in the country and “do not have a significant market share in either cereals (one of the most important food categories in Ethiopia) or processed food.”⁽⁵²⁾ As the economist key informant disclosed; local village shops, cafeterias, restaurants, and open-public markets are the major food (processed and non-processed) trading areas, both in urban and rural areas. For the last two decades, following the country’s macroeconomic growth, the expansion of supermarkets and food groceries in major cities have showed promising progress.^{(13), (15)}

The existing mainstream food taboos are strict and deep-rooted among the public and this probably has some costs, said economist key informant. Five research participants cited people’s strong adherence to taboo foods during the Ethiopian famine of 1984–85 and its aftermath. According to the diaspora key informant, “many lives could have been saved if people

Table 5.1: Summary of the main adverse impacts of FTP on Ethiopian food security

S. NO	DESCRIPTIONS	SPECIFIC CAUSES OF FOOD TABOOS & PREFERENCES	IMPACTS ON FOOD SECURITY (COMPONENTS)
1	Complete or partial prohibition of some of the existing eatable plants and animals	Religious commandment, traditional beliefs, misconceptions or lack of awareness, and stereotypes in food preferences	<ul style="list-style-type: none"> • Causes underutilization of the existing resources • Limits food availability, access, and varieties
2	Irregularity on size of food production and consumption	Fasting both OC and Muslims	<ul style="list-style-type: none"> • Causes price fluctuations on food items • Discourages investment in the food sector • Constrains food availability, access, and stability
3	Supply shortage of food items	OC Fasting	<ul style="list-style-type: none"> • Limits food availability and access
4	Price volatility on some food items	OC Fasting	<ul style="list-style-type: none"> • Affects food accessibility
5	Temporary decrease in economic transactions	Fasting both OCs and Muslims	<ul style="list-style-type: none"> • Discourages investment in the food sector • Endures the stability of the food sector
6	Temporary closure of shops and few restaurants	Fasting, especially among OC	<ul style="list-style-type: none"> • Discourages investment in the food sector • Endures the stability of the food sector • Limits food availability and access
7	Irregularity on opening and closing hours of some shops and other businesses	Fasting, especially among Muslims	<ul style="list-style-type: none"> • Discourages investment in the food sector • Endures the stability of the food sector • Limits food availability and access
8	On purpose abstinence from food and drinks for hours	Fasting both OC s and Muslims	<ul style="list-style-type: none"> • Impacts labour efficiency and productivity • Endures the stability of the food sector
9	The Tradition of animal consecration at home	Religious commandment and cultural traditions	<ul style="list-style-type: none"> • Discourages investment in the food sector • Constrains meat quality check • Endures the stability of the food sector • Limits exposure to food labels
10	Limit access for food labels particularly on meat products	Tradition of animal consecration at home	<ul style="list-style-type: none"> • Limits awareness of food contents and qualities • Limits exposure to adaptive food utilization • Limits access to price, size, & promotion advantages

Source: own processing based on the interview Results, 2020

were able to consider taboo foods especially donkey and horse meats which were available during the famine and drought.” Likewise, a lecturer at AAU said:

In some countries like China, chronic food insecurity had induced revolutionary change in food norms. It happened as part of a survival strategy. However, in Ethiopia, this kind of progressive change is hardly possible at least this time. At a different time in history, the country has experienced deadly drought and famine which cost the lives of millions. However, none of these has caused a revolutionary change in the mainstream food habits. The changes are all gradual.

In fact, it is noticed that goats, sheep, chickens, cows or bulls, and fish (no other seafood) are the main socially recognized animals for meat in the mainstream food culture, although the country is a home to more than 2800 animal species.⁽¹⁹⁾ Plant species are also exposed to similar food restrictions mostly due to misconceptions and stereotypes in food preferences. “If optimally utilized, banned or less preferred animal and plant species could have contributed immensely for the overall food security status of the country,” said the economist key informant.

VI. Discussions and Conclusions

6.1 Discussions

The ultimate aim of this thesis is investigating the impacts of FTP on Ethiopian food security. By definition, food taboos and preferences prohibit and/or limit the consumption and production of certain food items, as they are defined by a society.⁽⁵⁾ Especially, when the motives behind the restriction are non-scientific, they can cause adverse consequences on food security.^{(1), (9)} In this regard, the findings obtained in this thesis are neither different nor contradictory from some preexisting study findings. Instead it further substantiates it. Among others, food taboos and preferences have caused the underutilization of easily available food resources in Ethiopia.

Also, according to the research participants, FTP restrains not only socially banned foods but also publicly approved and highly demanded food. Meat is an example of this. Ethiopia is among the countries that consume the least meat and dairy products.^{(12), (22)} The average meat consumption of an Ethio-

pian adult is 7.4 kg per year which is half of the Sub-Saharan African average, namely 14 kg per year.⁽¹⁵⁾ Fasting is the most commonly cited justification for the under-consumption and production of meat and dairy products in Ethiopia.^{(12), (22), (23)} However, in this study, other religiously and culturally defined food taboos and beliefs are found equally as important as fasting. It is noticed that meat consumption is extremely valued in the country yet restrained by the existing food norms in different forms. Meat consumption is associated with cultural and religious rituals.⁽¹¹⁾ As the sociologist key informant described it, in Ethiopia, meat consumption is defined in a way that people do not easily access, afford, and utilize it. This restriction is expressed throughout all stages of the supply chain and strongly affects meat availability, access, utilization and stability.

Consecration of animals is a long-standing sacred tradition in Christian, Muslim, and Jewish societies. Today, it remains a common practice in Ethiopia.⁽¹²⁾ As revealed in the findings section, any socially recognized meat is automatically defined taboo unless sanctified in accordance with on the religious tradition. Out of fear to transgress their religious commandments, the vast majorities of Ethiopian Christians and Muslims neither share meat with each other nor do they feel comfortable to buy it from supermarkets.^{(11), (12)} Hence, animals are often consecrated in the household, either privately or in a group. Mostly, the consecration happens without animals passing through the necessary health and quality check from the concerned authority, especially in the countryside.

Some research participants expressed concerns about the health and economic implications of animal consecration at home. In their opinion, the practice impedes the expansion of supermarkets and food groceries in the country. In turn, this alienates people from access to product labels, quality checks, and price and choice advantages. Most food items in supermarkets have labels that give information about the expiry date, quality checks, utilization instructions, promotions, and nutritional contents.^{(53), (54)} Besides, as stated by the Ethiopian diaspora key informant, the day-to-day exposure to this kind of information can gradually enhance customers' awareness of varied nutrition. He also stated that all the information on food labels are essential components for a healthy diet, yet largely absent in Ethiopia. Moreover, supermarkets offer meat in different forms, sizes, and price categories. Nonetheless, the existing traditions have kept most Ethiopians away from these advantages.

According to multiple published scholarly studies, fasting among Ethiopian OC adversely affects the consumption and production of non-vegan foods. Comparing these findings with the results of this thesis, no basic inconsistencies are observed. However, additional to the previous studies, in this study a spillover effect is observed on the production and consumption of non-fasting foods and drinks, particularly on alcohol consumption. As justified by the sociologist key informant, this is because of the positive correlation between the

consumption of meat and people's desire for alcoholic drinks in the country. Nonetheless, whether this correlation is significant or not demands further quantitative inquiry. Moreover, during OC fasting days, supply shortage and an increase in the price of vegan foods are mentioned by the research participants. This finding is also supported by the microeconomics consumer theory on substitute goods. Vegan foods are a substitute for meat and dairy products. OC fasting causes the OCs and some non-OCs diet shift from meat and foods of animal origin to complete vegan foods.^{(23), (24)} This increases the demand for vegan foods with probable supply shortage and price increment.

The impact of restricted food habits on food sector investment is discussed by three of the research participants from economics, sociology, and development backgrounds. Their outlook for the different forms of food prohibition is that they will further decrease food consumption and overall business transactions in Ethiopia. This might have a discouraging effect on the country's attempt of attracting local and foreign investors in the entire food sector. After all, investment decisions are made based on feasibility study results which take into account all possible profit opportunities and potential costs.⁽⁵⁵⁾ The observation that investment in the food sector is less profitable than in other sectors⁽⁵⁶⁾ partly underpins the conferred result.

The joint report of the World Food Program and the Central Statistics Agency of Ethiopia⁽¹⁵⁾ shows that, in 2016, around 54 percent of Ethiopian households used to consume at most four different types of food per week. In the same document, poverty is cited as the main probable reason for the poor figure. However, the evidence obtained in this thesis does not fully support this suggested reason. The evidence also argues against other study findings that exclusively reduce the weakly diversified food intake of Ethiopians into poverty or income limitations. Food diversification is not the main distinction between the rich and poor Ethiopians, according to the interviewees. Rather, an increase in income is more associated with regular meat consumption than with dietary diversification. This observation finding demonstrates that existing food habits are probably equally as important as income constraints for limited diet diversification, which directly affects the food utilization components of food security.

