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Sabrija Čadro

Work : Zmaja od Bosne 8, 71000, Sarajevo, Bosnia and Herzegovina

Email: s.cadro@ppf.unsa.ba **Phone:** (+387) 33225727

Phone: (+387) 61812633

Website: https://www.researchgate.net/profile/Sabrija_Cadro

Website: https://scholar.google.com/citations?user=LsYmC7oAAAAJ&hl=en

Facebook: https://www.facebook.com/sabrija.cadro

Gender: Male **Date of birth:** 15/06/1984 **Nationality:** Bosnian-Herzegovinian

ABOUT ME

Associate professor at the University of Sarajevo (UNSA), Faculty of Agriculture and Food Science. Born and living in Sarajevo, Bosnia and Herzegovina.
Teaching: geodesy, agro-hydrology, erosion, soil conversation, amelioration, drainage, and irrigation.
Scientific and research interests: irrigation, drought, soil water balance, evapotranspiration, climate change, smart and digital agriculture, UAVs and remote sensing, disaster risk reduction, agro-climatology, soil physics and agro-hydrology.

WORK EXPERIENCE

[31/10/2024 – Current]

Associate professor

University of Sarajevo

City: Sarajevo | **Country:** Bosnia and Herzegovina

Lecturing, scientific research; Academic assistance and tutoring; Head of scientific research projects

Scientific fields:

Pedology and amelioration, more precisely:

Amelioration, land reclamation, geodesy - aero photogrammetry, agro-hydrology, soil conservation and erosion, drainage, irrigation and drought.

[01/01/2024 – Current]

Leading expert Sustainable Agriculture

Stockholm Environment Institute (SEI) and Forestry and Environmental Action (FEA)

City: Sarajevo | **Country:** Bosnia and Herzegovina

Sustainable agriculture - Sustainable Transition of Bosnia and Herzegovina (BiH SuTra)

[09/12/2022 – Current]

Science and Technology Correspondent for Bosnia and Herzegovina

United Nations Convention to Combat Desertification (UNCCD)

Country: Bosnia and Herzegovina

[23/12/2019 – 30/10/2024]

Assistant professor

University Sarajevo, Faculty of Agriculture and Food Sciences https://ppf.unsa.ba/

Address: Zmaja od Bosne 8, Zmaja od Bosne 8, 71000, Sarajevo, Bosnia and Herzegovina | **Email address:** podrska@ppf.unsa.ba | **Name of unit or department:** Pedology, agrochemistry and melioration | **Business or sector:** Agriculture, forestry and fishing

Lecturing, Scientific research; Academic assistance and Tutoring; Head of scientific research projects

Scientific fields:

Pedology, agrochemistry and amelioration, more precisely:

Melioration, Land reclamation, Geodesy - aero photogrammetry, Agro-hydrology, Soil conservation and Erosion, Drainage, Irrigation and drought.

[01/11/2022 – 31/12/2024]

Member of expert team

FAO

City: Sarajevo | **Country:** Bosnia and Herzegovina

The Fourth Cycle of Land Degradation Reporting: Supporting the UNCCD's PRAIS4 reporting process in Bosnia and Herzegovina

[26/11/2014 – 26/11/2019]

Senior assistant

University Sarajevo, Faculty of Agriculture and Food Sciences https://ppf.unsa.ba/

Address: Zmaja od Bosne 8, Zmaja od Bosne 8, 71000, Sarajevo, Bosnia and Herzegovina | **Email address:** podrska@ppf.unsa.ba | **Name of unit or department:** Pedology, agrochemistry and melioration | **Business or sector:** Agriculture, forestry and fishing

Activities:

Teaching assistant; Lecturing, practical exercises with the students; Scientific research; Academic

assistance and Tutoring; Work on scientific research projects

[12/05/2023 – Current]

National expert for crop production analysis linked to climate change in agriculture

Standing Working Group in South-Eastern Europe (SWG)

City: Skopje | **Country:** North Macedonia

[05/05/2019 – 01/01/2022]

Consultant/Specialist Climate Smart Agriculture (CSA)

Caritas Switzerland in Bosnia and Herzegovina

City: Sarajevo | **Country:** Bosnia and Herzegovina

Consultant/Specialist in Climate Smart Agriculture (CSA) for the ongoing Caritas Switzerland (CaCH) project in Bosnia and Herzegovina (B&H), “Jobs and Income Generation in the Agricultural Sector of B&H (IGAS)”.

[01/09/2022 – 01/11/2022]

Jury member for European Climate Initiative (EUKI)

Center for Energy, Environment and Resources (CENER21)

Country: Bosnia and Herzegovina

[01/01/2021 – 31/12/2022]

Member of the multidisciplinary author team

The International Climate Initiative (IKI)

City: Sarajevo | **Country:** Bosnia and Herzegovina

The International Climate Initiative (IKI) of the German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB) - Decision IPBES-2/4: Conceptual framework for the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services.

[28/11/2019 – 21/11/2021]

Coordinator and leading resercher

Caritas Switzerland in BiH (CACH)

City: Sarajevo | **Country:** Bosnia and Herzegovina

Trialing renewable energy for greenhouses (TREG) - Developing a functional model of the greenhouse by applying heating with a heat pump by the usage of renewable energy sources.

