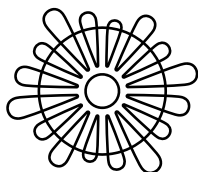


GEADRIA



Sveučilište u Zadru
Universitas Studiorum
Jadertina | 1396 | 2002 |

HRVATSKO GEOGRAFSKO DRUŠTVO - ZADAR / CROATIAN GEOGRAPHICAL SOCIETY - ZADAR
SVEUČILIŠTE U ZADRU / UNIVERSITAS STUDIORUM JADERTINA / UNIVERSITY OF ZADAR
ODJEL ZA GEOGRAFIJU / DEPARTMENT OF GEOGRAPHY

UDC 91

CODEN GEOAFZ

ISSN 1331-2294

GEOADRIA

GLASILO HRVATSKOGA GEOGRAFSKOG DRUŠTVA - ZADAR
I ODJELA ZA GEOGRAFIJU SVEUČILIŠTA U ZADRU

JOURNAL OF THE CROATIAN GEOGRAPHICAL SOCIETY - ZADAR
AND DEPARTMENT OF GEOGRAPHY UNIVERSITY OF ZADAR

REFERIRA SE U / *Indexed in:*
Web of Science Core Collection – Emerging Source Citation Indeks (ESCI), Scopus, ERIH PLUS, GEOREF,
Current Geographical Publications

AKADEMSKE BAZE I PRETRAŽIVAČI / *Academic databases and searching engines*
DOAJ, EBSCO (Academic Search Complete), Hrcak

ON-LINE INAČICA ČASOPISA NA WEB STRANICI / *On-line version of the journal on the web address*
<https://morepress.unizd.hr/journals/index.php/geoadria>, <http://hrcak.srce.hr/geoadria>

IZDAJU / *Published by:*
Sveučilište u Zadru, Odjel za geografiju / University of Zadar, Department of Geography
Hrvatsko geografsko društvo – Zadar / Croatian Geographical Society – Zadar

ADRESA UREDNIŠTVA / *Address of the Editorial Board*
Ulica dr. Franje Tuđmana 24 i, 23000 Zadar, HRVATSKA
Tel.: 023/200-823, 023/345-020, 023/200-814,
E-mail: nloncar@unizd.hr, anblace@unizd.hr, imaric1@unizd.hr

POVJERENSTVO ZA IZDAVAČKU DJELATNOST SVEUČILIŠTA U ZADRU / *University of Zadar Publishing Committee*

PREDSJEDNIK / *President*
Josip Faričić

UREDNIČKI ODBOR / *Editorial Board*

GLAVNA UREDNICA / *Editor-in-Chief*
Nina Lončar

IZVRŠNI UREDNIK / *Executive Editor*
Ante Blaće

TEHNIČKI UREDNIK / *Technical Editor*
Ivan Marić

ČLANOVI / *Members*

Sanja Faivre (Prirodoslovno-matematički fakultet Sveučilišta u Zagrebu, Zagreb), Borna Fürst-Bjeliš (Prirodoslovno-matematički fakultet Sveučilišta u Zagrebu, Zagreb), Lluís Gómez Pujol (Universitat de les Illes Balears, Palma de Mallorca, Španjolska), Boštjan Kerbler (Urbanistični inštitut Republike Slovenije, Ljubljana, Slovenija), Sanja Klempić Bogadi (Institut za migracije i narodnosti, Zagreb), Damir Magaš (Sveučilište u Zadru, Zadar), Irena Mrak (Visoka šola za varstvo okolja, Velenje, Slovenija), Maša Surić (Sveučilište u Zadru, Zadar), Ante Šiljeg (Sveučilište u Zadru, Zadar)

LEKTORICE / *Language Editor*
Jadranka Varošaneć (hrvatski) / *(Croatian)*, Marija Schjaer (engleski) / *(English)*

PRIJEVODI / *Translations by*
autori *(authors)*

GRAFIČKO OBLIKOVANJE KORICA / *Cover Design*
Sveučilište u Zadru

ISSN 1331-2294 (tisak / *print*)
ISSN 1848-9710 (online)
DOI: 10.15291/geoadria

Glasilo izlazi dvaput godišnje / *The Journal is published twice a year*
Za članke odgovaraju autori / *The authors take full responsibility for their papers*
Odabir članaka i recenzenata obavio je urednički odbor / *Papers and reviewers selection made by Editorial Board*

Glasilo sufinancira / *The Journal is subsidized by*
Ministarstvo znanosti i obrazovanja Republike Hrvatske / *Ministry of Science and Education of Republic of Croatia*

Geoadria je časopis u otvorenom pristupu. Sadržaj časopisa u cijelosti je besplatno dostupan. Korisnici smiju čitati, preuzimati, kopirati, distribuirati, tiskati, pretraživati ili stavljati poveznice na materijal te mijenjati, preoblikovati i prerađivati materijal ili ga koristiti na druge zakonite načine, sve dok odgovarajuće citiraju izvornik, sukladno CC BY licenci.

Journal Geoadria is an Open Access journal. Users are allowed to read, download, copy, redistribute, print, search and link to material, and alter, transform, or build upon the material, or use them for any other lawful purpose as long as they attribute the source in an appropriate manner according to the CC BY licence.



SADRŽAJ / CONTENTS

Članci / Articles

- PASCHALIS RAMNALIS, DIMITRIOS-VASILEIOS BATZAKIS, EFTHIMIOS KARYMBALIS
Applying two methodologies of an integrated coastal vulnerability index (ICVI)
to future sea-level rise. Case study: southern coast of the Gulf of Corinth, Greece 7
- IRENONSEN OYAIMARE UDDIN, OGBONNAYA EZE ORI, EDWIN MBADIWE IGBOKWE
Patterns of international migration among rural households in Edo state, Nigeria 25
- NIKOLA VOJNOVIĆ
Materijalna baština antifašizma u južnoj Istri kao temelj
razvoja memorijalnog turizma
*The tangible heritage of antifascism in southern Istria as a basis
of the memorial tourism development* 39
- MARCIJA BUDIĆ, LANA SLAVUJ BORČIĆ
Prepoznatljivost i potencijal tradicijskih i umjetničkih obrta kao baštine Zagreba
Recognisability and potential of traditional and artistic crafts as heritage of the city of Zagreb 69
- VERA GRAOVAC MATASSI, ADRIANA ROGIĆ
Trendovi kretanja mortaliteta u Hrvatskoj u prva dva desetljeća 21. stoljeća
Mortality trends in Croatia in the first two decades of the 21st century 97
- JOSIP FARIČIĆ
Zaljubljenik u domovinu i geografiju – kratki prikaz znanstvenih,
nastavnih i institucijskih doprinosa profesora emeritusa
Damira Magaša u prigodi 70. obljetnice života 127
- Naputak autorima / Guidelines for authors* 133

ISPRAVAK / ERRATUM

U časopisu "Geoadria" broj 27/2 (2022.) rad *Uloga geografskog predtercijarnog obrazovanja u razvoju bioekonomije* (119-146), <https://doi.org/10.15291/geoadria.3422>, pogrešno je kategoriziran kao izvorni znanstveni rad. Točna kategorizacija je **pregledni rad**.

Uredništvo

In the journal "Geoadria" No. 27/2 (2022) the paper *The role of pre-tertiary geography education in the development of bioeconomics* (119-146), <https://doi.org/10.15291/geoadria.3422> has been miscategorized as the original scientific paper.

It is a **review paper**.

Editorial Board

APPLYING TWO METHODOLOGIES OF AN INTEGRATED COASTAL VULNERABILITY INDEX (ICVI) TO FUTURE SEA-LEVEL RISE. CASE STUDY: SOUTHERN COAST OF THE GULF OF CORINTH, GREECE

PRIMJENA DVIJE METODOLOGIJE INTEGRIRANOG INDEKSA RANJIVOSTI OBALNOG PODRUČJA (ICVI) NA BUDUĆI PORAST RAZINE MORA. STUDIJA SLUČAJA: JUŽNA OBALA KORINTSKOG ZALJEVA, GRČKA

PASCHALIS RAMNALIS,* DIMITRIOS-VASILEIOS BATZAKIS, EFTHIMIOS KARYMBALIS

Department of Geography, Harokopio University, Eleftheriou Venizelou Ave., 70, GR-176 76 Kallithea, Athens, Greece / *Odjel za geografiju, Sveučilište Harokopio, Atena, Grčka*, e-mail: geopas100@gmail.com, mpatzakis@hua.gr, karymbalis@hua.gr

* corresponding author / *autor za kontakt*

DOI: 10.15291/geoadria.4046

Original scientific paper / *Izvorni znanstveni rad*

Received / *Primitljeno*: 3-12-2022

Accepted / *Prihvaćeno*: 19-2-2023



Climate change is an issue of concern and is expected to cause various adverse impacts on human societies in the near and long-term future. Sea-level rise, which is caused by global warming and melting continental ice sheets, in combination with the rising global population and evolution of human activities in coastal areas, tends to make coastal societies more prone to coastal hazards. The Gulf of Corinth in Greece with its diverse coastal landforms and tectonic complexity makes the region unique when considering an assessment of coastal vulnerability. In this study we apply an Integrated Coastal Vulnerability Index (ICVI) to a potential sea-level rise for the southern coastline of the Gulf of Corinth (Greece) consisting of physical and socio-economic parameters. Among multiple different methodologies that have been developed over the recent years, we decided to apply two of the mathematical approaches we believe are best suited for the protection of human activities in our study area. The first one, ICVI_1, is based on the Coastal Vulnerability Index (CVI) by Thieler and Hammar-Klose (1999) with variables of equal relative importance, whereas the second one, ICVI_2, uses the Analytic Hierarchic Process (AHP) with the assignment of relative weight values to each parameter. The parameters were identified and ranked into a vulnerability index with a scale from 1 to 5. The results reveal that both approaches depict more or less the same coastal sections of high or very high vulnerability, but differ in the distribution of extreme values. ICVI_1 shows that 18.3% of the total coastline features very high vulnerability (score 5), while ICVI_2 shows 9.1%. The coastal sections with the highest scores of vulnerability are mostly represented in the eastern part of the studied coastline with low-lying regions of gentle slope and concentrated human activity.

KEY WORDS: climate change, sea-level rise, coastal vulnerability, AHP,

Problem klimatskih promjena izaziva zabrinutost te se očekuje da će negativno utjecati na društvo u bliskoj i dugoročnoj budućnosti. Porast razine mora, uzrokovan globalnim zagrijavanjem i otapanjem kontinentalnih ledenih ploča, u kombinaciji s rastućom globalnom populacijom i razvojem ljudskih aktivnosti u obalnim područjima, čini obalna društva sklonijima obalnim opasnostima. Korintski zaljev u Grčkoj sa svojim raznolikim obalnim oblicima i tektonskom složenosti čini ovu regiju jedinstvenom u kontekstu procjene ranjivosti obale. U ovom istraživanju primijenjen je integrirani indeks ranjivosti obale (ICVI), koji se sastoji od fizičkih i socioekonomskih parametara, za potencijalni porast razine mora na južnoj obali Korinskog zaljeva (Grčka). Među više različitih metodologija razvijanih posljednjih godina, odabrana su dva matematička pristupa za koje vjerujemo da su najprikladniji za zaštitu ljudskih aktivnosti u našem području istraživanja. Prvi, ICVI_1, temelji se na indeksu obalne ranjivosti (CVI) Thieler i Hammar-Klosea (1999.) s varijablama jednake relativne važnosti, dok drugi, ICVI_2, koristi analitički hijerarhijski proces (AHP) s dodjelom relativnih težinskih vrijednosti za svaki parametar. Parametri su definirani i rangirani u indeks ranjivosti na ljestvici od 1 do 5. Rezultati upućuju na to da oba pristupa prikazuju slične obalne dijelove visoke ili vrlo visoke ranjivosti, ali se razlikuju u distribuciji ekstremnih vrijednosti. ICVI_1 pokazuje da 18,3 % ukupne obale ima vrlo visoku ranjivost (ocjena 5), dok ICVI_2 pokazuje 9,1 %. Obalni dijelovi s najvišim ocjenama ranjivosti uglavnom su zastupljeni u istočnom dijelu proučavane obale s niskim područjima blagog nagiba i koncentrirane ljudske aktivnosti.

KLJUČNE RIJEČI: klimatske promjene, porast razine mora, ranjivost obale, AHP, Korintski zaljev

INTRODUCTION

Long-term sea-level rise is one of the adverse consequences of global warming with immediate and long-term impacts of flooding and erosion on coastal areas (NICHOLLS CAZENAVE, 2010). Significant components that contribute to long-term sea-level rise are related to eustatic sea-level changes such as thermal expansion of surface seawater, freshwater mass input from melting continental ice sheets of Greenland and Antarctica, and changes in the shape of the seafloor caused by tectonic activity (CHEN ET AL., 2006; RAMIERI ET AL., 2011; CAZENAVE, COZANNET, 2013; IPCC, 2013). Moreover, sea-level rise has a different impact on a local scale because sea-level fluctuations are combined with vertical land motion called isostatic adjustment, and therefore sea-level change is observed with respect to a land-based reference called relative sea-level change (KEMP ET AL., 2011; MOURTZAS ET AL., 2016; ROVERE ET AL., 2016). Research shows that trends of global sea-level rise are related to the acceleration of global sea-level temperatures. More specifically, global sea-level rise was accelerating in the 20th century and beyond with an average of 1.7 mm/yr for the period 1901-2010 and 3.2 mm/yr for 1993-2010 (IPCC, 2013). If the acceleration of mean global temperature continues at the current rate, sea-level temperature is estimated to rise by 1.5 °C between 2030 and 2052, and thus cause further long-term sea-level rise well beyond the next century that may expose small islands, low-lying coastal areas and deltas (IPCC, 2018). In the lowest baseline emissions scenario (RCP2.6) global sea-level is expected to rise by 0.29-0.59 m by the year of 2100 relative to the measures in 1986-2005, and in the highest scenario (RCP8.5) it is expected to rise by 0.51-1.92 m by the year of 2100 (IPCC, 2019). The process of global warming is expected to intensify coastal storms and extreme sea-levels, implying shoreline retreat and unprecedented flood risk levels by the end of this century (PERCH-NIELSEN ET AL., 2008; VOUSDOKAS ET AL., 2018; SIMEONE ET AL., 2021) with the contributing factors to coastal erosion

comprised by astronomical tides, sea surges and wave breaking processes (MERRIEFIELD ET AL., 2013; HOEKE ET AL., 2015). Vulnerability is a function of both exposure and coping ability of human societies and is therefore both physically and socially dependent (WU ET AL., 2002). There are significant trends of population increase in low-lying coastal zones as a result of rapid economic growth (MCGRANAHAN ET AL., 2007; NEUMANN ET AL., 2015). If sea-level rise continues with no adaptation measures it is expected to cause loss of land, displacement of coastal population, damage of agricultural production, and disturbance of biodiversity in wetlands, which in turn are expected to generate additional regional economic expenses (SMALL, NICHOLLS, 2003; OLIVER-SMITH, 2009; HALLEGATE, 2012; YOU, 2019) reaching 0.3–9.3% of the global gross domestic product by the end of the century (HINKEL ET AL., 2014). The impact of sea-level rise was measured in monetary terms, not least for the Greek coastlines (KONTOGIANNI ET AL., 2014). The total financial loss was estimated with long term inundation effects and short-term extreme weather, followed by adaptation measures in response to future sea-level rise.

The assessment of coastal vulnerability to sea-level rise has been applied by using various mathematical approaches (ŠIMAC ET AL., 2023). The most common method is the Coastal Vulnerability Index (CVI), initially proposed by Gornitz (1991), which was later modified by Thieler and Hammer-Klose (1999), and analyses coastal vulnerability by examining several physical factors influencing coastal erosion. This method was used, not least for the Greek southern coastlines, particularly for the Gulf of Corinth (KARYMBALIS ET AL., 2012), but also for the islands of Salamina and Elafonissos (KARYMBALIS ET AL., 2014), and the Gulf of Argolis (GAKI-PAPANASTASIOU ET AL., 2011). However, an integration of socio-economic factors has never been conducted for the Gulf of Corinth and it is highly important to consider it due to the concentration of human activities as well as for the complexity in tectonic and geomorphological processes.

STUDY AREA

The Gulf of Corinth is situated in central Greece and linked to the Gulf of Patras to the west through the narrow and shallow strait of Rio, and to the Gulf of Saronikos to the east by the artificial Corinth Canal. The study area covers the southern path of the Gulf of Corinth, which comprises approximately a 147 km long coastline in the northernmost part of the peninsula of Peloponnese, Greece. The Gulf of Corinth belongs tectonically to the Aegean region, which is one of the most seismically active zones in Europe (TSELENTIS, MAKROPOULOS, 1986; BERNARD ET AL., 2006; KARYMBALIS ET AL., 2012). The submerging African tectonic plate south of Crete collides with the Eurasian one (MAKROPOULOS ET AL., 2012) resulting in an uplift of the Peloponnese peninsula, which features the 120 km long Corinth Rift, an asymmetric graben structure consisting of active normal faults on each side of the gulf with a W.NW-E.SE orientation, causing the separation of the Peloponnese peninsula from the continental Greece in the NE-SW direction and a speed rate reaching 16 mm/year (TSELENTIS, MAKROPOULOS, 1986; ARMIJO ET

AL., 1996; BECKERS ET AL., 2015). The study area consists of the main north dipping active faults of Psathopyrgos, Aigion, Eliki, and Xylokaastro (Fig. 1), whose footwall on the southern side of the faults experiences uplift, whereas their hanging walls on the northern side are subsiding (KARYMBALIS ET AL., 2012), causing peculiar coastal formations. The western section is characterized by marine cliffs with a high slope, whereas the eastern section by low-lying coastal landscape of gentle slope. The central section is characterised by a transition zone with varied terrain from hilly to flat. In this regard, the relative sea-level of the Gulf of Corinth is dependent on the vertical land movement and the feeding of fluvial deposits to the gulf. Depositional processes are dominated by gravity mass flows such as debris flows and slides mainly caused by earthquakes, but also flood events, causing river-discharging sediment accumulation in the gulf by depositing coarser-grained material along the steeper southern continental shelf and slope (POULOS ET AL., 1996; SERGIU ET AL., 2016), developing beaches along the coastal plains and aprons of coastal alluvial fans, featured mainly by coarse sandy to gravels sediments (KARYMBALIS, 2012).

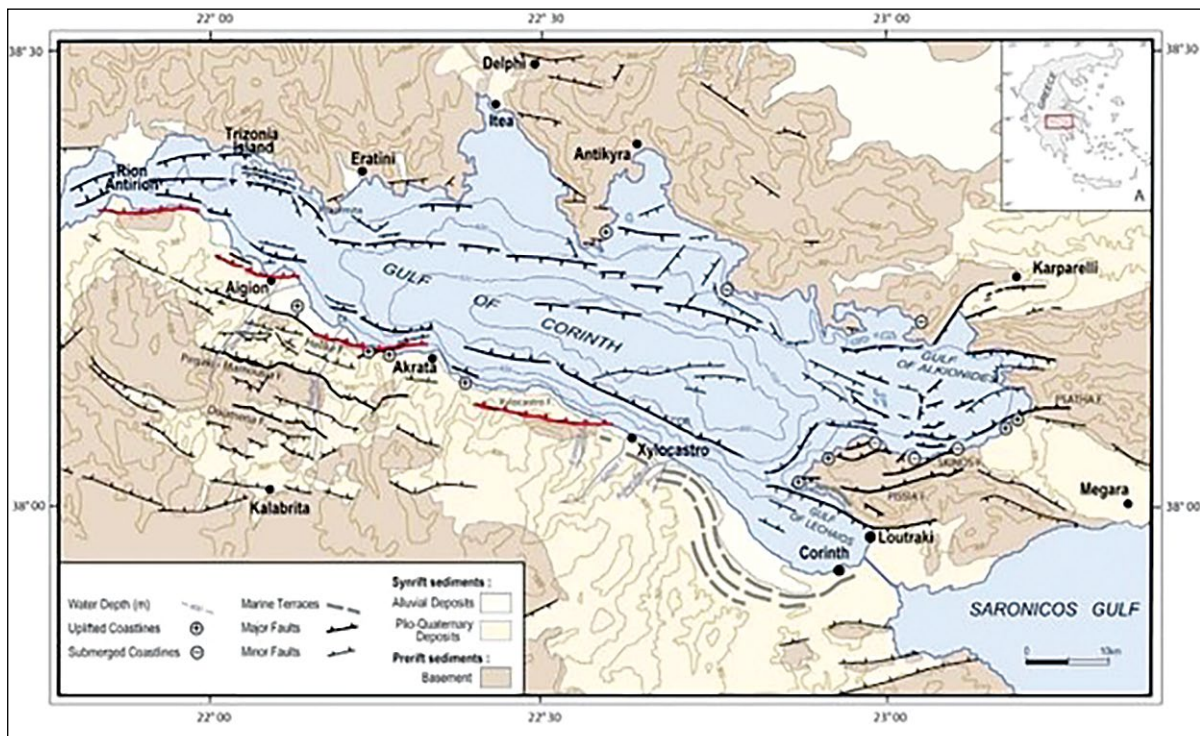


FIGURE 1 Structural map of the Gulf of Corinth with depiction of the four most concerned faults in the study area consisting of Psathopyrgos fault, Aigion fault, Eliki fault, and Xylokaastro fault (coloured red)

Source: Moretti et al. (2003)

TABLE 1 Significant towns of the study area and their population

Municipal Unit / Local Community	Corinth	Aegion	Sikyón*	Xylokastró	Río
Population	30.176	20.664	9.812	5.715	5.252

*Municipality unit of the town Kiato

Source: URL 1, Mapping Panorama of Greek Census Data 1991-2011

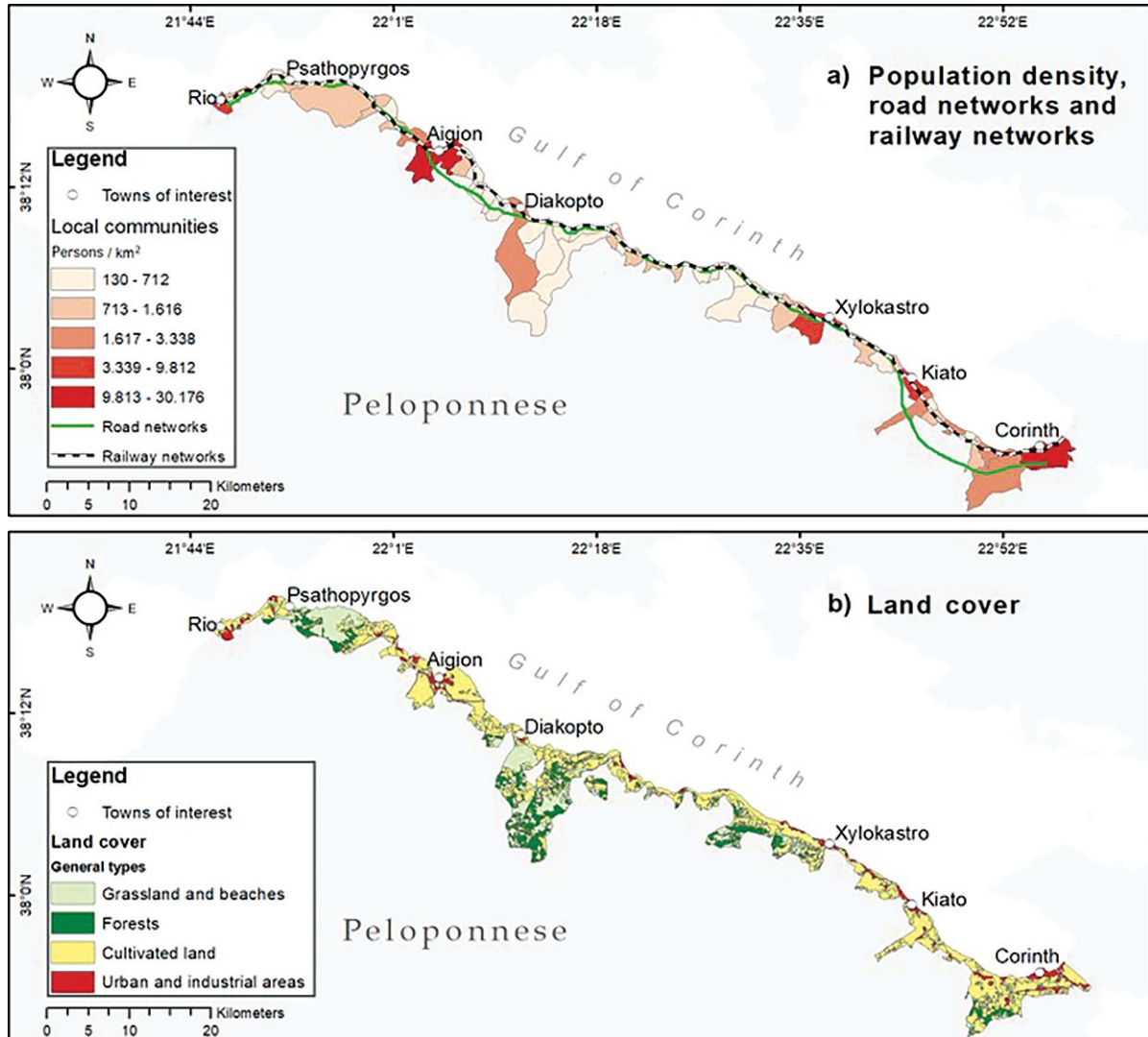


FIGURE 2 Maps featuring the areas in local coastal communities a) with road and railway networks, and b) that with land cover

In terms of climatology, according to the Hellenic National Meteorological Service (URL 2), the region is typical Mediterranean with a mild-cold rainy season from mid-October to late March and a hot dry season which lasts from April to September. The region receives precipitation of 1,300-1,700 mm/year which is considered above the Greek average. The precipitation is characterized by uneven annual distribution where the highest amount is accumulated in the winter season with days of heavy rainfalls during short periods of time. A report by the

Bank of Greece (2011) confirms that climate change tends to increase extreme flood events on Greece’s extensive coastline caused by intensified short-term precipitation in combination with long-term sea-level rise, and will affect negatively economic activities such as tourism, land use, and transport.

The studied coastline belongs administrative-ly to 52 local communities within the regional units of Corinth and Achaia, and covers an area of 397 km². According to the latest available Greek census from 2011, the population reached

119,203 inhabitants (URL 1) with an average of 300 people per square kilometre. The area forms an important cluster of population exceeding the average density of Greece (80 P/km²), especially during the tourist season. The largest towns are Corinth, Aegion, Kiato, Xylokastro and Rio, all situated on the coastline. The dominant land cover type comprises cultivated vegetation such as vineyards, fruit trees, olive groves and combined crops. One can also find land use types in the urban peripheries comprising minor commercial facilities such as industries and tourist accommodations that offer many forms of alternative tourism. The overwhelming majority of accommodation and tourist facilities are situated on the seafront, serving the tourist high season between May and September. The highway and the railway along the coastline provide a crucial service for passenger transport and international trade between Italy and Greece by linking the city of Athens in the east to the port of Patras in the west.

MATERIALS AND METHODS

This study aims at developing an Integrated Coastal Vulnerability Index (ICVI) for the southern Gulf of Corinth by adding socio-economic parameters to the initial sensitivity assessment conducted by Karymbalis et al. (2012). The physical parameters in this study were those from the commonly used Coastal Vulnerability Index (CVI) proposed by Thieler and Hammer-Klose (1999), which focuses on six physical variables strongly influencing coastal evolution.

$$CVI = \sqrt{\frac{(a * b * c * d * e * f)}{6}}$$

where, a: geomorphology, b: coastal slope, c: relative sea-level rise rate, d: shoreline erosion/accretion rate, e: mean tidal range, and f: mean significant wave height. Socio-economic parameters were added, which include population density, land use/land cover, road networks, and railway networks.

All ten variables were ranked with a scale of vulnerability from 1 to 5, where 1=very low vulnerability, 2=low vulnerability, 3=moderate vulnerability, 4=high vulnerability and 5=very high vulnerability. The ranges for the physical variables were taken from the studies of the Gulf of Argolis (TRAGAKI ET AL., 2011) and the Gulf of Corinth (KARYMBALIS, 2012), which are mentioned as designed for the Greek coastal environments. The values of the socio-economic parameters were set by the authors with relation to their exposure to anticipated sea-level rise, as described further for each parameter.

As for geomorphology, it can be defined as the study of landforms, each one having a degree of resistance to erosion (BIRD, 2000) which can be ranked according to the relative strength to marine erosion (NAGESWARA ET AL., 2008). They are important to consider in order to manage coastal resources in a sustainable way (WOODROFE, 2002). The predominant landforms identified for the studied shoreline are coarse sandy to gravel beaches and marine cliffs and were retrieved from the Greek Institute of Geology and Mineral Exploration consisting of a geological map at a scale of 1:50,000. The coastal landforms of the studied coastline were classified according to their resistance to coastal erosion. Sandy beaches and deltas were assigned the lowest vulnerability score due to their poor resistance to inundation of sea water, whereas rocky and cliff coasts were given the lowest vulnerability score for their high resistance to sea waves.

Coastal slope is the ratio of altitude to the horizontal distance between any two points on the coast perpendicular to the coastline. Regional coastal slopes indicate the relative vulnerability of inundation and the rate of shoreline retreat (GAKI-PAPANASTASIOU ET AL., 2011). With that mean, coastal areas with low slope are considered extremely vulnerable because they allow abundant penetration of marine waves over a larger area of the coast, while high slope coastal areas are more resistant to storm surges, therefore exhibiting less vulnerability (DWARAKISH ET AL., 2009; LEAMAN ET AL., 2021). The coastal slope for the studied coastline was estimated in percentage. First, a topographic map of northern

TABLE 2 Ranges of vulnerability ranking for physical – and socio-economic parameters

Physical Vulnerability Categories					
Vulnerability score	Very low (1)	Low (2)	Moderate (3)	High (4)	Very high (5)
Variables					
Geomorphology	Rocky, cliffed coasts	Medium cliffs, indented coasts	Low cliffs, alluvial plains	Cobble beaches, Lagoons	Sandy beaches, deltas
Erosion (-)/accretion (+) rate (m/year)	> (+1.5)	(+1.5)-(+0.5)	(+0.5)-(-0.5)	(-0.5 - (-1.5)	< (-1.5)
Coastal slope (%)	>12	12-9	9-6	6-3	<3
Relative sea level rise (mm/year)	<1.8	1.8-2.5	2.5-3.0	3.0-3.4	>3.4
Mean wave height (m)	<0.3	0.3-0.6	0.6-0.9	0.9-1.2	>1.2
Mean tidal range (m)	<0.2	0.2 -0.4	>0.4-0.6	>0.6-0.8	>0.8
Socio-Economic Vulnerability Categories					
Population density (/km ²)	12-116	117-229	230-625	626-1,101	1,102-1,704
Land use/land cover	Water elements	Beaches and grasslands	Forests	Cultivated land	Urban, industrial areas and road network
Road network (distance from coastline in km)	>2.0	1.6-2.0	1.1-1.5	0.5-1.0	<0.5
Railway network (distance from coastline in km)	>2.0	1.6-2.0	1.1-1.5	0.5-1.0	<0.5

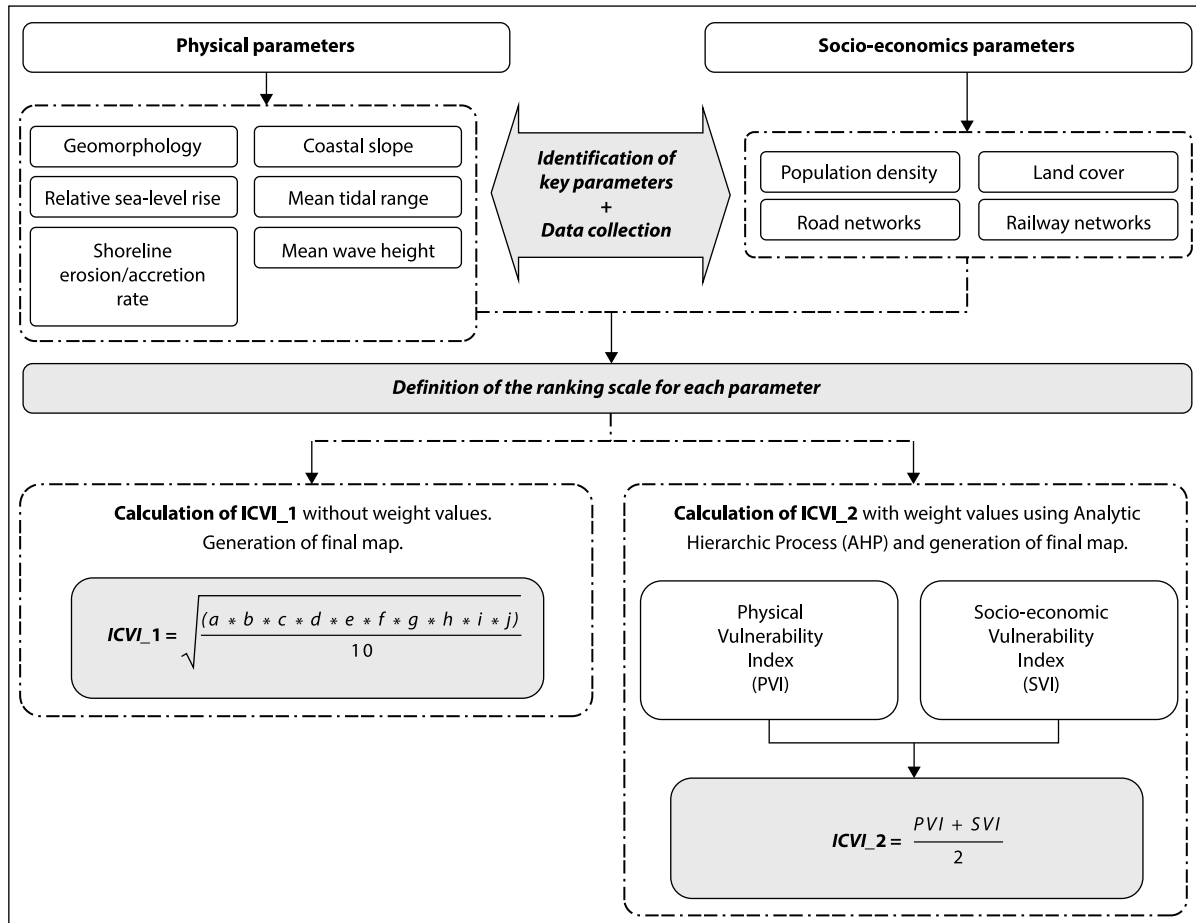


FIGURE 3 Flow diagram of the methodology

Peloponnese was converted to a Digital Elevation Map (DEM) with a focus on elevation of 0-10 m landwards from the coastline. Coastal slope zones were implemented with the ArcGIS software and intersected to the coastline as segments. Slopes of more than 12 degrees represent the highest slope values (Tab. 2) and were assigned very low vulnerability, whereas slopes under 3 degrees represent the lowest slopes and were given a score of very high vulnerability.

Relative sea-level rise in the Gulf of Corinth undergoes a complex physical process due to the interrelation between eustatic sea-level rise, vertical land movements, and the compaction of alluvial sediment deposits. Although several local physical processes have been analysed in the region, there are poor accurate measurements of long term sea-level rise. Consequently, we estimated a given value by Tragaki et al. (2018), which was proposed for the relative sea-level rise in the East Mediterranean of 1.8-2.5 mm/year. Thus, the coastline was given one and only score as of low vulnerability according to the vulnerability ranking scale (Tab. 2).

Shoreline erosion/accretion rates indicate the state of erosion or accretion as the past tendency of a shoreline to retreat or advance due to sea-level rise (DOUKAKIS, 2005; PANTUSA ET AL., 2018; URL 3). In order to estimate the erosion-accretion rate for each section of the studied shoreline, orthophotos were obtained from the Greek Land Registry/Hellenic Cadastre and historical trend of the shoreline was captured by comparing the available years 1945 and 2008 with the latter used as reference layer.

Tide is defined as the change in sea level relative to land and is influenced by the attraction of the moon and the sun to the earth's hydrosphere and has an effect locally with cyclical time varying from region to region (WOODROFFE, 2002). When it comes to Greek waters, the astronomical mean tidal range is generally low with the Gulf of Corinth considered as a micro-tidal region. The current mean tidal range for the Gulf of Corinth was estimated from the studies by Karymbalis (2012) and Tsimplis (1994) with a tidal range below 0.15 meters and was given the lowest score of vulnerability.

Waves represent for the most coastlines the dominant source of energy in the nearshore zone and are therefore the driving force behind geomorphologic change (MASSELINK, 2003) by mobilizing and transporting coastal sediments as a function of wave height (PENDLETON ET AL., 2006). Calculations of coastal vulnerability where mean significant wave height is integrated actually represent the potential for storm erosion (PANTUSA, 2018). The Gulf of Corinth is a relatively narrow gulf with its only entrance to open sea through a narrow straight and thus minimizes the energy for the creation of high waves. The mean wave height of the Gulf of Corinth was retrieved from the *Wind and Wave Atlas of the Hellenic Seas* composed by Soukissian et al. (2007), which depicts the annual mean significant wave height ranging from 0 m in the eastern section to 0.3 m in the west. The entire coastline was for that reason given very low vulnerability.

Population density is an important parameter for the assessment of socio-economic vulnerability because it constitutes a crucial factor when estimating population exposure to long term sea-level rise (TRAGAKI ET AL., 2018). First, the population data was retrieved from the Hellenic Statistical Authority for each of the 51 local communities that border the studied shoreline. Furthermore, the population density of each local community was calculated by dividing the population with the area of the correspondent local community. Finally, the boundaries of the classes were set with the *Jenks natural breaks* classification method, which indicates a good adaptability and high accuracy on the geographical environment unit division (CHEN ET AL., 2013).

Land use/land cover is another important parameter for assessing coastal vulnerability because land cover indicates the physical land type and helps distinguish built environment from vegetated land. Land use data detects geographically located human activities such as residential areas, commercial use, tourist accommodation and cultivated land. The economic activities and the rapid evolution of the built environment in coastal areas are threatened by a potential sea-level rise (SZLAFSTEIN, STERR, 2007) and for that reason human safety and economic activities have to be

prioritized in a coastal vulnerability assessment. Land cover and land use data were retrieved as a shapefile from the electronic data source of *Copernicus Land Monitoring Service* based on the Corine Land Cover 2018, and was limited to the geographical coverage of the local communities. The coastal segments were ranked accordingly by prioritizing human safety and economic activities, giving thus higher vulnerability scores to socio-economic activities and lower vulnerability scores to open wild landscapes.

Road and railway networks were retrieved as a shapefile from the *Ministry of interior of the Hellenic Republic*. As for the road network, the highway was seen as the most in need of protection due to the connectivity between the cities of Patras and Athens, and was for that reason the only used entity of the road network. The highway together with the railway were digitized and buffered separately in a classification of distance from the shoreline, ranging from 0 to 2.0 km where the highest score of vulnerability was determined by the shortest distance from the coastline.

Calculation of the ICVI

There are various methodologies and formulas to calculate the CVI with physical and socio-economic factors. Simac et al. (2023) distinguish three calculation methods: *equal variables*, which is characterized by equal importance of all physical and social variables, *separate variables*, which classifies physical and social vulnerability separately before creating a single vulnerability index, and *causal variables*, which first identifies geographical areas of highest physical vulnerability as a stepping-stone for further vulnerability analysis. Separate variables are utilized in a recent study of the Göksu Delta in southern Turkey (ÖZYURT, ERGIN, 2010) by separating physical parameters and human influence parameters with weighted values. Moreover, a similar method is used for the region of Apulia, Italy, a coastal region which is featured mainly by gentle slope beaches and significant human activity (DE SERIO ET AL., 2018). The method uses human parameters named socio-economic and places focus on the exposure of

human activities to sea-level rise rather than the influence. Our study area with a high diversity of landforms and a complex tectonic activity poses a challenge to an integrated coastal vulnerability assessment. For that reason, we utilized two calculation methods, one with equal variables and one with separate variables, both previously used for Apulia. The first mathematical approach ICVI_1 was calculated as the square root of the product of 10 variables divided by their total number (10)

$$ICVI_1 = \sqrt{\frac{(a * b * c * d * e * f * g * h * i * j)}{10}}$$

where each parameter a-j is represented by the given score of relative coastal vulnerability for each segment of the coastline. For the physical parameters a: geomorphology, b: coastal slope, c: relative sea-level rise rate, d: shoreline erosion/accretion rate, e: mean tidal range, and f: mean significant wave height. For the socio-economic parameters g: population density, h: land cover/land use, i: road networks, and j: railway networks.

The calculation of ICVI_2 is more complex and constitutes the continuity of the method ICVI_1. In order to calculate ICVI_2 we had to implement the Analytic Hierarchic Process (AHP) (SAATY, 1977; 1990) to obtain the so-called *weight value (Wi)* for each vulnerability score. The AHP is a multi-criteria decision-making tool, which comprises a step by step methodology evaluating all the selected variables to their relative importance by constructing a pairwise comparison matrix with scores from 1 to 9 in the rating scale, where 1 contributes equally to one another and 9 favouring one parameter over another of the highest possible order, always considering the vertical elements in the matrix as a reference. The intensity of importance is as follows: 1=equal, 3=moderate, 5=strong, 7=very strong, 9=extreme. Intermediate values such as 2, 4, 6 and 8 are used when compromise is needed. In the present study the score for each variable was taken from De Serio et al. (2018) who used the pairwise comparison matrix separately for physical parameters and socio-economic parameters (Tab. 3). The weight value for each parame-

TABLE 3 Pairwise comparison matrix calculated for all parameters. The relative importance of the physical parameters is set by De Serio et al. (2018)

PHYSICAL	Variables	Geomorphology	Erosion/ accretion rate	Coastal slope	Relative sea level rise	Mean wave height	Mean tidal range
	Geomorphology	1	5	1/3	6	8	9
	Erosion / accretion rate	1/5	1	1/6	3	4	5
	Coastal slope	3	6	1	4	9	9
	Relative sea level rise	1/6	1/3	1/4	1	3	3
	Mean wave height	1/8	1/4	1/9	1/3	1	2
	Mean tidal range	1/9	1/5	1/9	1/3	1/2	1
	Column Total	4.603	12.783	1.972	12.999	25.500	29.000
SOCIO-ECONOMIC	Variables	Population density	Land use		Road network	Railway network	
	Population density	1	4		8	8	
	Land use/ Land cover	1/4	1		4	4	
	Road networks	1/8	1/4		1	1	
	Railway networks	1/8	1/4		1	1	
	Column Total	1.500	5.500		14.000	14.000	

ter was calculated after normalizing the scores of the pairwise comparison matrix as defined by the AHP (Tab. 4).

After having assessed the weight values we verified the consistency of the matrix by checking the consistency ratio (CR) as calculated by the following formula:

$$CR = CI/RI$$

where CI is the consistency ratio index and RI a random index. The consistency index CI is expressed as:

$$CI = \frac{(\lambda_{\max} - n)}{(n - 1)}$$

where λ_{\max} is the principal eigenvalue of the matrix and n is the order of the matrix.

If $CR < 0.10$ the matrix is consistent.

After ensuring that $CR < 0.10$, the Physical Vulnerability Index (PVI) and the Socio-economic Vulnerability Index (SVI) were calculated separately as shown below.

The calculation of PVI and SVI were based on the Weighted Linear Combination method and comprises the sum (Σ) of weighted rating scores:

$$V = \sum_{i=1}^n Wi * Xi$$

where V stands for the vulnerability degree, n is the number of total factors, Wi is the weight of the corresponding factor i , and Xi is the rating of the factor i . The development of the mathematical formula for the PVI and SVI is shown below.

$$PVI = (W_1 * X_1) + (W_2 * X_2) + (W_3 * X_3) + (W_4 * X_4) + (W_5 * X_5) + (W_6 * X_6)$$

$$SVI = (W_7 * X_7) + (W_8 * X_8) + (W_9 * X_9) + (W_{10} * X_{10})$$

The final calculation of ICVI_2 was completed by deriving the average value of the PVI and SVI.

$$ICVI_2 = \frac{PVI + SVI}{2}$$

The coastal vulnerability mapping was computed in the ArcGIS environment by initial-

TABLE 4 Normalized scores of the pairwise comparison matrix and the calculated weight value (*W*) for each variable

PHYSICAL	Variables	Geomorphology	Erosion/ accretion rate	Coastal slope	Relative sea level rise	Mean wave height	Mean tidal Range	W
	Geomorphology	0.217	0.391	0.169	0.500	0.314	0.310	0.317
	Erosion/ accretion rate	0.043	0.078	0.085	0.028	0.157	0.172	0.094
	Coastal slope	0.652	0.469	0.507	0.333	0.353	0.310	0.437
	Relative sea level rise	0.036	0.026	0.127	0.083	0.118	0.103	0.082
	Mean wave height	0.027	0.020	0.056	0.028	0.039	0.069	0.040
	Mean tidal range	0.024	0.016	0.056	0.028	0.020	0.034	0.030
SOCIO-ECONOMIC	Variables	Population density	Land use/ Land cover	Road networks	Railway networks	W		
	Population density	0.667	0.727	0.571	0.571	0.634		
	Land use/ land cover	0.167	0.182	0.286	0.286	0.230		
	Road net- works	0.083	0.045	0.071	0.071	0.068		
	Railway networks	0.083	0.045	0.071	0.071	0.068		

ly segmenting the coastline separately for each variable according to the vulnerability score (1-5) to coastal inundation. Each coastal segment was then calculated by utilizing the two defined mathematical approaches separately. In order to achieve the relative ICVI for the study area, the outcome score of each coastal segment was classified with the Jenks classification method.

RESULTS AND DISCUSSION

The studied coastline of the southern Gulf of Corinth was found to feature geographical sections of various levels of relative vulnerability, from very low to very high. As regards to physical parameters, the coastline with the largest share of high and very high vulnerability relates to the coastal slope and geomorphology. The high value of the coastal slope stretches from Aigion to Corinth (Fig. 4), whereas the high

value of geomorphology covers the whole coastline. Erosion/accretion rate on the other hand features mostly high vulnerability rate with a notable small section of very high vulnerability rate west of Xylokaastro as a result of coastal erosion since 1945. Relative sea-level rise, mean wave height and mean tidal range cover very low vulnerability. As for socio-economic parameters, the highest coverage of a very high vulnerability score is featured by road and railway networks, whereas the population density and land cover/land use show a smaller share. The coastal area between Corinth and Kiato is a gently sloping area with a significant proportion of the built environment consisting of housing, factories and compact road networks. The road networks are characterized as having very low vulnerability in the easternmost section due to the significant distance of the highway to the coastline. Physical parameters applied with the AHP method as shown in Fig. 5, constitute 13.7% as

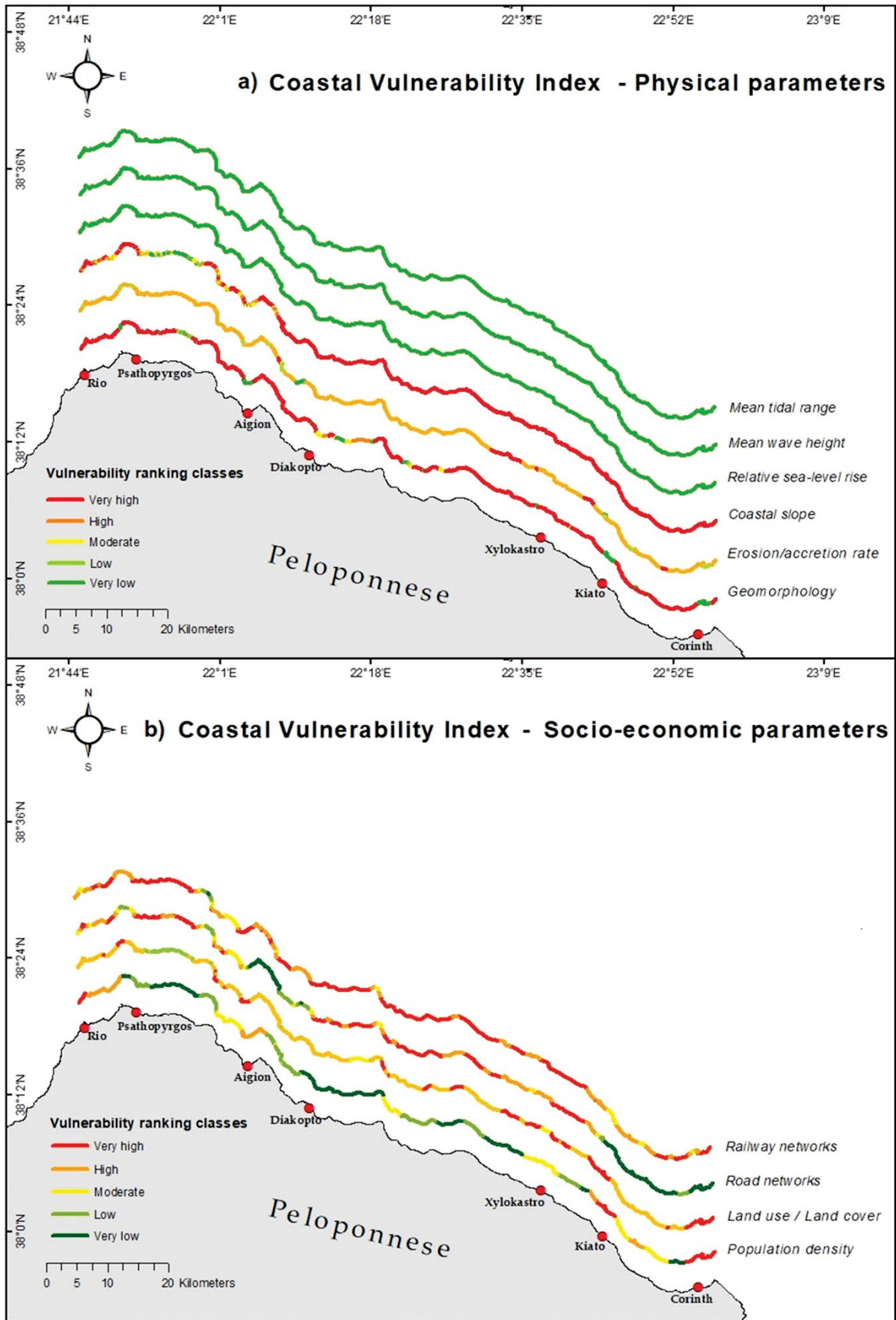


FIGURE 4 Maps depicting coastal vulnerability classification of the southern Gulf of Corinth with a) physical variables and b) socio-economic variables

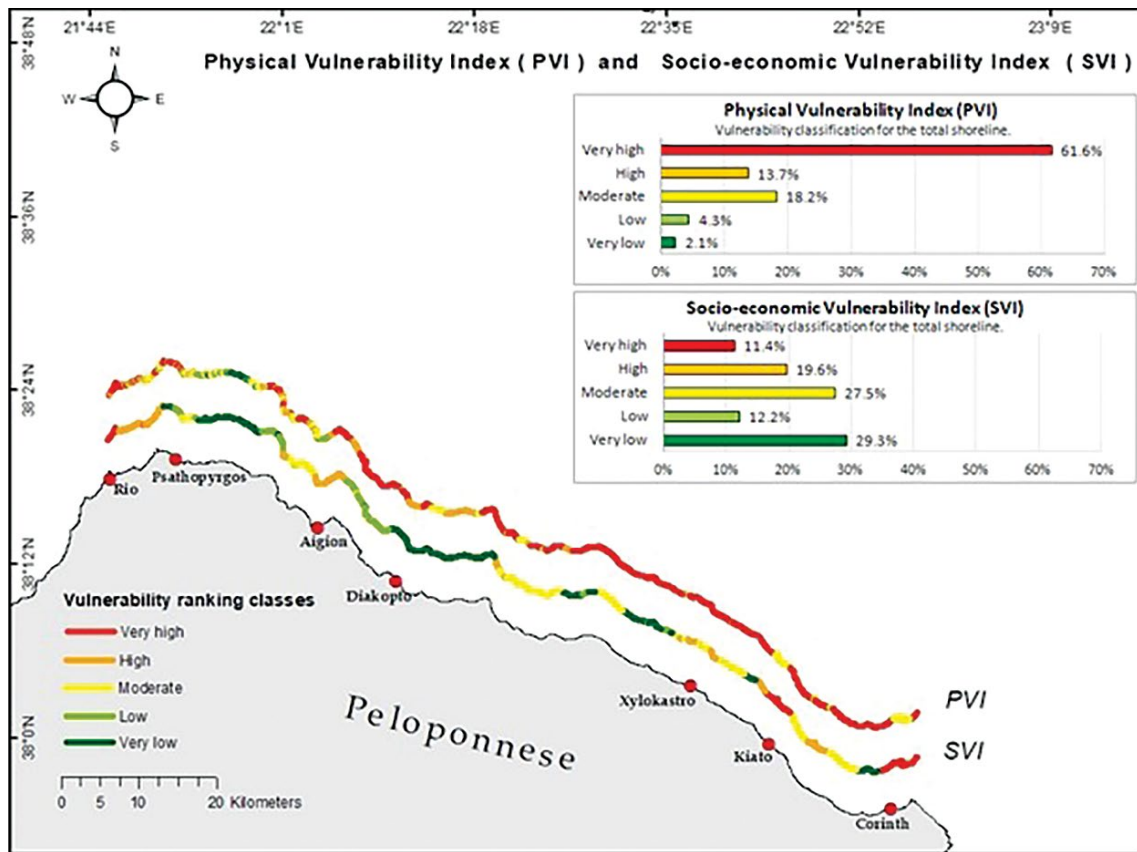


FIGURE 5 Map depicting the vulnerability classification of the Physical Vulnerability Index (PVI) and the Socio-Economic Vulnerability Index (SVI)

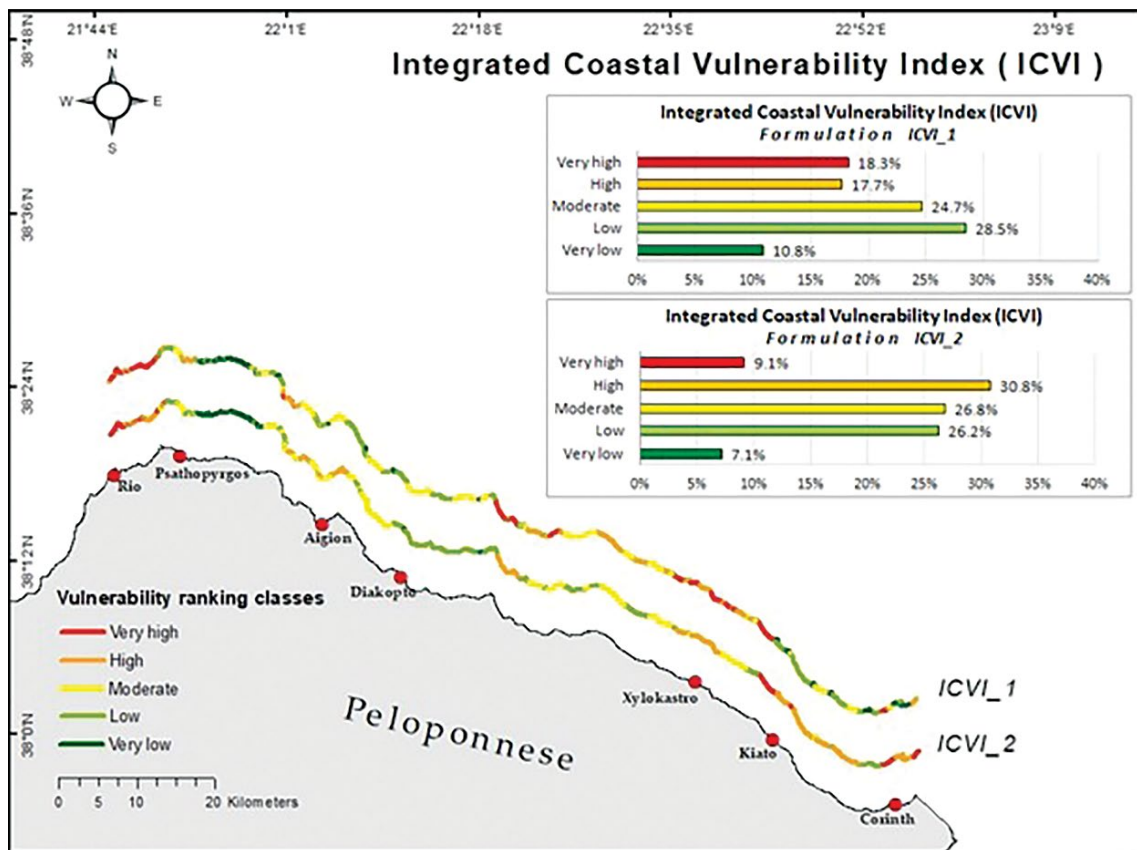


FIGURE 6 Final map of the Integrated Coastal Vulnerability Index to sea-level rise for the southern Gulf of Corinth, with ICVI_1 corresponding to the first mathematical approach, and the ICVI_2 to the second approach with the utilized AHP-method

of high vulnerability and 61.6% as of very high vulnerability, which together comprise a rate of 75.3% high or very high vulnerability, mainly distributed in the eastern coastline with plain morphological features. The socio-economic entity on the other hand comprises its high values of vulnerability in a lower degree with 16.7% of high vulnerability and 11.4% of very high vulnerability.

The results of the two mathematical approaches (ICVI_1 and ICVI_2), consist of six physical parameters and four socio-economic parameters. In Fig. 6, the first approach (ICVI_1) shows that 18.3% of the studied coastline is characterized as having a very high vulnerability, while 10.8% as having a very low vulnerability. In the second approach (ICVI_2) very high and very low vulnerability stand for 9.1% and 7.1% respectively. In general, both methods show very high to high vulnerability mainly in the eastern section of the coastline, whilst in the central and western section the aforementioned values are presented in a shorter overall length. The values of high and very high vulnerability are depicted in the most densely populated settlements, which are Corinth, Kiato and Xylokastro in the eastern section, and Rio in the western one. The lowest vulnerability (very low score) is depicted in Psathopyrgos due to the occurrence of marine cliffs. To sum up, the results depict a relatively extensive coastal segment of high or very high vulnerability to a potential sea-level rise.

CONCLUSIONS

The present study utilized two mathematical approaches to quantify the coastal vulnerability to a potential sea-level rise of the southern Gulf of Corinth by accounting socio-economic and physical parameters. Same coastal sections are highlighted as more vulnerable than others (high and very high) in both approaches, mostly the eastern coast of the southern Gulf

of Corinth (between the settlements of Corinth and Kiato) featured by flat coastal areas, which host important transport network and urban hubs, such as Rio, Xylokastro and Aigion. As such, the two methods seem to respond to the imprint of reality in a coastal region with a high variety of landforms. The implementation of the two mathematical approaches revealed the complexity of achieving a true and fair assessment of coastal vulnerability when integrating human activities to natural processes. The results of the two approaches show differences in the extreme vulnerability values, where the first approach (ICVI_1) expresses a higher proportion of extreme values compared to the second (ICVI_2). It can be attributed to the lower given importance of the socio-economic attributes in the ICVI_1 as well as the added weights to each variable in the ICVI_2. To this meaning, it is fundamental that each parameter is assigned the correct relative importance in order for the results to reflect an accurate vulnerability of the studied region. Equally important is to extract accurate data from reliable sources that represent the studied region, as outdated information or small discrepancies in quantitative data may alter the results after the assignments of weights. A high number of included parameters are also generators for altering the results because the particular influence of each parameter decreases. By saying this, each parameter contributes to vulnerability with unequal importance in nature and therefore a weighted procedure is highly recommended, especially when incorporating socio-economic parameters, which are considered human induced attributes. The utilized approaches in this study are recommended to be applied in similar environments by assigning weights of relative importance according to the priorities. Both constitute a first large-scale assessment in order to catch the most vulnerable coastal regions that need to be protected from future flooding and erosion caused by future sea-level rise or severe storm surge events.

