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PUBLIC SECTOR EXPENDITURES AS A MEASURE OF INVESTMENT IN BIODIVERSITY: A CASE STUDY OF THE REPUBLIC OF SRPSKA

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Abstract**:** *This paper explores public expenditures aimed at biodiversity preservation in the Republic of Srpska. The central research question addressed in this paper is: How much public funding is allocated to biodiversity protection in the Republika Srpska? Accordingly, the subject of the research is the analysis of public sector expenditures in the Republika Srpska, with a particular focus on budget allocations aimed at biodiversity conservation. The main hypothesis of the study is that allocations for biodiversity protection account for approximately 1% of total public expenditures in the Republika Srpska. However, the research is subject to several challenges and limitations. A key constraint is the absence of a unified database for tracking and identifying biodiversity-related investments, This lack of systematic data classification complicates the precise assessment of financial flows directed toward biodiversity. Furthermore, the introduction of a program-based budgeting system, accompanied by clearly defined monitoring and control mechanisms, would significantly improve the accuracy and transparency of data collection on public expenditures by purpose. Such reforms would enable a more reliable evaluation of biodiversity-related investments.*

Keywords: *sustainability, biodiversity, financial management, ecology, accounting*

JEL Classification**:** *Q01, Q56*

INTRODUCTION

Biodiversity includes diversity alive organisms in within different ecosystem and type. He represents basis functional ecosystem, which in return provide numerous valuable services ecosystem. However, human activities and pressures represent significant threat current condition biodiversity on global Convention about biological biodiversity (*CBD*), signed in 1992 in Rio de Janeiro, represents global frame for operation of 195 countries in areas biodiversity. Convention everything based on three basic goal: preservation biological diversity, sustainability use hers components and fair distribution benefits which expire from genetic resources. Republika Srpska, in

within obligation Bosnia and Herzegovina like signatories Conventions, determined everything for harmonization politics and measure with with this global goals, with special focus on preservation ecosystem, restoration degraded habitats, sustainable use natural resources you improvement education and consciousness about importance biodiversity (Milovanović et al., 2025). One from key questions in within *CBD* represents financial gap in areas biodiversity. Adequate and stable financing is prerequisite for efficiently preservation biological diversity and sustainably management natural resources. Adoption Kunming – Montreal global frame for biodiversity (GBF) in December 2022 , which is accepted by 196 countries, represents significant turning point in global efforts yes everything stop and overturn loss biodiversity (UNCC, 2023) Frame sets ambitious goal protection at least 30% of land and marine areas by 2030, as and vision of life" in harmony with "by nature" by 2050. Achievement these goals requires transformative changes and engagement all levels authorities, as and actively participation all segments societies. Biodiversity and the preservation of natural habitats protect us from natural disasters, climate change and provide us with sources of food, water, energy and raw materials. (Radonjić & Ostojić, n.d.)On the other hand, with the establishment of a new international framework and the global trend of introducing mandatory standards for environmental, social responsibility and governance (*ESG*) in business, global investments in biodiversity are expected to grow rapidly, especially in the private sector (Grujić & Novaković, 2025). A new Law on Accounting and Auditing has been adopted in the Republika Srpska. One of the innovations introduced by this law is the obligation to prepare and present a sustainability report (Novakovic & Grujic, 2026). Sustainability information related to sustainability factors includes:

1. environmental factors,
2. social and human resources factors,
3. management factors,
4. other information that the legal entity considers important for presentation in the sustainability report.

The problem defined as a research question in the paper is: How much public funds are allocated for biodiversity protection in the Republika Srpska. The subject of this paper is an analysis of public sector expenditures in the Republika Srpska in terms of allocations for biodiversity. While the basic hypothesis is: Allocation of public funds accounts for 1% of total public funds in the Republika Srpska.