The Ethiopian rich-poor food preferences have a distinctive feature. As shown in the findings, the rich eat meat and high protein content food while the poor consume varieties of grains, cereals, pulses, and some vegetables and fruits. This finding is also supported by literature sources. The poor Ethiopians' easy access to organic vegan food is neither the influence of science nor a healthy lifestyle choice. Instead, it results from the circumstances of small-scale subsistence farmers who have limited access to modern agricultural inputs and inorganic products. As substantiated by multiple sources,^{(57), (58)} fertilizer and pesticide consumption in Ethiopia are below the internationally recommended standard. Nonetheless, both the poor and the rich are not properly taking advantage of the low price of healthy vegan food. The average consumption of fruits and vegetables per person per year in the country is 3.5 kg and 61 kg respectively, which is below WHO's minimal consumption recommendation threshold.⁽¹⁵⁾

Research participants have conferred that palatability, avail-

⁽⁵³⁾ Hawkes (2010)

⁽⁵⁴⁾ WHO (2004)

⁽⁵⁵⁾ Ndyetabula & Hella (2017)

⁽⁵⁶⁾ Jian and Rehman (2016)

ability, and income are the main determinants for people's daily food preferences. Health impact or nutritional content are hardly considered, even among educated-higher class Ethiopians. This is explained by the deep-rooted life-long socialization regarding food preferences. This result of the thesis seems contradictory to the common understanding of the positive correlation between educational status and a healthy diet.⁽⁵⁹⁾ However, diet change is one of the most challenging tasks for both professionals and the general public.⁽⁶⁰⁾

6.2 Conclusions

Based on the data collected from the key informants, this thesis investigated how the prevailing culturally and religiously based FTP adversely impact the food security of Ethiopia. Accordingly, it is revealed that some animal and plant species that are edible in many other countries are proscribed and less preferred in Ethiopia, at least by socio-cultural norms. If these edible species were considered, the neglected plants and animals could contribute in mitigating the chronic food insecurity challenge in the country. Besides, parts of the socially approved foods are provisionally banned for fasting and expectations of fitting to the religious and secular normative standards. These provisional bans are hampering the free production and consumption patterns of even renowned foods.

It is also observed that during OCs and Muslims' fasting days, the entire food supply chain undergoes economic turbulence. This economic challenge occurs predominantly during OC fasting days as it leads to (1) a drop in consumption and supply of non-vegan foods, (2) the provisional closure of butcher and dairy shops, (3) an increase in the demand and price of vegan foods, and (4) an overall reduction in consumption and economic transactions, predominantly in the OC dominated areas of the country. Moreover, the tradition of animal consecration at home has made many Ethiopians independent of supermarkets, groceries, and other licensed meat shops. In turn, this impedes the country's endeavor of attracting local and foreign private investors in the entire food sector, impacting food stability. It also alienates people from food labels, meat quality checks, price, size, utilization instruction, and choice advantages, all of which are essential for better, adaptive, and stable food utilization.

Despite these challenges, the adverse impacts of FTP on food security are often turned invisible, taken-for-granted, and overlooked by the concerned authorities, including policy experts. However, systematic consideration of the subject in policy cycles aiming to end food insecurity would provide the country with additional strength in the fight against food insecurity.

⁽⁵⁷⁾ Endale (2011)

⁽⁵⁸⁾ Bachewe, Berhane, Minten, and Taffesse (2018)

⁽⁵⁹⁾ Li and Powdthavee (2014)

⁽⁶⁰⁾ O'Riordan and Stoll-kleemann (2015)

Acknowledgment

This work would not have been feasible without the guidance and constructive feedbacks of **Prof. dr. ir. Marijke D'Haese**, **Mr. Chinedu Ob**, **Mrs. Fatemeh Taheri**, and **Miss Sofie Devos**. Hence, I would like to thank you all for your indispensable professional contribution.

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CHANGES IN LEGAL REGULATIONS AS A WAY OF IMPROVING WATER MANAGEMENT IN POLAND

ZMENY V PRÁVNEJ ÚPRAVE AKO SPÔSOB ZLEPŠENIA VODNÉHO MANAŽMENTU V POĽSKU

Edward PIERZGALSKI*

I. Introduction

There are very few places in the world where there are no problems with water. Most often we have three unfavorable and usually temporally and spatially variable situations: too little water, too much water and water resources unusable due to pollution. Of course, adapting water management to the needs of municipalities, industry and agriculture, especially in terms of climate change, is a long-term process that requires knowledge and education, investments, proper organization, financial resources and, above all, perfected legislative basis. Poland is one of the countries that urgently need to improve water management. Therefore, in 2017, the Polish Parliament passed a new law on water management, aimed, inter alia, adapting to European Union directives. New Water Act⁽¹⁾ introduced significant changes as compared to the previous ones⁽²⁾. The most important of them was the new system of water manage-

ment consisting in its centralization by establishing an administrative unit called the State Water Enterprise Polish Waters, responsible for all activities in the field of water management. Their competences include, among others, all matters related to finance, investment planning and implementation, maintenance of water facilities, issuing administrative decisions, including water permits. The Water Act entered into force on January 1, 2018 and has been so far amended several times. At the same time, in 2018 the Water Resources Department was transferred from the Ministry of Environment to the Ministry of Maritime Economy and Inland Navigation, and then in 2020 to the Ministry of Infrastructure. The common opinion was that these shifts had no substantive justification, but were of a personal and political nature. After more than three years of implementing the Water Act, questions arose about the purposefulness of the introduced legislative changes and their consequences. In view of the existing and forecasted hydrological extreme phenomena and the generally assessed condition of water management as bad, a multi-person group

⁽¹⁾ Water Act. 2017. Journal of Law (Dziennik Ustaw) No. 1566 Act 20 July 2017.

⁽²⁾ Pierzgalski (2018).

Abstract (EN)

The article presents 9 water alerts illustrating the state and problems of water management in Poland three years after the entry of the new Water Act into force on January 1, 2018. The alerts were developed by a group of experts critically assessing some of the introduced legislative changes. The alerts analyzed the main problems related to drought and flood protection as well as the specificity of water management in cities and rural areas. Postulates to improve the legal regulations in the field of water management and financing, its integration with spatial planning and educational needs in this regard were also presented. The content of 8 alerts is briefly discussed, and the problem of water-agriculture interaction is presented in more detail. The article indicates that legal regulations of water management are particularly difficult as they apply to the entire society, almost all economic sectors and the natural environment, and its preparation must be carried out with extreme care after many analyses and debates.

Keywords (EN)

water act, water management, Poland

Abstrakt (SK)

Príspevok sa zameriava na 9 varovaní o vode, ktoré ilustrujú stav a problémy vodného hospodárstva v Poľsku tri roky po nadobudnutí účinnosti nového vodného zákona z 1. januára 2018. Varovania vypracovala skupina odborníkov, ktorí kriticky hodnotili niektoré zo zavádzaných zmien. V rámci varovaní sa odborníci zameriavali na analýzu hlavných problémov týkajúcich sa sucha a ochrany pred povodňami, ako aj špecifickosti vodného hospodárstva v mestách a na vidieku. Prezentované boli aj požiadavky na zlepšenie právnych predpisov v oblasti vodného hospodárstva a financovania, integrácie s územným plánovaním a vzdelávacími potrebami. Príspevok obsahuje stručný obsah deviatich varovaní a podrobnejšie sa venuje problému interakcie vody a poľnohospodárstva. Výsledky analýzy naznačujú, že právne predpisy týkajúce sa vodného hospodárstva sú obzvlášť zložité, pretože sa uplatňujú na celú spoločnosť, na takmer všetky hospodárske odvetvia a prírodné prostredie, pričom ich príprava musí byť vykonaná s mimoriadnou opatrnosťou a na základe mnohých analýz a diskusií.

Kľúčové slová (SK)

vodný zákon, vodné hospodárstvo, Poľsko

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of experts⁽³⁾ developed documents in the form of nine water alerts, in which the existing state and the need to improve water management were assessed. All alerts are available on the website www.oees.pl/dobrzewiedziec. The title of each alert defines the issue. They were dedicated to following areas:

- Alert No.1 We are threatened by a great water crisis.
- Alert No.2 It is necessary to reduce floods and droughts.
- Alert No.3 Water in cities.
- Alert No.4 Water management in strategic documents promoting development.
- Alert No.5 Water and agriculture - a problem not only for farmers.
- Alert No.6 Water in spatial planning.
- Alert No.7 Education and training in the field of water management.
- Alert No.8 Integrated approach to water management.
- Alert No.9 Water management in Poland.

The most important problems presented in the above-mentioned alerts are below summarized briefly, whereas water-agriculture interaction issues (Alert No.5) are presented in more details.

II. The Problems Indicated in the Alerts

Alert No. 1. We are threatened by a great water crisis

The authors characterized the situation in Poland in terms of water resources, which are relatively small compared to other European countries. Their main feature is spatial and temporal variability. Annual rainfall amounts on average are about 620 mm, with the highest occurring in the mountains in southern Poland amounting to 800-1000 mm, and the lowest in the central part of the country varying between 400-500 mm. Catastrophic phenomena in the form of severe droughts, but also excess water, which result in floods in extreme situations, are becoming more and more frequent. The title of this alert is related to the modeling results of projected hydrological changes due to climate change. The results of this work indicate the possibility of the water conditions deteriorating mainly as a result of changes in the distribution of precipitation over time, an increase in air temperature and the water infrastructure inadequate to these changes. As a result of this process, problems with water supply to the population will increase, and the risk of floods, including flash floods in urbanized areas, will increase. It was emphasized that much more attention should be paid to increasing the possibility of water retention and its saving. The authors criticize the introduced legislative changes concerning water management. Alert No. 9 is devoted to this problem in more detail.

⁽³⁾ Co-authors of alerts: Kundzewicz, Z., Zaleski, J., Nachlik, E., Balcerowicz, M., Banasik, K., Błażejowski, R., Chudziński, P., Degórski, M., Dolny, J., Drzewiecki, S., Godyń, I., Hausner, J., Jania, J., Januchta-Szostak, A., Jokiel, P., Kochanek, K., Konieczny, R., Kozyra, J., Kutek, K., Licznar, P., Magnuszewski, A., Majewski, W., Nieznański, P., Okruszko, T., Ostrowski, K., Pierzgański, E., Piniewski, M., Przybylak, R., Ramm, K., Romanowicz, R., Rosiek, K., Wałęga, A., Wawer, R., Wiatkowski, M., Ziętara, P.