SOURCES AND BIBLIOGRAPHY

- ARMIJO, R., MEYER, B., KING, G. C. P., RIGO, A., PAPANASTASSIOU, D. (1996): Quaternary evolution of the Corinth Rift and its implications for the Late Cenozoic evolution of the Aegean, *Geophysical Journal International*, Oxford University Press, 126 (1), 11-53, DOI: 10.1111/j.1365-246X.1996.tb05264.x.
- BANK OF GREECE (2011): *The environmental, economic and social impacts of climate change in Greece*, Bank of Greece, Athens, Greece, 2011.
- BECKERS, A., HUBERT-FERRARI, A., BECK, C., BODEUX, S., TRIPSANAS, E., SAKELLARIOU, D., DE BATIST, M. (2015): Active faulting at the western tip of the Gulf of Corinth, Greece, from high-resolution seismic data, *Marine Geology*, 360, 55-69, DOI: 10.1016/j.margeo.2014.12.003
- BERNARD, P., LYON-CAEN H., BRIOLE P., DESCHAMPS, A., BOUDIN F., MAKROPOULOS, K., PAPANASTASSIOU, P., LEMEILLE, F., PATAU, G., BILLIRIS, H., PARADISSIS, D., PAPAZISSI, K., CASTAREDE, H., CHARADE, O., NERCESSIAN, A., AVALLONE, A., PACCHIANI, F., ZAHRADNIK, J., SACKS, S., LINDE, A. (2006): Seismicity, deformation and seismic hazard in the western rift of Corinth: New insights from the Corinth Rift Laboratory (CRL), *Tectonophysics*, 426 (1-2), 7-30, DOI: 10.1016/j.tecto.2006.02.012.
- BIRD, E. C. F. (2000): *Coastal geomorphology: an introduction*, Publisher "J.Wiley & Sons", 2nd ed., Chichester, England, pp. 436.
- CAZENAVE, A., LE COZANNET, G. (2013): Sea level rise and its coastal impacts, *AGU*, 2 (2), 15-34, DOI: 10.1002/2013EF000188.
- CHEN, J., YANG, S., LI, H., ZHANG, B., LV, J. (2013): Research on geographical environment unit division based on the method of natural breaks (Jenks), *International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences*, XL-4/W3, 47-50, DOI: 10.5194/isprsarchives-XL-4-W3-47-2013.
- CHEN, J. L., WILSON, C. R., TAPLEY, B. D. (2006): Satellite gravity measurements confirm accelerated melting of Greenland ice sheet, *Science*, 313 (5795), 1958-1960, DOI: 10.1126/science.1129007.
- DE SERIO, F., ARMENIO, E., MOSSA, M., PETRILLO, A. F. (2018): How to Define Priorities in Coastal Vulnerability Assessment, *Geosciences*, 8 (11), 415, DOI: 10.3390/geosciences8110415.
- DOUKAKIS, E. (2005): Coastal Vulnerability and Risk Parameters, *European Water*, 11 (12), 3-7.
- DWARAKISH, G. S., VINARY, S. A., NATESAN, U., ASANO, T., KAKINUMA, T., VENKATARAMANA, K., JAGEDDESHA, B., BADITA, M. K. (2009): Coastal vulnerability assessment of the future sea-level rise in Udipi coastal zone of Karnataka state, west coast of India, *Ocean & Coastal Management*, 52, 467-478, DOI: 10.1016/j.ocecoman.2009.07.007.
- GAKI-PAPANASTASSIOU, K., KARYMBALIS, E., POULOS, S., SENI, A., ZOUVA, C. (2011): Coastal vulnerability assessment to sea-level rise based on geomorphological and oceanographical parameters: The case of Argolikos Gulf, Peloponnese, Greece, *Hellenic Journal of Geosciences*, 45, 109-122.
- GORNITZ, V. (1991): Global coastal hazards from future sea level rise. *Palaeogeography, Palaeoclimatology, Palaeoecology*, 89, 379-398, DOI: 10.1016/0031-0182(91)90173-O.
- HALLEGATTE, S. (2012): A Framework to Investigate the Economic Growth Impact of Sea Level Rise. *Environmental Research Letters*, 7 (1), 1-7, DOI: 10.1088/1748-9326/7/1/015604.
- HINKEL, J., LINCKE, D., VAFEIDIS, A. T., PERRETTE, M., NICHOLLS, R. J., TOL, R. S. J., MARXEION, B., FETTWEIS, X., IONESCU, C., LEVERMANN, A. (2014): Coastal flood damage and adaptation costs under 21st century sea-level rise. *Proceedings of the National Academy of Sciences*, 111 (9), 3292-3297, DOI: 10.1073/pnas.1222469111.
- HOEKE, R., MCINNES, K., O'GRADY, J. (2015): Wind and Wave Setup Contributions to Extreme Sea Levels at a Tropical High Island: A Stochastic Cyclone Simulation Study for Apia, Samoa, *Journal of Marine Science and Engineering*, 3 (3), 1117-1135, DOI: 10.3390/jmse3031117.
- IPCC (2013): *Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, 2013, available at: <https://www.ipcc.ch/report/ar5/wg1/>

- IPCC (2018): *Global warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty*, World Meteorological Organization, Geneva, Switzerland, 2018, 32, available at: <https://www.ipcc.ch/sr15/>
- IPCC (2019): *IPCC Special Report on the Ocean and Cryosphere in a Changing Climate*. In press.
- KARYMBALIS, E., CHALKIAS C., CHALKIAS, G., GRIGOROPOULOU, E., MANTHOS, G., FERENTINOU, M. (2012): Assessment of the sensitivity of the Southern Coast of the Gulf of Corinth (Peloponnese, Greece) to Sea-level Rise, *Central European Journal of Geosciences*, 4 (4), 561-577, DOI: 10.2478/s13533-012-0101-3.
- KARYMBALIS, E., CHALKIAS, C., FERENTINOU, M., CHALKIAS, G., MAGKLARA, M. (2014): Assessment of the Sensitivity of Salamina (Saronic Gulf) and Elafonissos (Lakonic Gulf) islands to Sea-level Rise. *Journal of Coastal Research*, 70, 378–384, DOI: 10.2112/SI70-064.1
- KEMP, A. C., HORTON, B. P., DONNELLY, J. P., MANN, M. E., VERMEER, M., RAHMSTORF, S. (2011): Climate related sea-level variations over the past two millennia, *Proceedings of the National Academy of Sciences of the United States of America*, 108 (27), 11017-11022, DOI: 10.1073/pnas.1015619108
- KONTOGIANNI, A., TOURKOLIAS, C. H., DAMIGOS, D., SKOURTOS, M. (2014): Assessing sea level rise costs and adaptation benefits under uncertainty in Greece, *Environmental Science & Policy*, 37, 61–78, DOI: 10.1016/j.envsci.2013.08.006
- LEAMAN, C. K., HARLEY, M. D., SPLINTER, K. D., THRAN, M. C., KINSELA, M. A., TURNER, I. L. (2021): A storm hazard matrix combining coastal flooding and beach erosion, *Coastal Engineering*, 170, 104001, DOI: 10.1016/j.coastaleng.2021.104001.
- MAKROPOULOS, K., KAVIRIS, G., KOUSKOUNA, V. (2012): An updated and extended earthquake catalogue for Greece and adjacent areas since 1900, *Natural Hazards and Earth System Sciences*, 12, 1425-1430, DOI: 10.5194/nhess-12-1425-2012.
- MASSELINK, G. (2003): *Introduction to coastal processes and geomorphology*, Oxford University Press, London.
- MCGRANAHAN, G., BALK, D., ANDERSON, B. (2007): The rising tide: assessing the risks of climate change and human settlements in low elevation coastal zones. *Environment and Urbanization*, 19 (1), 17–37, DOI: 10.1177/0956247807076960.
- MERRIFIELD, M. A., GENZ, A. S., KONTOES, C. P., MARRA, J. J. (2013): Annual maximum water levels from tide gauges: Contributing factors and geographic patterns. *Journal of Geophysical Research: Oceans*, 118 (5), 2535-2546, DOI: 10.1002/jgrc.20173.
- MORETTI, I., SAKELLARIOU, D., LYKOUSIS, V., MICARELLI, L. (2003): The Gulf of Corinth: an active half graben?, *Journal of Geodynamics*, 36 (1), 323-340, DOI: 10.1016/S0264-3707(03)00053-X.
- MOURTZAS, N., KOLAITI, E., ANZIDEI, M. (2016): Vertical land movements and sea level changes along the coast of Crete (Greece) since Late Holocene, *Quaternary International*, 401, 43–70, DOI:10.1016/j.quaint.2015.08.008.
- NAGESWARA RAO, K., SUBRAELU, P., VENKATESWARA RAO, T., HEMA MALINI, B., RATHEESH, R., BHATTACHARYA, S., RAJAWAT, A. S. (2008): Sea-level rise and coastal vulnerability: an assessment of Andhra Pradesh coast, India through remote sensing and GIS, *Journal of Coastal Conservation*, 12 (4), 195–207, DOI: 10.1007/s11852-009-0042-2.
- NEUMANN, B., VAFEIDIS, A. T., ZIMMERMANN, J., NICHOLLS, R. J. (2015): Future coastal population growth and exposure to sea-level rise and coastal flooding - A global assessment, *PLoS ONE*, 10 (3), e0118571, DOI:10.1371/journal.pone.0118571.
- NICHOLLS, R. J., CAZENAVE, A. (2010): Sea-level rise and its impact on coastal zones, *Science*, 328 (5985), 1517-1520. DOI: 10.1126/science.1185782.
- OLIVER-SMITH, A. (2009): Sea Level Rise and the Vulnerability of Coastal Peoples: Responding to the Local Challenges of Global Climate Change in the 21st Century, *United Nations University – Institute for Environment and Human Security*, No.7., available at: https://www.unisdr.org/files/14028_4097.pdf

- ÖZYURT, G., ERGIN, A. (2010): Improving Coastal Vulnerability Assessments to Sea-Level Rise: A New Indicator-Based Methodology for Decision Makers, *Journal of Coastal Research*, 26 (2), 265–273, DOI: 10.2112/08-1055.1.
- PANTUSA, D., D'ALESSANDRO, F., RIEFOLO, L., PRINCIPATO, F., TOMASICCHIO, R. G. (2018): Application of a Coastal Vulnerability Index. A Case Study along the Apulian Coastline, *Water*, 10 (9), 1218, DOI: 10.3390/w10091218.
- PENDLETON, E. A., THIELER, E. R., WILLIAMS, S. J. (2006): Coastal vulnerability assessment of Glacier Bay National Park to sea-level rise: *U.S. Geological Survey Open-File Report*, 2005-1247, available at: pubs.usgs.gov/of/2005/1247
- PERCH-NIELSEN, L. S., B. BÄTTIG, M., IMBODEN, D. (2008): Exploring the link between climate change and migration, *Climatic Change*, 91 (3-4), 375-393, DOI:10.1007/s10584-008-9416-y.
- POULOS, S. E., COLLINS, M. B., PATTIARATCHI, C., CRAMP, A., GULL, W., TSIMPLIS, M., PAPA THEODOROU, G. (1996): Oceanography and sedimentation in the semi-enclosed, deep-water Gulf of Corinth (Greece). *Marine Geology*, 134 (3-4), 213–235, DOI: 10.1016/0025-3227(96)00028-x.
- RAMIERI, E., HARTLEY, A., BARBANTI, A., SANTOS, F. D., GOMES, A., LAIHONEN, P., MARINOVA, N., SANTINI, M. (2011): Methods for assessing coastal vulnerability to climate change, ETC/CCA Technical Paper, *EEA - European Environment Agency*, Bologna.
- ROVERE, A., STOCCHI, P., VACCHI, M. (2016): Eustatic and Relative Sea Level Changes, *Current Climate Change Reports*, 2 (4), 221–231, DOI: 10.1007/s40641-016-0045-7.
- SAATY, T. L. (1977): A scaling method for priorities in hierarchical structures, *Journal of Mathematical Psychology*, 15 (3), 234–281, DOI: 10.1016/0022-2496(77)90033-5.
- SAATY, T. L. (1990): How to make a decision: The analytic hierarchy process, *European Journal of Operational Research*, 48 (1), 9–26, DOI: 10.1016/0377-2217(90)90057-I.
- SERGIU, S., BECKERS, A., GERAGA, M., PAPA THEODOROU, G., ILIOPOULOS, I., PAPA EFTHYMIU, H. (2016): Recent sedimentary process in the western gulf of Corinth, Greece: Seismic and aseismic turbidites, *Bulletin of the Geological Society of Greece*, 50 (1), 383–391, DOI: 10.12681/bgsg.11739.
- ŠIMAC, Z., LONČAR, N., FAIVRE, S. (2023): Overview of Coastal Vulnerability Indices with Reference to Physical Characteristics of the Croatian Coast of Istria, *Hydrology*, 10 (1), 14, DOI: 10.3390/hydrology10010014.
- SIMEONE, S., PALOMBO, L., MOLINAROLI, E., BRAMBILL, W., CONFORTI, A., DE FALCO, G. (2021): Shoreline Response to Wave Forcing and Sea Level Rise along a Geomorphological Complex Coastline (Western Sardinia, Mediterranean Sea), *Applied Sciences*, 11 (9), 4009, DOI: 10.3390/app11094009.
- SMALL, C., NICHOLLS, R. J. (2003): A global analysis of human settlement in coastal zones, *Journal of Coastal Research*, West Palm Beach, Florida, 19 (3), 584-599.
- SOUKISSIAN, T., HATZINAKI, M., KORRES, G., PAPADOPOULOS, A., KALLOS, G., ANADRANISTAKIS, E. (2007): Wind and Wave Atlas of the Hellenic Seas, *Hellenic Centre for Marine Research*, pp. 300.
- SZLAFSZEIN, C., STERR, H. (2007): A GIS-based vulnerability assessment of coastal natural hazards, state of Pará, Brazil, *Journal of Coastal Conservation*, 11, 53–66, DOI: 10.1007/s11852-007-0003-6.
- THIELER, E. R., HAMMAR-KLOSE, E. S. (1999): National Assessment of Coastal Vulnerability to Sea-Level Rise: Preliminary Results for the U.S. Atlantic Coast, *U.S. Geological Survey Open File Report*, 99-593.
- TRAGAKI, A., GALLOUSI, C., KARYMBALIS, E. (2018): Coastal Hazard Vulnerability Assessment Based on Geomorphic, Oceanographic and Demographic Parameters: The Case of the Peloponnese (Southern Greece), *Land*, 7 (2), 56, DOI: 10.3390/land7020056.
- TSELENTIS, G. A., MAKROPOULOS, K. (1986): Rates of crustal deformation in the Gulf of Corinth [central Greece] as determined from seismicity, *Tectonophysics*, 124 (1-2), 55–66, DOI: 10.1016/0040-1951(86)90137-X.
- TSIMPLIS, M. N. (1994): Tidal oscillations in the Aegean and Ionian Seas, *Estuarine, Coastal and Shelf Science*, 39, 201–208.

- URL 1, *Mapping Panorama of Greek Census Data 1991-2011*, ELSTAT, <http://panorama.statistics.gr>, 25.9.2021.
- URL 2, *Hellenic National Meteorological Service – HNMS*, www.emy.gr/emv/en/, 19. 9. 2021
- URL 3, *National Coastal Vulnerability Assessment and Designing of Integrated Coastal Management and Adaptation Strategic Plan for Timor-Leste, Coastal Vulnerability Assessment Report*, United Nations Development Program, 2018, www.undp.org/publications, 20.09.2021
- VOUSDOKAS, M. I., MENTASHI, L., VOUKOUVALAS, E., VERLAAN, M., JEVREJEVA, S., JACKSON, L. P., FEYEN, L. (2018): Global probabilistic projections of extreme sea levels show intensification of coastal flood hazard, *Nature Communications*, 9 (1), DOI: 10.1038/s41467-018-04692-w.
- WOODROFFE, C. D. (2002): *Coasts: form, process and evolution*, Cambridge University Press, New York.
- WU S., YARNAL B., FISHER A., (2002): Vulnerability of coastal communities to sea-level rise: a case study of Cape May County, New Jersey, USA, *Climate Research*, 22, 255-270, DOI: 10.3354/cr022255.
- YOU, Z. J. (2019): Tropical Cyclone-Induced Hazards Caused by Storm Surges and Large Waves on the Coast of China, *Geosciences*, 9 (3), 131, DOI:10.3390/geosciences9030131.

PATTERNS OF INTERNATIONAL MIGRATION AMONG RURAL HOUSEHOLDS IN EDO STATE, NIGERIA

OBLICI MEĐUNARODNE MIGRACIJE MEĐU RURALNIM KUĆANSTVIMA U SAVEZNOJ DRŽAVI EDO, NIGERIJA

IRENONSEN OYAIMARE UDDIN¹, OGBONNAYA EZE ORI², EDWIN MBADIWE IGBOKWE³

¹ Department of Agricultural Economics and Extension, Ambrose Alli University, 310103, Ekpoma, Edo, Nigeria / *Odjel za poljoprivrednu ekonomiju i savjetovanje, Sveučilište Ambrose Alli, 310103, Nigerija*, e-mail: uddinirenonсен@gmail.com

² Social Sciences Unit, School of General Studies, University of Nigeria, Obukpa Rd, 410105, Nsukka, Enugu, Nigeria / *Odjel za društvene znanosti, Fakultet općih studija, Sveučilište u Nigeriji, Nsukka, Enugu, Nigerija*, e-mail: ogbonnaya.ori@unn.edu.ng

³ Department of Agricultural Extension, University of Nigeria, Obukpa Rd, 410105, Nsukka, Enugu, Nigeria / *Odjel za poljoprivredno savjetovanje, Sveučilište u Nigeriji, Nsukka, Enugu, Nigerija*, e-mail: emigbo@yahoo.com

* corresponding author / *autor za kontakt*

DOI: 10.15291/geoadria.3619

Original scientific paper / *Izvorni znanstveni rad*

Received / *Primitljeno*: 8-1-2022

Accepted / *Prihvaćeno*: 21-12-2022



This article examines the pattern of international migration among rural households in Edo State, Nigeria. The empirical results are based on a quantitative and qualitative survey of 240 household heads. The findings show that some household heads sourced information with special reference to international migration. This information assisted them in guiding intending migrants from their households on how to go about leaving the country in search of a better life. The information sourced was majorly centred on visa processing and obtaining residency/work permits and job opportunities. Family and friends, the Internet and travel agencies were among various channels where household heads got information to guide their international migration decisions. Migrants from rural households left the country through legal and illegal means. A key factor in their choice of destination country was the presence of either family members or friends, while plans and arrangements for migrants' departure from the country were largely facilitated by household heads and migrants themselves. Irrespective of the quest of many migrants to leave Nigeria, some sought greener pastures in some African countries. Libya turned out to be the first destination of most migrants from where they later migrated to other countries of choice majorly in Europe.

KEY WORDS: international migration, migration patterns, migration information, migration decisions, Nigeria, Europe

Ovaj članak ispituje obrazac međunarodne migracije među ruralnim kućanstvima u državi Edo u Nigeriji. Empirijski rezultati temelje se na kvantitativnom i kvalitativnom istraživanju 240 nositelja kućanstva. Rezultati su pokazali da su neki nositelji kućanstva došli do informacija s posebnim osvrtom na međunarodne migracije. Te su im informacije pomogle u usmjeravanju potencijalnih migranata iz njihovih kućanstava kako da napuste zemlju u potrazi za boljim životom. Izvori informacija uglavnom su bili usmjereni na obradu viza i dobivanje boravišnih/

radnih dozvola i mogućnosti zapošljavanja. Obitelj i prijatelji, internet i putničke agencije bili su među raznim kanalima putem kojih su nositelji kućanstva dobivale informacije koje su im pomogle pri donošenju odluka o međunarodnoj migraciji. Migranti iz seoskih kućanstava napuštali su zemlju legalnim i ilegalnim putem. Ključni čimbenik u odabiru zemlje odredišta bila je prisutnost članova obitelji ili prijatelja, dok su planove i dogovore za odlazak migranata iz zemlje uvelike omogućili nositelji kućanstva i sami migranti. Bez obzira na želju mnogih migranata da napuste Nigeriju, neki su potražili zelenije pašnjake u nekim afričkim zemljama. Pokazalo se da je Libija bila prvo odredište većine migranata odakle su kasnije migrirali u druge zemlje po izboru, uglavnom u Europi.

KLJUČNE RIJEČI: međunarodna migracija, migracijski obrasci, informacije o migraciji, odluke o migraciji, Nigerija, Europa

INTRODUCTION

Migration, which is the movement of people over defined space and time, is a phenomenon that has been part of humans from the creation. Humans have been on the move in quest of overcoming the earth, so to speak, and exploiting existing resources and socio-economic opportunities for the well-being of humans (IKWUYATUM, 2016). The International Federation of Red Cross and Red Crescent Societies (IFRC) (2012) described international migration to be a process of moving across borders. To buttress this point, Adetunji (2014) also defined international migration as the movement of individuals across national boundaries. International migration is naturally complex. It can affect a nation-state politically, culturally and socio-economically by bringing either strength or weakness. In other words, international migration can bring both progress and decline in the socio-economic development of a nation-state (FAYOMI, 2013).

International migration manifests itself in diverse dimensions and researchers uncover new and different classes of its manifestations as they get intrigued by the topic. This reveals that international migration is a subject that keeps on emerging in various ways as the world and various nation-states in the international system change socio-economically and geopolitically (WICKRAMASINGHE, WIMALARANTANA, 2016). According to Jennissen (2004), there are various types and kinds of international migration. These are as highlighted below.

1. **International labour migration** is defined as the movement of persons from their home nation to another nation for the purpose of employment. This kind of international migration can also be influenced by nation-state bilateral relations (SANDER ET AL., 2013). Labour migration involves migrants (skilled, semi-skilled, unskilled) seeking job opportunities in different destination states (JENNISSEN, 2004). Labour migration can also involve voluntary migrants for the sole purpose of working or getting a comfortable

job. This is mostly more of a personal gain and is indirectly profitable to the receiving states. Simply put, international labour migration is the transfer of skills from one nation-state to another.

2. **International return migration** occurs when a migrant retires back home to his/her nation-state of origin after leaving the home nation-state for another for quite some time or a long time. Sometimes migrants go to various destinations to secure better living conditions and later, return back home to start a business or permanently return to live after studies. It can also be explained as the relocating of migrants back to their respective countries.
3. **International chain migration** is described as movements where various individuals migrate out of their home countries with the sole aim of joining their family members abroad. This type of international migration can also be referred to as reunification. This involves invitations from family members and friends to the destinations individuals wish to arrive at.
4. **International asylum migration** involves asylum seekers (individuals) that seek refuge in a destination nation-state due to frustration and push factors surrounding them in their home countries. They describe themselves as requiring help and refuge. This is also described as forced migration. This type of international migration includes mostly refugees, internally displaced persons and others who claim refugee status.

According to Wickramasinghe and Wimalarantana (2016), international migration is grouped into three (3) types based on the factors that influence it. These are the following:

1. **International economic migration** is related to job seekers and is associated to other economic-related reasons. In this type of international migration, the migrant's sole purpose is to apply his/her skill in exchange for money. These migrants can also have the intention of improving his/her standard of

living through better job opportunities in their destination countries.

2. **International environmental migration** is influenced by push and pull factors such as desert nature in the home nation-state, rise in sea levels, and drought among other factors while the pull factor is perceived as multiple opportunities in that region such as a serene environment in the destination state.
3. **International political migration** is also influenced by political push factors in the home nation-state; such factors may be civil wars, corruption among leaders, political discrimination, and tribalism to mention a few.

Africans migrate within and outside the continent and the number continues to grow daily. Between 2015 and 2017, for example, the number of African international migrants living within the region jumped from 16 million to around 19 million (IOM, 2017a; McAULIFFE, KITIMBO, 2018). Within the same period, there was only a moderate increase in the number of Africans moving outside the continent, from around 16 million to 17 million (IOM, 2017a; McAULIFFE, KITIMBO, 2018). African migrants account for only 14% of the global migrant population: significantly less than migrants from Asia, which account for 41%, or Europe, which account for 24% (NAIDOO, 2019).

In Nigeria, as in most developing countries of the world, both internal and international migration has become a major issue influencing government policies and programmes. Nigeria presently occupies an important position within the West African sub-region as a country of origin, transit and destination of migrants (NBS, 2014). Due to Nigeria's position as the most populous and ethnically diverse country in sub-Saharan Africa, migration in Nigeria manifests in multiple and diverse forms in terms of its nature, causes and effects (AGYEMAN, SETRANA, 2014). Among numerous reasons behind migration, an elevated unemployment rate, increased susceptibility to working poverty and lack of good quality job opportunities are key factors shaping most Nigerians' decisions to mi-

grate overseas (ILO, 2016) with the strong belief that countries in Europe and America have superb opportunities concerning employment, education and training, and sociocultural identification. Suffice it to say that much of the emigrating population in Nigeria has their base in rural areas.

In Nigeria, the bulk of agricultural production takes place in rural areas. This is because these areas have more resources such as land, water and fertile soil to support agricultural activities. To this end, most of the rural population depends on agriculture-related activities for their livelihood. Farm households produce over 70% of the agricultural output of Nigeria in their characteristic small-sized plots (ASOGWA, AGBO, 2013). These households collectively form an important foundation upon which the nation's agricultural economy rests. Farming households not only provide employment and food for the country's teeming population, but they also provide a more equitable basis for the distribution of income as well as an effective demand structure for other sectors of the economy (DORNER, 2010; BRAVA-URETA, EVENSON, 2011). However, small-scale farmers whose livelihoods are dependent on agricultural activities remain poor because of low productivity (CSO, 2000; CHIKOPELA, 2014). Apart from low productivity, various factors such as global economic meltdown, the negative effect of access to natural resources and environmental deterioration, climate change, the HIV/AIDS pandemic, population growth, the negative effect of trade liberalization, adverse effect of globalization among others have been adduced to rural poverty (OSAWA, 2013).

Based on the foregoing, an understanding of the underlying complex interrelationship of persistent vulnerabilities of rural households and migration decisions could help inform policies targeted at reducing poverty, especially in rural marginalised areas. Hence, this study was conducted to ascertain the patterns of international migration among rural households in Edo State, Nigeria. Specifically, the study sought to ascertain: (i) rural households' information sources on international migration decisions, (ii) step-

wise processes involved in migrants' departure from the country, (iii) migrants' first destination country and destination country, (iv) migrants' length of stay in the first destination country and destination country.

MATERIALS AND METHODS

Study area

The study was carried out in Edo State, Nigeria from November 2018 to June 2019. The state was created on 27 August, 1991, out of the defunct Bendel State. Edo State lies between longitude 06°04'E and 06°43'E, latitude 05°44'N and 07°34'N. It is bordered in the south by Delta State, in the west by Ondo State, in the north by Kogi State and in the east by Kogi and Anambra States. It occupies a land area of about 19,187 square kilometres (NBS, 2011) with 180,000 farm families (OMOREGBE, AJAYI, 2009). It has a population of about 3,218,332 (NBS, 2011).

Notable ethnic groups in Edo State include Bini, Esan, Etsako, Owan and Akoko Edo. Edo people engage in professional and non-professional as well as skilled and unskilled jobs. Farming is the predominant occupation among rural dwellers in the state. The main crops grown are rubber trees, oil palm trees, cocoa, yam, cassava, maize, rice, plantain, pineapple, tomatoes as well as leafy vegetables (UDDIN, 2010). There is also a significant animal husbandry industry, with cows, goats, pigs, rabbits and sheep being the main products. Edo people are progressives and explorers. Hence, they migrate and can be found across several states in Nigeria and other countries across the globe.

Edo State has three agricultural zones, namely Edo Central, Edo North and Edo South. Edo Central agricultural zone has five extension blocks, namely Esan Central, Esan West, Esan North-East, Esan South-East and Igueben. Edo North agricultural zone comprises six extension blocks: Owan West, Akoko-Edo, Etsako West, Etsako East, Owan East and Etsako Central. Edo South agricultural zone has seven extension blocks: Oredo, Ovia South West, Ovia North

East, Ikpoba-Okha, Egor, Uhumwode and Orhionwon. All in all, there is a total of 18 extension blocks in the study area (UDDIN, 2014).

Research design

The study adopted the survey design. Survey research involves the collection of information from a sample of individuals through their responses to questions (CHECK, SCHUTT, 2012). This type of research allows for a variety of methods to recruit participants, collect data, and utilize various methods of instrumentation (PONTO, 2015). Survey research can use quantitative research strategies (e.g., using questionnaires with numerically rated items), qualitative research strategies (e.g., using open-ended questions), or both strategies (i.e., mixed methods). As they are often used to describe and explore human behaviour, surveys are frequently used in social and psychological research (SINGLETON, STRAITS, 2009).

Population and sampling procedure

The population for the study comprised all international migrants' household heads in Edo State, Nigeria. Multi-stage sampling technique was used to collect data from the population of international migrant(s) households' heads in the study area. In the first stage, the three agricultural zones (Edo Central, Edo North and Edo South) in the state were selected. In the second stage, two blocks were randomly selected from each zone, giving a total of 6 blocks. The blocks selected are Esan West and Esan North-East (Edo Central agricultural zone); Etsako Central and Etsako West (Edo North agricultural zone) and Ikpoba-Okha and Orhionmwon (Edo South agricultural zone). In the third stage, two circles were purposively selected from each block, giving a total of 12 circles. In the fourth stage, a list of households with international migrant(s) was compiled with the help of community youth leaders in each circle. Community youth leaders were engaged because they were likely to know more households with international migrants based on the assumption

that most migrants are youths. From the list, 20 household heads were randomly selected from each circle. Thus, the total sample size for the study was 240 respondents.

Data collection

Quantitative data were collected using a semi-structured interview schedule. The respondents, who are household heads, were asked to derive information on international migration in sampled households in line with outlined objectives of the study. In addition, focus group discussion (FGD) was used to collect qualitative data, especially for objective two. The FGD involved group discussions where men, women and youths gathered together from different backgrounds or experiences discuss specific issues of interest in international migration. One FGD was conducted in each of the sampled zones giving a total of three FGDs. Furthermore, key informant interviews (KIIs) were conducted with one opinion leader considered to be adequately knowledgeable in each of the sampled blocks. Thus, in each of the zones, two KIIs were conducted giving a total of six KIIs. The FGDs and KIIs were used to gather ethnographic information, especially the information which may be difficult to gather adequately using questionnaires. As a result, illustrative quotes from the FGDs and KIIs were used to buttress the quantitative data.

Data analysis

Variables in objectives one, two, three and four were presented using frequency, percentage, mean scores and standard deviation. Objective four, differentials in assets of remittance-receiving households before and after migrants left the country was analysed using paired sample t-test.

RESULTS AND DISCUSSIONS

Rural households' information sources on international migration decisions

Entries in Table 1 show that 67.9% of household heads did not source information on in-

ternational migration. This finding shows that household heads in the study did not source much information with special reference to international migration. This finding implies that some household heads may be lacking information which could aid their migration decisions. On the other hand, 32.1% of household heads did seek information on international migration. Sourced information includes visa processing and obtaining residency/work permit (15.8%), human trafficking and consequences of illegal migration (10.0%), and job opportunities (2.5%). Other sourced information includes possible routes to Libya and how to cross from Libya into Europe (2.1%), migrating to Europe through Morocco (1.2%) and travelling from Nigeria to other West African countries (0.4%). Furthermore, results presented in Table 1 show that 19.2% of respondents sourced the information on international migration from family and friends, 14.1% from the Internet, 5.4% from travelling agencies, 2.5% from the immigration office and 2.1% from radio, TV and newspapers.

Participants in an FGD in Edo Central Agricultural Zone identified rural households' information sources on international migration and said: *'information on international migration always comes from family or friends most frequently in form of speculation – somebody said this, somebody said that. Also, from different types of social interactions or gatherings and more recently through social media.'* In one of the KIIs in Amedokhian community in Esan North East LGA, a chief said: *'information that migrants seek was mainly on how to travel, cost implications and who can lead the way. Would-be migrants keep looking for links to sponsors who will direct them on how they will go. Of course, there are people in the community who are agents that assist those who want to travel legally or illegally.'* Additionally, during a key informant interview in Ologbo community in Ikpoba-Okha LGA, a participant said: *'information sourced for illegal migration, centres on how to travel, who to meet (agents), routes to follow and accommodation matters. Most of the information may be correct or wrong. That is why at the end*

TABLE 1 Rural household's information sources on international migration decisions

Variables	Freq.	%
Information sourcing on international migration		
Yes	77	32.1
Information sourced for		
Visa processing and obtaining residency/work permit	38	15.8
Human trafficking and consequences of illegal migration	24	10.0
Job opportunities	6	2.5
Travelling routes to Libya and how to crossover from Libya into Europe	5	2.1
Migrating to Europe through Morocco	3	1.2
Travelling from Nigeria to other West African countries	1	0.4
Sources of information*		
Family members and friends	46	19.2
Internet	34	14.1
Travelling agency	13	5.4
Immigration office	6	2.5
Radio, TV and newspapers	5	2.1

*Multiple responses

of the day, most migrants suffer untold hardship when they leave the shores of the country due to inadequate information.'

Corroborating the above statements, United Nations High Commission for Refugees (UNHCR) (2013) asserts that most migrants begin their journey with little information because they are selective in what they want to know. Learning about the risks of the journey does not deter them as they believe that nothing can be worse than what they are currently living and, despite a dangerous journey, they believe that their life will improve once they arrive at their destination. Unrealistic expectations of their migration are fuelled by migrants in their destination who rarely send negative news home because of the pressure on them to succeed, which creates a distorted understanding of life abroad (UNHCR, 2013).

Further deductions from the results (Tab. 1) are that; access to ICT tools could translate to use in making migration decisions among some household heads. According to Ebri (2017), international migration is said to be on the increase due to awareness of opportunities in various countries through various platforms such as television, and the Internet, among other media. Ruysen (2013), considers these technological revolutions are expected to further deepen migration pressures both within and across borders.

Stepwise process(es) involved in migrants' departure from the country

As obtained from the focus group discussions (FGDs) and key informant interviews (KIIs) conducted, the step-wise processes involved in migrants' departure from the country are discussed below.

Legal migration: Migrants make necessary enquiries (i.e. from formal and informal sources) and arrangements through travelling agencies, obtain travel documents from the Nigerian immigration office, get the visas from embassies of the chosen country, book a flight or obtain bus tickets to leave the country depending on the destination country.

Illegal migration: Migrants make necessary enquiries and arrangements mainly through informal and unapproved channels. They establish necessary links with agents (human traffickers, sailors, transporters etc.). Agents charge migrants and thereafter hand them over to syndicate groups who will take the migrants to their respective locations travelling either by land or water.

Furthermore, data in Table 2 show that the choice of destination country was largely migrants' decision (62.9%). Reasons for choosing the destination country were because the following: family/friends reside in the country (72.9%), good living conditions (62.9%), job

TABLE 2 *Step-wise process(es) involved in migrants' departure from the country*

Variables	Freq.	Percentage (%)	Mean (\bar{x})
Choice of destination			
Migrant	151	62.9	
Friends	35	14.6	
Members of the nuclear family	27	11.2	
Household head	13	5.4	
Scholarship board	8	3.3	
Members of the extended family	4	1.7	
Church missions	2	0.8	
Reason for choosing destination country*			
Family/friends reside there	175	72.9	
Good living conditions	151	62.9	
Job opportunities	120	50.0	
Study opportunities	75	31.3	
Ease of doing business	68	28.3	
A safe passage to Europe	45	18.8	
Love for western culture	34	14.1	
Adequate health care	6	2.5	
Missionary responsibilities	2	0.8	
Plans and arrangements for departure			
Household head	70	29.2	
Migrant alone	69	28.8	
Members of the nuclear family	57	23.8	
Travelling agency	18	7.5	
Members of the extended family	11	4.6	
Scholarship arrangement	9	3.8	
Friends	3	1.2	
Church missions	2	0.8	
Royal palace	1	0.4	
Provision of money for departure*			
Household head	168	70.0	
Members of the nuclear family	110	45.8	
Migrant alone	88	36.7	
Members of the extended family	69	28.8	
Scholarship funding	25	10.4	
Travelling agency	18	7.5	
Church missions	2	0.8	
Royal palace	1	0.4	
Estimated amount used for transit (n=160)**			
≤ ₦200,000	12	5.0	
₦200,001 – ₦400,000	45	18.8	
₦400,001 – ₦600,000	28	11.7	
₦600,001 – ₦800,000	25	10.4	
₦800,001 – ₦1,000,000	22	9.2	₦513,000
Above ₦1,000,000	28	11.7	
Means of transportation			
By land using a vehicle	128	53.3	
By air using an aeroplane	109	45.4	
By sea using a ship	3	1.2	

Multiple responses

**1 USD = 365 NGN (June 2019)

opportunities (50.0%) and study opportunities (31.3%). In addition, the ease of doing business (28.3%), a country being an easy route to enter Europe (18.8%), and love for western culture (14.1%) contributed to what made migrants choose the destination country.

Plans and arrangements for migrants' departure from the country were largely facilitated by the household head (29.2%), followed by 28.8% that were made by migrants themselves. Entries in Table 2 further show that household heads provide a greater proportion (70.0%) of the money needed by migrants to travel. About 46% was provided by members of the nuclear family, while 36.7% was by migrants themselves. Additionally, 28.8% of the monetary contribution was made by members of the extended family, while 10.4% was from scholarship funding.

Table 2 shows that a greater proportion (18.8%) of migrants spent from N200,001 – N400,000 to travel overseas, while 11.7% spent N400,001 – N600,000 and only about 12% spent above N1,000,000. The mean amount spent on foreign travel by migrants was N513,000. Moreover, data in Table 2 reveal that 53.3% of migrants travelled by land, while 45.4% travelled by air and 1.2% by sea.

As expected, migrants made their choice of destinations. Nonetheless, the results show that the choice of destination alongside plans/arrangements to leave the country had a combination of factors influencing it. According to Crawley et al. (2016), the decision-making process regarding the choice of destination country is believed to be contingent primarily on the information that is accessible through personal networks, especially information provided by the Nigerian diaspora. Nigerian nationals, who have family members or friends living in Europe, are more likely to have a specific destination country in mind, in contrast to compatriots that do not have family or friends in Europe. As can be further deduced from the results, the immediate family of migrants were actively involved with financial and moral support for migrants' departure. Ellis et al. (2011) posit that in Nigeria, it has become customary for children-rich households to invest in the emigration of one family member given that many

families consider sending one household member to Europe.

Migrants in first destination country and destination country

Entries in Table 3 show that a greater proportion (36.2%) of migrants had Libya as their first destination, 9.6% Ghana, 5.8% USA, 4.6% Malaysia while 3.8% first arrived in Spain, UAE 3.3% and 2.9% South Africa. On the other hand, Table 3 shows that a greater proportion (29.6%) of migrants had Italy as their destination country, 8.5% Spain, 7.1% United Kingdom, and USA 6.2%. Furthermore, 5.8% of migrants reside presently in Ghana, 5.4% in Germany, 5.0% in Malaysia, 3.8% in UAE and 3.3% in South Africa.

From these findings, there is a clear indication that a good number of migrants had Libya as their first destination country before transiting to other parts of the world (especially Europe). By implication, migration flows into Libya have steadily increased due to its strategic positioning between Africa and Europe. According to UNHCR (2013), most migrants claim to be drawn to Libya by the opportunities in generating income. Some arrive and work for a few years before returning to their country of origin with a pool of savings, some repeat the pattern over and over again at different points in their lives, and some are passing through only long enough to generate the necessary funds for their onward journey to Europe, their final destination. In addition, Hamood (2006) posits that a significant proportion of migrants in Libya have an irregular or ambiguous legal status. The irregular status of many, both while en route to the European Union (EU) and when based in Libya, leads to a heightened sense of vulnerability.

Furthermore, irrespective of the quest of many migrants to leave the African continent, some still seek greener pastures in some African countries as seen in the results. By implication, migrants' choice of first destination country or destination country will largely be influenced by several factors such as the rationale behind migrants' decision to travel, the available opportunities and the connections that can be explored.

TABLE 3 *Migrants' first destination country and destination country*

	First destination n=238		Destination n=236
Country	%	Country	%
Libya	36.2	Italy	29.6
Ghana	9.6	Spain	8.3
USA	5.8	United Kingdom	7.1
United Kingdom	5.0	USA	6.2
Malaysia	4.6	Ghana	5.8
Spain	3.8	Germany	5.4
UAE	3.3	Malaysia	5.0
Germany	2.9	UAE	3.8
South Africa	2.9	South Africa	3.3
Italy	2.5	Turkey	2.9
China	2.1	China	2.5
Morocco	2.1	Canada	2.5
Turkey	2.1	Ukraine	2.1
Ukraine	2.1	Libya	1.7
Canada	1.7	Australia	1.2
Kenya	1.2	France	1.2
Cameroon	1.2	Netherlands	1.2
Australia	0.8	Scotland	0.8
Tunisia	0.8	Portugal	0.4
France	0.8	Brazil	0.4
Japan	0.8	Finland	0.4
Belgium	0.8	Poland	0.4
Saudi Arabia	0.4	Japan	0.4
Ivory Coast	0.4	Belgium	0.4
Togo	0.4	Chile	0.4
Mali	0.4	Denmark	0.4
Scotland	0.4	New Zealand	0.4
Finland	0.4	Benin Republic	0.4
Poland	0.4	India	0.4
Chile	0.4	Singapore	0.4
Denmark	0.4	Austria	0.4
Netherlands	0.4	Switzerland	0.4
Benin Republic	0.4	Saudi Arabia	0.4
India	0.4	Kenya	0.4
Singapore	0.4	Morocco	0.4
Switzerland	0.4	Senegal	0.4

TABLE 4 *Length of stay in the first destination country and destination country*

Variables	Frequency	Percentage (%)	Mean (\bar{x})
First destination			
No response	6	2.5	2.66 ± 3.17
< 1 year	78	32.5	
1 – 5 years	124	51.7	
6 – 10 years	20	8.3	
> 10 years	12	5.0	
Destination at present			
No response	3	1.2	3.50 ± 3.29
< 1 year	38	15.8	
1 – 5 years	153	63.8	
6 – 10 years	30	12.5	
> 10 years	16	6.7	

Migrants' length of stay in the first destination country and destination country

Entries in Table 4 show that a greater proportion (51.7%) of migrants stayed in their first destination country for 1-5 years, 32.5% stayed less than a year, 8.3% stayed 6 – 10 years and 5.0% stayed over 10 years. The mean number of years of stay in the first destination country was (2.66 ± 3.17). On the other hand, Table 4 shows that a greater proportion (63.8%) of migrants stayed in their destination country for 1-5 years, 15.8% less than a year, 12.5% stayed for 6 – 10 years and 6.7% stayed over 10 years. The mean number of years of stay in the destination country was (3.50 ± 3.29).

Based on UNDESA (1998) criteria; an international migrant who changes his or her place of usual residence for at least one year is defined as a long-term migrant, while a person who changes his or her place of usual residence for more than three months but less than one year is considered to be a short-term migrant. Following the above, the results show that a large proportion of international migrants in the study were long-term migrants with just a few being short-term migrants.

CONCLUSION AND RECOMMENDATION

In summary, in this research, it was found that some household heads sourced informa-

tion to aid their international migration decisions. Information sourced covered a range of subjects such as visa processing and obtaining residency/work permit, human trafficking and consequences of illegal migration, and job opportunities among others. The source of information on international migration was: family and friends, the Internet, travel agencies and the immigration office. Migrants from households either left the country legally or illegally. Plans and arrangements for the departure of household members were spearheaded by household heads, migrants themselves and members of the nuclear or extended family. Commensurably, migrants from rural households first stopped over in Libya before relocating to other countries majorly in Europe. It was further deduced from the study that a good number of migrants from households were long-term migrants with just a few being short-term migrants. This study contributes to migration literature by providing more information on the type and sources of information most rural household heads seek in their quest to help their members relocate overseas for greener pastures. Moreover, it comprehensively x-rays the processes and patterns involved when a migrant chooses to migrate from the country using legal or illegal means. More so, the present study offers an interesting analysis by engaging quantitative and qualitative data, to shed more light on the patterns of international migration among rural households in Edo State, Nigeria. Considering the active

roles played by household heads in assisting members of their household to relocate outside the country, it is suggested that the Edo State government, NGOs and other agencies engage them, particularly in the fight against illegal migration. The state government should

also employ a variety of tactics to combat illegal immigration, including solid institutional reform and legal framework, public awareness campaigns, the reintegration of returnees, and empowerment initiatives to support the aspiration of its youthful population.

SOURCES AND BIBLIOGRAPHY

- ADETUNJI, M. A. (2014): Trans-border movement and trading activities across Nigeria-Benin Republic border, *Mediterranean Journal of Social Sciences*, 5 (1), 415-423, DOI: 10.5901/mjss.2014.v5n1p415.
- AGYEMAN, E. A., SETRANA, M. B. (2014): Africans on the move. In B. Fabio (Ed.). *Human mobility in Ghana, Nigeria, Angola and South Africa*, Scalabrini Institute for Human Mobility in Africa – SIHMA Cape Town-South Africa, 71-113.
- ASOGWA, U. G., AGBO, F. U. (2013): Migration, remittances and livelihood systems of farm households in Enugu State, Nigeria, *Journal of Biology, Agriculture and Healthcare*, 3 (7), 184-191.
- BRAVA-URETA, B. E., EVENSON, R. E. (2011): Efficiency in agricultural production: The case of peasant farmers in Paraguay, *Agricultural economics*, 10 (1), 27-37, DOI: 10.1016/0169-5150(94)90037-X
- Central Statistical Office (2000): *Agriculture food and environmental statistics in Zambia*, Government Printers, Lusaka. <https://docs.wfp.org/api/documents/WFP-0000125456/download/>, accessed on September 19, 2018.
- CHECK, J., SCHUTT, R. K. (2012): Survey research, in: *Research methods in education*, Eds., J. Check, R. K. Schutt, Thousand Oaks, CA: Sage Publications, 159–185.
- CHIKOPELA, J. (2014): *Livelihood strategies of small-scale farmers in Nankanga camp of Kafue District, Zambia*, Master's Dissertation, School of Humanities and Social Sciences, University of Zambia, Lusaka.
- CRAWLEY, H., DUVELL, F., JONES, K., SKLEPARIS, D. (2016): Understanding the dynamics of migration to Greece and the EU: Drivers, decisions and destinations, *MEDMIG, Research Brief No.2*.
- DORNER, P. (2010): *Land reform and economic development*. Baltimore, MD, Penguin Books.
- EBRI, P. O. (2017): *International migration and the study of socio-economic development in Nigeria: The role of Nigerian Immigration Service*, Master's Dissertation, Covenant University, Ogun State, Nigeria.
- ELLIS, S., CISSE, P. N., IMOROU, A. B., VINCENT-OSAGHAE, G., RESTOY, E., GARSANY, J. (2011): *The role of organized crime in the smuggling of migrants from Western Africa to the European Union*. United Nations Office on Drugs and Crime, Vienna, 1-82.
- FAYOMI, O. O. (2013): *The diaspora and Nigeria-Ghana relations (1979-2010)*, PhD Thesis, Covenant University, Ogun State, Nigeria.
- HAMOOD, S. (2006): *African transit migration through Libya to Europe: the human cost*, Cairo: American University in Cairo, Forced Migration and Refugee Studies, 1-87.
- IKWUYATUM, G. O. (2016): The pattern and characteristics of inter and intra-regional migration in Nigeria, *International Journal of Humanities and Social Science*, 6 (7), 114-124.
- International Federation of Red Cross and Red Crescent Societies, (2012): The phenomenon of migration: Its significance or meaning in human societies throughout history, available at: http://www.ifrc.org/PageFiles/89397/the%20phenomenon%20of%20migration_TYPEFI_final_En.pdfhttp://www.ifrc.org/PageFiles/89397/the%20phenomenon%20of%20migration_TYPEFI_final_En.pdf, accessed on September 19, 2018.
- International Labour Organization, (2016): World employment and social outlook 2016: Trends for youth, available at: https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms_513739.pdf, accessed on April 25, 2018.
- INTERNATIONAL ORGANIZATION FOR MIGRATION, (2017a): *World migration report 2018*, UN, New York, DOI:10.18356/f45862f3-en
- JENNISSSEN, R. P. W. (2004): *Macro-economic determinants of international migration in Europe*, Doctoral Dissertation, University of Groningen, 1-225, available at: <https://pure.rug.nl/ws/portalfiles/portal/9799531/thesis.pdf>, accessed on September 20, 2018.
- McAULIFFE, M. KITIMBO, A. (2018): African migration: what the numbers really tell us, available at: <https://www.weforum.org/agenda/2018/06/heres-the-truth-about-african-migration/>, accessed on July 20, 2019.

- NAIDOO, J. (2019): *Most African migrants head for Africa, not Europe, and they support economic growth*, Daily Maverick, available at: <https://www.dailymaverick.co.za/opinionista/2019-04-12-most-african-migrants-head-for-africa-not-europe-and-they-support-economic-growth/>, accessed on July 20, 2019.
- National Bureau of Statistics (2011): Annual abstract of statistics, Federal Republic of Nigeria, available at: https://istmat.org/files/uploads/53129/annual_abstract_of_statistics_2011.pdf, accessed on July 20, 2019.
- National Bureau of Statistics (2014): *Job creation report, 2nd–4th quarter 2013 job creation survey: a collaborative survey between the National Bureau of Statistics, the office of the chief economic adviser to the president, Federal Ministry of Labour and Productivity and National Directorate of Employment, NBS, Abuja*. <https://nigerianstat.gov.ng/download/218>, July 20, 2019.
- OMOREGBE, F. E., AJAYI, M. E. (2009): Assessment of training needs of extension staff of agricultural development programme (ADP), Edo State, Nigeria, *Journal of Tropical Agriculture, Food, Environment and Extension*, 8 (2), 97–103.
- OSAWA, O. W. (2013): Livelihood vulnerability and migration decision making nexus: The case of rural farm households in Nigeria. In *4th International Conference of the African Association of Agricultural Economists*, September 22-25, 2013, Hammamet, Tunisia, 1-28.
- PONTO J. (2015): Understanding and evaluating survey research, *Journal of the Advanced Practitioner in Oncology*, 6 (2), 168-71.
- RUYSSEN, I. (2013): *Determinants of international migration*, Ph.D. Thesis, Faculty of Economics and Business Administration, Ghent University, Brussels.
- SANDER, N., ABEL, G. J., ROISEMENA, F. (2013): The future of international migration: developing expert-based assumptions for global population projections, Vienna Institute of Demography Working Papers, No. 7/2013, Austrian Academy of sciences (OAW), Vienna Institute of Demography (VID), Vienna.
- SINGLETON, R. A., STRAITS, B. C. (2009): *Approaches to social research (5th edition)*, Oxford University Press, New York.
- UDDIN, I. O. (2010): *Analysis of costs and returns in pig production business in Edo State, Nigeria*, Undergraduate Dissertation, Ambrose Alli University, Ekpoma, Nigeria.
- UDDIN, I. O. (2014): *Knowledge, attitude and practices of herbicides use among farmers in Edo State, Nigeria*, Master's Dissertation, University of Nigeria, Nsukka.
- UNDESA, U. (1998): *Division on economic and social affairs, Meas Chang Consum Prod Patterns A Set Indic* New York, United Nations.
- United Nations High Commission for Refugees, (2013): *Mixed migration: Libya at the crossroads – mapping of migration routes from Africa to Europe and drivers of migration in post-revolution Libya*, available at: <https://www.refworld.org/docid/52b43f594.html>, accessed on: June 7, 2019.
- United Nations, Department of Economic and Social Affairs, (1998): *Recommendations on statistics on international migration, Revision 1*, United Nations Department of Economic and Social Affairs, New York.
- WICKRAMASINGHE, A. A. I. N., WIMALARANTANA, W. (2016): International migration and migration theories. *Social Affairs: A Journal of the Social Science*, 1 (5), 13-32.

MATERIJALNA BAŠTINA ANTIFAŠIZMA U JUŽNOJ ISTRI KAO TEMELJ RAZVOJA MEMORIJALNOG TURIZMA

THE TANGIBLE HERITAGE OF ANTIFASCISM IN SOUTHERN ISTRIA AS A BASIS OF THE MEMORIAL TOURISM DEVELOPMENT

NIKOLA VOJNOVIĆ

Fakultet ekonomije i turizma "Dr. Mijo Mirković", Sveučilište Jurja Dobrile u Puli, Zagrebačka ul. 30, 52100, Pula / *Faculty of Economics and Tourism "Dr. Mijo Mirković", Juraj Dobrila University of Pula, Pula*, e-mail: nikola.vojnovic@unipu.hr

DOI: 10.15291/geoadria.3913

Pregledni rad / *Review*

Primljeno / *Received*: 20-9-2022

Prihvaćeno / *Accepted*: 4-3-2023



U radu se analiziraju prostorni raspored i mogućnosti antifašističke materijalne baštine za razvoj memorijalnog turizma u općinama i gradovima Južne Istre. U prvoj polovici 20. stoljeća antifašistička borba u Istri bila je ključni dio nekoliko političkih prekretnica. Te povijesne prekretnice imale su dalekosežne posljedice i najvećim dijelom bile su obilježene oružanim sukobima, pojedinačnim i masovnim ljudskim žrtvama i terorom nad stanovništvom. Motiv putovanja u memorijalnom turizmu ovdje je obilazak mjesta gdje su se ovi tragični događaji dogodili i komemoracija žrtvama. Cilj istraživanja bio je utvrditi geografski raspored antifašističke materijalne baštine u Južnoj Istri i njezinu pogodnost za razvoj memorijalnog turizma. Dodatni cilj bio je predložiti tematske rute memorijalnog turizma u općinama i gradovima Južne Istre. Korištene su metode analize povijesnih istraživanja, terenskog rada, sudioničkog promatranja, prostorne i GIS analize. Istraživanje je pokazalo da šest južno istarskih općina i dva grada imaju 167 dobro očuvanih i obilježenih materijalnih spomenika antifašizma. Najveći broj spomenika nalazi se u središnjem dijelu grada Pule. Glavni doprinos ovog članka bio je prevrednovanje materijalne baštine antifašizma kao potencijalnog resursa za razvoj memorijalnog turizma kao inovacije u turističkoj ponudi Istre.

KLJUČNE RIJEČI: Južna Istra, materijalna baština, spomenici, antifašizam, memorijalni turizam

This paper analyses the spatial layout and possibilities of the antifascism tangible heritage for memorial tourism development in the municipalities and towns of Southern Istria. In the first half of the 20th century, the antifascist struggle in Istria was a crucial part of several political turning points. Those historical turning points had far-reaching consequences and, for the most part, were marked by armed conflicts, individual and mass human casualties and terror over the population. The motive of travel in memorial tourism here is to visit the places where these tragic events occurred and commemorate the victims. The aim of the research was to determine the geographical distribution of the antifascism tangible heritage in Southern Istria and their suitability for the development of memorial tourism. An additional objective was to propose thematic routes of memorial tourism in Southern Istrian municipalities and towns. Methods of analyses of historical research, fieldwork, participant observation, spatial and GIS analysis were used. The survey indicated that six South Istrian municipalities and two towns have 167 well-preserved and marked tangible antifascism monuments. The

largest number of monuments are located in the central district of the city of Pula. The main contribution of this article was to provide re-evaluation of antifascism tangible heritage as the potential resource for the memorial tourism development as the innovation in the tourism supply of Istria.

KEY WORDS: Southern Istria, tangible heritage, monuments, antifascism, memorial tourism

UVOD

Posljednjih desetljeća turizam posebnih interesa razvio se od ekskluzivnog i individualističkog oblika turističkih motivacija, aktivnosti i ponašanja do općeprihvaćene komponente prostornoga modela razvoja receptivnih turističkih regija i država. Od ranih 1990-ih do danas, turizam posebnih interesa smatran je kontrapunktom masovnom turizmu (MCKERCHER CHAN, 2005.; WEILER, FIRTH, 2021.). Hrvatska turistička zajednica i Ministarstvo turizma prepoznali su tako veliki potencijal turizma posebnih interesa kao alat u pravcu smanjenja prostorne i sezone koncentracije turista u obalnim općinama i gradovima. Sukladno tome, Ministarstvo turizma RH je u strateškom dokumentu *Strategija razvoja turizma do 2020. godine* (URL 1) prepoznalo kulturni turizam kao jedan od glavnih turističkih proizvoda (uz kupališni, nautički i poslovni turizam). Navedena Strategija ističe relevantne proizvode kulturnog turizma za Hrvatsku: urbani turizam, turizam baštine, turizam događaja, kreativni turizam i vjerski turizam.

Istarska županija, kao vodeća hrvatska turistička županija po broju turističkih postelja u komercijalnim smještajnim objektima, ukupnim dolascima i noćenjima turista, suočila se s velikim izazovima i problemima intenziteta turizma, izrazite sezonalnosti i prostorne koncentracije u obalnim općinama i gradovima, posebice u zapadnom i južnom dijelu Županije. Kako bi se izbjegli ili smanjili potencijalno negativni prostorni učinci i neodržive ekološke, sociokulturne i gospodarske posljedice razvoja turizma, Turistička zajednica Istarske županije u strateškom dokumentu *Master plan razvoja turizma Istarske županije 2015. – 2025.* (URL 2) preporučuje turizam posebnih interesa kao što su ruralni, sportski, manifestacijski i kulturni turizam. Među njima su kao najvažniji istaknuti turizam baštine i oživljavanje narodnih običaja kao dio kulturno turističke ponude (RUŽIĆ, MEDICA, 2010.; GRŽINIĆ, VOĐEB, 2015.; ORLIĆ, 2019.). Štoviše, razvoj turističkih proizvoda temeljenih na kulturnoj baštini ili turistička valorizacija materijalne i nematerijalne kulturne baštine, spomenika i lokaliteta jedna je od najvažnijih operativnih i strateških mjera u ovom

INTRODUCTION

In the last decades, special interest tourism evolved from exclusive and individualistic form of tourist motivations, activities and behaviours to the generally accepted component of spatial development model in tourism-receiving regions and states. From the early 1990s to the present days, special interest tourism has been considered as a counterpoint to mass tourism (MCKERCHER CHAN, 2005; WEILER, FIRTH, 2021). Croatian national tourism board and Ministry of tourism recognised such a large potential of special interest tourism as a tool in terms of reducing spatial and seasonal concentration of tourists in coastal municipalities and towns. Accordingly, Croatian Ministry of tourism in the strategic document *Tourism Development Strategy until 2020* (URL 1) recognized cultural tourism as one of the main tourism products (alongside the sun and bathing, nautical and business tourism). Aforementioned Strategy emphasizes relevant cultural tourism products for Croatia: urban tourism, heritage tourism, event tourism, creative tourism and religious tourism.

Istria County, as the top Croatian tourist county by the tourist beds in commercial accommodation facilities, total tourist arrivals and total tourist overnight stays, has faced great challenges and problems of tourism intensity, extreme seasonality and spatial concentration in coastal municipalities and towns, especially on the western and southern part of the County. To avoid or reduce potentially negative spatial effects and unsustainable environmental, sociocultural and economic consequences of tourism development, Istria County tourism board in the strategic document *The 2015 – 2025 Master Plan for Tourism in Istria County* (URL 2) suggests special interest tourism such as rural, sports, event, and cultural tourism. Among these, heritage tourism and the revival of folk customs as a part of cultural tourism supply have been distinguished as the most important (RUŽIĆ, MEDICA, 2010; GRŽINIĆ, VOĐEB, 2015; ORLIĆ, 2019). Moreover, the development of tourism products based on cultural heritage or tourist valorization of tangible and intangible cultural heritage, monuments and sites is one of the most essential operational and strategic measures in this Master plan

Master planu (URL 2). Kako bi se poboljšala diverzifikacija turističke ponude, Master planom se preporučuje sedam klastera, među kojima je i Južna Istra.¹ Vezano uz glavne strateške mjere i ciljeve navedenog Master plana, turistički poduzetnici, promotori, regionalne i lokalne turističke zajednice posljednjih dvadesetak godina nastoje implementirati mnoge podvrste kulturnog turizma uključujući i održivu turističku valorizaciju kulturne baštine.

Unatoč značajnim naporima i podršci regionalnih i lokalnih vlasti na provedbi Master plana Istre (URL 2), memorijalni turizam kao dio širokog spektra kulturnog turizma nije prepoznat i razvijen. Isto tako, materijalna baština u Istri posvećena tragičnim događajima u prvoj polovici 20. stoljeća, posebice ona posvećena antifašističkom pokretu i borbi, zanemarena je u turističkoj ponudi Županije. Slično tome, prema Masterplanu Istre (URL 2), Južna Istra kao glavnu kulturnu baštinu nudi, uz rimske spomenike, industrijsku baštinu Pule, ali ne prepoznaje baštinu antifašizma. Potencijalne vrijednosti za razvoj memorijalnog turizma i zaneimarivanje materijalne antifašističke baštine bili su glavni motiv u ovom radu. Stoga je prvi cilj ovog istraživanja bio identificirati i definirati prostorni raspored i potencijale lokaliteta antifašističke baštine kao temelja razvoja memorijalnog turizma u Južnoj Istri. Sekundarni cilj bio je predložiti tematske staze i rute kao sredstvo razvoja memorijalnog turizma povezanoga s antifašizmom na području gradova i općina Južne Istre. Ova turistička regija odabrana je kao studija slučaja odlukom autora iz više razloga. U prvom redu, Južna Istra je najnaseljeniji dio Istre, gdje se nalazi i najveći grad Pula. Drugo, turizam je vrlo uspješna i razvijena aktivnost u ovoj regiji. Nadalje, prema izvorima, publikacijama i istraživanjima povjesničara, Južna Istra je imala bogatu povijest događaja i procesa, vezanih uz antifašistički pokret i borbu. Konačno, metodološka, prostorna i vremenska ograničenja ovog rada usmjerila su i fokusirala cijeli proces u ovoj regiji zbog svrhovitog i olakšanog znanstvenog istraživanja.

¹ Master plan, u potpoglavlju *Marketinški plan turizma Istre 2015.-2018.*, koristi termin klaster, ali je iz geografske perspektive bolji i prihvatljiviji termin turistička regija.

(URL 2). To improve diversification of tourism supply, Master plan suggests seven clusters among which is Southern Istria.¹ Related to the main strategic measures and goals of the aforementioned Master Plan, tourist entrepreneurs, promoters, regional and local tourist boards over the last twenty years have been trying to implement many subtypes of cultural tourism including sustainable tourism valorization of cultural heritage.

Despite significant efforts and support of regional and local authorities on the implementation of the Istrian Master plan (URL 2), memorial tourism as the part of large cultural tourism spectrum is not recognized and developed. Similarly, tangible heritage in Istria dedicated to the tragic events in the first half of 20th century, especially those one dedicated to the antifascism movement and struggle, are neglected in County's tourism supply. Similarly, according to the Istrian Master plan (URL 2), Southern Istria as the main cultural heritage offers, alongside Roman monuments, industrial heritage of Pula, but didn't recognize antifascism heritage. Potential values for memorial tourism development and neglect of tangible antifascism heritage were the main motive in this paper. So, the first objective of this research was to identify and define spatial distributions and potentials of antifascism heritage sites as the basis of memorial tourism development in Southern Istria. As a secondary objective was to propose thematic trails and routes as a tool of memorial tourism development connected with antifascism in the areas of Southern Istrian towns and municipalities. This tourism region was chosen as the case study of the research by the author's decision for several reasons. In the first place, Southern Istria is the most populated part of Istria, where is the largest city of Pula located. Secondly, tourism is the very prosperous and developed activity in this region. Furthermore, according to historians' research, sources and publications, Southern Istria had a rich history of events and processes, connected with the antifascist movement and struggle. Finally, methodological, spatial and temporal constraints of this

¹ The Master plan, in the subchapter *Marketing plan of Istrian tourism 2015-2018.*, uses a term *cluster*; but from a geographical perspective is better and more acceptable term *tourism region*.

U 20. stoljeću Istra² i Južna Istra imale su brojne povijesne prekretnice, kao i prijelomne događaje i procese s dalekosežnim posljedicama za njezin ukupni politički, društveni i gospodarski razvoj. Jedan od najznačajnijih prijelomnih procesa u prvoj polovici 20. stoljeća bio je nastanak i razvoj istarskog antifašističkog pokreta i borbe kao reakcije i čina nužnog otpora ugnjetavanju talijanske fašističke vlasti i lokalne uprave. Ovu borbu obilježili su oružani sukobi praćeni pojedinačnim i masovnim ljudskim žrtvama, te progoni i zvjerstva vojnih i paravojnih fašističkih snaga nad pojedincima i stanovništvom. Antifašistički pokret i borba u Istri, za razliku od ostalih hrvatskih županija, započeli su 1920. godine (DRNDIĆ, 1978.; DUKOVSKI 2001.; DUKOVSKI 2011.; RADOŠEVIĆ, 2020.; RADOŠEVIĆ 2021.), a trajali su do kraja Drugog svjetskog rata i neposrednog poraća (MIKOLIĆ, 1973.; 2003.; GIRON, 2004.; BURŠIĆ, 2011.; KEŠAC, SKULJAN BILIĆ, 2018.) što je i povijesni okvir ovog istraživanja.

TEORIJSKI OKVIR I PREGLED LITERATURE

Izazovno teoretsko pitanje u ovom radu je rasprava o glavnim razlikama između tamnoga i memorijalnoga turizma. Što se tiče teorijske krhkosti i eklekticiteta literature o tamnome turizmu (STONE, 2006) postoje značajne razlike između tamnoga i memorijalnoga turizma koje su relevantne za ovo istraživanje. Kao prvo, tamni turizam ima širu mrežu turističkih mjesta, atrakcija i izložbi od memorijalnoga turizma, uključujući lokacije i atrakcije povezane sa zabavom i razonodom (STONE, 2006.; STONE, SHARPLEY, 2008.; STONE 2012.; BOWMAN, PEZZULLO, 2009.; MIONEL, 2019.). Iako tamni i memorijalni turizam uključuju mjesta smrti, katastrofa i zločina (FOLEY, LENNON, 1996.), memorijalni turizam se ne može povezati s atrakcijama, kako su ih Stone (2006.) i Raine (2013.) klasificirali i nazvali: *Tvornice tamne zabave*.

Drugo, kao što su González Vázquez (2018.) i Virgili i dr. (2018.) ustvrdili je da su turistički

work have directed and focused the whole process in this region due to purposeful and facilitated scientific research.

In the 20th century Istria² and Southern Istria has had numerous historical turning points, as well as ground-breaking events and processes with far-reaching consequences for its overall political, social and economic development. One of the most remarkable ground-breaking processes in the first half of 20th century was the establishment and development of Istrian antifascism movement and struggle as the reaction and act of the necessary resistance to the oppression of Italian fascist government and local authorities. This combat was marked by armed conflicts followed by individual and mass human casualties, as well persecution and atrocities committed by military and paramilitary fascist forces against individuals and the population. Antifascism movement and struggle in Istria, unlike the other counties of Croatia, begun in 1920 (DRNDIĆ, 1978; DUKOVSKI, 2001; DUKOVSKI, 2011; RADOŠEVIĆ, 2020; RADOŠEVIĆ, 2021) and lasted to the end of World War II (WWII) and the immediate post-war period (MIKOLIĆ, 1973; MIKOLIĆ 2003; GIRON, 2004; BURŠIĆ, 2011; KEŠAC, SKULJAN BILIĆ, 2018) that is the historical framework of this research.

THEORETICAL BACKGROUND AND LITERATURE OVERVIEW

The challenging theoretical issue in this paper is to discuss the major differences between dark and memorial tourism. Concerning the theoretical fragility and eclecticism of dark tourism literature (STONE, 2006) there are significant divergences between dark and memorial tourism which are relevant to this research. In the first place, dark tourism has a broader network of tourist sites, attractions and exhibitions than memorial tourism, including locations, and attractions associated with fun and entertainment (STONE, 2006; STONE, SHARPLEY, 2008; BOWMAN, PEZZULLO, 2009; STONE 2012;

² Istra je geografski izjednačena s jedinicom područne (regionalne) samouprave Istarske županije koju čini 10 gradova i 31 općina.

² Istria is geographically equated with the regional self-government unit of Istria County, which consists of 10 towns and 31 municipalities.

agenti i organizacije koje su promovirale ratišta u sjeveroistočnoj Francuskoj ubrzo nakon Prvog svjetskog rata pokrenule memorijalni turizam, a to je uključivalo i memorijalnu baštinu. Za razliku od toga, tamni turizam su stvorili i uspostavili znanstvenici kao ponajprije akademski pojam u upotrebi, pokrivajući širu skupinu lokacija i disonantne baštine (TUNBRIDGE, ASHWORTH, 1996.; DANN, SEATON, 2001.; HARTMANN, 2014.; ASHWORTH, ISAAC, 2015.; NAUERT, 2017.; BATTILANI I DR., 2018.; URL 3).³ Konačno, ali u kontekstu ovog istraživanja najvažniji je aspekt ponude tamnoga turizma koji uključuje provod i zabavu. Navedene tvornice tamne zabave (STONE, 2006.; RAINE, 2013.) kao jedna od lokacija ili atrakcija memorijalnog turizma i antifašističke materijalne baštine Južne Istre ne mogu primijeniti. Štoviše, tragični događaji, patnje i stradavanja pojedinaca i skupina povezanih s antifašističkim pokretom i borbom, koji su tematski okvir ovoga rada, još uvijek su u živom sjećanju stanovništva Istre i Hrvatske koje redovito komemorira njegove žrtve (FRYKMAN, 2003.; ŠULIGOJ, 2019.; VOJNOVIĆ, 2020.; FRYKMAN 2021.). Uvažavajući te razloge, vrlo je dvojbeno antifašističku baštinu u Južnoj Istri razmatrati i uključivati u skupinu osporavane ili disonantne baštine kao što to Dragičević Šešić, Rogač Mijatović (2014.) i Naef, Ploner (2016.) predlažu u slučajevima Balkana i bivše Jugoslavije.

Kako su naglasili i definirali Čaušević (2019.) i Horvatinčić (2020.), antifašistička baština prije osamostaljenja Hrvatske i raspada Jugoslavije bila je tematski vezana uz antifašističku borbu i socijalističku revoluciju Drugog svjetskog rata u Jugoslaviji te su slavile antifašizam i dijelile humanost. Ipak, valja istaknuti, kako je uočila Horvatinčić (2017.), materijalna baština antifašizma u postsocijalističkoj Hrvatskoj bila je zanemarena, oštećena ili čak uništena. Iznimke od ovih destruktivnih procesa su u Istri, Gorskom kotaru i Kvarneru gdje se spomenici čuvaju ili obnavljaju. No, kako je objasnila Čaušević (2019.),

³ Disonantna baština je baština koja podsjeća na događaje iz prošlosti, teško pomirljiva s vrijednostima i svakodnevnim iskustvima suvremenih posjetitelja. Sinonimi su teško naslijeđe i osporavano naslijeđe (ŠTUBLIĆ, SAMOVOJSKA, 2018.).

MIONEL, 2019). Although, dark and memorial tourism include locations of death, disasters, and atrocities (FOLEY, LENNON, 1996), memorial tourism couldn't be associated with the attractions, as Stone (2006) and Raine (2013) classified and named: *Dark fun factories*.