Research related to answering questions:

Can a geothermal heating system provide better competitiveness for agricultural producers in climatically different conditions in BiH? What would be the operation scale to achieve such a system's economic viability?

Which greenhouse crop (different fruit and vegetable varieties) is most suitable for such a model of production?

Cost-benefit calculation with and without initial investment cost, as well as different scenarios of crops and their varieties, included.

[05/05/2008 – 25/11/2014] **Assistant**

University Sarajevo, Faculty of Agriculture and Food Sciences https://ppf.unsa.ba/

Address: Zmaja od Bosne 8, 71000, Sarajevo, Bosnia and Herzegovina | **Email address:** podrska@ppf.unsa.ba | **Name of unit or department:** Pedology, agrochemistry and melioration | **Business or sector:** Agriculture, forestry and fishing

Teaching assistant; Lecturing, practical exercises with the students; Scientific research; Academic assistance and Tutoring; IT, Technical support.

Scientific fields:

Melioration (amelioration), Land reclamation, Geodesy, Agro-hydrology, Soil conservation and Erosion, Drainage and Irrigation.

EDUCATION AND TRAINING

[17/07/2023 – 21/07/2023] **Crop Growth Modelling and Water Productivity for Eco-Efficient Agricultural Water Management**

CIHEAM Bari https://www.iamb.it/

City: Bari | **Country:** Italy |

[27/09/2021 – 01/10/2021] **Advanced remote sensing technologies and tools for crop water requirements estimates and irrigation scheduling**

The Instituto Superior de Agronomia. Universidade de Lisboa (ISA, Lisboa)

City: Lisabon | **Country:** Portugal |

[14/10/2017 – 28/10/2017] **Resilient Agriculture Training**

North Carolina State University https://www.ncsu.edu/

City: Raleigh | **Country:** United States |

Climate change adaption methods by farmers, how to use land and water resources more effectively

in hot and dry conditions, appropriate government policies, organic and conventional crop production,

livestock production, aquaculture and fisheries, pesticide and irrigation practices, the effect of negative

weather events on market prices, extension outreach and training, and agricultural waste

management.

[15/01/2015 – 15/07/2019] **PhD in Agriculture Sciences**

University of Sarajevo, Faculty of Agriculture and Food Science https://ppf.unsa.ba/

Address: Zmaja od Bosne 8, 71000, Sarajevo, Bosnia and Herzegovina | | **Thesis:** Softw are Models for Sustainable Water Management and Increase in Productivity of Irrigated Cropping

The main goal of this research is a determination of irrigation crop water requirements for different

agro-climatic conditions in Bosnia and Herzegovina by using several contemporary software models,

with the special aim of sustainable water resources management, reduction of negative impact of

climate change and maximum utilization of plant potentials while protecting the natural environment.

Methods: MATLAB Software development, ArcGIS, Mapping, Climate, Irrigation, Evapotranspiration,

Zoning, Laboratory Techniques and Procedures, AquaCrop, Fieldwork

[12/09/2015 – 17/09/2015]

Communication And Ways/Methods Of Knowledge Transfer Training

Univerity of Ljubljana, Biotehnical Faculty https://www.uni-lj.si/academies_and_faculties/faculties/2013052914461802/

Address: Jamnikarjeva ulica 101, 1000, Ljubljana, Slovenia |

[16/04/2008 – 07/05/2014]

Master of Agricultural Sciences, Sustainable Soil Management

University of Sarajevo, Faculty of Agriculture and Food Science https://ppf.unsa.ba/

Address: Zmaja od Bosne 8, 71000, Sarajevo, Bosnia and Herzegovina | **Field(s) of study:** Agriculture, forestry, fisheries and veterinary | **Thesis:** Water - Physical and Reclamation Problems of the Most Important Types of Agricultural Land

Applied Pedology (Soil physics, Soil chemistry); Hydro-melioration; Water management; Sustainable

soil and water management; Soil erosion processes; Soil conservation practices; Climate change; GIS

mapping; Soil fertility; Drainage and irrigation.

[01/11/2011 – 30/06/2012]

Sustainable Agriculture Specialist

The Mediterranean Agronomic Institute https://www.iamb.it/

Address: Via Ceglie, 9, 70010, Valenzano BA, Italy | | **Thesis:** Roles and actions of "Eco-Terra" local association in promoting sustainable agriculture

Sustainability; Sustainable agriculture; Biodiversity; Sustainable land management; Soil fertility; Socioeconomic

research in rural area, Agriculture innovation system; Climate change; Resource conserving

technologies; participatory rural appraisal; Gender issues; Markets and value chains; Agro-ecology;

Rural development; Water resource management; SWOT; Local institutions and live-hoods analyses

[23/09/2003 – 05/02/2008]

Agricultural Engineer

University of Sarajevo, Faculty of Agriculture and Food Science https://ppf.unsa.ba/

Address: Zmaja od Bosne 8, 71000, Sarajevo, Bosnia and Herzegovina | | **Thesis:** Soil erosion in Kanton Sarajevo

Agriculture systems and management, Crop production, Food processing, Environment, Pedology,

Hydrology, Melioration, Land and water resources, Agroclimate.