Alert No. 2. It is necessary to reduce floods and droughts

In Poland, as in many countries in Europe and the world, floods and droughts have occurred, are occurring and will continue to occur. These are natural and random phenomena, and their range, intensity and natural, economic and social effects are largely influenced by anthropogenic activities. The title of alert 2 indicates that despite significant progress in the protection against floods and droughts, the threat and the magnitude of the effects of these events do not decrease, but even increase. The air temperature rises, the distribution and intensity of rainfall changes. These are symptoms of climate change. The forecast scenarios of climate change indicate a further deepening of the currently observed trends. Droughts that used to occur in Poland every 5 years now occur every two years. The frequency of floods is changing in a similar way, including more and more often the so-called flash floods. The material effects of droughts and floods amount to approximately 0.4% of GDP each year, and even up to 1% of GDP every five years. The alert made a critical review of the methods and tools used to reduce the effects of drought and reduce the risk of flooding. Very high educational, investment and financial needs were indicated in order to improve the situation. It was found that the central management of water management introduced by the new Water Law also has disadvantages consisting in the lack of a cooperation network between central, regional and local entities. Some of the changes made by the Water Law did not work, and instead of improvements, they even caused deterioration. The need for legislative changes is evidenced by the adoption of several dozen changes in the provisions of the Water Act in the last three years. Moreover, the alert calls for the introduction of monitoring of the implementation of legal acts. It is also necessary to pass the EU Drought Directive, similar to the EU Floods Directive.

Alert No. 3. Water in cities

The water problems of cities include all generally known water problems, i.e. water shortage, surplus in the form of flooding and flooding, and water pollution. However, these problems in cities are different from those in non-urban areas. Their specificity lies in the necessary activities of large water supply and sewerage projects, spatial planning adapted to the needs of the population, management of rainwater flowing from large sealed areas. An important role in running good water management in cities is played by its financing, usually from the city budget, residents' fees and national and European Union aid programs. The alert indicated that the main actions in cities influencing water management are the reduction of green areas, including wooded areas, the development of buildings limiting the infiltration of water into groundwater, increasing water demand, and the use of drinking water for other purposes.

Many outdated storm water and combined sewage systems are leaky and fail-safe, and in many cases, with changed weather conditions, they are not able to drain water, e.g. from torrential rains. The regulations introduced in the new Water Act concerning fees for water services were critically assessed, and their implementation as excessively bureaucratic and imprecise, which leads to any interpretation. At the end of the alert, a number of postulates leading to the improvement of water management in cities were listed, including: development and

implementation of an integrated water management strategy, integration of spatial planning with water management and integration of flood risk management with spatial planning and rainfall management.

Alert No. 4. Water management in strategic documents promoting development

Matters related to water management are taken up in various strategies, both governmental and in many development strategies of voivodships, cities and sectoral strategies. Water-only strategies developed in the past were basically forced by crisis situations. The matters related to the economy are taken up in various governmental strategies as well as in many voivodship and city development strategies and sectoral strategies. Water-only strategies developed in the past were basically forced by crisis situations. These include, for example, government programs: “Program for the Odra 2006”, adopted after a large flood in the Odra catchment in 1997, and implemented in the period 2001 – 2014, “Program for protection against flooding in the upper Vistula basin” approved after the flood in 2010 in The upper Vistula catchment area, implemented also in the same years, and also the National Program of Municipal Sewage Treatment, imposed by European Union directives, which has been implemented since 2005 until now. An autonomous water management development strategy has not been developed. The alert emphasizes the large dispersion of water issues in various development documents. An attempt to respond to the currently worsening situation are projects adopted by Polish Waters, such as the Drought Effects Counteracting Program. The alert stated that “at the level of strategic documents, the water management situation did not find and still does not find its proper place. The alert emphasizes the positive role in shaping sustainable water management played by European Union directives, in particular the Water Framework Directive, the Floods Directive, the Nitrates Directive and others, which force the creation of planning documents and their implementation. The summary highlights the urgent need to develop and adopt a National Water Management Strategy integrating all water management projects.

Alert No. 6. Water in spatial planning

Final conclusions of alert no. 3 “it is necessary to integrate spatial planning with water management, as well as the integration of flood risk management with spatial planning” were developed in alert no. 6. The analysis of documents determining the cooperation between the two institutions showed that the matter is complicated. It was found that “lack of vision and good legislation” hampers or even prevents good cooperation between water and spatial planning authorities. As an example, the control of floodplain management, which is dealt with by water management institutions in an authoritarian manner, without dialogue with municipalities establishing local law, and which cover the costs of their consequences. The alert indicates a few examples of problems requiring close cooperation. These include the issuing of building permits in areas at risk of flooding, projects aimed at increasing water retention, protection of green areas and biologically active surfaces, etc. The alert authors call for an urgent review and improvement of existing legal acts.

Alert No. 7. Education and training in the field of water management

The decade 2018–2028 under the name of “Water for sustainable development” was established by the United Nations in order to increase public awareness of the need for rational management of water resources. Lack of sufficient knowledge may affect ad hoc decisions, the effects of which in the long term may turn out to be negative. Research conducted in Poland in 2018 on environmental awareness, including water management, showed that it is relatively good for over 40% of Poles, but only 10% of respondents took action to reduce climate extremes, and participation in training on water management efficiency was indicated the least frequently. This indicates the need to fill the educational gaps in this regard, at all levels of education: from kindergarten through primary, secondary and higher education. Only good current knowledge can be the basis for actively supporting or criticizing planned water-related projects through various types of public consultations. The alert presents the following activities that are the basis for the preparation of individual social groups as partners for substantive participation in sustainable water management: access to information, access to guides and good practices, training and workshops, support for education of school children and youth, acquiring knowledge through action. A large part of the alert was devoted to education at the university level in the field of water issues, proposing, among other things, the creation of the field of study “Integrated water management”, which in addition to theoretical training should include laboratory classes, design and professional practices.

Alert No. 8. Integrated approach to water management

Integrated Water Resources Management doesn't contain a catalog of practical solutions to be used in all catchments of the world, but indicates the objectives of using integrated water management on a river basin scale, including both quantitative aspects of all waters (rainfall, surface and groundwater), as well as functional aspects, that is, “ensuring economic productivity, social justice and environmental sustainability”. Due to the fact that water is important for the supply of people, for each type of economic activity and the natural environment, the implementation of an ideal integrated management of water resources is very difficult, as it may cause conflicts, violating the interests of various social groups. The alert critically assessed the state of implementation of integrated water management in Poland, listing the administrative and industry sectoral character as factors largely responsible for such a state and significantly dispersed in water management. Water management in agricultural, forest and urban areas as well as water and water-sewage management in urban areas were analyzed. The specificity of problems in the above-mentioned areas and examples of conflicting goals of various institutions were presented. The problems of integrating the tasks of water management at the national and regional levels were also analyzed. A big problem at these levels is still the lack of an integrated approach to protection against floods and droughts and navigability on the main rivers in the country (Vistula and Odra) and their basins. The most urgent measures to improve the current situation include: development of standards for the assessment of the effects of implementation of measures

under plans and projects, implementation of multi-thematic research and studies on the catchment scale constituting the basis of masterplans, development of rules for the practical implementation of an integrated approach in water management in the form of guides and good practices, development of requirements and rules for respecting limitations resulting from flood risk, retention projects and others in local spatial development plans.

Alert No. 9. Water management in Poland

The alert describes the current institutional system of water management introduced in the Water Act of 2017. Its characteristic feature is strong centralization through the establishment of a new institution, the State Water Enterprise Polish Waters, responsible for all matters of water management and armed with strong administrative powers, i.e. public authority, but also having an ownership function for public waters. The authors of the alert stated that “The connection in the centralized organization of Polish Waters to the competences of the water user and the public authority issuing administrative decisions to other water users is a dubious solution in the context of impartiality and disinterestedness. The solutions to the water law currently in force in the matter of ensuring a two-instance appeal process against administrative decisions issued by Polish Waters, guaranteed by the Constitution of the Republic of Poland, raise serious doubts.” They also postulate that the current model of water management should be decentralized, including the transfer of some of its competences by Polish Waters to the local authorities, i.e. from the central level to lower management levels. It was also deemed necessary to introduce changes to the adopted system of financing water management, including the system of fees for water services, in particular.

III. Water and Agriculture – the Problem Not Only for Farmers

Sources of water

The surface water resources in Poland are small compared to other European countries. Average outflow per year per capita amounts to approx. 1600 m³ and is one of the lowest in Europe. Precipitation, which is the primary renewable source of water resources, is characterized by high spatial and temporal variability. It is the main cause of flood hazards and droughts. Most (about 70%) of abstracted surface and groundwater is used in agriculture worldwide. In Poland, the proportions of water used are different. About 70% is used by industry, 20% is municipal needs, and only 10% of the water taken is for filling fish ponds and a small amount for irrigation⁽⁴⁾. This means that currently crop production depends on precipitation. However, the progressive climate change and the related forecast increase in rainfall irregularities will translate into an increase in the frequency and intensity of threats related to excess and shortage of water. Modern agriculture is expected to intensify agricultural production and its stable level, for which optimal

moisture conditions are a prerequisite. In the near future, irrigation of crops will become more and more important and agriculture will become the main user of water. Then the key problem will be the availability of water sources of appropriate quality and, of course, its price. It should be emphasized that the consequences of agriculture’s water problems concern not only this sector, but every citizen buying food. Improving the quantitative status of water resources requires projects to increase the retention capacity of the catchment area by slowing down the outflow of rainwater and meltwater, as well as storing water in periods of its excess and using it in periods of drought. Such activities include the construction of small water reservoirs, slowing down the outflow of water in natural watercourses, canals and ditches with the use of damming structures, regulating the outflow of water from drainage systems, the use of agrotechnical treatments increasing the infiltration capacity and retention properties of soils, retaining rainwater on the farm.