Secondly, as González Vázquez (2018) and Virgili et al. (2018) argued, memorial tourism was implemented soon after World War I by tourist agents and organizations that promoted battlefields in northeastern France, and this included memorial heritage. Unlike that, dark tourism was created and established by scholars as a more academic term in use, covering a broader group of locations and dissonant heritage (TUNBRIDGE, ASHWORTH, 1996; DANN, SEATON, 2001; HARTMANN, 2014; ASHWORTH, ISAAC, 2015; NAUERT, 2017; BATTILANI ET AL., 2018; URL 3).³ Finally, but in the context of this research, the most important, is the aspect of dark tourism supply including fun and entertainment. Above-mentioned dark fun factories (STONE, 2006; RAINE, 2013) as one of the dark tourism locations or attractions are not appropriate and in the case of the memorial tourism and antifascist tangible heritage of Southern Istria couldn't be applied. Moreover, the tragic events, suffering and deaths of individuals and groups associated with antifascist movement and struggle, which are the thematic framework of this paper, are still in the living memory of the Istrian and Croatian population who commemorate its victims regularly (FRYKMAN, 2003; ŠULIGOJ, 2019; VOJNOVIĆ, 2020; FRYKMAN, 2021). Respecting these reasons, it is very dubious, antifascism heritage in Southern Istria to consider and include in the group of contested or dissonant heritage as Dragičević Šešić, Rogač Mijatović (2014) and Naef, Ploner (2016) suggested in the cases of the Balkans and former Yugoslavia.

As Čaušević (2019) and Horvatinčić (2020) underlined and defined, antifascist heritage sites before Croatian independence and break-up of Yugoslavia were thematically related to the antifascist struggle and the socialist revolution of the Second

³ Dissonant heritage is heritage that recalls past events, not easily reconciled to the values and everyday experiences of contemporary visitors. Synonyms are difficult heritage and contested heritage (ŠTUBLIĆ, SAMOVOJSKA, 2018.).

u posljednjem desetljeću dolazi do oživljavanja i revalorizacije antifašističkih spomenika u bivšim jugoslavenskim republikama što bi moglo unaprijediti razvoj memorijalnog turizma. Ova materijalna baština i komemorativni događaji dio su regionalnog i nacionalnog identiteta te su povezani s potomcima žrtava i onima koji im i danas žele odati počast (DUKOVSKI, 2001.; KESAR, TOMAS, 2014.; DRVENKAR I DR., 2015.; ŠULIGOJ, 2016.; VUKOJEVIĆ, OPAČIĆ, 2017.; ŠULIGOJ 2019.; VOJNOVIĆ, 2020.; FRYKMAN, 2021.).⁴ Zbog tih razloga se lokacije i materijalna antifašistička baština u ovom radu ne mogu nazvati turističkim atrakcijama, već memorijalnim mjestima (SEATON, 2002.; SHARPLEY, STONE, 2009.; VOJNOVIĆ, 2020.).

Naposljedku, memorijalnim turizmom u ovom se radu smatra posjet i boravak na mjestima pojedinačnih i masovnih stradanja uzrokovanih ratom i drugim oružanim sukobima, isključujući stradanja uzrokovana prirodnim katastrofama, industrijskim i prometnim nesrećama (KESAR, TOMAS, 2014.; HERTZOG, 2016.; VOJNOVIĆ, 2020.). Isto tako, isključena su mjesta morbidnih religijskih rituala i mističnih događaja,⁵ čija je svrha prvenstveno bila zabava i razonoda (KESAR, TOMAS, 2014.; GONZÁLEZ VÁZQUEZ, 2018.).

Mjesta i lokaliteti tamnoga i memorijalnoga turizma već dugo privlače posjetitelje i turiste. Posljedično, tako širok interes javnosti, povećao je širok spektar autora i znanstvenika u turizmu, društvenoj geografiji, antropologiji, psihologiji, povijesti, ekonomiji, sociologiji, etnologiji i drugim znanstvenim područjima. Knjiga *Ways to Escape* Chrisa Rojeka (1993.) smatra se prvom publikacijom koja je uključila pojam *Black spot* kao početno znanstveno objašnjenje tamnih i memorijalnih turističkih lokacija. U prvom razdoblju znanstvenog istraživanja znanstvenici su razmatrali i raspravljali o definicijama, teorijskim koncepti-

World War in Yugoslavia and have celebrated antifascism and shared humanity. Nevertheless, it is worthy to emphasize, as Horvatinčić (2017) noted, antifascism tangible heritage in post-socialist Croatia was neglected, damaged or even destroyed. Exceptions to these destructive processes are recorded in Istria, Gorski kotar and Kvarner where the monuments are preserved or renewed. But, as Čaušević (2019) explained, in the last decade, there are the revival and revalorization of the antifascist monuments in ex-Yugoslav republics which could improve memorial tourism development. These tangible heritage and commemorative events are a part of regional and national identity and are linked to the descendants of the victims and those who wish to pay their respects even today (DUKOVSKI, 2001; KESAR, TOMAS, 2014; DRVENKAR ET AL., 2015; ŠULIGOJ, 2016; VUKOJEVIĆ, OPAČIĆ, 2017; ŠULIGOJ 2019; VOJNOVIĆ, 2020; FRYKMAN, 2021).⁴ For these reasons, the locations and the tangible antifascist heritage in this work cannot be termed as the tourist attractions, rather as memorial sites (SEATON, 2002; SHARPLEY, STONE, 2009; VOJNOVIĆ, 2020).

In the end, memorial tourism, in this paper, is considered to be visits and stays in locations of individual and mass casualties caused by war and other armed conflicts, excluding casualties caused by natural disasters, or industrial and traffic accidents (KESAR, TOMAS, 2014; HERTZOG, 2016; VOJNOVIĆ, 2020). Likewise, there are excluded sites of morbid religious rituals and mystical events,⁵ the purpose of which was primarily fun and entertainment (KESAR, TOMAS, 2014; GONZÁLEZ VÁZQUEZ, 2018).

Dark and memorial tourism sites and locations has attracted visitors and tourists for a long time. Consequently, such broad interest of public, has increased large spectrum of authors and scholars in

⁴ Najznamenitiji primjer u Južnoj Istri je komemoracija nedužnim civilnim žrtvama koje su pogubile nacističke oružane snage i fašistička milicija u selu Šajini (Općina Barban). Svake godine potomci, dužnosnici Općine Barban i Istarske županije polažu cvijeće i vijence na spomenik žrtvama u središnjem dijelu ovoga sela.

⁵ Pojam *morbidni vjerski ritual* ne povezuje se sa službenim i priznatim vjerskim uvjerenjima i zajednicama (kršćanstvo, islam itd.), već uz opskurne sekte, bogohulne kultove, neslužbene supkulturne skupine kao što su gotičari, sotonisti ili poganski štovatelji.

⁴ The most iconic example in Southern Istria is the commemoration of innocent civilian victims executed by Nazi military forces and fascist militia in Šajini village in Barban Municipality. Every year, descendants, local officials of Barban Municipality and Istria County lay flowers and wreaths at the monument to the victims in the central part of this village.

⁵ The term *morbid religious ritual* isn't associated with official and recognized religious beliefs and communities (Christianity, Islam etc.), but with obscure sects, blasphemous cults, unofficial subcultural groups such as the gothics, satanists or pagan worshippers.

ma, praksi i povijesnome razvoju tamnoga turizma (FOLEY, LENNON, 1996.; LENNON, FOLEY, 2000.; SEATON, 2002.; WIGHT, 2006.; STONE, SHARPLEY, 2008.; SHARPLEY, STONE, 2009.). Novija istraživanja ponude memorijalnoga i tamnoga turizma uključujući spektar tamnoga turizma (STONE, 2006.; RAINE, 2013.), novije smjerove istraživanja (HARTMANN, 2014.; HERTZOG, 2016.; MIONEL, 2019.) te teoretske modele i divergencije tamnoga i memorijalnoga turizma (GONZÁLEZ VÁZQUEZ, 2018.), najvažnije su za ovaj rad.

Brojne su studije slučaja koje su proučavale europske turističke regije i njihovu pogodnost za razvoj memorijalnoga turizma. Takva su istraživanja uključivala mjesta i područja pojedinačnih i masovnih stradanja kao njihov prostorni okvir te su proučavala turističku važnost glavnih bojišta i ratnih groblja iz Prvog svjetskog rata u Francuskoj, Belgiji i Italiji (SEATON, 2000.; WINTER, 2011.; IRIMIÁS, 2014.; VIRGILI I DR., 2018.). Jednako tako, bitne teme istraživanja su ratišta Drugog svjetskog rata, muzeji i spomenici posvećeni civilnim žrtvama u Berlinu, Dachauu, Auschwitzu i Istočnoj Europi (WOLASTON, 2005.; BROWN, 2015.; LIYANAGE I DR., 2015.; VOJNOVIĆ, KURKA, 2021.). Za ovaj rad posebno su značajna hrvatska znanstvena istraživanja i istraživanja u zemljama koje dijele slične ili identične političke i socioekonomske prekretnice kroz 20. stoljeće kao Hrvatska. Ti su radovi proučavali potencijalne vrijednosti te valorizaciju lokacija i ruta memorijalnoga turizma u Rumunjskoj (GHETAU, ESANU, 2010.), Slovačkoj (HORODNIKOVA, DERCO, 2015.), Srbiji (MINIĆ, 2012.), Sloveniji (GOSAR I DR., 2015.; HROBAT VIRLOGET, ČEBRON LIPOVEC, 2017.; ŠULIGOJ, 2017a.), bivšoj Jugoslaviji (PUTNIK, 2016.) i hrvatskom dijelu Istre (VOJNOVIĆ, 2020.). Konačno, najutjecajnija znanstvena istraživanja i radovi o memorijalnom turizmu u Hrvatskoj razmatraju potencijal razvoja koji uključuje hrvatsku baštinu iz Domovinskog rata (DRVENKAR I DR., 2015.), simboličku memorijalnu vrijednost grada Vukovara, Goli otok, koncentracijski logor Jasenovac iz Drugoga svjetskoga rata (KESAR, TOMAS, 2014.; ŠULIGOJ, 2016.; VUKOJEVIĆ, OPAČIĆ, 2017.; SLIVKOVA, BUCHER, 2017.; KENNEL I DR., 2018.), ratni turizam (ŠULIGOJ 2016.; ŠULIGOJ 2017b.) i baštinu antifašizma (TOMAŠ, 2019.).

tourism studies, human geography, anthropology, psychology, history, economics, sociology, ethnology and the other scientific fields. The book *Ways to Escape* by Chris Rojek (1993) is considered as the first publication which included the term *Black spot* as the initial scientific explanation of dark and memorial tourism locations. In the first period of scientific research, scholars considered and discussed definitions, theoretical concepts, practices and historical development of dark tourism (FOLEY, LENNON, 1996; LENNON, FOLEY, 2000; SEATON, 2002; WIGHT, 2006; STONE, SHARPLEY, 2008; SHARPLEY, STONE, 2009). The more recent research of memorial and dark tourism supply including dark tourism spectrum (STONE, 2006; RAINE, 2013), the new directions in research (HARTMANN, 2014; HERTZOG, 2016; MIONEL, 2019) and dark and memorial tourism theoretical models and divergences (GONZÁLEZ VÁZQUEZ, 2018), are the most important for this work.

There are the numerous case studies that considered European tourist regions and their suitability for memorial tourism development. Such research included sites and areas of individual and mass casualties as their spatial framework and studied tourism importance of WWI major battlefields and war cemeteries in France, Belgium, and Italy (SEATON, 2000; WINTER, 2011; IRIMIÁS, 2014; VIRGILI ET AL., 2018). Equally, the essential research topics are WWII battlefields, museums, and monuments dedicated to civilian casualties in Berlin, Dachau, Auschwitz and Eastern Europe (WOLASTON, 2005; BROWN, 2015; LIYANAGE ET AL., 2015; VOJNOVIĆ, KURKA, 2021). Croatian scientific studies and studies in the countries that share a similar or identical political and socio-economical turning-points throughout the 20th century like Croatia, are of the particular significance for this paper. Those papers studied the potential values and valorization of the memorial tourism sites and routes in Romania (GHETAU, ESANU, 2010), Slovakia (HORODNIKOVA, DERCO, 2015), Serbia (MINIĆ, 2012), Slovenia (GOSAR ET AL., 2015; HROBAT VIRLOGET, ČEBRON LIPOVEC, 2017; ŠULIGOJ, 2017a), former Yugoslavia (PUTNIK, 2016) and Croatian part of Istria (VOJNOVIĆ, 2020). Finally, the most influential scientific research and papers on memorial tourism in Croatia consider

METODOLOGIJA ISTRAŽIVANJA

Navedena analiza teorijskoga okvira memorijskoga turizma, povijesne važnosti antifašističke borbe u Južnoj Istri i pregled literature uključujući revalorizaciju materijalne baštine antifašizma upućuju na sljedeća istraživačka pitanja: U kojoj su mjeri antifašistički spomenici očuvani i dostupni u Južnoj Istri? Može li materijalna baština antifašizma u Južnoj Istri postati dijelom ponude memorijskoga turizma? Istraživanje je testiralo sljedeće hipoteze:

- H1 Općine i gradovi Južne Istre imaju povoljan prostorni raspored materijalne baštine antifašizma
- H2 Materijalna baština antifašizma Južne Istre dobro je očuvana i dostupna potencijalnim posjetiteljima i turistima.
- H3 Gustoća i dostupnost spomenika antifašizmu u Južnoj Istri stvaraju mogućnosti za razvoj memorijskoga turizma.

Za realizaciju ciljeva istraživanja i postizanje znanstvenih rezultata korišteno je više znanstvenih postupaka, metoda, alata i tehnika. Prva faza ovoga istraživanja obuhvaćala je analizu relevantnih povijesnih istraživanja, znanstvenih radova, knjiga i drugih publikacija o presudnim događajima i najznačajnijim prekretnicama u prvoj polovici 20. stoljeća u Južnoj Istri vezanima uz antifašistički pokret i borbu (MIKOLIĆ, 1973.; DRNDIĆ, 1978.; DUKOVSKI, 2001.; MIKOLIĆ 2003.; GIRON, 2004.; MARUŽIN, ROJNIĆ, 2004.; SCOTTI, 2008.; BURŠIĆ, 2011.; DUKOVSKI 2011.; KEŠAC, SKULJAN BILIĆ, 2018.; RADOŠEVIĆ, 2020., 2021.). Koristeći takva primijenjena povijesna istraživanja i publikacije, presudni događaji povezani s antifašističkim pokretom i borbom mogu se podijeliti u dva glavna razdoblja: međuratno razdoblje (1918. – 1940.) i razdoblje Drugoga svjetskog rata uključujući neposredno poraće (MARUŽIN, ROJNIĆ, 2004.; SCOTTI, 2008.; DUKOVSKI, 2011.; KEŠAC, SKULJAN BILIĆ, 2018.; RADOŠEVIĆ, 2020., 2021.).⁶

⁶ Antifašistički pokret u Istri, za razliku od ostalih hrvatskih županija, prema relevantnim znanstvenim istraživanjima, radovima i publikacijama povjesničara, započeo je u razdoblju neposredno nakon Prvog svjetskog rata. Prvo razdoblje završilo je

potential of development and which include Croatian war of Independence heritage (DRVENKAR ET AL., 2015), symbolic memorial value of the town of Vukovar, the island Goli, the WWII concentration camp Jasenovac (KESAR, TOMAS, 2014; ŠULIGOJ, 2016; VUKOJEVIĆ, OPAČIĆ, 2017; SLIVKOVA, BUCHER, 2017; KENNEL ET AL., 2018), warfare tourism (ŠULIGOJ 2016; ŠULIGOJ 2017b) and anti-fascism heritage (TOMAŠ, 2019).

RESEARCH METHODOLOGY

Above-mentioned analysis of theoretical background of memorial tourism, historical importance of the antifascist struggle in Southern Istria and literature review including revalorization of tangible antifascism heritage point to the following research questions: To what extent are antifascist monuments preserved and accessible in Southern Istria? Does the antifascist tangible heritage in Southern Istria can become part of memorial tourism supply?

The research tested following hypotheses:

- H1 Southern Istrian municipalities and towns have favourable spatial distribution of tangible antifascism heritage.
- H2 Tangible antifascism heritage in Southern Istria is well-preserved and accessible to potential visitors and tourists.
- H3 The density and accessibility of the antifascist monuments in Southern Istria create opportunities for the memorial tourism development.

In order to realise research objectives and obtain scientific results, several scientific procedures, methods, tools and techniques were used. The first stage of this research included analyses of relevant historical research, scientific papers, books and other publications regarding the crucial events and the most significant turning points in the first half of the 20th century in Southern Istria connected with antifascist movement and struggle (MIKOLIĆ, 1973, 2003; DRNDIĆ, 1978; DUKOVSKI, 2001; GIRON, 2004; MARUŽIN, ROJNIĆ, 2004; SCOTTI, 2008; BURŠIĆ, 2011; DUKOVSKI, 2011; KEŠAC, SKULJAN BILIĆ, 2018; RADOŠEVIĆ,

U drugoj fazi ovoga istraživanja, proveden je višestruki terenski rad, uključujući sudioničko promatranje, kako su definirali Hall (2011.), de Walt i de Walt (2011.), Ribeiro i Foemmel (2012.) te Phillips i Johns (2012.). Terenski rad i sudioničko promatranje trajalo je 10 mjeseci: rujan 2021. – lipanj 2022.⁷ Tijekom ovih obilazaka i promatranja spomenika i lokaliteta materijalne baštine antifašizma utvrđeni su precizni položaji i geografske koordinate svakog pojedinog spomenika pomoću GPS uređaja (*Garmin Montana 680t*). Drugi razlog terenskog rada i zapažanja sudionika bio je posjet komemoracijama i obljetnicama tragičnih događaja koje organiziraju južno istarske jedinice lokalne samouprave kako bi se shvatila važnost antifašizma za lokalno stanovništvo. Treći razlog ovih metoda je ispitivanje pristupačnosti svakog pojedinog spomenika, kao i prikladnosti za tematske rute i ponudu memorijalnoga turizma (HORVAT, KLARIĆ, 2012.; BALAŽIĆ, 2013.; HORODNIKOVA, DERCO, 2015.; MATEČIĆ, 2016.; HROBAT VIRLOGET, ČEBRON LIPOVEC, 2017.; SLUNJSKI, 2017.). Istovremeno, u ovoj fazi istraživanja upotrebljavalo se kartiranje uz potporu GIS-a kao alata kako su definirali i predložili Boers i Coetrell (2007.), Chhetri i Arrowsmith (2008.), Curić i dr. (2012.), Glamuzina i dr. (2017.). U tu svrhu korištena je aplikacija QGIS (verzija 3.22.3). Dodatno, se upotrebljavala foto dokumentacija kako su predložili Jacobsen (2007.), Rakić i Chambers (2012.) te Brown (2015.).

Završna faza istraživanja uključuje prijedloge popisa i tipologije (STONE, 2006.; RAINE, 2013.; VOJNOVIĆ, 2020.) lokaliteta materijalne baštine antifašizma po općinama i gradovima Južne Istre, korištenjem podataka prikupljenih i generiranih terenskim radom, sudioničkim promatranjem, kartiranjem i fotodokumentacijom. Svrha popisa spomenika i tipologije je stvaranje ključnih točaka potencijalnih tematskih ruta kao alata razvoja memorijalnoga turizma, slično već valoriziranim ru-

1940. godine, kada je Italija objavila rat saveznicima.

⁷ U razdoblju istraživanja posjećuju se brojna događanja ili neformalna druženja. Najvažniji među njima su komemoracija Vladimiru Gortanu u Gortanovoj uvali (Pula), u selu Šajini, Komemoracija kod Mlina (Pula), antifašističkim obilježavanjima Dana antifašističke borbe (razni događaji i skupovi) itd.

2020; RADOŠEVIĆ, 2021). Using such applied historical research and publications, the crucial events connected with antifascist movement and struggle could be divided in two main periods: the inter-war period (1918 to 1940) and the World War II (WWII) period including the immediate post-WWII period (MARUŽIN, ROJNIĆ, 2004; SCOTTI, 2008; DUKOVSKI, 2011; KEŠAC, SKULJAN BILIĆ, 2018; RADOŠEVIĆ, 2020; RADOŠEVIĆ, 2021).⁶

In the second stage of this research, multiple fieldworks, including participant observation, were undertaken as defined by Hall (2011) de Walt and de Walt (2011) Ribeiro, Foemmel (2012) and Phillips, Johns (2012). Fieldwork and participant observation lasted 10 months: September 2021 to June 2022.⁷ During these visits and observations of antifascist tangible heritage monuments and sites, precise positions and geographical coordinates of each of the individual monument using GPS device (*Garmin Montana 680t*) have been determined. The other reason of fieldwork and participant observations was the visit to commemorations and anniversaries of tragic events organized by South Istrian communities to understand importance of antifascism for local inhabitants. The third reason of these methods is testing of the accessibility of each individual monument, and as well as a suitability for thematic routes and memorial tourism supply (HORVAT, KLARIĆ, 2012; BALAŽIĆ, 2013; HORODNIKOVA, DERCO, 2015; MATEČIĆ, 2016; HROBAT VIRLOGET, ČEBRON LIPOVEC, 2017; SLUNJSKI, 2017). Simultaneously, in this stage of research, the mapping using GIS as a tool are used as defined and suggested by Boers and Coetrell (2007), Chhetri and Arrowsmith (2008), Curić et al. (2012), Glamuzina et al. (2017). The QGIS (version 3.22.3) application was used for this purpose. Additionally, photo documentation put in use as proposed by Jacobsen (2007), Rakić,

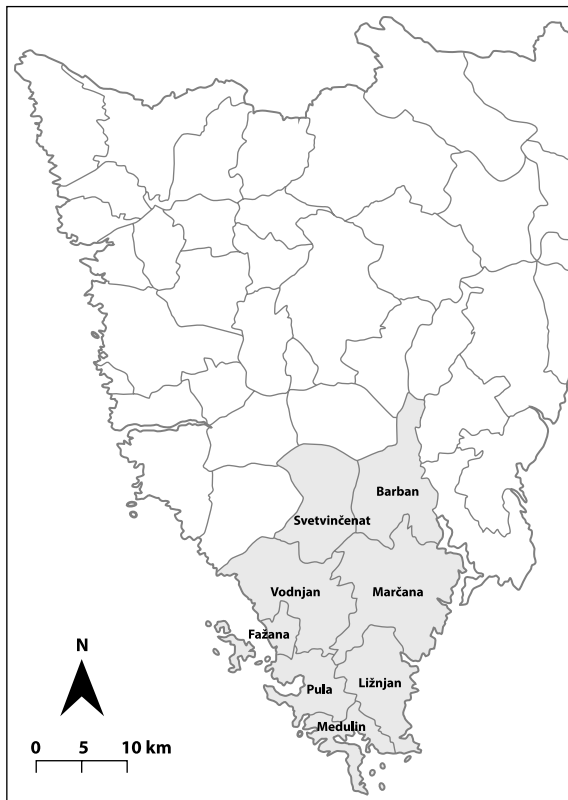
⁶ The antifascist movement in Istria, unlike the other Croatian counties, according to the relevant scientific research, papers and publications by historians, begun in the immediate post-WWI period. The first period ended in 1940, when Italy declared the war to the Allies.

⁷ In the research period, numerous events or informal gatherings are visited. The most important among them are commemoration to Vladimir Gortan in Gortan cove (Pula), in Šajini village, Commemoration at the Mill (Pula), to antifascist celebrations of Day of Antifascist Struggle (various events and gatherings) etc.

tama u Južnoj i Srednjoj Europi (GHETAU, ESANU, 2010.; IRIMIÁS, 2014.; HORODNIKOVA, DERCO, 2015.; GOSAR I DR., 2015.; HROBAT VIRLOGET, ČEBRON LIPOVEC, 2017.; NAUERT, 2017.; ŠULIGOJ, 2017a.).

JUŽNA ISTRA KAO TURISTIČKA REGIJA

Južna Istra (Sl. 1.) kao turistička regija u Istarskoj županiji ima ukupnu površinu od 571,8 km² s 81 293 stanovnika (2021), administrativno podijeljena na dva grada (Pula i Vodnjan) i šest općina (Barban, Fažana, Ližnjan, Marčana, Medulin i Svetvinčenat) (VRESK, 2002; LUKIĆ, 2012; MAGAŠ, 2013.). Ovaj dio Istre nudi u 2019. godini 89 857 turističkih ležajeva u komercijalnim smještajnim objektima (30,5% Istarske županije) te prima 1 147 254 ukupnih turističkih dolazaka (1/4 dolazaka u Istarskoj županiji) i ostvaruje 6 750 918 ukupnih noćenja što je 25,6% boravaka u matičnoj županiji (DRŽAVNI ZAVOD ZA STATI-



SLIKA 1. Gradovi i općine Južne Istre u Istarskoj županiji

FIGURE 1 Towns and municipalities of the Southern Istria in Istria county

Chambers (2012) and Brown (2015).

The final stage of research includes proposals of a list and typology (STONE, 2006; RAINE, 2013; VOJNOVIĆ, 2020) of antifascist tangible heritage sites by the Southern Istrian municipalities and towns, using data compiled and generated through the fieldwork, participant observation, GIS supported mapping, and photo documentation. The purpose of the list of monuments and typology is a creation of the key points of potential thematic routes as a tool of memorial tourism development, similar to the valorized routes in the Southern and Central Europe (GHETAU, ESANU, 2010; IRIMIÁS, 2014; HORODNIKOVA, DERCO, 2015; GOSAR ET AL., 2015; HROBAT VIRLOGET, ČEBRON LIPOVEC, 2017; NAUERT, 2017; ŠULIGOJ, 2017a).

SOUTHERN ISTRIA AS A TOURISM REGION

Southern Istria (Fig. 1) as a tourism region in Istria county has a total area of 571.8 km² with a population of 81,293 (2021), administratively divided into two towns (Pula and Vodnjan) and six municipalities (Barban, Fažana, Ližnjan, Marčana, Medulin and Svetvinčenat) (VRESK, 2002; LUKIĆ, 2012; MAGAŠ, 2013). This part of Istria offers in 2019 89,857 tourist beds in commercial accommodation facilities (30.5% of Istria county) and receives 1,147,254 overall tourist arrivals (1/4 arrivals in Istria county) and realizes 6,750,918 overall overnight stays which is 25.6% of stays of home county (CROATIAN BUREAU OF STATISTICS, 2020).

The geographical location of Istria county and Southern Istria is defined by four key determinants. First, the County is positioned on the edges of large European physical geographical regions: Alps, the Dinarides, the Pannonian basin, the Po Valley and plain and northern Adriatic Sea as a part of the north Mediterranean basin. Furthermore, Istria county is the westernmost part of Croatia and a part of Croatian region North Adriatic littoral. Thirdly, transport network, routes (highways and railways) and hubs (road junctions, international airports and seaports) contribute to the favourable geographical location in the similar ways as the vicinity of tourist-generating markets, regions and

STIKU, 2020.).

Geografski položaj Istarske županije i Južne Istre definiraju četiri ključne odrednice. Prvo, Županija se nalazi na rubovima velikih europskih fizičko geografskih regija: Alpa, Dinarida, Panonske zavale, Padske nizine i sjevernog Jadrana kao sjevernog dijela Sredozemnog bazena. Nadalje, Istarska županija je najzapadniji dio Hrvatske i dio hrvatske regije Sjeverno jadransko primorje. Treće, prometna mreža, pravci (autoceste i željeznice) i čvorišta (cestovna čvorišta, međunarodne zračne i morske luke) pridonose povoljnom geografskom položaju na sličan način kao i blizina turističkih tržišta, regija i država Srednje i Zapadne Europe.

Južna Istra nudi dvije skupine turističkih atrakcija koje su jednako važne u oblikovanju ukupne turističke ponude. Prva skupina su prirodne atrakcije od kojih su najznačajniji geomorfološki oblici (morski i krški oblici reljefa), 268,6 km duga morska obala i Jadransko more pogodno za četiri do pet mjeseci kupališnog turizma i sličnih obalnih rekreacijskih aktivnosti, blaga klima, prirodne i kultivirane vegetacijske zone (otvorena polja, pašnjaci, parkovi i šume). Drugu skupinu atrakcija čine zaštićena kulturno-povijesna baština iz pretpovijesnog, rimskog, srednjovjekovnog i suvremenog razdoblja, kulturne institucije (muzeji i galerije) te posebna događanja poput filmskog festivala, sajma knjiga i raznih vrsta glazbenih festivala (VOJNOVIĆ, 2012.).

REZULTATI I RASPRAVA

Upotrebljavajući navedeni metodološki aparat i istraživačke tehnike na području Južne Istre locirano je 167 materijalnih spomenika i lokaliteta povezanih s antifašističkim pokretom i borbom, uključujući oba povijesna razdoblja prve polovice 20. stoljeća. Predloženom povijesnom periodizacijom, u Južnoj Istri nalazi se 13 spomenika i lokaliteta posvećenih međuratnom razdoblju i 154 spomen-obilježja antifašističkom pokretu u Drugom svjetskom ratu uključujući i neposredno poraće. Veći broj spomenika i lokaliteta iz Drugog svjetskog rata u odnosu na one iz međuratnog razdoblja razumljiv je s obzirom na in-

states of the Central and Western Europe.

Southern Istria offers two groups of tourist attractions that are equally important in the design of an overall tourism supply. The first group are natural attractions and the most significant of them are geomorphologic forms (marine and karst forms of relief), 268.6 km long sea coast and Adriatic Sea suitable for four to five months of sun and bathing tourism and similar coastal recreational activities, mild climate, natural and cultivated vegetation zones (open fields, pasture, parks and forests). The second group of attractions consists of protected cultural and historical heritage from the prehistoric, Roman, Medieval and modern-day periods, cultural institutions (museums and galleries) and special events such as film festival, book fair and various types of music festivals (VOJNOVIĆ, 2012.).

RESULTS AND DISCUSSION

Using the aforementioned methodological apparatus and research techniques in Southern Istria are located 167 tangible monuments and sites associated with antifascism movement and struggle including both of two historical period of the first half of 20th century. Using proposed historical periodization, in Southern Istria are located 13 monuments and sites dedicated to the interwar period and 154 to the memory of the antifascism struggle and movement in WWII including the immediate post-war period. Larger number of the WWII monuments and sites in comparison to the ones of the interwar period is understandable considering the intensification and concentration of the historical events and processes connected with armed resistance, armed conflicts and battles against fascism (DRNDIĆ, 1978; DUKOVSKI, 2001; GIRON, 2004; BURŠIĆ, 2011). Spatial layout of antifascism tangible heritage by administrative units of Southern Istria confirms the presence of these monuments and sites in all of six municipalities and two towns (Fig. 2).

Southern Istria has the monuments' density where 2,9 antifascist monument or site placed on each 10 km². The largest number of the tangible antifascism heritage in Southern Istria is located



SLIKA 2. Prostorni raspored materijalne baštine antifašizma i Južnoj Istri
 FIGURE 2 Spatial layout of the tangible antifascism heritage in Southern Istria

tenziviranje i koncentraciju povijesnih događaja i procesa vezanih uz oružani otpor, oružane sukobe i bitke protiv fašizma (DRNDIĆ, 1978.; DUKOVSKI, 2001.; GIRON, 2004.; BURŠIĆ, 2011.). Prostorni raspored materijalne baštine antifašizma po administrativnim jedinicama Južne Istre potvrđuje prisutnost ovih spomenika i lokaliteta u svih šest općina i dva grada (Sl. 2.)

Južna Istra ima gustoću spomenika gdje se na svakih 10 km² nalazi 2,9 antifašističkih spomenika ili lokaliteta. Najveći broj materijalne antifašističke baštine u Južnoj Istri nalazi se u gradu Puli gdje se nalazi 51 spomenik i lokalitet što čini 30,5% svih spomenika. Štoviše, grad Pula ima najgušću mrežu (broj spomenika do 10 km²)

in the town of Pula where are 51 monuments and sites which make 30.5% of all monuments. Moreover, the town of Pula has the densest network (number monuments to 10 km²) of these monuments, in which 9.5 monuments is placed on 10 km² of surface area.

Such numerous the monuments in Pula are deeply associated, not only with population size, but the political, social, economic and historical role of the town in the first half of the 20th century as the most important hub of the antifascist movement and resistance. Moreover, historical research (DUKOVSKI, 2001; DUKOVSKI, 2011; MIKOLIĆ, 2003; MARUŽIN, ROJNIĆ, 2004) undoubtedly emphasizes the key role of the town of Pula in that period.

TABLICA 1. Materijalna baština antifašizma prema tipu i upravnoj jedinici Južne Istre
 TABLE 1. Antifascism tangible heritage by type and administrative units of Southern Istria

Town/ Municipality / Grad/općina	Type of antifascism tangible heritage						Total / Ukupno
	Memorial exhibitions and museums / Memorijalne izložbe i muzeji	Cemeteries / Groblja	Historical personages / Povijesne osobe	Battles and armed conflicts / Bitke i oružani sukobi	Mass casualties of populations / Masovno stradavanje stanovništva	Others / Ostalo	
Barban	1	2	2	5	7	4	21
Fažana	-	1	-	1	-	-	2
Ližnjan	-	-	6	6	2	-	14
Marčana	-	3	12	3	12	8	38
Medulin	-	1	3	-	5	3	12
Pula	1	5	17	4	14	10	51
Svetvinčenat	-	-	4	-	7	2	13
Vodnjan	-	2	6	1	6	1	16
Southern Istria / Južna Istra	2	14	50	20	53	28	167

ovih spomenika, u kojoj je 9,5 spomenika smješteno na 10 km² površine.

Velik broj spomenika u Puli duboko je povezan ne samo s brojem stanovnika, već i političkom, društvenom, gospodarskom i povijesnom ulogom grada u prvoj polovici 20. stoljeća kao najvažnijeg središta antifašističkog pokreta i otpora. Štoviše povijesna istraživanja (DUKOVSKI, 2001.; MIKOLIĆ, 2003.; MARUŽIN, ROJNIĆ, 2004.; DUKOVSKI, 2011.) nedvojbeno ističu ključnu ulogu grada Pule u tom razdoblju.

Upotrebljavajući ponudu tamnoga turizma (STONE, 2006; RAINE, 2013.) koja u ovom radu isključuje kao neprimjerene tvornice tamne zabave, u Južnoj Istri je utvrđeno šest modificiranih tipova antifašističke materijalne baštine (Tab. 1.). Tako se na ovom području nalaze memorijalne izložbe i muzeji, spomenici na grobljima, spomenici povijesnim osobama, bitkama i oružanim sukobima, masovnim stradanjima stanovništva i ostali. Najveći broj materijalne baštine antifašizma pod nazivom *Ostali* su oni spomenici koji su posvećeni značajnim susretima, okupljanjima i osnivanju antifašističkih organizacija i borbenih postrojbi. Najvažniji kriterij ove tipologije materijalne baštine antifašizma je glavna namjena spomenika ili razlog za postavljanje.

Među ovim tipovima najbrojniji su spomeni-

Using the dark tourism suppliers (STONE, 2006; RAINE, 2013) which, in this paper, it excludes as inappropriate *dark fun factories* in Southern Istria are determined six modified types of the antifascism tangible heritage (Tab. 1). Thus, in this region are located memorial exhibitions and museums, monuments in cemeteries, monuments to historical personages, to the battles and armed conflicts, to the mass casualties of population and the others. The largest number of the antifascism tangible heritage called *Others* are those monuments which are dedicated to the significant meetings, gatherings and foundations of antifascist organizations and combat units. The most important criterion of this typology of antifascism tangible heritage is the main dedication of monuments or reason to be erected.

Among these types, the monuments, and sites dedicated to the mass casualties of population (53 monuments) and those one dedicated to the historical personages (50)⁸ are the most numerous. These two types have almost 2/3 of all the anti-

⁸ The criterion to list monument in the type of *Mass casualties of populations* was numerous victims, no matters if they were antifascists or innocent civilian victims. The type of *Historical personages* includes monuments dedicated to the individual places such as are places of birth, living, arrest, torturing, or death of the antifascists.

ci i lokaliteti posvećeni masovnim stradanjima stanovništva (53 spomenika) i oni posvećeni povijesnim osobama (50).⁸ Na ove dvije vrste otpada gotovo 2/3 svih antifašističkih spomenika i spomenika u Južnoj Istri, a najviše ih je bilo u gradu Puli (31 spomenik i lokalitet) i općini Marčana (24). S druge strane, samo su dvije lokacije memorijalnih izložbi i muzeja. Jedna od njih je Povijesni i pomorski muzej Istre, smješten na brežuljku Kaštel, u središnjoj gradskoj četvrti Pule. Muzejski fondus broji preko 100 000 predmeta kulturno-povijesnog, političkog, vojnog i etnografskog karaktera, raspoređenih u 18 zbirki. Muzej redovito organizira povremene izložbe o antifašističkom pokretu i borbi u Istri (KEŠAČ, SKULJAN BILIĆ, 2018.). Drugi memorijalni muzej je stalni postav u selu Šajini (općina Barban) posvećen pokolju nedužnog civilnog stanovništva ovog sela početkom 1944. godine od strane nacista i paravojnih fašističkih postrojbi (BURŠIĆ, 2011.; MIKOLIĆ, 2003.; MARUŽIN, ROJNIĆ, 2004.). Spomenici postavljeni unutar mjesnih groblja najbrojniji su u gradu Puli. Unutar gradskog groblja u Puli postavljena su 4 spomenika, jedan spomenik je postavljen na groblju gradske četvrti Štinjan, a jedan od spomenika je na Mornaričkom groblju koje je memorijalnog karaktera. U Južnoj Istri postoji 20 spomenika posvećenih borbama i oružanim sukobima protiv fašizma (Tab. 1).⁹ Najznačajnije bitke i oružani sukobi protiv fašizma u Južnoj Istri, iz perspektive povjesničara, dogodili su se u rujnu i listopadu 1943. nakon kapitulacije Italije i posljednjih mjeseci i tjedana Drugog svjetskog rata (MIKOLIĆ, 1973.; 2003.; GIRON, 2004.; SCOTTI, 2008.; BURŠIĆ, 2011.). Najznamenitiji spomenici i mjesta posvećena masovnom stradanju stanovništva Južne Istre, uvažavajući sve dimenzije ljudske patnje i tragedije, nalaze se u spomenutom selu

fascism monuments and sites in Southern Istria, and the largest number of them was located in the town of Pula (31 monuments and sites) and Marčana Municipality (24). On the other hand, there are only two locations of memorial exhibitions and museums. One of them is the Historical and maritime museum of Istria, located on Kaštel hill, in the central urban district of Pula. Museum fundus has over 100,000 items of cultural, historical, political, military and ethnographic character, deployed in 18 collections. The museum regularly organizes occasional exhibitions about the anti-fascism movement and struggle in Istria (KEŠAČ, SKULJAN BILIĆ, 2018). The other one memorial museum is the permanent exhibition room in the village Šajini (Barban Municipality) dedicated to the massacre of innocent civilian population of this village at the beginning of 1944 committed by Nazis and paramilitary fascist troops (MIKOLIĆ, 2003; MARUŽIN, ROJNIĆ, 2004; BURŠIĆ, 2011). The monuments placed inside the local cemeteries are the most numerous in the town of Pula. Inside the town cemetery of Pula are placed 4 monuments, one monument is placed in the cemetery of the urban district of Štinjan and one of the monuments is at the Naval cemetery which has a memorial character. There are 20 monuments in Southern Istria dedicated to battles and armed conflicts against fascism (Tab. 1).⁹ The most significant battles and armed conflicts in Southern Istria against fascism, by historians' perspective, occurred in September and October 1943 after the armistice of Italy and the last months and weeks of WWII (MIKOLIĆ, 1973; MIKOLIĆ 2003; GIRON, 2004; SCOTTI, 2008; BURŠIĆ, 2011). The most iconic monuments and sites dedicated to the mass casualties of population in Southern Istria, respecting all dimensions of the human suffering and tragedy, are placed in the above-mentioned village of Šajini, the village of Bokordići (Svetvinčenat Municipality), Barban Municipality, Marčana Municipality and towns of Pula and Vodnjan. The number of

⁸ Kriterij za uvrštavanje spomenika u kategoriju *masovnih stradanja stanovništva* bile su brojne žrtve, bez obzira radi li se o antifašistima ili nevinim civilnim žrtvama. Tip *Povijesne osobe* uključuje spomenike posvećene pojedinim mjestima kao što su mjesta rođenja, života, uhićenja, mučenja ili smrti antifašista..

⁹ Spomenici posvećeni borbama i oružanim sukobima protiv fašista podijeljeni su u dvije skupine. Prva je skupina spomenika postavljenih na mjestu bitke ili oružanog sukoba. Druga je skupina spomenika posvećenih antifašističkim borbama poginulim negdje drugdje u Istri ili drugim hrvatskim regijama.

⁹ Monuments dedicated to the battles and armed conflicts against fascists are divided into the two groups. The first one is the group of the monuments placed where a battle or armed conflict had occurred. The second one is the group of the monuments dedicated to the antifascist combatants who died somewhere else in Istria or other Croatians regions.

Šajini, selu Bokordići (općina Svetvinčenat), u općinama Barban i Marčana te gradovima Pula i Vodnjan. Brojnost antifašističkih spomenika prostorno raspoređenih u svim gradovima i općinama Južne Istre te njihova tipološka raznolikost potvrđuju prvu hipotezu ovog rada.

S obzirom na karakteristike kulturnih vrijednosti materijalne baštine o kojima govori Matečić (2016.), najvažnije vrijednosti u slučaju antifašističkih spomenika i lokaliteta su njihove društvene, povijesne, simboličke i autentične vrijednosti. Za razvoj memorijalnog turizma u Južnoj Istri manje su značajne estetske i duhovne vrijednosti ove baštine. Slično tome, među četiri skupine kriterija za valorizaciju kulturne baštine, koje je predložio Slunjski (2017.), najprimjenjiviji za ovo istraživanje su turistički kriteriji, uključujući dostupnost i blizinu, te kulturni i obrazovni kriteriji. Jednako tako, Balažić (2013.), u slučaju socijalističkog naslijeđa susjedne regije, slovenskog dijela Istre, ističe dostupnost, autentičnost, današnje stanje i marketinški potencijal spomenika i lokaliteta. Horvatinčić (2017.) ističe da su istarski antifašistički spomenici dobro očuvani i autentični. Uvažavajući navedene teorijske pristupe i empirijska dostignuća, u smislu memorijalno turističke valorizacije spomenika i lokaliteta antifašizma u Južnoj Istri, najutjecajnije značajke su brojnost, dostupnost i blizina spomenika i lokaliteta potencijalnim posjetiteljima ili turistima. Isto tako, korištenjem terenskog rada i sudioničkog promatranje kao metoda, sadašnje stanje antifašističke materijalne baštine u Južnoj Istri ocjenjuje se kao dobro očuvano.¹⁰ Nadalje, u prepoznavanju potencijala materijalne antifašističke baštine kao temelja razvoja memorijalnog turizma u Južnoj Istri i primijenjene vrijednosti spomenika kao ključnih točaka turističkih ruta, pristupačnost je ocijenjena kao najvažniji kriterij. Pristupačnost i broj spomenika glavni su kriteriji pri planiranju tematskih kulturnih ruta (HORVAT, KLARIĆ, 2012.). Korištenjem kartiranja uz podršku GIS alata koji su dodatno

antifascist monuments spatially located in all the Southern Istria towns and municipalities and their typological diversity confirm the first hypothesis of this paper.

Considering characteristics of the tangible heritage's cultural value discussed by Matečić (2016), the most important values in the case of the antifascism monuments and sites are their social, historical, symbolic and authenticity values. For the memorial tourism development in Southern Istria, aesthetic and spiritual values of this heritage are less significant. Similarly, among four groups of criteria for cultural heritage valorization, suggested by Slunjski (2017) the most applicable for this research are tourist criteria, including accessibility and proximity, cultural and educational criteria. In the same way, Balažić (2013), in the case of socialist heritage of the neighboured region, Slovenian part of Istria, emphasizes accessibility, authenticity, present condition and marketing potential of monuments and sites. Horvatinčić (2017) noted that Istrian antifascist monuments are well preserved and authentic. Respecting mentioned theoretical approaches and empirical achievements, in terms of memorial tourism valorization of the antifascism monuments and sites in Southern Istria, the most influential features are the number, accessibility and proximity of the monuments and sites to potential visitors or tourists. Likewise, using fieldwork and participant observation as the methods, the present conditions of antifascism tangible heritage in Southern Istria is assessed as well-preserved.¹⁰ Furthermore, to identify potentials of the tangible antifascism heritage as the basis of the memorial tourism development in Southern Istria and applied value of the monuments as the key points of tourist routes, accessibility was assessed as the most important criteria. The accessibility and number of the monuments are the main criteria in the planning of thematic cultural routes (HORVAT, KLARIĆ, 2012). Using mapping supported by GIS tool which are additionally tested using the fieldwork and par-

¹⁰ Lokalne vlasti u Južnoj Istri (gradovi i općine) čuvaju svu kulturnu baštinu zajedno s Ministarstvom kulture i medija, regionalnom upravom i konzervatorima.

¹⁰ Local authorities in Southern Istria (towns and municipalities) preserve all the cultural heritage together with the Ministry of culture and media, regional authority and conservationists.

TABLICA 2. *Dostupnost materijalne baštine antifašizma po administrativnim jedinicama Južne Istre*
TABLE 2 *Accessibility of antifascism tangible heritage by administrative units of Southern Istria*

Town/Municipality / Grad/Općina	Paved road / Asfaltirana cesta	Footpath / Pješačka staza	Total / Ukupno
Barban	19	2	21
Fažana	2	0	2
Ližnjan	11	3	14
Marčana	32	6	38
Medulin	12	0	12
Pula	51	0	51
Svetvinčenat	13	0	13
Vodnjan	15	1	16
Southern Istria	155	12	167

testirani terenskim radom i metodama sudioničkog promatranja, 167 spomenika i lokaliteta antifašizma podijeljeno je u dvije skupine prema kriteriju pristupačnosti (Tab. 2.).

Prva skupina obuhvaća 155 spomenika i lokaliteta do kojih se redovno dolazi asfaltiranom cestom vozilima ili pješice. Do samo 12 spomenika i lokaliteta se dolazi samo pješačkom stazom, no sve su te točke vrlo blizu asfaltirane ceste. Najpovoljniji položaj na kojem bi se svim spomenicima i lokalitetima moglo pristupiti asfaltiranom cestom nalaze se u općinama Fažana, Medulin, Svetvinčenat i gradu Puli. Glavni nedostatak antifašističkih spomenika u Južnoj Istri u ponudi memorijalnog turizma je nepostojanje višejezičnih informativnih tabli u blizini. Kao primjer dobre prakse je glavni antifašistički spomenik u Titovom parku, u središnjem dijelu Pule gdje su postavljene informativne ploče na 4 jezika (hrvatski, engleski, njemački i talijanski). Ipak, materijalna baština antifašizma u Južnoj Istri ima povoljnu dostupnost i stanje očuvanosti, čime se potvrđuje druga hipoteza ovog rada.

TEMATSKE RUTE KAO ALAT RAZVOJA MEMORIJALNOG TURIZMA

U završnoj fazi ovog istraživanja, kao što je gore navedeno, predložene su antifašističke memorijalne turističke rute Južne Istre. Brojni spomenici i lokaliteti povezani s antifašizmom u Južnoj Istri s postojećom mrežom turističkih atrakcija i in-

ticipant observation methods, 167 antifascism monuments and sites are divided in two groups by the criteria of the accessibility (Tab. 2).

The first group includes 155 monuments and sites which are regularly accessed by paved road using vehicles or by foot. Only 12 monuments and sites are accessed using only footpath, but all of those points are very close to the paved road. The most favourable position in which all the monuments and sites could be accessed by paved road are located in the municipalities of Fažana, Medulin, Svetvinčenat and the town of Pula. The main shortcoming of antifascist monuments in Southern Istria in terms of memorial tourism supply is the lack of multilingual information tables nearby. As the example of good practice is the main antifascist monument in Tito's park in the central part of Pula where 4-languages (Croatian, English, German, and Italian) information tables are posted. Nevertheless, antifascism tangible heritage in Southern Istria has favourable accessibility and state of preservation, thus confirming the second hypothesis of this paper.

THEMATIC ROUTES AS A TOOL OF MEMORIAL TOURISM DEVELOPMENT

In the final stage of this research, as mentioned above, the antifascism memorial tourism routes of Southern Istria are proposed. Numerous monuments and sites connected with antifascism in Southern Istria with existing network of tourism attractions

frastrukture mogli bi pružiti nove mogućnosti, revalorizaciju i reafirmaciju postojeće turističke ponude. Valorizirana ponuda kulturnog turizma i utvrđene rute u ovoj regiji, kako su neki znanstvenici razmatrali i sugerirali (RUŽIĆ, MEDICA, 2010.; GRŽINIĆ, VODEB, 2015.; ORLIĆ, 2019.; IVEKOVIĆ MARTINIS, SULOJDŽIĆ, 2020.), mogu poslužiti kao primjer dobre prakse i motiv za razvoj antifašističke baštine. Slični primjeri dobre prakse uključivanja memorijalnih turističkih ruta u turističku ponudu razvijeni su u Sloveniji (GOSAR I DR., 2015.; ŠULIGOJ 2017a.), Rumunjskoj (GHETAU, ESANU, 2010.), Slovačkoj (HORODNIKOVA, DERCO, 2015.; SLIVKOVA, BUCHER, 2017.) i Italiji (IRIMIÁS, 2014.).

S obzirom na povoljan položaj, gustoću i pristupačnost, svi antifašistički spomenici i lokaliteti u Južnoj Istri mogu se uvrstiti kao potencijalne ključne točke ili postaje predloženih tematskih ruta. Štoviše, istovremeno s terenskim radom i sudioničkim promatranjem uključujući posjete komemoracijama i obljetnicama antifašističke borbe, potvrđuje se da su lokalne zajednice duboko povezane s tim povijesnim razdobljem.

and infrastructure could provide new opportunities, revalorization and reaffirmation of the existing tourism supply. The valorized cultural tourism supply and established routes in this region, as some scholars have considered and suggested (RUŽIĆ, MEDICA, 2010; GRŽINIĆ, VODEB, 2015; ORLIĆ, 2019; IVEKOVIĆ MARTINIS, SULOJDŽIĆ, 2020), could be used as the example of good practises and motive for the development of antifascism heritage. Similar examples of good practices of including memorial tourist routes in the tourism supply are developed in Slovenia (GOSAR ET AL., 2015; ŠULIGOJ 2017a;), Romania (GHETAU, ESANU, 2010), Slovakia (HORODNIKOVA, DERCO, 2015; SLIVKOVA, BUCHER, 2017) and Italy (IRIMIÁS, 2014).

Considering favourable locations, density and accessibility, all antifascist monuments and sites in Southern Istria can be included as the potential key points or stations of the proposed thematic routes. Moreover, simultaneously using fieldwork and participation observation including visits of commemorations and anniversaries of antifascism struggle, it is confirmed that local communities are deeply connected with that historical period. Unlike other

TABLICA 3. Memorijalne turističke rute antifašizma u Južnoj Istri i potencijalne ključne točke
TABLE 3 The antifascism memorial tourism routes in Southern Istria and potential key points

Thematic route / Tematska ruta	Potential key points by municipality or town* / Potencijalne ključne točke po općini ili gradu
Route of the resistance to fascism in interwar period (1918 - 1943) / Ruta otpora fašizmu u međuratnom razdoblju (1918. - 1943.)	Marčana (1) Medulin (2) Pula (7) Vodnjan (1)
Battles route (1943 – 1945) / Ruta bitaka (1943. – 1945.)	Barban (2) Ližnjan (1) Marčana (2) Pula (5)
Route of mass casualties of civilians (1943 – 1945) / Ruta masovnih stradanja civila (1943. – 1945.)	Barban (7) Fažana (1) Marčana (4) Pula (2) Svetvinčenat (2) Vodnjan (3)
Route of antifascist historical personages / Ruta povijesnih osoba antifašizma	Barban (1) Ližnjan (6) Marčana (12) Medulin (2) Pula (16) Svetvinčenat (4) Vodnjan (5)

*Brojevi u zagradama su potencijalne ključne točke na ruti / Numbers in the brackets are potential key points on the route

Za razliku od ostalih hrvatskih županija u kojima je u postsocijalističkom razdoblju oštećeno ili uništeno gotovo 3500 spomenika (HRŽENJAK, 2009.); u Istri su spomenici očuvani bez obzira na vladajuću političku opciju u općini/gradu (FRYKMAN, 2003.; VOJNOVIĆ, 2020.; FRYKMAN 2021.). Štoviše, kako Kennel i dr. (2018.) te Šuligoj (2019.) raspravljaju antifašističke komemoracije i obljetnice u slovenskoj i hrvatskoj Istri dobro su zastupljene u regionalnim tiskanim i elektroničkim novinama. U skladu s brojnošću, dobrom dostupnošću i očuvanošću potencijalnih ključnih točaka ili postaja u svim općinama i gradovima Južne Istre, mogle bi se uspostaviti četiri tematske rute memorijalnog turizma vezane uz baštinu antifašizma: Ruta otpora fašizmu u međuratnom razdoblju (1918. – 1943.), Ruta bitaka (1943. – 1945.), Ruta masovnih stradanja civila (1943. – 1945.) i Ruta povijesnih osoba antifašizma (Tab. 3.).

Ruta otpora fašizmu u međuratnom razdoblju (1918. – 1943.) Najvažniji spomenici antifašizma i lokaliteti ovih ruta memorijalnog turizma nalaze se u gradu Puli, gdje je sedam

Croatian counties where almost 3500 monuments were damaged or destroyed in the post-socialist era (HRŽENJAK, 2009); in Istria the monuments were preserved regardless of the ruling political option in the municipality/town (FRYKMAN, 2003; VOJNOVIĆ, 2020; FRYKMAN, 2021). Moreover, as Kennel et al. (2018) and Šuligoj (2019) discussed, the antifascist commemorations and anniversaries in Slovenian and Croatian Istria are well-presented by regional printed and electronic newspapers. In accordance with the large number, good accessibility and preservation of the potential key points or stations in all municipalities and towns of Southern Istria, four thematic routes of memorial tourism associated with the antifascism heritage could be established: The route of the resistance to fascism in interwar period (1918 – 1943), The battles route (1943 – 1945), The route of mass casualties of civilians (1943 – 1945) and The route of antifascist historical personages (Tab. 3).

Route of the resistance to fascism in interwar period (1918 – 1943). The most important antifascism monuments and sites of this memorial tourism routes are in the town of Pula, where seven potential



SLIKA 3. Spomenik Proštinskoj buni (1921.)

FIGURE 3 Monument to Proština uprising (1921)

Izvor/Source: Author

potencijalnih ključnih točaka. Te točke vezane su uz oružane sukobe protiv paravojnih fašističkih postrojba i mjesta rođenja, života, uhićenja, mučenja ili smrti istaknutih antifašista. Ova ruta povezuje grad Pula, Vodnjan i općine Medulin i Marčanu. Najvrjedniji lokaliteti u smislu nacionalne memorijalizacije i kolektivnog identiteta ljudi u Istri su ona u općini Marčana inaseljima Šegotići, Kavran, Krnica, Mutvoran (Sl. 3.) i sva druga koja su vezana uz Proštinsku bunu 1921. godine (MIKOLIĆ, 2003.; BURŠIĆ, 2011.).¹¹ Iz perspektive povjesničara veliku važnost ima spomenik u Vodnjanu, gdje je započeo otpor fašizmu u Istri (RADOŠEVIĆ, 2021.). Potencijalne ključne točke ove rute smještene su u blizini komercijalnih turističkih smještajnih kapaciteta (hoteli, odmarališta, kuće za odmor i kampovi) i sve su dobro povezane javnim asfaltiranim cestama i javnim prijevozom. Osim toga, ova se ruta može spojiti s tematski sličnim rutama u Istočnoj i Središnjoj Istri.

Ruta bitaka (1943. – 1945.). Ova ruta povezuje naselja Južne Istre u kojima su se odvijali oružani sukobi u posljednje dvije godine Drugog svjetskog rata i neposrednom poraću. Ruta bitaka uključuje mjesta povezana s oružanim sukobima (borbama) između antifašističkih borbenih postrojbi s jedne strane i velikih i raznovrsnih skupina neprijatelja (regularna njemačka vojska, elitne SS borbene postrojbe, specijalne SS policijske snage, paravojne fašističke postrojbe itd.) na drugoj strani. Najznamenitije mjesto ove tematske rute memorijalnog turizma je šuma Magran u blizini naselja Jadreški (općina Ližnjan), gdje se odigrala prva bitka protiv nacističkih okupacijskih oružanih snaga (rujan 1943.) (Sl. 4.). Jednako je važna lokacija u pulskoj gradskoj četvrti Stoja, gdje je u svibnju 1945. godine organizirana posljednja linija bojišnice Drugog svjetskog rata u Istri. Sličnu važnost ima i spomenik ispred Mlina u Puli gdje su u siječnju 1947. poginula trojica antifašista u sprječavanju krađe i uklanjanja strojeva iz ove tvornice (DUKOVSKI, 2001.; BURŠIĆ, 2011.; DU-

key points are located. Those points are connected with armed conflicts against paramilitary fascist troops and the places of birth, living, arrest, torturing, or death of the prominent antifascists. This route connects the town of Pula, Vodnjan and the municipalities of Medulin and Marčana. The most valuable sites in terms of national memorialization and collective identity of people in Istria are those in Marčana Municipality and settlements of Šegotići, Kavran, Krnica, Mutvoran (Fig. 3) and all others which are all linked to the *Proštinska buna* (Proština uprising) in 1921 (MIKOLIĆ, 2003; BURŠIĆ, 2011).¹¹ From the historians' perspective, great importance has a monument in Vodnjan, where the resistance to fascism in Istria had begun (RADOŠEVIĆ, 2021). Potential key points of this route are placed near commercial tourist accommodations (hotels, resorts, holiday homes and camping grounds) and are all well-connected by public paved roads and public transport. Additionally, this route could be merged with thematically similar routes in Eastern and Central Istria.

Battles route (1943 – 1945). This route connects settlements of Southern Istria where armed conflicts occurred in the past two years of the WWII and the intermediate after war period. Battles route includes places connected with armed conflicts (battles) between antifascist combat units on the one side and large and various groups of the enemy (Regular German army, elite SS combat troops, special SS police force, paramilitary fascist troops etc.) on the other side. The most iconic site of this thematic route of memorial tourism is the Magran Forest in proximity to Jadreški settlement (Ližnjan Municipality), where the first battle against Nazi occupation armed forces took place (September 1943) (Fig. 4). Equally important is the location in Pula's urban district Stoja, where was the last front line of the WWII in Istria was organized in May 1945. Similar importance has a monument in the front of the Mill in Pula where in January 1947, three antifascists died to prevent stealing and removing of machines from this industrial unit (DUKOVSKI, 2001; DUKOVSKI, 2011; BURŠIĆ, 2011). As well as the previous

¹¹ Najznačajniji spomenik i mjesto ovog ustanka protiv fašističkog ugnjetavanja nalazi se u blizini sela Šegotići, koje su paravojne fašističke postrojbe 1921. godine do temelja spalile kao odgovor na pobunu seljaka.

¹¹ The most important monument and site of this uprising against fascist oppression is located near the village Šegotići, where paramilitary fascist troops in 1921 burned it to the ground in response to the peasant rebellion.



SLIKA 4. Spomenik bitki u šumi Magran (1943.) u općini Ližnjan
FIGURE 4 Monument to Magran forest battle (1943) in Ližnjan Municipality
 Izvor/Source: Author

kovski 2011.). Kao i na prethodnoj ruti, spomenici i lokaliteti duž ove rute smješteni su uz asfaltirane javne ceste i dobro su povezani lokalnim i regionalnim autobusnim prijevozom. Prednost rute je povezanost sa sličnim rutama u ostalim istarskim regijama.

Ruta masovnog stradanja civila (1943. – 1945.). Ova ruta ima 19 potencijalnih ključnih točaka ili postaja u šest administrativnih jedinica Južne Istre. Ruta masovnog stradanja civila povezana je s mjestima gdje su se odvijali osvetnički napadi i tragične represije neprijateljskih borbenih jedinica nad nenaoružanim civilnim stanovništvom u selima i gradovima. Ruta povezuje gradske četvrti Pule (četvrti Veli vrh i Pragrande) sa selom Gajana u blizini grada Vodnjana, selom Šajini (općina Barban) (Sl. 5.) i selom Bokordići (općina Svetvinčenat). Poštujući obilježavanje nevinih civilnih žrtava i talaca, spomenici na ovoj memorijalnoj turističkoj ruti mjesta su na kojima se svake godine održavaju službene komemoracije u organizaciji lokalnih vlasti. Ipak, te lokacije imaju samo potencijalnu memorijalnu turističku vrijednost. Isto tako,

route, the monuments and sites along this route are placed along paved public roads and well-connected by local and regional bus public transport. The advantage of the route is the connection with similar routes in the other Istrian regions.

Route of mass casualties of civilians (1943 – 1945). This route has 19 potential key points or stations in six administrative units of Southern Istria. The route of mass casualties of civilians is connected with places where retaliatory strikes and tragic repressions of the enemy combat units against the unarmed civilian population in villages and towns occurred. The route connects the urban districts of Pula (Districts Veli vrh and Pragrande) with the village Gajana near town Vodnjan, the village Šajini (Barban Municipality) (Fig. 5) and the village Bokordići (Svetvinčenat Municipality). Respecting memorialization of innocent civilian victims and hostages, the monuments on this memorial tourism route are sites where official commemorations, organized by local authorities, take place every year. Nevertheless, these locations have only potential memorial tourism value. Similarly, this memorial tourism route, as in the above-mentioned cases,



SLIKA 5. Spomenik nedužnim civilnim žrtvama (siječanj 1944.) u selu Šajini
 FIGURE 5 Monument to innocent civilian victims (January 1944) in the village of Šajini
 Izvor/Source: Author

ovu rutu memorijalnog turizma, kao i u gore navedenim slučajevima, moguće je tematski povezati s potencijalnim rutama koje uključuju ostale istarska regije. Iako ova ruta ima veliki potencijal memorijalnog turizma uključujući veliku mrežu komercijalnih turističkih smještaja i dobro organiziran javni prijevoz, glavni nedostatak je disonantna baština povezana s tragičnim, uznemirujućim, šokantnim povijesnim događajima i neljudskim zločinima.

Ruta povijesnih osoba antifašizma. Najbrojnije potencijalne ključne točke ili postaje (46) posvećene su istaknutim antifašistima. Ova memorijalno-turistička ruta obuhvaća spomenike i lokalitete posvećene mjestima rođenja, života, uhićenja, mučenja ili smrti istarskih antifašista. Najveći broj ovih lokacija je u gradu Puli (16 lokacija) i općini Marčana (12). Dakle, ova ruta povezuje neka od najistaknutijih mjesta povezanih s kolektivnim identitetom lokalnog stanovništva i redovitim memorijalizacijama. Među tim mjestima su spomenici Vladimiru Gortanu (1904. – 1929.) u turističko-rekreacijskoj, obalnoj četvrti Pule (Gortanova uvala) (Sl. 6.), mjestu

can be thematically linked with potential routes which include the other Istrian regions. Although this route has great memorial tourism potential, including a large network of commercial tourist accommodations and well-organized public transport, the main disadvantage is dissonant heritage associated with the tragic, disturbing, shocking historical events, and inhuman atrocities.

Route of antifascist historical personages. The most numerous potential key points or stations (46) are dedicated to the prominent antifascists. This memorial tourism route includes monuments and sites dedicated to the places of birth, living, arrest, torturing, or death of the Istrian antifascists. The largest number of these locations is in town Pula (16 sites) and Marčana municipality (12). So, this route connects some of the most iconic places associated with collective identities of local people and regular memorialization. Among those places are monuments dedicated to Vladimir Gortan (1904 – 1929) in the tourist-recreational, coastal district of Pula (Gortan's Cove) (Fig. 6), the place of living and the place of death of young antifascist activist Sergio Dobrich who is one of the last killed in WWII



SLIKA 6. Spomenik na mjestu strijeljanja antifašiste Vladimira Gortana (1929.)

FIGURE 6 Monument at the place where the antifascist Vladimir Gortan was executed (1929)

Izvor/Source: Author

življenja i pogibije mladog antifašističkog aktivista Sergia Dobricha koji je jedan od posljednjih poginulih u Drugom svjetskom ratu u Puli. U Puli je i spomenik posvećen antifašistu Luigiju Scalieru kojeg su 1921. godine ubile fašističke paravojne postrojbe. Kao dio ukupne kulturne baštine u najposjećenijoj, središnjoj pulskoj četvrti, glavni je istarski spomenik posvećen svim antifašističkim borcima. Izvan Pule spomenici su antifašističkim aktivisticama Ruži Petrović i Foški Doblanić u općini Svetvinčenat. Isto tako, ostale administrativne jedinice Južne Istre imaju spomenike posvećene lokalnim povijesnim osobama antifašizma kao potencijalne ključne točke ove memorijalne turističke rute. Kao i u slučaju rute masovnih stradanja civila, ova ruta ima veliki memorijalni turistički potencijal, ali uvažavajući tragičnu, uznemirujuću i šokantnu povijesnu pozadinu. Međutim, ruta ima, kao i prethodne rute, velike turističke mogućnosti zbog velike ponude turističkih smještajnih kapaciteta i prometne infrastrukture.

Ove četiri rute memorijalnog turizma povezane s pristupačnom, gusto raspoređenom i dobro

in Pula. Also in Pula, is a monument dedicated to antifascist Luigi Scalier, who was killed in 1921 by fascist paramilitary troopers. As a part of the overall cultural heritage in the most visited, central district of Pula, is the main Istrian monument dedicated to all antifascist combatants. Outside of Pula, there are monuments in Svetvinčenat Municipality dedicated to antifascists activists Ruža Petrović and Foška Doblanić. Similarly, the other administrative units of Southern Istria have the monuments dedicated to the local antifascist historical personage as the potential key points of this memorial tourism route. As in the case of the route of the mass casualties of civilians, this route has great memorial tourism potential, but respecting the tragic, disturbing and shocking historical background. However, the route has, as the previous routes, great tourism capabilities due to large supply of the tourist accommodation facilities and transport infrastructure.

