

# LANDSCAPE SUITABILITY EVALUATION AS A TOOL FOR DEVELOPMENT AND PROTECTION OF VALUABLE RURAL AREAS

Dora Tomić, M.L.A., Ana Žmire, Martina Šekutor,  
Vesna Koščak Miočić-Stošić, Sonja Butula

Faculty of Agriculture, University of Zagreb  
Svetošimunska 25, 10 000 Zagreb, Croatia  
e-mail: dtomic@agr.hr



*Review article*

*COBISS 1.02*

*DOI: 10.4312/dela.44.5.85-102*

## Abstract

This research studied application possibilities of landscape suitability evaluation as a methodological approach within landscape planning. It was presented in the case study of the wider area of Krka River through analysis of three Mediterranean agricultural crops. Results indicated (1) the efficacy of the procedure for obtaining optimised spatial potential for development as well as protection of valuable rural areas and (2) the possibility to include new methods into current planning regulations.

**Key words:** landscape qualities, protection, rural areas, sustainable development

## VREDNOTENJE PRIMERNOSTI KRAJINSKE PODOBE KOT ORODJE ZA RAZVOJ IN VARSTVO DRAGOCENIH PODEŽELSKIH OBMOČIJ

### Izvleček

V raziskavi smo preučevali možnosti uporabe metode vrednotenja krajinske primernosti v krajinskem načrtovanju. Metoda je predstavljena na študiji primera širšega območja reke Krke skozi analizo treh sredozemskih kulturnih rastlin. Rezultati kažejo (1) učinkovitost postopka za ugotavljanje optimiziranega prostorskega potenciala za razvoj in hkrati za varovanje dragocenih podeželskih območij in (2) možnosti vključevanja novih metod v obstoječe načrtovalske postopke.

**Ključne besede:** krajinske vrednote, varstvo, podeželska območja, trajnostni razvoj

## I INTRODUCTION

The role of rural landscape in everyday life has extremely complex significance because it can be considered from several very diverse aspects. For local residents, the primary role of rural landscape is to be a living environment, in which other roles as natural ecosystem, natural resource and cultural heritage must be adjusted. In rural spaces, agriculture is a traditionally dominant activity, but the demands of contemporary lifestyle have led to its inevitable abandonment. Allowing ecological succession and loss of valuable agricultural land leads to the neglect of cultural heritage consisting of buildings constructed by drywall techniques, a fundamental carrier of visual identity of agricultural landscapes (Butula et al., 2009) and identity of place (Torreggiani et al., 2014).

The main objectives of this paper are:

- the identification and preparation of the suitability models for the development of Mediterranean agricultural activity within a wider area of Krka River, with emphasis on Mediterranean fruit cultures such as olive, fig and pomegranate;
- cartographic presentation of suitability models;
- the comparison of obtained spatial models to determine differences between spatial demands while planning the development of different Mediterranean fruit cultures, and
- the comparison to decisions in the current spatial plan.

The accomplishment of the set objectives is possible through the multicriterial analysis of the landscape qualities for spatial evaluation. The final result is a synthesis of the desire for maximum fruit production efficiency while taking into account the advantageous characteristics of the research area. This would open the possibility of linking other activities that can be supportive with Mediterranean agriculture and, at the same time, reduce potential negative environmental impacts to a minimum.

## 2 REVIEW OF PREVIOUS INVESTIGATIONS

Since the research area covers the entire lower part of Krka River drainage basin, which is under protection as a significant landscape according to the Croatian law of nature protection and is situated next to the Krka National Park, Mediterranean agricultural production is considered acceptable for this area. Its advantages are not only the ecological origin of the product, but also the orientation to conservation and enhancement of the natural environment together with possibilities for connection to rural tourism (agritourism), which is considered the most appropriate for the research area. Jelinčić (2007) defines agritourism as a ‘... *form of tourism in which local residents offer tours within their own agricultural project and thus allow the visitor a direct participation in experiences of a certain site, such as planting, harvesting and food processing ...*’. The author also emphasizes that the local residents reach the greatest benefit from agritourism. It is necessary for the preservation of local communities, the fundamental pillars of development in this area. Bosnić (2011) states that ‘... *changes caused by globalization processes led to increasing interest of tourists for exploring different countries, new cultures, local*

*customs and ways of life ...* and emphasizes the need for ‘... continuous design of new, innovative and quality tourist products based on originality of the resource base, tradition and in accordance with the principles of sustainable development.’ Krajnović, Čičin-Šain and Predovan (2011) emphasize: ‘Rural tourism contributes to the preservation of natural, cultural and historical heritage of the receptive environment, preventing emigration from the so-called “passive region” and encourages revaluation of indigenous values of the receptive area.’

Since one of the significant characteristics of the research area is a high presence of traditional drywalls surrounding the fertile soil, the fragmentation of agricultural land represents a challenge for sustainable and feasible agriculture with protection of cultural heritage. A solution could be found in setting up classical orchards, which according to Čmelik (2010) have a significant role in the protection of typical landscapes in rural and partly urban areas, and in conservation of biodiversity of agro-ecosystems.

For this paper, the fruit cultures of olive, fig and pomegranate were chosen due to the suitability of the Mediterranean part of Croatia for their successful cultivation. According to Guidelines for horticulture 2008–2013 (Smjernice razvoja voćarstva 2008–2013, 2009), the cultivation of these fruit cultures can contribute to a significant reduction in imports and can partially provide a surplus for export. The document also emphasizes that because of favorable climatic conditions in this area vegetation growth starts earlier and fruits ripen sooner which can contribute to the earlier supply of the continental and international markets of Central and Northern Europe with fruit.