Water infrastructure

Water infrastructure drainage, drainage-irrigation and irrigation systems are the basic elements of infrastructure used to shape water resources and their use in agriculture and rural areas. They can perform productive functions (regulating water relations in the soil), they can be used to increase water resources (channel retention), as well as for protection against flooding, delaying the runoff of water masses to rivers. Their non-production function, including environmental protection and reduction of greenhouse gas emissions from the decomposition of dried soil humus, is becoming more and more important. The technical and functional condition of melioration devices is currently very bad, as most of them were made 50-70 years ago, and the organizational and financial system did not ensure proper maintenance and operation of the devices. Most of the drainage systems should be modernized in order to improve their functioning and adapt them to perform not only drainage and irrigation functions, but also other functions, including non-production ones. Reducing the risk of flooding and drought, protecting the environment, and reducing greenhouse gas emissions benefit society as a whole.

Financing

The current level of financing of water infrastructure does not ensure proper water management in agriculture, including the maintenance of water facilities in good condition. For the efficient and rational use of water infrastructure, a stable, multi-level financing system is needed, based both on private and public funds. The basic component of this system should be a water drainage fund, e.g. at the disposal of Polish Waters as a supervising and coordinating entity, supported with funds from European funds and a special-purpose subsidy from the state budget. In order to create systemic, rational conditions for financing and carrying out the reconstruction and development of the catchment retention potential, a statutory obligation should be introduced to develop a plan for the maintenance of drainage devices and to supervise its implementation. A number of other changes to the financing of agricultural water management should also be considered. For example, it would be advisable to introduce systemic compensation for

⁽⁴⁾ Bagiński, Balcerowicz, Pierzgałski, Popek (2021).

farmers for activities that bring production losses, but are profitable for the state budget as a result of reducing flood losses. An example of such action may be the use of a regulated outflow from drainage devices in order to delay the inflow of water masses to rivers and reduce the volume of the flood wave. Also, increasing the organic carbon content of soils should be an important goal perceived by the authority, deserving financial incentives.

Legislative regulation

The existing legal regulations in the field of water resources management in agriculture and in rural areas do not fully meet the challenges resulting from the water management reform, as well as from the anticipated climate changes. There is still a lack of adequate regulations ensuring integrated water management in agriculture, including systemic, rational conditions for conducting such an economy. One of the significant changes concerning agriculture was the abolition of the division into basic and specific drainage facilities existing in the previous Water Act of 2001. Basic devices were financed from the state budget, and specific by land owners who “benefit from melioration devices”, with the support of public funds with their partial return in the form of the so-called drainage fee. The introduced change may have negative effects, because the drainage systems, in order to properly fulfill their functions, must have the possibility of draining or supplying water. For this purpose, in Poland, mainly watercourses and canals, which were previously classified as basic melioration, are used. According to the current Water Act, the regulations concerning the regulation and maintenance of rivers do not take into account their key role in the functioning of drainage systems. The specificity of the drainage and supply of water for agriculture is basically omitted. Knowing the difficulties solved by the 2018 reform of the Voivodship Melioration and Water Facilities Boards with obtaining funds for basic melioration devices and the maintenance of watercourses important for agriculture, it can be expected that the state of insufficient financing of these facilities will continue after the reform.

IV. Conclusions

The entry into force of the Water Act on January 1, 2018 brought all waters under one authority. At the same time, this regulation changed the management system of waters essential for agriculture. Institutions financing, supervising and administering drainage systems, small rivers and most of the flood

protection devices were liquidated. The Water Law Act 2018 introduced many systemic changes in water management in Poland, however, they do not fully ensure the operational use of state policy instruments in the field of water management for the needs of agriculture and rural areas, including in particular the construction and maintenance of drainage facilities. The necessary actions that should be taken to improve the current state of water management in rural areas, and legal provisions to facilitate and stimulate them, include:

- reconstruction and modernization of water infrastructure,
- development of irrigation systems with high water use efficiency,
- increasing the retention capacity in terms of the catchment area,
- care for soils and their retention properties,
- protection and revitalization of the spatial order that is friendly to water efficient management,
- modernization and adaptation of agricultural practices for farming in conditions of limited water resources,
- social education and consulting in the field of solidarity and efficient use of water resources.

The experience from improving the legislative regulations so far show that they undoubtedly lead to the improvement of water management in agriculture.

Observing the frequent new concepts of water management, emerging with new political authorities, the aspect of making the national economy independent from the impact of these current changes should be considered.

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QUALITY SOIL AND HEALTHY FOOD IN THE JEAN MONNET PROJECT

KVALITA PŮDY A ZDRAVÉ POTRAVINY V PROJEKTOCH JEAN MONNET

Zuzana Bohátová - Lucia Palšová - Norbert Floriš*

I. Introduction

Soil is one of the most important natural resources that provide us with vital goods and services to sustain life. It serves as a platform for human activities, landscape and heritage, and acts as a provider of raw materials⁽¹⁾. Soil plays a central role in food safety as it determines the possible composition of food and feed at the root of the food chain⁽²⁾.

Numerous studies have shown that heavy metals in soil can accumulate in tissues, subsequently affect organ functions, and disrupt the reproductive, nervous or endocrine system. In general, heavy metal compounds are toxic, mutagenic, teratogenic, and carcinogenic in animals. They enter the body through ingestion, inhalation, or through the skin, and their presence can cause serious toxicity. Therefore, the health status in relation to xenobiotics should be monitored and explored. Soil contamination effected by the environmental pollution is one of the most pressing issues in the political and expertise debate on food safety within the related EU policies as Common agricultural policy, EU agri-environmental, EU food policy and EU health policy.

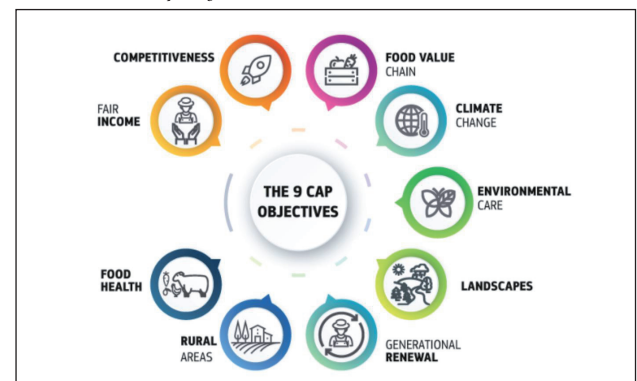
Food policy has to fulfil a range of objectives. It must provide

⁽¹⁾ European Commission, 2018

⁽²⁾ Toth, G. at all, 2016

food of good nutritional quality and promote diets that support good health. It has to achieve food security, it must be environmentally sustainable, it should ensure that animals are farmed to high welfare standards. Food policy needs to take an integrated approach, ensuring that one objective is not achieved at the expense of another.

For the period 2021 - 27, the European Commission proposes that the Common Agricultural policy (CAP) will be built around nine key objectives.



Source: European Commission: Key policy objectives of the future CAP

Abstract (EN)

Soil quality issues, together with issues related to healthy food, are becoming key areas of interest at the European level. Both spheres play an important role in the formulation of EU policies such as the EU Common Agricultural Policy, EU Agri-environmental Policy, EU Food Policy but also EU Health Policy. For this reason, deepening knowledge and exchanging experiences in these areas seem to be necessary preconditions for finding ways to respond to current challenges and problems. The project "Quality Soil as a Pathway to Healthy Food in the EU", acronym FOODIE, also reacts on the mentioned issues. The main aim of the project is to foster an expertise dialogue between the crucial experts (academics, public authorities, professionals from practice) in the field of food/feed management in the EU affecting the achieving the objectives of correlated EU policies and recently adopted European Green Deal.

The presented paper is of a disseminating nature and aims to acquaint the reader with the mentioned project.

Keywords (EN)

soil, healthy food, Jean Monnet projects

Abstrakt (SK)

Problematika kvality pôdy spolu s otázkami ohľadne zdravých potravín sa v súčasnosti stávajú kľúčovými sférami záujmu na európskej úrovni. Obe oblasti majú dôležité postavenie pri formulácii politík ako napr. Spoločná poľnohospodárska politika EÚ, agro-environmentálna politika EÚ, potravinová politika EÚ ale aj politika zdravia EÚ. Z tohto dôvodu sa prehlbovanie poznatkov a výmena skúseností v týchto sférach zdá byť nevyhnutným predpokladom pri hľadaní spôsobov ako reagovať na súčasné výzvy a problémy. Na spomínanú problematiku reaguje aj projekt "Quality Soil as a Pathway to Healthy Food in the EU", akronym FOODIE, ktorého hlavným cieľom je podporiť odborný dialóg medzi relevantnými odborníkmi (akademikmi, verejnými orgánmi, odborníkmi z praxe) v oblasti manažmentu potravín/krmív v EÚ, ktorý prispeje k dosahovaniu cieľov súvisiacich politík EÚ a nedávno prijatej Európskej zelenej dohody. Predkladaný článok je disemináčného charakteru a kladie si za cieľ oboznámiť čitateľa so spomínaným projektom.

Kľúčové slová (SK)

pôda, zdravé potraviny, projekty Jean Monnet

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Also, the Institute for European Environmental Policy⁽³⁾ defined five recommendations for shaping Europe's research mission on Soil Health and Food to achieve healthy and sustainable soils:

1. define a clear policy objective related to the major challenge of climate and environment,
2. develop concrete solutions to address hotspot issues in Europe,
3. effectively engage stakeholders and the public,
4. open international cooperation,
5. explore the soil microbiome.

European and international environmental documents strongly encourage EU Member States to set up actions to maintenance and protect food and feed (ESFA) based on the environmental justice and sustainable principles. Adopted EU documents: "The New Consensus on Development, Our World Our Dignity, Our Future", and "European Green Deal" have a political and legal potential for possible changes in the field. The realization of the possible legal measures in order to protect agricultural land requires in some cases to eliminate several obstacles, especially the constitutional obstacles caused by the rigid protection of the ownership right, the international legal obstacles caused by the law of European Union and the absence of any general strategies⁽⁴⁾.