[24/09/2022 – 30/09/2022]

Use of innovative technologies and tools for collective and on-demand pressurized irrigation systems

Consejo Superior de Investigaciones Científicas (CSIC) https://www.csic.es/es

City: Zaragoza | **Country:** Spain |

LANGUAGE SKILLS

Mother tongue(s): Bosnian , Croatian , Serbian

Other language(s):

English

LISTENING C2 **READING** C2 **WRITING** C2

SPOKEN PRODUCTION C2 **SPOKEN INTERACTION** C2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

DIGITAL SKILLS

My Digital Skills

Office, media and data processing

GoogleDocs | EndNote | Adobe Photoshop, Adobe Lightroom - photography post processing | Microsoft Office: Word, Excel, Access, Power Point, Outlook. | CorelIDRAW | Adobe Photoshop | Rstudio

Social media

Social Media Management (Facebook, Twitter, Linkedin, YouTube, Instagram)

Irrigation and drought

CROPWAT | AQUARCROP | SRCLET | ETcalc | DrinC | ISAREG | MABIA | CUP-E | EToCalculator | PDSI | Hydrocalc | SPAW & Soil Water Characteristics | UpflowV3.2 | SIMETAW | WASIM | SPEI | WetUp | RAINBOW

GIS and remote sensing

AquaCrop-GIS | GIS software: ArcGIS, QGIS | MapInfo Professional | PrecisionMapper | Pix4D | DroneDeploy | DJI drone | Google Earth | Agisoft | SNAP

Sol erosion

IntErO | USLE

PUBLICATIONS

[2008] **Erosion Risk On The Arable Soils On The Hill Area Of Canton Sarajevo. Radovi Poljoprivrednog Fakulteta Univerziteta U Sarajevu, Br.59/2, Sarajevo.**

Reference: Žurovec Jasminka, Čadro Sabrija

[2010] **Climate Changes, The Need and Importance Of Crop Irrigation In Northeastern Bosnia And Herzegovina, 21st Scientific-Expert Conference In Agriculture And Food Industry, Neum.**

Reference: Žurovec Jasminka, Čadro Sabrija

[2011] **Crops Yield Reduction In Conditions Without Irrigation In Northeaster Bosnia, 46th Croatian And 6th International Symposium On Agriculture, Opatija.**

Reference: Žurovec Jasminka, Čadro Sabrija

[2011] **Drought Analysis In Sarajevo Using Standardized Precipitation Index (SPI), 22nd International Scientific expert Conference In Agriculture And Food Industry, Sarajevo.**

Reference: Žurovec Jasminka, Čadro Sabrija, Murtić Senad

[2011] **Monaco New Variety of Potato In Bosnia And Herzegovina, 22nd International Scientific expert Conference In Agriculture And Food Industry**

Reference: Čota Josip., Čota Jelena, Žurovec Jasminka., Čadro Sabrija

[2011] **The Relationship Between Standardized Precipitation Index And Yield Reduction Of Significant Agricultural Crops In Northeastern Bosnia, 22nd International Scientific expert Conference In Agriculture And Food Industry, Sarajevo**

Reference: Žurovec Jasminka, Čadro Sabrija

[2012] **Coordination of agricultural and rural development in Montenegro. Proceedings of the Fifth Annual Poverty and Social Protection Conference; March 8-10, 2012; Bangkok. Tomorrow People Organization (Eds), Belgrade. pp: 146-169. ISBN: 978-86-87043-12-1.**

Reference: Despotovic A., Berjan S., El Bilali H., Driouech N., Čadro S. and Simić J.

[2012] **Roles and actions of Eco-Terra local association in promoting sustainable agriculture and rural development in Hodbina village, Herzegovina-Neretva Canton, Bosnia and Herzegovina. Report for Advanced Specialized Course on Sustainable agriculture, Mediterranean Agronomic Institute of Bari.**

Reference: Čadro Sabrija

[2012] **Governance Of Adaptation To And Mitigation of Climate Change on Agricultural, Forest and Water Resources in Bosnia. Third International Scientific Symposium "Agrosym Jahorina 2012", Jahorina**

Reference: Čadro S., Berjan S., El Bilali H., Žurovec O., Simić J. and Rajčević B.

[2012] **International Aid to Bosnian Agriculture, Forestry and Rural Development in The Post-War Period. Third International Scientific Symposium "Agrosym Jahorina 2012", Jahorina**

Reference: 10. El Bilali H., Berjan S., Despotović A., Jovanović M., Driouech N., Čadro S.

[2012] **Urban and Peri-Urban Agriculture in Bosnia and Herzegovina: Legal Framework, Governance and Role of Extension Services. International Conference on Multifunctional Agriculture and Urban-Rural Relations. 1-4 April 2012; The Netherlands**

Reference: El Bilali H., Berjan S., Vittuari M., Despotović A., Čadro S. and Kulina M.

[2012] **Organic farming in Bosnia and Herzegovina: governance, policies and market. CD-ROM of Abstracts of the XIII World Congress of Rural Sociology: "The new rural world: from crises to opportunities"; Lisbon, Portugal, July 29-August 4, 2012.**

Reference: El Bilali H., Berjan S., Noureddin, D., Čadro, S., Simic, J., Kulina, M., Despotovic A.