### 3 METHODS AND MATERIALS

In this paper, the multicriterial analysis was conducted through the dual spatial analysis, also known as the landscape suitability analysis, which is characteristic for the landscape planning procedure. In fact, most contemporary landscape planning approaches are based on the concept of suitability (Golobič, Breskvar Žaucer, 2010). Landscape planning is a planning instrument that implements conservation goals into spatial application, because it includes all phases of spatial planning, from targeted stocktaking and evaluation, making of spatial models that include the goals of proposed intervention and activity in space to the monitoring process during the realization phase (Krause, 2001). This instrument does not consist of physical objects for implementation but is rather used for studying the processes of interaction between planned interventions and landscape values. Hence, landscape planning is a planning discipline which prepares the cognitions about natural values and incorporates conservation measures into spatial planning process (Marušič, 1986). Its application within the process of strategic decision-making is considered very significant, especially if the main goal is achieving sustainable development.

After gathering all the relevant information, the selection of essential criteria for making the landscape attractiveness and vulnerability concepts was made, and a multicriterial analysis with spatial evaluation was conducted in order to produce spatial models (attractiveness and vulnerability) of the research area for growing of selected Mediterranean fruit cultures (olive, fig and pomegranate). Overlaying those models resulted in

landscape suitability model, evaluated from three aspects: development, protective and compromise. The selected suitability model was overlaid with the spatial plan map of Šibenik-Knin County (2013) showing the assigned land use. The selection of a suitability model depends on the characteristics and landscape qualities of a specific location. Likewise, the results of vulnerability evaluation for one intervention or activity cannot be used for another intervention, because vulnerability to different developmental changes in the same landscape varies (Benson et al., 2004).

The results of the landscape attractiveness, vulnerability and suitability models are thematic maps. They represent an evaluation in a scale of numeric and descriptive values indicating the level of attractiveness, vulnerability and suitability. Used numeric values are in the range from 0 to 5, with 0 representing absolutely unattractive/invulnerable/unsuitable areas, and 5 representing the most attractive/vulnerable/suitable areas.

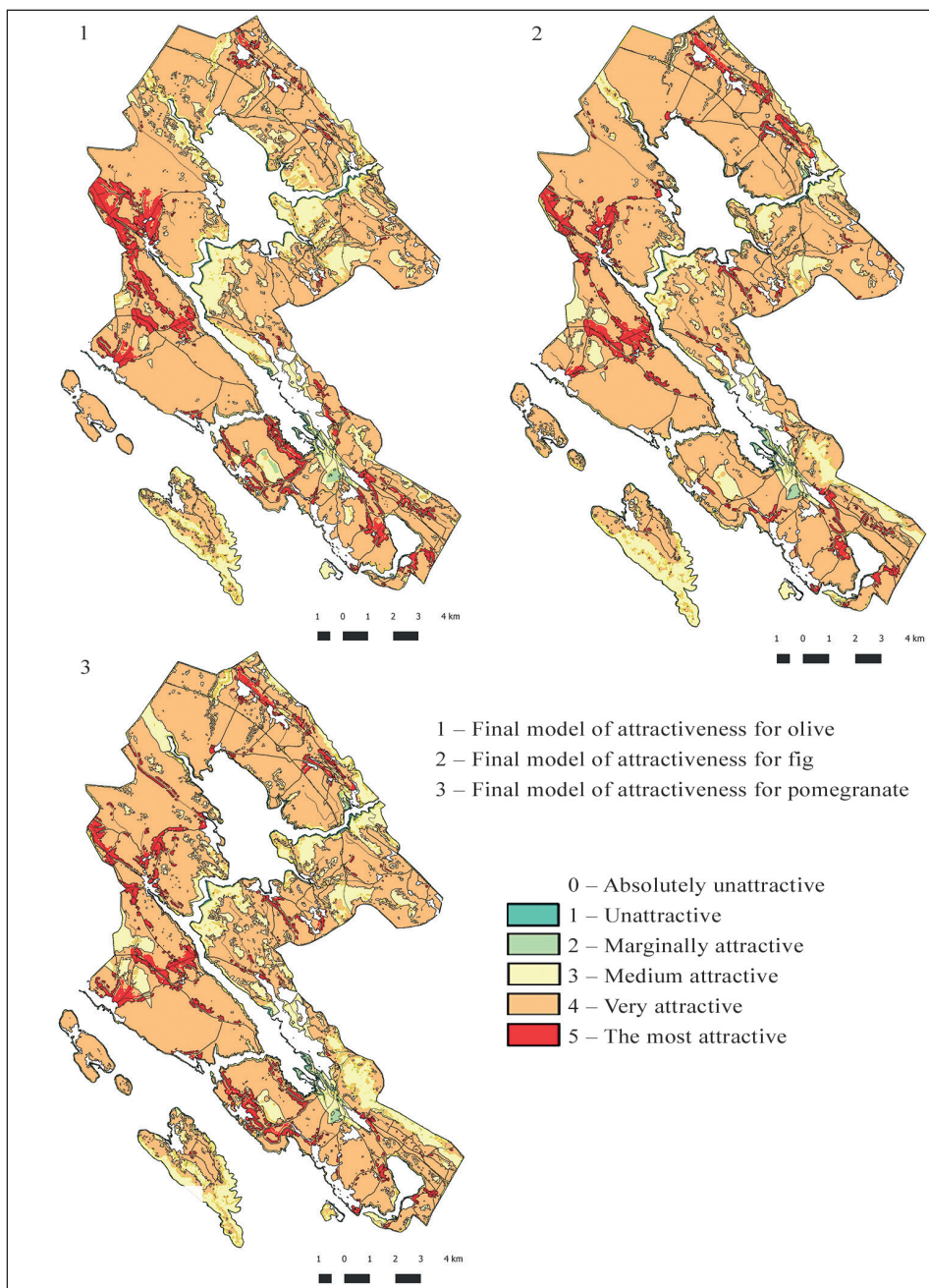
The mentioned procedures were conducted and results presented using the *ProVal*, *ArcGIS*, *QGIS* and *AutoCAD* software. During the data analysis in the GIS software *ProVal*, the size of homogeneous spatial units displayed in pixels was 10 by 10 m. The working process also included the analysis of gathered literature and publications, and visual and digital interpretation of cartographic and orthophoto maps.