Challenges and limitations of the work are reflected in the lack of a single database for collecting, or rather identifying, climate finance (Jokić et al., 2024; Novaković et al., 2024) and investments in biodiversity. The introduction of a program budget and clear control mechanisms would enable more precise collection of data on expenditures directed to different purposes. (Novakovic et al., 2025, 2026; Novaković, 2025)

METHODOLOGY OF THE REVIEW OF BIODIVERSITY EXPENDITURE IN THE REPUBLIKA SRPSKA

The assessment followed a two-step approach to identify and quantify biodiversity-related public expenditure. First, budget lines at the level of the Budget of the Republic of Srpska were screened for their potential link to biodiversity, following the BIOFIN methodology and the GLOBE taxonomy. Expenditures were then classified

according to their biodiversity purpose as primary (direct) or secondary (indirect). Primary expenditures were identified using the principle of predominance, whereby biodiversity is the main purpose of the expenditure unless evidence indicated otherwise. Secondary expenditures were those for which biodiversity represented a complementary objective; these were assigned a Biodiversity Attribution Rate (BAR) reflecting the estimated share of the budget line contributing to biodiversity. Accordingly, attributed biodiversity expenditure was calculated as: Biodiversity expenditure = Σ (budget line × BAR). GLOBE attribution rates range from 0% to 100%, Finally, the results were aggregated to estimate total public biodiversity expenditure in Republika Srpska, covering both the Republic-level Budget and the budgets of local self-government units.

Table 1. Description of biodiversity expenditures related to primary and secondary attribution levels.

Attribution levels	Description of biodiversity expenditures
100% (primary)	The expenditure is fully aligned with biodiversity objectives. Biodiversity is the explicit and central purpose of the expenditure. Other objectives, such as climate, health, or human development, are also compatible with biodiversity and do not undermine its achievement.
75% (pretty much) significantly)	Biodiversity remains an important objective of the expenditure, but the link is more indirect and/or other objectives take precedence over biodiversity.
50% (significant)	The biodiversity objective is unclear in the policy or expenditure formulation, and other objectives are more prominent than biodiversity.
25 % (Moderate)	The biodiversity objective is considerably weaker in the policy formulation compared with other objectives. The expenditure is framed as having an unintended or incidental positive influence on biodiversity.
5% (low)	Biodiversity is not explicitly identified in the policy formulation. Any contribution to biodiversity is considered incidental or unintended.
1% (Minimum)	The main purpose of the expenditure is unrelated to biodiversity, but there is a minimal connection or potential contribution to biodiversity.

Source: https://www.biofin.org/knowledge-product/global-biodiversity-expenditure-taxonomy

The main groups of budget items were mapped to the relevant expenditure categories according to their stated purpose, policy objectives, and expected relationship to biodiversity. Biodiversity attribution rate percentages were then assigned based on the strength of this relationship: higher rates were applied where biodiversity was an explicit or significant objective, and lower rates where the biodiversity contribution was indirect, incidental, or minimal.

RESULTS

The results show the distribution of biodiversity expenditures at the republic and local government unit levels. in accordance with the identified institutions through the strategic framework related to biodiversity (Čigoja et al., 2025). Expenditure data were analyzed based on the budget rebalance of the observed institutions for the period 2022 to 2024. The analysis is based primarily on budget and budget-rebalance data. Expenditures identified in the budget are assessed according to their stated objectives and policy relevance to biodiversity, and an attribution percentage (100%, 75%, 50%, 25%, 5%, or 1%) is applied to estimate the proportion of each expenditure that can reasonably be considered biodiversity-related.

One of the key institutions responsible for environmental protection in the Republika Srpska is the Ministry of Spatial Planning, Construction and Ecology. The Ministry performs administrative and professional tasks in the field of nature protection, including ensuring the conservation of natural resources, declaring protected areas, and participating in the preparation and implementation of management plans. It also plays an important role in public information, intergovernmental cooperation, and providing support to other levels of government. In addition, the Ministry is responsible for approving and supervising the work of protected area managers, verifying compliance with professional, personnel, and organizational standards, and issuing key administrative acts such as permits, expert opinions, and decisions. It maintains official registers, including the ecological network, red lists, and lists of protected species, and implements enforcement measures through inspection procedures.

The following public institutions operate under the direct jurisdiction of the Ministry:Public Institution National Park Kozara, Public Institution National Park Sutjeska, Public Institution National Park Drina. Within its budget for the observed period, the Ministry allocated financial resources to these national parks in the following amounts: 2,330,000 KM for Sutjeska, 2,530,000 KM for Kozara, and 2,530,000 BAM for Drina. These expenditures are classified under biodiversity-related spending, specifically within category 7.01 – Management and Expansion of Protected Areas, subcategory 7.01.16, according to the third-level taxonomy classification.