These four memorial tourism routes connected with the accessible, densely distributed and well-preserved antifascism tangible heritage of Southern Istria provide opportunities for development of that form of special interest tourism, thus confirming

očuvanom antifašističkom materijalnom baštinom Južne Istre pružaju mogućnosti za razvoj tog oblika turizma posebnih interesa, potvrđujući tako treću hipotezu. Štoviše, memorijalni turizam ima dodatne razvojne mogućnosti. Ove bi se rute mogle spojiti i integrirati u već razvijene istarske rute kulturnog turizma i druge antropogene atrakcije i lokacije kao dio ukupne turističke ponude ove regije. Nadalje, rute bi mogle koristiti, osim javnih cesta, široku mrežu postojećih, dobro označenih biciklističkih, motociklističkih i trekking ruta. Konačno, ove memorijalne turističke rute povezane s baštinom antifasizma, s obzirom na domaća i inozemna iskustva, treba uključiti u buduće turističko i prostorno planiranje.

ZAKLJUČAK

Istraživanje je pokazalo da se u dva grada i šest općina turističke regije Južna Istra nalazi 167 materijalnih spomenika i lokaliteta posvećenih antifašističkom pokretu i borbi. Uvažavajući povijesne, društvene i političke posebnosti istarskih prekretnica u prvoj polovici 20. stoljeća, materijalna antifašistička baština Južne Istre podijeljena je u šest tipova pogodnih za razvoj memorijalnog turizma. Prostorni raspored ove baštine u Južnoj Istri jasno pokazuje da se najistaknutiji spomenici i lokaliteti mogu identificirati kao ključne točke u oblikovanju i promicanju tematskih memorijalnih turističkih ruta. Uzimajući u obzir primjere i iskustva dobre prakse europskih zemalja i regija koje su po svom društveno-ekonomskom, političkom i povijesnom razvoju slične Hrvatskoj, predložene su četiri rute memorijalnog turizma inspirirane antifašističkom baštinom Južne Istre.

Glavna prednost četiriju predloženih ruta očituje se u njihovoj prostornosti i međusobnoj povezanosti, uključujući svih osam južno istarskih administrativnih jedinica u ovaj oblik ponude memorijalnog turizma. Još jedna prednost, potvrđena u ovom radu, je dobra očuvanost materijalnih spomenika i lokaliteta antifasizma uz potporu stručnjaka, lokalnih i županijskih vlasti te njihova dostupnost glavnim cestama s redovitim prometnim vezama. Dostupnost i prikladnost predloženih tematskih ruta dodatno je poboljšana velikom

the third hypothesis. Moreover, memorial tourism has additional developmental possibilities. These routes could be merged and integrated in already developed Istrian cultural tourism routes and other anthropogenic attractions and locations as a part of the overall tourism supply of this region. Furthermore, the routes could use, beside the public roads, the large network of existing, well-marked bicycle, motorcycle, and trekking routes. Finally, these memorial tourism routes connected with the antifascism heritage, considering the domestic and as well as experiences from abroad, should be included in the future tourist and spatial planning.

CONCLUSION

This research has shown that in two towns and six municipalities of tourism region Southern Istria are located 167 tangible monuments and sites dedicated to the antifascism movement and struggle. Respecting historical, social and political particularities of Istrian turning points in the first half of the 20th century, the antifascism tangible heritage of Southern Istria is divided in six types suitable for memorial tourism development. The spatial layout of this heritage in Southern Istria clearly shows that the most prominent monuments and sites could be identified as key points in the formation and promotion of thematic memorial tourism routes. Considering examples and experiences of good practices in European countries and regions that are similar to Croatia in their socio-economic, political and historical development, four memorial tourism routes inspired by antifascism heritage in Southern Istria have been proposed.

The main advantage of the four proposed routes is observable in their spatiality and interconnectivity, including all eight South Istrian administrative units in this form of memorial tourism supply. Another advantage, confirmed in this work, is good preservation of the antifascism tangible monuments and sites supported by the experts, local and County authorities as well as their accessibility by the main roads with regular public transport connections. The accessibility and suitability of the proposed thematic routes are additionally improved by the large network of the pre-existing

mrežom već postojećih kulturno-rekreacijskih ruta. Naposljetku, prednost ovih ruta očituje se u dobro razvijenoj ponudi komercijalnog turističkog smještaja, prirodnih i antropogenih atrakcija kao i ukupne infrastrukture Južne Istre.

S metodološkog aspekta, u ovom istraživanju primijenjeni su dugotrajni, međusobno povezani i simultani terenski rad i sudioničko promatranje. Terenski rad i sudioničko promatranje u ovom istraživanju imalo je širi okvir od uobičajenih primjena u ustaljenoj metodologiji društvene geografije. Prioritet ima istraživač pojedinac u ulozi potencijalnog memorijalnog turista u određenoj turističkoj regiji. Ovakvo prošireno korištenje tradicionalnih metoda omogućuje testiranje u stvarnom vremenu i okruženju lokacija, dostupnost i procjenu potencijalne važnosti baštine za memorijalni turizam. Istraživanje turizma posebnih interesa, ali istraživanje turizma općenito, u kojem su nedostatak dostupnih prostornih, infrastrukturnih i/ili statističkih podataka o potencijalnim lokacijama glavni ograničavajući čimbenik, moglo bi se nadvladati korištenjem ovih proširenih, ali primjenjivijih pristupa.

S praktične strane, proučavanje materijalne baštine antifašizma koristeći razvijenu turističku regiju kao prostorni okvir i model moglo bi se primijeniti za nova istraživanja memorijalnoga i/ili tamnoga turizma. Rute memorijalnog turizma predložene u istraživanju mogu se primijeniti na europske turističke regije u kojima su se odvijali slični povijesni događaji i procesi. Isto tako, ovaj rad može predstavljati temelj za nove razvojne pravce kulturnog turizma u regiji. Praktična vrijednost mogla bi biti primjena rezultata istraživanja u prostornom i turističkom planiranju sličnih turističkih regija na nacionalnoj i međunarodnoj razini. Konačno, ovaj rad može poslužiti kao predložak u novim istraživanjima revalorizacije i reafirmacije materijalne antifašističke baštine kao lokacija ili točaka razvoja memorijalnog turizma u hrvatskim turističkim regijama.

Nedostaci ovog istraživanja su zbog trajanja i složenosti zahtjevnoga terenskog rada i sudioničkoga promatranja. Istodobno, utjecala su ograničenja materijalnih i financijskih sredstava, ali i elementi disonantnosti ove materijalne baštine, uključujući i određene kontroverze o povijesnim

cultural and recreational routes. Finally, the advantage of these routes is observable in the well-developed supply of commercial tourist accommodation, natural and anthropogenic attractions as well as the overall infrastructure of South Istria region.

From a methodological perspective, in this research are applied long-lasting, mutually connected and simultaneous fieldwork and participant observations. The fieldwork and participant observation in this research had a broader framework than usual applications in the established methodology of the human geography. Priority is given to the individual researcher in the role of potential memorial tourist in the specific tourism region. Such extended using of traditional methods provide testing in the real time and environment of locations, accessibility and assessment of potential importance of heritage for memorial tourism. Research of the special interest tourism, but tourism study generally, in which the lack of the available spatial, infrastructural and/or statistical data of potential sites are the main limiting factors, could be prevailed using these extended but more applicable approaches.

From practical point, study of the antifascism tangible heritage using developed tourism region as the spatial framework and model could be applied for new research of memorial or/and dark tourism. Memorial tourism routes suggested in the research can be applied to European tourism regions where similar historical events and processes occurred. In the same way, this work can represent a foundation for new developmental directions of cultural tourism in the region. Practical value could be application of the research findings in the spatial and tourism planning of the similar tourist regions on the national and international level. Finally, this work can be used as the template in the new research on the revalorization and reaffirmation of the tangible antifascism heritage as the locations or points of memorial tourism development in Croatian tourism regions.

The shortcomings of this research are due to the duration and complexity of demanding fieldwork and participant observations. Simultaneously, limitations of material and financial resources have impacted as well as elements of the dissonance of this tangible heritage, including certain controversies about the historical events and processes connected

dogadajima i procesima vezanim uz antifašizam i današnju memorijalizaciju u Južnoj Istri. Međutim, navedeni nedostaci nisu obezvrijedili niti ugrozili razradu i korištenje predloženog metodološkog aparata, postizanje rezultata ili ostvarivanje ciljeva istraživanja.

with the antifascism and the present-time memorialization in Southern Istria. However, the above-mentioned shortcomings did not devalue or endanger the elaboration and use of the proposed methodological apparatus, achieving of research results or the accomplishment of the research's objectives.

LITERATURA I IZVORI

- ASHWORTH, G., ISAAC, R. K. (2015): Have we illuminated the dark? Shifting perspectives on 'dark' tourism, *Tourism Recreation Research*, 40 (3), 316–325, DOI: 10.1080/02508281.2015.1075726
- BALAŽIČ, G. (2013): Socialist Heritage Tourism in the Municipality of Koper: valorisation of newly recognized tourist sites, *WIT Transactions on State of the Art in Science and Engineering*, 25-40, WIT Press, Billerica, DOI: 10.2495/978-1-84564-806-0/003
- BATTILANI, P., BERNINI, C., MARIOTTI, A. (2018): How to cope with dissonant heritage: a way towards sustainable tourism development, *Journal of Sustainable Tourism*, 26 (8), 1417-1436, DOI: 10.1080/09669582.2018.1458856
- BOERS, B., COTRELL S. (2007): Sustainable Tourism Infrastructure planning: A GIS-Supported Approach, *Tourism Geographies*, 9 (1), 1–21, doi: 10.1080/14616680601092824
- BOWMAN, M. S., PEZZULLO, P. C. (2009): What's so 'Dark' about 'Dark Tourism'?: Death, Tours, and Performance, *Tourist Studies*, 9 (3), 187-202, doi: 10.1177/1468797610382699
- BROWN, L. (2015): Memorials to the victims of Nazism: the impact on tourists in Berlin, *Journal of Tourism and Cultural Change*, 13 (3), 244-260, DOI: 10.1080/14766825.2014.946423.
- BURŠIĆ, H. (2011): Od ropstva do slobode, C.A.S.H., Pula, pp. 746
- ČAUŠEVIĆ, S. (2019): Reclaiming heritage from anti-communist discourse, *Annals of Tourism Research*, 77, 12-25, DOI: 10.1016/j.annals.2019.03.013
- CHHETRI, P., ARROWSMITH, C. (2008). GIS-based Modelling of Recreational Potential of Nature-Based Tourist Destinations, *Tourism Geographies*, 10 (2), 233–257. DOI: 10.1080/14616680802000089
- CROATIAN BUREAU OF STATISTICS, (2020): *Tourism, 2019, Statistical reports 1661*, Croatian Bureau of Statistics, Zagreb
- CURIĆ, Z., GLAMUZINA, N., OPAČIĆ, V.T. (2012): Contemporary Issues in the Regional Development of Tourism in Croatia, *Hrvatski geografski glasnik*, 74 (1), 19-40, DOI: 10.21861/HGG.2012.74.01.02
- DANN, G. M. S., SEATON, A. V. (2001). Slavery, Contested Heritage and Thanatourism, *International Journal of Hospitality & Tourism Administration*, 2 (3–4), 1–29, DOI: 10.1300/J149v02n03_01
- DE WALT, K. M., DE WALT, B. R. (2011): *Participant Observation – A Guide for Fieldworkers*, Rowman And Littlefield Publishers, Lanham, pp 278.
- DRNDIĆ, Lj. (1978): *Oružje i sloboda Istre*, Školska knjiga i Glas Istre, Zagrebi Pula, pp. 419
- DRVENKAR, N., BANOŽIĆ, M., ŽIVIĆ, D. (2015): Development of memorial tourism as a new concept – possibilities and restrictions, *Tourism and Hospitality Management*, 21 (1), 63-77.
- DUKOVSKI, D. (2001): *Rat i mir istarski: model povijesne prijelomnice 1943.-1955.*, C.A.S.H., Pula, pp. 358.
- DUKOVSKI, D. (2011): *Povijest Pule: deterministički kaos i jahači Apokalipse*, Nova Istra, Pula, pp. 484.
- FOLEY, M., LENNON, J. (1996): JFK and dark tourism: A fascination with assassination, *International Journal of Heritage Studies*, 2 (4), 198-211, doi: 10.1080/13527259608722175
- FRYKMAN, J. (2003): Making Sense of Memory. Monuments and Landscape in Croatian Istria, *Ethnologia Europaea*, 33 (2) 107–120.
- FRYKMAN, J. (2021): Locating Memorials: Transforming Partisan Monuments into Cultural Heritage, In: *Transforming Heritage in the Former Yugoslavia*. (eds. Bădescu, G., Baillie, B., Mazzucchelli, F.), Palgrave Macmillan, Cham, 323-349
- GHETAU, L., ESANU, L. V. (2010): Dark tourism in Romania: from concept to reality, *Sustainable Tourism IV*, 139, 581-590, DOI: 10.2495/ST100501
- GIRON, A. (2004): Zapadna Hrvatska u Drugom svjetskom ratu, Adamić, Rijeka, pp. 534
- GLAMUZINA, N., MADŽAR, I., PUTICA, J. (2017): Regional aspects of modern tourism development of Bosnia and Herzegovina, *Hrvatski geografski glasnik*, 79 (1), 61-79, DOI: 10.21861/HGG.2017.79.01.03
- GONZÁLEZ VÁZQUEZ, D. (2018): Dark tourism and memorial tourism: Nexus and divergences between theoretical models, *European Journal of Tourism Research*, 20, 46-58.

- GOSAR, A., KODERMAN, M., RODELA, M. (eds) (2015): *Dark tourism: post-WWI destinations of human tragedies and opportunities for tourism development: proceedings of the international workshop*, University of Primorska, Koper, pp. 169.
- GRŽINIĆ, J., VODEB, K. (Eds) (2015): *Cultural tourism and destination impacts*, Juraj Dobrila University, Pula, pp. 307.
- HALL, C. M. (Ed.) (2011): *Fieldwork in Tourism: Methods, Issues and Reflections*, Routledge, London-New York, pp. 322.
- HARTMANN, R. (2014): Dark tourism, thanatourism, and dissonance in heritage tourism management: new directions in contemporary tourism research, *Journal of Heritage Tourism*, 9 (2), 166-182, DOI: 10.1080/1743873X.2013.807266
- HERTZOG, A. (2016): Re-inventing battlefield tourism? In times of peace: Connecting tourism and the remembrance of violence, in: *Tourism and violence* (ed Andrews, H.), Routledge, London and New York, 85-102.
- HORODNIKOVA, J., DERCO, J. (2015): Dark tourism, thematic routes and possibilities for innovation in the Slovak Republic, *Tourism*, 63 (2), 241-246
- HORVAT, M., KLARIĆ, V. (2012): *Management of tourist visits on thematic cultural routes*. Ministarstvo turizma Republike Hrvatske i Udruga Lujzijana, Delnice.
- HORVATINČIĆ, S. (2017): *Spomenici iz razdoblja socijalizma u Hrvatskoj – prijedlog tipologije*, Doktorska disertacija, Sveučilište u Zadru, Zadar, pp 525.
- HORVATINČIĆ, S. (2020): Between memory politics and new models of heritage management: Rebuilding Yugoslav memorial sites 'from below', *ICOMOS–Hefte des Deutschen Nationalkomitees*, 73, 108-115.
- HROBAT VIRLOGET, K., ČEBRON LIPOVEC, N. (2017): Heroes we love? Monuments to the National liberation movement in Istria between memories, care, and collective silence, *Studia ethnologica Croatica*, 29 (1), 45-71, 2017. DOI: 10.17234/SEC.29.2
- HRŽENJAK, J (Ed.) (2001): *Rušenje antifašističkih spomenika u Hrvatskoj: 1990-2000*, SABA, Zagreb.
- IRIMIÁS, A. (2014): The Great War heritage site management in Trentino, northern Italy, *Journal of Heritage Tourism*, 9 (4), 317-331, DOI: 10.1080/1743873X.2014.908886
- IVEKOVIĆ MARTINIS A., SULOJĐIĆ A. (2020): Austro-Hungarian heritage and tourism discourses in Pula, Croatia, *Journal of Tourism and Cultural Change*, 19 (1), 1-18, DOI: 10.1080/14766825.2020.1764572
- JACOBSEN, J. S. (2007): *Use of Landscape Perception Methods in Tourism Studies: A Review of Photo-Based Research Approaches*, *Tourism Geographies*, 9 (3), 234-253, DOI: 10.1080/14616680701422871
- KENNEL, J., ŠULIGOJ, M., LESJAK, M. (2018): Dark Events: Commemoration and Collective Memory in the Former Yugoslavia, *Event Management*, 22 (6), 945-963, DOI: 10.3727/152599518X15346132863247
- KEŠAC, G., SKULJAN BILIĆ, L. (ur) (2018): *Sloboda narodu! Antifašizam u Istri*, Povijesni i pomorski muzej Istre, Pula, pp. 512
- KESAR, O., TOMAS, P. (2014): Obilježja i dosezi memorijalnog turizma u Hrvatskoj, *Liburna*, 3 (1), 49-88.
- LENNON, J., FOLEY, M. (2000): *Dark tourism: The attraction of death and disaster*, Continuum, London, pp. 184
- LIYANAGE, S., COCA-STEFANIAK, A., POWELL, R. (2015): Dark destinations – visitor reflections from a holocaust memorial site, *International Journal of Tourism Cities*, 1 (4), 282-298, DOI: 10.1108/IJTC-08-2015-0019
- LUKIĆ, A. (2012): *Mozaik izvan grada*, Meridijani, Samobor, pp. 256.
- MAGAŠ, D. (2013): *Geografija Hrvatske*, Meridijani, Samobor, pp. 597.
- MARUŽIN, A., ROJNIĆ, M. (2004): *Spomenici govore* UABH, Pula, pp. 550
- MATEČIĆ I. (2016): Specific characteristics of the tangible cultural heritage valuation process in tourism, *Acta Turistica*, 28 (1), 73-100.
- MCKERCHER, B., CHAN, A. (2005): How Special Is Special Interest Tourism? *Journal of Travel Research*, 44

- (1), 21–31, DOI: 10.1177/0047287505276588
- MIKOLIĆ, M. (1973): Istra 1943., *Časopis za suvremenu povijest*, 5 (3), 53-69.
- MIKOLIĆ, M. (2003). *Istra 1941.-1947.: godine velikih preokreta*, Barbat, Zagreb, pp. 400.
- MINIĆ, N. (2012): *Development of 'dark' tourism in the contemporary society*, Zbornik radova Geografskog instituta Jovan Cvijić, 62 (3), 81-103, DOI: 10.2298/IJGI1203081M.
- MIONEL, V. (2019): Dark tourism and thanatourism: Distinct tourism typologies or simple analytical tools?, *Tourism*, 67 (4), 423-437.
- NAEF, P., PLONER, J. (2016) Tourism, conflict and contested heritage in former Yugoslavia, *Journal of Tourism and Cultural Change*, 14 (3), 181-188, DOI: 10.1080/14766825.2016.1180802
- NAUERT S. (2017): The Linguistic and Cultural Interpretation of Dissonant Heritage: the ATRIUM Cultural Route, *Almatourism*, 15, 16-37, DOI: 10.6092/ issn.2036-5195/6807.
- ORLIĆ, I. (2019): Autentičnost ponude istarskoga turizma – stanovanje, u: *Proceedings of the International Scientific Conference "Istrian Economy Yesterday and Tomorrow"*, (ur. Povolio, C., Križman Pavlović, D., Novak, M., Orbančić E.), Državni arhiv u Pazinu, Sveučilište Jurja Dobrile u Puli, Università Ca' Foscari Venezia, Pula, Pazin Venecija, 204-212.
- PHILLIPS, R., JOHNS, J. (2012): *Fieldwork for Human Geography*, SAGE, London, pp. 226
- PUTNIK, V. (2016): Second World War monuments in Yugoslavia as witnesses of the past and the future, *Journal of Tourism and Cultural Change*, 14 (3), 206-221. doi: 10.1080/14766825.2016.1169344
- RADOŠEVIĆ, M. (2020): Palež pulskoga Narodnog doma 14. VII. 1920. ili kako je otvorena fašistička Pandorina kutija, *Historia*, 10, 103-134, DOI: 10.32728/h2020.04
- RADOŠEVIĆ, M. (2021): „Vodnjanska bitka“ 16. I. 1920. i fašizam u Istri: Početak, *Problemi sjevernog Jadrana*, 9, 45-84, DOI: 10.21857/m8vqtrq339
- RAINE, R. (2013). A dark tourism spectrum, *International Journal of Culture, Tourism and Hospitality Research*, 7 (3), 242-256, DOI: IJCTHR-05-2012-0037.5
- RAKIĆ, T., CHAMBERS, D. (ur) (2012): *An Introduction to Visual Research Methods in Tourism*, Routledge, London-New York, pp. 218
- RIBEIRO, N. F., FOEMMEL, E. W. (2012): Participant observation, u: *Handbook of Research Methods in Tourism Quantitative and Qualitative Approaches*, (ur. Dwyer, L., Gill, A., Seetaram, N.), Edward Elgar, Cheltenham, 377-391.
- ROJEK, C. (1993): *Ways of escape: Modern transformations in leisure and travel*, Macmillan. Basingstoke, pp. 251
- RUŽIĆ, P., MEDICA, I. (2010): Tradicijski seoski identitet Istre – njegovo prepoznavanje i uključivanje u turistički proizvod, *Sociologija i prostor*, 48 (3), 479-504.
- SCOTTI, G. (2008): *Krik iz fojbe*, Adamić, Rijeka, pp. 295
- SEATON, A. V. (2000): "Another Weekend away Looking for Dead Bodies...": Battlefield Tourism on the Somme and in Flanders, *Tourism Recreation Research*, 25 (3), 63-77, DOI: 10.1080/02508281.2000.11014926.
- SEATON, A. V. (2002): Thanatourism's final frontiers? Visits to cemeteries, churchyards and funerary sites as sacred and secular pilgrimage, *Tourism Recreation Research*, 27 (2), 73-82, doi: 10.1080/02508281.2002.11081223
- SHARPLEY, R., STONE, P. R. (ur) (2009): *The Darker Side of Travel: The Theory and Practice of Dark tourism*, Channel View Publication, Bristol, pp. 275
- SLIVKOVA, S., BUCHER, S. (2017). Dark tourism and its reflection in post-conflict destinations of Slovakia and Croatia, *GeoJournal of Tourism and Geosites*, 19 (1), 22-34.
- SLUNJSKI, R. (2017): Turističkogeografski pristup u valorizaciji kulturne baštine, *Podravina*, 16 (31), 163-172.
- STONE, P. (2006): A dark tourism spectrum: Towards a typology of death and macabre related tourist sites, attractions and exhibitions, *Tourism*, 54 (2), 145-160.
- STONE, P. (2012): Dark tourism and significant other death: towards a Model of Mortality Mediation,

- Annals of Tourism Research*, 39 (3), 1556-1587, DOI: 10.1016/j.annals.2012.04.007.
- STONE, P., SHARPLEY, R. (2008): Consuming dark tourism: A Thanatological Perspective, *Annals of Tourism Research*, 35 (2), 574-595, DOI: 10.1016/j.annals.2008.02.003.
- STUBLIĆ, H., SAMOVOJSKA, R. (2018). Uvod u problematiku komodifikacije teške baštine. *Studia ethnologica Croatica*, 30 (1), 279-293. DOI: 10.17234/SEC.30.9
- ŠULIGOJ, M. (2016): Memories of War and Warfare Tourism in Croatia, *Annales, Series Historia et Sociologia*, 26 (2), 259-270, doi: 0.10.19233.ASHS.2016.20.
- ŠULIGOJ, M. (2017a): Light and dark sides of dark tourism in Slovenia, u: *Zbornik radova četvrtog kongresa geografa Bosne i Hercegovine* (ur. Drešković, N.), Geografsko društvo u Federaciji Bosne i Hercegovine, Sarajevo, 799-809.
- ŠULIGOJ, M. (2017b): Warfare tourism: an opportunity for Croatia?, *Economic Research*, 30 (1), 439-452, DOI: 10.1080/1331677X.2017.1305800.
- ŠULIGOJ, M. (2019): Dark Events of the Istrian Countryside: *An Electronic Media Perspective*, *Academica Turistica*, 12 (2), 121-132, DOI: 10.26493/2335-4194.12.121-132
- TOMAŠ, K. (2019): Antifašistički spomenici u Novom Vinodolskom, *Časopis za povijest Zapadne Hrvatske*, 14 & 15 (1), 139-150.
- TUNBRIDGE, J., ASHWORTH, G. (1996): *Dissonant heritage: The management of the past as a resource in conflict*, Wiley, Chichester-New York, pp. 299
- URL 1 *Tourism Development strategy of the Republic of Croatia until 2020*. https://mint.gov.hr/UserDocsImages/arhiva/Tourism_development_strategy_2020.pdf, 25.5.2022.
- URL 2 *Master plan turizma Istarske županije* https://www.istra.hr/downloadf/Master_Plan_Turizma_Istarske_Zupanije_2015-2025.pdf 22. 6. 2022.
- URL 3 *Dissonant Heritage: Wars and Ideologies of the 20th Century in Adriatic and Ionian Region*, About the Project, <https://dissonantheritage.wordpress.com/> 25. 03. 2022.
- VIRGILI, S., DELACOUR, H., BORNAREL, F., LIARTE, S. (2018): "From the Flames to the Light": 100 years of the commodification of the dark tourist site around the Verdun battlefield, *Annals of Tourism Research*, 68, 61-72, DOI: 10.1016/j.annals.2017.11.005.
- VOJNOVIĆ, N. (2012): Stagnacija turističke destinacije: primjer Pule, *Hrvatski geografski glasnik*, 74 (2), 113-128, DOI: org/10.21861/HGG.2012.74.02.06
- VOJNOVIĆ, N. (2020): The potential of memorial tourism development in Istria (Croatia), *Hrvatski geografski glasnik*, 82 (2), 107-129, DOI: org/10.21861/HGG.2020.82.02.04
- VOJNOVIĆ, N., KURKA, B. (2021): Odabrani lokaliteti stradavanja u Istočnoj Europi kao osnova za razvoj mračnog (dark) turizma, *Geografski horizont*, 67 (1), 23-34
- VRESK, M. (2002): Grad i urbanizacija, Školska knjiga, Zagreb, pp. 252
- VUKOJEVIĆ, K., OPAČIĆ, V. T. (2017). Memorial tourism in Croatia? A case study of Vukovar: attitudes of local population, u: *Book of proceedings of 2nd International Tourism and Hospitality Management Conference* (ur. Drešković, N.), Faculty of Science, University of Sarajevo, Sarajevo, 73-89.
- WEILER, B. FIRTH, T. (2021): Special Interest Travel: Reflections, Rejections and Reassertions, u: *Consumer Tribes in Tourism Contemporary Perspectives on Special-Interest Tourism* (ur. Pforr, C., Dowling, R., Volgger, M.), Springer, Singapore, 3-10.
- WIGHT, A. C. (2006): Philosophical and methodological praxes in dark tourism: Controversy, contention and the evolving paradigm, *Journal of Vacation Marketing*, 12 (2), 119-129, DOI: 10.1177/1356766706062151.
- WINTER, C. (2011): First World War Cemeteries: Insights from Visitor Books, *Tourism Geographies*, 13 (3), 462-479, DOI: 10.1080/14616688.2011.575075.
- WOLASTON, I. (2005): Negotiating the marketplace: The role(s) of Holocaust museums today, *Journal of Modern Jewish Studies*, 4 (1), 63-80, DOI: 10.1080/14725880500052782

PREPOZNATLJIVOST I POTENCIJAL TRADICIJSKIH I UMJETNIČKIH OBRTA KAO BAŠTINE ZAGREBA

RECOGNISABILITY AND POTENTIAL OF TRADITIONAL AND ARTISTIC CRAFTS AS HERITAGE OF THE CITY OF ZAGREB

MARCIJA BUDIĆ¹, LANA SLAVUJ BORČIĆ^{2*}

¹ Samostalni istraživač, Zagreb, Republika Hrvatska / *Independent researcher, Zagreb, Republic of Croatia*, e-mail: marcija.budic1@gmail.com

² Sveučilište u Zagrebu, Prirodoslovno-matematički fakultet, Geografski odsjek, Marulićev trg 19/II, 10000 Zagreb, Republika Hrvatska / *University of Zagreb, Faculty of Science, Department of Geography, Zagreb, Republic of Croatia*, e-mail: lslavuj@geog.pmf.hr

* corresponding author / *autor za kontakt*

DOI: 10.15291/geoadria.3882

Izvorni znanstveni rad / *Original scientific paper*

Primljeno / *Received*: 11-7-2022

Prihvaćeno / *Accepted*: 8-2-2023



Predmet ovoga istraživanja su obrti Zagreba, s posebnim naglaskom na tradicijske i umjetničke obrte. Cilj rada je istražiti njihovu prepoznatljivost među stanovnicima Zagreba i naglasiti njihov potencijal u kontekstu razvoja kulturnog i kreativnog turizma grada. Istraživanje je provedeno u dvije faze 2021. godine. Prvu fazu činilo je kartiranje tradicijskih i umjetničkih obrta te napuštenih poslovnih prostora u užem središtu grada. U drugoj fazi provedeno je anketno istraživanje putem interneta na prigodnom uzorku od 179 stanovnika Zagreba. Radi dodatnog razumijevanja predmeta istraživanja provedena su četiri polustrukturirana intervjua s odabranim tradicijskim i umjetničkim obrtnicima. Rezultati istraživanja pokazuju da većina ispitanika tradicijske obrte smatra važnim dijelom kulturnog identiteta Zagreba. Također, većina ispitanika smatra da tradicijski obrti i njihovi proizvodi nisu dovoljno promovirani u javnosti. Obrti čine vrijednu materijalnu i nematerijalnu baštinu Zagreba te su potencijal za daljnji razvoj kulturnog turizma Zagreba. Po uzoru na slične turističke ture u svijetu mogla bi se osmisлити obrtnička tura upoznavanja rada zagrebačkih tradicijskih i umjetničkih obrtnika s mogućnošću razgleda njihovih radionica i sudjelovanja u procesu izrade pojedinih (dijelova) predmeta. To bi bilo u skladu sa sve većom potražnjom i željom suvremenih turista da budu aktivni sudionici koji razvijaju svoje vještine i koji su sukreatori iskustva, a ne samo promatrači baštine.

KLJUČNE RIJEČI: tradicijski i umjetnički obrti, materijalna i nematerijalna baština, kulturni turizam, kreativni turizam, Zagreb

The topic of this research is crafts in the city of Zagreb, with special emphasis on traditional and artistic crafts. The main objective of this paper is to analyse the extent to which they are recognizable by the citizens of Zagreb, as well as to emphasize their potential for the development of the cultural and creative tourism. The research was conducted in two stages in 2021. The first stage consisted in the mapping of traditional and artistic craft businesses and vacant commercial property in the city centre, and the second stage included an online questionnaire survey on a purposive sample of 179 citizens of Zagreb. In order to understand

the topic of research better, additional four semi-structured interviews with selected traditional and artistic craftspeople were conducted. Research shows that the majority of respondents consider traditional crafts an important part of Zagreb's cultural identity. Furthermore, the majority of respondents believe that traditional craft businesses and their products are not promoted enough in public. Crafts represent valuable tangible and intangible heritage of the City of Zagreb and have a potential for the development of cultural tourism of Zagreb. In this sense, and following the example of similar tourist tours in the world, a craft tour could be designed based on the work of traditional and artistic craftsmen of Zagreb, with the possibility of visiting their workshops and participating in the process of making products or their parts. This would be in line with the increasing demand and desire of modern tourists to be active participants and co-creators of experience rather than just be observers of the heritage.

KEY WORDS: traditional and artistic crafts, tangible and intangible heritage, cultural tourism, creative tourism, Zagreb

UVOD

U gospodarskom razvoju Zagreba važnu ulogu odigrali su različiti obrti koji su svoje djelovanje obavljali na prostoru grada. U srednjem vijeku dominirali su samouki majstori, a u kasnijim stoljećima formalnim školovanjem i prenošenjem tradicije stasale su nove generacije majstora (KOLAR-DIMITRIJEVIĆ I DR., 2005.). Veliku ulogu u razvoju obrta imali su i cehovi kao prve strukovne organizacije koje su u Zagrebu bile vrlo razvijene. Oni su od svojih početaka u ranom srednjem vijeku pratili društvene potrebe i tehnološki napredak te tako zadovoljavali potrebe obrtnika i građanstva (HORVAT, 1994.). Stari obrti odražavaju vještine i umijeća tih generacija, no njihov je značaj u gospodarskom smislu danas mnogo manji.

Tradicijski obrti definirani su Pravilnikom o tradicijskim odnosno umjetničkim obrtima iz 2007. kao „oni za koje je potrebno poznavanje zanatskih vještina i umijeća u obavljanju djelatnosti te koji se obavljaju pretežnim udjelom ručnog rada, a koji se tehnikama proizvodnje i rada, namjenom, i oblikom oslanjaju na obrasce tradicijske kulture, pa u tom smislu mogu simbolizirati lokalni, regionalni ili nacionalni identitet“ (URL 3). Isti Pravilnik navodi da su: „umjetnički obrti oni koji se odlikuju proizvodima i uslugama visoke estetske vrijednosti, dizajnom, likovnim i drugim rješenjima uz naglašenu kreativnost i individualnost majstora obrta – umjetnika“ (URL 3). Odluku o dodjeli Uvjerenja o stjecanju statusa tradicijskog ili umjetničkog obrta donose tijela Hrvatske obrtničke komore. Pri dodjeli Uvjerenja razmatra se: razdoblje u kojem se obrt obavlja, obrtnička tradicija, broj proizvoda, autohtonost, kvaliteta proizvoda, tehnološki proces, dizajn, funkcionalna upotrebljivost i sl. Uslužnim obrtima koji zadovoljavaju kriterije dodjeljuje se Uvjerenje, a proizvodnim obrtima uz Uvjerenje dodjeljuje se Znak tradicijskog, odnosno umjetničkog obrta za proizvod.

Obrti Zagreba koji djeluju u užem središtu grada, s posebnim naglaskom na tradicijske i umjetničke obrte, predmet su istraživanja ovoga rada. Cilj rada je istražiti kakva je njihova prepoznatljivost među stanovnicima Zagreba i naglasiti njihov potencijal u kontekstu razvoja kulturnog i kreativnog turizma grada.

INTRODUCTION

Various craft businesses that operated within city limits played an important role in the economic development of the City of Zagreb through history. From the Middle Ages when self-taught master craftspeople were predominant and in later centuries when new generations of master craftspeople were trained through formal education and passing on of the tradition (KOLAR-DIMITRIJEVIĆ ET AL., 2005). In this context, guilds played a major role as the first professional organizations that were developed in Zagreb, and the development of the city itself depended on the development of guilds. From their beginnings in the early Middle Ages, they have followed social needs and technological progress, thus meeting the needs of craftsmen and citizens (HORVAT, 1994). Old craft businesses reflect the skills of these generations, but in the economic sense their significance is much more limited today.

Traditional crafts are defined in the Ordinance on Traditional and Artistic Crafts from 2007 as ‘crafts that require special knowledge of craftsmanship and skills in performing activities and that are performed with a predominant share of manual labour, whose production and work techniques, purpose and form rely on patterns of traditional culture, and in that sense, they can symbolize local, regional or national identity’ (URL 3). According to the same Ordinance: ‘artistic crafts are crafts characterized by products and services of high aesthetic value, design, visual and other solutions with pronounced creativity and individuality of a craftsman – artist’ (URL 3). Decisions on granting the Certificate of Acquiring the Status of a Traditional or Artistic Craft are made by the bodies of the Croatian Chamber of Trades and Crafts. The criteria considered for granting the certificate are: the period of practising the craft, craftsmanship tradition, number of products, autochthony, quality of products, technological process, design, functionality etc. Service crafts that meet the criteria are awarded the Certificate, and production crafts are awarded both the Certificate and the Label of Traditional or Artistic Craft for the product.

Craft businesses of the City of Zagreb operating in the city centre, especially traditional and artistic ones, are the research topic of this paper. The main

O obrtima Zagreba do sada se pisalo uglavnom iz aspekta njihova povijesnog razvoja i važnosti za grad. Iscrpnim proučavanjem razvoja obrta Zagreba kroz povijest bavili su se u svojim radovima Buntak (1996.), Herkov (1987.) i Horvat (1992.; 1994.). Vrijedan i opsežan doprinos poznavanju ove teme predstavlja i monografija autora Kolar-Dimitrijević i dr. (2005.). Međutim, do sada nema objavljenih radova koji se bave segmentom njihove prepoznatljivosti među stanovnicima grada i njihova potencijala u kontekstu razvoja kulturnog i kreativnog turizma.

METODOLOGIJA ISTRAŽIVANJA

Istraživanje je provedeno u dvije faze. Prvu fazu činilo je kartiranje tradicijskih i umjetničkih obrta te praznih poslovnih prostora u užem središtu Zagreba, a drugu fazu anketno istraživanje. Radi dodatnog razumijevanja predmeta istraživanja provedena su i četiri polustrukturirana intervjua s odabranim tradicijskim i umjetničkim obrtnicima.

Radi upoznavanja prostornog rasporeda i strukture tradicijskih i umjetničkih obrta koji danas djeluju u užem središtu Zagreba te registriranja broja praznih poslovnih prostora provedeno je kartiranje od 11. do 25. listopada 2021. godine. Granice istraživačkog prostora obuhvaćale su: Frankopansku ulicu (od kućnog broja 1 do 14), Mesničku ulicu (od kućnog broja 1 do 49), Felbingerove stube, Ulicu Tome Mikloušića (od kućnog broja 1 do 6), Kaptol (od kućnog broja 1 do 16), Vlašku ulicu (od kućnog broja 1 do 49), Draškovićevu ulicu (od kućnog broja 1 do 18), Jurišićevu ulicu (od kućnog broja 1 do 32), Amruševu ulicu (od kućnog broja 1 do 19), Ulicu Nikole Tesle (od kućnog broja 1 do 17) i Masarykovu ulicu (od kućnog broja 1 do 30) (označeno crvenom linijom na karti). Podaci o tradicijskim i umjetničkim obrtima su uz kartiranje prikupljeni i putem adresa obrta. Dobiveni podaci vizualizirani su uz pomoć GIS-a *Software ArcMapa 10.4*.

Anketno istraživanje provedeno je od 15. do 30. studenog 2021. godine na uzorku od 179 ispitanika, internetskim upitnikom putem *Google Formsa*, među građanima Zagreba kako bi

objective of this paper is to analyse the extent to which they are recognizable by the citizens of Zagreb, as well as to emphasize their potential for the development of the cultural and creative tourism.

To date, craft businesses of the City of Zagreb have been studied mostly from the perspective of their historical development and significance for the city. The development of craft businesses in the City of Zagreb throughout history was studied in detail in the papers by Buntak (1996), Herkov (1987), Horvat (1992). A valuable and extensive contribution to the knowledge of this topic is the monograph of Kolar-Dimitrijević et al. (2005). However, there is a lack of papers about their recognisability by the citizens and their potential for the development of the city's cultural and creative tourism.

RESEARCH METHODOLOGY

The research was conducted in two stages. The first stage consisted in the mapping of traditional and artistic craft businesses and vacant commercial property in the city centre, and the second stage included a questionnaire survey. In order to understand the topic of research better, additional four semi-structured interviews with selected traditional and artistic craftspeople were conducted.

The mapping was performed for the purpose of understanding the spatial distribution and structure of traditional and artistic craft businesses operating in the centre of Zagreb and to register the vacant commercial property in the area. The mapping was conducted from 11 to 25 October 2021 in the city centre, whose boundaries include the following streets: Frankopanska (from number 1 to 14), Mesnička (from number 1 to 49), Felbingerove stube, Ulica Tome Mikloušića (from number 1 to 6), Kaptol (from number 1 to 16), Vlaška (from number 1 to 49), Draškovićeva (from number 1 to 18), Jurišićeva (from number 1 to 32), Amruševa (from number 1 to 19), Ulica Nikole Tesle (from number 1 to 17) and Masarykova ulica (from number 1 to 30) (marked with the red line on the map). In addition to mapping, data on traditional and artistic crafts were also collected through the addresses of the crafts. The obtained data were visualised using *GIS Software ArcMap 10.4*.

se ispitala njihova osviještenost i stavovi prema obrtima, kao i mišljenja za poboljšanje i revitalizaciju obrtničke tradicije. Anketa je objavljena u nekoliko *Facebook* grupa tematski povezanih sa Zagrebom (*Zagreb, Zagreb u srcu, I to je Zagreb, Zagreb događanja*). Korišten je neprobabilistički prigodni uzorak. U anketi su korištena zatvorena pitanja s ponuđenim kategorijama odgovora i s Lickertovom ljestvicom od 5 stupnjeva (1 – nimalo se ne slažem, 5 – u potpunosti se slažem, te 1 – izrazito ne povezujem, 5 – izrazito povezujem). U anketi je korišteno i otvoreno pitanje, a odgovori na njega kodirani su u odgovarajuće kategorije.

U ovom radu predstavljen je dio rezultata dobivenih anketnim istraživanjem. U anketnom istraživanju sudjelovalo je 64,8 % ženskih osoba i 35,2 % muških. Najveći broj ispitanika bio je u dobi od 46 do 60 godina (37,4 %). Ispitanika u dobi od 18 do 25 bilo je 27,9 %, u dobi od 26 do 35 godina 16,2 %, a ispitanika u dobi od 36 do 45 godina bilo je 15,6 %. Najmanje ispitanika bilo je u dobnim skupinama iznad 60 godina (2,2 %) i ispod 18 godina (0,6 %). Ispitanici su u najvećem postotku (65,4 %) zaposleni, dok su drugi najzastupljeniji studenti s 25,1%. Slijede nezaposleni (5,6 %) te umirovljenici (3,4 %) i učenici (0,6 %). Ispitanici u najvećem postotku od 38,5 % imaju završeni diplomski studij, a slijede oni sa srednjoškolskim obrazovanjem (32,4 %). Preddiplomski studij završilo je 26,3 % ispitanika, a njih 2,2 % ima završen doktorski studij. Jedan ispitanik (0,6 %) ima završenu samo osnovnu školu. Prema mjestu stanovanja, u Zagrebu najveći broj ispitanika živi na području šireg središta grada (50,3 %), 32,4 % ispitanika se izjasnilo da živi na periferiji grada, 10,6 % ispitanika živi u okolici Zagreba, a najmanji broj ispitanika, 6,7 %, živi u užem središtu grada.

Radi boljeg upoznavanja i boljeg razumijevanja podataka dobivenih anketnim istraživanjem provedeni su polustrukturirani intervjui. Intervjui su provedeni u studenom i prosincu 2021. godine s četiri zagrebačka obrtnika s popisa tradicijskih i umjetničkih obrta Hrvatske obrtničke komore (proizvođač kišobrana, postolar, zlatar, urar). S tri sugovornika intervju je proveden uživo, a s jednim elektroničkom poštom. Pojedine informacije dobivene metodom intervjua o poslovanju obrta, pro-

The questionnaire survey was conducted from 15 to 30 November 2021 on a purposive sample of 179 respondents among citizens of the City of Zagreb, using a Google Forms online survey. The questionnaire survey was conducted with the aim of analysing their awareness and attitudes towards crafts, as well as their opinion about the improvement and revitalization of crafts. The questionnaire survey was posted in several Facebook groups related to the City of Zagreb (*Zagreb, Zagreb u srcu, I to je Zagreb, Zagreb događanja*). In the questionnaire survey, closed-ended questions and questions with a 5-point Lickert scale (1 - I do not agree at all, 5 - I completely agree, and 1 - I strongly do not relate, 5 - I strongly relate) were used. An open-ended question was also used in the survey, and the answers to it were coded into appropriate categories.

This paper will present part of the results obtained by the questionnaire survey. The questionnaire survey included 64.8% females and 35.2% males. The largest number of respondents was in the age group from 46 to 60 years (37.4%). Respondents in the age group from 18 to 25 years accounted for 27.9%, respondents in the age group from 26 to 35 accounted for 16.2%, and respondents in the age group from 36 to 45 accounted for 15.6%. The age groups over 60 years (2.2%) and under 18 years (0.6%) contained the smallest number of respondents. The majority of respondents were employed (65.4%), while university students were the second largest group with 25.1%. They were followed by the unemployed (5.6%), pensioners (3.4%) and pupils (0.6%). The largest percentage of respondents (38.5%) completed graduate studies, followed by those with a high school diploma (32.4%). Undergraduate studies were completed by 26.3% of the respondents, and doctoral studies by 2.2%. One subject (0.6%) finished only primary school. According to the place of residence within Zagreb, the majority of respondents live in the wider city centre (50.3%), 32.4% of respondents reported they live in the suburbs, 10.6% of respondents live near Zagreb, while the smallest number of respondents (6.7%) live in the very centre of the city.

To improve the understanding the data obtained using a questionnaire survey, semi-structured interviews were also conducted. These interviews were carried out in November and December 2021 with four craftsmen included in the list of traditional and artistic crafts

blemima s kojima se susreću i mišljenjima obrtnika integrirane su u raspravi ovoga rada.

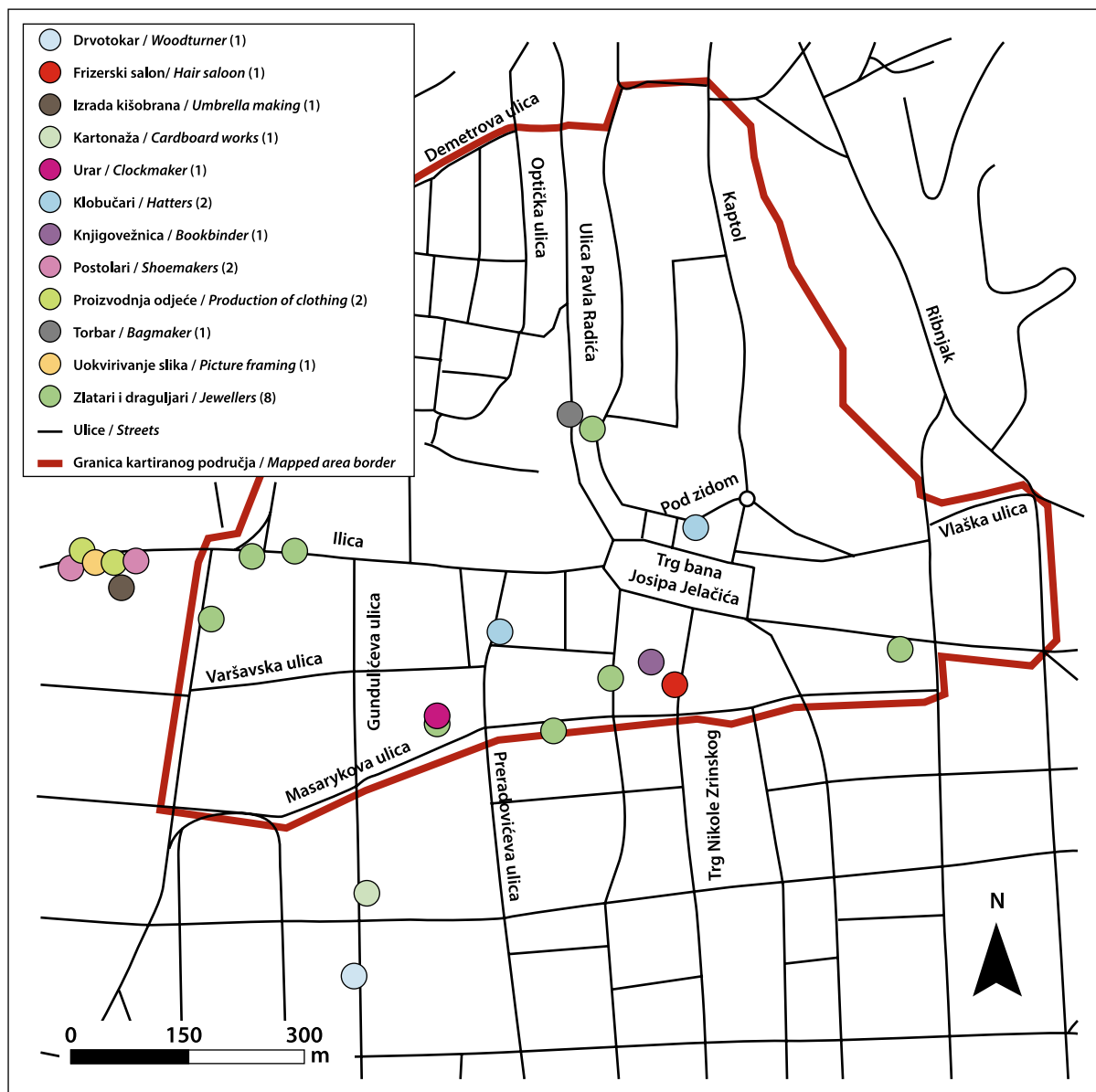
Prostorni razmještaj tradicijskih i umjetničkih obrta i napuštenih poslovnih prostora u užem središtu Zagreba

Na promatranom području djeluje 22 od ukupno 42 tradicijska i umjetnička obrta u Zagrebu. Preostalih 20 obrta raspršeno je na širem gradskom području. Među tradicijskim i umjetničkim obrtnicima u promatranom području najviše je zlatara i draguljara (8), zatim proizvođača odjeće (2), klobučara (2) i postolara (2), a ostali obrti zastupljeni su po jedan od

of the Croatian Chamber of Trades and Crafts (an umbrella-maker, a shoemaker, a goldsmith, a watchmaker). Three interviews were conducted in person, and one via e-mail. Certain information obtained through interviews about business operations of the crafts, problems they face and opinions of craftspeople were integrated into the discussion of this paper.

Spatial distribution of traditional and artistic crafts and vacant commercial property in the centre of Zagreb

Out of total 42 traditional and artistic crafts in Zagreb, 22 operate within the examined area. The



SLIKA 1. Tradicijski i umjetnički obrti u užem središtu Zagreba prema vrstama

FIGURE 1 Traditional and artistic crafts in the centre of Zagreb, divided into groups

Izvor/Source: Terensko istraživanje, 2021, URL 1 / field survey, URL 1

svakog (drvotokar, frizerski salon, izrada kišobrana, kartonaža, urar, knjigovežnica, torbar, uokvirivanje slika) (Sl. 1.). Cjelovit popis zagrebačkih tradicijskih i umjetničkih obrta naveden je na kraju rada.

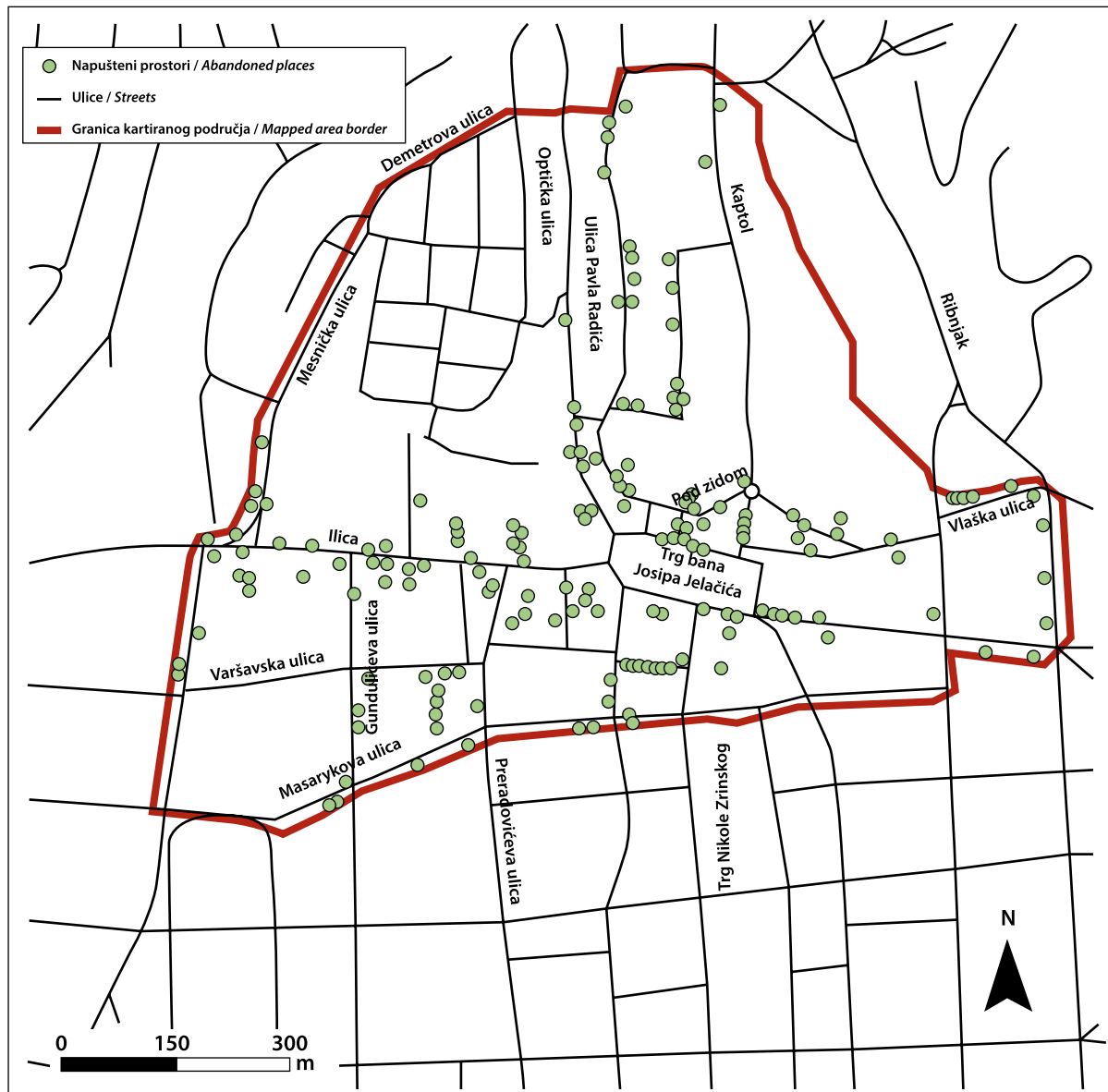
Osim aktivnih tradicijskih i umjetničkih obrta, evidentirani su i napušteni poslovni prostori kojih na kartiranom prostoru ima čak 165 (Sl. 2.). Iznimno je velika koncentracija praznih prostora oko Trga bana Josipa Jelačića (11), Marićevom prolazu (7), Harmici (4) i na Opatovini (7). Ilica kao glavna trgovačka ulica središta Zagreba također ima velik broj zatvorenih prostora – na kartiranom prostoru (do kućnog broja 39) nalazi ih se ukupno 30 (16 na glavnoj ulici te još 14 u dvorištima). U većini slučajeva nije se moglo zaključiti koje djelatnosti su se u navedenim prostorima obavljale, no vjerojatno je među njima veći dio pripadao obrtnicima. Tako, primjerice, Jakovčić (2006.) navodi da u sustrukтури zatvorenih prostora u Ilici 2006. godine dominirali zlatari (38,9 %), postolari (19,05 %) i krojači (14,29 %) (JAKOVČIĆ, 2006.). Radeljak Kaufmann i dr. (2020.) također su evidentirali velik udio praznih prostora u Ilici i u drugim ulicama u središtu grada. Razlozi nestanka brojnih poslovnih objekata iz središta grada vidljivi su u trendu koji je u Hrvatskoj i drugim postsocijalističkim zemljama započeo sredinom 1990-ih, a odnosi se na otvaranje velikih trgovačkih centara na rubovima grada (NAGY, 2001.; LUKIĆ, JAKOVČIĆ, 2004.; TEMELOVÁ, 2007.). Osim novih trgovačkih centara koji su doveli do suburbanizacije maloprodaje, na pražnjenje gradskih središta utjecali su i sljedeći čimbenici: suburbanizacija stanovništva, promjene u stavovima i očekivanjima potrošača, promjene razine kupovne moći, povećana pokretljivost stanovništva, razvoj prodaje putem interneta, neriješeni imovinsko-pravni odnosi kao posljedica procesa denacionalizacije (ADAMS I DR., 2002.; GORTER I DR., 2003.; JAKOVČIĆ, 2006.; SPILKOVÁ, RADOVÁ, 2011.; KRIŽAN I DR., 2016.; BILKOVÁ I DR., 2016.; DOLEGA, LORD, 2020.).

Tradicijski i umjetnički obrti kao nositelji nematerijalne i materijalne baštine i njihov potencijal za razvoj kulturnog i kreativnog turizma

Globalizacija i brzi tehnološki razvoj glavne su odlike ovoga tisućljeća. Razvojem globalne kulture

remaining 20 crafts are scattered across the wider city area. Among traditional and artistic crafts within the area examined, the most numerous ones were goldsmiths and jewellers (8), followed by clothing producers (2), hatters (2) and shoemakers (2), and by one of each of the remaining crafts (woodturner, hairdresser, umbrella maker, cardboard works, clockmaker, bookbinder, bagmaker, picture framing) (Fig 1). The complete list of traditional and artistic crafts in Zagreb can be found at the end of the paper.

In addition to crafts, vacant commercial property was also recorded, with the total of 165 units within the mapped area (Fig. 2). A very large concentration of empty commercial units can be found around the square Trg Bana Jelačića (11), the passage Marićev prolaz (7), Harmica (4) and Opatovina (7). Ilica, the main shopping street in city centre, also has a large number of closed commercial units – within the mapped area (up to number 39), there is a total of 30 commercial units (16 on the main street and additional 14 in the courtyards). In the majority of cases, it was not possible to conclude what business activities were performed in these commercial units, but it can be assumed that most of them belonged to crafts. For example, Jakovčić (2006) reports that the predominant crafts of closed commercial units in Ilica in 2006 included goldsmiths (38.9%), shoemakers (19.05%) and tailors (14.29%) (JAKOVČIĆ, 2006). Radeljak Kaufmann et al. (2020) also reported on a large share of empty commercial units in Ilica and other streets in the city centre. The reasons for the disappearance of many businesses from the city centre can be found in the trend that in Croatia and other post-socialist countries started in mid 1990s, which is related to the opening of large shopping malls on the outskirts (NAGY, 2001; LUKIĆ, JAKOVČIĆ, 2004; TEMELOVÁ, 2007). In addition to new shopping malls that led to the suburbanization of retail trade, the emptying of city centres was also supported by the following factors: suburbanization of population, changes in consumers' opinions and expectations, changes in purchasing power, increased mobility of the population, development of online sales, unresolved property law relations as a result of denationalisation (ADAMS ET AL., 2002; GORTER ET AL., 2003; JAKOVČIĆ, 2006; SPILKOVÁ, RADOVÁ 2011; BILKOVÁ ET AL., 2016; DOLEGA,



SLIKA 2. Prostorni razmještaj zatvorenih poslovnih prostora u užem središtu Zagreba
 FIGURE 2 Spatial distribution of closed commercial units in the centre of Zagreb

Izvor/Source: Terensko istraživanje 2021/ field survey 2021

dolazi do nestajanja kulturnih posebnosti i lokalnih identiteta. No upravo kao odgovor na globalizaciju, javila se potreba za očuvanjem lokalnih kulturnih raznolikosti.

Organizacija Ujedinjenih naroda za obrazovanje, znanost i kulturu (UNESCO) potaknuta globalnim promjenama donijela je 2003. Konvenciju o zaštiti nematerijalne kulturne baštine. Najvažniji razlozi i nužnost donošenja Konvencije vidljivi su već u uvodnom dijelu u kojem se ističe: važnost nematerijalne baštine kao pokretača kulturne raznolikosti i jamstva održivog razvoja, međuovisnost nematerijalne kulturne baštine i materijalne kulturne baštine, prepoznavanje da procesi globalizacije dovode do ozbiljnih opasnosti gubitka vrijed-

LORD, 2020; KRIŽAN ET AL., 2016).

Traditional and artistic crafts as carriers of intangible and tangible heritage and their potential for the development of cultural tourism

Globalization and swift technological development are the main characteristics of this millennium. The development of global culture contributes to the disappearance of many cultural specificities and local identities. However, the need to preserve local cultural diversity actually arose as a response to globalisation.

The United Nations Educational, Scientific and Cultural Organization (UNESCO), motivated by global changes, adopted the Convention for the Safeguarding of the Intangible Cultural Heritage

nosti, nestajanja i uništenja nematerijalne kulturne baštine i potreba da se izgradi veća svijest, posebno među mlađim naraštajima o važnosti nematerijalne kulturne baštine i o njezinoj zaštiti (URL 6). Republika Hrvatska je 2005. godine donijela zakon kojim potvrđuje prihvaćanje ove Konvencije (URL 7) te je do danas na listu zaštićenih kulturnih dobara (materijalnih i nematerijalnih) stavila niz dobara. Za potrebe rada ovdje se navode samo oni vezani za zagrebačke obrte. Ministarstvo kulture i medija kao nadležno tijelo vodi Registar kulturnih dobara Republike Hrvatske. U Registru se nalaze sljedeći zagrebački obrti: Frizerski obrt *Kincl* kao „važan segment obrtničkog i modnog identiteta Zagreba“, umijeće izrade šestinskog kišobrana u tradicijskom obrtu *Cerovečki* kao „prepoznatljiv motiv identiteta Zagreba“, umijeće ručne izrade i popravka satova urarskog obrta *Lebarović*, umijeće ručne izrade tradicionalnih klobuka iz raznih krajeva Republike Hrvatske proizvodno-trgovačkog obrta *Cahun*, umijeće izrade i popravka pisaćeg pribora u sklopu obrta *Peroklinika* (URL 4). Osim navedene zaštićene nematerijalne kulturne baštine, zaštićeni su i brojni objekti kao materijalna kulturna baština Zagreba u čijem su stvaranju stoljećima sudjelovali obrtnici raznih struka i u njih ugradili svoj rad, poput: povijesno-urbane cjeline Zagreba, Zelene potkove, niza profanih zgrada i kanonskih kurija u središtu grada (URL 4).

Baština, materijalna i nematerijalna, nositelj je obilježja prošlih vremena i jedan od glavnih elemenata za prepoznavanje identiteta neke zajednice (KARAMEHMEDOVIĆ, 2017.), predstavlja ono što smo naslijedili iz prošlosti, a čime se koristimo u sadašnjosti (TIMOTHY, 2011.). Baština je u stalnom procesu evoluiranja i odraz je međudjelovanja ljudi i mjesta u vremenu. Osim pravnih aspekata zaštite baštine, jedan od mogućih mehanizama zaštite i održavanja kulturnog nasljeđa i razvoja lokalne kulture je poticanje razvoja kulturnog turizma (PANČIĆ KOMBOL, 2006.). Koristi za baštinu od kulturnog turizma su višestruke: od prevladavanja problema poput nedostatka javnih financijskih sredstava za njezinu zaštitu, omogućavanja veće vidljivosti baštine u širem međunarodnom okruženju, do mogućnosti povećanja prihoda u turizmu i u drugim sektorima (NIKOČEVIĆ I DR., 2012.).

in 2003. The most important reasons and the necessity for adopting the Convention are indicated already in the introduction, which emphasises the importance of intangible cultural heritage as a mainspring of cultural diversity and a guarantee of sustainable development; the deep-seated interdependence between the intangible cultural heritage and the tangible cultural heritage; recognition that the processes of globalization give rise to grave threats of deterioration, disappearance and destruction of the intangible cultural heritage; as well as the need to build greater awareness, especially among the younger generations, of the importance of the intangible cultural heritage and of its safeguarding (URL 6). In 2005, the Republic of Croatia adopted an act ratifying this Convention (URL 7), adding to date a series of items to the list of protected cultural property (both tangible and intangible). For the purpose of this paper, only items related to crafts in the City of Zagreb will be mentioned. The Ministry of Culture and Media, as the competent body, keeps the Register of Cultural Property of the Republic of Croatia. The Register includes the following crafts from Zagreb: hairdresser's shop *Kincl* as 'an important segment of craftsmanship and fashion identity of Zagreb,' the art of making Šestine umbrellas by the traditional craft *Cerovečki* as 'a recognizable motif of the Zagreb identity,' the art of making and repairing clocks by hand by the traditional craft *Lebarović*, the art of making traditional hats from various parts of Croatia by the production and trade craft *Cahun*, the art of making and repairing stationery as part of the craft *Peroklinika* (URL 4). In addition to the protected intangible cultural heritage above, numerous buildings are protected as tangible cultural heritage of the City of Zagreb, hosting craftspeople of various professions through centuries, who built their work into these buildings, such as: historical urban unit of the City of Zagreb, the Green Horseshoe, a series of secular buildings and manor houses in the city centre (URL 4).