II. Project Description

As a response to recommendations of the European Commission, Institute for European Environmental Policy and other authorities, the Faculty of European Studies and Regional Development and the Faculty of Biotechnology and Food Sciences of the Slovak University of Agriculture in Nitra prepared and submitted a common project "Quality Soil as a Pathway to Healthy Food in the EU", acronym FOODIE. The project was submitted under the Erasmus+ Jean Monnet program and it was approved in summer 2020, decision number 621119, project number 621119-EPP-1-2020-1-SK-EPPJMO-PROJECT. Project activities started in September 2020 and they will finish in August 2021.

The project arises from the need to contribute to food safety, quality control and/or effects of risk factors of food chain on animal and human health status. Therefore, the main aim of the project is to foster an expertise dialogue between the crucial experts (academics, public authorities, professionals from practice) in the field of food/feed management in the EU affecting the achieving the objectives of correlated EU policies and recently adopted European Green Deal.

Specific objectives of the project are:

- to promote discussion about sustainability of the food quality a safety in the EU;
- to boost knowledge about the risk factors affecting soil contamination and food quality;
- to discuss and propose effective actions to enable sustainable agriculture and food safety in the EU.

The main objective will be achieved through following activities:

- expertise discussing of experts at different levels of competences in the field of food/feed management;
- encouraging the professional cooperation between experts within the field;
- gathering and exchanging the knowledge and expertise among involved experts;
- providing information about the food/feed quality, risk factors of food chain and risk assessment to all target groups.

Cross-fertilization and spread content idea of the project is evident in the content of the proposed activities, while respecting multidisciplinary approach (political, legal, socio-economic, agro-technical and medical) to the issues addressed. Discussion about the EU risk factors of food chain will be led in mutual synergy of experts at different levels of competence (academics, public authorities, and professionals from practice) what may contribute to the further actions within the environmental, food and health policies.

In the frame of the project a webpage has been created (www.foodie.uniag.sk). This webpage contains all relevant information about the project, its activities and news from EU Policies. Staff involved in the project will prepare with collaborating institutions from the Netherlands, Germany, Italy, Czech Republic, Poland, Hungary, Bulgaria and Croatia a video presentation about Risk Factors Affecting Animal and Human Health in each of above-mentioned countries. These institutions will also cooperate on the report "Risk Factors of Food Chain in the EU - Perspectives" and researchers from involved countries will meet and present result of their research at an international scientific conference organized within the frame of this project. As a result, a conference proceeding will be published and new innovative approaches will be discussed and recommended by conference participants to local, regional, national and EU authorities.

Outcomes of the project will be:

- reinforced mutual cooperation among experts within the field;
- improved state-of-the-art knowledge in the field that will be used in teaching and further research and/or project activities of educational and research institutions in the EU;
- enhanced governance of food/feed production in the EU member states and subsequently in the EU;
- enforced EU and national policies and legislation correlated to the field (agriculture, environment, food and health).

Expected impacts of the project are: sustaining the food quality and safety in the context of the correlated EU policies; contribution to development of assessment of risk factors of food chain aspects in the EU; harmonization of political tools and implementation measures related to risk factors of food chain in the EU and increasing awareness of the impact of risk factors of food chain (as well as processing risks) on the animal as well human health status.

⁽³⁾ Hiller, Hulot, Kollenda, 2019

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With the support of the
Erasmus+ Programme
of the European Union



EVALUATION OF SELECTED INDICATORS POINTING AT THE CURRENT CONDITION AND IMPORTANCE OF AGRICULTURAL LAND PROTECTION IN SLOVAKIA

HODNOTENIE VYBRANÝCH UKAZOVATEĽOV POUKAZUJÚCICH NA SÚČASNÝ STAV A DÔLEŽITOSŤ OCHRANY POĽNOHOSPODÁRSKEJ PÔDY NA SLOVENSKU

Zina MACHNIČOVÁ*

I. Introduction

Soil as one of the basic components of the environment is also a necessary condition for ensuring the quality of life requirements of individuals, but also society. The issue of its protection is dealt by several scientists, authors but also by the institutions of the European Union or the representatives of the government in Slovakia themselves⁽¹⁾. From the perspective of the European Commission, soil has generally been defined as the top layer of the earth's crust made up of minerals, organic matter or living organisms⁽²⁾. Many authors agree that

important factors in characterizing the soil are the functions it performs:

- ecological functions: the soil protects the environment from contamination of groundwater and the food chain precisely by its filtration, buffering and transformation capacities. It also represents a gene reservation or so-called biodiversity base with more organisms than other terrestrial habitats. Last but not least, it produces biomass, food, renewable energy and other components necessary for the existence of life as such;
- non-ecological functions: soil represents the basis for all human activities (housing, industry, waste storage, etc.) and is also a source of raw materials needed for economic

⁽¹⁾ Palšová, 2020

⁽²⁾ European Commission, 2016

Abstract (EN)

Agricultural land is currently protected by many subjects and institutions. The characteristics of the soil in terms of its functions and importance for individuals or society from perspectives of several scientific disciplines is dealt with by several authors. The aim of the paper is to point out the current state and importance of the agricultural land protection in Slovakia in connection with the threats that affect its quantity and overall quality. The indicators as the area of agricultural land and the structure of the land fund, the evolution of agricultural land withdrawals for non-agricultural purposes and the current state or structure of legislation and institutions in the field of agricultural land protection in Slovakia were evaluated. The paper pointed out the important role of agricultural land in the country, as its area, especially with the majority of arable land and permanent grasslands, represents the majority of the total area of Slovakia. For several years, however, the volume of agricultural land has been steadily declining. This phenomenon is partly caused by the agricultural land withdrawals, which have now managed to stabilize at an average of 1000ha of withdrawn land per year. In Slovakia, there is currently a large number of legislative acts regulating the protection and agricultural land withdrawals, as well as a wide range of state and non-state institutions that operate in the field of agricultural land protection. The effectiveness of the implementation of legislation and the effectiveness of mutual cooperation of institutions seems questionable focusing on the current state of the land fund, which leads to the need to expand research on these aspects.

Abstrakt (SK)

Poľnohospodárska pôda je v súčasnosti predmetom ochrany mnohých inštitúcií. Charakteristikou pôdy z hľadiska jej funkcií a dôležitosti pre jednotlivcov aj spoločnosť sa z hľadiska pohľadov viacerých vedných disciplín zaoberajú viacerí autori. Cieľom príspevku je poukázať na súčasný stav a dôležitosť ochrany poľnohospodárskej pôdy na Slovensku v súvislosti s hrozbami, ktoré ovplyvňujú jej objem a celkovú kvalitu. Hodnotenými ukazovateľmi boli najmä výmera poľnohospodárskej pôdy a štruktúra pôdneho fondu, vývoj záberov poľnohospodárskej pôdy na nepoľnohospodárske účely a súčasný stav a štruktúra legislatívnej úpravy či inštitúcií na úseku ochrany poľnohospodárskej pôdy na Slovensku. Príspevok tak poukázal na významnú úlohu poľnohospodárskej pôdy v krajine, nakoľko jej výmera najmä v zastúpení ornej pôdy a trvalých trávnatých porastov predstavuje väčšinu celkovej plochy Slovenska. Už niekoľko rokov však objem poľnohospodárskej pôdy nepretržite klesá. Tento jav je čiastočne zapríčinený aj zábermi poľnohospodárskej pôdy, ktoré sa síce v súčasnosti podarilo stabilizovať na úrovni v priemere 1000ha vyňatej pôdy za rok. Na Slovensku v súčasnosti existuje pomerne veľké množstvo legislatívnych aktov, ktorými je ochrana a samotné zábery poľnohospodárskej pôdy upravená a tiež široká škála štátnych i neštátnych inštitúcií, ktoré na úseku ochrany poľnohospodárskej pôdy pôsobia. Efektívnosť výkonu legislatívy a efektívnosť vzájomnej spolupráce inštitúcií sú však vzhľadom na súčasný stav pôdneho fondu otáznе, čo vedie k potrebe rozšírenia výskumu v oblasti týchto aspektov.

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development (minerals, clay, sand, gravel, etc.). It also represents a cultural and geogenic heritage for the country (3), (4), (5), (6), (7).

Agricultural land in Slovakia was defined by Act No. 220/2004 Coll. on the protection and use of agricultural land and amending certain laws such as “*productively potential land registered in the real estate cadastre such as arable land, hops, vineyards, orchards, gardens and permanent grassland*”.⁽⁸⁾

However, the views and approaches of individual subjects on agricultural land are different. While by ecologists it is considered as irreplaceable natural resource, partly independent of human, which at the same time cannot represent a tradable commodity, from the point of view of scientific disciplines such as economy, soil is a common tradable commodity available on the market. For environmentalists it is an initiative to protect it⁽⁹⁾.

Currently, EU countries, including Slovakia, are struggling with the problem of agricultural land degradation, mainly due to human activity⁽¹⁰⁾. Therefore, the European Commission has identified several areas of agricultural land protection in relation to the biggest threats affecting its quality (erosion, contamination, loss of organic matter, loss of biodiversity, compaction, salinisation, landslides and impermeable land cover)⁽²⁾.

In Slovakia, in the field of agricultural soil protection, we recognize mainly legislative (standards), economic (pollution charges, financial support, etc.) and voluntary (environmental education, soil protection strategies, etc.) instruments⁽¹¹⁾.