[2012] **Impacts of the global financial and economic crisis on Bosnian agro-food sector and rural areas. CD-ROM of Abstracts of the XIII World Congress of Rural Sociology: "The new rural world: from crises to opportunities"; Lisbon, Portugal, July 29-August 4, 2012.**

Reference: Berjan S., El Bilali H., Despotovic A., Radovic M., Simic J. and Čadro S. (2012)

[2014] **Urban agriculture in Bosnia: Case of Sarajevo region. Journal of Central European Agriculture, 14(4), pp.1585-1597. DOI: 10.5513/JCEA01/14.4.1401**

Reference: El Bilali H., Berjan S., Simic, J., Despotovic, A., Cadro, S., Kulina, M.

[2015] **Soil-Water Characteristic Curve and Retention of Water for Different Types of Agricultural Soils in Tuzla Canton. 26th International Scientific expert Conference in Agriculture and Food Industry, Ilidža, Sarajevo.**

Reference: Žurovec Jasminka, Čadro Sabrija

[2015] **Temporal Drought and Soil Moisture Variability in the Arable Land of Spreča Valley. 26th International Scientific expert Conference in Agriculture and Food Industry, Ilidža, Sarajevo.**

Reference: Žurovec Jasminka, Čadro Sabrija

[2015] **The Relationship Between Analyzed Physical, Water and Chemical Characteristics of Different Agricultural Soil Types in Tuzla Canton. VI International Scientific Agricultural Symposium "Agrosym 2015", Jahorina.**

Reference: Žurovec Jasminka, Čadro Sabrija

[2015] **Assessing the Hydraulic Sensitivity of Pressurized Irrigation Delivery Networks Through the MASSCOTE/MASSPRES Rational. VI International Scientific Agricultural Symposium "Agrosym 2015", Jahorina.**

Reference: Salwa Cherni-Čadro, Zaccaria D., Čadro, S.

[2015] **National Strategy: Lifelong Learning for Sustainable Agriculture in Bosnia and Herzegovina.**

Reference: Karić N., Gadžo D., Đikić M., Miličević M., Spužević I., Grahić J., Čadro S., Gavrić T.

[2016] **Real-Time Irrigation Scheduling charts for Apple (Malus domestica) in the Central-Eastern Areas of Bosnia and Herzegovina. VII International Scientific Agricultural Symposium "Agrosym 2016", Jahorina. pp.77-83. 10.7251/AGRENG1607006.**

Reference: Čadro, S., Žurovec, J., Radović, M.

[2016] **Effect of Climate Change on Agro Hydrological Balance for Some Regions in Bosnia and Herzegovina. VII International Scientific Agricultural Symposium "Agrosym 2016", Jahorina. pp.1863-1869. 10.7251/AGRENG1607280.**

Reference: Čadro, S., Žurovec, J., Mrkulić, A., Šehić, Dž., Šero, A., Mičić, G.

[2017] **Chart for Real Time Potato Irrigation Based on Actual Weather Conditions in Herzegovina. Radovi Poljoprivredno-prehrambenog Fakulteta Univerziteta U Sarajevu, Br. 67/2, 299 – 311. Sarajevo.**

Reference: Čadro, S., Žurovec Jasminka, Husić, S.

[2017] **Validation and calibration of various reference evapotranspiration alternative methods under the climate conditions of Bosnia and Herzegovina. International Soil and Water Conservation Research. Volume 5, Issue 4, December 2017, Pages 309-324. https://doi.org/10.1016/j.iswcr.2017.07.002.**

Reference: Čadro, S., Uzunović, M., Žurovec, J., Žurovec, O.

[2017] **Quantitative Assessment of Vulnerability to Climate Change in Rural Municipalities of Bosnia and Herzegovina. Sustainability 2017, 9, 1208; doi:10.3390/su9071208.**

Reference: Žurovec, O., Čadro, S., Situala, B.

[2017] **Severity, Magnitude and Duration of Droughts in Bosnia and Herzegovina Using Standardized Precipitation Evapotranspiration Index (SPEI). Agriculture & Forestry, 63(3), 199-206. doi: DOI:10.17707/AgricultForest.63.3.20.**

Reference: Čadro, S., Žurovec, J., & Cherni-Čadro, S.

[2017] **Assessment of Erosion and Possible Conservation Measures of Agricultural Soil in the Area of Željezno Polje. Works of the Faculty of Agriculture and Food Sciences, University of Sarajevo, LXII (67/2), 299-311.**

Reference: Žurovec, J., Čadro, S., Sinanović, K., Husić, S., Šehić, D., & Mrkulić, A.

[2018] **Impact of Climate Change on the Annual Water Balance in a Humid Climate Agriculture & Forestry (Vol. 64, pp. 129-143). Podgorica.**

Reference: Čadro, S., Miseckaite, O., Gavrić, T., Baublys, R., & Žurovec, J.

[2018] **Climate and aridity change. Paper presented at the 8TH Asian Regional Conference (8ARC): Irrigation in Support of Evergreen Revolution, Kathmandu, Nepal.**

Reference: Miseckaite, O., Čadro, S., Tunguz, V., Lukashevich, V., Šimunić, I., i Orlović-Leko, P.