Both tangible and intangible heritage reflects the characteristics of past times, being one of the main elements for recognizing the identity of a community (KARAMEHMEDOVIĆ, 2017), i.e. it represents what we inherited from the past and use in the

Korištenje kulturne baštine u turizmu i kulturni turizam prošli su dugi razvojni put koji su pratile promjene u kulturno-turističkoj potražnji, očekivanjima, percepciji, motivaciji i ponašanju turista. To je uvjetovalo i promjene u kulturno-turističkoj ponudi, željama i nastojanjima da turist doživi ono što očekuje (KARAMEHMEDOVIĆ, 2017.). U sklopu kulturnog turizma sve je traženiji kreativni turizam, a razvio se kao odgovor na statičnost koju nude tradicionalne atrakcije kulturnog turizma. Richards i Raymond (2000.) definirali su kreativni turizam kao turizam koji posjetiteljima nudi priliku da razvijaju svoje kreativne potencijale aktivnim sudjelovanjem u radionicama i učenjem kroz iskustva karakterističnih za destinaciju u kojoj provode odmor. Bit kreativnog turizma leži u stvaranju nezaboravnih iskustava povezanih sa samoostvarenjem i samoizražavanjem turista (RICHARDS, 2011.). Richards i Raymond (2000.) istaknuli su da kreativni turizam podrazumijeva da i destinacija mora postati kreativnija u osmišljavanju specifičnih iskustava koje može ponuditi turistima. Svako mjesto ima potencijal za pružiti jedinstvenu kombinaciju znanja, vještina, fizičkih obilježja, socijalnoga kapitala i atmosfere (RICHARDS, 2011.). Grad Zagreb donio je 2015. godine temeljni dokument, planski okvir za provedbu kulturne politike – Strategiju kulturnog i kreativnog razvitka Grada Zagreba 2015.-2022. Kao opći strateški ciljevi u strategiji se navode očuvanje, zaštita i prepoznavanje materijalne i nematerijalne baštine. Nadalje, u Strategiji se navodi da se želi povećati interes, znatiželja i uključiti građane u kulturne atrakcije. Izrazito je važno da se novim naraštajima omogući razumijevanje i korištenje kulturnog nasljeđa te se podupire novo umjetničko i tradicionalno stvaralaštvo (URL 5). Lokalna zajednica je dio kreativnog turizma s obzirom na to da je naglasak na interakciji turista s domaćim stanovništvom (RUDAN, 2012.). Kreativni turisti žele spoznati lokalnu kulturu kroz kulturno-povijesne spomenike, umjetnost, povijesne građevine, muzeje, ali pri tome žele biti aktivni i steći iskustva (VRTIPRAH, 2006.). Prema interesima suvremenog turista, materijalna dimenzija kulturne baštine (spomenici, galerije i sl.) treba biti u kombinaciji s nematerijalnom dimenzijom (običaji, tradicija, obrti, razne vještine)

present (TIMOTHY, 2011). The heritage is constantly evolving, reflecting the interaction between people and places over time.

In addition to the legal aspects of cultural heritage protection, one of the possible mechanisms for the protection and preservation of cultural heritage and the development of local culture is to promote the development of cultural tourism (PANČIĆ KOMBOL, 2006). The benefits of cultural tourism for heritage are manifold: from overcoming the obstacles such as the lack of public resources for its safeguarding and increasing the visibility of heritage in a wider international context, to the possibility of increasing the income in tourism, as well as in other sectors (NIKOČEVIĆ ET AL., 2012). The use of cultural heritage in tourism, as well as cultural tourism itself, has significantly evolved, which was followed by changes in cultural and tourist offer, expectations, perception, motivation and behaviour of tourists themselves. This also resulted in changes to the cultural and tourist offer, aspirations and efforts to meet the tourists' expectations (KARAMEHMEDOVIĆ, 2017). Within cultural tourism, there is an increasing demand for creative tourism, which has developed in response to static nature of traditional attractions of cultural tourism. Richards and Raymond (2000) defined creative tourism as a type of tourism which offers visitors the opportunity to develop their creative potential through active participation in courses, and learning experiences that are characteristic for the holiday destination where they are taken. The essence of creative tourism seems to lie in activities and experiences related to self-realization and self-expression of a tourist (RICHARDS, 2011). Richards and Raymond (2000) emphasized the fact that creative tourism implies that not just the tourists need to be creatively involved, but the destination itself needs to become more creative in designing 'characteristic' experiences. Every location has the potential to provide a unique combination of knowledge, skills, physical assets, social capital and atmosphere. In 2015, the City of Zagreb adopted a fundamental document, a planning framework for the implementation of cultural policy - the Strategy for Cultural and Creative Development of the City of Zagreb 2015-2022. The preservation, protection and recognition of

(JELINČIĆ, 2008.). Kreativni turizam u određenom je smislu mobilan jer se u kontekstu prezentacije nematerijalne kulturne baštine, radionice mogu organizirati bilo gdje (muzeji, majstorske radionice, organizirane manifestacije). Nadalje, temelji se na procesu lokalnog umijeća i prenošenja iskustva turistu u prikladnom okolišu i ne zahtijeva građenje nove infrastrukture (RICHARDS, 2002.). Osim toga, kreativni programi kao dodatna ponuda mogu pridonijeti duljem boravku u destinaciji (RUDAN, 2012.). U tom smislu, kao nedovoljno iskorišten potencijal za kreativni i kulturni turizam javlja se mogućnost razvijanja ponude temeljene na tradicijskim i umjetničkim obrtima. Pružanjem mogućnosti turistima da posjete autentične radionice i majstore te upoznaju njihove vještine i primijene vlastitu kreativnost, mogla bi se dodatno obogatiti turistička ponuda Zagreba. Stjecanje lokalnih kulturnih doživljaja, edukacija te aktivno sudjelovanje i okušavanje u različitim aktivnostima, iskustva su kojima teže mnogi suvremeni turisti.

REZULTATI ANKETNOG ISTRAŽIVANJA

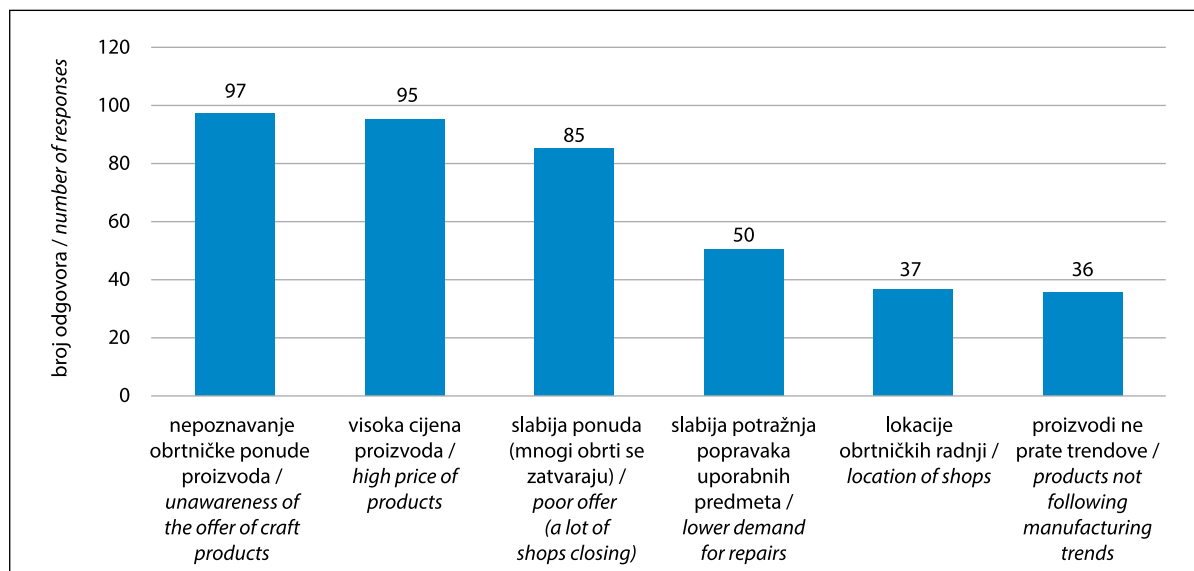
U ovom dijelu rada iznose se rezultati provedenoga anketnog istraživanja. Dobiveni rezultati prikazani su i analizirani prema broju i udjelu ispitanika koji su odabrali pojedini odgovor, kroz prosječne ocjene i distribuciju frekvencija pojedinih odgovora. Odgovori na otvoreno pitanje kodirani su u odgovarajuće kategorije.

Ispitanicima je postavljeno pitanje kupuju li obrtničke proizvode, na što je 53 % (94) ispitanika odgovorilo negativno, a 47 % (85) pozitivno. Nastavno na to pitanje, od ispitanika se tražilo da objasne zašto kupuju obrtničke proizvode. Nakon što su odgovori na ovo otvoreno pitanje razvrstani prema kategorijama, zaključeno da najveći broj ispitanika kupuje obrtničke proizvode zbog njihove kvalitete (39 ispitanika ili 21,8 %), zbog podrške hrvatskim/lokalnim proizvođačima njih 10,6 % (19), zbog toga što im se sviđaju i unikatni su 7,3 % (13), zbog toga što su izrađeni kreativno, ručno i po mjeri njih 4,5 % (8). Ostali odgovori odnosili su se na po-

tangible and intangible heritage are stated in the strategy as general strategic goals. In addition, the Strategy states that the interest and curiosity of citizens in cultural attractions should be increased. It is extremely important to enable new generations to understand and use cultural heritage and to support new artistic and traditional creativity. Local community is an integral part of creative tourism, since emphasis is on the interaction with local population (RUDAN, 2012). Creative tourists want to learn about the local culture through cultural and historic monuments, art, historical buildings, museums, but they also want to be active and gain new experiences (VRTIPRAH, 2006). The tangible dimension of cultural heritage (monuments, galleries etc.) should be thus combined with the intangible dimension (customs, tradition, crafts, various skills) (JELINČIĆ, 2008). Creative tourism is based on the process of presenting local skills and transferring the experience to the tourist in an adequate environment which does not require building of a new infrastructure (RICHARDS, 2002). Furthermore, creative programs as an additional offer can contribute to a longer stay in the destination (RUDAN, 2012). In this regard, one underutilized potential for creative and cultural tourism lies in the opportunity to develop an offer based on traditional and artistic crafts. By providing tourists with an opportunity to visit authentic workshops and master craftsmen, learn about their skills and apply their own creativity, the tourist offer of the City of Zagreb could be further enriched. Local cultural experiences, education, and active participation in different activities are all experiences sought by present-day tourists.

RESULTS OF THE QUESTIONNAIRE SURVEY

This part of the paper describes the results obtained by the questionnaire survey. The results are presented and analysed according to the number and share of the respondents who chose a particular answer, through average grades and the distribution of frequency of individual answers. The answers to the open-ended questions have been coded into appropriate categories.



SLIKA 3. Razlozi manjeg intenziteta kupnje obrtničkih proizvoda

FIGURE 3 Reasons for less intensity of purchase of craft products

Izvor/Source: anketno ispitivanje/questionnaire survey

*ispitanici su mogli odabrati više odgovora / respondents could choose multiple answers

pravak umjesto kupovine novog, naviku i zadovoljstvo kupovanja. Nadalje, ispitanici su pitani o razlozima slabije kupovine proizvoda zagrebačkih obrtnika pri čemu su mogli odabrati više ponuđenih odgovora (Sl. 3.). Većina ispitanika, njih 54,2 % (97), smatra da ljudi nisu dovoljno upoznati s ponudom obrtničkih proizvoda. Gotovo jednak broj ispitanika, njih 53,1 % (95), smatra da je glavni razlog manje kupovine obrtničkih proizvoda visoka cijena proizvoda. Slabu ponudu kao razlog navodi 47,5 % (85) ispitanika, dok su razloge poput slabije potražnje za

The respondents were asked whether they bought craft products, to which 53% (94) answered negatively and 47% (85) positively. As a follow-up to that question, respondents were asked to explain why they buy craft products. The question was open, and after the answers were grouped according to the categories. It was concluded that the largest number of respondents buy artisan products because of their quality (39 or 21.8%), because they support Croatian/local producers (19 or 10.6%), because they like them and they are unique (13 or 7.3%), due to the fact that they

TABLICA 1. Načini promocije obrta koje ispitanici smatraju najučinkovitijima

TABLE 1 Methods that the respondents found the most effective for the promotion of crafts

	Broj odgovora / Number of answers	Udio ispitanika / Share of respondents
Društvene mreže / Social media	148	82,7 %
Sajmovi i razne manifestacije / Fairs and various manifestations	124	69,3 %
Internetske stranice obrta / Web-site of the craft	104	58,1 %
Internetske stranice Turističke zajednice grada Zagreba / Web-site of the Tourist Board of the City of Zagreb	94	52,5 %
Usmena preporuka / Verbal recommendations	90	50,3 %
Promotivni letci i brošure grada Zagreba / Promotional leaflets and brochures of the City of Zagreb	58	32,4 %
Promocije Udruženja obrtnika grada Zagreba / Promotions by the Craftsmen Association of the City of Zagreb	56	31,3 %
Putem turističkog informativnog centra / Through the Tourist Information Centre	52	29,1 %

Izvor/Source: anketno istraživanje / questionnaire survey

*ispitanici su mogli odabrati više odgovora / respondents could choose multiple answers

TABLICA 2. *Upoznatost ispitanika s manifestacijama koje promoviraju obrte*
TABLE 2 *Knowledge of respondents about manifestations promoting crafts*

	Broj odgovora / Number of answers	Udio ispitanika / Share of respondents
Zlatna igla	104	58,1 %
Ilica Q'Art Project	64	35,8 %
Zagrebački obrtnički sajam	62	34,6 %
Markov sajam	36	20,1 %
Zazeleni svaki dan manifestation	9	5 %
Nisam upoznat s navedenim manifestacijama / <i>I am not familiar with any of these manifestations</i>	37	20,7 %

Izvor/Source: anketno istraživanje / questionnaire survey

ispitanici su mogli odabrati više odgovora / respondents could choose multiple answers

popravicima proizvoda (27,9 %, tj. 50 ispitanika), lokacije radnji (20,7 %, tj. 37 ispitanika) i praćenje trendova u proizvodnji (20,1 %, tj. 36 ispitanika) naveli kao manje bitne.

Na pitanje koje načine smatraju najučinkovitijim za promociju obrta, od osam ponuđenih odgovora najviše je ispitanika, njih 82,7 % (148) odabralo odgovor društvene mreže, 69,3 % (124) ispitanika odabralo je sajmove i manifestacije, 58,1 % (104) odabralo je internetske stranice obrta, a 52,5 % (94) internetske stranice Turističke zajednice grada Zagreba. Svi odgovori prikazani su u Tab. 1.

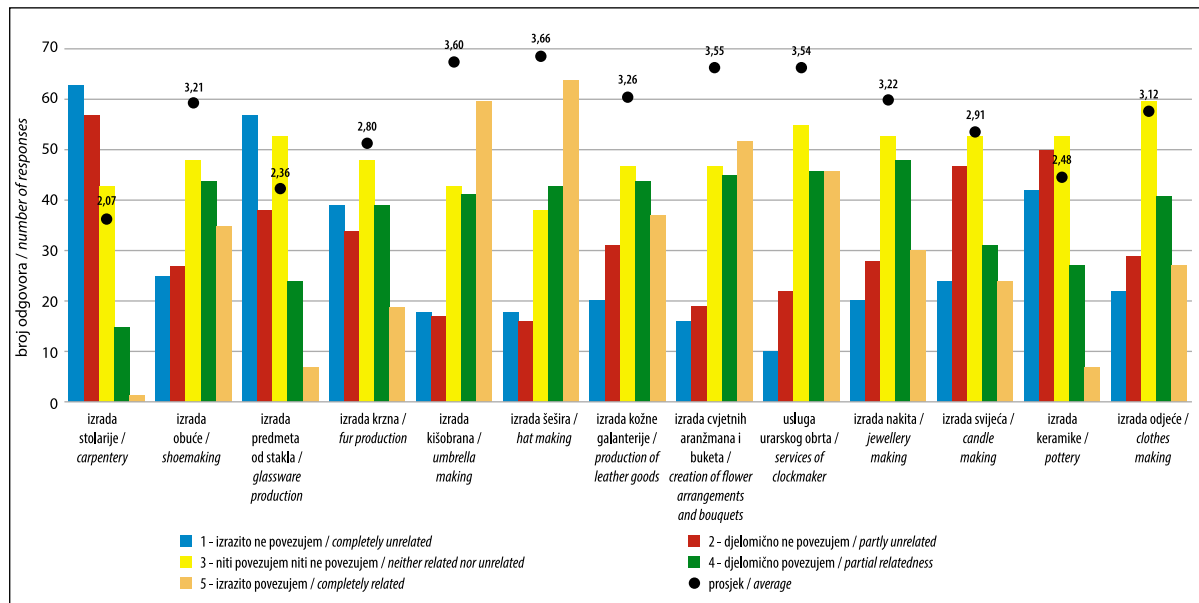
Također, ispitanike se tražilo da navedu s kojim su manifestacijama vezanima za promociju obrta Zagreba upoznati. Najveći udio ispitanika (58,1 %, tj. 104) poznaje manifestaciju Zlatna igla. Navedena manifestacija održava se od 1935. pa ne čudi njezina prepoznatljivost. Dio ispitanika (35,8 %, tj. 64) upoznat je s Projektom Ilica Q'art te u nešto manjem postotku (34,6 %, tj. 62) sa Zagrebačkim obrtničkim sajmom. Osim navedenih, ispitanici su upoznati s manifestacijama: Markov sajam (20,1 %, tj. 36) i Zazeleni svaki dan (5 %, tj. 9). Čak 20,7 % ispitanika (37) nije upoznato ni s jednom navedenom manifestacijom (Tab. 2.).

Nadalje, od ispitanika se tražilo da navedu u kojoj mjeri povezuju pojedine obrte sa Zagrebom, pri čemu je korištena ljestvica s vrijednostima od 1 do 5 (1 je označavalo izrazito nepovezivanje, a 5 izrazito povezivanje). Rezultati pokazuju da od navedenih obrta ispitanici (njih 64) u najvećoj mjeri sa Zagrebom povezuju izradu šešira (3,66). Izrada kišobrana na drugom je

are made creatively, by hand and to measure (8 or 4.5%). Other answers related to repair instead of buying new, habit and shopping satisfaction. Furthermore, the respondents were asked why people bought less and less products from Zagreb's craftspersons, and they were offered multiple possible answers (Fig. 3). The majority of the respondents, 54.2% (97), believe that people are not well informed about the offer of craft products. Almost an equal number of respondents, 53.1% (95), believe that the reason is the high price of such products. Poor offer was chosen as an answer by 47.5% (85) of the respondents, while the reasons such as lower demand for repairs (27.9% or 50 respondents), location of shops (20.7% or 37 respondents) and not following manufacturing trends (20.1% or 36 respondents) were indicated as less important.

When they were asked what methods they found most efficient for the promotion of crafts, out of eight possible answers, the majority of the respondents, 82.7% (148), chose social media, followed by 69.3% (124) who chose fairs and manifestations, 58.1% (104) who chose the web-site of the craft, and 52.5% (94) who chose the website of the Tourist Board of the City of Zagreb. All the answers are shown in Table 1.

The respondents were also asked to name the events they were familiar with in relation to the promotion of crafts of the City of Zagreb. The majority of the respondents (58.1% or 104 respondents) were familiar with the event *Zlatna igla*. This event was first organised in 1935, so it is no surprise it is widely known. Part of the respondents (35.8% or 64 respondents) are familiar with the project *Ilica Q'art* and a somewhat smaller percent-



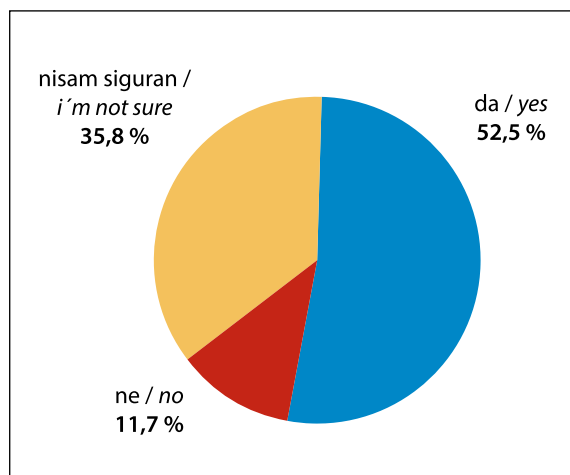
SLIKA 4. Prosječne ocjene i frekvencije odgovora ispitanika na pitanje u kojoj mjeri povezuju navedene obrte sa Zagrebom

FIGURE 4 Average grades and frequencies of answers about the extent of relation of listed crafts to the city of Zagreb

Izvor/Source: anketno istraživanje / questionnaire survey

mjestu prema prepoznatljivosti, taj obrt sa Zagrebom izrazito povezuje 60 ispitanika (3,60). Iako ove obrti ispitanici najviše poznaju, u Zagrebu djeluju još samo tri obrta koja se bave izradom šešira i samo jedan obrtnik u Ilici koji izrađuje i popravlja kišobrane. Više prosječne vrijednosti zabilježili su i obrti koji se bave izradom cvjetnih aranžmana i buketa (3,55) te urari (3,54). Ispitanici najmanje povezuju sa Zagrebom obrte koji se bave izradom stolarije (2,07) i predmeta od stakla (2,36) (Sl. 4.).

Na pitanje jesu li upoznati s pojmom tradicij-



SLIKA 5. Odgovori ispitanika na pitanje jesu li upoznati s pojmovima tradicijskih i umjetničkih obrta

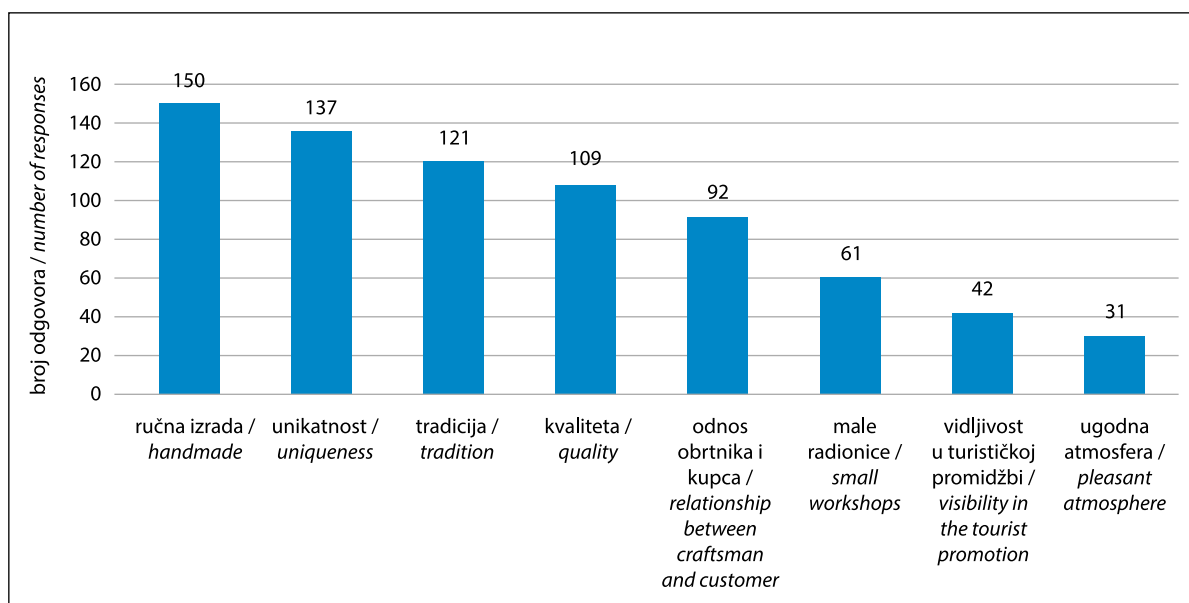
FIGURE 5 Answers about the knowledge of the terms of traditional and artistic crafts

Izvor/Source: anketno istraživanje / questionnaire survey

age (34.6% or 62 respondents) with *Zagrebački obrtnički sajam*. The respondents were also familiar with the following events: Markov sajam (20.1% or 36 respondents) and *Zazeleni svaki dan* (5% or 9 respondents). As much as 20.7% (37) of the respondents are not familiar with any of the specified events (Tab. 2).

Furthermore, the respondents were asked to state to which extent they related particular crafts to Zagreb, using the scale from 1 to 5 (1 indicates complete un-relatedness, and 5 complete relatedness). The results show that, among the listed crafts, the largest number of respondents (64) related hat making to Zagreb (3.66), which was followed by umbrella making (3.60; 60 respondents expressed complete relatedness). Although these crafts are most familiar to the respondents, there are only three hatters left and only one craftsman in Ilica who makes and repairs umbrellas. Higher average values are also reported for crafts that engage in the creation of flower arrangements and bouquets (3.55) and for clockmakers (3.54). Crafts that engage in carpentry (2.07 or only 1 subject with complete relatedness) and glassware (2.36; only 7 respondents with complete relatedness) were least related to the City of Zagreb by the respondents (Fig. 4).

When asked whether they were familiar with the term of traditional and artistic crafts, the majori-



SLIKA 6. Karakteristike koje izdvajaju umjetničke i tradicijske obrte od ostalih obrta

FIGURE 6 Characteristics that make traditional and artistic crafts stand out

Izvor/Source: anketno istraživanje / questionnaire survey

*ispitanici su mogli odabrati više odgovora / respondents could choose multiple answers

skih i umjetničkih obrta, većina ispitanika, njih 52,5 % (94), odgovorila je potvrdno, no značajan je udio i onih koji su odgovorili da nisu sigurni (38,5 %, tj. 64 ispitanika), što upućuje na nepoznavanje točne definicije ovih obrta. Ostalih 11,7 % (21) ispitanika izjavilo je da nisu upoznati s pojmovima tradicijskih i umjetničkih obrta (Sl. 5.).

Na pitanje koje su karakteristike tradicijskih i umjetničkih obrta koje ih izdvajaju od ostalih obrta, 83,8 % (150) ispitanika izjasnilo se da je to ručna izrada, 76,5 % (137) ispitanika navelo je da je to unikatnost, a 67,6 % (121) tradicija. Najmanje ispitanika odabralo je odgovore ugodna atmosfera (17,3 %, tj. 31 ispitanik) i vidljivost u turističkoj promidžbi (23,5 %, tj. 42) (Sl. 6.).

Nadalje, ispitanici su upitani za koje dijelove Zagreba vežu pojam tradicijskih i umjetničkih obrta pri čemu su također mogli odabrati više odgovora. Najviše ispitanika, njih 87,2 % (156), odabralo je odgovor uži centar grada, a slijede odgovori širi centar grada koji je odabralo 25,1 % (45), okolica Zagreba (17,3 %, tj. 31) i periferija grada koji je odabralo 8,4 % (15) ispitanika.

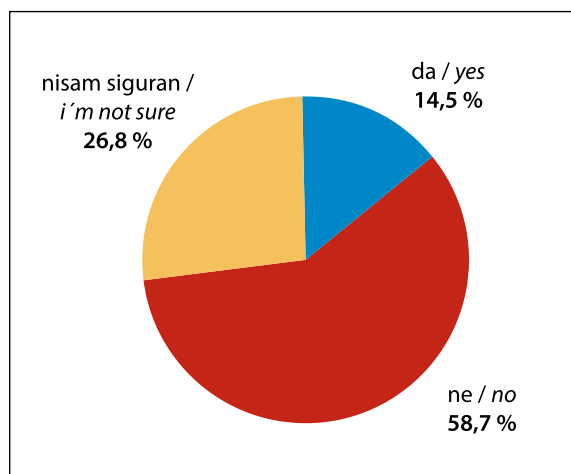
Slijedila su pitanja vezana uz poznavanje „certifikata“ tj. Znaka tradicijskog ili umjetničkog obrta koji dodjeljuje Hrvatska obrtnička komo-

ty of respondents, 52.5% (94) of them, provided a positive answer, but there was also a significant share of those who were not sure (38.5% or 64 respondents), which indicates the lack of knowledge of the exact definitions of these types of crafts. The remaining 11.7% (21) of the respondents stated they were not familiar with the term (Fig. 5).

When asked about the characteristics of traditional and artistic crafts that make them stand out from the rest of the crafts, 83.8% (150) of respondents said it was production by hand, 76.5% (137) of the respondents said it was their uniqueness, and 67.6% (121) said it was tradition. The smallest number of respondents chose pleasant atmosphere (17.3% or 31 respondents) and visibility in the tourist promotion (23.5% or 42 respondents) (Fig. 6).

Furthermore, the respondents were asked about parts of Zagreb to which they relate the concept of traditional and artistic crafts, again having the possibility to choose multiple answers. The largest number of respondents, 87.2% (156), chose the very centre of the city, followed by a wider city centre, chosen by 25.1% (45) of the respondents, Zagreb surroundings (17.3% or 31) and the suburbs, chosen by 8.4% (15) of the respondents.

The following questions were related to the knowledge of the ‘certificate’, i.e. the Label of Traditional or Artistic Craft awarded by the Croa-



SLIKA 7. *Upoznatost ispitanika s pojmom Znak tradicionalnog odnosno umjetničkog obrta*
FIGURE 7 *Familiarity of the respondents with the Label of Traditional or Artistic Craft*

Izvor/Source: anketno istraživanje / questionnaire survey

ra. Većina od 58,7 % (105) ispitanika izjavila je da nije upoznata sa Znakom, 26,8 % (48) odgovorilo je da nije sigurno, dok je samo 14,5 % (26) ispitanika odgovorilo da su upoznati sa Znakom tradicijskog ili umjetničkog obrta (Sl. 7.).

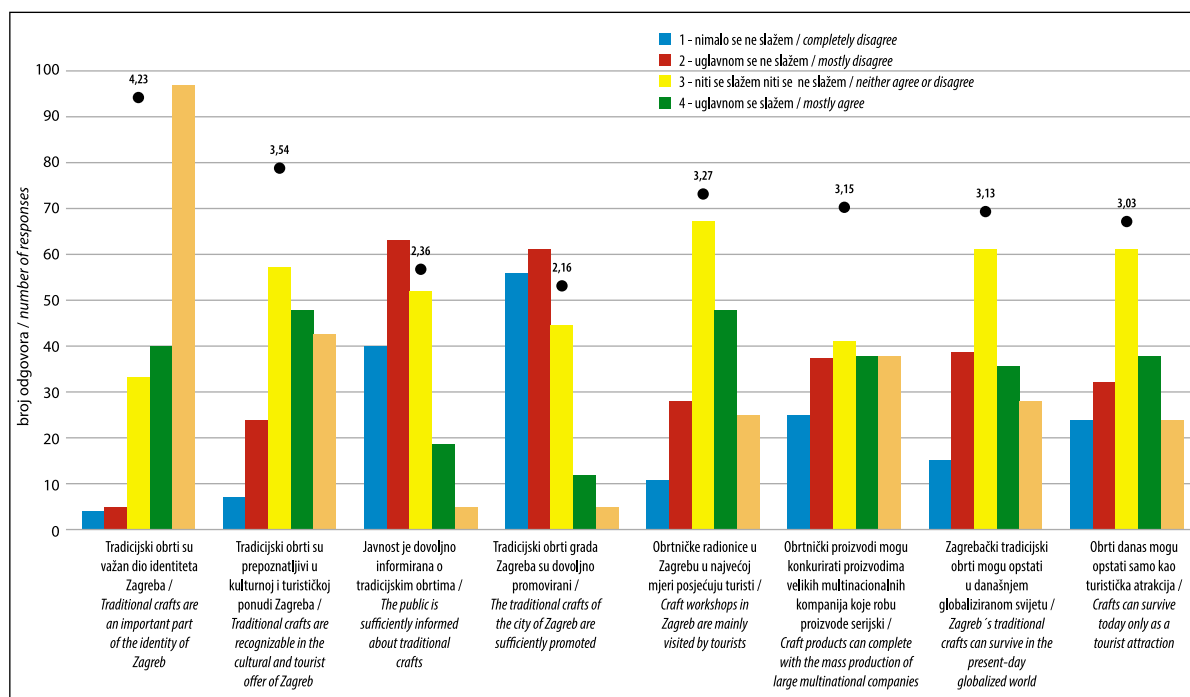
Nadalje, od ispitanika se tražilo da navedu obrte koji posjeduje taj Znak. Da ispitanici vrlo slabo znaju koji su obrti nositelji te oznake pokazuje podatak da je samo pet ispitanika navelo spomenute obrte poimence. Tri ispitanika navela su *Kišobrane Cerovečki*, a po jedan ispitanik naveo je: *Modu Šabić*, obrt za izradu šešira *Cahun* i *Cipele Bočak*. Ostali ispitanici navodili su pojedine vrste obrta poput izrade licitarskih srca, postolara i urara, ali bez imena.

Ispitanicima je ponuđeno i osam tvrdnji te su trebali navesti u kojoj mjeri se slažu s pojedinom tvrdnjom na skali od 1 do 5 (1 – nimalo se ne slažem, 5 – u potpunosti se slažem) (Sl. 8.). Tvrdnje se odnose na značaj tradicijskih obrta za identitet Zagreba, njihovu promociju, mogućnost opstanka i dr. Uvjerljivo najveći broj ispitanika, njih 76,5 % (137), odgovorio je da se u potpunosti ili uglavnom slažu s tvrdnjom da su tradicijski obrti važan dio identiteta Zagreba (4,23). Samo je 5 % (9) onih koji se s time ne slažu. Najniže prosječne ocjene dobile su tvrdnje koje se odnose na promociju obrta i informiranost javnosti o tradicijskim obrtima (2,16 i 2,36). Većina ispitanika, njih 65,4 % (117),

tian Chamber of Trades and Crafts. The majority of respondents, 58.7% (105) of them, said they were not familiar with the label, 26.8% (48) answered they were not sure, and 14.5% (26) of the respondents answered they were familiar with the Label of Traditional or Artistic Craft (Fig. 7).

Furthermore, the respondents were asked to name the crafts that have the label. The respondents were obviously not very familiar with the crafts that have the label, since only 5 of them could name the said crafts. Three respondents mentioned *Kišobrani Cerovečki*, while *Moda Šabić*, hat-making craft *Cahun* and *Cipele Bočak* were each mentioned by one subject only. Other respondents mentioned particular types of crafts, such as production of licitar hearts, shoemakers and clockmakers, but without naming the business.

The respondents were also offered eight statements, and they were asked to indicate the extent to which they agreed to each of them, on a scale from 1 to 5 (1 – completely disagree, 5 – completely agree) (Fig. 8). The statements were related to the significance of traditional crafts for the identity of the City of Zagreb, their promotion, ability to survive etc. The vast majority of the respondents, 76.5% (137), answered that they completely agreed or mostly agreed with the statement that traditional crafts are an important part of the identity of the City of Zagreb (4.23). Only 5% (9) of the respondents disagreed with this statement. The lowest average grades were given to the statements in connection with the promotion of crafts and level of information of the public regarding traditional crafts (2.16 and 2.36). The majority of respondents, 65.4% (117), said they completely disagreed with the statement that traditional crafts of Zagreb are well promoted, as well as with the statement that the public is sufficiently informed about such crafts (57.5%, 103). Moreover, the majority of respondents, 31.8% (57) said they neither agreed nor disagreed with the statement that crafts are recognizable in the cultural and tourist offer of Zagreb. The total of 40.8% (73) of the respondents agreed with the statement that craft shops are mainly visited by tourists, while 37.4% (67) of them neither agreed nor disagreed with this statement. The total of 25% (56) of the respondents disagreed with the statement that crafts can survive



SLIKA 8. Prosječne ocjene i frekvencije odgovora ispitanika s obzirom na navedene tvrdnje

FIGURE 8 Average grades and frequencies of respondents' answers regarding the specific statements

Izvor/Source: anketno istraživanje / questionnaire survey

iskazala je ukupno neslaganje s tvrdnjom da su tradicijski obrti Zagreba dobro promovirani, kao i s tvrdnjom da je javnost dovoljno informirana o njima (57,5 %, 103). Također, najveći je broj ispitanika, njih 31,8 % (57), koji niti se slažu, niti se ne slažu s tvrdnjom da su obrti prepoznatljivi u kulturnoj i turističkoj ponudi Zagreba. S tvrdnjom da obrtničke radionice većinom posjećuju turisti ukupno se slaže 40,8 % (73) ispitanika, a njih 37,4 % (67) niti se slaže, niti se ne slaže. S tvrdnjom da obrti mogu danas opstati samo kao turistička atrakcija ukupno se ne slaže 31,3 % (56) ispitanika, dok je najviše onih koji niti se slažu, niti se ne slažu (34 %, tj. 61). O tvrdnji da obrtnički proizvodi mogu konkurirati serijski proizvedenim proizvodima, mišljenja su vrlo podijeljena, ali najviše je njih (22,9 %, tj. 41) koji niti se slažu, niti se ne slažu, a podjednak je broj onih koji se uglavnom ili u potpunosti slažu s tvrdnjom (21,2 %, tj. 38).

RASPRAVA

Tradicijским i umjetničkim obrtima danas se smatraju oni koji izrađuju proizvode pretežitim udjelom ručnog rada tradicijskim tehnikama i

today only as a tourist attraction, while the majority of respondents neither agreed nor disagreed with this statement (38% or 62 respondents). The opinions regarding the statement that craft products can compete with serially manufactured products were divided, but the majority of respondents (40% or 41 respondents) neither agreed nor disagreed with this statement, followed by those who mostly agreed with this statement (56% or 39 respondents).

DISCUSSION

Traditional and artistic crafts are those crafts that produce wares with a predominant share of handicraft, using traditional techniques and tools. The craftspeople interviewed as part of this research stated that they followed the original production technology in their work, but that they also introduced some necessary innovations. The form and purpose of their products follow the patterns of traditional culture and emphasise the creativity and individuality of master craftspeople. Even though Zagreb developed based on the work of craftspeople, the present-day traditional crafts have a negligible share in the economic sense. One

alatima. Obrtnici intervjuirani u sklopu ovoga istraživanja naglasili su da pri izradi proizvoda poštuju izvornu tehnologiju izrade, ali su uveli i nužne inovacije. Njihovi proizvodi svojim oblikom i namjenom slijede obrasce tradicijske kulture te naglašavaju kreativnost i individualnost majstora. Iako je Zagreb izrastao na obrtničkom radu, današnji tradicijski obrti imaju zanemariv doprinos u gospodarskom smislu. Jedan od razloga tome je što, poštujući kriterije koje ih čine tradicijskim obrtima, mogu izrađivati ograničene serije proizvoda koje uglavnom nisu u značajnijoj mjeri ekonomski isplative. Svi sugovornici naveli su da su naslijedili obrt, odnosno u vlasništvu je njihove obitelji drugu ili treću generaciju. Tradicija, znanje, vještine i ljubav prema poslu prenošena im je od roditelja s kojima su u radionicama provodili djetinjstvo. Svi su sugovornici položili majstorske ispite te smatraju da su za održavanje kvalitete proizvoda, osim talenta i vještina koje su im prenijeli roditelji te ljubavi prema poslu, najvažniji trud, praksa i formalno obrazovanje stečeno u obrtničkim školama. Obrtnici su ipak napomenuli da je naslijeđen i uhodan posao ujedno svojevrsan teret i izazov: „To je izazov, jer su ljestvice postavljene visoko. Naslijedio si i brend i mušterije i znanje, te je izazov stalno održavati vrhunski nivo i opravdati brend.“ No ne žele iznevjeriti svoje kupce i naglašavaju da im je zadovoljstvo klijenata najveća motivacija za rad. Izrađuju kvalitetne proizvode koji cijenom teško konkuriraju jeftinijoj uveznoj robi. To su u intervjuima potvrdili obrtnici, ali i podaci dobiveni anketom među stanovnicima grada koji smatraju da obrtnički proizvodi imaju visoku cijenu. Kao što su naveli intervjuirani obrtnici, većina kupaca su njihovi dugogodišnji klijenti, a udio turista kupaca bi, smatraju, trebao biti mnogo veći. Obrtnici smatraju da je motiv za kupnju njihovih proizvoda kvaliteta, originalnost, unikatnost proizvoda napravljenih po mjeri i visoki estetski standard, a te su karakteristike obrtničkih proizvoda istaknuli i sami ispitanici. Podaci dobiveni anketom pokazuju da većina ispitanika ne kupuje obrtničke proizvode i da većina ispitanika nije upoznata sa Znakom tradicijskog ili umjetničkog obrta i shodno tome većinom ne znaju koji obrtnici po-

of the reasons is that, having to satisfy the criteria that make them traditional crafts, they can produce only limited series of products, which is usually not cost-effective. All of the interviewees indicated that they inherited the craft, that is, it is in their family for two or three generations. The tradition, knowledge, skills and love of work were passed onto them by their parents, with whom they spent their childhood in the workshops. All of the interviewees have passed a master craftsman's exam and believe that the most important thing to maintain the quality of the products, in addition to talent, skill and love of work, is hard work, practice and formal education acquired in craft schools. However, the craftsmen noted that an inherited and well-established profession is at the same time a kind of burden and a challenge: 'It's a challenge because the standards are set high. You have inherited the brand, the customers and the knowledge, and the challenge is to constantly maintain that high standard and justify the brand.' Nevertheless, they do not want to let their customers down and emphasize that their customers' satisfaction is their greatest motivation for their work. They produce high-quality wares whose price cannot be competitive compared to cheaper imported wares. This was confirmed by the craftspeople themselves during the interviews, but also by the results of the questionnaire survey conducted among the citizens who believe that the price of craft products is high. As the interviewed craftspeople stated, the majority of buyers are their long-standing customers, and the share of tourist buyers should, they believe, be much higher. The craftspeople believe that the motif for the purchase of their products is their quality, originality, uniqueness of custom-made products and high aesthetic standards, which are all characteristics mentioned by the respondents as well. However, the data obtained through the questionnaire survey show that the majority of respondents do not buy craft products and that the majority of respondents are not familiar with the Label of Traditional or Artistic Craft, and that accordingly they are unable to name the craftspeople who have this label. Despite the lack of knowledge of traditional crafts as business activities (especially when they had to name them), the majority of respondents pointed out handicraft and uniqueness

sjeduju taj Znak. Bez obzira na slabije poznavanje tradicijskih obrta kao djelatnosti (pogotovo kada su ih trebali navesti poimence), ispitanici su u najvećoj mjeri izdvojili ručnu izradu i unikatnost kao važne karakteristike tradicijskih obrta koje ih po njihovu mišljenju izdvajaju od jeftinije industrijske konkurencije.

Velik udio ispitanika (65,4 %) smatra da tradicijski obrti nisu dovoljno promovirani u javnosti. Time se nameće potreba kreativne i atraktivne promocije prilagođene suvremenim trendovima i mlađim generacijama. Promociju putem novih medija, ponajprije društvenih mreža preferiraju ispitanici ankete i to u velikom postotku (82,7 %, 148), dok sami obrtnici naglašavaju da bi rado sudjelovali u modernijim i inovativnijim manifestacijama kao načinu prezentacije svojih proizvoda. Takve inicijative postoje, ali se najčešće svode na napore kreativnih pojedinaca, što je u razgovoru posebno istaknula jedna od obrtnica. Može se zaključiti da se bez obzira na medij i način prezentacije, ispitanici i obrtnici slažu da je potrebno još osuvremeniti prezentaciju i povećati vidljivost i dostupnost tradicijskih proizvoda.

Osim nedovoljne promocije i vidljivosti obrta u javnosti, prema mišljenju ispitanika, postoji niz drugih razloga koji su pridonijeli stagnaciji i padu broja obrta. Kao jedan od najvećih problema, svi intervjuirani obrtnici istaknuli su nedostatak mladoga kadra koji bi nastavio tradiciju proizvodnje. Obrtnici su naglasili da je interes mladih za obrtnička zanimanja u stalnom padu, što pokazuje i podatak da kvote u strukovnim školama u Zagrebu nisu popunjene (MATKOVIĆ, ŠABIĆ, 2022.), stoga ih ne čudi da su njihovi brojni kolege bili primorani zatvoriti svoje obrte. Iako svi posjeduju licence za naukovanje učenika, trenutačno nemaju koga učiti. Posljednjih godina bilo je slučajeva da nitko nije upisao smjer za primjerice zlatare ili urare. Ova situacija dio je šire slike jer je i u drugim europskim gradovima prisutan problem da većina obrtnika završava svoje karijere, a nema dovoljno mladih ljudi koji bi krenuli njihovim stopama (FERREIRA I DR., 2018.). Među intervjuiranim obrtnicima ima i onih koji nemaju nasljednika u poslu, riječima jednog od njih: „Radit ću do mirovi-

as important characteristics of traditional crafts that, in their opinion, make them stand out from cheaper industrial competition.

A large proportion of respondents (65.4%) believe that traditional crafts are not sufficiently promoted in the public. This leads to the need for creative and attractive promotion that would be adapted to modern trends and younger generations. The promotion through new media, especially social media, is the preferred option among respondents, in a very large percentage (82.7%, 148), while craftspeople point out that they would like to participate in modern and innovative events as a means to promote their products. Such initiatives do exist, but they mostly depend on the efforts of creative individuals, which was especially pointed out by one of the craftswomen. It can be concluded that, regardless of the medium and method of presentation, both respondents and craftspeople agree that there is a need for modernising the presentation and increasing the visibility and availability of traditional products.

In addition to insufficient promotion of crafts, there is a series of other reasons contributing to the stagnation and reduction in crafts. One of the major problems mentioned by the craftspeople is the lack of young staff who could continue the tradition. The craftspeople pointed out that the interest of young people in vocational jobs is constantly falling, which is also shown by the fact that the quotas in vocational schools in Zagreb are not met (MATKOVIĆ, ŠABIĆ, 2022), so they are not surprised that many of their colleagues were forced to close their businesses. Although they all have licenses to teach students, they currently have no one to teach. In recent years there have been cases where no one has enrolled in a course for goldsmiths or watchmakers. This situation is part of a wider picture, as in many other European cities most craftsmen end their careers, and there are not enough young people to follow in their footsteps (FERREIRA ET AL., 2018). Among the interviewed craftsmen there are also those who do not have a successor in the business, in the words of one of them: 'I will work until I retire and then probably close the business.' They believe that part of the problem is a prevailing public perception that vocational jobs are reserved for less successful stu-

ne, a onda valjda zatvoriti obrt.“ Dio problema vide u tome što u javnosti prevladava mišljenje da su strukovna zanimanja rezervirana za lošije učenike te da su nedovoljno plaćena i manje vrijedna u društvu. Primjer koji je navela jedna od obrtnica dobro oslikava tu situaciju: „Imali smo na praksi nekoliko učenica obrtničke škole koje su bile toliko nesretne činjenicom da pohađaju školu za postolara da su se to sramile reći poznanicima.“

Preostali tradicijski i umjetnički obrti danas većinom posluju u užem središtu grada što je vidljivo iz njihova prostornog razmještaja dobivenog kartiranjem i analizom adresa. Centar grada koji je nekada vrvio obrtničkim radionicama (ROKSANDIĆ, 2012.) danas je uvelike opustio, što je jasno utvrđeno kartiranjem (evidentirana su čak 165 prazna poslovna prostora). Takva slika uvelike se podudara s rezultatima istraživanja koje su proveli Radeljak Kaufmann i dr. (2020.) i Jakovčić (2006.), te se može pretpostaviti da su ti zatvoreni prostori u velikoj mjeri nekada pripadali obrtnicima. Neupitna je nužnost revitalizacije središta grada kroz niz aspekata. U kontekstu ovoga rada to se ponajprije odnosi na obrtničke radionice i na mogućnost iskorištavanja ovih brojnih napuštenih poslovnih prostora. U tom smislu, sugovornici su kao pozitivan primjer posebno istaknuli Projekt Ilica Q'art kojim se nastoji revitalizirati napuštene prostore u Ilici, često surađujući s obrtnicima. Također, anketa je pokazala da ispitanici u najvećoj mjeri (87,2 %) središte grada povezuju s tradicijom obrtničkog rada.

Da Grad Zagreb prepoznaje važnost obrta vidljivo je kroz gradske strateške dokumente i programe (poput Programa poticanja razvoja obrta, malog i srednjeg poduzetništva u Gradu Zagrebu 2019. – 2023.) te kroz projekte koje provodi, a kojima je „cilj promocija i očuvanje tradicijskih, deficitarnih i umjetničkih obrta te povećanje njihove konkurentnosti“ (URL 8). Od 2004. godine Grad dodjeljuje financijske potpore obrtnicima s posebnim naglaskom na one koji obavljaju tradicijske, deficitarne i proizvodne obrtničke djelatnosti. Također, sudjeluje u organiziranju Zagrebačkoga obrtničkog sajma kojim se promoviraju obrtnička zanimanja

as well as that they are less paid and less worthy in society. The example given by one of the craftsman illustrates this situation well: ‘We had several vocational school apprentices who were so unhappy with the fact that they were attending a shoemaking school that they were ashamed to tell their acquaintances.’

Today, the remaining traditional and artistic crafts mostly operate in the city centre, which is evident from their spatial distribution obtained through mapping and address analysis. However, the city centre that was once swarming with craft shops (ROKSANDIĆ, 2012) has become deserted, which was confirmed through the process of mapping (as many as 165 vacant commercial properties were recorded). Such an image corresponds to a great extent to the results of research conducted by Radeljak Kaufmann et al. (2020) and Jakovčić (2006) and it can be assumed that these closed spaces once belonged to craftsmen to a large extent. There is no doubt that the city centre needs to be revitalised in a series of aspects. In the context of this paper, this primarily refers to craft shops and the possibility to exploit numerous vacant commercial units. In this sense, interviewees especially pointed out the project *Ilica Q'art* as a positive example, which aims to revitalize the vacant property in Ilica, often in cooperation with craftspeople. The questionnaire survey also showed that the respondents to the greatest extent (87.2%) related city centre to the tradition of craftsmanship.

The fact that the City of Zagreb recognizes the importance of crafts is reflected in the City's strategic documents and programs (such as the Program for the Promotion of the Development of Crafts, Small and Medium Enterprises in the City of Zagreb 2019 - 2023) and in the projects it implements, which are ‘aimed at promoting and preserving traditional, deficit and artistic crafts and increasing their competitiveness’ (URL 8). Since 2004, the City of Zagreb has been providing financial support to craftsmen, focusing on those engaged in traditional and deficit craft activities. It also participates in the organization of the Zagreb Crafts Fair, which promotes vocational professions among elementary school students. Since 2017, the fair has been included in the Program for Organizing Events of Economic Interest for

među učenicima osnovnih škola. Sajam je od 2017. uvršten u Program organizacije manifestacija od gospodarskog interesa za Grad Zagreb, a sufinanciraju se i brojni drugi sajmovi (poput Zlatne igle, Floraarta i dr.) (URL 8). Grad je s Hrvatskom obrtničkom komorom i Obrtničkom komorom Zagreb pokrenuo dvojezičnu digitalnu platformu Zagreb Crafts kojom se promoviraju tradicijski i umjetnički obrti Zagreba. Radi jačanja suradnje gradske uprave sa svim obrtničkim i poduzetničkim udrugama i institucijama u gradskim strukturama djeluje Odjel za poticanje razvoja obrta i poduzetništva i praćenje stanja u gospodarstvu (URL 8.). Obrtnici su naglasili da imaju uglavnom dobru suradnju s Gradom i strukovnim udrugama.

Tradicijski i umjetnički obrti danas imaju veliku vrijednost i važnost kao nositelji nematerijalne baštine. Velika većina ispitanika (76,5 %) tradicijske obrte smatra važnim dijelom kulturnog identiteta Zagreba. Međutim, anketnim istraživanjem utvrđeno je da je vrlo mali broj ispitanika upoznat s načinom zaštite tradicijskih i umjetničkih obrta dodjeljivanjem Značka kao certifikata autentičnosti vještina. Samo 14,5 % ispitanika izjavilo je da je upoznato s pojmom Značka tradicijskog odnosno umjetničkog obrta. Prema tome, nužan je inovativan način za isticanje i promociju tradicijskih obrta putem suvremenih medija koji bi pridonijeli vidljivosti i pomogli osvijestiti stanovnike i turiste o vrijednosti, kvaliteti i značaju obrta kao materijalne i nematerijalne baštine.

Poticanje kulturnog turizma jedan je od mehanizama zaštite kulturne baštine. Upravo je uključivanje obrtničkih radionica u turističku ponudu način za inovativnu prezentaciju znanja i vještina u autohtonom okruženju kao i prilika za opstanak na tržištu i daljnji razvoj. Kao što navodi Terrio (1999.), današnji turisti uglavnom nemaju izravnog iskustva s proizvodnjom, a istovremeno su nezadovoljni sa standardiziranom ponudom te su željni upoznati ne samo lokalne kulturne elemente nego i ono što se događa „iza pozornice“, odnosno unutar samih obrtničkih radionica. U tom je smislu vrlo zanimljiva mogućnost izrade i ponude turističkih tura na temu tradicijskih i umjetničkih obrta. Takve specija-

the City of Zagreb, and numerous other fairs are also co-financed (e.g. Zlatna igla, Floraart, etc.) (URL 8). Together with the Croatian Chamber of Crafts and the Zagreb Chamber of Crafts, the City has launched a bilingual digital platform Zagreb Crafts, which promotes traditional and artistic crafts in Zagreb. The Department for Promotion of Trade and Entrepreneurship Development and Monitoring of the Economic Situation operates in order to strengthen the cooperation of the City Administration with all trade and business associations and institutions within the city structures (URL 8). The craftsmen themselves emphasized that they generally have a good cooperation with the City and trade associations.

Today, traditional and artistic crafts are very valuable and important as carriers of intangible heritage. It should be noted that the vast majority of respondents (76.5%) recognises traditional crafts are an important part of the cultural identity of Zagreb. However, the questionnaire survey showed that only few respondents were familiar with the method of safeguarding traditional and artistic crafts by awarding them a Label of the authenticity of their skills. Only 14.5% of the respondents stated they were familiar with the Label of Traditional or Artistic Craft. Therefore, there is a need to find innovative ways to increase and promote traditional crafts through modern media among citizens and tourists which would contribute to the visibility and help make people aware of the value, quality and significance of crafts as tangible and intangible heritage.

One of the mechanisms of safeguarding the cultural heritage consists in encouraging cultural tourism. Therefore, the introduction of craft shops to the tourist offer could be a method for innovative presentation of knowledge and skills in an autochthonous environment, as well as an opportunity for survival in the market and further development. As Terrio (1999) states, today's tourists generally do not have direct experience with production, and at the same time they are dissatisfied with the standardized offer, and they are eager to view not only local cultural elements, but also the 'back stage' normally reserved for hosts. In this sense, the possibility of developing and offering tourist tours themed around traditional and

lizirane ture, koje nude i iskustvo sudjelovanja u izradi obrtničkih proizvoda, dio su već standardne ponude u mnogim turističkim destinacijama. Primjer su tematske ture o keramičkim pločicama Azulejos u Lisabonu (URL 9), ture o izradi lončarije u Barcelosu (Portugal) (FERREIRA I DR., 2021.), korištenju prirodnih pigmenata u Provansi (URL 10), izradi kožnih, drvenih i drugih predmeta u Parizu (URL 11), tradicionalnim načinima ukrašavanja tekstila u Indiji (URL 12, SAIYED I DR., 2017.) i dr. Kao što navode Teixeira i Ferreira (2018.), ručno izrađeni obrtnički proizvodi doživjeli su globalni preporod u različitim segmentima tržišnih niša proteklih godina. Grad Barcelos (Portugal) dobar je primjer razvoja kreativnog turizma temeljenog na obrtničkom radu. U posljednjih nekoliko godina broj posjetitelja grada u stalnom je porastu, a samo obrtničke radionice godišnje posjeti gotovo milijun turista (FERREIRA I DR., 2018.). Sve dinamičniji razvoj u ovim segmentima kreativnog i doživljajnog turizma upućuje na to da je pravo vrijeme za (ponovno) skretanje pozornosti prema obrtima i poticanje njihova razvoja (FERREIRA I DR., 2018.). U tom smislu, potencijalan jedinstveni turistički proizvod Zagreba koji bi mogao pridonijeti razvoju kulturnog i kreativnog turizma mogla bi biti obrtnička tura koja bi uključivala: obilazak objekata nastalih radom raznih obrtničkih djelatnosti, razgledavanje zbirki obrtničkih proizvoda u postavama Muzeja za umjetnost i obrt, Muzeja grada Zagreba i Etnografskog muzeja, edukativne radionice u muzejima te posjet aktivnim obrtničkim radionicama koji bi omogućio turistima uvid u proces nastajanja proizvoda, uz mogućnost sudjelovanja u izradi (pojednog dijela) proizvoda i stjecanje vlastitog iskustva.

Preduvjet za stvaranje takvoga novog oblika kreativne turističke ponude je postojanje kvalitetne suradnje lokalne zajednice, institucija vezanih za turizam i kulturu, kao i samih nositelja baštine, tj. obrtničkih majstora. Intervjuirani obrtnici do sada nisu sudjelovali u takvim aktivnostima te nisu sigurni na koji bi se način mogli uključiti i koje bi im to benefite ili probleme moglo donijeti. Međutim, brojni primjeri iz svijeta pokazuju da je to niša na tržištu koja ima budućnost u sklo-

artistic crafts is very interesting. Such specialized tours, which also offer the experience of participating in the production of handicraft products, are already a standard offer in many tourist destinations. For example: Azulejos ceramic tile tour in Lisbon (URL 9), the pottery tour in Barcelos (Portugal) (FERREIRA ET AL., 2021), the use of natural pigments in Provence (URL 10), the production of leather, wood and other objects in Paris (URL 11), traditional methods of textile decoration in India (SAIYED ET AL., 2017; URL 12), and others. As Teixeira and Ferreira (2018) notes, handmade craft products have experienced a global resurgence in recent years in various market niche segments. The City of Barcelos (Portugal) is a good example of the development of creative tourism based on handicraft. In recent years, there has been a steady increase in the number of visitors to the city, and the craft ateliers alone are visited by nearly one million tourists per year (FERREIRA ET AL., 2018). The increasingly dynamic development in these segments of creative tourism shows that it is time to re-establish a growth in the handicrafts activities (FERREIRA ET AL., 2018). In this sense, a potential unique tourism product of Zagreb contributing to the development of cultural and creative tourism could be a tour related to traditional and artistic crafts. This craft tour could contain the following elements: tour of the buildings that developed through the business activities of various crafts, viewing the collections of craft products at the Museum of Arts and Crafts, the Zagreb City Museum and Ethnographic Museum, educational workshops at the museums, and a visit to active craft workshops that would allow tourists to see the process of creating products, with the possibility of participating in the creation of (or some part of) the product and creating their own experience.

The creation of such new form of creative tourist offer requires successful cooperation between local community, institutions related to tourism and culture, as well as carriers of heritage themselves, i.e. master craftspeople. The interviewed artisans have not participated in such activities so far, and they are not sure how they could get involved and what benefits or problems it might bring them. However, numerous examples from the world show that it is a niche on the market that has a

pu ekonomije doživljaja te je važno informirati sve zainteresirane o inovativnim smjerovima u turizmu (FERREIRA I DR., 2018.).

ZAKLJUČAK

Tradicijski i umjetnički obrti u razdoblju obilježnom globalizacijom, masovnom i jeftinom proizvodnjom, novim načinima prodaje i poslovanja te nezainteresiranošću šire javnosti i mladih za tradiciju, gube na važnosti ponajprije u gospodarskom smislu. Opstanak preostalih tradicionalnih obrta važan je iz najmanje dva razloga. Prvi razlog vezan je uz činjenicu da je taj rad obrtnicima djelatnost od koje žive. S obzirom na to da se suočavaju s nizom problema koji su prijete njihovu opstanku (od ozbiljnog nedostatka radne snage, visokih kriterija koje moraju zadovoljiti da bi imali status tradicijskog obrta i posljedično skupih finalnih proizvoda koji su kvalitetni, ali teško konkuriraju jeftinoj robi na tržištu, pa do nedovoljne prepoznatljivosti u javnosti i dr.) potrebno je neprestano se prilagođavati i usavršavati. Jedno od mogućih rješenja za uspješnije poslovanje, kojim se dio obrtnika već i služi, je povezivanje obrta s drugim kreativnim industrijama. Dobar primjer toga je ostvarena suradnja tradicijskog obrtnika proizvođača kišobrana s dizajnerom čime je nastao novi inovativni proizvod kabanica *Kaplja* koja prati formu šestinskoga kišobrana, njihova izvornog proizvoda. Takve suradnje obrtnika s drugim kreativnim industrijama mogu potaknuti njihov daljnji razvoj i prepoznatljivost zadržavajući kvalitetu proizvoda, kao i kreativnost u radu. Drugi razlog je velika vrijednost tradicijskih obrta kao baštine i njihov značaj za kulturni identitet Zagreba. U tom smislu, Zagreb ima povijesno nasljeđe koje je vrijedni turistički resurs, ali još uvijek nedovoljno valoriziran. Aktualni trendovi u turizmu danas se temelje na doživljajima, autentičnosti ponude, upoznavanju s lokalnom baštinom i na interakciji s nositeljima baštine. Turistički proizvod temeljen na upoznavanju kulturnog nasljeđa kroz materijalnu i nematerijalnu ostavštinu stoljetnog rada zagrebačkih obrtnika s mogućnošću obilaska autentičnih ra-

future as part of the experience economy, and it is important to inform all those interested in innovative directions in tourism (FERREIRA ET AL., 2018).

CONCLUSION

In the today's world characterised by globalization, cheap mass production, new methods of sale and business, and lack of interest for tradition by the general public and the youth, traditional and artistic crafts are losing their importance especially in the economic sense. The survival of remaining traditional crafts is important for at least two reasons. The first one is related to the fact that craftspeople need their work to make their living. Faced with a series of problems that threaten their survival (from a serious shortage of labour, to high criteria that must be met to obtain the status of a traditional craft and, consequently, expensive final products that are of high quality but can hardly compete with cheap goods on the market, to insufficient recognition by the public, etc.), it is necessary to constantly adapt and improve. One of the possible solutions for a more successful business, which some craftsmen are already using, is to combine crafts with other creative industries. A good example of this is the collaboration between a traditional umbrella manufacturer and a designer, which resulted in a new innovative product, the *Kaplja* raincoat, which follows the shape of the Šestine umbrella, their original product. Such collaborations of craftspeople with other creative industries can promote their further development and recognition, while maintaining product quality. The second reason is the high value of traditional crafts as heritage and its significance for the cultural identity of the City of Zagreb. In this respect, Zagreb has historical heritage that is a valuable tourist resource, but is still not sufficiently exploited. The current trends in tourism are based on experiences, authenticity of the offer, learning about local heritage and interaction with carriers of such heritage. A tourist product based on learning about cultural heritage through tangible and intangible legacy of centuries-old work of Zagreb's craftspeople, with a tour of authentic workshops and participation in

dionica i sudjelovanja u procesu izrade (dijela) proizvoda, bio bi jedinstven i originalan kako za turiste tako i za edukaciju šire domaće javnosti.

Tradicijski i umjetnički obrti dio su kulturnog identiteta Zagreba. Stoga ih treba snažnije promovirati i osvijestiti domaće stanovništvo i posjetitelje o njihovoj vrijednosti, kvaliteti i važnosti u očuvanju tradicionalne kulture.

the process of making the product or part of it, would be unique and original both for tourists and for education of local people.

Traditional and artistic crafts are part of Zagreb's cultural identity and should be promoted more. Local population and visitors should become more aware of their value, quality and importance for the preservation of traditional culture.

