

## *Chapter 4*

# **Cost-Benefit Analysis for the Establishment of the Ministry of Agriculture, Food, and Rural Development of Bosnia and Herzegovina**

*Sanela Klarić, Mubidin Zametica, Emir Klarić,  
and Selma Osmanagić Agović*

After years of stagnation in the Agriculture and Rural Development sector of Bosnia and Herzegovina (BiH), the following cost-benefit analysis, arguing for the establishment of a BiH ministry of agriculture, food and rural development, represents a logical and natural continuation of efforts to draw attention to the ministry, and argue for its necessity.

Experts, institution representatives, the academic community, civil society organizations (CSOs) in the rural development sector, and farmers have clearly demonstrated that only by strengthening the institutional framework on the state level through the establishment of a functional ministry of agriculture, food, and rural development, fundamental changes can be made toward advancing and improving this sector. In the last decade, efforts to coordinate between different levels of governance have been futile and discouraging, and there cannot be a functional solution in the future without the establishment of such an institution.

In general, the agriculture and rural development sector in BiH is characterized by insufficient institutional capacities, jurisdiction overlapping, undefined chains of communication and control in almost all spheres of agriculture, weak communication, coordination and information exchange between different levels of governance, and unsynchronized systems of subsidies on different administrative levels. In addition, subsidies for this sector are insufficient and are not harmonized with the agricultural policy of the European Union.

The making of important strategic agricultural and rural decisions is complicated due to a lack of basic information on the sector, quality mining and processing of data on agriculture, as well as a lack of reliable statistics and cooperation between data indicator agencies. Such information is necessary for farmers to adequately place their products on the market.

Moreover, the lack of information discourages foreign investors to set up development projects in BiH.

Due to a failure to establish IPARD (Instrument for Pre-Accession Assistance in Rural Development) structures (an IPARD payment agency and governing body, and the creation of a state strategy for the rural development), BiH has thus far not been able to use the 2007–2013 IPARD funds for agriculture and rural development that are given directly to farmers and rural communities. If decision-makers fail to agree on the establishment of the above-mentioned structures, BiH will be unable to access the funds for the planned period of 2014–2020. Moreover, due to the tardiness in implementing measures and activities on the mitigation of consequences of Croatia's accession to the European Union (EU), BiH has brought into question the export of products of plant and animal origin from BiH after Croatia's accession into the EU, thus directly jeopardizing the position of farmers and producers from BiH on foreign markets and the overall economic progress of the state.

The implementation of reforms leading toward European integration is conducted very slowly in BiH. Preparations in these areas are still in an early stage, and visible progress was made only in the field of food safety and veterinary policy. In the coming year, BiH should focus on the following: aligning the official veterinary and phytosanitary control system with European standards, strengthen its administrative capacity and in particular its inspection services and laboratories, drawing up a State-level strategic plan for rural development, and establishing national structures for pre-accession assistance to the agricultural sector through the Instrument for Pre-accession Assistance for Rural Development.<sup>1</sup> This study has found that a solution for the general discord and absence of coordination in the implementation of agricultural policy in BiH should be sought in the strengthening of the institutional organization and the state-level jurisdiction.

The cost-benefit analysis provides specific answers to the question of the costs for the establishment and maintenance of this ministry and, on the other hand, which benefits and advantages farmers and citizens can expect. So far, such answers have been missing to complete the argumentation in the advocacy for the establishment of this ministry. Keeping in

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<sup>1</sup> "European Neighbourhood Policy And Enlargement Negotiations." European Commission. [https://ec.europa.eu/neighbourhood-enlargement/pdf/key\\_documents/2015/20151110\\_report\\_bosnia\\_and\\_herzegovina.pdf](https://ec.europa.eu/neighbourhood-enlargement/pdf/key_documents/2015/20151110_report_bosnia_and_herzegovina.pdf).

mind Bosnia and Herzegovina's large public administration on all levels of government, the matter of establishing a ministry of agriculture, food, and rural development on the state-level should be approached in a serious and studious manner, which will result in the answers to the above-mentioned questions.

## **Research Methodology**

In the following analysis, our research team used both quantitative and qualitative research methods. The research team conducted a considerable number of interviews with representatives of institutions on various levels of governance, as well as with local and international experts and civil society organizations (CSOs). In addition, best practices from countries in the region were consulted (Croatia and Macedonia in particular), establishing an institutional framework in the sector of rural development, and experiences from these countries adapted to the needs and context of BiH. Furthermore, preliminary study results were presented to the CSOs working in the rural development sector, chambers of commerce, and other stakeholders during two regional meetings in Livno and Trebinje. These meetings and subsequent discussions aimed at testing the research hypotheses, presenting the preliminary results of the cost-benefit analysis, and getting an overview of positions of interested parties on a wider spectrum.

Cost-benefit analysis (CBA) is a method in economic analysis that evaluates and compares all benefits and flaws of a project that could arise from project implementation.<sup>2</sup> The emphasis is on a systematic overview and comparison of costs and benefits that are the result of an investment project within the overall societal context. In addition, it takes into account a number of social and economic parameters in order to determine the societal benefits and losses that may result from project implementation.

Since this cost-benefit analysis is atypical—being an analysis in support of establishing a ministry of agriculture, food, and rural development of BiH and all costs and benefits pertaining to it—special attention has been given to those factors that are considered difficult to monetize, so that the baseline of a cost-benefit *analysis* can be accomplished, which implies that it is necessary to include as many financial, economic and social factors as

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<sup>2</sup> Milan Čupić, "Cost-benefit analiza" (Cost-Benefit Analysis), Business Start-up centre Kragujevac, 2009.

possible, in order to adequately approach the assessment of the project's cost-efficiency. Therefore, the financial and economic analyses have been complemented by a multi-criteria analysis, taking into consideration multiple criteria and their evaluations.

## **Contextual Analysis of Establishment of the Ministry of Agriculture, Food, and Rural Development of Bosnia and Herzegovina**

We have noted in the introduction that this cost-benefit analysis in support for the establishment of the ministry of agriculture, food, and rural development of BiH represents a logical and natural continuation of efforts made by experts, representatives of institutions, the academic community, civil society organizations (CSOs) in the rural development sector, and farmers, in order to draw attention to the urgent need for establishing such a ministry and to advocate it with sound arguments.

The following part provides an overview of current challenges in the sector of agriculture and rural development, in terms of the institutional and legislative framework, cooperation of institutions in charge, as well as the way it reflects on the European integration process, with special emphasis on the issue of under-preparedness of BiH for Croatia's EU membership. In addition, we will provide a short overview of the agricultural policy in the EU, its standards, and the relevant structures.

## **Institutional and Legislative Framework for Agriculture and Rural Development in BiH**

The institutional framework for agriculture and rural development has been regulated in a way that the majority of jurisdictions in the sphere of agriculture and rural development are given to the entities and the Brčko District (BD). Hence, at the entity level two ministries and a department are in charge of governing the sector of agriculture and rural development: Republika Srpska's Ministry of Agriculture, Forestry and Water Management (MAFWM-RS), the BiH Federal Ministry of Agriculture, Water Management and Forestry (FMAWF), and the Department for Agriculture, Forestry and Water Management in BD. The situation is further complicated at the level of FBiH, where administrative bodies in charge of agricultural, veterinary, forestry- and water management-related issues, are established separately in all 10 cantons.

At the state level, the jurisdiction in the field of agriculture and rural development is assigned to the Ministry of Foreign Trade and Economic Relations of BiH (MoFTER BiH) and has been defined by the Article 9 of the Law on Ministries and Other Governing Bodies in BiH.<sup>3</sup> MoFTER BiH is in charge of the cooperation with the EU and other international organizations that are relevant for the sector of agriculture, food, and rural development, international agricultural trade, the creation of a unique economic market, general legislation, custom control measures and inspection supervision in the veterinary sector, animal identification and harmonization of policies made by entity institutions, and governance with international policies. In this regard, the sector for Agriculture, Food, Forestry, and Rural development exists within the scope of MoFTER BiH.

MoFTER also encompasses administrative organizations; the State Veterinary Office of BiH (SVO BiH) and the Administration of Bosnia and Herzegovina for Plant Health Protection (APHP BiH), which have their own jurisdictions in matters of animal health care and plant health. These administrative organizations report directly to the minister, while the Sector for Agriculture, Food, Forestry, and Rural Development is in charge of the coordination for these administrative units. MoFTER BiH includes an additional administrative unit, the Office for Harmonization and Coordination of Payment Systems in Agriculture, Food, and Rural Development in BiH, which is, among other things, authorized to develop a legal framework for the establishment and development of institutional structures to support the policy implementation measures and attracting funds from EU other international agencies, and to establish unique practices and procedures of approval, implementation, and accounting transactions in the sector of agriculture, food, and rural development, which are to be applied in the entities and the BD. Apart from that, the jurisdiction over the matters of food safety at the state level is given to the Food Safety Agency of BiH (FSA BiH). FSA BiH is an independent administrative organization, under the jurisdiction of the Council of Ministers of BiH (CoM BiH), which cooperates with the MoFTER BiH in food-related issues.