[2018] **Influence of Meteorological Parameters on the Yield and Chemical Composition of Common Buckwheat. Agriculture & Forestry, 64(4), 113-120.**

Reference: 29. Gavrić, T., Čadro, S., Gadžo, D., Đikić, M., Bezdrob, M., Jovović, Z., . . . Hamidović, S.

[2018] **Effects of Plant Density on the Yield and Total Phenolic Contents of Tartary Buckwheat. Paper presented at the Agrosym 2018, Jahorina, Bosnia and Herzegovina.**

Reference: Gavrić, T., Gadžo, D., Đikić, M., Bezdrob, M., Čadro, S., & Bašić, F.

[2018] **Climate Change Impact on the Main Conponents of Thornthwaite-Mather Water Balance. Paper presented at the 8th International Scientific and Tehnical Conference "Modern Problems of Water Managmenet, Environmental Protection, Architecture and Construction", Tbilsi, Georgia.**

Reference: Miseckaite, O., & Čadro, S.

[2019] **A reference evapotranspiration map for Bosnia and Herzegovina. International Soil and Water Conservation Research, 7(1), 89-101. doi: 10.1016/j.iswcr.2018.11.002.**

Reference: Čadro, S., Cherni-Cadro, S., Markovic, M., & Zurovec, J.

[2019] **Changes in the water balance of Bosnia and Herzegovina as a result of climate change. CASEE CONFERENCE 2019. Sarajevo, Bosnia and Herzegovina 12 - 15 June, 2019.**

Reference: Čadro, S., Uzunović, M., Cherni-Čadro, S., Žurovec, J.

[2019] **Kreiranje prognoznog modela za plamenjaču krastavca u agroekološkim uslovima Tuzlanskog kantona. Works of the Faculty of Agriculture and Food Sciencies, University of Sarajevo, Vol. LXIV, No. 69/1**

Reference: Almira Konjić, Mirsad Kurtović, Fuad Gaši, Jasmin Grahić, Osman Musić, Sabrija Čadro...

[2019] **Entrepreneurial Education Skills in Urban Agriculture of Bosnia And Herzegovina. Works of the Faculty of Agriculture and Food Sciences, University of Sarajevo, Vol. LXIV, No. 69/2.**

Reference: Alen Mujčinović, Sabrija Čadro, Mirza Uzunović, Merima Makaš, Petar Glamočlija, Pakeza Drkenda

[2019] **A Modern Hardware and Software Solutions for Corn Irrigation. Proceedings ISAE 2019. 31. October – 2. November 2019. Belgrade, Serbia**

Reference: Čadro Sabrija, Škaljić Selim, Rakita Nermin, Žurovec Jasminka

[2020] **Soil Water Balance Response to Climate Change in Posavina Region. 30th Scientific-Experts Conference of Agriculture and Food Industry. AgriConf 2019. IFMBE Proceedings, vol 78. Springer, Cham**

Reference: Čadro S., Marković M., Kaloper S.E., Ravlić M., Žurovec J.

[2020] **Determination of erosion intensity in Brka watershed, Bosnia and Herzegovina. Agriculture and Forestry, 66 (2): 79-92.**

Reference: Kaloper, S. E., Čadro, S., Uzunović, M., Cherni-Čadro, S.

[2020] **Kalandar navodnjavanja nekih voćarskih kultura na području Tuzlanskog kantona. Works of the Faculty of Agriculture and Food Sciences, University of Sarajevo, Vol. LXIV, No. 70.**

Reference: Sabrija Čadro, Osman Musić, Selman Edi Kaloper, Maida Krdžalić, Amila Kušeš.

Add a description here...

[2021] **Assessment of Soil Erosion Intensity Using Erosion Potential Method: Case Study – Brka River Basin.**

Reference: Kaloper, S. E., Čadro, S. 31st International Scientific-Expert Conference of Agriculture and Food Industry (AGRIFOOD 2021) 27-28 September 2021, Ege University, Izmir, Turkey

Add a description here...

Relationships between Heavy Metals and Their Connection to Amorphous and Total Iron in a Frequently Subsampled Clay Pit Core Sample. ACS Earth Space Chem

Reference: Josip Jurković, Senad Murtić, Fejzo Bašić, Teofil Gavrić, Emina Sijahović, and Sabrija Čadro

Add a description here...

[2021] **The evaluation of effective rainfall under different climatic conditions. Agroekologija, ekološka poljoprivreda i zaštita okoliša**

Reference: Monika Marković, Atilgan Atilgan, Sabrija Čadro, Marko Oršolić, Vladimir Zebec

[2021] **Trialling Renewable Energy for Greenhouses (TREG) - FINAL REPORT. Jobs and Income Generation in the Agricultural Sector of Bosnia and Herzegovina (IGAS)**

Reference: Sabrija Čadro, Emir Bećirović, Merima Makaš et al

Add a description here...

[2021] **Priručnik za proizvodnju jagode - CARITAS Švicarske u Bosni i Hercegovini**

Reference: Lejla Hećimović, Sabrija Čadro

Add a description here...