LITERATURA I IZVORI

- ADAMS, D., DISBERRY, A., HUTCHISON, N., MUNJOMA, T. (2002): Retail location, competition and urban redevelopment, *The Service Industries Journal*, 22 (3), 135-148. DOI: 10.1080/714005090
- BILKOVÁ, K., KRIŽAN, F., BARLÍK, P. (2016): Consumers preferences of shopping centers in Bratislava (Slovakia), *Human Geographies – Journal of Studies and Research in Human Geography*, 10 (1), 23-37. DOI: 10.5719/hgeo.2016.101.2
- BUNTAK, F. (1996): *Povijest Zagreba*, Nakladni zavod Matice hrvatske, Zagreb, pp. 824.
- DOLEGA, L., LORD, A. L. (2020): Exploring the geography of retail decline: A case study of the Liverpool City, *Cities*, 96, 102456. DOI: 10.1016/j.cities.2019.102456
- FERREIRA J., SOUSA, B., GONÇAVLES, F. (2018): Encouraging the subsistence artisan entrepreneurship in handicraft and creative contexts, *Journal of Enterprising Communities: People and Places in the Global Economy*, DOI: 10.1108/JEC-09-2018-0068
- FERREIRA, J., SOUSA, B., GONÇAVLES, F., MACEDO, C. (2021): From Shaping of Pottery to Shaping of a Safe Tourism: The Case of the Artisanal Routes of Barcelos, u: *Entrepreneurial Connectivity, Network, Innovation and Strategy Perspectives* (ur. Ratten, V.), Springer, Singapore, 83-96.
- GORTER, C., NIJKAMP, P., KLAMER, P. (2003): The attraction force of out-of-town shopping malls: A case study on run-fun shopping in the Netherlands, *Tijdschrift voor economische en sociale geografie*, 94 (2), 219-229, DOI: 10.1111/1467-9663.00250
- HERKOV, Z. (1987): *Povijest zagrebačke trgovine*, Jugoslavenska akademija znanosti i umjetnosti „Zagreb“, Zagreb, pp. 305.
- HORVAT, R. (1992): *Prošlost grada Zagreba*, August Cesarec, Zagreb, pp. 401.
- HORVAT, R. (1994): *Povijest trgovine, obrta i industrije u Hrvatskoj*, AGM u suradnji s Hrvatskom gospodarskom komorom, Zagreb, pp. 472.
- JAKOVČIĆ, M. (2006): Business Functions and Problem of Closure of Commercial Premises in Ilica Street in Zagreb. *Hrvatski geografski glasnik*, 68 (1), 27-50, DOI: 10.21861/HGG.2006.68.01.02
- JELINČIĆ, D. A. (2008): *Abeceda kulturnog turizma*, Meandarmedia/Meandar, Zagreb, pp. 347.
- KARAMEHMEDOVIĆ, D. (2017): Uloga europske inicijative Interreg III. u valorizaciji kulturne baštine u Republici Hrvatskoj, *Putokazi*, 5 (1), 125-142.
- KOLAR-DIMITRIJEVIĆ, M., ŠOIĆ, M., HORVAT, Đ. (2005): *Obrtništvo Zagreba: 650 godina tradicije i 120 godina organiziranog obrta*, Udruženje obrtnika grada Zagreba, Zagreb, pp. 208.
- KRIŽAN, F., BILKOVÁ, K., KITA, P., SIVIČEK, T. (2016): Transformation of retailing in post-communist Slovakia in the context of globalization, *E+M Ekonomie a management*, 19 (1), 148-164, DOI: 10.15240/tul/001/2016-1-011.
- LUKIĆ, A., JAKOVČIĆ, M. (2004): Location and function of hypermarkets and shopping centres in Zagreb. *Dela*, (22), 39-54, DOI: 10.4312/dela.22.39-54.
- MATKOVIĆ, T., ŠABIĆ, J. (2022): *Studija o stanju u području srednjoškolskog obrazovanja u svrhu povećanja obuhvata učenika gimnazijskim programima i smanjivanja broja suficitarnih programa u strukovnome obrazovanju*, Institut za društvena istraživanja Ivo Pilar, Zagreb.
- NAGY, E. (2001): Winners and losers in the transformation of city centre retailing in East Central Europe, *European Urban and Regional Studies*, 8 (4), 340-348, DOI: 10.1177/096977640100800406.
- NIKOČEVIĆ, L., GAVRILOVIĆ, L.J., HROVATIN M., JELINČIĆ, D.A., KALE, J., RATKOVIĆ, D.L., MOUNTCASTLE, A., SIMONIĆ, P., ZEBEC, T., (2012): Kultura ili baština? Problem nematerijalnosti, *Etnološka tribina*, 42 (35), 7-56.
- PANČIĆ KOMBOL, T. (2006): Kulturno naslijeđe i turizam, *Radovi Zavoda za znanstveni rad Varaždin*, (16-17), 211-226.
- RADELJAK KAUFMANN, P., KLIČEK, S., BIŠĆEVIĆ, F., DOKUPIL, D., JAŠINSKI, D., BEGONJA, M., HARJAČ, D., BOSANAC, T., KOMES, S., SLAVUJ BORČIĆ, L. (2020): Hollowing out and revitalising a post-socialist city

- centre: Vacant commercial premises in Zagreb, *Geographia Polonica*, 93 (3), 341-360, DOI: 10.7163/GPol.0177.
- RICHARDS, G. (2002): Od kulturnog do kreativnog turizma: europske perspektive, *Turizam*, 50 (3), 229-236.
- RICHARDS, G. (2011): Creativity and tourism: The state of art, *Annals of Tourism Research*, 38 (4), 1225-1253, DOI: 10.1016/j.annals.2011.07.008
- RICHARDS, G., RAYMOND, C. (2000.): Creative tourism, *ATLAS News*, 23, 16-20.
- ROKSANDIĆ, D. (2012): Izlazak izvan zidina, u: *Povijest grada Zagreba, Knjiga 1. Od prethistorije do 1918*, (ur. Goldstein, I., Goldstein, S.), Novi liber, Zagreb, 200-251.
- RUDAN, E. (2012): Razvojne perspektive kreativnoga turizma Hrvatske, *Ekonomski misao i praksa*, (2), 713-730.
- SAIYED, A. A., BASALINGAPPA, A., KUMAR SINHA, P. (2017): Value Network in Heritage Walks: Case Studies of Ahmedabad City Walks, *Journal of Heritage Management*, 1 (2), 191-204, DOI: 10.1177/2455929616687897.
- SPILKOVÁ, RADOVÁ, L. (2011): The formation of identity in teenage mall microculture: A case study of teenagers in Czech malls. *Czech Sociological Review*, 47 (3), 565-586, DOI: 10.13060/00380288.2011.47.3.05.
- TEMELOVÁ, J. (2007): Flagship developments and the physical upgrading of the post-socialist inner city: The golden angel project in Prague, *Geografiska Annaler: Series B, Human Geography*, 89(2), 169-181, DOI: 10.1111/j.1468-0467.2007.00246.x.
- TERRIO, S. J. (1999): Performing Craft for Heritage Tourists in Southwest France, *City and Society* 11 (1-2), 125-144, DOI: 10.1525/city.1999.11.1-2.125.
- TEIXEIRA, S. J., FERREIRA, J. J. M. (2018): Entrepreneurial artisan products as regional tourism competitiveness, *International Journal of Entrepreneurial Behavior & Research*, 25 (4), 652-673. DOI: 10.1108/IJEER-01-2018-0023
- TIMOTHY, D. J. (2011): *Cultural Heritage and Tourism. An Introduction*. Channel View Publications, New York, pp 497.
- URL 1, *Geofabrik*, 2021, <https://download.geofabrik.de/europe/croatia.html>, 12.11.2021.
- URL 2, *Portal obrtnog registra Republike Hrvatske*, 2021: O obrtu, <https://portor.gov.hr/index.php/o-obrtu/>, 14.12.2021.
- URL 3, *Pravilnik o tradicijskim odnosno umjetničkim obrtima*, 2007, Narodne novine, donositelj: Ministarstvo gospodarstva, rada i poduzetništva, NN 112/2007, https://narodne-novine.nn.hr/clanci/sluzbeni/2007_10_112_3312.html
- URL 4, *Registar kulturnih dobara Republike Hrvatske*: <https://registar.kulturnadobra.hr/#/>, 3.4.2021.
- URL 5, *Strategija kulturnog i kreativnog razvitka Grada Zagreba 2015.-2022.*, Grad Zagreb, 2015, <https://www.zagreb.hr/UserDocsImages/arhiva/04%20Strategija.pdf>, 10.12.2021.
- URL 6, *UNESCO Linguistic versions of the 2003 Convention, Konvencija o zaštiti nematerijalne kulturne baštine*, Unesco.org, <https://ich.unesco.org/en/in-other-languages-00102>, 3.9.2021.
- URL 7, *Zakon o potvrđivanju Konvencije o zaštiti nematerijalne kulturne baštine*, 2005, Narodne novine, 2005, NN 5/2005, https://narodne-novine.nn.hr/clanci/medunarodni/2005_06_5_47.html, 3.9.2021
- URL 8, *Program poticanja razvoja obrta, malog i srednjeg poduzetništva u Gradu Zagrebu 2019. -2023*, <https://www.zagreb.hr/userdocsimages/arhiva/gospodarstvo/program%20poticanja%20razvoja%20obrt%20malog%20i%20srednjeg%20poduzetni%C5%A1tva/Program%20poticanja%20razvoja%20obrt%20malog%20i%20srednjeg%20poduzetni%C5%A1tva%20u%20GZ%202019-2023.pdf>, 20. 1. 2023.
- URL 9, *Tiles and Tales: Azulejos Workshop and Private Tour*, https://www.tui.co.uk/things-to-do/lisbon/tiles-and-tales-azulejos-workshop-and-private-tour-63453/?gclid=CjwKCAiArNOeBhAHEiwAze_nKKhq8Yy7QrFoD4zDjxMwdEWIPatsuC19hAAL9HL_qGmRNwOYyQBvrRoCRKIQA_vD_BwE&gclid=aw.ds, 12. 1. 2023.

URL 10, *Artisan Tours in Provence-Alpes-Côte d'Azur: Arts & Crafts*, <https://provence-alpes-cotedazur.com/en/things-to-do/shopping-arts-craft/artisan-tours/arts-crafts/>, 12. 1. 2023.

URL 11, *Arts and Crafts in Paris*, <https://en.parisinfo.com/what-to-see-in-paris/info/guides/arts-and-crafts-in-paris>, 11. 1. 2023.

URL 12, *9 Immersive Themed Handicraft Tours in India*, <https://www.tripsavvy.com/india-tours-to-learn-about-indian-handicrafts-1539451>, 12. 1. 2023.

VRTIPRAH, V. (2006): Kulturni resursi kao činitelj turističke ponude u 21. Stoljeću, *Ekonomska misao i praksa*, (2), 279-296.

PRILOG I. *Popis umjetničkih i tradicijskih obrta u Zagrebu, 2021.*
APPENDIX I *List of traditional and artistic crafts in Zagreb, 2021.*

Umjetnički obrti / Artistic crafts	Tradicionalni obrti / Traditional crafts		Tradicionalni i umjetnički obrti / Traditional and artistic crafts
Danijela Halužan – izrada keramike / pottery	Andrea Jukišić – knjigovežnica / bookbinder	Antun Penezić – češljar / comb producer	Marijan Golub – zlatar / goldsmith
Biserka Jakšić – draguljar / jeweller	Miljenko Vuk – proizvodnja kožne galanterije / production of leather goods	Anita Štulec Zannoti – proizvodnja obuće (A shoe) / shoemaking	Monika Popek – zlatar / goldsmith
Irena Medić – konzervator / conservator	Mirza Šabić – krojač / tailor	Dubravko Glivetić – drvotokar / woodturner	Kruno Krznarić – zlatar / goldsmith
Nada Kobali – izrada šešira / hat making	Mirjana Tkalčec-Valek – izrada cipela / shoemaking	Vesna Milković – proizvodnja etno odjeće / production of traditional clothing	Džan i Đuro Bashota – zlatari / goldsmiths
Dominique Jurić – izrada vitraja / production of stained-glass windows	Renato Bočak – izrada cipela / shoemaking	Vesna Murtić – frizer / hairdresser's shop Kincl	Josip Tržec – metal lijevanje / metal casting
Tea Jagarinec – zlatar / goldsmith	Sanja Opačak – proizvodnja paprenjaka / production of peppery cookies	Radovan Šafrić – izrada torbi / bag making	
Mario Nokaj – zlatar / goldsmith	Slavica Horvat – pećar / stovemaker	Silvijo Lončarić – galanterist / leather craftsman	
	Josipa Cahun – izrada šešira / hat making	Tomislav Petković – izrada tekstilne i kožne galanterije / production of textile and leather products	
	Milan Matijević – soboslikar / house painter	Nenad Ružić – glazbar / musical instrument manufacturer	
	Franka Vatovac – izrada svijeća / candle making	Zlatko Prosinečki – građevinski obrt / construction craft	
	Boris Skomina – izrada torbi / bag making	Marijan Hudetz – kartonaža / cardboard works	
	Damir Marković – izrada okvira / frame making	Andrea Novak-Barišin – izrada keramike / pottery	
	Dalibor Lebarović – urar / watchmaker	Krešimir Cerovečki – izrada kišobrana / umbrella making	
	Ivan Puzak – urar / watchmaker	Marija Radić – knjigovežnica / bookbinder	
	Vlado Crkvenac – zlatar / goldsmith	Tajana Klanac – knjigovežnica / bookbinder	

Izvor/Source: Hrvatska obrtnička komora, <https://www.hok.hr/cehovi-i-sekcije/tradicijski-i-umjetnicki-obrta/popis-obrta>, 12. 1. 2021.

TRENDOVI KRETANJA MORTALITETA U HRVATSKOJ U PRVA DVA DESETLJEĆA 21. STOLJEĆA

MORTALITY TRENDS IN CROATIA IN THE FIRST TWO DECADES OF THE 21st CENTURY

VERA GRAOVAC MATASSI¹, ADRIANA ROGIĆ²

¹ Odjel za geografiju, Sveučilište u Zadru, Ul. dr. Franje Tuđmana 24i, 23 000 Zadar / *Department of Geography, University of Zadar, Zadar, Croatia*, e-mail: vgraovac@unizd.hr

² Samostalni istraživač, Zadar, Republika Hrvatska / *Independent researcher, Zadar, Republic of Croatia*, e-mail: adriana.rogic11@gmail.com

* corresponding author / *autor za kontakt*

DOI: 10.15291/geoadria.4094

Prethodno priopćenje / *Preliminary communication*

Primljeno / *Received*: 28-12-2022

Prihvaćeno / *Accepted*: 29-3-2023



Negativni demografski trendovi u Hrvatskoj (negativna prirodna promjena, negativni migracijski saldo i starenje stanovništva) imaju sve značajniji utjecaj na društveno-gospodarski razvoj zemlje. Već na početku 21. stoljeća dugotrajno smanjenje broja rođenih i povećanje broja umrlih prepoznati su kao destabilizirajući čimbenici demografskog razvoja u Hrvatskoj. Nakon pristupa Hrvatske Europskoj uniji, zabrinutost za budući demografski razvoj zemlje znatno je porasla zbog intenzivne emigracije stanovništva u ostale zemlje članice Europske unije uz istodobno povijesno niske stope rodnosti i smrtnosti. Ovaj rad bavi se trendovima mortaliteta u Hrvatskoj u prva dva desetljeća 21. stoljeća. U navedenom razdoblju na mortalitet u Hrvatskoj utjecali su različiti društveno-gospodarski, demografski i epidemiološki čimbenici. S obzirom na nedostatak novijih radova vezanih uz istraživanje mortaliteta u Hrvatskoj, glavni cilj ovoga rada je analizirati promjene odabranih pokazatelja mortaliteta te pridonijeti raspravi o suvremenim trendovima mortaliteta u Hrvatskoj. Rezultati istraživanja pokazali su da su u Hrvatskoj zabilježene određene pozitivne promjene vezane uz mortalitet (posebice povećanje očekivanog trajanja života pri rođenju te smanjenje stopa smrtnosti dojenčadi u prvom analiziranom razdoblju), ali neki trendovi nisu povoljni, posebice oni vezani uz uzroke smrtnosti. Iako je došlo do smanjenja udjela umrlih od bolesti cirkulacijskog sustava, zabilježeno je značajno povećanje broja umrlih od endokrinih bolesti, bolesti prehrane i metabolizma, što se može pripisati nezdravom načinu života i različitim bihevioralnim čimbenicima.

KLJUČNE RIJEČI: mortalitet, Hrvatska, specifične stope mortaliteta prema dobi, COVID-19, smrtnost dojenčadi, mortalitet prema uzroku, očekivano trajanje života pri rođenju

Negative demographic trends in Croatia (natural decrease, negative net migration and population aging) are increasingly influencing socio-economic development of the country. Already in early 21st century, the long term decrease of live births and the increase of deaths were recognized as destabilizing factors of population development in Croatia. After the Croatian accession to the EU, the concerns regarding future demographic development of the country raised even more due to intensive emigration to other EU countries, which coincided with the historically low birth rates and high death rates. The focus of this paper is on mortality

trends in Croatia in the first two decades of the 21st century. In this period, mortality in Croatia was influenced by different socio-economic, demographic, and epidemiological factors. Given the lack of recent papers dealing with mortality in Croatia, the main aim of this paper is to provide an overview of the changes in selected mortality indicators and contribute to the discussion on recent mortality trends in Croatia. The results of this research indicate that Croatia experienced some positive changes regarding mortality (increase of life expectancy at birth and decrease of infant mortality rates in the first period, in particular), but, some of the trends are not favourable, particularly the changes in the causes of death. Although improvements were observed regarding the share of deaths caused by the diseases of the circulatory system, there was a notable increase in deaths caused by the endocrine, nutritional and metabolic diseases which can be attributed to the unhealthy lifestyle and various behavioural factors.

KEY WORDS: mortality, Croatia, age-specific death rate, COVID-19, infant mortality, cause-specific mortality, life expectancy at birth

UVOD

Mortalitet je negativna komponenta prirodne promjene stanovništva i ukupnoga kretanja stanovništva, a njegova razina rezultat je složene interakcije bioloških, zdravstvenih i gospodarskih čimbenika. S druge strane, mortalitet utječe na dobni, spolni i društveno-gospodarski sastav stanovništva (WERTHEIMER-BALETIĆ, 1999.). Države diljem svijeta ulažu velike napore u unaprijeđenje zdravlja vlastitog stanovništva. Ti su naponi usmjereni na smanjenje mortaliteta i poboljšanje zdravstvenog stanja populacije (GIROSI, KING, 2008.). Tijekom 20. stoljeća u razvijenim zemljama povećanje realnog dohotka bilo je popraćeno do tada nezabilježenim smanjenjem stopa mortaliteta te je došlo do povećanja očekivanog trajanja života pri rođenju za gotovo trideset godina (CUTLER I DR., 2006.). Stanovništvo zemalja s niskim stopama mortaliteta nalazi se u kasnoj fazi demografske i „epidemiološke tranzicije“. S obzirom na to da su te zemlje prethodno zabilježile snažno smanjenje stopa smrtnosti dojenčadi, trendovi mortaliteta u budućnosti uglavnom će ovisiti o smrtnosti u odrasloj dobi, ponajprije u staroj i najstarijoj staroj dobi (CASELLI, DREFAHL, 2017.).

Teorija epidemiološke tranzicije, koju je osmislio Omran 1971. godine, naslanja se na teoriju demografske tranzicije pružajući detaljniju analizu uzroka smrtnosti stanovništva. Fokus se premješta na specifični mortalitet prema dobi i uzroku koji je povezan s razvojem, a karakterizira ga smanjenje mortaliteta uzrokovanog zaraznim bolestima i reproduktivnim uvjetima, dok kronične nezarazne bolesti postaju najznačajniji uzrok smrtnosti stanovništva (SANTOSA I DR., 2014.; HAZRA, GULLIFORD, 2017.).

Analize i prognoze kretanja mortaliteta posebno su važne za istraživače iz različitih znanstvenih disciplina, donositelje odluka, osiguravajuća društva itd., jer pružaju bitne informacije za donošenje relevantnih odluka. Na temelju tih informacija donositelji odluka i vlade mogu adekvatno (pre) usmjeriti financijska sredstva te provesti bitne institucionalne promjene vezane uz umirovljenje i zdravstvenu zaštitu u skladu sa stvarnim izgledima za preživljavanje pojedinih kohorti stanovništva. Mogućnosti doživljenja starije životne dobi koje

INTRODUCTION

Mortality is a negative component of natural change and total population change, and its level is the result of a complex interaction of biological, health and economic factors. Alternately, mortality influences the age, sex and socio-economic composition of the population (WERTHEIMER-BALETIĆ, 1999). Countries around the world put significant efforts to improve the health of their populations. These efforts are aimed at reducing mortality and increasing the health status (GIROSI, KING, 2008). Throughout the 20th century, in developed countries, growth in real incomes was accompanied by a historically unprecedented decline in mortality rates that resulted in the increase in life expectancy at birth by nearly 30 years (CUTLER ET AL., 2006). The populations of low-mortality countries have been in an advanced phase of the demographic and epidemiologic transition. Considering the fact that they already experienced strong decreases in infant mortality, the future mortality trends will be driven mainly by mortality in adult ages, primarily the old and oldest-old (CASELLI, DREFAHL, 2017).

Postulated by Omran in 1971, the epidemiologic transition theory was developed from the demographic transition theory by adding a more thorough discussion on the causes of mortality. It shifts focus to age- and cause-specific mortality associated with the development and characterized by a decline in mortality caused by infectious diseases and reproductive conditions, while chronic non-communicable diseases become major causes of death (SANTOSA ET AL., 2014; HAZRA, GULLIFORD, 2017).

Mortality analyses and forecasts are of particular interest to researchers from various disciplines, policymakers, insurance companies, etc., because they provide policy-relevant information. Based on this information the policymakers and governments can (re)direct financial means accordingly, and make necessary institutional arrangements for retirement and health care in line with the actual prospects of cohort survival. The levels of survival to advanced ages reached by recent cohorts are significantly higher than would have been expected

bilježe današnje kohorte stanovništva znatno su više nego u vrijeme kada su iste te kohorte bile u mladoj i radno aktivnoj dobi ili čak u vrijeme kada su se približavale dobi za umirovljenje (SHKOLNIKOV I DR., 2011.).

Tranzicija mortaliteta u Hrvatskoj započela je krajem 19. stoljeća kada je opća stopa mortaliteta pala ispod 30 ‰, a završila je 1950-ih, kada je stopa pala ispod 15 ‰ (GELO, 1987.). S druge strane, tranzicija fertiliteta završila je početkom 1980-ih, a Hrvatska je u posttranzicijsku fazu ušla krajem 1980-ih (NEJAŠMIĆ, 2005.). Od 1991. godine Hrvatska gotovo svake godine bilježi negativnu prirodnu promjenu – iznimku čine 1996. i 1997. godina kada je zabilježen kratkotrajni poslijeratni *baby boom*. Osim toga, od 1991. godine Hrvatsku karakterizira smanjenje broja stanovnika, koje je u prvom desetljeću 21. stoljeća većim dijelom bilo uzrokovano negativnom prirodnom promjenom, a nakon 2010. godine značajniju ulogu u depopulaciji imao je negativan migracijski saldo.

U ovom radu naglasak je stavljen na obilježja mortaliteta u Hrvatskoj u prva dva desetljeća 21. stoljeća. U navedenom razdoblju na mortalitet u Hrvatskoj utjecali su različiti društveno-gospodarski, demografski i epidemiološki čimbenici. Negativni demografski trendovi (negativna prirodna promjena, negativni migracijski saldo i starenje stanovništva) imaju sve veći utjecaj na društveno-gospodarski razvoj zemlje. Već na početku 21. stoljeća dugotrajno smanjenje broja rođene djece i povećanje broja umrlih prepoznati su kao destabilizirajući čimbenici demografskog razvoja u Hrvatskoj (ŽIVIĆ I DR., 2005.). Nakon pristupa Hrvatske Europskoj uniji, pojačala se zabrinutost za buduću demografski razvoj zemlje zbog intenzivne emigracije u druge zemlje Europske unije uz istodobno povijesno niske stope rodnošći i visoke stope smrtnosti. Zabrinutost zbog izrazito negativne stope prirodne promjene još je više do izražaja došla posljednjih godina zbog pandemije koronavirusa, koja je dodatno povećala stope smrtnosti i snizila očekivano trajanje života pri rođenju (ČIPIN I DR., 2021.).

Unatoč činjenici da se Hrvatska već trideset godina suočava s negativnom prirodnom promjenom i povećanjem stopa mortaliteta, malo je demografskih i geografskih radova koji se bave ovom

in terms of period mortality regimes when these cohorts were young and of working age, or even when they were approaching the age of retirement (SHKOLNIKOV ET AL., 2011).

Mortality transition in Croatia started in late 19th century, when crude mortality rate fell below 30 per thousand, and it ended in 1950s, when the rate fell below 15 per thousand (GELO, 1987). On the other hand, fertility transition ended in early 1980s, and Croatia entered the posttransitional stage in late 1980s (NEJAŠMIĆ, 2005). Since 1991 Croatia had almost continuous natural decrease – the only exceptions were 1996 and 1997, when a small scale baby boom was recorded. Additionally, since 1991 Croatia has recorded a total population decline, which was in the first decade of the 21st century largely caused by natural decrease, but in the period after 2010, negative net migration was the main cause of population decline in Croatia.

The focus of this paper is on mortality trends in Croatia in the first two decades of the 21st century. In this period, mortality in Croatia was influenced by different socio-economic, demographic, and epidemiological factors. Negative demographic trends (natural decrease, negative net migration and population aging) were increasingly influencing socio-economic development of the country. Already in early 21st century, the long term decrease of live births and the increase of deaths were recognized as destabilizing factors of population development in Croatia (ŽIVIĆ ET AL., 2005). After the Croatian accession to the EU, the concerns regarding future demographic development of the country raised even more due to intensive emigration to other EU countries, which coincided with the historically low birth rates and high death rates. Concerns related to particularly high rates of natural decrease intensified even more lately due to coronavirus pandemic, which additionally increased the mortality rates and lowered life expectancy (ČIPIN ET AL., 2021).

Regardless of the fact that Croatia has faced natural decrease and increasing death rates for the last 30 years, there are not many demographic and geographic papers dealing with this issue, and most of them were published in the early

problematikom i većinom su objavljeni početkom 2000-ih. Mrđen (2000.) je analizirala specifični mortalitet prema dobi i spolu, smrtnost dojenčadi i mortalitet s obzirom na uzroke u Hrvatskoj u razdoblju od 1950. do 1998. godine. Ostali autori analizirali su trendove kretanja mortaliteta u sklopu analize općih demografskih trendova u Hrvatskoj (npr. AKRAP, ŽIVIĆ, 2001.; ŽIVIĆ, 2003.; WERTHEIMER-BALETIĆ, 2003.; 2004.; 2005.; GELO I DR., 2005.; ČIPIN, MEĐIMUREC, 2019.) ili u širem europskom kontekstu (e.g. NEJAŠMIĆ, 2002.; TCHOLAKOV, 2005.). Tek u novije vrijeme, početkom pandemije COVID-19, povećao se interes za proučavanje mortaliteta, ali uglavnom za mortalitet uzrokovan bolešću COVID-19 (npr. ROPAC I DR., 2020; ČIPIN I DR., 2021.; KLEMPIĆ BOGADI, 2021.) i utjecaj pandemije na različite sfere života i društveno-gospodarski razvoj (npr. MESARIĆ ŽABČIĆ, MALNAR, 2021.; SMOLIĆ I DR., 2021.; FÜRST-BJELIŠ I DR., 2022.; JURIC, 2022.). Iz navedenog je jasan nedostatak novijih istraživanja vezanih uz suvremena obilježja mortaliteta u Hrvatskoj te je glavni cilj ovoga rada dati pregled promjena odabranih pokazatelja mortaliteta i pridonijeti raspravi o suvremenim trendovima mortaliteta u zemlji.

IZVORI PODATAKA I METODOLOGIJA

U ovom istraživanju analizirani su podaci o kretanju opće stope mortaliteta, specifičnom mortalitetu prema dobi i spolu, uzrocima smrtnosti, smrtnosti uzrokovanj bolešću COVID-19, smrtnosti dojenčadi i očekivanom trajanju života pri rođenju za razdoblje od 2000. do 2020. godine. Glavni izvori navedenih podataka bili su Državni zavod za statistiku, Hrvatski zavod za javno zdravstvo te *Human Mortality Database*. Međutim, neki od podataka za 2000. i 2001. godinu ne postoje te su za početnu godinu pri analizi uzete prve iduće godine za koje postoje podaci. Podaci o specifičnoj smrtnosti prema dobi i spolu ne postoje za 2000. i 2001. godinu, a za prosječno očekivano trajanje života pri rođenju za 2000. godinu pa je stoga za početnu godinu uzeta 2002., odnosno 2001. godina. Većina podataka preuzeta je iz hrvatskih baza

2000s. Mrđen (2000) analysed age- and sex-specific mortality, infant mortality and mortality by causes of death in Croatia for the period from 1950 to 1998. Other authors discussed mortality trends within the analyses of general population trends in Croatia (e.g. AKRAP, ŽIVIĆ, 2001; ŽIVIĆ, 2003; WERTHEIMER-BALETIĆ, 2003, 2004, 2005; GELO ET AL., 2005; ČIPIN, MEĐIMUREC, 2019) or in a wider European context (e.g. NEJAŠMIĆ, 2002; TCHOLAKOV, 2005). Only recently, with the offset of COVID-19 pandemic, the interest in mortality rose to prominence, but mostly to COVID-19 mortality (e.g. ROPAC ET AL., 2020; ČIPIN ET AL., 2021; KLEMPIĆ BOGADI, 2021) and its effects on various aspects of life and socio-economic development (e.g. MESARIĆ ŽABČIĆ, MALNAR, 2021; SMOLIĆ ET AL., 2021; FÜRST-BJELIŠ ET AL., 2022; JURIC, 2022). This clearly indicates that there is a notable gap in the state-of-the-art regarding contemporary features of mortality in Croatia, so the main aim of this paper is to provide an overview of the changes in selected mortality indicators and contribute to the discussion on the recent mortality trends in the country.

DATA AND METHODS

In this research we analysed the data on general death rates, age-and-sex-specific mortality rates, mortality by causes of death, COVID-19 mortality, infant mortality and life expectancy at birth for the period from 2000 to 2020. The data were retrieved from the Croatian Bureau of Statistics, Croatian Institute of Public Health and Human Mortality Database. However, some of the data were not available for 2000 and 2001, so we took the first available data as a starting point. The data on age- and sex-specific mortality were not available for 2000 and 2001, and for life expectancy at birth for 2000, so as a starting point we took 2002 and 2001, respectively. Most of the data were retrieved from Croatian data bases, but the data for life expectancy at birth and age-and-sex-specific death rates were retrieved from Human Mortality Database, which provides the data for the whole analysed period, while in Cro-

podataka, dok su podaci o očekivanom trajanju života pri rođenju i specifične stope mortaliteta prema dobi i spolu preuzeti iz baze *Human Mortality Database*, jer navedena baza daje podatke za čitavo analizirano razdoblje, dok hrvatske baze ne pružaju objedinjene podatke za navedene pokazatelje (dio podataka nije dostupan u digitalnom obliku). Također su korišteni podaci EUROSTAT-a pri usporedbi pokazatelja u Hrvatskoj s prosjekom EU-27. Budući da su za 2021. godinu dostupni samo preliminarni podaci o ukupnom broju umrlih, nije moguće provesti sveobuhvatnu analizu smrtnosti u toj godini. Međutim, u analizi utjecaja pandemije bolesti COVID-19 na smrtnost stanovništva u 2021. godini korišteni su dostupni podaci za navedenu godinu.

Za detaljniji uvid u kretanje opće stope smrtnosti primijenjena je regresijska *analiza* uz pomoć točaka *spajanja* (*joinpoint regression analysis*), koja se često koristi za analizu trendova mortaliteta (CHAURASIA, 2020). Za analizu trendova kretanja mortaliteta korišten je računalni program *joinpoint regression software* (verzija 4.9.1.0., Američkoga nacionalnog instituta za rak – *National Cancer Institute USA*). Program u obzir uzima trend kretanja odabranih podataka i izrađuje jednostavan model točaka spajanja s obzirom na ulazne podatke. Potom program određuje točke infleksije za svaki niz podataka kod kojeg postoji značajna promjena u kretanju linearnog trenda (KIM I DR., 2001.).

Kako bi se istražio utjecaj broja umrlih od COVID-19 na mortalitet, provedena je usporedba mjesečnog broja umrlih osoba od početka pandemije s prosječnim mjesečnim brojem umrlih u četverogodišnjem razdoblju prije početka pandemije (2016. – 2019.). Višak umrlih prikazuje se kao postotna razlika između registriranog i prosječnog broja umrlih (*P-score*), a računa se prema sljedećoj formuli:

$$P - score = \frac{\text{registrirani broj umrlih} - \text{prosječan broj umrlih}}{\text{prosječan broj umrlih}} * 100$$

Primjerice, vrijednost *P-score* koja iznosi 100 % u nekom mjesecu tijekom 2020. ili 2021. godine znači da je u tom mjesecu broj umrlih bio 100 % veći od pretpostavljenog broja umrlih (tj. od prosječnog broja umrlih u tom istom mjesecu u četverogodišnjem razdoblju prije pandemije – 2016.

atian sources the data were not compiled in one database (part of the data was not available in a digital format). We also used the EUROSTAT data when comparing Croatia to the EU-27 average. The preliminary data for 2021 are available only for the total number of deaths, so it is not possible to make a complete analysis of the mortality in that year. However, where possible, we will refer to that data to indicate the influence of COVID-19 pandemic on mortality in Croatia.

For more detailed investigation of crude death rates, we employed the joinpoint regression analysis, which has been used often in analysing mortality trends (CHAURASIA, 2020). Accordingly, joinpoint regression software (version 4.9.1.0., National Cancer Institute USA) was used to analyse the changes in mortality trends. The software takes the trend data and fits the simplest joinpoint model that the data allow. The software identifies inflection points for each range of data at which there is a significant change in the slope of the linear trend (KIM ET AL., 2001).

In order to investigate the effect of COVID-19 deaths on mortality, we compared the number of deaths by month from the beginning of the pandemic with the average number of deaths by month for the four-year period before the pandemic (2016–2019). Excess mortality was expressed as a percentage difference between the reported and projected number of deaths (*P-score*) and it was calculated as follows:

$$P - score = \frac{\text{reported deaths} - \text{projected deaths}}{\text{projected deaths}} * 100$$

For example, *P-score* of 100% in a given month in 2020 or 2021 means that the death count for that month was 100% higher than the projected death count for that month (i.e. than the average death count for that particular month in the four-year period before the pandemic – 2016–2019). We chose the four-year period before the pandemic instead of five-year period (that some authors used, e.g. KARLINSKY, KOBAC, 2021), because of the increase in mortality caused by remarkably deadly 2014–2015 flu season. Eurostat also uses 2016–2019 period as the baseline for calculating excess mortality, so we can compare the excess mortality in Croatia with the EU-27.

– 2019.). Četverogodišnje razdoblje prije pandemije uzeto je kao referentno razdoblje umjesto petogodišnjeg razdoblja (koji koriste neki autori, primjerice KARLINSKY, KOBAC, 2021.) zbog povećane smrtnosti tijekom sezone gripe 2014./2015. Osim toga, EUROSTAT također uzima razdoblje 2016. – 2019. kao referentno razdoblje za izračunavanje viška umrlih te se stoga može provesti usporedbu između Hrvatske i Europske unije.

REZULTATI I DISKUSIJA

Opća stopa mortaliteta

Od početka 20. stoljeća broj umrlih u Hrvatskoj smanjivao se i najnižu razinu dosegno je 1960-ih i ranih 1970-ih (GELO I DR., 2005.), ali od kraja 1970-ih počeo se povećavati zbog starenja stanovništva (MRĐEN, 2000.). Prema teoriji epidemiološke tranzicije, smanjenje mortaliteta može se pripisati promjenjivom odnosu između društveno-gospodarskog razvoja, promjena u stilu života i inovacija u medicini u različitim razdobljima (ZHENG, 2014.).

U promatranom razdoblju (2000. – 2020.) broj umrlih zabilježio je uzlazan trend, posebice nakon 2013. te nakon početka pandemije COVID-19, kada je zbog pandemije došlo do značajnog povećanja broja umrlih i stope mortaliteta u 2020. godini. Prosječni godišnji broj umrlih u analiziranom razdoblju bio je 51 838 i samo je u dvije godine bio ispod 50 000 (Sl. 1.). Uočavaju se dvije godine u kojima je došlo do posebno velikog povećanja broja umrlih – 2015. i 2020. Tijekom 2015. godine do povećanja broja umrlih na godišnjoj razini došlo je zbog neuobičajeno velikog broja umrlih tijekom sezone gripe, posebice među starijom populacijom. Navedeno povećanje nije zabilježeno samo u Hrvatskoj, već i u brojnim drugim europskim zemljama (MØLBAK I DR., 2015.; NELI I DR., 2015.; RELEIGH, 2018.).

Najveći broj umrlih zabilježen je 2020. kada je bio 10,1 % viši nego prethodne godine. Podaci za 2021. godinu pokazuju da je takav trend nastavljen te se broj umrlih povećao za još 10 %.¹

¹ Prema podacima za 2021. godinu broj umrlih dosegno je 62 712.

RESULTS AND DISCUSSION

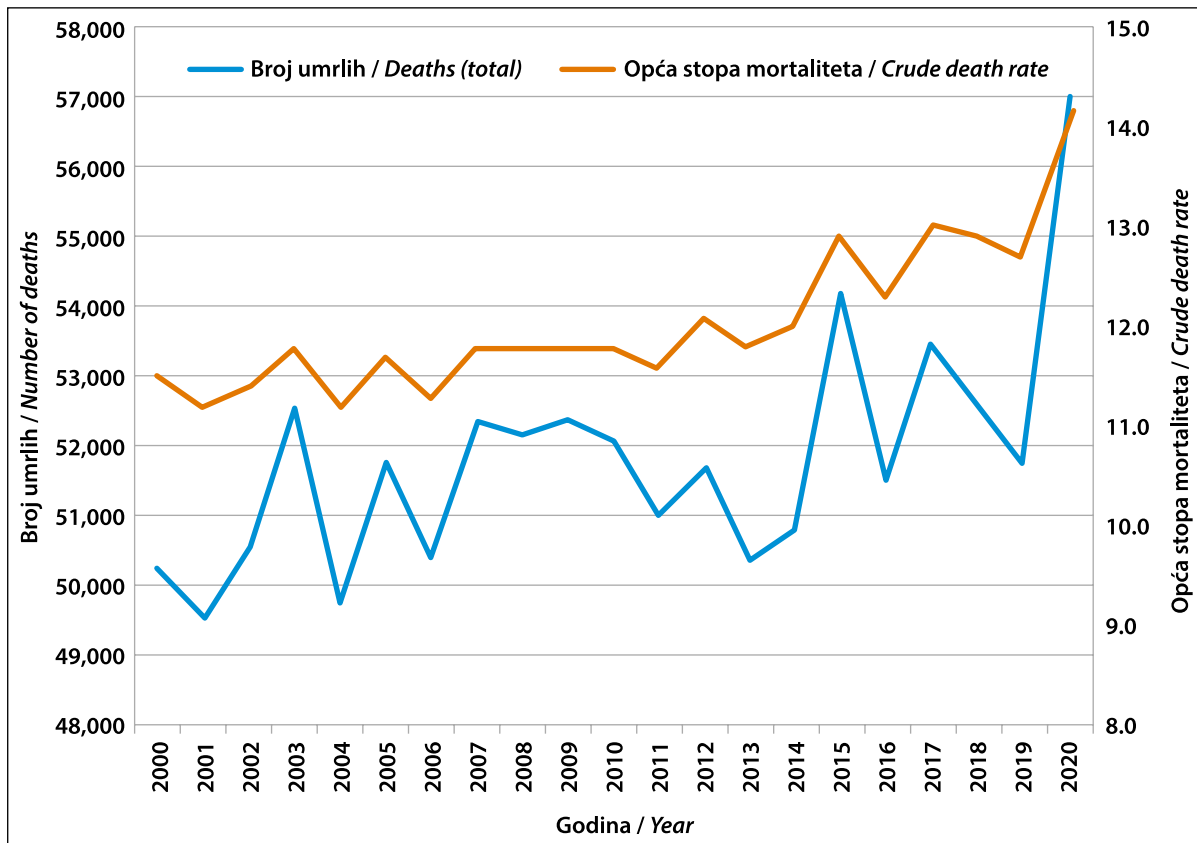
Crude mortality rate

From the beginning of the 20th century the number of deaths in Croatia was decreasing and reached the lowest levels during the 1960s and early 1970s (GELO ET AL., 2005), but from the late 1970s it started to increase again due to population ageing (MRĐEN, 2000). According to the epidemiologic transition theory, mortality decline can be attributed to a changing mix of socio-economic development, lifestyle changes and medical innovations in each period (ZHENG, 2014).

In the analysed period, the number of deaths recorded an upward trend, particularly after 2013 and with the onset of the COVID-19 pandemic, which significantly increased the number of deaths and crude death rate in 2020. The average annual number of deaths was 51,838 and in only two years the number of deaths was below 50,000 (Fig. 1). In two of the analysed years the increase in the number of deaths was particularly sharp – in 2015 and 2020. In 2015, the increased mortality was caused by unusually deadly flu season, particularly among the elderly population, which was not only recorded in Croatia, but also in many other European countries (MØLBAK ET AL., 2015; NELI ET AL., 2015; RALEIGH, 2018).

The highest number of deaths was registered in 2020, and it was 10.1% higher than in the previous year. The data for 2021 indicate that this trend continued and the number of deaths increased by additional 10.0%.¹ Such a sharp increase in mortality can be attributed to COVID-19 pandemic, which had a significant influence on mortality, particularly during the second and fourth waves (November-December 2020 and 2001, respectively) (Fig. 10). Mortality rate in that period also increased, but not only due to increased number of deaths, but also due to the fact that it coincided with the declining population in Croatia. Namely, in two intercensal periods (2001–2011 and 2011–2021), the

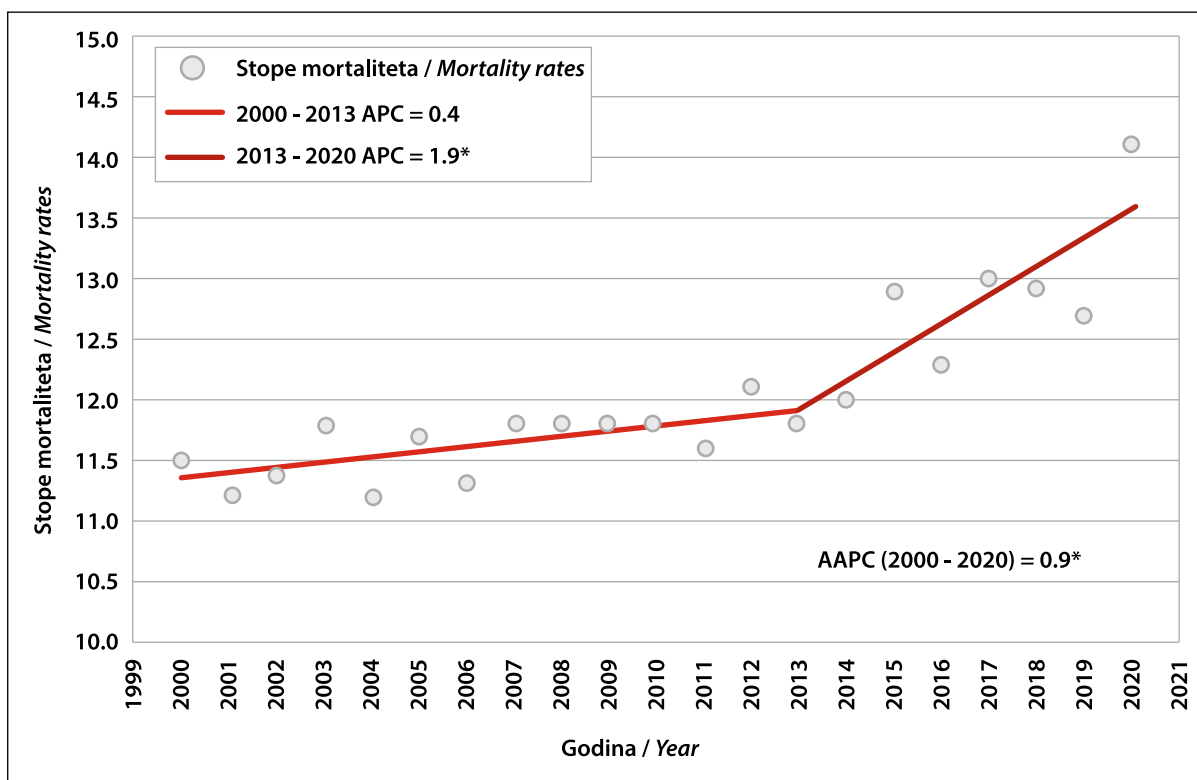
¹ According to the data for 2021, the number of deaths reached 62,712.



SLIKA 1. Broj umrlih i stope mortaliteta u Hrvatskoj od 2000 do 2020

FIGURE 1 Number of deaths and crude death rates in Croatia from 2000 to 2020

Izvor/Source: Natural change in population, Croatian Bureau of statistics, <https://podaci.dzs.hr/hr/podaci/stanovnistvo/prirodno-kretanje-stanovnistva/>, accessed 20 May 2022



SLIKA 2. Trend kretanja stope mortaliteta u Hrvatskoj od 2000 do 2020

FIGURE 2 Mortality trends in Croatia from 2000 to 2020

Izvor/Source: Authors' computation based on Natural change in population, Croatian Bureau of Statistics, <https://podaci.dzs.hr/hr/podaci/stanovnistvo/prirodno-kretanje-stanovnistva/>, accessed 20 May 2022

Tako snažan porast mortaliteta povezan je s pandemijom COVID-19, koja je značajno utjecala na mortalitet, posebice tijekom drugog i četvrtog vala (studeni – prosinac 2020. i 2021.) (Sl. 10.). Stopa mortaliteta u navedenom razdoblju također se povećala, ali ne samo zbog povećanja broja umrlih, već i zbog istodobnog smanjenja broja stanovnika u Hrvatskoj. Naime, u dva međupopisna razdoblja (2001. – 2011. i 2011. – 2021.) broj stanovnika u Hrvatskoj smanjio se za 12,7 %², s tim da je smanjenje bilo posebice izraženo u drugom razdoblju. U čitavom promatranom razdoblju opće stope mortaliteta bile su više nego u Europskoj uniji.

Regresijska analiza uz pomoć točaka spajanja pokazala je da postoji samo jedna točka spajanja u trendu kretanja stopa mortaliteta, što znači da se izdvajaju dva razdoblja u trendu – prvo razdoblje je od 2000. do 2013., a drugo od 2013. do 2020. (Sl. 2.). U prvom razdoblju nagib linije trenda bio je blag s prosječnom postotnom promjenom od 0,4 (95-postotni interval pouzdanosti, -0,1 do 0,8), koja nije bila značajno različita od $\alpha = 0,05$ ($P = 0,087$). U drugom razdoblju, nagib linije trenda bio je strmiji, prosječna postotna promjena iznosila je 0,9 (95-postotni interval pouzdanosti, 0,9 do 2,9) i bila je značajno različita od nule. Navedeni rezultati pokazuju da je nakon 2013. došlo do ubrzanog povećanja stope mortaliteta. U čitavom promatranom razdoblju prosječna godišnja postotna promjena iznosila je 0,9 (95-postotni interval pouzdanosti, 0,5 do 1,3) i bila je značajno različita od nule, što upućuje na to da je došlo do ukupnog povećanja stopa smrtnosti.

Zabilježeno povećanje mortaliteta u drugom razdoblju posljedica je nekoliko čimbenika. U tom razdoblju u Hrvatskoj je došlo do značajnog smanjenja broja stanovnika (u usporedbi s prethodnim razdobljem) zbog intenzivne emigracije stanovništva nakon ulaska u Europsku uniju. Osim toga, u tom razdoblju *baby boom* generacija rođena nakon Drugoga svjetskog rata ušla je u staračko doba u kojoj je rizik od smrtnosti znatno veći, posebice smrtnost od zaraznih bolesti kao što su gripa ili COVID-19 (što je bio slučaj 2014./2015, odnosno 2020./2021.).

Croatian population decreased by 12.7%,² and the decline was particularly sharp in the second period. Throughout the whole analysed period, crude death rates in Croatia were higher than in the EU-27.

Joinpoint regression software identified one joinpoint while computing results for mortality rates, which means there are two periods in the trend, the first one from 2000 to 2013, and the second one from 2013 to 2020 (Fig. 2). The slope of the trend was gentle in the first identified period with the Average Percent Change (APC) of 0.4 (95% Confidence Interval, -0.1 to 0.8), but it was not marked as significantly different from zero at the $\alpha = 0.05$ level ($P=0.087$). In the second period, the slope of the trend was steeper, with the APC equal to 0.9 (95% Confidence Interval, 0.9 to 2.9) and marked as significantly different from zero. The results indicate that from 2013 the increase of mortality rates accelerated. Looking at the whole studied period, the Average Annual Percent Change was 0.9 (95% Confidence Interval, 0.5 to 1.3) marked as significantly different from zero, which shows that there was an overall increase in mortality rates.

The observed increase in mortality in the second period was caused by several factors. In this period Croatia experienced a strong population decline (in comparison to the previous period), largely due to intensive emigration after the accession to the EU. Additionally, it was the period during which the baby-boomers entered the old age, when they are at greater risk of death, particularly from communicable diseases such as the flu or COVID-19 (as it was the case in 2014/2015 and 2020/2021, respectively).

Age-and sex-specific mortality

During the 20th century, mortality became concentrated at older ages, non-communicable diseases became the prevailing causes of death, and female survival advantage came to light (GOLDIN, LLERAS-MUNEY, 2019; HOLLINGSHAUS ET AL., 2019). In Croatia, the mortality shift to

² Istodobno, broj rođenih smanjio se za 18,1 %, a stopa prirodne promjene smanjila se s -1,5 ‰ na -5,2 ‰.

² At the same time, the number of births decreased by 18.1%, and the rate of natural decrease lowered from -1.5‰ to -5.2‰.

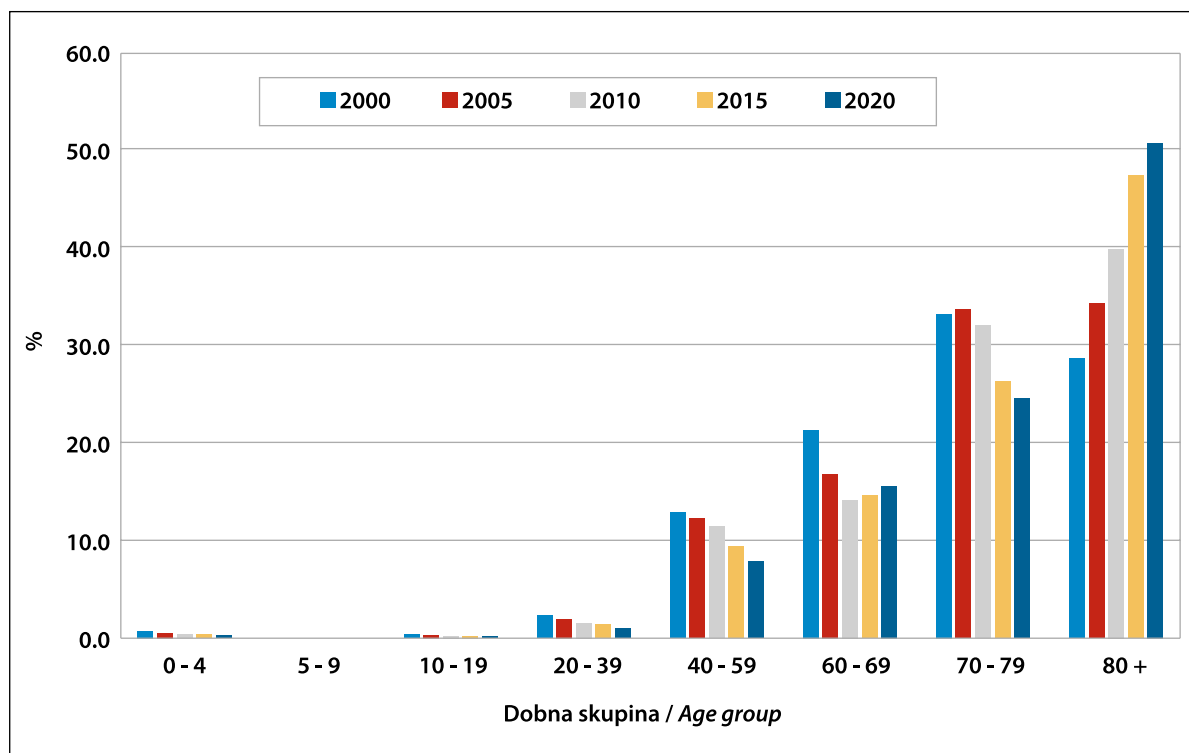
Specifični mortalitet prema dobi i spolu

Tijekom 20. stoljeća smrtnost je postala karakteristična za stariju životnu dob, nezarazne bolesti postale su glavni uzrok smrtnosti, a veće stope preživljavanja kod žena postale su očite (GOLDIN, LLERAS-MUNNEY, 2019.; HOLLINGSHAUS I DR., 2019.). U Hrvatskoj je tijekom 20. stoljeća također došlo do pomicanja smrtnosti u stariju životnu dob, a trend se nastavio i u proučavanom razdoblju na početku 21. stoljeća.

Rezultati analize upućuju na značajne promjene u raspodjeli umrlih prema dobnim skupinama u Hrvatskoj. U gotovo svim dobnim skupinama udio umrlih se smanjio (Sl. 3.). U usporedbi s 2000. godinom, 2020. godine broj umrlih u dobi 0 – 4 godine smanjio se za 55,6 %, u dobi 5 – 9 za 64,5 %, u dobi 10 – 19 za 60,2 %, u dobi 20 – 39 za 50,5 %, u dobi 40 – 59 za 31,8 %, u dobi 60 – 69 za 17,9 % te u dobi 70 – 79 za 16,3 %. S druge strane, u dobnj skupini 80 i više godina broj umrlih povećao se za 100,2 %. Osim toga, 2000. godine najveći udio umrlih zabilježen je u dobnj skupini 70 – 79 godina te se u idućim godinama počeo postupno smanjivati uz istodobno povećanje umrlih u

older ages was also prominent throughout the 20th century, and it was evident in the observed period, too.

The results indicate notable changes in the distribution of deaths across the age groups in Croatia. In almost all age groups the share of deaths in the total number of deaths decreased (Fig. 3). In comparison to the 2000, in 2020 the number of deaths in 0–4 age group decreased by 55.6%, in 5–9 age group by 64.5%, 10–19 age group by 60.2%, 20–39 age group by 50.5%, 40–59 age group by 31.8%, 60–69 age group by 17.9%, and in 70–79 age group by 16.3%. On the other hand, in 80+ age group the number of registered deaths increased by 100.2%. Additionally, in 2000, the largest share of deaths was recorded in 70–79 age group, but in the following periods that share started to decrease gradually with simultaneous increase in mortality for 80+ age group. Consequently, in 2020, the largest share of deaths occurred in the last age group (50.7%). This clearly indicates the transition of mortality to older ages, particularly among the oldest-old population, which is in accordance with the epidemiological transition theory, i.e. its postulates



SLIKA 3. Umrli prema dobnim skupinama (u %) u Hrvatskoj u odabranim godinama

FIGURE 3 Distribution of total deaths across the age groups (in %) in Croatia in selected years

Izvor/Source: Statistička izvješća, Prirodno kretanje stanovništva, Državni zavod za statistiku, <https://podaci.dzs.hr/hr/podaci/stanovnistvo/prirodno-kretanje-stanovnistva/>, accessed 26 March 2022

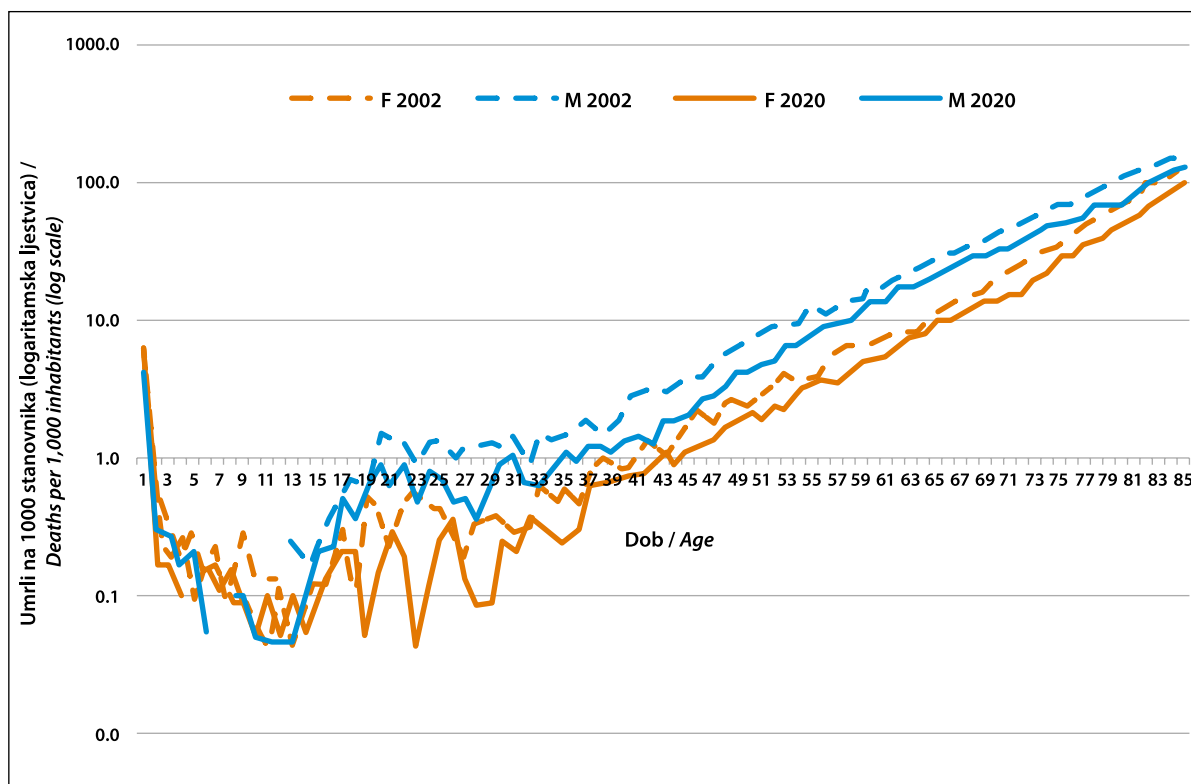
skupini 80 i više godina. U konačnici, 2020. godine najveći broj umrlih zabilježen je u dobi od 80 i više godina (50,7 %). Navedeni podaci jasno upućuju na tranziciju mortaliteta u stariju životnu dob, posebice među najstarijim starim stanovništvom, što je u skladu s teorijom epidemiološke tranzicije, odnosno pretpostavkom da degenerativne i kronične bolesti (koje posebice pogađaju starije stanovništvo) postaju najznačajniji uzrok smrti te pretpostavkom vezanom uz povećanje stope preživljavanja djece u dobi do 15 godina (OMRAN, 1971.). U tom kontekstu važno je naglasiti utjecaj *baby boom* generacija koje su nakon 2010. godine počele ulaziti u staru životnu dob i tako pridonijele tranziciji mortaliteta.

Specifične stope mortaliteta prema dobi imaju tipičan oblik slova J, što upućuje na nešto više stope mortaliteta dojenčadi, nakon čega počinju znatno opadati i najnižu razinu dosežu kod djece u dobi 5 – 14 godina. Stope ostaju relativno ujednačene dvadesetih i ranih tridesetih godina života, nakon čega se počinju povećavati, posebice nakon 60. godine života (Sl. 4.). Usporedba specifičnih stopa mortaliteta prema dobi na početku i na kraju analiziranog razdoblja upućuje na to da su na kraju promatranog razdoblja stope bile niže, što je u

regarding the degenerative and man-made diseases (that particularly affect the older population) as main causes of death, and the improvement in survival of children under 15 (OMRAN, 1971). In this context, it is also important to emphasize the impact of baby boom generations, as they increasingly moved to older ages during 2010s and thus contributed to the transition of mortality.

Age-specific mortality rates have a typical J-shape pattern, indicating somewhat higher mortality rates among infants, after which they decline significantly, reaching the lowest levels among the children aged 5–14. The rates are relatively steady throughout the 20s and early 30s, after which they start increasing, particularly after the age of 60 (Fig. 4). The comparison between the age-specific rates at the beginning and at the end of the analysed period indicate that at the end of the period the rates were lower, which is in line with the thesis that over the years the mortality hazards have shifted to older ages (BONGAARTS, 2005).

An increase in mortality rates was recorded among both men and women in Croatia. Throughout the whole period, the male mortal-



SLIKA 4. Specifične stope mortaliteta prema dobi i spolu u Hrvatskoj 2002 i 2020 godine
FIGURE 4 Age-specific mortality for men and women in Croatia in 2002 and 2020

Izvor/Source: Human Mortality Database, <https://www.mortality.org/>, accessed: 5 April 2022

skladu s tezom da se smrtnost s vremenom pomiče u stariju životnu dob (BONGAARTS, 2005.).

Povećanje stopa mortaliteta zabilježeno je i kod muškaraca i kod žena u Hrvatskoj. U čitavom promatranom razdoblju stope mortaliteta muškaraca bile su više od stopa mortaliteta žena, ali razlika među njima se smanjila (Sl. 5.). Smanjenje razlike u stopama mortaliteta posljedica je više stope preživljavanja muškaraca. Naime, analiza specifičnih stopa mortaliteta prema dobi pokazala je da su se stope mortaliteta značajnije smanjile kod muškaraca u mlađoj odrasloj i srednjoj životnoj dobi nego kod žena (Sl. 4.).

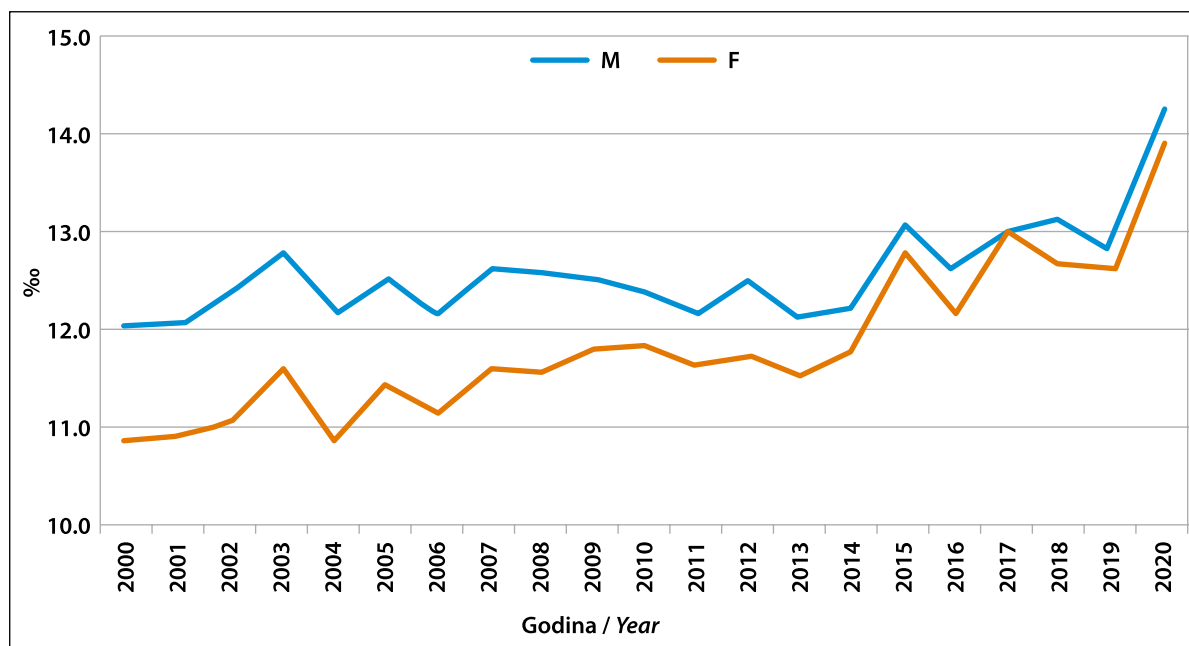
Razlika u stopama mortaliteta između muškaraca i žena može se objasniti društvenim/okolišnim i biološkim čimbenicima. Socijalni aspekt naglašava ulogu društvenih veza, navika i ponašanja koji utječu na zdravlje te društveno-gospodarskih čimbenika, dok biološki modeli naglašavaju utjecaj bioloških markera, hormona i genetike na zdravlje (ROGERS I DR., 2010.). Sve do 2009. godine udio muškaraca u ukupnom broju umrlih u Hrvatskoj bio je nešto viši od udjela žena, ali nakon toga udio žena postao je viši, ali ne značajno. Godine 2020. stope mortaliteta značajno su se povećale kod oba spola zbog pandemije COVID-19. Međutim, mortalitet muškaraca bio je ipak bio veći.

Analiza specifičnih stopa mortaliteta prema dobi pokazala je da su, u usporedbi s 2002. godinom,

ity was higher than that of women, but the gap between them narrowed (Fig. 5). The narrowing of the gap was the result of higher survival rates among men. Namely, the age specific death rates indicate that the mortality rates decreased more intensively among young adult and middle-aged men than among women (Fig. 4).

Sex gap in mortality can be explained by social/environmental and biological factors. Social perspectives emphasize the importance of social relationships, health-related behaviours, and socio-economic factors in accounting for sex differences in survival, while biological models emphasize the role of biological markers, hormones, and genetics on health outcomes (ROGERS ET AL., 2010). Up to 2009, the share of men in the total number of deaths in Croatia was slightly higher, but from that point on, the share of women became higher, but not significantly. In 2020, the mortality rates increased sharply for both sexes due to COVID-19 pandemic. However, the mortality rate for men was higher.

Analysis of age-specific mortality by sex reveals that in comparison with 2002, in 2020 the age-specific rates for all ages and for both sexes were lower, indicating higher survival rates at all ages (Fig. 4). A particularly notable decrease in mortality was recorded for the ages 18 to 28 for



SLIKA 5. Stope mortaliteta prema spolu u Hrvatskoj od 2000 do 2020

FIGURE 5 Mortality rate by sex in Croatia from 2000 to 2020

Izvor/Source: Prirodno kretanje stanovništva, Državni zavod za statistiku, <https://podaci.dzs.hr/hr/podaci/stanovnistvo/prirodno-kretanje-stanovnistva/>, accessed: 24 April 2022

2020. godine specifične stope mortaliteta u svakoj dobi i spolu bile niže, što upućuje na više stope preživljavanja stanovništva u svakoj dobi (Sl. 4.). Znatno smanjenje smrtnosti zabilježeno je u dobi 18 – 28 godina kod oba spola. Smanjenje specifičnog mortaliteta prema dobi posebice je bilo značajno kod muške populacije. Smanjenje mortaliteta kod mlađih skupina odraslog stanovništva i kod stanovništva srednje životne dobi može se povezati sa smanjenjem broja umrlih od vanjskih uzroka, posebice prometnih nezgoda (stopa smrtnosti u prometnim nezgodama smanjila se s 15,2/100 000 stanovnika 2004. godine na 7,5/100 000 stanovnika 2020. godine).

Smrtnost se i kod muškaraca i kod žena pomaknula u stariju životnu dob, dok se mortalitet u ranoj i srednjoj odrasloj dobi smanjio. Navedene promjene, kao i razlika u mortalitetu muškaraca i žena, često se objašnjavaju intrinzično-ekstrinzičnim modelom. Intrinzični mortalitet odraz je fizioloških degeneracijskih procesa koji su karakteristični za oba spola te se razlika u intrinzičnom mortalitetu muškaraca i žena sužava. S druge strane, muškarci imaju više stope ekstrinzičnog mortaliteta zbog svoje fiziološke podložnosti vanjskim čimbenicima (primjerice, zaraznim bolestima) i urođenoj sklonosti rizičnom ponašanju (OWENS, 2002.). U konačnici, u starijoj dobi, u kojoj intrinzični mortalitet ima važnu ulogu, razlike u stopama mortaliteta muškaraca i žena vjerojatno će se smanjivati, dok se u kasnijoj srednjoj i ranoj starijoj životnoj dobi, u kojoj je ekstrinzični mortalitet dominantan, razlike vjerojatno neće značajnije smanjivati (LI I DR., 2013.).