Considering the complexity of this administrative set-up and the division of authorities in the sphere of agriculture across different levels, as well as the administrative units that MoFTER BiH is expected to oversee,

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<sup>3</sup> Law on Ministries and Other Governing Bodies in BiH, Official Gazette of BiH, issues 5/03, 42/03, 26/04, 42/04, 45/06, 88/07, 35/09, 59/09 and 103/09).

it is quite understandable to conclude that this sector and its capacities have been reduced in the past two years.<sup>4</sup> This is particularly relevant when taking into account the context of liabilities arising from Bosnia and Herzegovina's accession to the EU.<sup>5</sup> When it comes to coordinating administrative organizations from the part of the Sector for Agriculture, Food, Forestry, and Rural Development (where there is currently only one work position that coordinates the operations of APHP BiH, SVO BiH and FSA BiH), we can conclude that in such circumstances coordination cannot be successful and that it should be improved. Furthermore, a question is raised in regard to the hierarchical organization within the Ministry and the administrative units that the Sector is supposed to coordinate, i.e., the feasibility of a coordination of units administered by the chief managers, which is done by the Sector (state office) that is governed by the assistant to the minister. This is where challenges arise in coordinating and achieving a quality, quick, and effective communication, which is why it has been clearly demonstrated that the Sector for Agriculture, Food, Forestry, and Rural Development, with its current capacities, is not in a position to meet its law-prescribed responsibilities.

When it comes to the legal framework, the Law on Agriculture, Food, and Rural Development of BiH<sup>6</sup> regulates the basic aims, principles and mechanisms for the development of policies and strategies, structure, and jurisdictions on all level of governance, their functions and liaisons, mechanisms of monitoring and assessment, as well as their administrative supervision. This law is also supposed to facilitate the progress of European integration and sector harmonization, as well as the phases of preparation for establishing pre-accession funds. However, the law does not foresee any control mechanisms or consequences for authorities that fail to meet their duties. Furthermore, the process of creating the strategy for rural development at the state level was formally launched, but stopped very quickly. The creation of a strategy for rural development, the advancement

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<sup>4</sup> This sector presently employs only 25 persons and many professional spheres of the agricultural and rural development sector are not represented.

<sup>5</sup> Coordination has been additionally complicated and slowed down with the establishment of the Republika Srpska Ministry for Economic Relations, which represents an equivalent to the Direction for European Integrations (DEI) at the entity level, through which the entire communication related to the EU integrations needs to be made. Understandably, this ministry does not employ experts for every individual field, including agriculture and rural development, and therefore its employees cannot respond promptly and offer opinions on a given topic. Instead they seek additional counseling with authorized bodies, which further slows down the work that is already slow and poorly coordinated.

<sup>6</sup> Official Gazette of BiH, issue 50/08.

of IPARD structures and the creation of an IPARD program, based on that strategic plan, have been the objectives of several already financed projects by the EU IPA funds.<sup>7</sup> However, the lack of political will for the adoption of the above-mentioned documents and structural developments at the state level led to these projects failing to accomplish their objectives, thus leaving the funds from the IPARD program unused. BiH remains deprived of a strategic document and a necessary structure as the basis for IPARD programming.

There is currently a strategy of rural development in RS, while in FBiH the process is underway to create an operative plan of rural development for 2014–2020. One of the conditions for BiH to access the IPA 2 program for 2014–2020 is to reach an agreement on creating a comprehensive long-term state strategy for rural development, forming IPARD structures, and implementing IPA measures of rural development in accordance with the demands set by the IPA for the state strategy and rural development program.

## **General Features of the State of Agriculture in BiH and the EU Integration Process**

The state of the agricultural sector in BiH is characterized by varying legal regulations in different areas, legal overlapping, limited capacities and communication channels, and a lack of clear vision and necessary reforms. At the state level, there are no defined agricultural policies in a real sense, although Chapter II of the Law on Agriculture does define general objectives and measures of the policy of agriculture, food, and rural development and its stakeholders. The agricultural policy is currently being conducted at the entity and BD level, but the scope and effects of such policy are limited. Domestic production and local farmers do not receive sufficient incentives and are not protected, since BiH does not have measures of protecting domestic production from excessive imports of certain products, which has its legal ground in CEFTA.<sup>8</sup> In fact, although

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<sup>7</sup> Support for Implementation of the Functional Review Recommendations in the Agriculture Sector (SESMARD), 2006–2008 (financed through CRDS funds in the amount of 1 million euros), IPA 2007, Strengthening the BiH Rural Development Programming Capacities (3P-BHRD) 2009–2011, in the amount of 2.2 million euros.

<sup>8</sup> CEFTA stands for Central European Free Trade Agreement, which has been signed in December 1992 by then Czechoslovakia, Hungary, and Poland. Slovenia became a member of CEFTA in 1996, Romania in 1997, Bulgaria in 1999, Croatia in 2003, and Macedonia in 2006. The main objectives of CEFTA were: harmonizing the development of economic

the CEFTA Agreement and the Stabilization and Association Agreement with the EU both foresee certain options for the protection of local products when local markets are threatened, so far no steps have been taken to enact these in the country. The result of such passive politics is the inability to sell local products in the domestic market, decreasing incentives for local production.<sup>9</sup>

The rate of import liberalization is unprecedented in our region, which is evident in the fact that within the CEFTA association, only BiH has a zero-custom rate for all products, while other countries maintain concessions on products that are of special interest to these countries. Besides, BiH has entered these arrangements with its institutions entirely unprepared to establish reciprocal non-custom measures and ensure the export of its products to the demanding market of the EU. MoFTER BiH and CoM BiH have not developed measures for the protection of local production from excessive import of certain products, which is a fact that has its legal ground in CEFTA. Such a position in foreign trade is not in BiH's economic interest, and, above all, is detrimental for its agricultural sector.<sup>10</sup>

Strategic decision-making in the agricultural and rural development sector is complicated due to a lack of basic information on the sector, quality mining and information processing on agriculture, and the absence of reliable statistics and cooperation between statistical entity agencies. More precisely, BiH has still not adopted an informative agricultural strategy or a law on agricultural census. Lacking necessary information and a sense of security for investing, this unclear and disordered state of the

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relations, providing equal commercial treatment and removing obstacles to trade between signatory countries. Furthermore, CEFTA functioned as one of the preparatory activities of signatory countries on their way toward a full membership in the EU. Therefore, the signatory countries set the following conditions for accession to CEFTA: a signed EU accession agreement, membership in World Trade Organization (WTO) and the approval of all established members of CEFTA. Once becoming members of the European Union in 2004, the Czech Republic, Hungary, Poland, Slovakia, and Slovenia withdrew from CEFTA. In 2004, the remaining members were Bulgaria, Romania, Croatia, and Macedonia. Since May 1 2007, members include: Albania, Bosnia and Herzegovina, Montenegro, Croatia (Croatia's membership in CEFTA ended 24 hours before its EU accession), Macedonia, Moldova, Serbia, and Kosovo (UNMIK). More on the matter can be found at: <http://www.dei.gov.ba/dokumenti/?id=4553>.

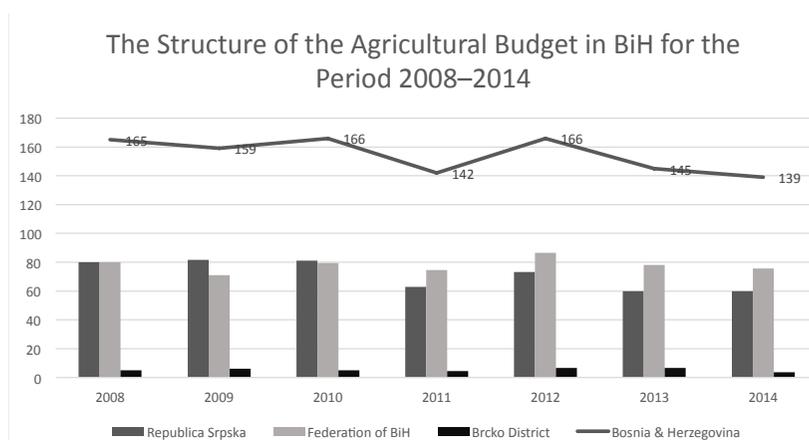
<sup>9</sup> More on the matter can be found at: "Poljoprivreda i ruralni razvoj u BiH—Preporuke civilnog društva za brži EU" (Agriculture and Rural Development in BiH—Civil Society Recommendations for a Faster Way Toward the EU), [http://gradjanizaeuropu.ba/sites/default/files/poljoprivreda\\_i\\_ruralni\\_razvoj\\_finalne\\_preporuke\\_gradjana\\_zaeuropu.pdf](http://gradjanizaeuropu.ba/sites/default/files/poljoprivreda_i_ruralni_razvoj_finalne_preporuke_gradjana_zaeuropu.pdf)

<sup>10</sup> Ibid.

agricultural and rural development sector fails to attract foreign investors and new business ideas.<sup>11</sup> This also complicates the process of accession into the World Trade Organization (WTO) and further thwarts negotiations with the EU related to agriculture.