[2022] **Geothermal energy for sustainable agriculture: a case study Sarajevo, Bosnia and Herzegovina.**

Reference: Čadro, S., Bećirović, E., Makaš, M., Omerović, Z., Zahirović, Ć., Crljenković B. Agriculture and Forestry, 68 (2): 93-108.

Bosnia and Herzegovina is strategically committed to agriculture. Although it has adequate natural resources to engage in modern agriculture, it is also an area that faces a number of problems, such as small landholdings, low technological level of production, abandonment of rural areas, low yields, high exposure and poor adaptability to climate change. Given these conditions, the main goal of this paper was to determine the possibility for the stallholder farmer in Bosnia and Herzegovina to increase its sustainability using geothermal heating system to heat the greenhouse during the winter and achieve safer production with higher yields. Lettuce (Lactuca sativa) was chosen as the test crop. By heating, a higher air temperature was achieved in the greenhouse (2.20 -

3.82 oC), a higher growth intensity was also achieved, as well as much shorter lettuce vegetation, which was only 67 days. However, the economic aspects of sustainability have not been realized, these higher yields are not enough to cover costs. Fixed cost value, was covered with gross margin five times (502%) in the control greenhouse, while achieved gross margin is not sufficient to cover fixed costs in the heated greenhouse, shown by the calculated value of 60%.

[2022] **Smart agricultural water management of maize crop cultivation on two different pedoclimatic locations in Bosnia and Herzegovina. Conference: XI International Symposium of Agricultural Sciences "AgroReS 2022"At: Trebinje, Bosnia and Herzegovina**

Reference: Mihajlo Marković, Zlatan Kovačević, Vojo Radić, Sabrija Čadro, Mladen Todorović, et al.

Add a description here...

[2022] **Godišnja produkcija erozionog nanosa i mogućnost njegovog smanjenja na području sliva rijeke Brke. Works of the Faculty of Agriculture and Food Sciences, University of Sarajevo, Vol. LXVII, No. 72/1**

Reference: Selman Edi Kaloper, Sabrija Čadro

Add a description here...

[2023] **Climate Change Impacts on Water Balance Components in Bosnia And Herzegovina and Croatia**

Reference: Sabrija ČADRO, Mirza UZUNOVIĆ, Monika MARKOVIĆ, Ognjen ŽUROVEC , Milan GOCIĆ

Write here the description...

[2023] **Komparativna analiza naprednih modela za precizno navodnjavanje kukuruza**

Reference: Benjamin Crljenković, Sabrija Čadro. Works of the Faculty of Agriculture and Food Sciences, University of Sarajevo, Vol. LXVIII, No. 73/2. p16-28

[2023] **Impact of Climate Change on the Soil Water Balance Components in the Area of Sanski Most (Bosnia and Herzegovina)**

Reference: Ajla Smajlovic, Ahmed Gudic, Ajdin Avdovic, Faruk Hadžic, Sara Tatarevic, Vanesa Ibrakovic, Zejneba Kermo, and Sabrija Cadro.

[2023] **Determination of Water Extractable Chloride in the Greenhouse Soil and Minimizing Interferences Caused by the Presence of the Iron Ions**

Reference: Jurković, J. Elmedina Bristrić, Sanel Haseljić, Sabrija Čadro, Fejzo Bašić, Rasim Omanović & Jasmina Sulejmanović.

[2024] **A roadmap to consolidate research and innovation in agricultural water management in Bosnia and Herzegovina**

Reference: Enrique Playán, Nataša Čereković, Mihajlo Marković, Željko Vaško, Marinko Vekić, Alen Mujčinović, Sabrija Čadro, Đurađ Hajder, Milan Šipka, Emir Bećirović, Musić, et al., . Agricultural Water Management, Volume 293, 2024, 108699, ISSN 0378-3774,

[2024] **Climate Change Influence on Occurrence of Extreme Dry-Wet Periods in Bosnia and Herzegovina**

Reference: Čadro, S., Uzunović, M., Omerović, Z., Vlahovljak, E., Konjić, A., Marković, M. Agriculture and Forestry, 70(1), 325-344.

[2024] **Assessing the impact of climate change on extreme hydrological events in Bosnia and Herzegovina using SPEI**

Reference: Sabrija ČADRO, Monika MARKOVIĆ, Adna HADŽIĆ, Adnan HADŽIĆ, Ognjen ŽUROVEC. Journal of Central European Agriculture, 2024, 25(2), p.531-541

[2024] **Upgrading Maize Cultivation in Bosnia and Herzegovina from Rainfed to Irrigated Systems: Use of Remote Sensing Data and the Dual Crop Coefficient Approach to Estimate Evapotranspiration**

Reference: Čadro, S., Omerović, Z., Soares, D., Crljenković, B., Almeida, W.S., Šipka, M., Makaš, M., Todorović, M., Paço, T.A. Water 2024, 16, 1797.