Smrtnost dojenčadi

Stopa smrtnosti dojenčadi smatra se jednim od glavnih pokazatelja zdravstvenog stanja u nekoj zemlji i jednim od najvažnijih mjerila očekivanog trajanja života (WANG, 2002.). Povezana je s društveno-gospodarskim uvjetima koji utječu na zdravlje majki i djece. U današnje vrijeme smrtnost dojenčadi i male djece niži su nego ikad. Tijekom 20. stoljeća napredak u medicini i javnom zdravstvu u zapadnim industrijaliziranim državama rezultirao je značajnim smanjenjem stopa smrtnosti dojenčadi (KIM, SAADA, 2013.).

U Hrvatskoj je kasnih 1960-ih više od jedne trećine dojenčadi umiralo prije navršene prve godi-

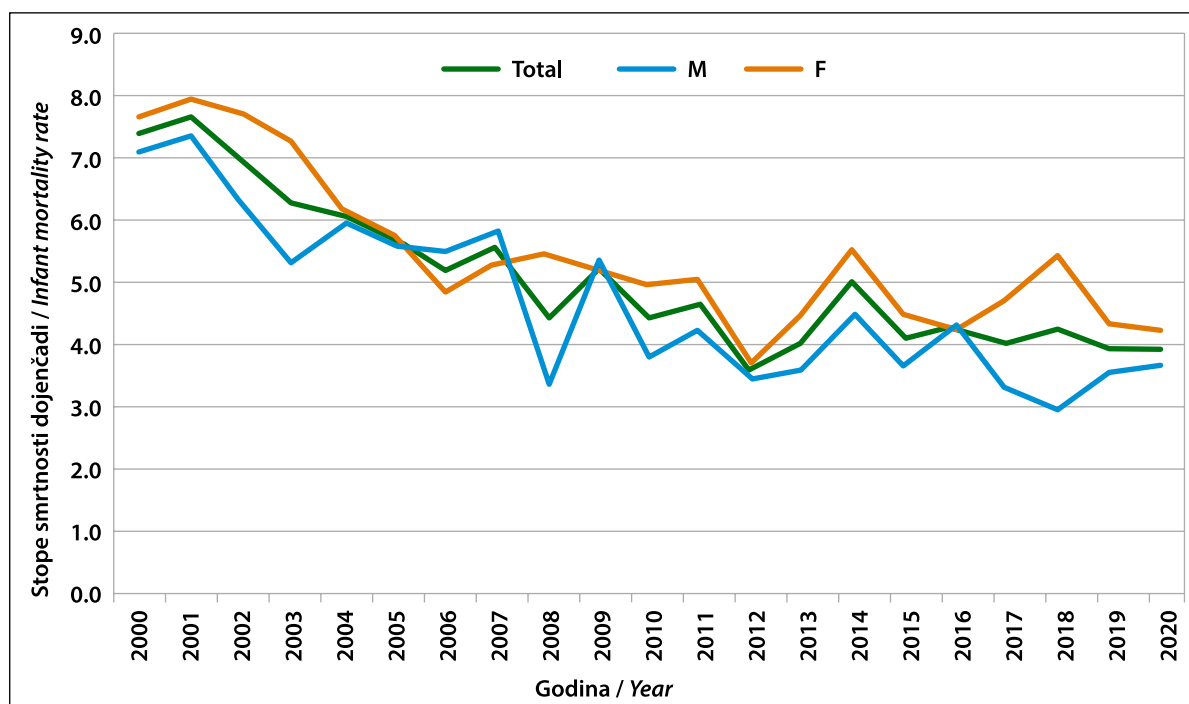
both sexes. A decrease in age-specific mortality was particularly evident among male population. The decrease of mortality of young adult and middle-aged population can be linked to the decrease of deaths by external causes, particularly transport accidents (which decreased from 15.2/100,000 in 2004 to 7.5/100,000 in 2020).

The mortality among both men and women has shifted to older ages, and the mortality in early and middle adult age has decreased. These changes, as well as the sex gaps in mortality are often discussed through intrinsic-extrinsic framework. The intrinsic mortality reflects physiological degeneration processes that are common to both sexes, so the sex gap in intrinsic mortality is converging. On the other hand, men have higher extrinsic mortality rate due to their physiological vulnerability to external factors (infectious diseases, for example) and innate risky behaviour (OWENS, 2002). Consequently, in old age, where intrinsic mortality plays an important role, male and female trajectories may continue to converge, but in the late middle and early old ages, where extrinsic mortality is more dominant, the trajectories are likely to persist (LI ET AL., 2013).

Infant mortality

Infant mortality rate (IMR) is considered as one of the principal health status indicators of a country and one of the most important measures of a nation's life expectancy (WANG, 2002). It is associated with socio-economic conditions that influence the health of mothers and infants. Infant and child mortality today are the lowest they have ever been. Over the course of the 20th century, the advances in medicine and public health in western industrialized world produced major reductions in infant mortality rates (KIM, SAADA, 2013).

In Croatia, in late 1960 more than one-third of the infants died in their first year of life, while in early 1970s, that share was more than one-quarter, but in the subsequent periods the country saw a rapid decline in IMRs. The rate continued to decrease in the first decade of the 21st century, but in the second decade it stagnated. At the beginning of the whole analysed period it was



SLIKA 6. Stope infatilnog mortaliteta u Hrvatskoj od 2000 do 2020

FIGURE 6 Infant mortality rates in Croatia from 2000 to 2020

Izvor/Source: Vitalna statistika, Državni zavod za statistiku, <https://podaci.dzs.hr/hr/podaci/stanovnistvo/>, accessed: 5 April 2022

ne života, dok ih je ranih 1970-ih umiralo više od jedne četvrtine. Međutim, u idućim razdobljima došlo je do brzog smanjenja stopa smrtnosti dojenčadi. Stope su nastavile opadati u prvom desetljeću 21. stoljeća, dok su u drugom desetljeću stagnirale. Na početku analiziranog razdoblja stopa je iznosila 7,4 umrle dojenčeta na 1 000 živorođene djece (7,1 za djevojčice i 7,7 za dječake), dok se na kraju razdoblja smanjila na 4,0 (3,7 za djevojčice i 4,2 za dječake) (Sl. 6.). Unatoč tome, mortalitet dojenčadi u Hrvatskoj je otprilike 21 % veći od prosjeka EU-27 (3,3). Smrtnost dojenčadi uglavnom se bilježi u neonatalnom razdoblju (između 0. i 7. dana života), a nakon toga se stopa preživljavanja povećava. Hrvatska ima visoke stope preživljavanja djece u dobi do pet godina (99,5 %), što znači da je već dostigla UN-ov cilj održivog razvoja 3.2.³

Mortalitet prema uzrocima smrti

Međunarodna klasifikacija bolesti (MKB) koristi se diljem svijeta i pruža važne informacije o raširenosti pojedinih bolesti, njihovim uzrocima i po-

7.4 per thousand (7.1 for girls and 7.7 for boys), while at the end of the period it lowered to 4.0 per thousand (3.7 for girls and 4.2 for boys) (Fig. 6.) The IMR in Croatia is still approximately 21,0% higher than the EU-27 average (3.3). Most of the infant deaths occur in the early neonatal period (between 0 and 7 days after the birth), and after that period the survival rate increases. Similarly, Croatia has a particularly high survival rate of children under five (99.5%), which means that the UN's Sustainable Development Goal 3.2³ has already been reached.

Cause-specific mortality

International Classification of Diseases (ICD) is used globally and provides important information on the extent, causes and consequences of human disease and death worldwide. Standardized categories and data collection of ICD enable large scale research, and provide the basis for comparable statistics on causes of mortality and

³ Cilj 3.2 je smanjiti smrtnost djece na barem 2,5 % u svim zemljama do 2030. To znači da bi više od 97,5 % novorođenčadi preživjelo do pete godine života bez obzira na to gdje su rođeni. <https://sdgs.un.org/2030agenda>

³ Goal 3.2 is to reduce the child mortality rate to at least as low as 2.5% in all countries by 2030. This would mean that more than 97.5% of all newborns would survive the first five years of their life no matter where they are born. <https://sdgs.un.org/2030agenda>

sljedicama te smrtnosti. Standardizirane kategorije i prikupljanje podataka za MKB omogućuju opsežna istraživanja i čine osnovu za izradu komparativnih analiza o uzrocima mortaliteta i morbiditeta među različitim područjima tijekom vremena. S obzirom na razdoblje koje se analizira u ovom radu, korištena je deseta revidirana verzija MKB-a (tj. MKB-10). Za analizu mortaliteta prema uzrocima smrti u ovom su radu odabrane tri godine (početak, sredina i kraj analiziranog razdoblja) te je provedena usporedna analiza podataka.

Kao i u drugim industrijaliziranim državama, tako i u Hrvatskoj, već desetljećima najznačajniji uzrok smrti su nezarazne bolesti, ponajprije kardiovaskularne bolesti i novotvorine (neoplazme). Glavni uzrok smrti tijekom analiziranog razdoblja bile su bolesti cirkulacijskog sustava, ali mortalitet na 100 000 stanovnika se smanjio u ukupnoj populaciji i kod oba spola, posebice kod muškaraca (Tab. 1.). Stopa mortaliteta od bolesti cirkulacijskog sustava bila je viša kod žena nego kod muškaraca. Drugi najznačajniji uzrok smrti bile su novo-

morbidity between places and over time. Considering the period analysed in this paper, we used the tenth revision of ICD (i.e., ICD-10). For analysing the mortality by causes we selected three years (beginning, middle and end of the analysed period) and compared the data.

As it has been the case in other industrialized countries for decades, most of the deaths in Croatia have been attributed to non-communicable diseases, primarily cardiovascular diseases and neoplasms. The main cause of death throughout the analysed period were the diseases of the circulatory system, but the mortality per 100,000 inhabitants decreased in total population and for both sexes, particularly for men (Table 1). Mortality rate for the diseases of the circulatory system was much higher for women than for men. The second most important cause of death were neoplasms, and the mortality rate for neoplasms increased in the twenty-year period. The largest increase in mortality rate was recorded for the third most important cause of death – endocrine,

TABLICA 1. Umrla prema skupinama uzroka smrtnosti u Hrvatskoj u odabranim godinama
TABLE 1 Mortality by causes of death in Croatia in selected years

Uzrok smrti/ Cause of death	Mortalitet (na 100 000 stanovnika)/ Mortality (per 100,000 inhabitants)								
	Ukupno / Total			Muškarci / Men			Žene / Women		
	2000.	2010.	2020.	2000.	2010.	2020.	2000.	2010.	2020.
Novotvorine/ Neoplasms	268	310	334	325	369	394	214	255	277
Bolesti cirkulacijskog sustava / Diseases of the circulatory system	610	580	564	558	513	494	657	643	630
Bolesti respiratornog sustava / Diseases of the respiratory system	47	44	55	56	56	65	38	34	45
Endokrine bolesti, bolesti prehrane i metabolizma / Endocrine, nutritional and metabolic diseases	21	33	117	19	30	100	22	35	134
Bolesti probavnog sustava / Diseases of the digestive system	57	56	49	73	70	60	42	43	39
COVID-19	0	0	111	0	0	132	0	0	91
Ostale bolesti/ Other diseases	144	156	179	179	167	183	115	145	175
Ukupno / Total	1,147	1,179	1,409	1,210	1,205	1,428	1088	1,155	1,391

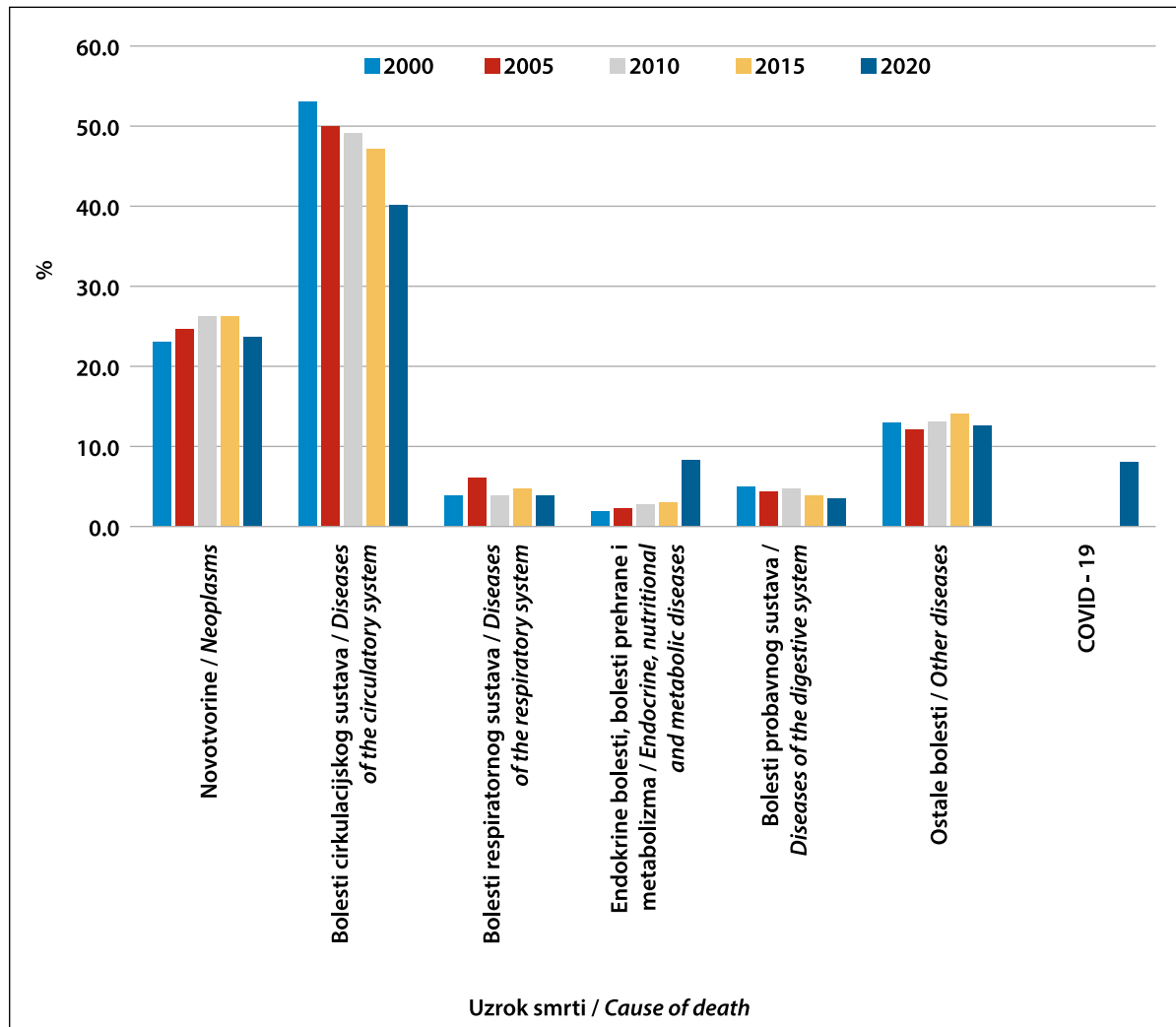
Izvor/Source: Hrvatski zdravstveno-statistički ljetopis za 2000.; Izvješće o umrlim osobama u Hrvatskoj u 2010. godini; Izvješće o umrlim osobama u Hrvatskoj u 2020. godini, accessed: 20th May 2022.

tvorine te se u dvadesetogodišnjem razdoblju stopa mortaliteta od novotvorina povećala. Najznačajniji porast stope mortaliteta zabilježen je za treći najznačajniji uzrok smrti – endokrine bolesti, bolesti prehrane i metabolizma. Stopa mortaliteta od COVID-19 (peti najznačajniji uzrok smrti 2020. godine) bila je značajno viša kod muškaraca nego kod žena.

Godine 2000. bolesti cirkulacijskog sustava bile su uzrok smrti kod 53,1 % umrlih, ali se u idućim razdobljima taj udio smanjio na 40 % (Sl. 7.). Udio umrlih od novotvorina povećavao se do 2015. godine te je ostao drugi najznačajniji uzrok smrti s udjelom između 23,2 % i 26,4 %. Smrtnost od ostalih skupina uzroka bila je značajno manja i uvijek ispod 10 %. međutim, treba naglasiti da se u razmjerno kratkom razdoblju smrtnost uzroko-

nutritional and metabolic diseases. The mortality rate for COVID-19, which was the fifth most important cause of death in 2020, was notably higher for men than for women.

In 2000, the diseases of the circulatory system accounted for 53.1% of all deaths, but in the following periods that share lowered to 40.0% (Fig. 7). The share of deaths caused by neoplasms recorded an increase until 2015, and remained the second most important cause of death with the share between 23.2% and 26.4%. The share of deaths caused by other groups of diseases was much lower and continuously below 10.0%, but it should be emphasized that in a relatively short period of time, deaths caused by endocrine, nutritional and metabolic diseases increased from 3.1% to 8.3%. In 2020, during the coronavi-



SLIKA 7. Umrlji prema skupini uzroka u Hrvatskoj u odabranim godinama

FIGURE 7 Mortality by causes of death in Croatia in selected years

Izvor/Source: Hrvatski zdravstveno-statistički ljetopis za 2000. godinu, <https://www.hzjz.hr/>, Hrvatski zdravstveno-statistički ljetopis za 2005. godinu, <https://www.hzjz.hr/>, Izvješće o umrlim osobama u Hrvatskoj u 2010. godini, <https://www.hzjz.hr/>, Izvješće o umrlim osobama u Hrvatskoj u 2015. godini, <https://www.hzjz.hr/>, Izvješće o umrlim osobama u Hrvatskoj u 2020. godini, <https://www.hzjz.hr/>, accessed: 20 May 2022

vana endokrinim bolestima, bolestima prehrane i metabolizma povećala s 3,1 % na 8,3 %. U 2020. godini tijekom pandemije koronavirusa čak 7,9 % umrlih umrlo je od posljedica bolesti COVID-19.

Analiza mortaliteta prema uzrocima smrti uputila je na dva prevladavajuća trenda – smanjenje smrtnosti od kardiovaskularnih bolesti i povećanje smrtnosti od novotvorina te endokrinih bolesti, bolesti prehrane i metabolizma. Smanjenje smrtnosti od kardiovaskularnih bolesti u razvijenim zemljama može se pripisati poboljšanim životnim navikama i različitim dostignućima u medicini (FERALDI, ZARULLI, 2022.), poput preventivnih sistematskih pregleda, poboljšane dijagnostike, lijekova i napretka u tehnologiji liječenja kardiovaskularnih oboljenja. Istodobno, stopa smrtnosti od novotvorina se povećala, ali ukupan broj umrlih od karcinoma i njihov udio u ukupnom broju umrlih malo se smanjio na kraju analiziranog razdoblja, što je rezultat uvođenja programa preventivnih pregleda i probira, ranog otkrivanja bolesti te sve učinkovitijeg liječenja. U posljednja dva desetljeća Ministarstvo zdravstva uvelo je nekoliko preventivnih programa vezanih uz rano otkrivanje karcinoma (pluća, dojki, cerviksa te kolorektalnog karcinoma). Bez obzira na to, 2019. godine stopa smrtnosti od karcinoma u Hrvatskoj bila je među najvišima u Europskoj uniji (OECD/European Union, 2022.).

Stopa mortaliteta od endokrinih bolesti, bolesti prehrane i metabolizma zabilježila je značajan porast u Hrvatskoj, a bolest koja je najviše pridonijela tom porastu bio je dijabetes (*diabetes mellitus*). Dijabetes je jedan od najvećih izazova javnog zdravstva u svijetu u 21. stoljeću i nekoć nije bio prepoznat kao globalna zdravstvena prijetnja (ZIMMET ET AL., 2001.).

Ako se detaljnije analiziraju vodeći pojedinačni uzroci smrtnosti, dolazi se do zaključka kako su na početku i na kraju analiziranog razdoblja ishemijska bolest srca i cerebrovaskularne bolesti bili dva glavna uzroka smrti, ali njihov se udio u ukupnom broju umrlih smanjio, dok se povećao broj umrlih od drugih bolesti – posebice od dijabetesa, hipertenzivnih bolesti i ateroskleroze (Tab. 2.). S druge strane, upala pluća (pneumonija), kronične bolesti jetara i ciroza jetara te zloćudna novotvorina želuca koje su bile među deset glavnih uzroka smrti

rus pandemic, deaths caused by COVID-19 accounted for 7.9% of all deaths.

The analysis of the cause-specific mortality indicates two dominant trends – reduction in cardiovascular mortality and increase of mortality caused by neoplasms, and endocrine, nutritional and metabolic diseases. Decline in cardiovascular mortality in developed countries may be attributed to improved lifestyle habits and different medical advancements (FERALDI, ZARULLI, 2022), such as preventive health check-ups, improved diagnostics, medication, and advances in cardiovascular medical technology. Simultaneously, the mortality rate for neoplasms increased, but the total number of cancer deaths and their share in total deaths recorded a slight decrease at the end of the analysed period, which may be attributed to screening programs, early detection, and improved treatment. In the last two decades, Croatian Ministry of Health has introduced several prevention programs related to early detection of cancers (lung, breast, cervical and colorectal cancers). Nevertheless, in 2019, the overall mortality from cancer in Croatia was among the highest in the EU-27 (OECD/European Union, 2022).

Mortality rate for endocrine, nutritional and metabolic diseases recorded a particularly high increase in Croatia, and the disease that contributed to the increase the most was diabetes mellitus. Diabetes mellitus has been recognized as one of the most important public health challenges of the 21st century worldwide, and it used to be underrated as a global health threat (ZIMMET ET AL., 2001).

If we investigate the causes of death further and in more detail, and analyse the leading causes of death, we can conclude that both at the beginning and at the end of the analysed period ischemic heart diseases and cerebrovascular diseases were the two leading causes of death, but their share in total deaths decreased, while some other diseases came to prominence – diabetes mellitus, hypertensive diseases and atherosclerosis, in particular (Tab. 2). On the other hand, causes of death such as pneumonia, chronic liver diseases and cirrhosis, and malignant neoplasm of stomach, which were among the top ten lead-

2004. godine, zabilježili su smanjenje smrtnosti i nisu bili među deset glavnih uzroka smrti 2020. godine. U analiziranom razdoblju incidencija tuberkuloze se smanjila, a medicinski napredak u ranom otkrivanju i liječenju navedenih bolesti zas-

ing causes of death in 2004, recorded a decrease in mortality and were not among the ten leading causes of death in 2020. In the analysed period the incidence of tuberculosis decreased, and medical advances in early detecting and treat-

TABLICA 2. *Deset vodećih uzroka smrtnosti u Hrvatskoj 2004 i 2020 godine*
TABLE 2 *Ten leading causes of death in Croatia in 2004 and 2020*

Rang 2020/ 2020 rank	Rang 2004/ 2004 rank	Šufra/ Code	Dijagnoza/ Diagnosis	2004		2020	
				Ukupan broj/ Total number	%	Ukupan broj/ Total number	%
1	1	I20-I25	Ischemijske bolesti srca / <i>Ischemic heart diseases</i>	9,173	18.4	7,589	13.3
2	2	I60-I69	Cerebrovaskularne bolesti / <i>Cerebrovascular diseases</i>	7,962	16.0	4,950	8.7
3	9	E10-E14	Dijabetes / <i>Diabetes mellitus</i>	973	2.0	4,697	8.2
4	-	I10-I15	Hipertenzivne bolesti / <i>Hypertensive diseases</i>	-	-	4,487	7.9
5	-	U071-U072	COVID-19	-	-	4,478	7.9
6	4	C33-C34	Zloćudne novotvorine dušnika, bronha i pluća / <i>Malignant neoplasm of trachea, bronchus and lung</i>	2,635	5.3	2,819	4.9
7	5	C18-C21	Zloćudne novotvorine debelog crijeva, rektosigmoidnog prijelaza, anusa i analnog kanala / <i>Malignant neoplasm of colon, rectosigmoid junction, rectum, anus and anal canal</i>	1,564	3.1	2,079	3.6
8	8	J40-J47	Kronične bolesti donjega dišnog sustava (emfizem, bronhitis, astma) / <i>Chronic lower respiratory diseases (emphysema, bronchitis, asthma)</i>	1,185	2.4	1,696	3.0
9	-	I70	Ateroskleroza / <i>Atherosclerosis</i>	-	-	1,569	2.8
10	3	I50	Insuficijencija srca / <i>Heart failure</i>	2,956	5.9	865	1.5
Ukupno 10 vodećih uzroka smrti / <i>Total 10 leading causes</i>				30,172*	60.6	35,229	61.8
Ukupan broj umrlih / <i>Total deaths</i>				49,756		57,023	

Izvor/Source: Izvješće o umrlim osobama u Hrvatskoj u 2004. godini, <https://digarhiv.gov.hr/arhiva/245/4872/www.hzjz.hr/publikacije/umrli2004.pdf>, accessed: 14th June 2022; Izvješće o umrlim osobama u Hrvatskoj u 2020. godini, https://www.hzjz.hr/wp-content/uploads/2021/10/Bilten_Umrli-_2020.pdf, accessed: 14th June 2022

*Osim navedenih uzroka smrti, među deset najznačajnijih uzroka smrti 2004. godine također su bili upala pluća (1 504 umrlih), kronične bolesti jetara i ciroza jetara (1 253 umrlih) i zloćudne novotvorine želuca (967 umrlih) / Besides the above-mentioned causes of death, the ten leading causes in 2004 also included pneumonia (1,504 deaths), chronic liver diseases and cirrhosis (1,253 deaths) and malignant neoplasms of stomach (967 deaths)

gurno su pridonijeli smanjenju smrtnosti od njih. Osim toga, došlo je do promjena u ispunjavanju smrtovnica, utvrđivanju uzroka smrti i promjena u korištenju šifri uzroka smrti što je također zasigurno pridonijelo smanjenju broja umrlih od insuficijencije srca (IVANUŠA, KRALJ, 2014.).

Uočavaju se određene razlike u glavnim uzrocima smrti kod muškaraca i žena. Godine 2004. ishemijske bolesti srca i cerebrovaskularne bolesti bile su dva vodeća uzroka smrti kod oba spola, a nakon njih vodeći uzroci smrti bili su zloćudna novotvorina dušnika, bronha i pluća, insuficijencija srca i kronične bolesti jetara i ciroza jetara kod muškaraca, odnosno insuficijencija srca, zloćudna novotvorina dojke i upala pluća kod žena. S druge strane, 2020. godine vodeći uzroci smrtnosti kod muškaraca bili su ishemijske bolesti srca, COVID-19, cerebrovaskularne bolesti, dijabetes te zloćudna novotvorina dušnika, bronha i pluća. Ishemijske bolesti srca bile su vodeći uzrok smrti i kod žena, a slijedile su ih hipertenzivne bolesti, cerebrovaskularne bolesti, dijabetes i COVID-19.

Promjene u mortalitetu prema uzroku smrti mogu se razmatrati s aspekta teorije epidemiološke tranzicije. Većina razvijenih zemalja trenutačno se nalazi u četvrtoj fazi epidemiološke tranzicije (razdoblje odgođenih degenerativnih bolesti), koju karakterizira značajan napredak u medicinskoj tehnologiji i programima zdravstvene zaštite. Posljedično, došlo je do smanjenja mortaliteta u mlađoj dobi, sve većeg umiranja u kasnijoj životnoj dobi i povećanja stope preživljavanja u starijoj dobi (WILMOTH I DR., 2000.). Također, u ovoj fazi degenerativne bolesti ili „bolesti povezane sa životnim stilom“ (posebice bolesti cirkulacijskog sustava i novotvorine) postaju glavni uzroci smrti (KLENK I DR., 2016.).

Trendovi vezani uz specifični mortalitet prema uzroku smrti u Hrvatskoj dosta su slični onima u EU-27. Prije pandemije COVID-19, točnije 2019. godine, dvije najznačajnije skupine uzroka smrti i u EU-27 i u Hrvatskoj bile su bolesti cirkulacijskog sustava (35 % svih smrti u EU-27) i novotvorine (26 % svih smrti u EU-27). Godine 2020. COVID-19 bio je uzrok smrti u 8 % slučajeva i u Europskoj uniji i u Hrvatskoj. Ako se usporede pojedinačni uzroci smrti u Hrvatskoj i Europskoj uniji, dolazi se do zaključka da su ishemijske bolesti

ing the above-mentioned diseases certainly also contributed to the mortality decrease. Additionally, the changes in how the death certificate is completed, in determining the cause of death and changes in the use of cause of death codes contributed to lower number of deaths being attributed to heart failure (IVANUŠA, KRALJ, 2014).

There are certain differences in the leading causes of death in men and women. In 2004, ischemic heart diseases and cerebrovascular diseases were the two leading causes of deaths in both sexes, followed by malignant neoplasm of trachea, bronchus and lung, heart failure, and chronic liver diseases and cirrhosis in men, and heart failure, malignant neoplasm of breast, and pneumonia in women. On the other hand, in 2020, the leading causes of death in men were ischemic heart diseases, COVID-19, cerebrovascular diseases, diabetes mellitus and malignant neoplasm of trachea, bronchus and lung. Ischemic heart diseases were also the leading cause of death in women, but it was followed by hypertensive diseases, cerebrovascular diseases, diabetes mellitus and COVID-19.

Cause-specific mortality changes should be discussed from the viewpoint of the model of epidemiological transition. Most developed countries are currently at the fourth stage of epidemiologic transition (the age of delayed degenerative diseases), which is characterized by notable advances in medical technology and health care programs. This resulted in decreased mortality in younger ages, delayed age at death, and improved survival at increasingly older ages (WILMOTH ET AL., 2000). Moreover, in this stage degenerative diseases or “lifestyle illnesses” (particularly diseases of the circulatory system or neoplasms) emerge as the leading causes of death (KLENK ET AL., 2016).

Trends in cause-specific mortality in Croatia are similar to those in the EU-27. Before the COVID-19 pandemic, in 2019, the two main broad causes of mortality in the EU-27 were circulatory diseases (35% of all deaths) and neoplasms (26% of all deaths), as it was the case in Croatia, too. In 2020, COVID-19 accounted for 8% both in the EU-27 and in Croatia. If we compare the individual causes of death in Cro-

srca i cerebrovaskularne bolesti najučestaliji uzrok smrti među bolestima cirkulacijskog sustava. Što se tiče novotvorina, i u Hrvatskoj i u Europskoj uniji karcinom pluća bio je najčešći uzrok smrtnosti. Međutim, u EU-27 karcinom pluća bio je glavni uzrok smrti od novotvorina kod muškaraca, nakon čega je slijedio kolorektalni karcinom, dok je kod žena najčešći uzrok smrti bio karcinom dojke, a potom karcinom pluća (OECD/European Union, 2022.). U Hrvatskoj je kod oba spola karcinom pluća bio najčešći uzrok smrtnosti među novotvorinama, a potom kolorektalni karcinom. Godine 2019. u Hrvatskoj su rizični faktori povezani sa životnim navikama (poput nezdravih prehrambenih navika, pušenja cigareta, konzumacije alkohola i nedovoljne fizičke aktivnosti) bili odgovorni za 44 % svih smrti (OECD, 2021.).

Mortalitet od COVID-19

Prvi slučaj zaraze virusom SARS-CoV-2 (koronavirus) zabilježen je 25. veljače 2020. i do 31. prosinca 2021. ukupno je zabilježeno 715 245 slučajeva zaraze virusom te 12 538 umrlih. Pandemija je imala značajan utjecaj na društveno-gospodarske i demografske procese, ali najočitiji utjecaj bio je na mortalitet, posebice tijekom drugog i četvrtog vala epidemije (studen i prosinac 2020. i 2021. godine).

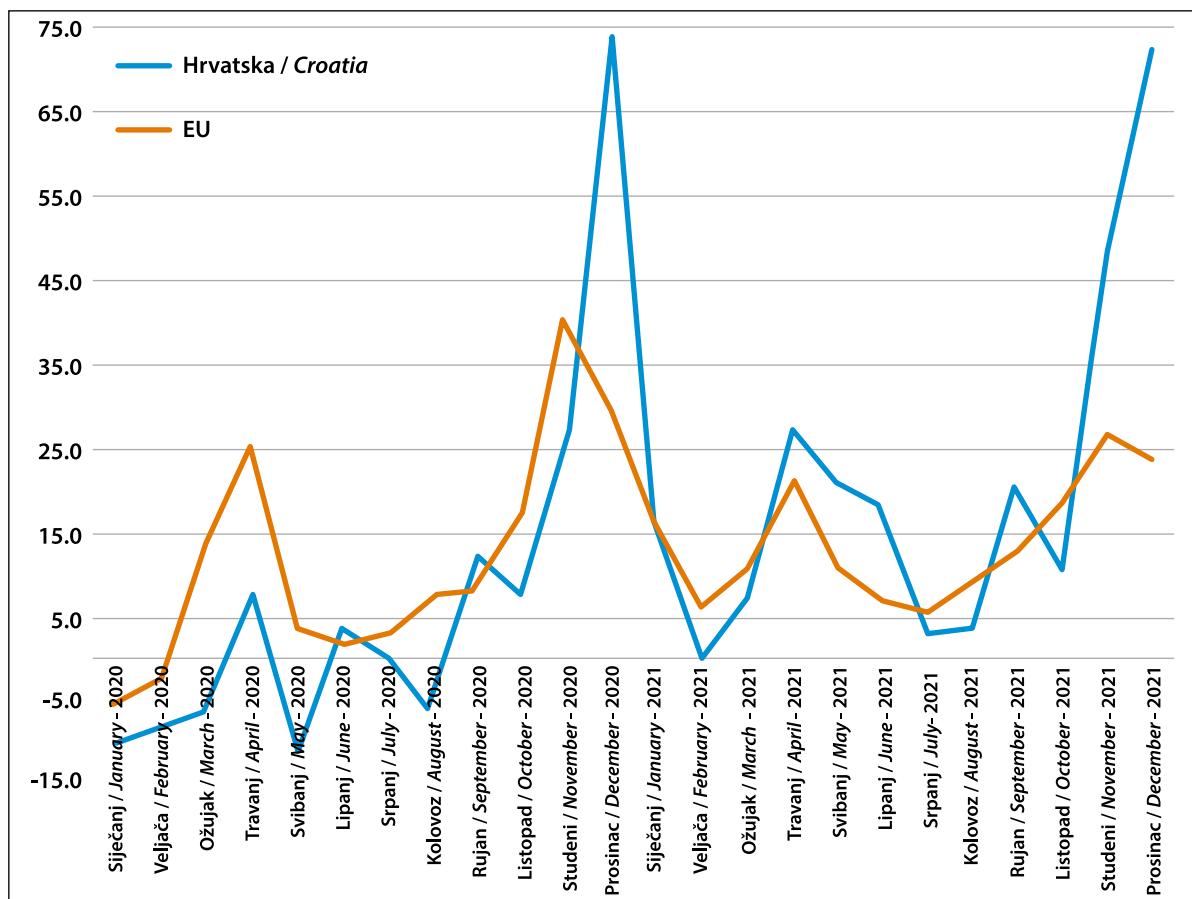
Utjecaj COVID-19 na mortalitet najbolje se očituje analizom viška umrlih. Ako se uspoređi mjesečni broj umrlih osoba 2020. i 2021. godine s prosječnim mjesečnim brojem umrlih u četverogodišnjem razdoblju prije pandemije (2016. – 2019.), može se primijetiti povećani mortalitet, posebice u studenom i prosincu (Sl. 8.). Godine 2020. broj umrlih bio je 27,3 % viši u studenom i 74,3 % u prosincu. U istim mjesecima 2021. godine višak umrlih iznosio je 48,4 % i 72,3 %. Ako se u obzir uzme ukupan broj umrlih na godišnjoj razini u prve dvije pandemijske godine, vidljivo je da je 2020. godine broj umrlih bio 8,9 % veći od prosjeka za razdoblje 2016. – 2019. godine, a 2021. godine 19,7 %. Ako se uspoređi višak smrtnosti u Hrvatskoj s prosjekom EU-27, dolazi se do zaključka da je višak smrtnosti u Hrvatskoj bio manji tijekom prvog vala pandemije, što se može povezati sa strogim mjerama tijekom *lockdowna*, koje su usporile širenje zaraze. Međutim, tijekom idućih

atija and the EU-27, it is evident that ischemic heart diseases and cerebrovascular diseases were the most common causes of mortality considering circulatory diseases. As for cancer, both in Croatia and the EU-27 lung cancer was the leading cause of cancer mortality. However, in the EU-27 lung cancer was the main cause of cancer death in men followed by colorectal cancer, while breast cancer was the leading cause of cancer death in women followed by lung cancer (OECD/European Union, 2022). In Croatia, lung cancer was the leading cause of cancer mortality followed by colorectal cancer in both men and women. In 2019, in Croatia, behavioural risk factors, such as dietary factors, tobacco smoking, alcohol consumption and low physical activity, were responsible for 44.0% of all deaths (OECD, 2021).

COVID-19 mortality

The first case of SARS-Cov-2 (coronavirus) infection in Croatia was reported on 25th February 2020, and until the 31st December 2021, as many as 715,245 confirmed cases and 12,538 deaths were reported. The pandemic had a great impact on different socio-economic and demographic processes, but the most evident one was on the mortality, particularly during the second and fourth waves of the epidemic (November and December 2020 and 2021, respectively).

The influence of COVID-19 deaths on mortality can be analysed through excess mortality. If we compare the number of deaths by month in 2020 and 2021 with the monthly averages for the four-year pre-pandemic period (2016–2019), we can observe the increased mortality, particularly in November and December (Fig. 8). In 2020, the number of recorded deaths was 27.3% higher in November and 74.3% in December. In the same period in 2021, the excess deaths were 48.4% and 72.3%, respectively. If we take into account the total number of deaths during the pandemic years, it is evident that in 2020, the annual number of deaths was 8.9% higher than the average for 2016–2019 period, and in 2021, it was 19.7% higher. If we compare the excess deaths in Croatia with the EU-27, we can



SLIKA 8. Višak smrtnosti u Hrvatskoj i u EU-27 po mjesecima 2020 i 2021 godine – umrli od svih uzroka smrtnosti u usporedbi s razdobljem 2016–2019 godine

FIGURE 8 Excess mortality in Croatia and EU-27 by months in 2020 and 2021 – deaths from all causes compared to 2016–2019 period

Izvor/Source: Prirodno kretanje stanovništva, Državni zavod za statistiku, <https://podaci.dzs.hr/hr/podaci/stanovnistvo/prirodno-kretanje-stanovnistva/>, accessed: 24 April 2022; Eurostat, https://ec.europa.eu/eurostat/databrowser/view/DEMO_MEXRT__custom_5200607/default/table, accessed: 24 April 2022

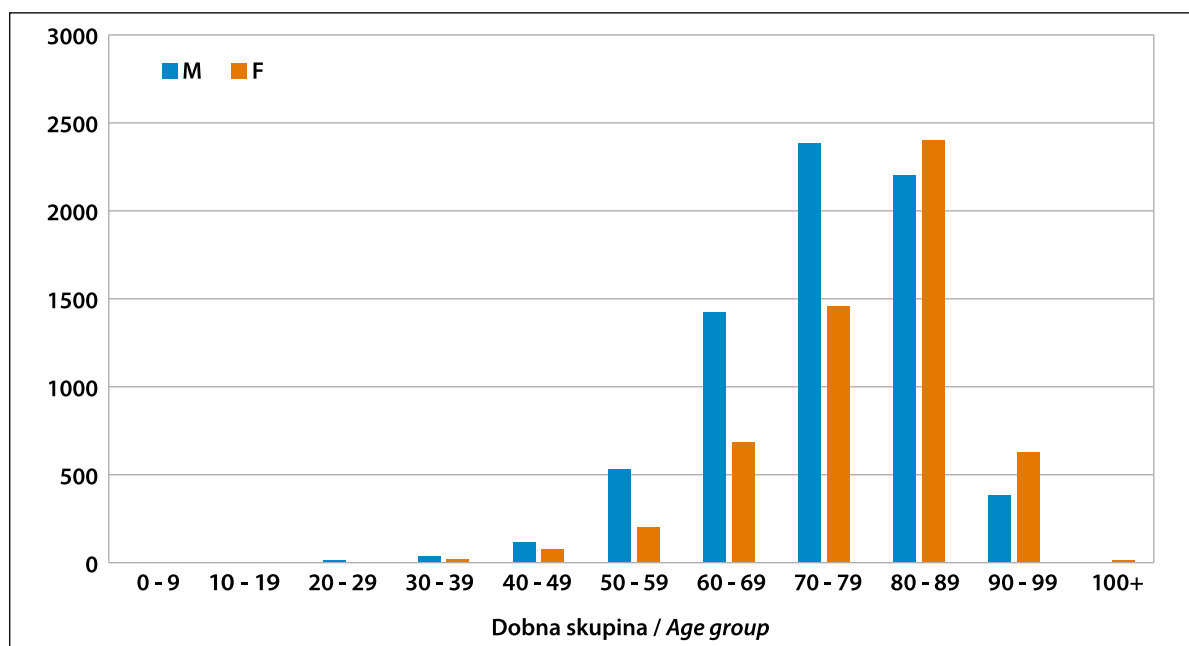
valova višak umrlih u Hrvatskoj bio je veći, posebice tijekom studenog i prosinca 2020. i 2021. godine. Posljedica je to nepravovremeno uvedenih i manje strogih restriktivskih mjera u usporedbi s početnim valom pandemije (ČIPIN I DR., 2021).

Veći višak umrlih u Hrvatskoj 2021. godine može se također povezati s nižom procijepljenošću u Hrvatskoj u usporedbi s EU-27. Naime, prema studiji koju su proveli Watson i dr. (2022.) cijepljenje protiv COVID-19 spasilo je desetke milijuna života diljem svijeta. Krajem 2021. godine u Hrvatskoj je 56,6 % ukupne populacije bilo cijepljeno jednom dozom, a 53,7 % s dvije doze, dok je u EU-27 procijepljenost bila znatno veća – 73 % cijepljenih jednom dozom i 68,4 % s dvije doze (ECDC, 2022.).

Iz službenih podataka o umrlima od COVID-19 može se zaključiti da je bolest imala različit utjecaj na mortalitet kod muškaraca i kod žena te kod razli-

see that the excess deaths in Croatia were lower during the first wave, which can be attributed to strict lockdown measures, that slowed down the spreading of infection. However, during the subsequent waves, the excess mortality in Croatia was higher, particularly in November–December period in both 2020 and 2021. That can be attributed to untimely introduced and weaker restrictions than at the beginning of the pandemic (ČIPIN ET AL., 2021).

Higher excess mortality in Croatia in 2021 might also be attributed to lower vaccination rate in Croatia in comparison to the EU-27. Namely, a study conducted by Watson et al. (2022) revealed that vaccinations against COVID-19 saved tens of millions of lives globally. At the end of 2021, in Croatia 56.6% of the population was vaccinated with one dose and 53.7% with two doses, while in the EU-27 the vaccination rates



SLIKA 9. Umrli od COVID-19 prema spolu i dobnim skupinama od 25. veljače 2020 do 2. siječnja 2022.

FIGURE 9 COVID-19 deaths by age groups from 25 February 2020 to 2 January 2022

Izvor/Source: https://www.koronavirus.hr/uploads/2_1_2022_izvjesce_tjedno_novo_64eea1e4cf.pdf, accessed: 5 May 2022

čitih dobnih skupina. Čak 56,3 % umrlih od COVID-19 bili su muškarci. U gotovo svim dobnim skupinama (osim skupine 20 – 29 i 70 – 79) mortalitet muškaraca bio je viši od mortaliteta žena (Sl. 9.), a u dobnim skupinama iznad 80 godina mortalitet je bio viši kod žena, jer su žene i brojnije u tim skupinama. Višak umrlih u starijim dobnim skupinama utjecao je na smanjenje očekivanog trajanja života pri rođenju i pogoršanje općega zdravstvenog stanja stanovništva (ČIPIN I DR., 2021.).

Očekivano trajanje života pri rođenju

Očekivano trajanje života pri rođenju još je jedan važan pokazatelj mortaliteta u određenoj populaciji i usko je povezan sa životnim standardom i zdravstvenim uvjetima života. Razlike u zdravstvenom statusu uvjetovane su razlikama u prihodima stanovništva pojedinih zemalja te postoji uska korelacija između očekivanog trajanja života pri rođenju, razine gospodarskog razvoja i gospodarskog rasta u novije vrijeme (TOP, CINAROGLU, 2021.). Ključni mehanizam važan za povećanje očekivanog trajanja života je epidemiološka tranzicija (OLSHANSKY, AULT, 1986.; OMRAN, 1971.).

Diljem svijeta, pa tako i u Hrvatskoj, žene u prosjeku žive dulje od muškaraca. Istraživanja vezana uz uzroke kraćega životnog vijeka muškaraca

were notably higher – 73.0% and 68.4%, respectively (ECDC, 2022).

The available data indicate that COVID-19 had a different impact on the mortality of men and women and on particular age groups. As much as 56.3% of all COVID-19 deaths were recorded in men. In all the age groups from 20-29 to 70-79, mortality was higher for men (Fig. 9), and only in the age groups 80+ the mortality was higher for women, who are simultaneously more numerable at those ages. Excess mortality in older age groups lowered the life expectancy at birth and worsened the general health of the population (ČIPIN ET AL., 2021).

Life expectancy at birth

Life expectancy at birth is another relevant mortality indicator in a population, and it is closely related to the standard of living and health conditions. Differences in health status are prompted by income differences across countries, and there is a strong correlation between life expectancy at birth and the level of economic development and recent economic growth (TOP, CINAROGLU, 2021). The key mechanism behind the increase in human life expectancy is epidemiologic transition (OLSHANSKY, AULT, 1986; OMRAN, 1971).

ca naglašavaju ulogu bioloških čimbenika (npr. Y kromosom, mitohondrijska DNA i spolni hormoni) (GIULIANI, GARAGNANI, FRANCESCHI, 2018.; MARAIS I DR., 2018.; ROGERS I DR., 2010.), ali i životnih navika i obrazaca ponašanja (npr. muškarci češće usvajaju rizične obrasce ponašanja što se očituje i u njihovu povećanom mortalitetu) (GOLDSTEIN, 2011.). Prema Oeppenu i Vaupelu (2002.), u posljednja dva stoljeća u brojnim razvijenim zemljama očekivano trajanje života se više nego udvostručilo – s 30 – 40 godina na otprilike 80 i više godina.

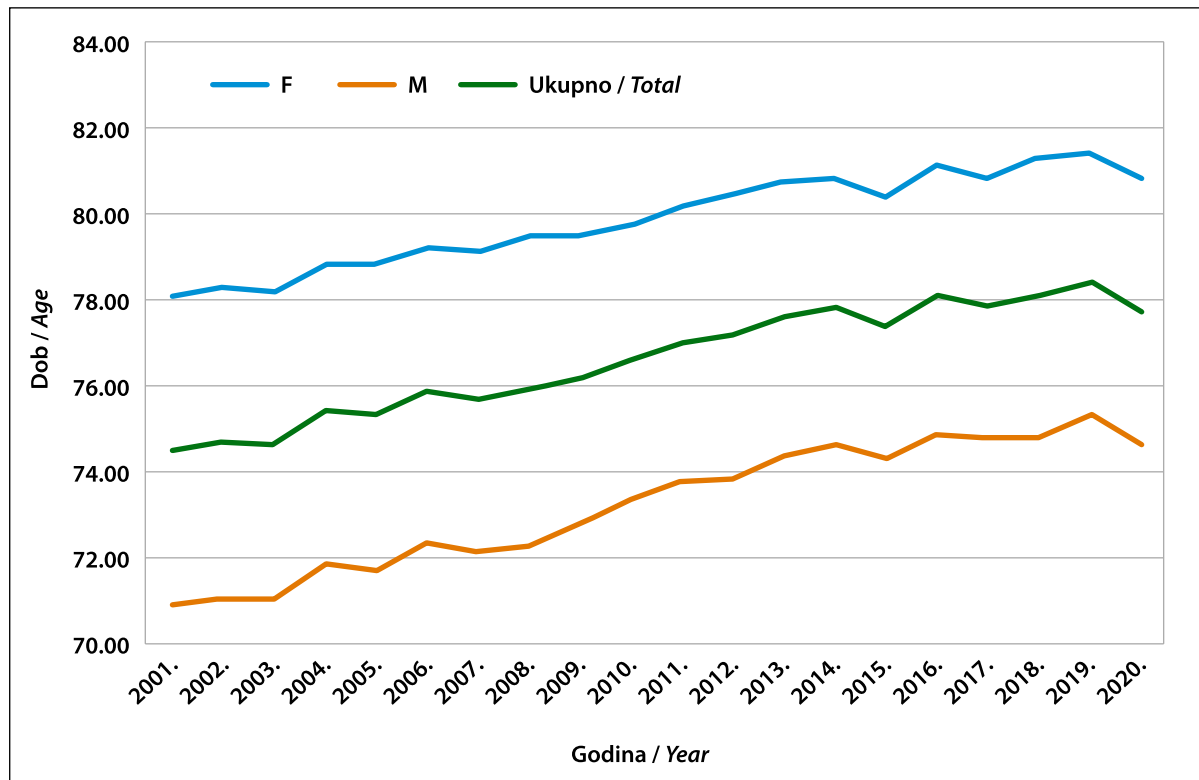
Povećanje očekivanog trajanja života pri rođenju u Hrvatskoj koje je započelo u 20. stoljeću nastavilo se i u 21. stoljeću. Godine 1950. očekivano trajanje života u Hrvatskoj je bilo dosta nisko (56,0 godina za muškarce i 60,9 godina za žene) u usporedbi s industrijaliziranim zapadnim zemljama, ali u idućim 15 godina značajno se povećalo (za otprilike 10 godina) (MRĐEN, 2000.). Do kraja 20. st. povećanje očekivanog trajanja života bilo je sporo i ujednačeno te se više povećalo kod žena nego kod muškaraca. U većini industrijaliziranih zemalja razlika u očekivanom trajanju života među spolovima povećavala se do 1970-ih, a nakon toga se počela smanjivati (GLEI, HORIUCHI, 2007.; OKSUZYAN I DR., 2008.; 2009.). S druge strane, u Hrvatskoj je od 1970-ih nadalje ta razlika bila uglavnom ista.

Od 2001. do 2019. godine očekivano trajanje života pri rođenju u Hrvatskoj povećalo se sa 74,6 na 78,4 godine (za 3,8 godina) (Sl. 10.). Istodobno, očekivano trajanje života kod žena povećalo se za 3,4 godine, a kod muškaraca za 4,4 godine. Razlika u očekivanom trajanju života između muškaraca i žena 2001. godine iznosila je 7,2 godine u korist žena, a 2019. godine 6,2 godine. Očekivano trajanje života u Hrvatskoj je još uvijek ispod prosjeka EU-27 i 2019. godine je iznosilo 81,3 godine za ukupno stanovništvo, odnosno 84,0 godina za žene i 78,5 godina za muškarce. Ukupno gledano, između 2002. (prva godina za koju su dostupni podaci za sve zemlje članice) i 2019. godine očekivano trajanje života u EU-27 povećalo se za 3,7 godina za ukupno stanovništvo, 3,1 godinu za žene i 4,2 godine za muškarce. Također, razlika u očekivanom trajanju života između žena i muškaraca smanjila se sa 6,6 godina na 5,5 godina. Isti trendovi zabilježeni su u većini zemalja članica.

On average and worldwide, women live longer than men, and Croatia is no exception. Research on the causes of the male disadvantage emphasize the role of both biological factors (e.g. Y chromosome, mitochondrial DNA and sex hormones) (GIULIANI ET AL., 2018; MARAIS ET AL. 2018; ROGERS ET AL., 2010) and behavioural factors (e.g. the tendency of men to engage in more reckless behaviours, which can be observed from mortality hump for men (GOLDSTEIN, 2011). According to Oeppen and Vaupel (2002), in many developed countries, in the last two centuries, life expectancy at birth has more than doubled – from 30-40 years to approximately 80 or more years.

The life expectancy at birth increase in Croatia that started in the 20th century, continued in the 21st century, too. In 1950, life expectancy at birth in Croatia was very low (56.0 for men and 60.9 for women) in comparison to industrialized western European countries, but in the following 15 years, life expectancy increased rapidly (by approximately 10 years) (MRĐEN, 2000). By the end of the 20th century, life expectancy increase was slow and steady and life expectancy gains were higher for women than for men. In most industrialized countries the gap in life expectancy between the two sexes widened until 1970s, and after that it started to narrow (GLEI, HORIUCHI, 2007; OKSUZYAN ET AL., 2008; 2009). On the other hand, from 1970s onward in Croatia, the gap in life expectancy remained relatively steady.

From 2001 to 2019, the life expectancy at birth for total population increased from 74.6 to 78.4 (by 3.8 years) (Fig. 10). Simultaneously, life expectancy for women increased by 3.4 years, and for men by 4.4 years. The difference in life expectancy between men and women in 2001 was 7.2 years and in 2019 it lowered to 6.2 years. Life expectancy at birth in Croatia is still below the EU-27 average, which was estimated at 81.3 years for total population in 2019, reaching 84.0 years for women and 78.5 years for men. Overall, between 2002 (the first year for which life expectancy at birth data became available for all member countries) and 2019, life expectancy at birth in the EU-27 increased by 3.7 years for total population, 3.1 years for women and 4.2



SLIKA 10. Očekivano trajanje života u Hrvatskoj od 2001. do 2020.

FIGURE 10 Life expectancy at birth in Croatia from 2001 to 2020

Izvor/Source: Human Mortality Database, <https://www.mortality.org/>, accessed: 5 April 2022

Povećanje mortaliteta 2020. godine tijekom pandemije koronavirusa imalo je negativan utjecaj na očekivano trajanje života u Hrvatskoj – za ukupno stanovništvo očekivano trajanje života smanjilo se za 8,16 mjeseci, za muškarce 8,52 mjeseca, a za žene 7,20 mjeseci. Isti trend zabilježen je u većoj ili manjoj mjeri i u ostalim članicama EU-27. Očekivano trajanje života 2020. godine u EU-27 procijenjeno je na 80,4 godine za ukupno stanovništvo (10,8 mjeseci niže u usporedbi s 2019. godinom), za žene 83,2 godine (9,6 mjeseci niže nego 2019. godine), a za muškarce 77,5 godina (godinu dana niže nego 2019. godine). Višak umrlih zbog COVID-19 tijekom 2021. godine i niže stope procijepljenosti dodatno su snizili očekivano trajanje života pri rođenju u Hrvatskoj – u usporedbi s 2020. godinom, 2021. godine očekivano trajanje života za ukupno stanovništvo snizilo se za jednu godinu, dok je u EU-27 sniženo za tek 0,3 godine.

Posljednjih nekoliko desetljeća razlike u očekivanom trajanju života između spolova su se smanjile u većini zemalja s niskim stopama mortaliteta (THORSLUND I DR., 2013.; HOSSIN, 2021.). Navedeno smanjenje rezultat je više stope preživljavanja muškaraca. Postojeća istraživanja ističu nekoliko

years for men. In addition, the difference in life expectancy between women and men lowered from 6.6 years to 5.5 years. The same trends were recorded in most of the EU member countries.

The increased mortality in 2020 during the coronavirus pandemic had a negative effect on life expectancy in Croatia – for the total population it decreased by 8.16 months, for men 8.52 months and for women 7.20 months. The same trend was recorded in other EU member states to a lesser or larger degree. Life expectancy at birth in the EU-27 was estimated at 80.4 years in 2020 (10.8 months lower than in 2019), reaching 83.2 years for women (9.6 months lower than in 2019) and 77.5 years for men (1 year lower than in 2019). The excess COVID-19 mortality in 2021 and lower vaccination rates additionally lowered the life expectancy at birth in Croatia – in comparison to 2020, in 2021, life expectancy at birth for both sexes decreased by 1 year, while in the EU-27 it decreased by 0.3 years.

In the last few decades, the gender gap in life expectancy has narrowed in most low-mortality countries (THORSLUND ET AL., 2013; HOSSIN,

bitnih čimbenika koji su utjecali na smanjenje razlika – povećano sudjelovanje žena na tržištu rada i sve veće prihvaćanje nezdravih navika (npr. pušenje i konzumacija alkohola), promjene drugih društvenih čimbenika i čimbenika povezanih sa stilom života te medicinski napredak u liječenju smrtonosnih bolesti (HEMSTRÖM, 2016.; SUNDBERG I DR., 2018.; HOSSIN, 2021.).

ZAKLJUČAK

U posljednja dva desetljeća u Hrvatskoj su zabilježene određene pozitivne promjene vezane uz pojedine pokazatelje mortaliteta stanovništva. Starenje stanovništva i intenzivna depopulacija rezultirali su povećanjem stopa mortaliteta, posebice na kraju proučavanog razdoblja, kada je dodatan negativni utjecaj na mortalitet imala pandemija COVID-19. Međutim, smrtnost se pomaknula u stariju životnu dob zbog sve većeg ulaska *baby boom* generacije u staračku dob i zbog sve većih stopa preživljavanja u mlađoj i odrasloj dobi. Pozitivni trendovi također su zabilježeni kod stopa smrtnosti dojenčadi u prvom analiziranom razdoblju te kod očekivanog trajanja života pri rođenju. Unatoč zabilježenim pozitivnim trendovima, navedeni pokazatelji su još uvijek ispod prosjeka EU-27. S druge strane, opća stopa mortaliteta neprestano se povećavala i bila iznad EU-27 prosjeka u čitavom analiziranom razdoblju.

Značajne promjene zabilježene su i kod mortaliteta prema uzroku smrti. Iako je došlo do smanjenja smrtnosti od bolesti cirkulacijskog sustava, zabilježeno je očito povećanje stopa mortaliteta uzrokovanog novotvorinama te endokrinim bolestima, bolestima prehrane i metabolizma, posebice kod žena. Pandemija COVID-19 također je značajno utjecala na mortalitet u Hrvatskoj – povećao se godišnji broj umrlih, zabilježen je višak umrlih u usporedbi s prethodnim razdobljem te je smanjeno očekivano trajanje života pri rođenju.

Zabilježena diversifikacija uzroka smrti povećava pritisak na zdravstveni sustav i snažno utječe na raspodjelu zdravstvenih resursa. Stoga je potrebna daljnja analiza mortaliteta prema uzroku smrti te prema dobi i spolu kako bi se utvrdio utjecaj određenih bolesti na potencijalno izgubljene godine ži-

2021). That convergence was caused by more rapid gain in survival in men. The existing research point out several important factors that might have propelled the convergence trend – increased labour force participation of women and the adoption of health-damaging lifestyles (e.g. smoking and drinking), changes in other social and lifestyle factors, and improved medical treatment of deadly diseases (HEMSTRÖM, 2016; SUNDBERG ET AL., 2018; HOSSIN, 2021).

CONCLUSION

In the last two decades Croatia experienced some positive changes regarding different mortality indicators. Population ageing and intensive depopulation resulted in increased mortality rates, particularly at the end of the research period when they coupled with increased mortality caused by COVID-19. However, the mortality shifted to older ages due to the increasing number of baby boomers entering the older ages and higher survival rates in young and adult ages. Positive trends were also recorded in infant mortality rates in the first analysed period and in life expectancy at birth. Despite the positive trends, those indicators are still below the EU-27 average. On the other hand, the crude death rate recorded a constant increase and was above the EU-27 average throughout the whole period.

Notable changes were recorded in mortality trends according to the causes of death. Although the death rates from the diseases of circulatory system decreased, there was an evident increase in death rates caused by neoplasms and endocrine, nutritional and metabolic diseases, particularly in women. COVID-19 pandemic also had a significant influence on mortality in Croatia – it increased the annual number of deaths and excess mortality, and decreased the life expectancy at birth.

The observed diversification of the causes of death increases the pressure on the healthcare system and largely affects the distribution of health resources. Therefore, there is a need to further analyse the changes in mortality by causes of death by age and sex in order to determine the influence

vota i na očekivano trajanje života pri rođenju i u starijoj dobi. Osim toga, navedeni rezultati trebali bi ukazati na utjecaj faktora rizika povezanih sa životnim navikama na mortalitet te poslužiti kao osnova za osmišljavanje i provođenje preventivnih programa usmjerenih na ublažavanje najznačajnijih izazova javnog zdravstva.

of particular diseases on the years of potential life lost and on the life expectancy at birth and at older ages. Additionally, those results should indicate the role of behavioural risk factors in mortality and serve as a basis for designing and implementing preventive programs aimed at reducing the most important public health challenges.