The total allocation for agriculture on all administration levels in 2014 reached its lowest level in a six-year period since 2009. In 2014, the total allocation stood at 139.1 million BAM, which represents a decrease of 5.6 million BAM or 4 percent when compared to the previous year's budget of 145.05 million BAM.<sup>12</sup> In 2014, the budget decreased by about 16 percent from 2012, when the total allocation was highest.

**Figure 1. Overview of total allocations into agriculture in BiH (in millions BAM)**



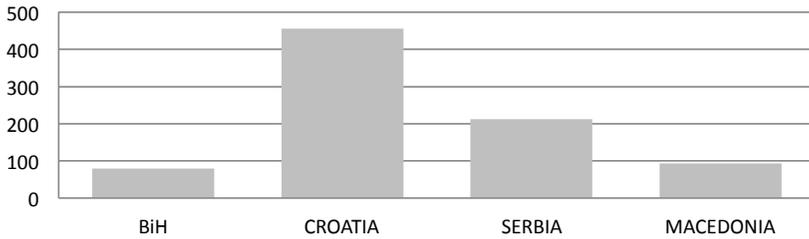
Source: Ministry of Foreign Trade and Economic Relations of BiH<sup>13</sup>

<sup>11</sup> It is worth noting that through its IPA 2007 project “Strengthening and Harmonization of BiH Agriculture and Rural Sectors Information System” the EU gave technical support to BiH with the aim of advancing the collection of ordered and reliable data from rural economy and agricultural sector, based on a methodology that is standardized and harmonized with the EU and developed during the implementation of a pilot-project for collecting data on agricultural production, economic operations on farms and accessibility of correct information and sampling. Within the course of this project, different strategic documents and analyses had been made that were never adopted due to the lack of political will.

<sup>12</sup> Agricultural Report for BiH, 2012, Ministry of Foreign Trade and Economic Relations, May 2013, available at: [http://www.mvteo.gov.ba/izvjestaji\\_publicacije/izvjestaji/default.aspx?id=7577&langTag=bs-BA](http://www.mvteo.gov.ba/izvjestaji_publicacije/izvjestaji/default.aspx?id=7577&langTag=bs-BA)

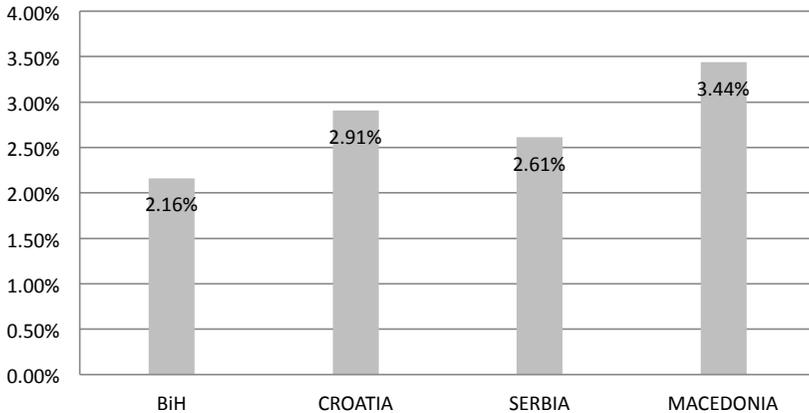
<sup>13</sup> Ibid.

**Figure 2. Investment into agriculture in countries in the region (millions of euros)**



Source of information: Ministry of Foreign Trade and Economic Relations of BiH<sup>14</sup>

**Figure 3. The rate of the investment into agriculture in the budgets of countries in the region (%)**



Source: Authors.

In order to get a realistic image of the level of support given to farmers in BiH, a comparison has been made of budgetary support in BiH with that of other countries in the region. The level of support given to agriculture and rural development in BiH is well below that of countries in the region which BiH has trade partnerships with. Based on a comparison for a five-year period, it was determined that in the time period between 2008 and 2012, Croatia received the highest level of support in the region with an average of 456.3 million euros. Serbia followed with 212.3 million

<sup>14</sup> Agricultural Report for BiH, 2012, Ministry of Foreign Trade and Economic Relations..

euro, Macedonia with 93 million euros, while Bosnia and Herzegovina is last with an average of 80.6 million euros.

When this investment is represented in percentage terms of total budgets, the highest rate of allocation was recorded in Macedonia, where it represented 3.44 percent of the total budget, followed by Croatia with 2.91 percent and Serbia at 2.61 percent.

Concerning investments trends, it can be noted that the most positive trend is exhibited by Macedonia, which has increased its investment into agriculture by 90 million euros from 2008 until 2012 (from 45 million euros in 2008 to 135 million euros in 2012), while the other three countries (BiH, Croatia, Serbia) displayed a more or less stable allocation level. Taken into account the levels of budgetary support and of local agricultural production, it is clear that in comparison to producers in neighboring countries, the agricultural producers in BiH are in a disadvantaged position.<sup>15</sup>

All above-mentioned factors hamper the operations of the agricultural and rural development sector. Consequently, the sector lags behind with the EU accession process in terms of its harmonization with the legal acquisitions of the EU, its procedures, and requested structures that are to implement the development policies in the sector. The lack of institutional capacities for development, coordination, and monitoring of agricultural policies and legislation is a large obstacle to a fast development of the local agricultural sector. This lag primarily reflects itself on the economic state of BiH citizens.

## **Agricultural Politics in the EU, Standards, and Programs of Support**

The agricultural policy has always been one of the most important EU policies and was raised to the level of the Union as the Common Agricultural Policy (CAP), which defines the standards for participating in a common agricultural market for all member countries. Since its adoption, the common market and reduction of technical obstacles to trade have significantly contributed to trade increase of food products in Europe.<sup>16</sup> Policies

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<sup>15</sup> Agricultural Report for BiH, 2012, Ministry of Foreign Trade and Economic Relations..

<sup>16</sup> Bruno Henry de Frahan and Mark Vancauteran, Harmonisation of food regulations and trade in the Single Market: evidence from disaggregated data, p. 33 *European Review of Agricultural Economics*, p. 337, pp. 337–360 (2006), in “Standardi Europske Unije za državnu regulaciju poljoprivrede” (Standards of the EU for State Regulation of Agriculture), available at:

concerning the coordination, harmonization, and competitiveness have always been prioritized by decision-makers in the EU, and are illustrated by the fact that the agricultural legislature of the EU accounts for over 50 percent of total legislature. In addition, an important indicator of the significance of this sector at the EU level is the EU's investment in the agricultural sector. Namely, almost 35 percent<sup>17</sup> of the EU budget is allocated to agriculture and rural development, while, as it was previously noted, BiH allocates only around 2 percent to this sector.

Since the beginning of the EU accession process, it has been recommended to BiH to form a ministry of agriculture, food, and rural development, which would provide a clear and developed coordination of complex policies of agriculture and rural development.

In order to receive membership to the EU, countries must adopt and effectively implement the EU *acquis*, which refers to the entire European legislative body<sup>18</sup>. Chapter 11 of the EU *acquis* contains the Common Agricultural Policy (CAP), which regulates the European market for agricultural products.<sup>19</sup>

More specifically, in order to proceed with EU accession, BiH will have to implement the CAP. As part of this implementation process, the EU highlights the following:

- Development of a uniform administrative structure;
- Data-mining;
- Subsidy administration;
- Food safety;
- Veterinary policy and policy on plant health;
- Rural development.

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<http://www.mreza-mira.net/wp-content/uploads/EU-standardi-za-regulaciju-poljoprivrede.pdf>

<sup>17</sup> In the 1970s this amount was even higher and the total rate of financing of agricultural policies accounted for around 70 percent of the total EU budget. The reduction has been caused by the expansion of other EU authorities, but also by the austerity reforms that enabled the EU to accept an additional 12 members since 2004. More on this matter can be found at: [http://europa.eu/pol/agr/index\\_en.htm](http://europa.eu/pol/agr/index_en.htm).

<sup>18</sup> European Council, Santa Maria da Feira, June 19–20, 2000: Presidency Conclusions, 16 (2000), in “Standardi Evropske Unije za državnu regulaciju poljoprivrede” (Standards of the EU for State Regulation of Agriculture), available at: <http://www.mreza-mira.net/wp-content/uploads/EU-standardi-za-regulaciju-poljoprivrede.pdf>

<sup>19</sup> Emil Erjavec and Dragi Dimitrievski, EU Common Agricultural Policy and Accession Tasks for Western Balkan's Countries, in *Western Balkan Agriculture and European Integration* 1, 2, available at: <http://www.agroedu.net/basic/publication/English.pdf#page=6>.