The Republic Institute for the Protection of Cultural, Historical and Natural Heritage of the Republic of Srpska plays a significant role in strengthening technical and monitoring capacities in the field of nature protection. It facilitates the integration of data into the E-Nature information system, provides expert opinions on nature conservation, monitors the state of biodiversity, and participates in international reporting processes. The Institute carries out a wide range of professional activities, including taxonomy, valorization, biodiversity monitoring, and the development and maintenance of the information system. Its responsibilities also include preparing expert opinions on protection conditions, developing protection studies, and providing professional justifications for the designation of protected areas. In addition, the Institute maintains official registers, prepares annual reports for the Ministry, contributes to international reporting obligations, and compiles data for the ecological network, Natura 2000, and red lists of species. Furthermore, the Institute actively cooperates with local governments, protected area managers, and scientific institutions, providing them with expert and technical assistance in the implementation of nature protection measures. Expenditures related to these activities are classified under biodiversity financing category 5.01 – Laws, Policies and Plans on Biodiversity, specifically subcategory 5.01.01, according to the third-level taxonomy classification.

The Ministry of Agriculture, Forestry and Water Management of the Republic of Srpska performs administrative and professional tasks as defined by Article 28 of the Law on Republic Administration ("Official Gazette of the Republic of Srpska", No. 115/18, 111/21, 15/22, 56/22, 132/22 and 90/23). Within its mandate, the Ministry integrates biodiversity considerations into agricultural, forestry, and water management policies and ecological schemes, while also contributing to the development of Payment for Ecosystem Services (PES) mechanisms and related incentive reforms. The Ministry is responsible for monitoring wild species within the sectors of hunting, fisheries, and

forestry, and regularly reports its findings to the competent environmental authority. It issues mandatory expert opinions in procedures related to species collection, repopulation, reintroduction, and the introduction of alien species, and participates in the development of criteria and measures for the control of invasive species. Furthermore, it prepares and implements regulatory frameworks and strategic plans in the fields of hunting, fisheries, and forestry, which must include measures for the protection of the ecological network. In accordance with the BIOFIN methodology and GLOBE taxonomy, biodiversity-related expenditures within the Ministry's budget are identified as secondary expenditures, classified under category 9 – Sustainable Use, including the following subcategories: 9.01 – Agrobiodiversity, 9.02 – Sustainable Agriculture, 9.05 – Sustainable Forestry, and 9.06 – Sustainable Freshwater Industry. These expenditures primarily consist of current grants and transfers to institutions and programs whose activities indirectly contribute to biodiversity conservation. Beneficiaries include the Agricultural Institute, the Fund for the Prevention of Infectious Diseases, Veterinary Institute Dr. Vaso Butozan, and projects co-financed through international financial and non-financial institutions. Additional allocations include transfers to the Agricultural Project Coordination Unit, the Public Enterprise Vode Srpske and the Public Enterprise Vučijak Prnjavor, as well as subsidies for expanded forest reproduction, unplanned forest protection measures, and the development of hunting and game management activities.

The Agrarian Payments Agency of the Republic of Srpska was established as a republican administrative organization in accordance with Article 39 of the Law on Republic Administration ("Official Gazette of the Republika Srpska", No. 115/18, 111/21, 15/22, 56/22, 132/22 and 90/23). Its operations are governed by the relevant by-laws, including the Regulation on the Conditions and Methods of Realizing Financial Incentives for the Development of Agriculture and Rural Areas and the Regulation on Incentives for Capital Investments in Agricultural Production, applicable for the observed years 2022, 2023, and 2024. These regulations define the eligibility criteria, procedures, types, amounts, and payment mechanisms of financial incentives, as well as the obligations of beneficiaries, applicable deadlines, and required documentation. Financial support is implemented through subsidies, including incentives, premiums, and rebates financed from funds aimed at promoting agricultural and rural development. These measures are structured into four main categories: Support for current production, including livestock production and crop production; Capital investments, such as the purchase of agricultural machinery, investments in livestock and crop production, storage and processing facilities, construction and equipment of fish farms, introduction of technological innovations, land improvement (melioration), and preservation of indigenous breeds; Rural development measures, aimed at improving living conditions and economic activities in rural areas; Systemic and other support measures, including animal and plant health protection, certification of equipment (e.g. sprayers), pesticide monitoring, support for breeding programs (e.g. artificial insemination), and measures for the protection, improvement, and sustainable management of fish stocks, including the operation of fish protection services. Although primarily oriented toward agricultural productivity and rural development, these measures also have indirect (secondary) impacts on biodiversity, particularly through the preservation of indigenous breeds, sustainable land management practices, and the protection of aquatic ecosystems.