## 4 RESULTS

### 4.1 Landscape attractiveness

The basic concept of landscape attractiveness for olive, fig and pomegranate growing was defined to make the attractiveness spatial model. The criteria were (1) terrain attractiveness, divided into two subcriteria: (1a) natural structure of terrain and (1b) economic aspect of soil tillage; (2) distance from waters for irrigation and (3) distance from transport infrastructure. The natural structure of the terrain was defined through elevation, slope of the terrain, dynamic of relief, soil permeability, terrain aspect, soil typology, soil capability and distance from temporary and permanent surface water. Due to the specific needs of each fruit culture for a certain type of soil, soil permeability, soil tillage and maintenance of plantations, the terrain attractiveness criteria were evaluated separately for each culture. The distances from water and infrastructure were evaluated equally for all cultures. According to the criteria set for olive, fig and pomegranate all submodels of landscape attractiveness were overlaid and a final attractiveness map for each culture was obtained (Figure 1). The maps show that the most represented areas are medium and very suitable for olive, fig and pomegranate growing.

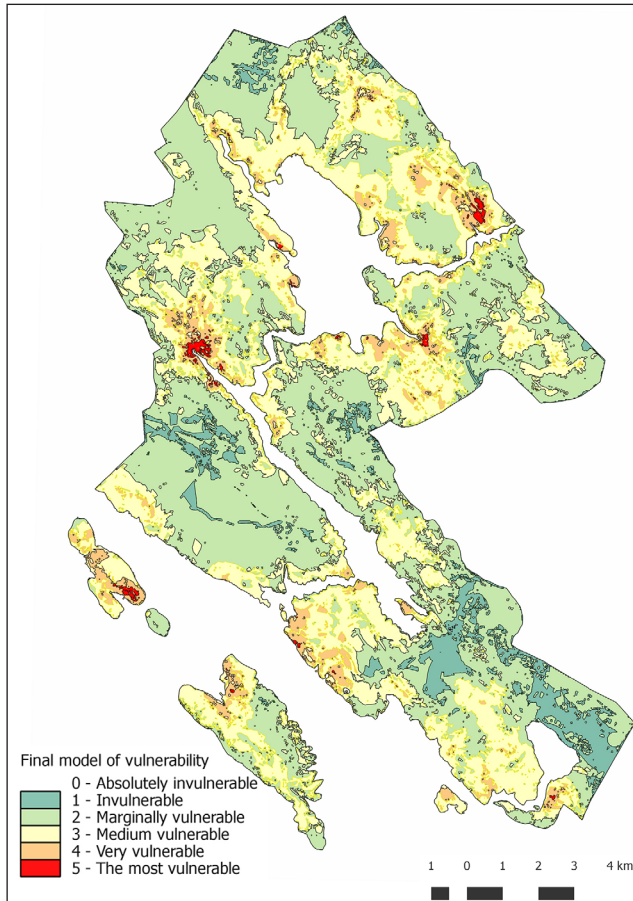
Figure 1: Final model of attractiveness for olive, fig and pomegranate growing  
 Slika 1: Končni model primernosti za oljko, smokvo in granatno jabolko



## 4.2 Vulnerability of landscape qualities

The interaction of landscape qualities and proposed activities of olive, fig and pomegranate growing is analyzed to determine the potential negative impacts. Landscape qualities which might be compromised by the proposed activities are (1) natural, (2) visual and (3) cultural qualities, and (4) the qualities of natural resources. The degradation may occur because of potential intensive soil tillage that can lead to changes in the soil structure and natural vegetation and to the soil and water pollution as well as to changes of landscape identity and image. Natural qualities (1) of the landscape were defined through the criteria of terrain, biodiversity, landscape diversity, surface waters, forest areas and predominantly natural vegetation area and the distance from nature protected areas and sources of pollution (settlements, traffic, industrial and craft areas and landfills of materials and

Figure 2: Final map of spatial vulnerability for olive, fig and pomegranate growing  
Slika 2: Končna karta ranljivosti prostora za gojenje oljk, fig in granatnih jabolk



intermediate products). Visual qualities (2) of the landscape were defined through the recognizable elements of this area regarding the previously conducted analysis of visibility from the highway and from the state and county roads. By overlaying the models of visual potential and visibility, the final model of visual qualities has been obtained. Cultural qualities (3) of the landscape were defined through the distance from registered and protected monuments of cultural heritage, archeological sites and areas, traditional agricultural land use (traditional vineyards and olive orchards), traditional land subdivisions (drywalls and other stone structures) and settlements. Qualities of natural resources (4) of the landscape were defined through the potential for utilization and protection of forests, agricultural land use and tourism potential along the sea and other water bodies.

By overlaying the submodels of natural, visual, cultural qualities and qualities of natural resources, the final map of landscape vulnerability has been obtained (Figure 2). The most vulnerable are those areas that have the most expressed qualities. These are primarily natural forest and water areas, archeological sites and areas with high visual potential, and the areas with natural resources for potential development.

### **4.3 Landscape suitability**

The final models of attractiveness and vulnerability were overlaid to obtain the final spatial model of landscape suitability for olive (Figure 3), fig (Figure 4) and pomegranate (Figure 5) growing. The final suitability model was evaluated from three aspects: development, protective and compromise. In evaluation of the development aspect, emphasis was given to the attractiveness model. In evaluation of the protective aspect, emphasis was given to the vulnerability model to protect landscape qualities of the area. In evaluation of the compromise aspect, both models, attractiveness and vulnerability, were valued equally to provide equal relation of the spatial development and protection.

The comparison of the percentages of the areas resulted as suitable for olive, fig and pomegranate growing indicates that the largest share of the most suitable areas is obtained within the development aspect model, while the largest share of the absolutely unsuitable areas within the protective aspect model. The share of the areas within the compromise aspect model ranges between the protective and developmental aspects according to the share of the most suitable and the absolutely unsuitable areas. Other values are listed in Tables 1, 2 and 3, separately for each culture.