Despite a moderate advancement, the EU has assessed that the effort of BiH in CAP implementation is limited by poor coordination and implementation mechanisms.<sup>20</sup>

In order to facilitate the process of establishing funds, the EU provides support to countries on their path of European integration through the IPARD program<sup>21</sup> through the Framework, Sectoral, and Multiannual Financial Agreements. IPARD is a pre-accession program in place for the time period 2007–2013, and IPA 2 for the 2014–2020 period. They are part of IPA or, more specifically, its fifth component—Rural Development. The main aim of the IPARD program is to advance the agricultural sector through competitiveness of agricultural products, and its priorities are the following:

- Improving the market efficiency and the implementation of EU standards;
- Preparatory activities for the implementation of agro-environmental measures and LEADER (program that enables that projects are created and co-financed in certain regions or micro-regions, regardless of the existing administrative boundaries, which involve as many local interest groups as possible);
- Development of the rural economy.<sup>22</sup>

In order to commence with IPARD implementation,<sup>23</sup> BiH would have to sign the Sectoral Agreement with the European Commission and meet their conditions. The Sectoral Agreement states that the IPARD operative structure must consist of an administrative body and an IPARD agency. Furthermore, for access to the IPARD program, adoption of a rural development strategy is essential, as this strategy would represent the vision for the development of the entire country, with clear priorities and goals to ensure a uniform, just, and transparent development of the whole territory of the country. The strategy needs to be approved and accredited by the EU, and the State Certification Officer (SCO) bears full responsibility for

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<sup>20</sup> Standardi Europske Unije za državnu regulaciju poljoprivrede” (Standards of the EU for State Regulation of Agriculture), available at: <http://www.mreza-mira.net/wp-content/uploads/EU-standardi-za-regulaciju-poljoprivrede.pdf>

<sup>21</sup> IPARD was founded on the basis of Council’s Directive number 1085/2006 and Commission’s Directive number 718/2007.

<sup>22</sup> More on this matter can be found at: <http://www.apprrr.hr/ipard-31.aspx>

<sup>23</sup> Under the assumption that the same principles of the legal framework for IPARD implementation would apply to the new financial framework of the EU for 2014-2020

the financial administration of EU funds in the beneficiary country and is responsible for the legality and regularity of all transactions.

The establishment of IPARD structures is important not only for the sake of access to IPARD funds, but also because such structures can be at hand when the state gains access to larger funds, the governing structure of which is identical to the IPARD structure. It should be noted that these are the funds that are given directly to farmers and rural communities that, with the help of these funds, would significantly contribute to the economic and social progress, the development of rural communities, and the raising of living standards in rural areas. BiH has still not established the requested IPARD structures and with further delays, farmers, citizens, and the whole country will suffer enormous economic losses.

## Analysis of Feasibility and Options

The research done by Green Council<sup>24</sup> has identified three policy options that can be taken into consideration for resolving the circumstances in agriculture and rural development in BiH. The research provided an overview of the advantages and disadvantages of their implementation.

Three options under consideration are the following:

- Maintaining the current state of the affairs—*status quo*;
- Establishment of a ministry of agriculture, food, and rural development of BiH;
- Strengthening of the institutional capacities of the Ministry of Foreign Trade and Economic Relations, i.e., the Sector for Agriculture, Food, Forestry, and Rural Development.

### ***Policy Option 1. Maintaining the Current State of Affairs—Status Quo***

After all that has been mentioned, it is clear that this policy option can in no way respond to the demands of the functional organization of the agricultural sector. In fact, this option is marked by constant delays in the European integration process, by failure to adopt essential reforms, poor coordination in the institutional system and, finally, enormous losses for farmers as well as for the entire economic development of BiH. Moreover, this situation has lasted for over a decade and the results are devastating both for the farmers and for the country.

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<sup>24</sup> Ibid.

***Policy Option 2. Establishment of a Ministry of Agriculture, Food, and Rural Development of BiH***

This option would guarantee the most certain and permanent changes. Functional legal and institutional framework, which is in accord with the EU standards and the best practices and which involves a close cooperation of state and entity and lower institutions in the sector of agriculture and rural development would ensure uniformity of agricultural policy in the whole country and allow for a more efficient administration. One reference point at the state level would simplify the communication and prevent repetition of information between BiH and the EU.

The Ministry could be established either by changes in the constitution or upon approval by the entities.

The first approach may stabilize agricultural institutions and agencies more effectively than a mere legislation. For example, this approach may reduce the effects of future political conflicts over the agricultural and rural development sector and the implementation of the CAP. Furthermore, this sort of structure may aid in improving the process of decision-making and law enforcement.

The second approach—reaching an agreement between the entities—may provide a lower degree of stability than a constitutional reform would, because the entities might attempt to re-establish their own authorities or withdraw their agreement altogether.

***Policy Option 3: Strengthening of the Institutional Capacities of the Ministry of Foreign Trade and Economic Relations, i.e., the Sector for Agriculture, Food, Forestry, and Rural Development***

This option allows the entities to retain a considerable degree of authority over the agricultural policy and it cannot result in the same level of accord and efficiency as its alternatives would. This option cannot guarantee effectiveness in achieving the harmonization with the CAP or any other meaningful and permanent changes.

***Selection of a Policy Option***

After discussing the existing policy options, their advantages and disadvantages, we arrive at the conclusion that for a functionally administered agriculture and rural development sector, and the establishment of a system that will contribute to the effective development of this sector, providing

actual benefits for farmers and contributing to the general economic progress, the only real option is the establishment of a ministry for agriculture, food, and rural development of BiH. This option was also supported as the only real solution at the conference that took place in Sarajevo June 26, 2013, where the previous study by the Green Council was presented, titled “Establishment of the state-level ministry of agriculture, food, and rural development and other structures as a way of achieving economic progress for BiH in the EU integration process.”<sup>25</sup>

Through the cost-benefit analysis, the expenditures arising from this option will be identified and analyzed, as compared to monetized as well as non-quantifiable societal benefits of the establishment of a state ministry of agriculture, food and rural development.

## Financial Analysis

The aim of the financial analysis is the account of financial revenues. Two significant financial indicators taking into account the invested capital or public financial sources, are as follows:

1. Financial net present value (FNPV)
2. Financial internal rate of return (FIRR)

These financial indicators are calculated by discounting the cash flow, taking into account only cash inflow and outflow and not amortization, reserves etc., using the cash flow arising if the project is actually launched and not the existing one, which should be discounted for the sake of per-annum comparisons.

During the making of the cost-benefit analysis for the project of the establishment of a ministry of agriculture, food, and rural development of BiH, it seems appealing to define and select a specific time period. Nonetheless, we have chosen a six-year period (2015–2020), basing our decision on the period of availability of the IPA II funds (2014–2020). This is because within the economic analysis, as an important benefit, we will highlight the possibility of accessing the IPA II funds, as long as the requested IPARD structure is established at the state level (which will be enabled through the establishment of an adequate institutional and legal framework on the level of BiH).

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<sup>25</sup> The list of persons who attended this conference is enclosed in Appendix 4

As the project in question is specific, not generating traditional revenues and, thus, there is no inflow, but the matter is rather of the investments and the expenditures of the establishment of a ministry of agriculture, food and rural development of BiH, in this part of the analysis we are going to focus solely on the cash outflow.

### ***Total Investments***

This concerns the investments into the fixed assets and project start-up expenses. Start-up expenses incur in the first monitored years, or rather upon the launch of the project, arising from the aim of creating adequate conditions for project implementation. Included into the calculations are the start-up expenses related to the staff recruitment and training, as well as consulting, notary, administrative, and other services. Since there is only the matter of investments and cash outflow, all these items have a negative value.

Investments into the fixed assets were calculated based on the indicators arising from the experience of establishing of other institutions on the BiH level. Investments into real estate were not calculated based on information, but on the already-established practice of accommodating institutions through rental of certain spaces, which is financed through operative expenses (rental of office spaces) that are calculated in the part of the analysis dealing with revenues and costs.

Investments into the equipment were calculated based on the empirical indicators and estimations, with the average amount of 10,000 BAM per employee. The investments have been carefully divided between the beginning two years of the project.

Start-up expenses were also calculated based on empirical data (based on the establishment of the Ministry of Defense BiH, and the establishment of the Food Safety Agency) and estimations of 500 BAM per employee for expenses of personnel recruitment, 1,000 BAM per employee for training costs and flat-rate estimated amounts for other start-up expenses. All start-up expenses have been distributed between the beginning three years of the project implementation, with the estimated dynamics of personnel recruitment in the first three years of the project (Ministry—150 new employees: 75+50+25, payment agency—100 new employees: 25+25+50). The estimation of the required number of employees in the Ministry and the Agency has been reached through conversations with the representatives of the institutions, experts in the sector, and by comparing practices

**Table 1. Overview of total investments into the project (BAM)**

Investment items	2015	2016	2017	2018	2019	2020
1. Real estate						
2. Equipment	-1,500,000	-1,000,000				
A. Total fixed assets (1+2)	-1,500,000	-1,000,000	0	0	0	0
1. Costs of staff recruitment	-50,000	-37,500	-37,500			
2. Staff training	-100,000	-75,000	-75,000			
3. Consulting, judiciary, notary, administrative and other services	-50,000					
4. Other start-up expenses	-100,000	-50,000	-30,000			
B. Total start-up expenses (1+2+3+4)	-300,000	-162,500	-142,500	0	0	0
Total investments (a+b)	-1,800,000	-1,162,500	-142,500	0	0	0

Source: Authors

from countries in the region with parameters that correspond to the BiH parameters.

Start-up expenses were not calculated for persons already employed in the state-level institutions and agencies, in charge of agriculture, food, and rural development (sectors in MoFTER BiH: Sector for Agriculture, Food, Forestry and Rural Development and the Sector for Natural Resources, Energy and Environmental Protection, State Veterinary Office of BiH, Administration of BiH for Plant Health Protection, Office for Harmonization and Coordination of Payment Systems in Agriculture, Food and Rural Development in BiH, Food and Rural Development and Food Safety Agency—in total 145 employees.)<sup>26</sup> The revenue analysis will also not include the existing costs of these administrative units at the state-level into its calculation. It is worth noting once again that only the expenses of newly employed personnel will be included into the calculations.