Table 2 provides an overview of expenditures for the observed period with data on the budget rebalance of the institution in question and the percentage share of expenditures in the total budget of the institution.

Table 2. Institutional biodiversity expenditures

Name consumer units/Year	2022.	2023.	2024.
Ministry of Spatial Planning, Construction and Ecology			
Budget rebalance	7,335,500	6,456,700	5,551,800
Expenditure on biodiversity	2,330,000	2,530,000	2,530,000
% share of expenditures in the total budget of the Ministry	31.76	39.18	45.57
Republic Institute for the Protection of Cultural, Historical and Natural Heritage of the Republika Srpska			
Budget rebalance	955,100	1,082,200	1,395,000
Expenditure on biodiversity	538,509	634,788	616,977
% share of biodiversity expenditures in the total budget of the Institute	56.38	58.66	44.23
Ministry of Trade and Tourism			
Budget rebalance	7,556,200	9,056,000	32,860,900
Expenditure on biodiversity	162,500	162,500	162,500
% share of biodiversity expenditures in the total budget of the Ministry of Trade and Tourism	2.15	1.79	0.49
Ministry of Energy and Mining			
Budget rebalance	8,910,200.00	11,101,100.00	11,547,200.00
Expenditure on biodiversity	500,000.00	500,000.00	500,000.00
% share of biodiversity expenditures in the total budget of the Ministry of Environment and Natural Resources	5.61	4.5	4.33
Republic Institute for Geological Research			
Budget rebalance	920,200	1,882,500	1,856,400
Expenditure on biodiversity	460,100	941,250	928,200
% share of investments in biodiversity in the total budget of the Republic Institute for Geological Research of Republika Srpska	50	50	50
Ministry of Agriculture, Forestry and Water Management			
Budget rebalance	47,329,600	28,275,000	36,710,700
Expenditure on biodiversity	10,528,444	5,661,071	9,729,144
% share of biodiversity expenditures in the total budget of the Institute	22.24	20.02	26.5
Agricultural Payments Agency			
Budget rebalance	75,000,000	180,000,000	180,000,000
Expenditure on biodiversity	5,852,222	28,169,775	22,531,830
% share of biodiversity expenditures in the total budget of the Institute	7.8	15.65	12.52

Republic Hydrometeorological Institute of Republika Srpska			
Budget rebalance	2,793,500	2,890,300	2,903,700
Expenditure on biodiversity	1,396,750	1,445,150	1,451,850
% share of biodiversity expenditures in the total budget of the RHMZ	50	50	50

Source: author's analysis

The Republika Srpska is territorially organized into 12 cities and 52 municipalities. Local self-government units participate in the proclamation and management of protected areas on their territory, adopt an Environmental Protection Plan that includes planning in the field of nature. An analysis of biodiversity expenditures by local self-government units for the period 2022-2024 is presented in detail in the table in Annex 1 of this paper. After analyzing the presented data, we can draw the following conclusions:

- For most municipalities and cities, the share of biodiversity expenditures is below 1% of the budget framework, on average for the period 2022-2024, about 0.65% of the budget framework for biodiversity. Large cities have high absolute amounts, but a relatively low percentage share, while small municipalities have high percentage shares in individual years (Šekovići in 2022: 3.24%, Berkovići in 2024: 2.15%), but symbolic nominal amounts, which indicates that high percentages are often not the result of systemic policy, but of a small overall budget and one-off interventions.
- Many LLS show large oscillations by year (e.g. Bijeljina, Prijedor, Gacko, Stanari), which indicates that LLS finance biodiversity indirectly, as well as the absence of multi-year planning of BD in local budgets.
- Biodiversity is not treated as a development policy at the local level, but as a side cost, except for infrastructure or utility projects.