[2024] **Impact of different water regimes on maize grown at two distinctive pedo-climatic locations in Bosnia and Herzegovina**

Reference: Natasa Cerekovic, Mihajlo Markovic, Vojo Radic, Sabrija Cadro, Benjamin Crljenkovic, Nery Zapata, Teresa A. Paco, Wilk Almeida, Ruzica Stricevic and Mladen Todorovic. Spanish Journal of Agricultural Research 22 (3), e1201, 13 pages

NETWORKS AND MEMBERSHIPS

[24/02/2023 – Current] **Member of Land System group of The European Environment Information and Observation Network (Eionet) - European Environment Agency (EEA)**

[01/09/2022 – Current] **Special Issue editor MDPI land "Tillage Methods on Soil Properties and Crop Growth"**

[01/01/2018 – Current] **Member of the expert team at company diVision Agro: soil and water management expert**
Sarajevo

Member of syndicate: secretary for the Faculty of Agriculture and Food Science syndicate
Sarajevo

[01/07/2023 – Current] **Member of the expert team at the company Agrodrone, Sarajevo**

[01/01/2017] **Member of GREEN CHOICE association (http://gchoice.org/en/)** Sarajevo

[15/04/2012 – Current] **Member of The European Drought Centre (EDC)**

DRIVING LICENCE

Motorbikes: AM

Motorbikes: A1

Motorbikes: A2

Motorbikes: A

Cars: B1

Cars: B

Cars: BE

CONFERENCES AND SEMINARS

[16/04/2010 – 19/04/2010] **IV Conference: Higher Education Reform** Sarajevo, Bosnia and Herzegovina

[01/09/2010 – 04/09/2010] **21st Scientific-Expert Conference In Agriculture and Food Industry**
Neum, Bosnia and Herzegovina

[14/02/2011 – 18/02/2011] **46th Croatian And 6th International Symposium on Agriculture** Opatija, Croatia

[14/04/2011 – 15/04/2011] **V Conference: Higher Education Reform** Sarajevo, Bosnia and Herzegovina

[28/09/2011 – 01/10/2011] **22nd International Scientific expert Conference in Agriculture And Food Industry**
Sarajevo, Bosnia and Herzegovina

[28/11/2011 – 29/11/2011] **International Workshop: Guidelines for the Sustainability of the Mediterranean Diet**
Bari, Italy

[15/11/2012 – 17/11/2012] **Third International Scientific Symposium "Agrosym Jahorina 2012"** Jahorina, Bosnia and Herzegovina

[01/09/2015 – 04/09/2015] **26th International Scientific expert Conference in Agriculture and Food Industry**
Ilidža, Sarajevo

[15/10/2015 – 18/10/2015] **VI International Scientific Agricultural Symposium "Agrosym 2015"** Jahorina, Bosnia and Herzegovina

[29/10/2015 – 30/10/2015] **British Council: Quality, skills and mobility in higher education** Sarajevo, Bosnia and Herzegovina

[06/10/2016 – 09/10/2016] **VII International Scientific Agricultural Symposium "Agrosym 2016"**
Jahorina, Bosnia and Herzegovina

[04/09/2016 – 16/09/2016] **Life long learning: International Summer School, Beekeeping preserving our future**
Sarajevo, Bosnia and Herzegovina

[10/09/2016 – 23/09/2016] **Seminar: Beekeeping: Preserving Our Future** Sarajevo, Bosnia and Herzegovina

[27/09/2017 – 29/09/2017] **28th Scientific-Experts Conference of Agriculture and Food Industry**
Sarajevo, Bosnia and Herzegovina

[01/10/2018 – 04/10/2018] **IX International Scientific Agricultural Symposium "Agrosym 2018"** Jahorina, Bosnia and Herzegovina

[28/05/2018 – 31/05/2018] **Green Room Sessions 2018 International GEA (Geo Eco-Eco Agro) Conference**
Podgorica, Montenegro

[05/11/2018 – 05/11/2018] **Raising awareness about natural disasters risk management in Western Balkan countries (NatRisk)**
Sarajevo, Bosnia and Herzegovina

[12/06/2019 – 15/06/2019] **CASEE CONFERENCE 2019** Sarajevo, Bosnia and Herzegovina

[26/09/2019 – 27/09/2019] **30th Scientific-Experts Conference of Agriculture and Food Industry**
Sarajevo, Bosnia and Herzegovina

[31/10/2019 – 02/11/2019] **ISAE 2019 - 4th International Symposium** Belgrade, Serbia

[27/09/2021 – 01/10/2021] **Advanced remote sensing technologies and tools for crop water requirements estimates and irrigation scheduling**
the Instituto Superior de Agronomia. Universidade de Lisboa (ISA, Ulisboa)

[24/09/2022 – 30/09/2022] **Advanced Course: Use of innovative technologies and tools for collective and on-demand pressurized irrigation systems**
CSIC - Consejo Superior de Investigaciones Científicas, Zaragoza Spain

[01/12/2022 – 02/12/2022]

32nd International Scientific -Expert Conference of Agriculture and Food Industry

Sarajevo, Bosnia and Herzegovina

[01/10/2024 – 03/10/2024]

34rt Scientific-Expert Conference of Agriculture and Food Industry. Agriconference 2024, Ilidža, Sarajevo.