LITERATURA I IZVORI

- AKRAP, A., ŽIVIĆ, D. (2001): Demografske odrednice i obilježja obiteljske strukture stanovništva Hrvatske, *Društvena istraživanja: časopis za opća društvena pitanja*, 10 (4-5), 621–654.
- BONGAARTS, J. (2005): Long-range trends in adult mortality: Models and projection methods. *Demography*, 42 (1), 23–49, DOI: 10.1353/dem.2005.0003
- CASELLI, G., DREFAHL S. (2017): Future Mortality in Low Mortality Countries. In W. Lutz, W. P. Butz, & Samir K. C. (Eds.). *World Population & Human Capital in the Twenty-First Century: An Overview*, (Oxford, 2017; online edn, Oxford Academic, 12 Nov. 2020), DOI: 10.1093/oso/9780198813422.003.0009.
- CHAUASIA, A. R. (2020): Long-Term Trend in Infant Mortality in India: A Joinpoint Regression Analysis for 1971–2018. *Indian Journal of Human Development*, 14 (3), 394–406, DOI: 10.1177/0973703020975044
- ČIPIN, I., MEĐIMUREC, P. (2019): Suvremeni vitalni demografski procesi u Hrvatskoj. In V. Puljiz, (Ed.) *Socijalno-demografska reprodukcija Hrvatske* (pp. 5–23). Centar za demokraciju i pravo Miko Tripalo.
- ČIPIN, I., MUSTAČ, D., MEĐIMUREC, P. (2021): Učinak pandemije bolesti COVID-19 na mortalitet u Hrvatskoj. *Stanovništvo*, 59 (1), 1–16, DOI: 10.2298/STNV2101001C
- CUTLER, D., DEATON, A., LLIERES-MUNEY, A. (2006): The determinants of mortality. *Journal of Economic Perspectives*, 20 (3), 97–120, DOI: 10.1257/jep.20.3.97
- ECDC (2022): European Centre for Disease Prevention and Control, accessed at: <https://vaccinetracker.ecdc.europa.eu/public/extensions/COVID-19/vaccine-tracker.html#uptake-tab>
- FERALDI, A., ZARULLI, V. (2022): Patterns in age and cause of death contribution to the sex gap in life expectancy: a comparison among ten countries. *Genus*, 78, 23, DOI: 10.1186/s41118-022-00171-9
- FÜRST-BJELIŠ, B., NEL, E., PELC, S. (2022): COVID-19s Economic and Social Impact Globally. In B. Fürst-Bjeliš, E. Nel, & S. Pelc, (Eds.), *COVID-19 and Marginalisation of People and Places* (pp. 9–26). Springer International Publishing, DOI: 10.1007/978-3-031-11139-6_2
- GELO, J. (1987): *Demografske promjene u Hrvatskoj od 1780. do 1981. godine*. Globus.
- GELO, J., AKRAP, A., ČIPIN, I. (2005): *Temeljne značajke demografskog razvoja Hrvatske (bilanca 20. stoljeća)*. Ministarstvo obitelji, branitelja i međugeneracijske solidarnosti.
- GIROSI, F., KING, G. (2008): *Demographic Forecasting*. Princeton University Press.
- GIULIANI, C., GARAGNANI, P., FRANCESCHI, C. (2018): Genetics of human longevity within an eco-evolutionary nature–nurture framework. *Circulation Research*, 123 (7), 745–772, DOI: 10.1161/CIRCRESAHA.118.312562
- GLEI, D. A., HORIUCHI, S. (2007): The narrowing sex differential in life expectancy in high-income populations: Effects of differences in the age pattern of mortality. *Population Studies*, 61 (2), 141–159. DOI: 10.1080/00324720701331433
- GOLDIN, C., LLERAS-MUNEY, A. (2019): XX > XY?: The changing female advantage in life expectancy. *Journal of Health Economics*, 67, 102224, DOI: 10.1016/j.jhealeco.2019.102224
- GOLDSTEIN, J. R. (2011): A secular trend toward earlier male sexual maturity: Evidence from shifting ages of male young adult mortality. *PLoS One* 6(8), e14826. DOI: 10.1371/journal.pone.0014826
- HAZRA, N. C., GULLIFORD, M. (2017): Evolution of the “fourth stage” of epidemiologic transition in people aged 80 years and over: population-based cohort study using electronic health records. *Population Health Metrics*, 15, Article 18, DOI: 10.1186/s12963-017-0136-2
- HEMSTRÖM, Ö. (2016): Changes in the gender gap in life expectancy in Sweden: a cohort analysis with the most recent trends. In M. Dinges, A. Weigl (Eds.) *Gender-specific life expectancy in Europe* (pp. 1850–2010). Franz Steiner, Stuttgart.
- HOLLINGSHAUS, M., UTZ, R., SCHACHT, R., SMITH, K. R. (2019): Sex ratios and life tables: Historical demography of the age at which women outnumber men in seven countries, 1850–2016. *Historical Methods: A Journal of Quantitative and Interdisciplinary History*, 52 (4), 244–253, DOI: 10.1080/01615440.2019.1605863

- HOSSIN, M. Z. (2021): The male disadvantage in life expectancy: can we close the gender gap? *International Health*, 13 (5), 482–484, DOI: 10.1093/inthealth/ihaa106
- IVANUŠA, M., KRALJ, V. (2014): Epidemiologija zatajivanja srca u Republici Hrvatskoj. *Medix*, 112, 76–82.
- JURIĆ, T. (2022): Google trends as a method to predict new COVID-19 cases and socio-psychological consequences of the pandemic. In Z. Boutsoli, V. Bigelow, O. Gkounta, (Eds.), *Essays on COVID-19 Research* (pp. 231–254). Athens Institute for Education and Research.
- KARLINSKY, A., KOBAC, D. (2021): Tracking excess mortality across countries during the COVID-19 pandemic with the World Mortality Dataset. *eLife* 10:e69336, DOI: 10.7554/eLife.69336
- KIM, D., SAADA, A. (2013): The Social Determinants of Infant Mortality and Birth Outcomes in Western Developed Nations: A Cross-Country Systematic Review. *International Journal of Environmental Research and Public Health*, 10 (6), 2296–2335, DOI: 10.3390/ijerph10062296
- KIM, H., FAY, M., FEUER, E., MIDTHUNE, D. (2001): Permutation tests for joinpoint regression with application to cancer rates?. *Statistics in Medicine*, 20 (4), 335–351, DOI: 10.1002/(SICI)1097-0258(20000215)19:3<335::AID-SIM336>3.0.CO;2-Z
- KLEMPIĆ BOGADI, S. (2021): The older population and the COVID-19 pandemic: The case of Croatia. *Stanovništvo*, 59 (1), 31–46, DOI: 10.2298/STNV210406003K
- LI ET KLENK, J., KEIL, U., JAENSCH, A., CHRISTIANSEN, M. C., NAGEL, G. (2016): Changes in life expectancy 1950–2010: contributions from age- and disease-specific mortality in selected countries. *Population Health Metrics*, 14 (20), DOI: 10.1186/s12963-016-0089-x
- LI, T., YANG Y. C., ANDERSON J. J. (2013): Mortality increase in late-middle and early-old age: heterogeneity in death processes as a new explanation. *Demography*, 50 (5), 1563-1591, DOI: 10.1007/s13524-013-0222-4
- MANSON, J. E., AJANI, U. A., LIU, S., NATHAN, D. M., HENNEKENS, C. H. (2000): A prospective study of cigarette smoking and the incidence of diabetes mellitus among US male physicians. *American Journal of Medicine*, 109 (7), 538-542, DOI: 10.1016/S0002-9343(00)00568-4
- MARAIS, G. A., GAILLARD, J.-M., VIEIRA, C., PLOTTON, I., SANLAVILLE, D., GUEYFFIER, F. LEMAITRE, J.-F. (2018): Sex gap in aging and longevity: Can sex chromosomes play a role? *Biology of Sex Differences*, 9 (1), 33, DOI: 10.1186/s13293-018-0181-y
- MESARIĆ ŽABČIĆ, R., MALNAR, A. (2021): Povratna migracija u Republiku Hrvatsku uslijed pandemije virusa COVID-19: izazov za hrvatsko društvo. In F. Bašić, A. Akrap, D. Feletar, M. Perić Kaselj, K. Jurčević (Eds.). *Migracije i identitet: kultura, ekonomija, država - kulturni i demografski aspekt migracija* (pp. 168–180). IMIN, HAZU: Razred za prirodne znanosti.
- MØLBAK, K., ESPENHAIN, L., NIELSEN, J., TERSAGO, K., BOSSUYT, N., DENISSOV, G., BABURIN, A., VIRTANEN, M., FOUILLET, A., SIDEROGLOU, T., GKOLFINOPOULOU, K., PALDY, A., BOBVOS, J., VAN ASTEN, L., DE LANGE, M., NUNES, B., DA SILVA, S., LARRAURI, A., GÓMEZ, I. L., TSOUMANIS, A., JUNKER, C., GREEN, H., PEBODY, R., MCMENAMIN, J., REYNOLDS, A., MAZICK, A. (2015): Excess mortality among the elderly in European countries, December 2014 to February 2015. *Eurosurveillance*, 20, 21065, DOI: 10.2807/1560-7917.ES2015.20.11.21065
- MRĐEN, S. (2000): Tendencije mortaliteta u Hrvatskoj od 1950. do 1998. *Hrvatski geografski glasnik*, 62 (1), 25–40.
- NEJAŠMIĆ, I. (2002): Demografski razvoj u europskim postsocijalističkim zemljama (1990.-1999.). *Društvena istraživanja*, 11 (60+61), 701–723.
- NEJAŠMIĆ, I. (2005): *Demografija – stanovništvo u prostornim odnosima i procesima*. Školska knjiga.
- NELI, K., ANGELOVA, S., GEORGIEVA, I. (2015): Influenza virus activity during the 2013/2014 and 2014/2015 seasons in Bulgaria. *Comptes Rendus de l'Académie Bulgare Des Sciences: Sciences Mathématiques et Naturelles*, 68, 1167–1176.
- OECD/European Observatory on Health Systems and Policies (2021), *Croatia: Country Health Profile 2021, State of Health in the EU*, OECD Publishing, Paris/European Observatory on Health Systems and

- Policies, Brussels.
- OECD/EUROPEAN UNION (2022): *Health at a Glance: Europe 2022: State of Health in the EU Cycle*, OECD Publishing, Paris, DOI: 10.1787/507433b0-en.
- OEPPEN, J., VAUPEL, J. W. (2002): Broken limits to life expectancy. *Science*, 296, 1029–1031. DOI: 10.1126/science.1069675
- OKSUZYAN, A., JUEL, K., VAUPEL, J. W., CHRISTENSEN, K. (2008): Men: Good health and high mortality. Sex differences in health and aging. *Aging Clinical and Experimental Research*, 20 (2), 91–102, DOI: 10.1007/BF03324754
- OKSUZYAN, A., PETERSEN, I., STOVING, H., BINGLEY, P., VAUPEL, J. W. CHRISTENSEN, K. (2009): The male-female health-survival paradox: A survey and register study of the impact of sex-specific selection and information bias. *Annals of Epidemiology*, 19 (7), 504–511, DOI: 10.1016/j.annepidem.2009.03.014
- OLSHANSKY, S. J., AULT, A. B. (1986): The fourth stage of the epidemiologic transition: The age of delayed degenerative diseases. *The Milbank Quarterly*, 64, 355–391.
- OMRAN, A. R. (1971): The epidemiologic transition. A theory of the epidemiology of population change. *Milbank Memorial Fund Quarterly*, 49, 509–538.
- OWENS I. P. F. (2002): Sex differences in mortality rate. *Science*, 297 (5589), 2008–2009, DOI: 10.1126/science.1076813
- RALEIGH, V. S. (2018): Stalling life expectancy in the UK. *British Medical Journal*, 362, k4050, DOI: 10.1136/bmj.k4050
- ROGERS R.G., EVERETT B.G., ONGE, J. M. KRUEGER P.M. (2010): Social, behavioral, and biological factors, and sex differences in mortality. *Demography*. 47 (3), 555-78, DOI: 10.1353/dem.0.0119
- ROPAC, D., STAŠEVIĆ, I., RAFAJ, G. (2020): Neki epidemiološki pokazatelji u pandemiji COVID-19 u Republici Hrvatskoj tijekom 2020. godine. *Acta medica Croatica*, 74 (4), 299–305.
- SANTOSA, A., WALL, S., FOTTRELL, E., HOGBERG, U., BYASS P. (2014): The development and experience of epidemiological transition theory over four decades: a systematic review. *Global Health Action*, 7 (1), 23574, DOI: 10.3402/gha.v7.23574
- SHKOLNIKOV, V. M., JDANOV, D. A., ANDREEV, E. M., VAUPEL, J. W. (2011): Steep Increase in Best-Practice Cohort Life Expectancy. *Population and Development Review*, 37 (3), 419–434, DOI: 10.1111/j.1728-4457.2011.00428.x
- SMOLIĆ, Š., ČIPIN, I., MEĐIMUREC, P. (2021): Access to healthcare for people aged 50+ in Europe during the COVID-19 outbreak. *European Journal of Ageing*, 19 (4), 793-809, DOI: 10.1007/s10433-021-00631-9.
- SUNDBERG, L., AGAHI, N., FRITZELL, J., FORS S. (2018): Why is the gender gap in life expectancy decreasing? The impact of age- and cause-specific mortality in Sweden 1997-2014. *International Journal of Public Health*, 63 (6), 673-681, DOI: 10.1007/s00038-018-1097-3
- TCHOLAKOV, N. (2005): Mortality and Life Expectancies in EU Acceding Countries – Long-term Outlook. *Migracijske i etničke teme*, 21 (1-2), 91–109.
- THORSLUND, M., WASTEISSON, J. W., AGAHI, N., LAGERGREN, M., PARKER, M. G. (2013): The rise and fall of women's advantage: a comparison of national trends in life expectancy at age 65 years. *European Journal of Ageing*, 10 (4), 271–277, DOI: 10.1007/s10433-013-0274-8
- TOP, M., CINAROGLU, S. (2021): Cluster analysis of health systems in Europe according to life expectancy at birth. *International journal of health planning and management*, 36 (6), 2162–2181, DOI: 10.1002/hpm.3283
- WANG, L. (2002): *Health Outcomes in Poor Countries and Policy Options: Empirical Findings from Demographic and Health Surveys* (Policy Research Working Paper No. 2831), accessed: <https://openknowledge.worldbank.org/handle/10986/14806>, 3rd May 2022.
- WATSON, O. J., BARNSLEY, G., TOOR, J., HOGAN, A. B., WINSKILL, P., GHANI, A. C. (2022): Global impact of the first year of COVID-19 vaccination: a mathematical modelling study. *The Lancet Infectious Disease*

- ses, 22 (9), 1293-1302, DOI: 10.1016/S1473-3099(22)00320-6
- WERTHEIMER-BALETIĆ, A. (1999): *Stanovništvo i razvoj*. Zagreb.
- WERTHEIMER-BALETIĆ, A. (2003): Dugoročni demografski procesi u Hrvatskoj u svjetlu popisa stanovništva 2001. godine. *Zbornik Ekonomskog fakulteta u Zagrebu*, 1 (1), 91–103.
- WERTHEIMER-BALETIĆ, A. (2004): Depopulacija i starenje stanovništva - temeljni demografski procesi u Hrvatskoj. *Društvena istraživanja: časopis za opća društvena pitanja*, 13 (4-5), 631 –651.
- WERTHEIMER-BALETIĆ, A. (2005): Demografija Hrvatske – aktualni demografski procesi. *Diacovensia: teološki prilozi*, 13 (1), 37–118.
- WILMOTH, J. R., DEEGAN, L. J., LUNDSTROM, H., HORIUCHI, S. (2000): Increase in maximum life span in Sweden, 1861–1999. *Science*, 289, 2366–2368
- ZHENG, H. (2014): Aging in the context of cohort evolution and mortality selection. *Demography*, 51 (4), 1295–1317, DOI: 10.1007%2Fs13524-014-0306-9
- ZIMMET, P., ALBERTI, K.G., SHAW, J. (2001): Global and societal implications of the diabetes epidemic. *Nature*, 414 (6865), 782–787.
- ŽIVIĆ, D. (2003): Suvremene tendencije u razvoju stanovništva Hrvatske. *Diacovensia*, 11 (2), 253–279.
- ŽIVIĆ, D., POKOS, N., TURK, I. (2005): Glavni demografski procesi u Hrvatskoj, *Hrvatski geografski glasnik*, 67 (1), 27–44.

Zaljubljenik u domovinu i geografiju – kratki prikaz znanstvenih, nastavnih i institucijskih doprinosa *professora emeritusa* Damira Magaša u prigodi 70. obljetnice života

Damir Magaš rođen je u Metkoviću 15. siječnja 1953. Mjesto rođenja povezano je uz mjesto rada njegovih roditelja (u Opuzenu), prosvjetnih djelatnika podrijetlom iz starih obitelji u Vinjercu koje su životni putevi raspršili po hrvatskom priobalju, a zatim ujedinili na hrvatskom Jugu.

Osnovno i gimnazijsko obrazovanje stekao je u Zadru. Na Geografskom odsjeku Prirodoslovno-matematičkog fakulteta Sveučilišta u Zagrebu završio je inženjerski smjer studija geografije 1975. Godine 1976. zaposlio se u Zavodu za urbanizam u Zadru gdje je do 1993. obavljao poslove prostornog planera te rukovodio izradom prostornih planova i studija. Od 1976. godine surađuje i sa Zavodom za povijesne znanosti HAZU u Zadru u čijim je izdanjima objavio rezultate svojih prvih i više kasnijih geografskih znanstvenih istraživanja. Na poslijediplomskom studiju Urbanizam i prostorno planiranje Arhitektonsko-građevinsko-geodetskog fakulteta Sveučilišta u Zagrebu magistrirao je 1985.

Disertaciju pod naslovom *Historijsko-geografske osnove urbanog razvoja Nina i problemi njegove suvremene revitalizacije* pod mentorstvom prof. dr. sc. Velimira Rogića obranio je na Geografskom odsjeku PMF-a u Zagrebu 1992. godine. Te je godine započeo održavati nastavu geografije na Odsjeku za razrednu nastavu i predškolski odgoj Filozofskog fakulteta u Zadru kao vanjski suradnik na kojem se 1993. zaposlio. Godine 1994. godine započeo je s pripremama za pokretanje studija geografije, odnosno Odsjeka za geografiju/zemljopis na Filozofskom fakultetu u Zadru (kasnije Odjela za geografiju Sveučilišta u Zadru), čime su, uz Geografski odsjek PMF-a u Zagrebu, udareni temelji stvaranju nove znanstvene geografske jezgre u Hrvatskoj. Do 1999. bio je prvi predstojnik toga odsjeka. Ujedno, bio je član-volonter Poglavarstva Zadarsko-kninske županije (1993. – 1997.) za prostorno uređenje, predsjednik upravnog odbora Zavoda za prostorno uređenje Zadarske županije (1996. – 1999.) i član upravnog odbora Parka prirode *Telašćica* (1998. – 1999.).

Znanstveno zvanje višeg znanstvenog suradnika i znanstveno-nastavno zvanje izvanrednog profesora stekao je 1997. Dužnost prodekana Filozofskog fakulteta u Zadru obavljao je 1997. – 2000. kada je bio i predstojnik Zavoda za povijesne znanosti, klasičnu filologiju i geografiju na Filozofskom fakultetu u Zadru. Od 1999. predavao je na poslijediplomskim studijima na Filozofskom fakultetu u Zadru/Sveučilištu u Zadru (*Povijest jadranskog pomorstva* – do 2007.) i Prirodoslovno-matematičkom fakultetu u Zagrebu (*Geografske osnove prostornog planiranja i uređenja* – do 2016.).

U znanstveno zvanje znanstvenog savjetnika i znanstveno-nastavno zvanje i radno mjesto redovitog profesora izabran je 2001. Od 2006. redoviti je profesor u trajnom zvanju. Uz rad u nastavi na studiju geografije, u razdoblju 2002. – 2013. utemeljio je, vodio i sudjelovao u izvedbi nastave i na poslijediplomskom studiju *Geografske osnove litoralizacije Hrvatske* na Odjelu za geografiju Sveučilišta u Zadru (predmeti *Geografski i urbano-geografski aspekti litoralizacije Hrvatske* i *Geografske osnove razvitka hrvatskih otoka*). Sudjelovao je i na međunarodnom poslijediplomskom studiju *European Studies: Languages and Cultures in Contact*, Sveučilišta u Zadru u suradnji s četiri inozemna i dva hrvatska sveučilišta (2003. – 2007.). U dodiplomskoj nastavi predavao je i bio nositelj predavanja više predmeta, zaključno s predavanjima kolegija *Regionalna geografija Hrvatske I. i II* i *Geografski aspekti regionalizacije i prostornog planiranja*. Suradivao je u poslijediplomskoj i diplomskoj nastavi ili kao gostujući predavač na sveučilištima u Angersu, Zagrebu, Rijeci, Mariboru, Pečuhu i Skopju.

U razdoblju 1998. – 2002. vodio je opsežne radnje za osnivanje (obnovu) Sveučilišta u Zadru na tradicijama sveučilišta dominikanskog reda, *Studium generale – Universitas Iadertina*. Bio je posljednji u nizu dekana Filozofskog fakulteta u Zadru 2000. – 2002., a poslije donošenja *Zakona o osnivanju Sveučilišta*

u Zadru, 2002. – 2003. bio je privremeni rektor, a imenovala ga je Vlada Republike Hrvatske. Od 2003. do 2007. bio je prvi izabrani rektor novoga Sveučilišta u Zadru, prvoga u Hrvatskoj koje je u cijelosti pravno i funkcionalno integrirano. Potaknuo je kadrovski, prostorni, znanstveni, nastavni, izdavački i kulturno-umjetnički i sportski razvoj te visokoškolske i znanstvene ustanove, kao i njezinu suradnju s mnogim domaćim i inozemnim znanstvenim i istraživačkim ustanovama. U vrijeme njegova vođenja udvostručen je broj studenata (s 2500 na 5000), broj zaposlenika (s 200 na 400), posebno djelatnika u suradničkim, nastavnim i znanstveno-nastavnim zvanjima (sa 150 na 300), kao i prostorni kapaciteti s uređenjem i obnovom središnje zgrade na obali, zgrade Rektorata, kapele sv. Dimitrija, zgrade sveučilišnih centara i dr. Višestruko je proširena znanstvena, nastavna i izdavačka djelatnost te suradnja s mnogim domaćim i inozemnim ustanovama, sveučilištima. Inicirao je uključanje Sveučilišta u Zadru u međunarodne udruge sveučilišta (IAU – Svjetska zajednica sveučilišta, EUA – Europska zajednica sveučilišta, DRC – Dunavska rektorska konferencija, Alpe-Adria RC – Rektorska konferencija zemalja Alpe-Jadran, CERC – Rektorska konferencija zemalja Srednje Europe, UNIADRION – zajednica sveučilišta zemalja Jadranskog prostora) itd.

Akadske godine 2005./2006. predsjedavao je Rektorskim zborom Hrvatske i vodio njegove sjednice, ponajprije posvećene svim motrištima provođenja Bolonjske deklaracije u prvoj godini njezine primjene na hrvatskim visokim učilištima kao i ostalim pitanjima i predmetima sveučilišne akademske zajednice u Hrvatskoj sa svih aspekata nastave i znanstveno-istraživačke djelatnosti. Predstavljao je Rektorski zbor Republike Hrvatske na više međunarodnih skupova u Uppsali (EUA), Hamburgu (EUA), Dubrovniku (MZOŠ), Bangkoku (IAU), Bruxellesu (EUA), Mariboru (DRC), Innsbrucku (CERC) i Brnu (EUA). Predsjedavao je Rektorskom konferencijom zemalja Alpe-Jadran u akademskoj godini 2005./2006. i organizirao njezine skupove u Hrvatskoj.

Posebnu vrijednost ima znanstveni opus prof. dr. sc. Damira Magaša. Usmjerio se na regionalnogeografsku i historijskogeografsku problematiku hrvatskoga primorskog prostora, a dao je odgovarajući doprinos i političko-geografskim istraživanjima te geografskim motrištima prostornog planiranja. Objavio je oko 250 bibliografskih jedinica od čega 105 znanstvenih (pet knjiga, 26 poglavlja u knjizi i 74 znanstvena članka), zatim stručnih (stručne knjige, srednjoškolski udžbenici, osnovnoškolski priručnici, fakultetsku skripta i stručni članci), veći broj sažetaka predstavljenih priopćenja i radova u pripremi ili objavljenih, prikaza, osvrti, obljetnica, prigodnih i popularnih članaka. Među tim knjigama znanstvena monografija sa statusom sveučilišnog udžbenika *Geografija Hrvatske*, koju su objavili izdavačka kuća Meridijani i Sveučilište u Zadru na hrvatskom jeziku 2013. i na engleskom jeziku 2015., djelo je od prvorazrednog značaja za proučavanje i znanstveni pristup poznavanju prostora suvremene Hrvatske.

Znanstvene rasprave o hrvatskim otocima bile su njegovi prvi radovi u HAZU, a malim otocima zasebno. Objavio je fundamentalnu i opsežnu građu u kojoj se o hrvatskim otocima raspravlja i sintetski i pojedinačno (Olib, Premuda, Rava, Žirje, Kaprije, Unije, Ilovik, Elafiti, Drvenik Mali /Ploča/, Ist, Veli Rat i dr.). Posebnu pozornost posvetio je i otocima Ugljanu, Pagu, Pašmanu, Vrgadi, Kornatima, Sikavcima, Visu i Lastovu. Dio toga opusa, posebice sintetske radove, objavljivao je i objavljuje i na međunarodnoj razini, u zbornicima svjetskih geografskih kongresa i drugih skupova.

Istaknutu cjelinu čine Magaševi monografski radovi pojedinih mikrocjelina i naselja Jadranske Hrvatske. Posebno se bavio geografskom osnovom urbanog razvoja Nina što je razradio u svojoj disertaciji i posebno objavio. Napisao je sveobuhvatnu znanstvenu monografiju o Vinjercu, istaknutom ishodištu pomoraca u Velebitskom kanalu, s analiziranim, obrađenim i raspravljenim fizičko-geografskim, historijsko-geografskim, socio-geografskim i ekonomsko-geografskim aspektima zemljopisnog istraživanja i sintetiziranja mikroprostora. Također je autor više sintetskih geografskih radova o zadarskom užem kraju i Zadru (zadarska regija, zadarska urbana regija, Zadarsko-kninska županija, Zadarska županija) ili drugih prostora (biogradska mikroregija, Kaštela, skradinski prostor, posedarski kraj, novigradska općina, ljubački kraj, ličko-sjevernodalmatinski prostorni kompleks, starigradska općina, Bibinje, Kožino itd.).

U sklopu bavljenja geografskom problematikom hrvatskog priobalja i otoka, nekoliko važnih radova posvetio je složenim procesima litoralizacije, očuvanja prirode (Novigradsko more), prostornog planiranja i regionalizacije, na regionalnoj i na nacionalnoj razini. Na međunarodnoj se razini istaknuo svojim regionalno-geografskim i političko-geografskim raspravama o Hrvatskoj, značenju Jadranskog mora, hrvatskih otoka, ulasku Hrvatske u NATO i sl. na kongresima i skupovima na Menorci, Malti, Mentonu, u Seulu, Punta Arenasu, Metz/Schöngenu, Durbanu, Budimpešti, Dublinu (Maynouth), Glasgowu, Brisbaneu, Kopru, St. Niklaasu, Beču i dr. koje su objavljene u zbornicima tih skupova, poglavljima knjiga ili u pojedinim inozemnim časopisima. U tim se člancima ili poglavljima knjiga znanstveno obrađuju geografski položaj, prirodno-geografska osnova, historijsko-geografski razvoj i geopolitičke konstelacije, posebice u okolnostima nastajanja i razvoja samostalne Republike Hrvatske. U više suvremenih radova bavi se i problematikom geografske regionalizacije hrvatskog prostora.

U znanstvenim raspravama i istraživanjima njeguje kompleksni geografski pristup prostornoj stvarnosti, i onoj u retrospekciji razvoja na geopovršini i onoj u kojoj se bavi suvremenim obilježjima geoprostora. Osnovno značenje u radovima pridaje prirodnoj geo-osnovi, kroz razmatranje prirodno-geografskih (geomorfoloških, klimatskih, hidrogeografskih, pedogeografskih, biogeografskih) značajki, povezujući ih najčešće u složenoj prostornoj stvarnosti s drugim geografskim značajkama (historijsko-geografskim, socio-geografskim, ekonomsko-geografskim, geopolitičkim i sl.) ostvarujući tako sintetske rasprave o mikro ili makro prostornim geografskim jedinicama: naseljima, mikroregijama, regijama, prostoru države, akvatorijama, otocima, otočjima i sl. Tako prirodno-geografski aspekt dobiva primarno mjesto u objavljenim znanstveno-istraživačkim regionalno-geografskim raspravama što omogućuje široku primjenu tih radova u praksi, posebice u upoznavanju pojedinih prostora u svrhu njihova prostornog planiranja i uređivanja.

Znanstveni radovi Damira Magaša metodološki su predloži za uspješno i društveno korisno geografsko istraživanje kod mladih hrvatskih geografa, ali i drugih. Nadasve važan znanstveno-istraživački pristup u obradi prirodno-geografske osnove kao preduvjeta i uzroka mnogih prostornih procesa, posebice suvremenih antropogeografskih učinaka u okolnostima razvoja na Zemlji, uspješno je primjenjivao u svojim radovima, ali i u visokoškolskoj nastavi na prijediplomskim i diplomskim studijima, a to još uvijek čini i na poslijediplomskoj razini studija. Učinkovit način uzročno-posljedičnog povezivanja raznorodnih geografskih i uopće prostornih sastavnica geoprostora kvalitetan je poticaj radu novih naraštaja geografa s kojima djeluje i koji su stasali u okvirima studija i odjela koje je utemeljio, ali i znatno šire.

Stručni opus Damira Magaša obuhvaća stručne članke, poglavlja, udžbenike i priručnike, te različite prikaze (obljetnice, predgovore, polemike, nekrologe), zatim sažetke radova u pojedinim zbornicima radova, knjigama sažetaka ili programima skupova, objavljeno mu je nekoliko recenzija, a značajan dio odnosi se na elaborate, ekspertize i studije iz domene planiranja, uređenja i zaštite prostora. Dio stručnih radova odnosi se na prikaze koji se uglavnom vezuju za prikaze literature, djela, postignuća, rada ustanova, života osoba i sl. vezanih za geografsku znanost i struku, odnosno osobe, geografe i druge te ustanove zaslužne za razvoj geografske misli. Više prostorno-planskih elaborata i studija kvalitetni su i u praksi primijenjeni dokumenti u kojima geografski pristup ima istaknuto mjesto u multidisciplinarnoj obradi prostorne stvarnosti i neposrednim smjernicama razvoja. Na izradi *Prostornog plana Općine Zadar* i *Prostornog plana otoka Ugljana* radio je 1976. – 1978. Na izradi *Prostornog plana Zajednica općina Split* surađivao je 1980. – 1982., a *Prostornog plana SR Hrvatske* 1987. – 1989. Izradu *Prostornog plana Nacionalnog parka Paklenica* vodio je 1984. – 1985., a *Prostornog plana Dugog otoka, Rave i Zverinca* 1984. Reviziju prostornog plana Općine Biograd vodio je 1985., a zatim prostorne planove otoka Pašmana i otoka Vrgade. Izradu *Prostornog plana Parka prirode Telašćica* vodio je u razdoblju 1988. – 1990. *Osnove prostornog uređenja za bivše općine Benkovac, Biograd, Obrovac i Zadar* vodio je 1992. – 1993. Kao vanjski suradnik sudjelovao je i na izradi *Prostornog plana Zadarske županije* 1997. – 2000.

Bio je suradnik na dva znanstvena projekta koje je financiralo Ministarstvo znanosti i tehnologije (1991. – 1996.). Vodio je znanstvene projekte *Geografske osnove razvoja malih hrvatskih otoka* (1996.

– 2006.) i *Geografske osnove razvoja litoralnih regija Hrvatske* (2006. – 2014.). te program *Geografsko-krajobrazne odrednice razvoja hrvatskog priobalja i otoka* Ministarstva znanosti, obrazovanja i sporta Republike Hrvatske. Na tim je znanstvenim projektima angažirao nekoliko mladih suradnika kao znanstvene novake koji su se uz njegovu koordinaciju i mentorstvo razvili u samostalne istraživače te s njim u suautorstvu, a zatim samostalno i kao članovi različitih istraživačkih timova postigli značajna znanstvena i nastavna postignuća. Vodio je izradu 63 diplomskih rada, jednoga magistarskog rada znanosti i devet disertacija, a u tijeku je vođenja još jedne disertacije.

Utemeljio je, i petnaest godina, 1996. – 2011., bio glavni urednik znanstvenog časopisa *Geoadria*. Uredio je prvi hrvatski enciklopedijski *Geografski rječnik* autora Alfonsa Cvitanovića (2002.), znanstvenu monografiju *Otok Vir* (2016.), u ediciji *Bibliotheca Croatica Maritima et Carsologica*, Centra za istraživanje krša i priobalja Sveučilišta u Zadru, uredio je s Ninom Lončar izdanje *Zrmanja uokvirena kršem* (2014.). Bio je član uredništva nekoliko knjiga i časopisa. Aktivno je sudjelovao u radu 89 znanstvenih (u inozemstvu i u zemlji, uglavnom međunarodnih) i 28 stručnih skupova (dva u inozemstvu i 26 u zemlji). Recenzirao je gotovo stotinu radova (znanstvene i stručne knjige, poglavlja u knjigama te znanstvene i stručne članke). Govori, čita i piše engleski i njemački jezik, služi se talijanskim, ruskim i latinskim.

Prof. dr. sc. Damir Magaš vrlo je angažiran u znanstvenim i strukovnim udrugama, pridonoseći popularizaciji znanosti i okupljanju onih koje zanimaju geografska istraživanja te geografska motrišta različitih prostornih fenomena, procesa i interakcija. Član je *Hrvatskog geografskog društva* (HGD) od 1971., a od 1995. do 2011. bio je i predsjednik njegova ogranka u Zadru, a od 1995. član njegova Upravnog odbora. Član je *Hrvatskog kartografskog društva* od 2001. i njegova Suda časti (2001. – 2018.). Redoviti je član *Akademije odgojno-obrazovnih znanosti Hrvatske* od 2014. Član je *Društva za povjesnicu Zadarske nadbiskupije – Zmajević* od 2016. Volontirao je kao član poglavarstva Zadarsko-kninske županije (1993. – 1997.) i Zadarske županije (2000. – 2004.). Bio je dugogodišnji aktivni član *Zadarskog komornog orkestra* (1997. – 2002.).

Član je više povjerenstava i odbora. Član je *Nacionalnog vijeća za znanost i tehnologiju* od 2019. godine. Bio je član *Matičnog odbora za polje geoznanosti* u dva mandata (2005. – 13.) i član *Matičnog odbora za interdisciplinarno područje znanosti* (2010. – 2013. i od 2017.). Za svoja je postignuća dobio veći broj odlikovanja i priznanja. Odlikovan je Redom Danice hrvatske s likom Ruđera Boškovića (2007.), te nagrađivan: Plaketom Sveučilišta u Zadru (2012.), Nagradom „Federik Grisogono Bartolačić“ Hrvatskoga geografskog društva u Zadru (2014.) i Godišnjom nagradom za promicanje znanosti Zadarske županije (2014.). Nagradu za životno djelo „Frane Bulić“ za znanost dodijelila mu je Slobodna Dalmacija 2018. Dobio je i Nagradu Grada Zadra za životno djelo 2019.

Uzimajući u obzir znanstvena, nastavna i stručna postignuća u interdisciplinarnom području znanosti, polje geografija, sa značajnim nacionalnim utjecajem i zapaženim međunarodnim odjekom te osobit doprinos pri osnivanju i prvim godinama djelovanja Sveučilišta u Zadru Senat toga sveučilišta dodijelio je prof. dr. sc. Damiru Magašu počasno zvanje *professor emeritus* 2020.

Premda je u mirovini od kraja akademske godine 2019./2020., profesor Magaš ne miruje. Posvetio se pripremi višetomne znanstvene monografije *Velika geografija Hrvatske* koju objavljuju Školska knjiga i Sveučilište u Zadru. Okupio je mnoge znanstvenike geografe kao i znanstvenike iz geografiji srodnih znanstvenih disciplina (geologe, oceanologe, arheologe, povjesničare, biologe, pedologe i dr.) i s njima sukcesivno objavljuje pojedine tematske cjeline. To djelo kao i sveukupni znanstveni opus profesora Magaša odaje marljivoga znalca i velikog zaljubljenika u domovinu, ne zanemarujući, štoviše uvažavajući europski i globalni kontekst proučavanja i vrednovanja prostora. Svoj znanstveni stvaralački rad sada velikim dijelom obavlja u Vinjercu, pitoresknom primorskom i pomorskom mjestu svojih predaka. Zasiurno u starom masliniku sa svojom suprugom Katom i s pogledom na kanjone Velike i Male Paklenice te čudesno more Velebitskog kanala pobuđuje i dalje znanstvenu vatru iz koje se vjerojatno uz realnu radu i pokoja lijepa imaginarna geografska slika domovine i zavičaja.

Poveznica na popis važnijih publikacija profesora emeritusa Damira Magaša u Hrvatskoj znanstvenoj bibliografiji (CRORIS):

<https://www.croris.hr/crosbi/searchByContext/2/12391>

Odabrani tekstovi o profesoru emeritusu Damiru Magašu

Velimir Veljko Rogić (2000.): Četvrt stoljeća uspješnog geografskog rada – Damir Magaš, *Geoadria*, 6, 181-190.

Miljenko Lapaine i Ivka Kljajić (2009.): Damir Magaš, u: *Hrvatski kartografi – biografski leksikon*, Golden marketing – Tehnička knjiga, Zagreb, 2009., 360-362.

Ivan Stagličić (2023.): Prof. dr. sc. Damir Magaš – Nepoznato o poznatima, *Zadarski tjednik*, 10. ožujka 2023., 7-9. <https://zadarskitjednik.hr/grad-zadar/oni-cine-razliku/prof-dr-sc-damir-magas-zastarjeli-model-cetiri-centra-rezultirao-je-demografskom-pustosi-hrvatske-2503381>

Josip Faričić

NAPUTAK AUTORIMA

O ČASOPISU

Geoadria je znanstveni časopis u otvorenom pristupu koji primarno objavljuje rezultate istraživanja hrvatskoga litoralnog pojasa i Hrvatske u cjelini, a potom i rezultate istraživanja različitih geografskih i geografski srodnih znanstvenih disciplina o prostoru Jadrana, Sredozemlja i Europe. Dobrodošli su radovi bilo koje geografske tematike koji na teoretski, metodološki ili primjenjiv način razmatraju probleme i međudjelovanje prirodnih i društvenih sastavnica prostora. Posebno potičemo objavljivanje rezultata dobivenih geoprostornim alatima i metodama kao i onih koji se nadovezuju na prethodno objavljene rezultate istraživanja u Geoadriji.

Geoadriju izdaju Hrvatsko geografsko društvo – Zadar i Odjel za geografiju Sveučilišta u Zadru od 1996. Od 2006. godine svi se radovi u časopisu objavljuju na hrvatskom i engleskom jeziku ili samo na engleskom jeziku (strani autori).

U časopisu se objavljuju radovi koji podliježu najmanje dvjema dvostruko anonimiziranim recenzijama, a svrstavaju se u sljedeće kategorije:

- a) **izvorni znanstveni članak** (*original scientific paper*) – izvorno znanstveno djelo u kojem su izneseni novi rezultati fundamentalnih ili primijenjenih istraživanja
- b) **prethodno priopćenje** (*preliminary communication*) – znanstveni članak koji obavezno sadrži jednu ili više znanstvenih informacija, ali bez dovoljno pojedinosti koje bi omogućile čitatelju provjeru iznesenih znanstvenih spoznaja
- c) **pregledni članak** (*review*) – donosi, na temelju literature, cjelovit prikaz dosadašnjih znanja o nekoj temi nastojeći objasniti trenutačno razumijevanje te teme.

Otvoren pristup

Geoadria je časopis u otvorenom pristupu. Sadržaj časopisa u cijelosti je besplatno dostupan. Korisnici smiju čitati, preuzimati, kopirati, distribuirati, tiskati, pretraživati ili stavljati poveznice na materijal te mijenjati, preoblikovati i prerađivati materijal ili ga koristiti na druge zakonite načine, sve dok odgovarajuće citiraju izvornik, u skladu s CC BY 4.0 licencom.

Indeksiranje

Časopis se referira u bazama: Web of Science Core Collection – Emerging Source Citation Indeks (ESCI), Scopus, ERIH PLUS, GEOREF, Current Geographical Publications. Akademske baze i pretraživači: DOAJ, EBSCO (Academic Search Complete), Hrčak.

Troškovi

Prijava radova, recenzija i objavljivanje članaka se ne naplaćuje.

Publiciranje, vremenik

Tiskani brojevi časopisa Geoadria izlaze polugodišnje, u lipnju i prosincu, i to na hrvatskom i engleskom jeziku. Geoadria primjenjuje sustav objavljivanja „prvo na mreži“ (online first) što znači da se radovi postavljaju na mrežnu stranicu platforme Hrčak nakon recenzije i lekture, a prije grafičkog uređenja. Konačna verzija postavlja se nakon izrade prijeloma. Od prijave do objave rada u tiskanom obliku potrebno je, otprilike, od četiri do osam mjeseci.



ZAPRIMANJE RUKOPISA

Uredništvo prima rukopise cijele godine. Rukopis se podnosi na hrvatskom i engleskom jeziku (ili samo na engleskom – za strane autore) preko izdavačke platforme Morepress (<https://morepress.unizd.hr/journals/geoadria>). Radovi poslani putem e-pošte neće se uzeti u obzir. Autori u članku posebnu pozornost moraju obratiti na odgovarajuće strukturiranje teksta i odgovarajuću duljinu u skladu s priznatim standardima znanstvene metodologije. Zbog toga autorima predlažemo da prouče i koriste obrazac za pisanje članka. Prije slanja rada paziti da nigdje u rukopisu nisu navedeni osobni podaci autora (ime i prezime) ili u postavkama Word dokumenta. Pri imenovanju rukopisa predlažemo korištenje skraćene verzije naslova rada.

Radovi ne bi trebali imati više od 13 000 riječi, odnosno najviše 15 000 nakon recenzije. To uključuje sve reference. Kategoriju rada koja se objavljuje u zaglavlju članka utvrđuje glavni urednik na temelju dviju recenzija (po potrebi i više) i mišljenja uredničkog odbora. Ostali rukopisi i prilozi svrstavaju se u stalne i povremene rubrike. Prijava radova, recenzija i objavljivanje članaka (APC) se ne naplaćuje.

Prijava treba sadržavati:

- A) Rukopis
- B) Sve slike kao zasebne datoteke (ako ih ima)
- C) Excel dokument s izrađenim grafikonima (ako ih ima)
- D) Popratno pismo koje sadrži puna imena (s podcrtanim prezimenima) svih autora, njihove titule i potpis dopisnog autora kojim se potvrđuje da rukopis ili njegov dio nije prihvaćen za objavu ili da se razmatra za objavu ili da je objavljen negdje drugdje (Izjava o autorstvu) i Izjavu u sukobu interesa (ako postoji).
- E) Dopuštenje o objavi grafičkih priloga koje autori nisu sami izradili (ako ih ima)
- F) Dodatne dokumente

Prijava članka i provjera

Prijava članka podrazumijeva da rad nije prethodno objavljen (osim u obliku sažetka, objavljenog predavanja ili ocjenskog rada), da nije u razmatranju za objavljivanje na drugom mjestu, da su njegovo objavljivanje odobrili svi autori i insitucija gdje je istraživanje provedeno te da, ako bude prihvaćen, rad neće biti objavljen drugdje u istom obliku, na engleskom ili bilo kojem drugom jeziku, uključujući elektronički oblik.

Grafički prilozi

Izvorni znanstveni članci u načelu se ne bi trebali koristiti grafičkom dokumentacijom drugih autora. Ako se koristi takva dokumentacija iz graničnih područja (npr. geologije), obvezno treba citirati autora. Tablice i slike (karte, crteži, grafikoni, dijagrami, fotografije) u rukopisu trebaju biti raspoređene tako da ih se može pratiti usporedo s tekстом.

Slike se prilažu s rukopisom preko Morepress sustava kao zasebne datoteke u JPG, JPEG ili TIFF obliku s najmanje 300 dpi, a uredništvo može tražiti i veću razlučivost ako to zahtijeva grafički prikaz. Grafički prikazi moraju biti čitki s primjerenom i ujednačenom veličinom teksta i simbola. Tekst/legenda moraju biti na hrvatskom i na engleskom. Naslov tablice stavlja se iznad tablice, a izvor ispod nje, a naslov i izvor

slike pišu se ispod slike. Izvori na temelju kojih su slike ili tablice izrađene moraju se obavezno naznačiti, a u punom obliku se trebaju nalaziti i u popisu izvora i literature. Najveći format priloga je 50 × 40 cm. U člancima regionalnogeografske tematike obvezno je priložiti orijentacijski crtež sa svim važnijim geografskim imenima koja se spominju u tekstu.

Za one grafičke priloge koje autor nije samo izradio, tj. preuzeo ih je od muzeja, arhiva, repozitorija, drugih institucija ili privatnih osoba, potrebno je, u slučaju prihvaćanja rada, glavnom uredniku dostaviti pisano dopuštenje o objavi korištenih slika.

RECENZENTSKI POSTUPAK

Sve rukopise prvo ocjenjuje glavni urednik (i/ili članovi uredničkog odbora) i mogu se odbiti bez recenzije ako se zaključi da nemaju elemente znanstvenog rada, da tematski ne ulaze u domenu časopisa ili nisu dovoljno izvorni. Na temelju njihova mišljenja rad se odbija ili šalje dalje u recenzentski postupak. Prije recenzije svaki rukopis prolazi kroz softver za otkrivanje plagijata kako bi se provjerila izvornost i osigurala kvaliteta pisanog rada. Autori trebaju paziti da ne prijeđu granicu od 20 % preklapanja s objavljenim radovima. Radovi s visokim stupnjem preklapanja s objavljenim podacima (čak i u slučaju samoplageranja) bit će odbijeni bez recenzije. Radovi koji su prikladni za objavu šalju se najmanje dvama nepristranim recenzentima. Geoadria provodi dvostruki anonimizirani proces recenziranja što znači da su identiteti autora skriveni od recenzentata i obrnuto. Po potrebi, ako je jedna recenzija negativna, rukopis se šalje trećem recenzentu. Za odluku o prihvaćanju ili odbijanju članaka odgovoran je glavni urednik i njegova je odluka konačna. Urednici nisu uključeni u odluke o radovima koje su sami napisali ili su ih napisali članovi obitelji ili kolege ili koji se odnose na proizvode ili usluge s kojima je urednik povezan. Svaki takav podnesak podliježe uobičajenim procedurama časopisa, s recenzijom koja se obavlja neovisno o relevantnom uredniku i njegovim istraživačkim skupinama.

Recenzenti

Autori imaju priliku i obvezu predložiti pet recenzentata koji su prikladni za ocjenu rada, no taj prijedlog nije obvezujući. Uz ime, potrebni su kontakt podaci recenzenta (e-mail) i objašnjenje zašto se recenzent predlaže. Predlaganje recenzentata provodi se u Morepress sustavu tijekom prijave rada. Autori snose odgovornost da su svi podaci o predloženim recenzentima točni, u slučaju davanja pogrešnih imena ili podataka, rad može biti odbijen. Također, autori mogu predložiti recenzente koje bi trebalo izbjegavati jer bi odnos koji imaju s autorima spriječio recenzenta da ima nepristrano mišljenje o radu (profesionalna ili obiteljska povezanost itd.).

Poslije recenzije

Čim se recenzije učitaju u sustav, glavni urednik donosi odluku o mogućem prihvaćanju rukopisa. Recenzije se zatim šalju autorima putem Morepress sustava, a ako su recenzije pozitivne, od autora se očekuje da predaju revidiranu verziju u vremenskom okviru koji odredi sustav. Ako autori ne mogu predati revidirani rukopis u tom razdoblju, trebali bi se javiti glavnom uredniku u vezi s mogućnostima produljenja roka za ponovno slanje nakon što se provedu sve promjene koje recenzenti zahtijevaju. Autori su dužni uz svaku revidiranu verziju dostaviti popratni dokument s odgovorima na svaki recenzentov pojedinačni komentar. Ako je tijekom revizije došlo do promjene autorstva (dodavanje ili uklanjanje autora), autori su dužni objasniti razlog promjene, a svi autori (uključujući i uklonjene/dodane) moraju dostaviti pisani pristanak za promjenu. Autori dodani tijekom procesa evaluacije također moraju dostaviti ispunjenu i potpisanu Izjavu o autorstvu. Revidiranu verziju ocjenjuje glavni urednik i/ili recenzenti te na temelju njihovih sugestija glavni urednik u najkraćem mogućem roku donosi odluku o konačnom prihvaćanju. Ako je potrebno, može se zatražiti daljnja revizija kako bi se ispunili svi zahtjevi recenzentata. Kada se rukopis prihvati za tisak, dodjeljuje mu se doi broj te se radi lektura i korektura. Nakon

toga autori provjeravaju rukopis i potom bude objavljen prvo na mreži (online first) kao prva verzija rada. Nakon toga autorske promjene rukopisa nisu moguće. Kada se prikupe svi članci za taj broj, autori dobivaju prijelom rada u PDF-u na konačnu provjeru prije tiska. Od autora se očekuje ispravljanje ponajprije tiskarskih pogrešaka s korekturama, a ne sadržaja. Prijelom je potrebno vratiti uredništvu u roku od 72 sata. Konačna verzija zatim se šalje u tisak, a svi se rukopisi objavljuju online kao pdf datoteke u konačnom obliku i indeksiraju u bazama podataka.

Autorstvo i promjena autorstva

Individualni doprinos svakog autora mora biti naveden u rukopisu nakon što je rad prihvaćen za objavljivanje. Autor može biti netko tko je bitno pridonio ideji ili osmišljavanju istraživanja, prikupljanju podataka, analizi ili interpretaciji podataka, bio uključen u izradu, pisanje ili kritičku reviziju rada i odobrio konačnu verziju rada. Ostale suradnike treba navesti u zahvalama i ne mogu se smatrati autorima rada. Svi autori trebaju odobriti konačnu verziju rada prije slanja rada Geoadriji. Oni se slažu da su odgovorni za sve aspekte rada i dužni su potpisom dopisnog autora u prapratnom pismu potvrditi da su svi podaci vjerodostojni i točni.

Od autora se očekuje da pažljivo razmotre popis i redoslijed autora prije podnošenja svojeg rukopisa i dostave konačan popis autora tijekom prve prijave rada. Bilo kakvo dodavanje, brisanje ili preraspoređivanje imena autora u popisu autorstva treba učiniti prije nego što je rukopis prihvaćen i jedino ako to odobri glavni urednik časopisa. Da bi zatražio takvu promjenu, urednik mora primiti sljedeće od dopisnog autora: (a) razlog promjene na popisu autora i (b) pismenu potvrdu (e-mail, pismo) od svih autora da se slažu s dodatkom, uklanjanjem ili preuređivanjem. U slučaju dodavanja ili uklanjanja autora, to uključuje potvrdu autora koji se dodaje ili uklanja.

Samo u iznimnim okolnostima urednik će razmotriti dodavanje, brisanje ili preraspoređivanje autora nakon što je rukopis prihvaćen. Dok urednik razmatra zahtjev, objavljivanje rukopisa bit će obustavljeno. Ako je rukopis već objavljen u digitalnom izdanju, zahtjevi koje je urednik odobrio rezultirat će ispravkom.

GDPR

U skladu s Općom uredbom (EU) o zaštiti podataka (GDPR), časopis prikuplja podatke o autorima, recenzentima i urednicima uključujući imena i prezimena, naslove, podatke za kontakt, područja profesionalnog interesa i životopis. Podaci se koriste kako bi pomogli urednicima odabrati odgovarajuće recenzente, kontaktirati s recenzentima i autorima te pružiti potrebne informacije u objavljenim člancima. Podaci se koriste samo u mjeri potrebnoj za objavu, a informacije koje nisu uključene u članak ili zahvalu neće se dijeliti s trećim stranama. Podaci će se čuvati do opoziva ili brisanja podataka na zahtjev autora/recenzenta/urednika.

OSPORENJE OBJAVLJENOG RADA

Ako autori nakon objavljivanja uoče manjkavost u svojem radu koja utječe na ponovljivost istraživanja i točnost rezultata, mogu povući, tj. osporiti rad, pri čemu se online verzija rada označava oznakom osporili autori (“retracted by authors”). Poveznica na osporeni rad i dalje će biti aktivna, no oznaka na radu jasno će naznačiti da su rad osporili autori. Ako urednici, recenzenti ili čitatelji uoče da su podaci u objavljenom radu lažirani ili da istraživanje nije provedeno u skladu s etičkim načelima, uredništvo će razmotriti prijavu. Ako se utvrdi da su autori prekršili etička načela, uredništvo će osporiti rad, pri čemu će rad biti označen s osporio urednički odbor “retracted by editorial board”. Poveznica na osporeni rad i dalje će biti aktivna, no oznaka na radu jasno će naznačiti da je rad povukao urednik. Svaki postupak povlačenja objavljenog rada obavlja se u skladu sa smjernicama COPE.

IZJAVA O SUKOBU INTERESA

Autori moraju otkriti sve financijske i osobne odnose s drugim ljudima ili organizacijama koji bi mogli neprimjereno utjecati (pristrano) na njihov rad. Primjeri potencijalnih suprotstavljenih interesa uključuju zapošljavanje, savjetovanje, vlasništvo nad dionicama, honorare, plaćeno svjedočenje stručnjaka, prijave/registracije patenata i bespovratna ili druga sredstva. Autori moraju otkriti sve potencijalne sukobe interesa u rukopisu. Ako nema potencijalnih sukoba, treba navesti: "Autori izjavljuju da nema sukoba interesa".

FINANCIRANJE

Preporučljivo je navesti izvore financiranja istraživanja. Primjer je u predlošku.

UKLJUČIVOST

Jezik ukljućivosti priznaje razlićitost, izražava poštovanje prema svim ljudima, osjetljiv je na razlike i promiće jednake mogućnosti. Sadržaj rada ne smije stvarati nikakve pretpostavke o uvjerenjima ili obvezama bilo kojeg čitatelja; ne sadrže ništa što bi moglo implicirati da je jedna osoba superiorna drugoj na temelju dobi, spola, rase, etnićke pripadnosti, kulture, seksualne orijentacije, invaliditeta ili zdravstvenog stanja. Kroz cijeli rad treba koristiti jezik ukljućivosti. Pisanje bi trebalo biti oslobođeno pristranosti, stereotipa, žargona, pozivanja na dominantnu kulturu i/ili kulturne pretpostavke. Preporučujemo izbjegavanje uporabe pojmova koji se odnose na osobne podatke kao što su dob, spol, rasa, etnićka pripadnost, kultura, seksualna orijentacija, invaliditet ili zdravstveno stanje osim ako su relevantni i valjani. Ove su smjernice zamišljene kao referentna toćka za pomoć u prepoznavanju odgovarajućeg jezika, ali nipošto nisu iscrpne ili konaćne.

JEZIK

Molimo napišite svoj tekst na hrvatskom i engleskom (prihvaćena je uporaba amerićkog engleskog ili britanskog engleskog, ali ne i njihova mješavina) jeziku primjerenom znanstvenoj razini. Preporučujemo autorima da prije slanja rada, a posebno njegove engleske verzije, razmotre profesionalnu lekturu.

ISPRAVLJANJE PODATAKA U OBJAVLJENOM RADU

Autori rada snose odgovornost za toćnost objavljenih podataka. Svi ispravci u radu moraju biti provedeni prije objavljivanja broja, stoga dopisni autor dobiva prijelom rada koji mora pregledati što prije, a najkasnije u roku od 72 sata. Ako usprkos tome autori pronađu veću pogrešku u objavljenom radu, ispravak (*erratum*) mogu dostaviti uredništvu koji će se objaviti online i u prvom sljedećem tiskanom izdanju.

Molimo autore da se pridržavaju navedenih uputa pri grafićkom opremanju i uređivanju teksta rukopisa. Rukopis se neće prosljediti u daljnji recenzentski postupak dok se ne prilagodi obliku određenom u napatku autorima. Za sva pitanja vezana za tehnićko uređivanje teksta i priloga autori se mogu obratiti tehnićkom uredniku časopisa na e-adresu: imaric1@unizd.hr ili izvršnom uredniku na anblace@unizd.hr. Autori znanstvenih ćlanaka odgovorni su za sadržaj, izvornost, istinitost i etićnost rada (vidjeti kodeks ponašanja za autore). Autori znanstvenih ćlanaka primaju po jedan primjerak časopisa. Rukopisi i recenzije se ne honoriraju. Uredništvo, glavni, izvršni i tehnićki urednik zadržavaju uobićajeno pravo na manje izmjene teksta, lekture i grafićkih priloga.

Uredništvo

GUIDELINES FOR AUTHORS

ABOUT THE JOURNAL

Geoadria is an Open Access scientific journal that primarily publishes research results on the Croatian littoral area and Croatia in general, as well as research results from various geographic and geography-related scientific disciplines focusing on the Adriatic area, the Mediterranean, and Europe. The journal welcomes papers on any topic related to the interactions between the physical and human components of the environment, employing theoretical, methodological, or applied approaches. We particularly encourage the publication of results obtained through geospatial tools and methods, as well as those that build upon previously published research in Geoadria.

Geoadria has been published by the Croatian Geographical Society in Zadar and the Department of Geography, University of Zadar, since 1996. From 2006 onwards, all papers in the journal are published in Croatian and English or only in English (for foreign authors).

The papers published in the journal are subject to at least two double anonymous reviews, and are classified into the following categories:

- a) **Original scientific paper** – original scientific work presenting new findings from fundamental or applied research
- b) **Preliminary communication** – scientific articles that provide at least one or more pieces of scientific information, but may lack sufficient details for readers to fully evaluate the scientific findings.
- c) **Review** – articles that summarize existing literature on a specific topic, aiming to explain the current state of understanding

Open Access

Geoadria is an Open Access journal. Users are allowed to read, download, copy, redistribute, print, search and link to material, and alter, transform, or build upon the material, or use them for any other lawful purpose as long as they attribute the source in an appropriate manner according to the CC BY 4.0 licence

Indexing

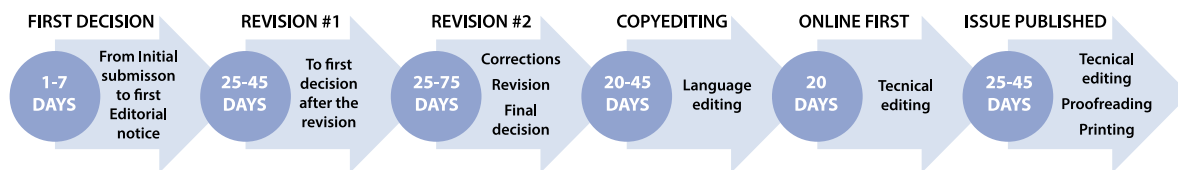
Geoadria is indexed in following databases: Web of Science Core Collection – Emerging Source Citation Indeks (ESCI), Scopus, ERIH PLUS, GEOREF, Current Geographical Publications. Academic databases and search engines: DOAJ, EBSCO (Academic Search Complete), Hrčak.

Charges

The journal does not charge article processing charges (APC).

Publication, timetable

Printed issues of Geoadria magazine are published semi-annually, in June and December, in both Croatian and English or only in English (for foreign authors). Geoadria utilizes online first publishing system, which means that papers are published online on the Hrčak webpage after review and proofreading. The final version is published upon formatting and typesetting. The entire process, from submission to the publication of the paper in print, typically spans a timeframe of four to eight months.



SUBMISSION OF MANUSCRIPTS

The Editorial Board accepts manuscripts throughout the year. A manuscript should be submitted in both Croatian and English (or only in English for authors outside Croatia) via the Morepress publishing platform (<https://morepress.unizd.hr/journals/geoadria>). Manuscripts sent by email will not be considered for publication. Prior to submission, authors are required to carefully read the Instructions for Authors and prepare the manuscript accordingly. Authors must pay particular attention to the proper structuring of the article's text and its appropriate length, following recognized standards of scientific methodology. Therefore, we suggest authors study and use the journal's article template. Please ensure that the personal data of the author(s) (names and surnames) are not mentioned anywhere in the manuscript or in the settings of the Word document. We recommend using an abbreviation of the paper title in the file name of the manuscript.

The length of articles should not exceed 13,000 words, including all references. After revisions, articles may be extended to a maximum of 15,000 words. The specific category under which an article is published is determined by the Editor-in-Chief in consultation with two reviewers (or more if necessary) and the Editorial Board. Other manuscripts and contributions are classified into permanent and temporary sections. The journal does not charge article processing charges (APC).

Submission should include:

- A) The manuscript
- B) All figures as individual items (if any)
- C) An Excel document with graphs (if any)
- D) A cover letter containing the full names (with underlined surnames) of all authors, their titles, and affiliations. The corresponding author should provide their signature, confirming that the manuscript or a part of it has not been accepted for publication, is not being considered for publication elsewhere, or has not been previously published (Declaration of Authorship). Additionally, include a Statement of Conflict of Interest if applicable.
- E) Permission to use images that were not created by the authors (if any)
- F) Additional documents

Submission declaration and verification

Submission of an article implies that the work described has not been published previously (except in the form of an abstract, a published lecture or academic thesis) that it is not under consideration for publication elsewhere, that its publication is approved by all authors and tacitly or explicitly by the responsible authorities where the work was carried out, and that, if accepted, it will not be published elsewhere in the same form, in English or in any other language, including electronically form.

Graphics and Tables

Original scientific papers should not include graphical documentation created by other authors. If such documentation is used from related fields (e.g., geology), the author must provide proper citation. Tables and figures (maps, drawings, graphs, diagrams, photographs) should be included in the manuscript and placed within the text in a way that follows the flow of the content. Figures should also be submitted separately in JPG, JPEG,

or TIFF format with a minimum resolution of 300 dpi via the Morepress system. The Editorial Board may request a higher resolution if necessary for graphical representation. Graphic images must be clear and legible, with appropriate and consistent text and symbol sizes. Text and keys should be provided in both Croatian (for Croatian authors) and English. The title of a table should be positioned above the table, and the source should be placed below it. For figures, both the title and the source should be placed below the figure. Any sources used as a basis for figures or tables must be indicated and listed in the full form within the list of sources and literature. The maximum format for attachments is 50 × 40 cm. For articles related to regional geography, it is necessary to include an indicative drawing that displays all major geographical names mentioned in the text.

For figures that were not created by the author, such as those obtained from museums, archives, repositories, other institutions, or private individuals, written permission to publish the used images must be submitted to the Editor-in-Chief upon acceptance of the paper.

REVIEW PROCESS

All manuscripts undergo an initial evaluation by the Editor-in-Chief (and/or members of the Editorial Board) and may be rejected without further review if they are deemed insufficiently interesting, lacking novelty, too preliminary, or outside the scope of the journal. Prior to the review process, each manuscript is subjected to plagiarism detection software to verify its originality and ensure the quality of the written work. Authors should take care not to exceed the limit of 20% overlap with previously published papers. Papers with a high degree of overlapping with previously published data, even in cases of self-plagiarism, will be rejected without review. Manuscripts suitable for the review process are sent to at least two impartial reviewers. Geoadria follows a double-blind review process, which means the identities of the authors are concealed from the reviewers, and vice versa. When necessary, if one review was negative, the manuscript is sent to a third reviewer. The final decision regarding the acceptance or rejection of articles lies with the Editor-in-Chief, and his/her's decision is considered final. Editors are not involved in decisions regarding papers they have written themselves, those written by family members or colleagues, or those related to products or services in which the editor has a vested interest. Any such submissions are subject to the journal's regular procedures, with peer review conducted independently by other editors and their research groups.

Reviewers

Authors have the opportunity and obligation to suggest up to five reviewers who are appropriate for the paper, although it should be noted that the journal may not utilize these suggestions. Along with the names, the reviewer's contact information (email) and an explanation as to why the reviewer is being proposed are required. The proposal of reviewers is done through the Morepress platform during the paper submission process. Authors are responsible for providing accurate data regarding the suggested reviewers. Inaccurate names and contact details may result in rejection of the manuscript. Authors can also suggest reviewers to be avoided due to any relationship that could hinder an unbiased opinion of the authors' work (e.g., professional or private connections).

After the review

Once the reviews are uploaded to the system, the Editor-in-Chief makes a decision regarding the possible acceptance of the manuscript. The reviews are then sent to the authors via the Morepress platform, and if the reviews are positive, the authors are expected to submit the revised version within the given timeframe. If authors are unable to resubmit the revised manuscript within this period, they should contact the Editor-in-Chief to discuss the possibility of extending the deadline for resubmission or uploading it as a new manuscript once all changes requested by the reviewers have been made. Authors must submit a new cover letter with each revised version, along with a response to each reviewer's comment. If changes in authorship (addition or removal of an author) have occurred during the revision process, authors are requested to clarify the reason for the change. All

authors, including the removed or added ones, need to submit written consent for the change. Authors added during the evaluation process must also submit a filled-in and signed Declaration of Authorship. The revised version is evaluated by the editor and/or reviewers, and the Editor-in-Chief makes a decision as soon as possible regarding the final acceptance based on their suggestions. If necessary, further revisions may be requested to meet all the reviewers' requirements. Once the manuscript is accepted for publication, it is assigned a DOI number, and a linguistic and technical revision is conducted. The authors then review the manuscript and it is posted as an online first version. After this point, changes to the authors of the manuscript are not possible. Once all articles for an issue are collected, the authors receive the galley proof for final review before printing. The authors are expected to primarily correct any typographical errors on the proofs and not the content. The proofs must be returned to the Editorial Office within 72 hours. The final version is sent for printing, and all manuscripts are posted online as PDF files in their final form and indexed in databases.

Authorship and change of authorship

The individual contribution of each author must be stated in the manuscript after it has been accepted for publication. An author can be someone who has substantially contributed to the idea or design of the research, data acquisition, data analysis or interpretation, drafting, writing, or critical revision of the paper for important intellectual content, and has approved the final version of the paper. Other contributors should be acknowledged in the acknowledgments section but cannot be considered as authors of the work. All authors should approve the final version of the paper before submitting it to Geoadria. They agree to be accountable for all aspects of the work and should state and verify, with the signature of the corresponding author in the cover letter, that all data is authentic and correct. Authors are expected to carefully consider the list and order of authors before submitting their manuscript and provide the definitive list of authors at the time of the original submission. Any addition, deletion, or rearrangement of author names in the authorship list should only be made before the manuscript has been accepted and must be approved by the journal Editor. To request such a change, the corresponding author must provide (a) the reason for the change in the author list and (b) written confirmation (via email or letter) from all authors indicating their agreement with the addition, removal, or rearrangement. In cases of adding or removing authors, this includes confirmation from the author being added or removed. Only in exceptional circumstances will the Editor-in-Chief consider the addition, deletion, or rearrangement of authors after the manuscript has been accepted. During the Editor-in-Chief's consideration, publication of the manuscript will be suspended. If the manuscript has already been published in an online issue, any approved requests by the Editor-in-Chief will result in a corrigendum.

GDPR

In accordance with the EU General Data Protection Regulation (GDPR), the journal collects data on authors, reviewers, and editors, including names, surnames, titles, contact details, fields of professional interest, and CV. The information is used to help editors choose the appropriate reviewers, contact reviewers and authors, and provide the necessary information in published articles. Data are used only to the extent needed for publication, and information that is not included in the article or acknowledgement will not be shared with third parties. Data will be stored until revocation or erasure of data upon the request of the author/reviewer/editor.

RETRACTION OF PUBLISHED PAPERS

If the authors made an honest error or discover major flaws in their work, they can retract the paper. The online version will then be marked as "retracted by authors." All links to the retracted article will be maintained. If the editors, reviewers, or readers notice a case of duplicate or overlapping publication, fraudulent use of data, plagiarism, or unethical research, the paper will be retracted after an internal review by the editorial board. In such cases, the online version will be marked as "retracted by the editorial board." All links to the retracted article will be maintained. All retractions will be done in accordance with the COPE retraction guidelines.

DECLARATION OF INTEREST

All authors must disclose any financial and personal relationships with other people or organizations that could inappropriately influence (bias) their work. Examples of potential competing interests include employment, consultancies, stock ownership, honoraria, paid expert testimony, patent applications/registrations, and grants or other funding. Authors must disclose any interests in the manuscript. If there are no interests to declare, please state: “The authors declare no conflict of interest.”

FUNDING

It is recommended to indicate the sources of research funding. An example is in the template.

INCLUSION

Inclusive language acknowledges diversity, conveys respect to all people, is sensitive to differences, and promotes equal opportunities. The content of the paper should make no assumptions about the beliefs or commitments of any reader; it should contain nothing that might imply that one individual is superior to another based on age, gender, race, ethnicity, culture, sexual orientation, disability, or health condition. Moreover, inclusive language should be used throughout, ensuring that the writing is free from bias, stereotypes, slang, references to the dominant culture, and cultural assumptions. It is recommended to avoid the use of descriptors that refer to personal attributes such as age, gender, race, ethnicity, culture, sexual orientation, disability, or health condition, unless they are relevant and valid. These guidelines serve as a point of reference to help identify appropriate language but are by no means exhaustive or definitive.

LANGUAGE

Please write your text in good English (American or British usage is accepted, but not a mixture of these). We recommend that authors who feel their English-language manuscript may require editing consider professional proofreading.

CORRECTION OF DATA IN THE PUBLISHED WORK

The authors are responsible for the accuracy of the published data. All corrections in the paper must be made before the publication of the issue. Therefore, the corresponding author receives a copy of the paper, which must be reviewed as soon as possible and within 72 hours at the latest. If, despite this, the authors discover a major error in the published work, they can submit a correction (erratum) to the editors, which will be published online and in the next printed edition.

The authors are required to follow the instructions provided above when preparing graphic material and editing the manuscript. The manuscript will not proceed to the further review process until it adheres to the specified formatting instructions for authors. For any questions related to the technical editing of the text, please contact the technical editor via email at imaric1@unizd.hr or executive editor at anblace@unizd.hr. The authors of scientific articles are responsible for the content, originality, authenticity, and ethics of the paper (see code of conduct for authors). The authors of scientific articles receive a copy of the journal. Manuscripts and reviews are not remunerated. The Editorial Board, Editor-in-Chief, Executive Editor, and Technical Editor reserve the right to make minor changes to the text, proofreading, and graphical documentation.

Editorial board

RAČUNALNA OBRADA I PRIJELOM / *Layout*
Sveučilište u Zadru

TISAK / *Printed by*
Sveučilišna tiskara d.o.o.

NAKLADA / *Edition*
100 primjeraka (100 copies)

CIJENA ČASOPISA / *Price of journal*
10 EUR

GODIŠNJA PRETPLATA / *Annual subscription*
20 EUR

UPLATE NA ŽIRO RAČUN / *Payment on transfer account*
HR8224070001100044440