DISCUSSION

The budget system of the Republika Srpska encompasses a set of relationships that arise through the implementation of the budget process, based on economic relations and the government structure. This system accumulates financial revenues that are used to finance public policies. The process of budget planning and execution is regulated by the Law on the Budget System of the Republika Srpska. Budget users dispose of the planned budget funds according to the priorities established by the operational financial plan. Users of budget funds are obliged to use the funds determined in the budget in accordance with the principles of rationality and savings. Monitoring of budget expenditures is supervised by the Ministry of Finance . Subsequent control of the legality of spending of budget funds is carried out by the Budget Inspection. The Government is responsible to the National Assembly for the execution of the budget of the Republic.

It is important to note that the process of establishing a program budget is underway in Republika Srpska as part of the reform and improvement of public finance management in Bosnia and Herzegovina. Budget system The Republic of Srpska is in the process of transforming from line budgeting to program budgeting , i.e. a budget based on results. The introduction of a program budget is expected to make the budgeting process more transparent, as well as the implementation, i.e. execution of the budget.

The analysis of biodiversity expenditure was conducted based on data from published budget revisions for the observed period. In practice, minor deviations may occur between the amounts planned in the revision and the amounts actually spent, and we believe that the presented data provide a sufficiently clear and relevant picture of biodiversity expenditure. Financing of biodiversity in the Republika Srpska comes from the state budget. budget and extrabudgetary sources. Primary expenditures for biodiversity are mainly directed by the Ministry of Spatial Planning, Construction and Ecology of the Republika Srpska. The funds in question relate to financing the operations of three national parks that are under the jurisdiction of the Ministry of Spatial Planning, Construction and Ecology of the Republika Srpska.

Analysis of available data on budget expenditures in the period 2022-2024 shows a slight increase in biodiversity funding in the Republika Srpska. Expenses that are directly and indirectly attributed to biodiversity, accounted for 0.75 % in 2024 (approximately 44 million BAM) of of the total state budget of the Republika Srpska of 5.81 billion BAM. Direct expenditures attributed to biodiversity conservation make up a smaller share, not exceeding 0.044 % of all of annual government spending in 2024. In 2022, these direct Expenditures on biodiversity amounted to approximately 2.5 million BAM. This shows that funds are directed towards biodiversity conservation both through direct measures and through indirect support mechanisms.

Table 3. Share of biodiversity expenditures in the Budget of the Republika Srpska in nominal and % amounts

Year	Total p.e.for biodiversity from the Budget in BAM	Budget of the Republika Srpska in BAM	% of p.e. for biodiversity in the Budget of the Republic of Srpska %
2022	26,846,490	4,510,000,000	0.595
2023	45,019,431	5,523,000,000	0.815
2024	43,580,897	5,810,000,000	0.750

Source: https://vladars.rs/sr-SP-Cyrl/Vlada/Ministarstva/mf/Pages/default.aspx

Table 3 shows total public expenditure on biodiversity as a percentage of GDP. The data presented show that the main driver of the growth in total expenditure on biodiversity is the national budget, while local government expenditure remains relatively stable. The ratio of expenditure to GDP remains below 0.35%, indicating that total allocations for biodiversity constitute a relatively small part of the economy, but with clearly visible growth at the national level. This increase in expenditure is the result of a significant increase in funds allocated to the agricultural sector in 2023 and 2024.

Table 4 Overview of total public expenditure as a percentage of GDP

Year	Total p.e. on biodiversity in BAM	Gross domestic product, cp	% of p.e for biodiversity in GDP
2022	34,805,850	14,536,974,000	0.239
2023	52,315,256	16,085,929,000	0.325
2024	50,966,181	17,205,787,000	0.296