Aware of the threat associated with agricultural land decline, the European Parliament has identified the determining factors in the emergence of this problem in the EU, which are mostly huge agricultural land withdrawals for non-agricultural purposes, mostly caused by the complicated land ownership, cheap acquisition price of agricultural land, and malfunctioning legislation or institutional system of executive institutions⁽¹²⁾. As land becomes a commercial medium and a motivation for political problems, economic and power gains and self-realization, the institutional system often fails, and land management becomes one of the most corrupt sectors of public administration⁽¹³⁾.

⁽³⁾ Tóth, Montanarella, Rusco, 2008

⁽⁴⁾ Kefeli, Blum, 2010

⁽⁵⁾ Karis, Jettou, 2013

⁽⁶⁾ Margottini, 2013

⁽⁷⁾ Efe, Ozturk, 2014

⁽⁸⁾ Act No 220/2004 Coll. on the protection and agricultural land use

⁽⁹⁾ Turanský, 2017

⁽¹⁰⁾ Schwarcz et al., 2016

⁽¹¹⁾ Enviroportál, 2017

⁽¹²⁾ Borrás et al., 2016

⁽¹³⁾ Burns, Dalrymple, 2018

II. Objective and Methodology

In accordance with the growing need for environmental protection, the paper aims through selected indicators to point out the importance of the protection of agricultural land in Slovakia as an irreplaceable component of the environment.

In relation to the possibility of disturbance or loss of quality and volume of agricultural land, with regard to the availability of resources the following were analysed:

- composition and evolution of the land fund in Slovakia during the observed period,
- evolution of agricultural land withdrawal in Slovakia during the observed period,
- current structure of legislation and bodies operating in the field of agricultural land protection in Slovakia.

Secondary research sources consisted mainly of scientific contributions or publications of domestic and foreign scientists, legislative acts, reports of bodies and institutions of the European Union and Slovakia, and data from databases and statistical surveys of the Statistical Office of the Slovak Republic.

From the methodological point of view, the methods of content analysis and text extraction were used. The approach of abstraction of theoretical issues from secondary sources was used, formulated into scientific assumptions, which were subsequently accepted or rejected through the analysis of relevant empirical data concerning Slovakia. These were processed and presented through graphic representations, on the basis of which interpretations were subsequently formulated.

III. Results and Discussion

3.1 Current Status of Agricultural Land in Slovakia

Agricultural land of various quality represents the majority (49%) of the total area of Slovakia (Figure 1). As a result, Slovakia can be considered primarily a rural country with an important role of the agricultural sector and agricultural land in terms of productive as well as non-productive activities within the economy⁽¹⁴⁾. However, since 1993 we have observed a constant declining trend in terms of the total area of agricultural land⁽¹⁵⁾. On the contrary, the area of forest land is growing, which in 2019 represented 41% of the total area of Slovakia⁽¹⁶⁾.

Agricultural land in accordance with Decree No. 461/2009 Coll. Office of Geodesy, Cartography and Cadastre of the Slovak Republic, which implements the Act of the National Council of the Slovak Republic No. 162/1995 Coll. on the Real Estate Cadastre and on the Registration of Ownership and Other

⁽¹⁴⁾ Paľšová et al., 2019

⁽¹⁵⁾ Enviroportál, 2020

⁽¹⁶⁾ Enviroportál, 2019

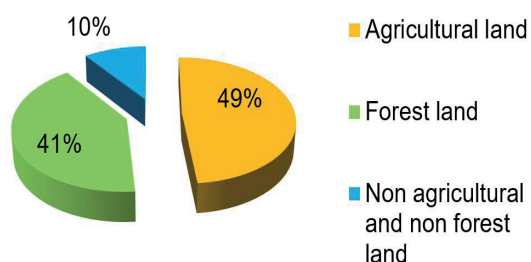
Keywords (EN)

agricultural land, agricultural land withdrawals, agricultural land protection, agricultural land legislation, Slovakia

Kľúčové slová (SK)

poľnohospodárska pôda, zábery poľnohospodárskej pôdy, ochrana poľnohospodárskej pôdy, legislatíva poľnohospodárskej pôdy, Slovensko

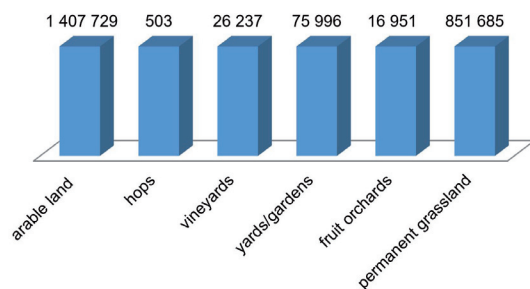
Figure 1: The share of individual types of land in the total area of Slovakia in 2019



Source: own processing according to the Electronic Land Service Yearbook 2019

Rights to Real Estate (Cadastral Act) as amended, was divided into arable land, hops, vineyards, gardens, orchards and permanent grassland⁽¹⁷⁾. Figure 2 shows that arable land (59%) and permanent grassland (36%) account for the largest share of agricultural land.

Figure 2: The structure of agricultural land fund in ha in Slovakia in 2019



Source: own processing according to the Electronic Land Service Yearbook 2019

According to the analyst of the Slovak Farmer's Cooperative Eva Sadovska, the situation in connection with the decline of agricultural land in Slovakia is alarming.

In the last 15 years, the land fund has been reduced by almost 15%, which represents one sixth of its total area. Most acreage is reduced from arable land, pastures and meadows, while one of the key reasons is considered to be the fragmented land structure in Slovakia, as a result of which the land becomes the subject of interest of speculative entities with non-agricultural intentions⁽¹⁸⁾.

3.2 Agricultural Land Withdrawals in Slovakia

In Slovakia, Act No. 220/2014 Coll. on the protection and use of agricultural land allows, under certain conditions, the so-called agricultural land withdrawals for non-agricultural purposes⁽⁸⁾.

poses⁽⁸⁾. Agricultural land withdrawals are an understandable phenomenon given the growing urbanization and growing population in certain areas. For the need of the quality of the human life, it is therefore necessary to build new settlements, industrial facilities and infrastructure in these areas. The problem, however, is that the current legislation in connection with the fragmented ownership and land structure provides too many opportunities for various speculative machinations in this area, as a result of which agricultural land withdrawals are constantly increasing, which cause negative impacts on the environment. Therefore, many authors discuss the need for more specific legal regulation of this act^{(1), (12), (19), (20)}.

According to Figure 3, the most intensive occupations of agricultural land for non - agricultural purposes in Slovakia were realized in 2009 - 2010. In the following years, with an average area of agricultural land withdrawn of 1000 ha, a fairly stable trend with smaller deviations was observed until 2019. The most common reasons for agricultural land withdrawals were housing and industry⁽¹²⁾, with the greatest extent of land with high-quality⁽¹⁸⁾. In the last updated period in 2019, a total of 913.95 ha of agricultural land was withdrawn for non-agricultural purposes, with a total increase of 62 ha of land. The differences between the increases and decreases of agricultural land are huge, as a result of which the current trend of the land fund is declining.

Figure 3: Evolution of agricultural land withdrawal in ha in Slovakia during the years 2009 - 2019



Source: own processing according to the Electronic Land Service Yearbooks 2009 - 2019

3.3 Current Structure of Legislation and Bodies Operating in the Field of Agricultural Land Protection in Slovakia

In particular, one of the most important instruments for the land protection is the legislation. Table 1 shows a comparison of legislation in the field of agricultural land within the EU and Slovakia. The basic document of the EU is the *European Soil Charter*, which defines the importance of soil for humans and the basic regulation of its protection. Next are Revised European Charter for the Protection and Sustainable Management of Soil and Recommendation of the Council of Europe No. R (92) 8 on soil protection, which emphasize in particular the importance of research as one of the key elements and tools of soil protection. *The Common Agricultural Policy (CAP)* is considered a ground-breaking document as a partnership between agri-

⁽¹⁷⁾ Decree No 461/2009 Coll by Office of Geodesy, Cartography and Cadastre of the Slovak Republic, which implements the Act of the National Council of the Slovak Republic No 162/1995 Coll on the Real Estate Cadastre and on the Registration of Ownership and Other Rights to Real Estate

⁽¹⁸⁾ Slovak Press Agency, 2017

⁽¹⁹⁾ Melišková, 2018

⁽²⁰⁾ Blaas et al., 2010

Table 1: Comparison of legislation in the field of agricultural land protection between the EU and Slovakia

European Union	Slovakia
European Soil Charter	Constitution of SR, art. 44, 45
Revised European Charter for the Protection and Sustainable Management of Soil	Act No. 17/1992 Coll. on the environment
Recommendation of the Council of Europe No. R (92) 8 on soil protection	Act No. 220/2004 Coll. on the protection and agricultural land use
Common Agricultural Policy:	Act No. 203/2009 Coll. amending Act No 188/2003 Coll. on the application of sewage sludge and bottom sediments to the soil
EU regulation 1307/2013	Act No. 140/2014 Coll. on the acquisition of ownership of agricultural land and on the amendment of certain laws
EU regulation 1308/2013	Act No. 277/2017 Coll. amending Act No 136/2000 Coll. on the fertilizers
EU regulation 1305/2013	Act No. 119/2019 amending the Act of the Slovak National Council No 330/1991 Coll. on the land adjustment, land ownership arrangement, land offices, land fund and land communities
EU regulation 1306/2013	Act No. 356/2019 Coll. amending Act No 543/2002 Coll. on the nature and landscape protection

Source: own processing, 2021

culture and society. In particular, it aims to support farmers in accordance with the conditions of soil protection or overall environmental sustainability.

As part of its operation, the following legal acts were adopted:

- rules for direct payments to farmers (EU regulation 1307/2013);
- a common organisation of the markets in agricultural products (EU regulation 1308/2013);
- support for rural development (EU regulation 1305/2013);
- financing, management and monitoring of the common agricultural policy (EU regulation 1306/2013).