Figure 3: Value maps of protective, development and compromise aspects of suitability for olive growing

Slika 3: Karte vrednotenja varovalnega, razvojnega in kompromisnega vidika primernosti za ureditev oljčnih nasadov

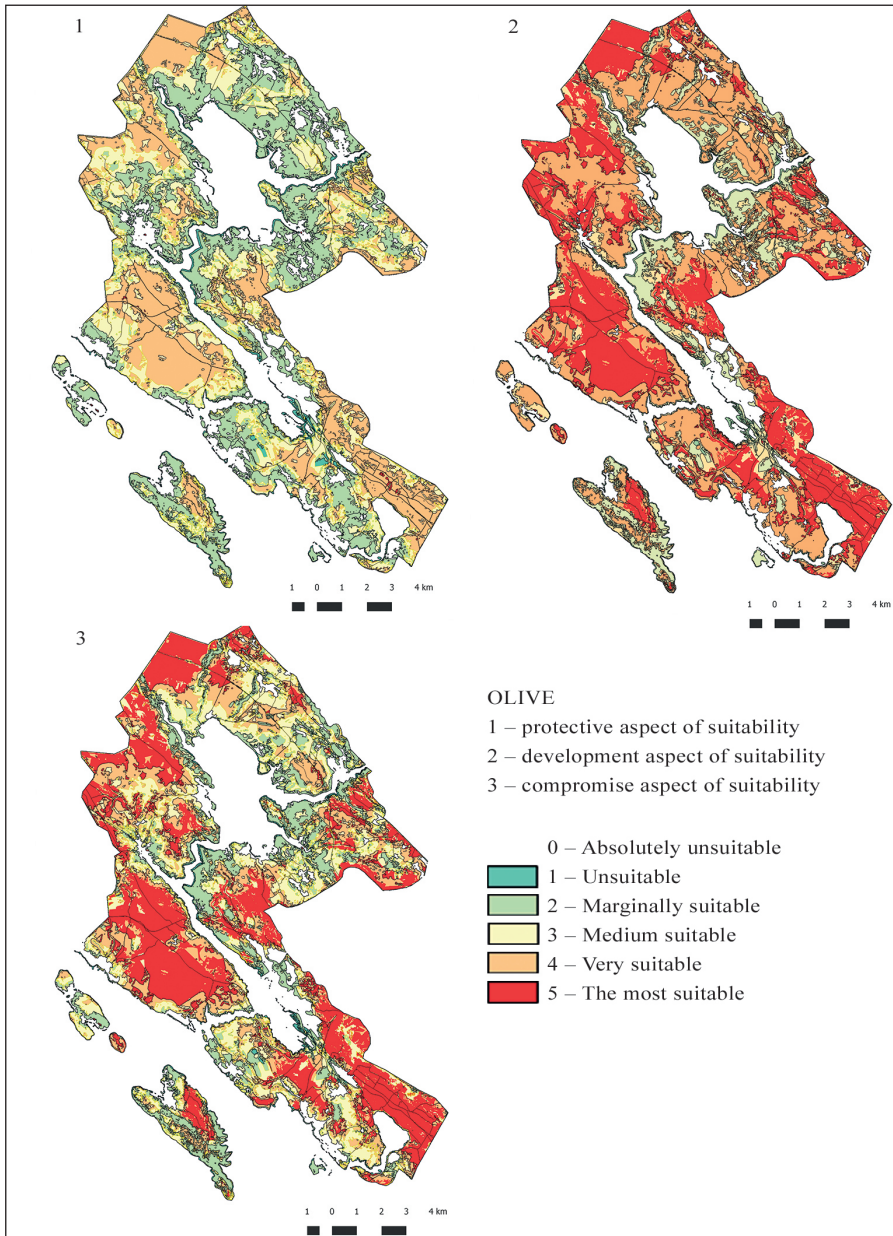




Figure 4: Value maps of protective, development and compromise aspect of suitability for fig growing

Slika 4: Karte vrednotenja varovalnega, razvojnega in kompromisnega vidika primernosti za ureditev nasadov smokev