### *Operating Expenses and Revenues*

The operating expenses of the project projected in the cost-benefit analysis include all costs of operation with a character of a cash outflow. Therefore, these expenses do not include costs that do not result in cash outflow, such as amortization costs, which are, in fact, accounting costs that usually do not result in cash expenditures. Interest and taxation costs,

<sup>26</sup> Source: MoFTER BiH, 2011.

although resulting in cash expenditures, are not included in operating costs (interest costs are included in the financial analysis as a constituting part of a discount rate, while the taxation costs are only included in the project feasibility analysis).

Operating revenues do not include inflow due to state grants or value added tax. In order to establish the ministry in an adequate and functional way, means need to be secured for its functioning and financing of the operating costs of employee salaries and benefits, equipment and service expenses, as well as capital expenses.

Costs of employee salaries and benefits were calculated based on the mean gross salary and benefits of employees in the state-level ministries at the rate for 2015. Mean equipment costs per employee, as well as mean capital expenses per employee were projected based on the information on expenditures of the Food Safety Agency for 2015. All data was collected from the Draft Budget of the CoM BiH institutions for the time period 2014–2016.

State budget grants for operating a newly-established ministry were not calculated as cash revenues. Based on a set of interviews with representatives of institutions at different levels of governance, local, and international experts and civil society organizations, in relation to projections on functions of a future ministry and the number of new employees required for performing those functions, and on the basis of a comparative analysis of a number of employees in relevant ministries in Croatia and Macedonia and the analysis of potential transfer of employees of existing institutions on BiH level that are in charge of agriculture, food, and rural development, we have obtained a number of new employees needed to complement the existing structures and ensure efficiency and efficacy of all functions of the newly established ministry at the state level.

According to our analyses and projections, an additional 150 persons should be employed, so that they will, along with the existing personnel of state-level institutions, ensure an undisturbed, efficient, and effective performance of all designated functions of the new ministry of agriculture, food, and rural development, including the governing body within the requested IPARD structure (with all its duties and jurisdictions explained in the part of the document dealing with the contextual analysis of the project).

The dynamics of a complete systematization of the newly-established ministry and agency is as follows:

**Table 2. Overview of operating expenses and revenues (BAM)**

Items of operating expenses and revenues	2015	2016	2017	2018	2019	2020
1.						
A Total operating revenues (1+2+3)	0	0	0	0	0	0
1. Costs of employee salaries and benefits	-3,240,000	-5,670,000	-8,100,000	-8,100,000	-8,100,000	-8,100,000
2. Expenditures for equipment and services (energy, material costs, production services, etc.)	-1,560,000	-2,730,000	-3,900,000	-3,900,000	-3,900,000	-3,900,000
3. Capital expenses		-437,500	-625,000	-625,000	-625,000	-625,000
B Total operating expenses (1+2+3)	-4,800,000	-8,837,500	-12,625,000	-12,625,000	-12,625,000	-12,625,000
Net operating balance (a+b)	-4,800,000	-8,837,500	-12,625,000	-12,625,000	-12,625,000	-12,625,000

Source: Authors

- Ministry: 75 persons in the first year, 50 persons in the second year and 25 persons in the third year upon establishing.
- Agency: 25 persons in the first year, 25 persons in the second year and 50 persons in the third year upon establishing of the ministry.

All expense calculations refer only to the newly employed personnel, while the expenditures pertaining to the existing structures were not included in the cost-benefit analysis.

**Table 3. Overview of cash inflow and outflow (BAM)**

Cash flow	2015	2016	2017	2018	2019	2020	Total
1. Total operating revenues	0	0	0	0	0	0	0
A Total cash inflow (1)	0	0	0	0	0	0	0
2.1. Salaries and benefits	-3,240,000	-5,670,000	-8,100,000	-8,100,000	-8,100,000	-8,100,000	-41,310,000
2.2. Other expenses	-1,560,000	-3,167,500	-4,525,000	-4,525,000	-4,525,000	-4,525,000	-22,827,500
2. Total operating expenses	-4,800,000	-8,837,500	-12,625,000	-12,625,000	-12,625,000	-12,625,000	-64,137,500
3. Total investments	-1,800,000	-1,162,500	-142,500	0	0	0	-3,105,000
B Total cash outflow (2+3)	-6,600,000	-10,000,000	-12,767,500	-12,625,000	-12,625,000	-12,625,000	-67,242,500
Net cash flow (a+b)	-6,600,000	-10,000,000	-12,767,500	-12,625,000	-12,625,000	-12,625,000	-67,242,500
Discount factor	1,0000	1,050000	1,10250	1,15763	1,21551	1,27628	
Cash flow present value	-6,600,000	-9,523,810	-11,580,499	-10,905,903	-10,386,587	-9,892,030	-58,888,828
Discount rate	5%						
FNPV(C)	-58,888,828						

Source: Authors

As has already been noted, this project is not envisioned to lead to financial revenues and cash inflow, since it is aimed at establishing a ministry that is entirely to be financed from the state budget. Actual benefits for the economy and society are not discussed in the financial analysis, but rather in the part of the cost-benefit analysis that deals with the economic analysis of the project.

Salary expenses, operating material expenses and capital expenses rise gradually and in proportion to the systematization, therefore, the total operating expenses, after recruitment of personnel for the ministry and the agency are completed will reach the level of 12,625,000 BAM per year.

#### ***Cash Flow and Financial Net Present Value***

In part of the financial analysis that follows, the data from the previous two tables will be incorporated in the table that gives an overview of cash inflow and outflow pertaining to the project investments (*project cash flow*).

This table displays the estimations of the total cash outflow linked to the implementation of the project of establishment of the ministry of agriculture, food, and rural development, including the initial investments and all operative expenses. Operative expenses and cash inflow were not calculated and presented in the financial analysis.

As shown in the table, the total cash outflow for the project in the period between 2015 and 2020 would amount to 67,242,500 BAM.

Using the financial parameters of net cash flow, financial net present value (FNPV) was determined. FNPV was calculated using the recommended discount rate of 5 percent (the rate is recommended by the Euro-

**Table 4. Net discounted cash flow (BAM)**

<b>Year</b>	<b>Net cash flow</b>	<b>Cash flow present value</b>
2015	-6600000	
2016	-10000000	
2017	-12767500	
2018	-12625000	
2019	-12625000	
2020	-12625000	
<b>Total</b>	<b>-67,242,500,00 BAM</b>	<b>-58,888,894,67 BAM</b>

Source: Authors

pean Commission for the time period 2007–2013 for the purposes of financial analysis of investments). Net present value represents the worth of the invested cash in the future period in terms of its present-day value.

Discounting enables us to express, in present-day terms, the cash flow occurring in different time periods. Therefore, in present value, the total cash outflow of this project amounts to 58,888,894 BAM.

The financial rate of return (FRR), defined as a discount rate which reduces the financial net present value (FNPV) of the investment to zero value,<sup>27</sup> was not calculated for the project of establishment of the ministry of agriculture, food, and rural development, because of the obvious negative values of the net cash flow throughout the whole duration of the project, which is logical considering that we are analyzing a project without revenues or cash inflow in the traditional sense. The operative expenses of the ministry are financed from the budget and partially from the IPA funds, which in fact lessens the burden on the public sources of financing. Indicators of financial return (financial cost-efficiency of an investment) and financial sustainability are used to show if it is possible to compensate the total investments out of the net revenues. It is obvious that in projects of this sort it is not possible to compensate the total investments with the financial net revenues.

Only through economic analysis is it possible to demonstrate that the full economic and societal benefits arising from this project surpass the financial expenditures, which are unavoidable in the functioning of a public administration.

## Economic Analysis

The purpose of the financial analysis was to estimate the financial revenues that the project is supposed to yield. *The economic analysis identifies the benefits and losses for the overall society, which would arise from the project.*

As opposed to the financial analysis which relied on market values for calculations, for the purposes of the economic analysis book values (accounting values or shadow prices) are used. Book values take into account the social discount rate (SDR), which represents the minimum acceptable return from the whole society's point of view. SDR may differ

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<sup>27</sup> Milan Čupić, "Cost-benefit analiza" (Cost-Benefit Analysis), Business Start-up centre Kragujevac, 2009.

from the financial discount rate due to market imperfections, however, for the purposes of the cost-benefit analysis we will adhere to the traditional principle that recommends that the social discount rate equal to the financial discount rate. In this analysis, we will use SDR of 5 percent.

In the process of economic analysis within the cost-benefit analysis, the following three steps will be undertaken:

1. Conversion of market to book values;
2. Inclusion and monetization of project's non-market (non-financial) benefits;
3. Discounting of estimated costs and benefits and calculation of indicators of project's economic return.

### ***Conversion of Market to Book Values***

When conducting an economic analysis, market values are converted to book values. Financial costs and benefits included in a cost-benefit analysis need to be expressed in socially acceptable values, meaning values that take into account the social discount rate (SDR).