Source: https://vladars.rs/sr-SP-Cyrl/Vlada/Ministarstva/mf/Pages/default.aspx

CONCLUSION

Introducing a program budget and creating programs/projects and activities that would focus only on biodiversity in the future would enable simpler data collection, simplify and improve future analyses, allowing for more comprehensive and long-term assessments of biodiversity funding. In the analyzed period from 2022 to in 2024, biodiversity expenditures will account for 0.75 percent of the total state budget, or about 0.30 percent of the gross domestic product of the Republika Srpska. The results of the analysis showed a trend of increasing state expenditures for environmental protection, including biodiversity . At the republican level, the most significant amount of biodiversity expenditure is allocated through the Ministry of Agriculture, Water Management of the Republika Srpska, i.e. the Agrarian Payments Agency, while primary biodiversity expenditure is allocated mainly through the Ministry of Spatial Planning, Construction and Ecology of the Republika Srpska and the Republic Institute for Cultural, Historical and Natural Heritage. Based on these findings, the obvious recommendation is that through the continuation of the reform of public finances and the budget system in the Republika Srpska, and the introduction of program budgeting, it is necessary to identify special programs within the budget of the Republika Srpska, as well as the budgets of local self-government units, in order to enable more precise, simpler and more efficient monitoring of biodiversity and environmental protection expenditure in the future. Given that the current budget classification is not used to indicate the environmental purpose of expenditures, it is proposed to introduce the "BIO" label into the program classification, which would enable visibility and comparability of data over time and between institutions, as well as strategic targeting of existing resources. This approach would also facilitate alignment with international obligations, including the goals of the Kunming-Montreal Global Biodiversity Framework under the Convention on Biological Diversity (CBD). In relation to the main hypothesis, the results suggest that biodiversity allocations are 0.75 percent of the total state budget. However, this estimate should be interpreted with caution due to data limitations. The absence of a unified and systematic database for tracking biodiversity-related investments remains a major constraint, as it reduces the precision and comparability of financial assessments. The estimate is close to but below the assumed 1% and should be interpreted in light of the stated data limitations.

The study underscores the need for further institutional and methodological improvements, particularly the introduction of program-based budgeting and clearer expenditure classification aligned with biodiversity objectives. Strengthening monitoring and reporting mechanisms would enhance transparency, enable more accurate evaluation of financial flows, and support evidence-based decision-making in biodiversity policy. Overall, while existing financial allocations demonstrate a certain level of commitment to biodiversity conservation, there is significant scope for improving both the scale and effectiveness of funding, as well as the systems used to monitor and evaluate these investments.

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ANNEX 1. Expenditure for biodiversity - local self-government units of the Republic of Serpska

Name city / municipalities	Nominal expenses for BD in 2022. BAM	Budgetary BAM 2022 framework.	% participation expenses for BD in the budget within for 2022.	% share in total expenses for BD cities / municipality 2022	Nominal expenses for BD in 2023. BAM	Budgetary Frame BAM 2023.	% participation expenses for BD in the budget within for 2023.	% share in total expenses for BD cities / municipality 2023.	Nominal expenses for BD in 2024. BAM	Budgetary BAM 2024 framework.	% participation expenses for BD in the budget within for 2024.	% share in total expenses for biodiversity cities / municipalities 2024.
City of I. Sarajevo	210,353	16,359,557	1.29	6.07	131,741	16,196,230	0.81	3.85	126,509	24,808,700	0.51	3.77
Municipality Milici	43,812	8,813,810	0.5	1.26	16,455	9,897,090	0.17	0.48	28,199	10,476,830	0.27	0.84
City Spa Luka	1,571,433	212,322,000	0.74	45.32	1,412,655	211,756,000	0.67	41.3	1,762,050	211,330,000	0.83	52.52
Municipality Bijeljina	657,780	72,375,675	0.91	18.97	219,605	68,585,164	0.32	6.42	196,392	74,171,235	0.26	5.85
Municipality Bileca	91,252	13,970,555	0.65	2.63	190,775	12,767,285	1.49	5.58	93,817	13,223,928	0.71	2.8
Municipality of K. Dubica	96,966	15,057,000	0.64	2.8	62,906	13,892,000	0.45	1.84	57,128	15,548,600	0.37	1.7
Municipality Gradiška	147,893	42,550,000	0.35	4.27	167,996	47,100,000	0.36	4.91	197,271	53,400,000	0.37	5.88
Municipality Groats on Uni	8,622	2,208,750	0.39	0.25	5,702	2,019,000	0.28	0.17	11,428	2,000,000	0.57	0.34
Municipality Boat	45,346	13,378,557	0.34	1.31	56,790	13,517,160	0.42	1.66	8,676	14,980,000	0.06	0.26
Municipality New City	111,625	15,722,752	0.71	3.22	101,288	17,000,663	0.6	2.96	109,035	19,570,811	0.56	3.25
Municipality Petrovac	48,310	3,006,525	1.61	1.39	26,275	2,883,532	0.91	0.77	43,702	2,402,517	1.82	1.3
Municipality Shamac	38,937	10,321,000	0.38	1.12	29,137	12,620,000	0.23	0.85	31,804	15,928,600	0.2	0.95
Municipality Bratunac	58,439	12,714,500	0.46	1.69	90,476	16,124,800	0.56	2.64	87,053	16,917,400	0.51	2.59
Municipality Teapots	32,295	3,887,500	0.83	0.93	30,020	4,299,200	0.7	0.88	33,086	4,405,550	0.75	0.99
Municipality Celinac	79,580	13,140,000	0.61	2.3	84,430	12,690,000	0.67	2.47	123,653	20,200,000	0.61	3.69