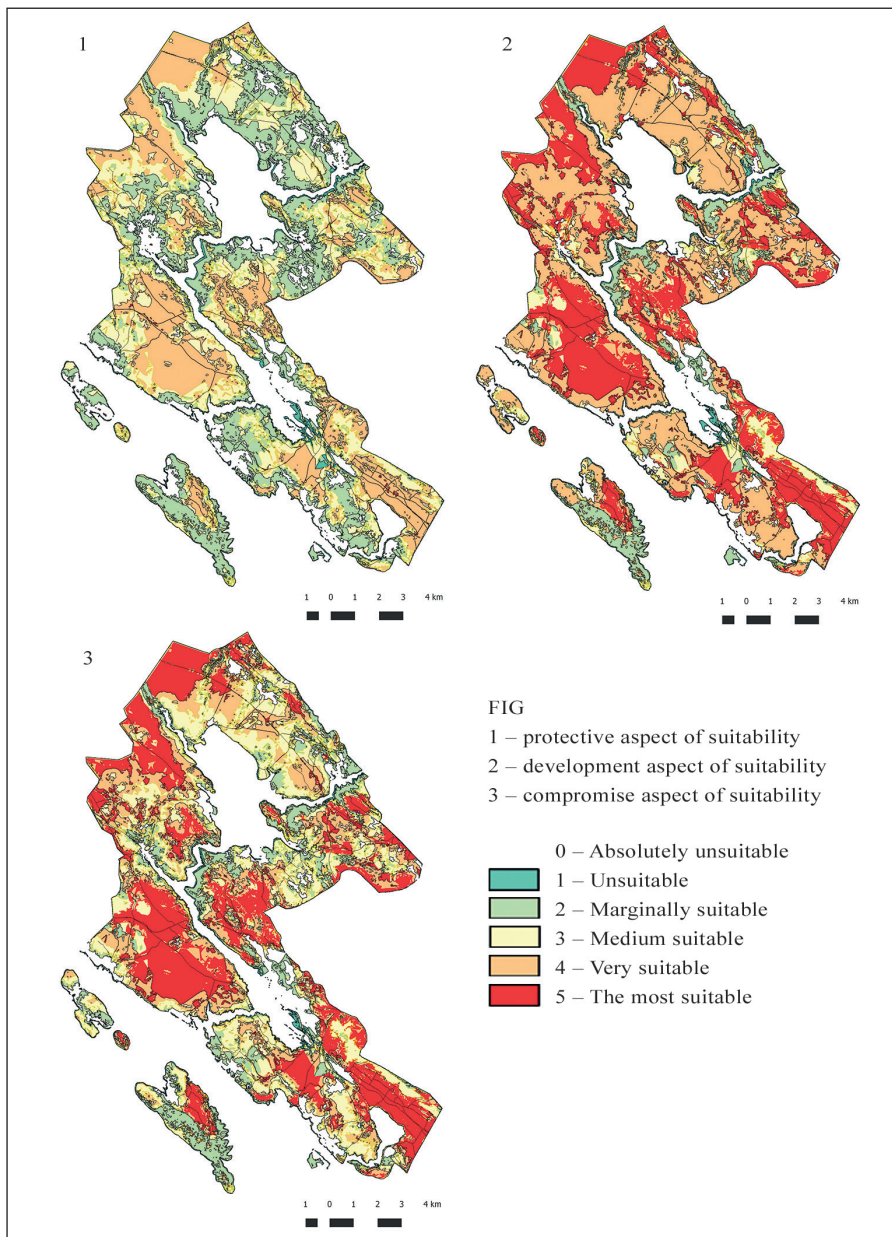
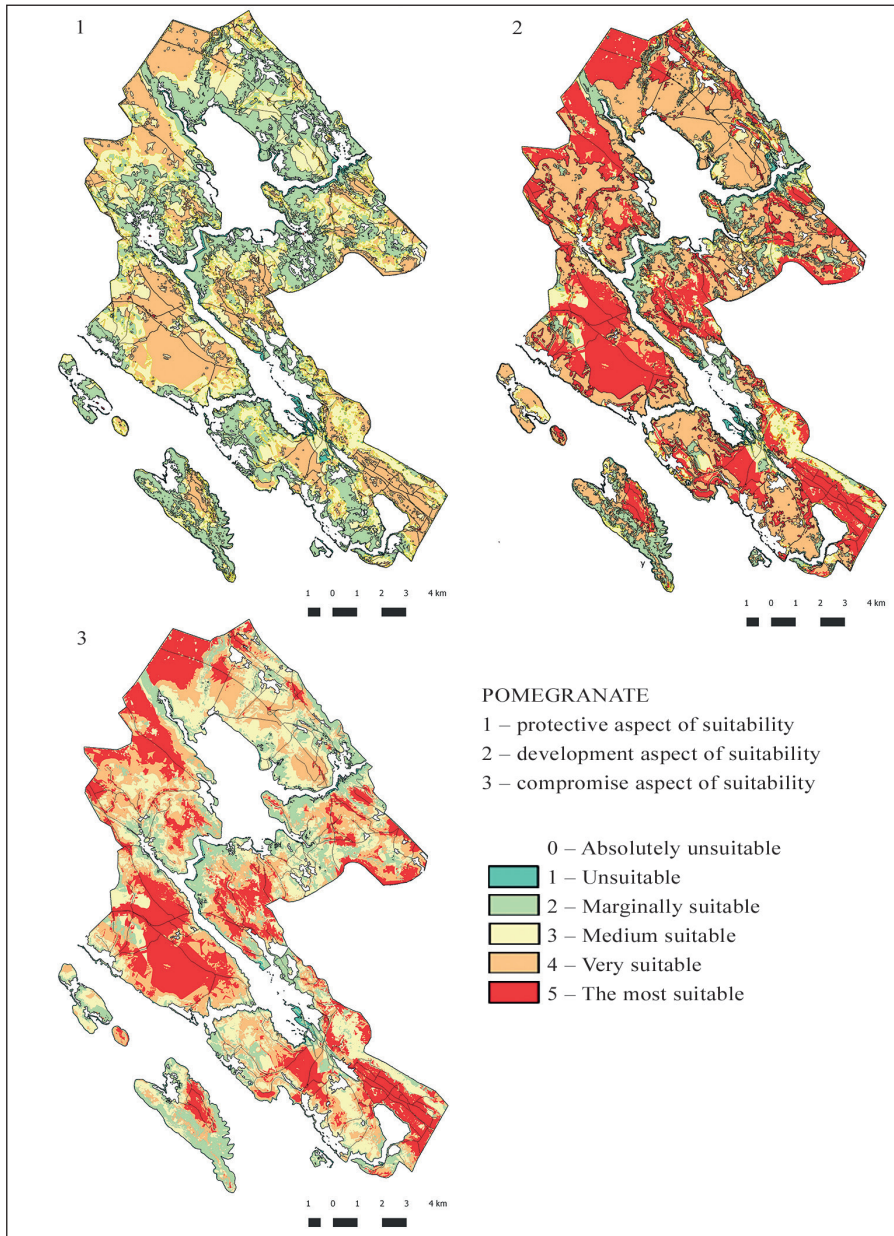


Figure 5: Value maps of protective, development and compromise aspect of suitability for pomegranate growing

Slika 5: Karte vrednotenja varovalnega, razvojnega in kompromisnega vidika primernosti za ureditev nasadov granatnih jabolk



*Table 1: A comparative view of the suitability shares for olive growing  
Preglednica 1: Primerjalni pregled deležev primernosti za gojenje oljke*