In some projects—and the project of establishment of a state ministry of agriculture, food, and rural development is one of these projects—certain societal benefits account for the largest part of economic benefits, while financial benefits may represent a very small part of the total benefits. In such cases, it is not practical to make a conversion of financial to economic benefits and, therefore, in the creation of this cost-benefit analysis we will omit this step.

### ***Inclusion and Monetization of Project's Non-Market (Non-Financial) Benefits***

The next step in the economic analysis is the inclusion into the analysis the benefits of the project that are of social relevance and that need to be quantified and expressed in financial terms, or in other words subjected to the monetization process.

Based on a set of interviews with representatives of institutions at different level of governance, local and international experts and civil society organizations, and on the basis of own research, we have identified a number of economic benefits as well as benefits from the aspect of the whole society.

The text that follows brings only some of the consequences of the implementation of this project, which will finally provide considerable economic and social benefits:

1. Establishment at last of a requested IPARD structure that will allow for an efficient system of identification, formulation and application of IPARD program, monitoring and assessment of project implementation, promotion, reporting, coordination and implementation and payment functions;
2. Definition and implementation of adequate measures and activities for the export of our products to the demanding market of the European Union—increase in (re-establishment of) export of certain products to the markets of Croatia and the EU;
3. Definition and implementation of adequate measures and activities for regulating the import into BiH. The degree of import liberalization is unprecedented in the region, which is evident in the fact that within the CEFTA association only BiH has a nil custom rate for all products, while other countries hold agreed concessions for products that are of special interest for those countries;
4. Development of measures for stimulating local production;
5. Defining at last the agricultural policy and understanding the sector of agriculture and rural development as the strategic sector for the overall economy;
6. Equalizing the systems of agricultural subsidies and harmonizing them with the EU agricultural policy;
7. Establishment of a functional statistical support, which will allow for a timely and effective decision-making;
8. Direct effect on strengthening of the national security by strengthening the agricultural sector.

For the purposes of creating a CBA of establishing a state ministry of agriculture, food, and rural development, and in order to justify the need for implementation of this project, it is sufficient to quantify and monetize only the first two out of above-listed benefits. In relation to other listed benefits, the two selected benefits are relatively easy to monetize considering the availability of data from reliable sources.

Thus, we will monetize the benefits arising from the establishment of the IPARD structure and the benefits that would arise if conditions were met for an unhampered export of products of animal origin into Croatia,

which has been discontinued in July 2013 when Croatia entered the EU, due to the low degree of preparedness of local unsynchronized and uncoordinated institutions on all levels. Other benefits will be evaluated using a multi-criteria analysis, in order to confirm that the establishment of a state ministry is justified.

### **Benefit I: IPARD Structures and Funds— Monetization of Benefits**

The contextual analysis of this document provides basic information on IPARD program and the establishment of a requested IPARD structure. Using a comparison with Croatia, this part of the analysis will demonstrate the extent of loss of EU funds that BiH has experienced due to the absence of political will and the lack of synchronized and coordinated action for establishing the requested IPARD structure.

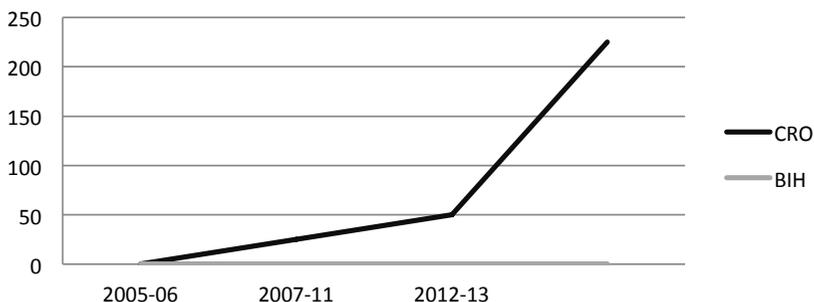
As the study conducted by the Green Council in the first half of 2013 has shown,<sup>28</sup> Croatia achieved a stable progress in the stabilization and accession process, by completing successfully all technical and political phases, including the closure of the negotiations of all 33 chapters of the accession agreement and since July 1, 2013 it has been a full member of the EU.

In the first 12 years since the start of the stabilization and accession process, Bosnia and Herzegovina has accomplished a progress equivalent to the progress that Croatia has made in the course of first 12 months. The implications of the low degree of progress toward achieving the mentioned objectives are not only political and technical. There are, more importantly, financial implications for every rural community, every farmer and every taxpayer in BiH. While Croatia took a number of difficult decisions in order to bring the benefits of the EU membership to its citizens, BiH made little to no progress.

Figure 4 displays the amounts of funds that have been paid to farmers and rural enterprises in Croatia since 2007, when the IPARD program came to effect.

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<sup>28</sup> More on this matter can be found at: “Establishment of the state-level ministry of agriculture, food and rural development and other structures as a way of achieving economic progress for BiH in the EU integration process”, Green Council, 2013, available at: <http://green-council.org/publikacije>.

**Figure 4. Cumulative utilization of SAPARD & IPARD funds 2007–13**

Source: Green Council, 2013

The total investments planned for the whole duration of the IPARD program (2007–2013) amounted to over 300 million euros. This sum was to be paid directly to farmers and rural communities in Croatia. In addition, 25 million euros were allocated through SAPARD program during the period 2005–2006. It means that between 2005 and 2013, 325 million euros have been accessible to Croatian farmers and rural communities. At the same time EU funds were reserved but not at the disposal of their BiH counterparts. According to Eurostat data, there are 132,000 agricultural households (with over 1200 euros of production yearly), which means that the EU funds that have so far been available amount to a mean of 2.462 euros per household.

There is a simple relation between the chronology of the relations between Croatia and the EU and the funds at Croatia's disposal. The failure of BiH to make needed reforms and establish required state-level structures has prevented its access to funds from the IPARD program. In contrast, Croatia has since 2001 achieved a sufficient degree of progress to apply for access to IPARD funds in 2008 and ensure, thus, that funds aimed at farmers keep entering the country undisturbed since that moment on.

#### ***Overall Consequences of the Failure to Access IPARD Funds:***

Consequences of the current situation in regard to the stabilization and accession process and IPARD are as follows:

- While BiH farmers and rural communities have so far not able to access the IPARD funds, Croatian farmers have been given the equivalent of 2,462 euro per household;

- Funds that could have been at the disposal of farmers and rural communities in BiH were lost, re-absorbed into the EU budget, whether to be spent on other countries in the Western Balkans, such as Croatia, or elsewhere in the EU;
- Final beneficiaries have very little or no experience in the EU mechanisms of investment into agriculture and rural development and, accordingly, they do not understand its potential worth;
- Starting from already this year, Croatian farmers and rural communities have been enabled to access much larger funds. The funds will be allocated yearly to the farmers and rural communities in Croatia and they will grow exponentially;
- Until an agreement on IPARD structures is made, the inflow of funds will not be possible; farmers and rural communities will still be unable to access these funds that are aimed at improving the social and economic conditions they live in;
- The level of trust in the abilities of BiH institutions to reach an agreement in accord with the EU demands is low;

Through calculating the amount of funds in relation to the number of households in BiH, we obtained a projected amount of IPARD funds that could be available to BiH if required IPARD structures were established. Thus calculated financial inflow was foreseen as of starting from year 2018, considering that a period of at least three years is needed for accreditation of the payment agency.

Based on the calculations of data displayed in Table 5, the annual amount of IPARD funds that could be at disposal of BiH had the required IPARD structures been established, would amount to 78 million BAM and these means would have been available three years after the establishment of the ministry and the payment agency (upon accreditation). However, based on the interviews conducted with experts from relevant institutions and considering the slow-paced progress made by BiH on its way toward the European integrations and the absence of required degree of synchronization and coordination on all levels in the agricultural and rural development sector, we have been careful in our calculations to use the annual benefits from the IPARD funds in the amount of 30 million BAM. The implementation would be launched three years upon the establishment of the ministry and the payment agency (period of accreditation).

**Table 5. Monetization of Benefits I – IPARD funds (BAM)**

Estimated IPARD funds that could be available if the IPARD structure were established

Number of registered households in 2012*	IPARD funds, amount per household (€) <sup>a</sup>	Calculated amount of IPARD funds lost (€) <sup>b</sup>	Calculated amount of IPARD funds lost (bam) <sup>c</sup>
FBiH 48,509	2,462	119,429,158	232,886,858
RS 63,795	2,462	157,063,290	306,273,416
Brčko 2,436	2,462	5,997,432	11,694,992
Total for period 2007–13		282,489,880	550,855,266
IPARD funds—annual amount		40,355,697	78,693,609

Source: Authors

a. Number of households. Source: MoFTER's Report on Agriculture for 2012

b. Per-household amount of IPARD funds was provided based on the case of Croatia (2007–13)

c. Calculation of lost IPARD funds for a seven-year period, based on the analogy made with the funds utilized in Croatia

## **Benefit II: Export of Products of Animal Origin to Croatia After its Accession to the European Union—Monetization of Benefits**

Despite the importance of Croatia as partner in foreign trade and despite being timely informed on Croatia's accession to the EU, BiH was completely unprepared for this moment. Due to being late to adapt the legal framework and incapacitate the authorities to perform their duties, the state has potentially caused great losses for itself and its producers.