Municipality Derventa	148,313	27,347,820	0.54	4.28	159,879	25,690,491	0.62	4.67	133,218	32,341,000	0.41	3.97
Municipality Doboj	691,495	73,005,910	0.95	19.94	687,718	81,963,800	0.84	20.1	657,328	85,995,000	0.76	19.59
Municipality Foca	101,915	16,800,000	0.61	2.94	104,169	17,400,000	0.6	3.05	120,164	24,468,696	0.49	3.58
Municipality Gacko	161,146	12,572,000	1.28	4.65	143,279	16,467,000	0.87	4.19	87,097	15,316,000	0.57	2.6
Municipality Pelagićevo	15,859	4,445,000	0.36	0.46	13,986	3,200,000	0.44	0.41	17,244	3,674,000	0.47	0.51
Municipality of N. Gorazde	22,759	2,743,528	0.83	0.66	24,015	3,013,382	0.8	0.7	26,076	3,128,337	0.83	0.78
Municipality Petrovo	14,988	3,838,250	0.39	0.43	15,092	3,952,000	0.38	0.44	17,087	5,283,200	0.32	0.51
Municipality Khan Sand	92,724	5,467,422	1.7	2.67	99,804	5,760,000	1.73	2.92	61,588	9,546,145	0.65	1.84
Municipality Lake	-	-	-	-	943	1,445,279	0.07	0.03	875	1,668,225	0.05	0.03
Municipality Eights	5,910	2,460,800	0.24	0.17	5,296	2,863,867	0.18	0.15	5,961	3,278,463	0.18	0.18
Municipality Kalinovik	79,830	7,677,000	1.04	2.3	104,733	6,450,000	1.62	3.06	86,460	5,800,000	1.49	2.58
Municipality Fishpond	61,794	6,760,851	0.91	1.78	38,825	6,108,035	0.64	1.13	79,927	6,839,451	1.17	2.38
Municipality Kotor Varos	121,117	12,400,000	0.98	3.49	118,925	14,200,000	0.84	3.48	140,177	16,900,000	0.83	4.18
Municipality Kupres	313	782,055	0.04	0.01	300	614,396	0.05	0.01	2,318	1,006,948	0.23	0.07
Municipality Laktashi	90,538	44,400,000	0.2	2.61	36,791	43,000,000	0.09	1.08	97,542	49,000,000	0.2	2.91
Municipality Lopare	26,377	7,667,000	0.34	0.76	21,047	7,950,000	0.26	0.62	50,512	8,972,000	0.56	1.51
Municipality Ljubinje	13,990	3,433,102	0.41	0.4	140	4,715,360	0	0	13,614	5,081,351	0.27	0.41
Municipality Bruise	142,744	19,662,500	0.73	4.12	176,199	16,643,800	1.06	5.15	250,788	19,550,700	1.28	7.48