<b>Suitability value</b>	<b>Protective aspect (area in %)</b>	<b>Development aspect (area in %)</b>	<b>Compromise aspect (area in %)</b>
<b>0</b> Absolutely unsuitable	13,36	7,92	9,4
<b>1</b> Unsuitable	1,25	0,96	0,63
<b>2</b> Marginally suitable	31,26	13,54	16,1
<b>3</b> Medium suitable	28,29	8,46	22,62
<b>4</b> Very suitable	25,79	39,42	23,72
<b>5</b> The most suitable	0,05	29,7	27,53

*Table 2: A comparative view of the suitability shares for fig growing  
Preglednica 2: Primerjalni pregled deležev primernosti za gojenje fig*

<b>Suitability value</b>	<b>Protective aspect (area in %)</b>	<b>Development aspect (area in %)</b>	<b>Compromise aspect (area in %)</b>
<b>0</b> Absolutely unsuitable	12,91	7,47	8,48
<b>1</b> Unsuitable	1,53	1,27	0,89
<b>2</b> Marginally suitable	30,24	9,88	13,55
<b>3</b> Medium suitable	29,8	9,38	25,47
<b>4</b> Very suitable	25,48	43,93	25,08
<b>5</b> The most suitable	0,04	28,07	26,53

*Table 3: A comparative view of the suitability shares for pomegranate growing  
Preglednica 3: Primerjalni pregled deležev primernosti za gojenje granatnega jabolka*

<b>Suitability value</b>	<b>Protective aspect (area in %)</b>	<b>Development aspect (area in %)</b>	<b>Compromise aspect (area in %)</b>
<b>0</b> Absolutely unsuitable	9,28	7,49	8,61
<b>1</b> Unsuitable	1,51	1,26	0,89
<b>2</b> Marginally suitable	34,72	11,4	14,69
<b>3</b> Medium suitable	30,4	10,57	26,04
<b>4</b> Very suitable	24,07	41,97	24,54
<b>5</b> The most suitable	0,02	27,31	25,23

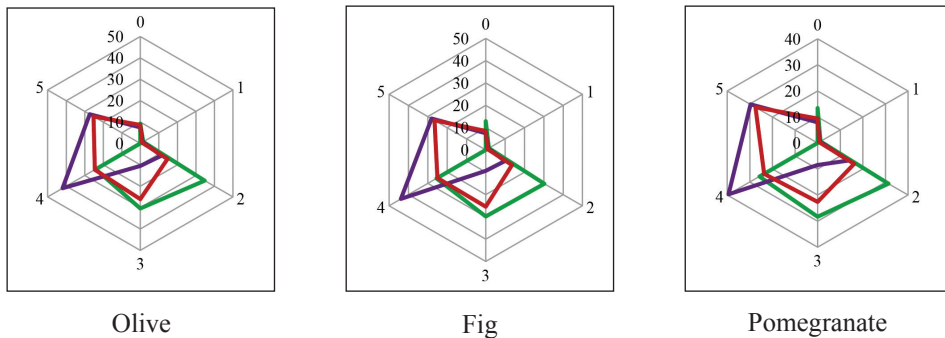
## 5 DISCUSSION

To protect the rural landscape and its natural, visual and cultural qualities as well as qualities of natural resources, the compromise aspect of landscape suitability is selected as the final spatial model for all three cultures. Within the evaluation procedure through predetermined criteria, equal significance has been attributed to the protection and to the development of the research area. Thereby, there was enough area left that was evaluated

as very suitable and the most suitable (Figure 6) where it is possible to encourage the development and maintain the landscape qualities.

*Figure 6: Comparative preview of spatial suitability aspects for olive, fig and pomegranate growing*

*Slika 6: Primerjalni pogled na primernostni vidik za gojenje oljke, smokve in granatnega jabolka*



*Legend:*

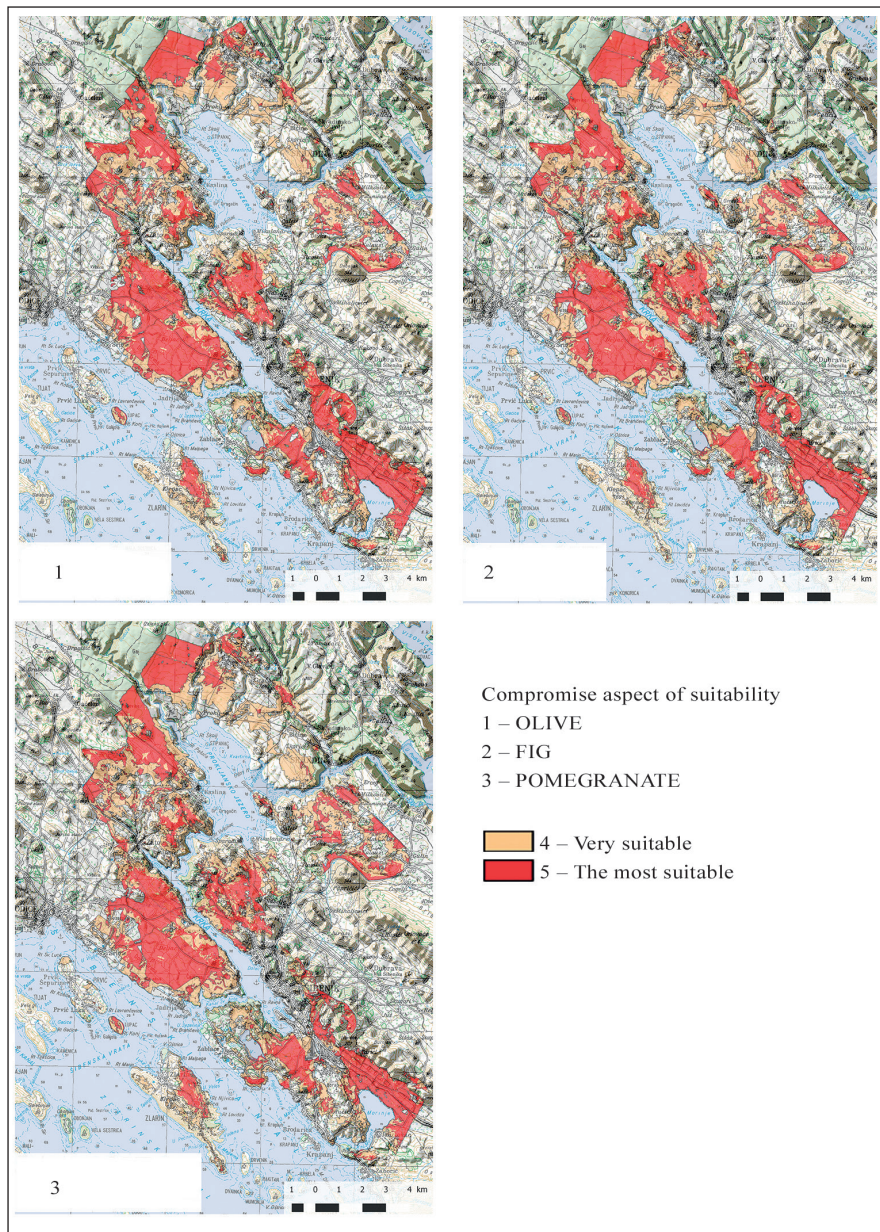
Development aspect ————  
 Protective aspect ————  
 Compromise aspect ————