In the following text, we provide an overview of export of products of animal origin to Croatia in the period between July 2012 and March 2013 (prior to Croatia's accession to the EU) and between July 2013 and March 2014 (after Croatia's accession to the EU). It can be noted that the export to Croatia for the period after its accession to the EU (July 2013–March 2014) was lowered by 38,625,188 BAM than the exports done in the same time of the year prior to Croatia's accession to the EU (July 2012–March 2013). On the annual level, this loss amounts to 51,500,000 BAM.

After Croatia entered the EU, the annual loss in exports of animal origin products reached 51.5 million BAM. BiH's economy is too small to successfully overcome such large losses.

**Table 6. Overview of export of products of animal origin prior to the accession of the Croatia to the European Union (BAM)**

Export to Croatia from BiH 07-12/2012		Export to Croatia 01-03 2013		Export to Croatia 07 2012-03 2013	
TN	Tariff name	Quantity (kg)	Value (BAM)	Quantity (kg)	Value (BAM)
0105	Live domestic fowls			211	2,346.01
0207	Fowl meat and edible slaughterhouse by-products	551259	2,491,256.23	20056	63,455.22
0210	Meat and edible slaughterhouse by-products	18054	277,993.51	3635	70,785.34
0301	Live fish	25620	142,431.33	8000	48,504.58
0302	Fish, fresh or cooled, except fish filets	144265	803,166.06	107629	651,067.65
0303	Frozen fish, except fish filets and other fish meats	61808	345,885.45	19884	92,525.80
0304	Fish filets and other fish meats	488	5,348.86	297	3,416.11
0305	Dried, smoked and salted fish	180610	725,535.35	24109	108,815.77
0401	Milk and cream, non-concentrated and without sugar added	13154880	11,749,196.39	8163695	8,090,021.80
0402	Milk and cream, concentrated or with sugar added	8074	21,403.95	303	804.97
0403	Buttermilk, sour milk, yoghurt, kefir	1079643	1,949,041.29	380838	722,346.21
0404	Whey, concentrated or non-concentrated	10000	44,349.77		
0405	Butter and other dairy fats	40187	283,273.18	15836	83,027.25
0406	Cheese and curd	556541	4,315,552.47	276587	2,148,495.70
0407	Bird and fowl eggs, fresh, shelled	893661	2,881,424.23	559143	1,924,210.63
0408	Bird and fowl eggs, fresh, unshelled			8640	6,756.47
0508	Corals and similar materials, raw or minimally prepared	6	24.21	6	24.21
0511	Other products of animal origin	1475020	14,423.99	817880	7,997.93
	Total for 9 months:	18200115	26,050,296.27	10406742	14,024,577.44
			Calculated annual export prior to Croatia's accession to the EU	28606857	40,074,873.71
				53,433,164.95	

Source: Foreign Trade Chamber of BiH

**Table 7. Overview of export of products of animal origin after the accession of the Croatia to the European Union (BAM)**

TN	Tariff name	Export to Croatia 07-12/2012		Export to Croatia 01-03 2013		Export to Croatia 07 2012-03 2013	
		Quantity (kg)	Value (BAM)	Quantity (kg)	Value (BAM)	Quantity (kg)	Value (BAM)
0105	Live domestic fowls						
0207	Fowl meat and edible slaughterhouse by-products						
0210	Meat and edible slaughterhouse by-products						
0301	Live fish						
0302	Fish, fresh or cooled, except fish filelets	105628	645,693.07	57220	355,115.78	162848	1,000,808.85
0303	Frozen fish, except fish filelets and other fish meats	53586	161,902.46	2040	12,368.66	55626	174,271.12
0304	Fish filelets and other fish meats	503	5,986.07	286	3,384.94	789	9,371.01
0305	Dried, smoked and salted fish	15434	111,613.08	20012	108,378.95	35446	219,992.03
0306	Crustaceans, with or without shells	522	10,301.82			522	10,301.82
0401	Milk and cream, non-concentrated and without sugar added	17	123.65			17	123.65
0402	Milk and cream, concentrated or with sugar added						
0403	Buttermilk, sour milk, yoghurt, kefir						
0404	Whey, concentrated or non-concentrated						
0405	Butter and other dairy fats						
0406	Cheese and curd						
0407	Bird and fowl eggs, fresh, shelled			11520	12,395.52	11520	12,395.52
0408	Bird and fowl eggs, fresh, unshelled						
0508	Corals and similar materials, raw or minimally prepared						
0511	Other products of animal origin	1475020	14,423.99	817880	7,997.93	2292900	22,421.92
	Total for 9 months:	1650710	950,044.14	908958	499,641.78	2559667	1,449,685.92
			Calculated annual export after Croatia's accession to the EU				1,932,914.56
			Revenue loss after Croatia's accession to the EU				51,500,250.39

Source: Foreign Trade Chamber of BiH.

### ***Discounting of estimated costs and benefits and calculation of indicators of project's economic returns***

Costs and benefits occurring in different time periods must be discounted to a present value. Unlike financial analyses where a financial discount rate is used, this economic analysis uses SDR - Social Discount Rate. The discounting procedure is the same as in a financial analysis, with the distinction that in the economic analysis, apart from the financial effects, identified economic and social non-market (non-financial) effects are also taken into account.

Indicators of project's economic return are:

- Economic Net Present Value (ENPV)
- Economic Rate of Return (ERR)
- B/C ratio (ratio between the present benefit value and the present value of the project costs)

The conditions of economic cost-efficiency are as follows:

$$\text{ENPV} > 0 \quad \text{ERR} > \text{SDR} \quad \text{B/C ratio} > 1$$

In order to state that a project is economically cost-efficient, it is necessary to confirm that the above-mentioned conditions are met. The economic net present value of the project must be higher than zero, the economic rate of return must be higher than the social discount rate (in this project this means it is higher than 5 percent) and the ratio of present benefit value to current cost value must be higher than 1.

As it has been demonstrated through the calculation of indicators of the project's economic returns (or revenues), all indicators confirm that the project is cost-efficient. The following graph compares the extent of the effects of the project, i.e., the extent of economic benefits in relation to the economic costs of the project.

Determined indicators of the project's economic return undoubtedly show that the project of establishing a ministry of agriculture, food, and rural development is a cost-efficient project.

### **Multi-Criteria Analysis**

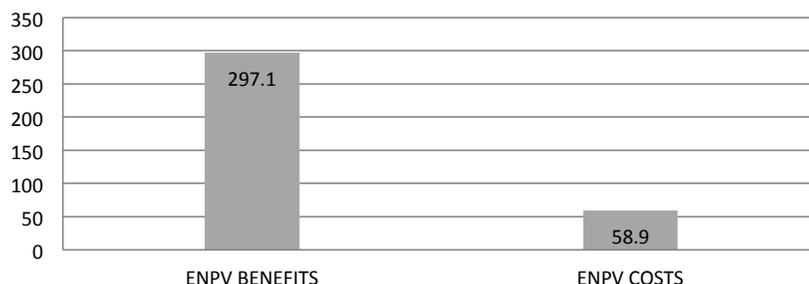
In the following economic analysis, we have monetized only the first two identified objectives: availability of IPARD funds and re-establishment

**Table 8. Economic flow of the project (BAM).**

Economic flows	2015	2016	2017	2018	2019	2020	Total
1. Total operative revenues	0	0	0	0	0	0	0
2. Benefit 1 - IPARD funds				30.000.000	30.000.000	30.000.000	90.000.000
3. Benefit 2 - Export to Croatia (products of animal origin)		51.500.250	51.500.250	51.500.250	51.500.250	51.500.250	257.501.250
A Total economic benefits (1+2+3)	0	51.500.250	51.500.250	81.500.250	81.500.250	81.500.250	347.501.252
2. Total operative expenses	-4.800.000	-8.837.500	-12.625.000	-12.625.000	-12.625.000	-12.625.000	-64.137.500
3. Total investments	-1.800.000	-1.162.500	-142.500	0	0	0	-3.105.000
B Total economic costs (2+3)	-6.600.000	-10.000.000	-12.767.500	-12.625.000	-12.625.000	-12.625.000	-67.242.500
Net economic effects (a+b)	-6.600.000	41.500.250	38.732.750	68.875.250	68.875.250	68.875.250	280.258.752
Discount factor	1,0000	1,05000	1,10250	1,15763	1,21551	1,27628	
Economic net present value	-6.600.000	39.524.048	35.131.746	59.496.774	56.663.664	53.965.627	238.182.225
Economic benefit present value			297.071.120				
Economic cost present value			-58.888.895				
Economic net present value			238.182.225				
Indicators of project's economic returns							
SDR	5%						
ENPV	238.182.225		ENPV>0				
ERR	6,32		ERR>SDR				
B/C ratio	5,04		B/C>1				

Source: authors.

**Figure 5. Relation between economic benefits and costs of establishment of the ministry of agriculture, food and rural development of BiH (million BAM).**



Source: Authors.

of export to Croatia of certain agricultural products the export of which has been suspended by Croatia's accession to the EU.