Municipality Vukosavlje	5,828	3,086,169	0.19	0.17	6,198	3,242,166	0.19	0.18	30,607	4,801,905	0.64	0.91
Municipality of M. Grad	103,856	20,280,000	0.51	3	99,554	21,178,150	0.47	2.91	85,101	22,774,000	0.37	2.54
Municipality Nevesinje	197,126	11,959,364	1.65	5.68	100,994	12,306,610	0.82	2.95	106,827	14,808,224	0.72	3.18
Municipality Lower Frog	2,907	3,226,000	0.09	0.08	2,697	2,773,000	0.1	0.08	3,438	2,182,000	0.16	0.1
Municipality / City Prijedor	485,481	78,293,405	0.62	14	369,104	83,606,055	0.44	10.79	266,701	85,099,396	0.31	7.95
Municipality Prnjavor	135,336	32,020,000	0.42	3.9	141,202	31,400,000	0.45	4.13	148,094	39,600,000	0.37	4.41
Municipality Rogatica	50,996	8,680,000	0.59	1.47	70,692	9,600,000	0.74	2.07	37,810	11,900,000	0.32	1.13
Municipality Rudo	62,763	6,192,517	1.01	1.81	70,340	7,106,120	0.99	2.06	72,533	8,190,192	0.89	2.16
Municipality Sharp Luka	23,727	2,931,013	0.81	0.68	23,855	4,628,582	0.52	0.7	26,403	2,452,913	1.08	0.79
Municipality I.Ilidza	51,349	11,903,360	0.43	1.48	72,449	13,039,800	0.56	2.12	88,536	17,934,190	0.49	2.64
Municipality East N. Sarajevo	93,407	21,231,270	0.44	2.69	133,073	23,495,700	0.57	3.89	139,431	27,850,952	0.5	4.16
Municipality Pale	17,902	22,000,000	0.08	0.52	33,417	23,274,000	0.14	0.98	20,017	26,012,500	0.08	0.6
Municipality of I. S. Grad	14,305	6,633,080	0.22	0.41	3,226	4,733,300	0.07	0.09	9,985	5,119,010	0.2	0.3
Municipality Trnovo	34,736	4,342,537	0.8	1	50,192	4,839,517	1.04	1.47	46,820	4,983,787	0.94	1.4
Municipality Knezhevo	8,324	6,944,930	0.12	0.24	48,186	7,199,400	0.67	1.41	49,099	7,910,920	0.62	1.46
Municipality Sokolac	101,263	10,091,441	1	2.92	82,132	11,044,000	0.74	2.4	81,187	11,044,000	0.74	2.42
Municipality Serb	40,712	18,383,000	0.22	1.17	30,000	15,920,000	0.19	0.88	26,593	18,220,000	0.15	0.79
Municipality Srebrenica	33,268	11,792,736	0.28	0.96	45,796	12,867,885	0.36	1.34	33,887	12,772,943	0.27	1.01

Municipality Berkovići	13,435	2,133,880	0.63	0.39	15,734	2,084,100	0.75	0.46	66,308	3,084,360	2.15	1.98
Municipality Shekovci	152,508	4,701,626	3.24	4.4	57,623	4,201,928	1.37	1.68	45,686	6,230,250	0.73	1.36
Municipality Shipovo	29,949	9,392,000	0.32	0.86	20,161	10,355,630	0.19	0.59	19,062	17,022,860	0.11	0.57
Municipality Teslic	67,523	36,450,000	0.19	1.95	79,839	32,250,000	0.25	2.33	40,315	33,800,000	0.12	1.2
Municipality of I. Drvar	580	1,278,773	0.05	0.02	400	1,245,810	0.03	0.01	-	-	-	-
Municipality / City Trebinje	539,132	39,411,900	1.37	15.55	647,373	39,160,000	1.65	18.93	703,107	49,980,000	1.41	20.96
Municipality Carbon	15,552	15,019,795	0.1	0.45	9,147	17,316,505	0.05	0.27	102,932	22,867,500	0.45	3.07
Municipality Visegrad	106,532	12,387,858	0.86	3.07	48,667	12,453,179	0.39	1.42	28,307	18,680,000	0.15	0.84
Municipality Vlasenica	15,106	10,963,000	0.14	0.44	8,000	9,440,000	0.08	0.23	7,000	13,200,000	0.05	0.21
Municipality Zvornik	163,597	40,957,000	0.4	4.72	176,151	35,827,500	0.49	5.15	142,313	45,121,720	0.32	4.24
Municipality Kostajnica	15,959	3,647,500	0.44	0.46	64,209	3,795,000	1.69	1.88	22,016	4,380,000	0.5	0.66
Municipality of I. Mostar	2,825	565,076	0.5	0.08	24,940	495,760	5.03	0.73	19,667	556,296	3.54	0.59
Municipality Tenants	338,922	23,282,000	1.46	9.77	383,087	21,828,600	1.75	11.2	157,724	21,828,600	0.72	4.7
	7,959,361.00				7,295,830.00				7,385,285.00			

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