The example of all three cultures shows that the most suitable areas cover almost the same surface in the compromise and the development aspect of suitability. Although the landscape vulnerability analysis of the wider area of Krka River proved its wealth of natural resources, forest and water areas, the space also abounds in cultural values. The most significant are traditional structures of agricultural land division, drywalls and other stone formations, which are, due to abandonment, left to ecological succession. This results in the loss of valuable agricultural land and devastated cultural heritage. The compromise aspect of landscape suitability for olive, fig and pomegranate growing in the research area enables the development of these activities, and at the same time, protect natural, visual and cultural landscape qualities, as well as qualities of natural resources.

Overlaying the selected compromise landscape suitability model for olive growing with the land use map (Figure 7) clearly shows that the most suitable (27,53%) and very suitable areas (23,72%), represented in roughly equal proportions within the entire research area (Figure 6), cover the areas already used for agriculture or areas that have visible remains of the traditional agriculture (drywalls and other stone formations). Those areas are classified as particularly valuable agricultural land, away from surface water and close to settlements and roads to ensure easier soil tillage and further processing of fruits after harvest. Less suitable areas are at an altitude of less than 30 meters, close to surface waters and overlapped with forest areas.

Figure 7: Suitable and very suitable areas for (1) olive growing, (2) fig growing and (3) pomegranate growing

Slika 7: Najprimernejša in zelo primerna območja za ureditev nasadov (1) oljke, (2) smokve in (3) granatnega jabolka



Overlaying the selected compromise suitability model for fig growing with the land use map (Figure 7) clearly shows that the most suitable (26,53%) and very suitable areas (25,08%), represented in roughly equal proportions within the entire research area (Figure 6), cover the areas already used for agriculture. Those areas are classified as particularly valuable and valuable agricultural land, away from surface water and close to settlements and roads. Less suitable are areas with higher landscape vulnerability but also possibility for degradation and contamination due to processing, which are close to surface water and forest areas.

Overlaying the selected compromise suitability model for pomegranate growing with the land use map (Figure 7) clearly shows that the most suitable (25,23%) and very suitable areas (24,54%), represented in roughly equal proportions within the entire research area (Figure 6), cover the areas already used for agriculture. Those areas are classified as particularly valuable and valuable agricultural land, close to settlements and roads, away from surface water and forest areas, in order to protect them considering their high vulnerability level.

Very high potential for Mediterranean agriculture within the research area is apparent from the data on the prevalence of the most suitable and very suitable areas of about

*Figure 8: Suitability of the Srma village land*  
*Slika 8: Primernost območja v zaledju naselja Srma*



Figure 9: Suitability of the background of Morinje  
 Slika 9: Primernost območja v zaledju Morinja



50% (Figure 6) in all three examples of compromise models. A large part of the area classified as absolutely unsuitable are water surfaces and settlements, where growing is impossible anyway.

The landscape of the area is determined by numerous elements, its basic natural and physical geographic characteristics such as climate, geomorphological, hydrological and soil characteristics, vegetation and social factors that include the presence of man and the intensity of his work (Kalogjera, 1996). In the background of the Srma settlement (Figure 8), currently unused agricultural land and area of cultural heritage, the revitalization of which is necessary if the historically valuable drywall structures and land division patterns are to be preserved, the results show a great potential for the development of analyzed cultures.

Besides the unused land of the Srma village, high potential exists around the Bilice settlement, too, currently partially used for agriculture, and around Morinje, where the land is currently very well utilized (Figure 9).

## 6 CONCLUSION

This paper indicates the great potential of the research area which should be taken into account during spatial, economic and developmental planning at a strategic level. It also shows the possibility of including multicriterial analysis in the spatial planning process. This would simultaneously enable the development of the area and the protection of its qualities, with a particular emphasis on valuable agricultural areas, and create solutions for long-term sustainable development, not only in physical but also social and economic terms.

Overlaying the most suitable and very suitable areas of compromising models for olive, fig and pomegranate growing shows the high potential for development of Mediterranean agriculture in the research area, with adequate protection of natural, visual and cultural qualities as well as qualities of the natural resources of the landscape. About the same area is suitable for all three cultures. The differences between the cultures in positions of the most suitable and very suitable sites occur because the attractiveness sub-models were evaluated according to the specific needs of each culture separately. While the olive tree favours good soil permeability on higher slopes to ensure the best possible soil permeability, the fig tree and the pomegranate are more resistant to the retention of water in the soil and favour flatter terrains where water remains for a longer time period after heavy rains (Miljković, 1991). All the three cultures favour well insolated places, especially southeastern, southern and southwestern exposures. The vicinity of traffic infrastructure and water resources, such as wells and cisterns, is necessary to ensure abundant yields and facilitate easier access and maintenance of plantations.