Sarajevo

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[30/11/2024 – 13/12/2024]

The United Nations Convention to Combat Desertification (UNCCD) Conference of the Parties (COP16)

Riyadh, Saudi Arabia

Member of Bosnia and Herzegovina delegation, as Science and technology correspondent for UNCCD

Link: https://www.unccd.int/cop16

PROJECTS

[01/01/2014 – 31/12/2016]

Lifelong Learning for sustainable agriculture in Alps-Danube - Adriatic region 544585-TEMPUS-1-2013-HR-TEMPUS-JPHES, Funded by the EU

Teacher staff in TEMPUS IV Project

[01/01/2017 – 31/12/2017]

Irrigation project Višićka kaseta, Čapljina, Bosnia and Herzegovina, financed by the World Bank

In charge of the agronomic part of the project. Irrigation and drainage requirements.

[01/01/2017 – 31/12/2020]

Western Balkan Urban Agriculture Initiative (BUGI), financed through ERASMUS + programme EU

Member of the project team

[01/01/2017 – 31/12/2017]

Irrigation project Municipality Žepće, Bosnia and Herzegovina, financed by the World Bank

In charge of the agronomic part of the project. Irrigation and drainage requirements.

[01/01/2017 – 31/12/2018]

Irrigation project Grad Bihać, Bosnia and Herzegovina, financed by the World Bank

In charge of the agronomic part of the project. Irrigation and drainage requirements.

[01/01/2018 – 31/12/2020]

Online development platform for creation and realization of innovative solutions in the framework of agroecosystems - OnOff Agro, financed by Challenge to Change programme

Member of the project team

[01/01/2018 – 31/12/2021]

ERASMUS+ CBHE project Harmonization and Innovation in PhD Study Programs for Plant Health in Sustainable Agriculture -HarISA

Head of the dissemination work package

[01/01/2020 – 01/01/2022]

Trialling Renewable Energy For Greenhouses (TREG) - Caritas Switzerland in BiH (CACH)

Project Coordinator

This scientific/research collaboration is the result of the framework of CACH activities and the project Jobs and Income Generation in the Agricultural Sector of Bosnia and Herzegovina (IGAS) which focuses on generating income in agriculture and increasing the

ability of smallholder farmers in BiH to meet forthcoming challenges among other to better cope with weather changes especially unusually cold springs and early summers. Developing a functional model of the greenhouse by applying heating with a heat pump by usage of renewable energy sources was proposed as an idea that would help the realization of these goals. It was assumed that using the heating model would decrease the influence of extreme temperatures in greenhouse production, prolonged periods of vegetation and fruiting as well as increase production and gain better prices because of earlier production. The idea had to be tested through field trials and a research project called Trialling Renewable Energy for Greenhouses (TREG) was created. The realization of this project began in the spring of 2020. Due to the coronavirus pandemic, there was no experiment with tomatoes in the first year (March), which was compensated for in 2021. The research activities were completed in October 2021. The main questions the research within the TREG project should answer are: • Greenhouses with an installed geothermal heating system can provide better competitiveness of agricultural producers in climatically different conditions in BiH? • What would be the operation scale to achieve such a system's economic viability? • Which greenhouse crop (different fruit and vegetable varieties) is most suitable for such a model of production? • Cost-benefit calculation with and without initial investment cost, as well as different scenarios of crops and their varieties, included.

[01/09/2020 – 30/03/2024]

Modern techniques to ensure environmental sustainability in Eastern Europe (MEET) - 621118-EPP-1-2020-1-BA-EPPJMO-MODULE - Erasmus+ Jean Monnet Module

Project coordinator

[01/01/2021 – 01/09/2024]

Promoting SMART agricultural WATER management in Bosnia and Herzegovina - Horizont 2020 - WIDESPREAD-05-2020 Twinning

Project coordinator for University Sarajevo

[01/01/2022 – 01/04/2023]

The fourth cycle of Land Degradation Reporting: Supporting the UNCCD's PRAIS4 reporting process in Bosnia and Herzegovina

Link: https://data.unccd.int/country-overview?country=BIH

[01/01/2022 – 31/12/2024]

Smart systems in agriculture - a response to the challenges of the 21st century - EU4Agri, UNDP

Research team member - Water in smart and sustainable agriculture

[01/10/2024]

Sustainable Soil and Subsoil health promotion by implementing agroecological land use and management to enhance ecosystem services delivery for society (SUS-SOIL), 101157560, HORIZON-MISS-2023-SOIL-01-01, Horizon Europe

Project coordinator for University Sarajevo

MANAGEMENT AND LEADERSHIP SKILLS

Management and leadership skills

Ability to work in a team, develop synergies and establish effective working groups. Ability to work

under pressure and stressful situations.

Excellent drafting and formulation skills.

Leadership and management skills gained through work with students and work on several

national and international projects. Giving lectures (practice exercises), responsible for their evaluation and technical processing.

Co-tutoring more than 25 students in their bachelor's or master's thesis.

HOBBIES AND INTERESTS

Photography, photogrammetry, cinematography, gardening

VOLUNTEERING

[25/09/2015] **European Researchers' Night - BiH2015** Sarajevo, Bosnia and Herzegovina

[23/10/2021 – 23/10/2021] **Organisator of CATCHaCORN competition** Sarajevo, Bosnia and Herzegovina

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[22/10/2022 – 22/10/2022] **Organisator of CATCHaCORN 2 competition** Sarajevo, Bosnia and Herzegovina

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