In Slovakia, soil protection is also partially regulated in the highest legal act - *the Constitution*, specifically in Articles 44 and 45. The soil as a component of the environment is regulated by *Act No. 17/1992 Coll. on the environment*. Following acts are considered to be key in the field of agricultural land use and protection: *Act No. 220/2004 Coll. on the protection and agricultural land use*, *Act No. 140/2014 Coll. on the acquisition of ownership of agricultural land and on the amendment of certain laws* and *Act No. 119/2019 amending the Act of the Slovak National Council No. 330/1991 Coll. on the land adjustment, land ownership arrangement, land offices, land fund and land communities*.

Agricultural land as a component of the environment, a non-renewable natural resource or a tool for landscaping and a key element of agricultural development is mentioned in a number of other legal acts, within the EU, for example in Directive No. 2008/98/EC on waste and No. 91/676/EEC on nitrates. In Slovakia for example in *Act No 277/2017 Coll. amending Act No 136/2000 Coll. on the fertilizers* and *Act No 356/2019 Coll. amending Act No 543/2002 Coll. on the nature and landscape protection*, etc.

In the field of agricultural land protection, a wide range of institutions operate in Slovakia, holding many functions (Fig. 4). The central authority authorized to issue generally laws, acts and regulations in connection with soil protection is the Ministry of Agriculture and Rural Development (MARD). The Institute of Agricultural Policy is a part of it and at the same time an

analytical department in the field of agricultural land. Following bodies are the district offices of the regions, which process information on agricultural land losses for MARD within its territory and works closely with the district offices, which decide on applications for change of land type, agricultural land withdrawals, discuss possible offenses and sanction them⁽⁸⁾.

Protective bodies work closely with the supervising bodies, which are the Land Service and the Central Agricultural Inspection and Testing Institute. The Land Service carries out professional supervision and monitors agricultural land in terms of its quality, biodiversity and other functions, then processes this information together with the recommendations in the framework of the agricultural land informational database. It is also responsible for updating the map of rated soil ecological units. The Central Agricultural Inspection and Testing Institute realizes official and state inspections in order of which it takes and analyses soil samples⁽⁸⁾.

The Slovak Land Fund is a legal entity established by Act No. 330/1991 Coll. on land adjustment, land ownership arrangements, land offices, land fund and land communities, according to which it is mostly responsible for the management of state-owned agricultural real estate and disposes of land of unknown owners⁽²¹⁾.

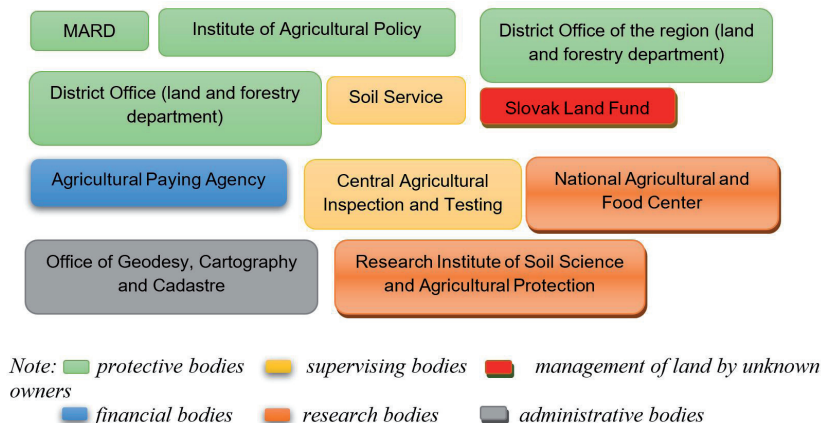
The Agricultural Paying Agency is a state administration body established in accordance with Act No. 473/2003 Coll. on the Agricultural Paying Agency, on the support of entrepreneurship in agriculture and on the amendment of certain laws as amended, which is authorized to provide support and subsidies in the field of agriculture and rural development on the basis of MARD accreditation in accordance with the relevant legal acts⁽²²⁾.

Research and data publication in the field of agriculture and quality of agricultural land in Slovakia is covered by many

⁽²¹⁾ Act No 119/2019 amending the Act of the Slovak National Council No 330/1991 Coll. on the land adjustment, land ownership arrangement, land offices, land fund and land communities

⁽²²⁾ Act No 473/2003 Coll on the Agricultural Paying Agency, on the support of business in agriculture and on the amendment

Figure 4: State administration bodies in the field of agricultural land protection in Slovakia



Note: protective bodies supervising bodies management of land by unknown owners financial bodies research bodies administrative bodies
Source: own processing, 2021

state and non-state institutions, the most important state institutions include the National Agricultural and Food Centre, while in the field of agricultural land protection the research is realized mostly by Research Institute of Soil Science and Agricultural Protection⁽²³⁾.

The function of offices of Geodesy, Cartography and Cadastre created in accordance with the Act No. 162/1995 Coll. On the Real Estate Cadastre and registration of ownership and other rights to real estate is primary to register data about the real estate data and rights to them. This information is available to the public in the appropriate form and extent through their own informational portal⁽²⁴⁾.

In addition to state bodies and institutions in Slovakia, a number of non-state or private organizations, institutions, associations or unions representing the interests of its members in the field of agriculture or the protection of agricultural land itself are being established.

One of the most important is the Slovak Chamber of Agriculture and Food, which is characterized as a non-state, public and self-governing institution. Its members, whose interests in relation to state authorities are represented and protected, are individuals and legal entities carrying out business activities, especially in the field of agriculture and food. It covers many unions or associations such as the Association of Agribusiness Entrepreneurs of Slovakia, the Association of Cereal Growers, the Association of Agricultural Cooperatives and Trading Companies, etc.

Considering that the Slovak Chamber of Agriculture and Food is the largest institution representing the interests of entrepreneurs in the field of agriculture, mutual cooperation between the chamber and the relevant state authorities is key for the correct setting of legislative instruments or national strategies.

At present, however, the Slovak Chamber of Agriculture and Food, through statements in the media, is increasingly expressing its dissatisfaction with communication, especially with MARD, and vice versa, MARD considers this criticism to

be unfounded. Conflicts arise in particular in connection with the preparation of the national strategic plan for the Common Agricultural Policy for the period 2021-2027, which represents the key tool for agricultural development and soil protection⁽²⁵⁾.

IV. Conclusion

The protection of agricultural land is one of the current but more difficult topics to grasp worldwide. In the European Union, but also in Slovakia, it is gaining more and more attention due to the growing need for food self-sufficiency. The aim of the paper was therefore to point out through selected indicators on the importance of protection and the current state of agricultural land in Slovakia as an irreplaceable component of the environment and the quality of human life. In particular, indicators as the structure of the land fund, the evolution of agricultural land coverage and, last but not least, the structure of legislation and state bodies in the field of agricultural land protection were identified.

The research showed that although agricultural land currently accounts for the majority of the total area of Slovakia, due to its declining share with negative predictions for the future, it is necessary to adopt more effective legislative and non-legislative regulations and instruments in order to protect it.

As part of the evolution of the land fund in Slovakia, monitored mainly by the rate of agricultural land withdrawals, the research pointed to a reduced trend in agricultural land withdrawal over the last 9 years, but the difference between increases and decreases in agricultural land remains disproportionate and alarming.

The legislative regulation of agricultural land is regulated in many legal acts, one of the most important in the EU is the European Soil Charter, while in Slovakia it is mainly Act No. 220/2004 Coll. on the protection and agricultural land use, which, among other, regulates the conditions of agricultural land withdrawals for non-agricultural purposes. The Common Agricultural Policy concluded by the EU with the Member States to promote sustainable agriculture and rural develop-

⁽²³⁾ Ministry of Education, Science, Research and Sport, 2021

⁽²⁴⁾ Act No. 162/1995 Coll. On the Real Estate Cadastre and registration of ownership and other rights to real estate

⁽²⁵⁾ polnoinfo.sk

ment is considered a ground-breaking instrument in order to support the agriculture and agricultural land protection.

A significant observation appears to be a large number of state as well as non-state bodies and institutions operating in the field of agricultural land protection. These cover many functions such as protection, control, funding, research or information provision, etc.

Based on the results, it is necessary to summarize that although the protection of agricultural land in Slovakia is covered by a sufficient number of legislative acts and bodies in the field of its protection, due to its declining share, several questions and suggestions for further research arise.

The paper provided several suggestions for further research, as it points out the need to examine in depth the potential causes threatening the quality and size of agricultural land in Slovakia, such as land fragmentation, complicated structure of ownership or increasingly common existence of so-called. "speculative purchases" of agricultural land. In accordance to the sufficient number of legislative acts adopted and the wide range of bodies or institutions operating in the field of agricultural land protection, but its steadily declining share, the key question of efficiency arises, both in the adoption and implementation of legislation, but also in mutual and effective cooperation of the stated bodies and institutions. Given the current state of the land fund, as well as the arguments of many authors, it is clear that the current legislation and the effectiveness of institutions in the field of agricultural land protection in Slovakia does not work ideally. Nevertheless, it is necessary to realize wider research in order to find out whether and how to change of the legislation or the functioning of these institutions will affect the evolution and quality of the land fund in the future. It is important to examine whether they can defend not only their interests, but also accept and subsequently implement decisions beneficial not only for most of them, but for a wide range of the community defending the interests of agricultural land protection in Slovakia.