Other identified objectives and outcomes or potential benefits are not easily monetized without a good statistical database and a study of a longer duration. In order to evaluate the influence of other outcomes of this project, we conducted multi-criteria analysis (MCA), which indicates which of the three defined options results in the best outcomes in relation to the objectives and benefits we have previously identified and formulated.

The first step in the multi-criteria analysis is formulation of options to be assessed (this has been done in Section 4. Analysis of feasibility and

**Table 9. MCA criteria and evaluation of their importance**

Criterion	Criterion value	Ponder
IPARD / structure establishment /availability of funds	50	0.11
Export to the EU and other demanding markets	80	0.18
Establishment of functional statistical support that will allow for timely and effective decision-making	40	0.09
Coordination and synchronization of subsidies for agriculture / protection and stimulation of local production	70	0.16
Political support and feasibility of the option	100	0.23
Increase in the level of national security	100	0.23
Total	440	1.00

Source: Authors.

options), as well as criteria on the basis of which the evaluation of given options is to be done. The identified and formulated criteria are evaluated in relation to the total outcome of the multi-criteria analysis.

As displayed in Table 9, the greatest weight was assigned to the increase in the level of national security and the political support and feasibility of the option, followed by the export to the EU and other demanding market, considering that the increase in production and export directly influences the rate of economic growth. In the next step, we assess all options based on individual criteria.

The option to establish the state ministry of agriculture, food, and rural development was assessed the most effective based on all criteria—which has already been confirmed in the analyses above (contextual analysis, analysis of feasibility and options, financial and economic analysis)—except based on the criterion “Political support and option feasibility,” where Option I—maintaining the current state of the affairs—has been assessed as most certain.

In order to reach the outcome that brings the highest benefits in mathematical terms, we multiplied the values that these options achieved for each criteria.

The results of the multi-criteria analysis correspond to the results of the CBA: based on almost all criteria, the option for establishing a state ministry of agriculture, food, and rural development has been assessed as the option that will yield the greatest economic and social benefits.

**Table 10. Assessment of options based on each MCA criterion**

<b>Criterion</b>	<b>Option I Maintaining the current state of affairs</b>	<b>Option II Strengthening of the Sector in MoFTER</b>	<b>Option III State ministry</b>
IPARD funds	0	100	50
Export to the EU	10	80	50
Statistical support / efficient decision-making	20	80	50
Protection of local production / synchronization of subsidies	20	80	40
Political support / option feasibility	100	20	80
National security	20	80	40

Source: authors.

**Table 11. MCA: Pondered assessment of given options.**

Criterion	Option I	Option II	Option III
	Maintaining the current state of affairs	Strengthening of the Sector in MoFTER	State ministry
IPARD funds	0	100	50
EIPARD funds	0	11	6
Export to the EU	2	15	9
Statistical support / efficient decision-making	2	7	5
Protection of local production / synchronization of subsidies	3	13	6
Political support / option feasibility	23	5	18
National security	5	18	9
Total	34	69	53

Source: authors.

## Risk Assessment

When conducting a financial and economic analysis of a project, there is always a possibility that the author failed to evaluate all parameters. That is why project risk assessment is always added to the analysis.

Risk assessment is based on the analysis of a probability that the project will indeed result in desired effects. This probability ranges between 0 and 1, where 0 represents a certainty that project will not yield these effects and 1 represents a certainty that the project will result in these effects, while all values between 0 and 1 represent a certain degree of probability (rather than certainty) of these effects.

In the continuation of the risk assessment part of the CBA, we conducted a sensitivity analysis (the identification of the project's critical factors and quantitative analysis of the effects of critical factors on the project).

## Sensitivity analysis

The sensitivity analysis identifies the project's critical factors. As a general rule, factors are critical when a change in their estimated value by 1 percent causes a change in project's net present value (NPV) by more than 1 percent.

**Table 12. Identification of critical factors**

Category	Possible factors
Total investments	Inflation rate, change in prices of products and services, reduction in sources of financing, failure to meet deadlines, etc.
Operative expenses	Inflation rate, change in prices of products and services, change in labour wages, change in energy prices, etc.
Benefit I – IPARD funds	Political instability, inadequate projects, decrease in funds, etc.
Benefit II – Export to Croatia (products of animal origin)	Change in production rate, political instability, lack of coordination and -preparedness for changes, etc.

Source: Authors

Provided below is an overview of identified critical factors for this project.

After we identified the critical factors, we performed a quantitative analysis of the effect of factors on project's economic net present value (ENPV):

As it is clear from the table, none of the critical factors affect the project impacts significantly. With the change of the value of identified factors by 1 percent, the NPV does not change by more than 1 percent.

Risk assessment, i.e., a sensitivity analysis and a quantitative analysis of potential critical factors, determined that none of the identified factors is of a significant risk for the impacts of the project of establishment of a ministry for agriculture, food, and rural development.

## Recommendations

The solution to the problem of general discord and lack of coordination in the implementation of an agricultural policy, as well as to the stagnation in the sector of agriculture and rural development in BiH, should certainly be sought in the strengthening of institutional organizations and jurisdictions at the state level. Keeping in mind everything that has previously been stated, the recommendations for advancement of the agricultural and rural development sector are the following:

- Establish a unique ministry of agriculture, food, and rural development of BiH with the authority to create, develop, and coordinate

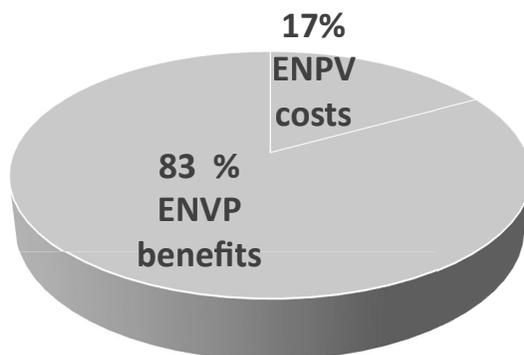
**Table 13. Quantitative analysis of the effect of factors on the ENPV.**

Factor	Percentage of change in factor	Percentage of change in ENPV
Total investments	+2%	-0.025 %
	+1%	-0.013 %
	-1%	+0.013 %
	-2%	+0.025 %
Operative expenses	+2%	-0.469%
	+1%	-0.234 %
	-1%	+0.234 %
	-2%	+0.469 %
Benefit I – IPARD funds	+2%	+0.622 %
	+1%	+0.311 %
	-1%	-0.311 %
	-2%	-0.622 %
Benefit II – Export to Croatia (products of animal origin)	+2%	+1.872 %
	+1%	+0.936 %
	-1%	-0.936 %
	-2%	-1.872 %

Source: Authors

agrarian/agricultural policies and to set strategic goals for agriculture and rural development of BiH, to create measures of structural agricultural policies, market and prices, customs and foreign trade, land, taxes, and measures of support for agriculture in accordance with standards of the EU, as well as other agreed authorities in relation to agriculture, veterinary sector, plant protection, food safety, forestry, water management, and rural development;

- Urgently create a strategy of rural development for BiH, as a priority and a condition of future access to the IPA 2 program;
- Urgently make a decision on forming the required IPARD structures, including the governing body within the ministry and IPARD payment agency on the state level;
- Support the work of the Office for Harmonization and Coordination of Payment Systems in Agriculture, Food and Rural Development in BiH by putting it into a full function with planned capacities and overtaking its function as a future IPARD payment agency.

**Figure 6. Current value of benefits and costs (in million euros)**

- Implement the remaining activities defined by the “Action Plan for Mitigation of Consequences of Croatia’s Accession to the European Union” so that the export to Croatia could be accelerated.
- Strengthen advisory offices so that they have capacities to offer quality services in preparing and writing of project proposals for IPARD funds for all farmers and rural communities in BiH

## Conclusion

Bosnia and Herzegovina is an underdeveloped state that does not recognize the agricultural and rural development as strategically crucial for the development of the entire BiH economy. Too much time and too many funds were lost over superficial changes in this socio-economically important sector, without concrete and visible results. It is essential that decision-makers implement the recommendations given in the Resolution on the progress of BiH in the European integration process, adopted by the EU on February 6, 2014. This Resolution points to the urgent establishment of a ministry of agriculture, food, and rural development of BiH.

For the purposes of this analysis, a CBA was done for two out of eight listed benefits (that would be the result of the establishment of the IPARD structure and as a consequence of meeting the conditions for an unhampered export of products of animal origins into Croatia or the EU). Even so, the two analyzed benefits greatly outweigh the cost indicators, and they represent enormous benefits that BiH and its farmers and rural communities may achieve if a functional ministry is established. Figure 6 dis-

plays the relation between the costs and benefits, additionally supporting the arguments for establishing a ministry of agriculture, food, and rural development for BiH.

After comparing the costs and benefits pertaining to the establishment and operations of a functional ministry of agriculture, food, and rural development, we can conclude that, based on almost all criteria, this is an option that can result in the largest economic and social benefits.

As this cost-benefit analysis has demonstrated, only the establishment of a ministry for the sector of agriculture and rural development can guarantee permanent changes and enable quality planning and development, contributing to economic and other benefits for Bosnia and Herzegovina and its society.