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REVIEW OF THE BOOK
“THE LEGAL AND ECONOMIC ASPECTS
OF ASSOCIATIONS AND AGRICULTURAL PRODUCERS IN
SELECTED COUNTRIES OF THE WORLD”
BY ANETA SUCHOŃ (EDITOR)

RECENZIA KNIHY
“PRÁVNE A EKONOMICKÉ ASPEKTY ASOCIÁCIÍ
A POĽNOHOSPODÁRSKYCH PRODUCENTOV
VO VYBRANÝCH KRAJINÁCH SVETA”
OD ANETY SUCHOŃ (EDITOR)

.....
Paul RICHLI

Prof. UAM Dr. hab. Aneta Suchoń presents with this publication a very remarkable book about the legal form of the cooperative and the functions of the cooperative in agriculture. She has succeeded in winning recognised experts from several countries for the project. Eight authors have each written a country report. One author contributes a fundamental article on agricultural organisation law. And one author has written an overview article on the worldwide development of the agricultural cooperative movement. In addition to the country report on Poland, the editor herself presents the introduction to the book and an overview article on the emergence and development of agricultural cooperative law worldwide and in Europe.

At the beginning of her introduction, Aneta Suchoń characterises agriculture in a concise manner with the following words, thereby simultaneously justifying the great need for cooperation in agriculture within the framework of cooperatives (p. 13): «Agriculture, which fulfils important economic, social and spatial functions, is a significant branch of the economy. Its chief aims focus on the production of food and raw resources for various branches of the industry, and more broadly speaking, on the supply of public goods. At the same time, there is a high level of financial uncertainty for agricultural producers, due to, for example, the relatively high costs associated with agricultural activity, the price changes of agricultural products and the impact of weather conditions. In addition, agricultural producers, especially European ones, have to meet more and more requirements related to areas such as environmental protection, public health, and animal health. Taking into account the high degree of financial uncertainty experienced by agricultural producers, associated with the relatively high costs related to agricultural activities, the collective action of farmers is necessary to reduce the costs of agricultural production,

achieve higher prices for agricultural products and increase their competitiveness in the market.»

Specifically for the USA, Aneta Suchoń explains (p. 16) that the majority of the approximately two million farmers belong to one or more cooperatives. Around 30 per cent of all agricultural products are sold through about 3000 manufacturing cooperatives. In this context, it should be mentioned that in the USA, a special antitrust law for agricultural cooperatives, especially in the dairy sector, has been in force for around 100 years, which privileges cooperatives by offering farmers opportunities to build countervailing power against the highly concentrated buyer side (see Paul Richli/Christian Busse, Competition rules in agriculture, General report of Commission I, in: CEDR [ed.], Agriculture and Competition, XXIX European Congress and Colloquium of Rural Law, Baden-Baden 2019, p.133 ff.). According to Suchoń, there are around 22,000 agricultural cooperatives in the European Union, and their total turnover exceeds EUR 347 billion. They have more than a 50% share in deliveries of the means of agricultural production and more than 60% in the purchasing, processing and marketing of agricultural products.

The European Union has also recognised that it is essential to give farmers more opportunities to organise countervailing power against the highly concentrated buyer side, which has been achieved with Regulation (EU) No 1308/2013. This puts European antitrust law into perspective, especially for cooperatives. Suchoń rightly cites Section 131 of its Preamble which says (S. 17): «Producer organisations and their associations can play useful roles in concentrating supply, in improving the marketing, planning and adjusting of production to demand, optimising production costs and stabilising producer prices, carrying out research, promoting best practices and providing technical assistance, managing by-products and risk manage-

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ment tools available to their members, thereby contributing to strengthening the position of producers in the food chain.» The relativisation under cartel law is expressed even more clearly in Section 139, where it is stated: «In order to ensure the viable development of production and thus a fair standard of living for producers in the beef and veal and olive oil sectors, as well as for producers of certain arable crops, their bargaining power vis-à-vis downstream operators should be strengthened.»

Aneta Suchoň rightly emphasises that the cooperative is not only an object of study from a legal point of view, but also from a cognitive, social and economic point of view. Thus, in the EU, social policy, employment and regional development are also affected, all of which also have an impact on cooperatives (p. 18 f.).

At the end of the introduction (p. 21), Aneta Suchoň writes about the methodology that she did choose for the work: «The basic research method involved the dogmatic analysis of normative texts, which is a characteristic feature of a lawyer's work. In the first place, the legislative acts concerning agricultural law and cooperative law were examined. The analysis of legislative acts in the field of civil, administrative and financial law accounted for the agricultural aspect.»

In her overview article, Aneta Suchoň presents very interesting explanations and reflections on the origin and the development of legal regulations governing associations of agricultural producers in the world, with particular emphasis on cooperatives in Europe, in which she also provides insights into the development in countries that are not dealt with individually in the book. These include Denmark, the Netherlands and the United Kingdom (p. 23 ff.). One focus is on outlining the influence of the EU on the development of cooperatives (p. 36 ff.).

The description of cooperative law in the individual countries usually covers at least organisation, capitalisation and membership. National legal peculiarities are quite numerous. Only a few elements are mentioned hereafter:

In the contribution for Argentina by Prof. Alfredo Gustavo Diloreto, other forms of companies, namely corporations, are mentioned in addition to the cooperative, such as the limited liability company and the joint-stock company, but also other forms of cooperation such as the cooperation groupings and cooperation consortia. Likewise, there are cooperations in various forms on a contractual basis (p. 46 ff.).

According to the contribution by Prof. Catherine Del Cont and Allison Macé, PhD student, the legal forms for agricultural production in France have taken a particularly rich and differentiated form (p. 61 ff.). In addition to the cooperative as a good form of co-operation, various legal forms are available for individual farms. Furthermore, producer organisations and contracting play an important role in the field of co-operation. France has a particularly strong interest in weakening antitrust law for co-operations among agricultural producers. Evidence of this is the «Endives» case, which has become a leading case by the European Court of Justice with regard to the extremely important agricultural antitrust law for farmers (on this, see for example Rudolf Mögele/Oliver Sitar, *Neue Entwicklungen des landwirtschaftlichen Wettbewerbsrechts der EU im Lichte des Endivienurteils des EuGH und der sog. Omnibusnovelle, Agrar- und Umweltrecht* 2018, p. 362 ff.).

According to the article by Prof. José Martínez, Germany has

a dogmatically well-developed law for agricultural co-operation (p. 81 ff.). The spectrum ranges from loose cooperation to firm connections under company law and participations in the form of cooperatives and producer organisations. For larger co-operations, the so-called Raiffeisengenossenschaften have become very important. Of considerable interest are special provisions for certain product areas.

Of particular interest is the contribution by Dr. Christian Busse entitled «Quo vadis Agrarorganisationsrecht? – A brief consideration in six chapters», which deals with basic questions of development in Germany and the EU (p. 105 ff.).

The presentation of the Italian legal situation by Prof. Irene Canfora shows the big influence of the requirements of EU law. However, it seems that not all possibilities of making EU law more flexible are exhausted. Producer organisations are limited to the «marketing role», which hinders other functions and activities of such organisations (p. 121 ff.).

The legal situation in Poland, described by Prof. Aneta Suchoň, is of particular interest not least because there are still more than one million agricultural holdings there. Structural adjustment is slow. Cooperation is therefore particularly urgent. In the dairy sector, there are more than 100 dairy cooperatives today. In addition, the Farmers Cooperatives, the Agricultural Producer Groups and the Agricultural producer organisations, the Social-professional farmers' organisations, the Industry associations as well as the unique Country housewives associations are described in more detail (p. 133 ff.).

As far as Slovakia is concerned, according to the study by Jarmila Laziková, PhD, Doc. JUDr. Ing., producer organisations are important because they allow economies of scale to be achieved and thus strengthen the market position of farmers (p. 157 ff.). The presentation of the historical development of cooperative law since 1845 is interesting. Between 1948 and 1989, the cooperative idea remained, but underwent a transformation. Today, agricultural cooperatives are structured as producer organisations in order to improve the market position of their members. However, it can be read that the economic reach of producer organisations is so small that they are not subject to EU competition law, but only to national antitrust law.

In Slovenia, according to the contribution by Franci Avsec, PhD, producer organisations are well established and enjoy considerable trust among producers (p. 177 ff.). Agricultural co-operation can be organised in various legal forms, not only as cooperatives, although this form is often chosen. A historical insight is that the current period began in 1992 with the enactment of the Cooperatives Act. Major challenges were posed by accession to the EU in 2004.

Spain has, according to the report of Prof. Trinidad Vázquez Ruano, the special feature that the cooperative is already anchored at the constitutional level (p. 195 ff.). Regulation takes place at three levels: EU, national level and communities. This embedding is well shown, as are the forms of cooperative integration. The highest organisational level is the «grupos cooperativos». Mergers of cooperatives are also dealt with.

Maria Zuba-Ciszewska, PhD, presents her contribution under the title «The role of agricultural cooperative movement worldwide – economic comments» (p. 213 ff.). It is based primarily on data from the International Cooperative Asso-

ciation (ICA) and Euricse. According to this, there are currently three million cooperatives, which provide work for 10 per cent of the world's employed people. About 12 per cent of the world's population, spread over almost all countries, are involved in cooperatives. Among the cooperatives, agricultural cooperatives are particularly significant. In addition, there are data from «Cooperatives Europe», which represents 176,000 European cooperatives from all economic sectors. Around 57 percent of the largest agricultural cooperatives are active in Europe. According to the author, the main purpose of cooperatives is to improve the social situation of their members and their families.

The Final considerations and *de lege ferenda* remarks (p. 231 ff.) emphasise the importance of cooperatives for strengthening the competitive (countervailing) power of agricultural producers. Cooperatives are popular in all the countries studied. They are suitable for co-operation between smaller and small farms, especially family farms. In the states with an unbroken

market economy, cooperatives have been present without interruption for almost two hundred years. But even in the states with a temporary socialist order, the development has not been interrupted in the long term. The editor summarises the presentations on the individual countries well and also makes certain considerations *de lege ferenda*.

The present work is a significant enrichment of the agricultural law literature. In addition to providing evidence of interesting regulations in individual countries, it offers a good basis for additional legal comparison. The reading is highly recommendable, especially for lawyers and other experts in agricultural organisations, agricultural offices and for farmer advisors.

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