Although the shares of the areas, classified as the most suitable and very suitable for agriculture, are approximately equal, small deviations can be noticed. They show that the natural features and spatial characteristics and conditions are the most conducive to the development of olive, while slightly less to the pomegranate and the fig.

The application of the multicriterial analysis approach, used in this paper, includes the adjustment of the demands of agricultural development with protective goals determined through the existing and potential spatial qualities. It can contribute to the revitalization of increasingly neglected rural areas of Croatia. In this way, the development of individual cultures can be directed to areas with the greatest potential for achieving development requirements, without compromising protected landscapes and culturally valuable areas and taking into account the need of local communities of the area, which are the fundamental driving force of development.

## ACKNOWLEDGEMENT

The paper presented has emerged from the scientific project *Landscape qualities protection within the rural development policy of Croatia*, realized with the support of the Ministry of Science, Education and Sport of the Republic of Croatia.



## REFERENCES

- Benson, J. F., Scott, K. E., Anderson, C., Macfarlane, R., Dunsford, H., Turner, K., 2004. Landscape capacity study for onshore wind energy development in the Western Isles. Scottish Natural Heritage Commissioned Report No. 042 (ROAME No. F02LC04), 151 pp. URL: [http://www.snh.org.uk/pdfs/publications/commissioned\\_reports/ReportNo042A.pdf](http://www.snh.org.uk/pdfs/publications/commissioned_reports/ReportNo042A.pdf) (Cited 22. 3. 2014).
- Bosnić, I., 2011. Agroturizam u globalizacijskim procesima. *Praktični menadžment*, 2, 2, p. 103–111. URL: <http://hrcak.srce.hr/file/113573> (Cited 22. 3. 2014).
- Butula, S., Andlar, G., Hrdalo, I., Hudoklin, J., Kušan, T., Kušan, V., Marković, B., Šteko, V., 2009. Inventory, valuation and planning of Dalmatian coastal landscapes: The area of the Krka river estuary (in Croatian). COAST Project: Conservation and sustainable use of biodiversity in the Dalmatian coast. OIKON Zagreb, Zavod za krajobraznu arhitekturu i ukrasno bilje Agronomskog fakulteta, Urbanistički institut Ljubljana, 192 pp. URL: [http://issuu.com/undp/hr/docs/krajobrazna\\_obalna\\_podrucja\\_dalmacije\\_krka](http://issuu.com/undp/hr/docs/krajobrazna_obalna_podrucja_dalmacije_krka) (Cited 24. 3. 2014).
- Čmelik, Z., 2010. Klasični (ekstenzivni) voćnjaci u Hrvatskoj. *Pomologia Croatica*, 16, 3–4, p. 55–66. URL: <http://hrcak.srce.hr/file/102974> (Cited 22. 3. 2014).
- Golobič, M., Breskvar Žaucer, L. 2010. Landscape planning and vulnerability assessment in the Mediterranean. Thematic study. Regional Activity Centre for the Priority Actions Programme. Split/Ljubljana, 92 pp. URL: <http://www.pap-theoastcentre.org/pdfs/Landscape%20Vulnerability.pdf> (Cited 24. 3. 2014).
- Jelinčić, D. A., 2007. Agroturizam u europskom kontekstu. *Studia ethnologica Croatica*, 19, 1, p. 269–289. URL: <http://hrcak.srce.hr/22137> (Cited 22. 3. 2014).
- Kalogjera, A., 1996. Pejzaž kao bitan fizičkogeografski element u prostornom planiranju (Primjer Srma-Šibenik). *Geoadria*, 1, p. 47–58. URL: <http://hrcak.srce.hr/file/15026> (Cited 24. 3. 2014).
- Krajnović, A., Čičin-Šain, D., Predovan, M., 2011. Strateško upravljanje razvojem ruralnog turizma – problemi i smjernice. *Oeconomica Jadertina*, 1/2011, p. 30–45. URL: <http://hrcak.srce.hr/file/101797> (Cited 22. 3. 2014).
- Krause, C. L., 2001. Our visual landscape. Managing the landscape under special consideration of visual aspects. *Landscape and urban planning*, 54, 1–4, p. 239–254.
- Krpina, I., Krpina, L., Starešinić, V., Vrbanek, J., Asić, A., Ljubičić, M., Ivković, F., Ćosić, T., Štambuk, S., Kovačević, I., Perica, S., Nikolac, N., Zeman, I., Zrinščak, V., Cvrilje, M., Janković-Čoko, D., Krpina, S., 2004. *Voćarstvo*. Zagreb, Nakladni zavod Globus, 448 pp.
- Marušić, J., 1986. *Krajinsko planiranje*. Ljubljana, Biotehniška fakulteta, Vtozd za agromijo, 52 pp.
- Miljković, I., 1991. *Suvremeno voćarstvo*. Zagreb, Znanje, 547 pp.
- Smjernice razvoja voćarstva 2008–2013. 2009. Zagreb, Agronomski fakultet, 40 pp. URL: [http://www.mps.hr/userdocsimages/vocarstvo/sazetak\\_smjernice\\_vocarstvo\\_2008\\_2013-.pdf](http://www.mps.hr/userdocsimages/vocarstvo/sazetak_smjernice_vocarstvo_2008_2013-.pdf) (Cited 22. 3. 2014).

Torreggiani, D., Ludwiczak, Z., Dall'Ara, E., Benni, S., Maino, E., Tassinari, P., 2014. TRuLAn: A high-resolution method for multi-time analysis of traditional rural landscapes and its application in Emilia-Romagna, Italy. *Landscape and urban planning*, 124, p. 93–103.

## **VREDNOTENJE PRIMERNOSTI KRAJINSKE PODOBE KOT ORODJE ZA RAZVOJ IN VARSTVO DRAGOCENIH PODEŽELSKIH OBMOČIJ**

### **Povzetek**

Trajnostni razvoj je zelo pogost termin v vseh hrvaških razvojnih strategijah in dokumentih, tudi v podeželskih in kmetijskih, udejanja pa se s prostorskimi načrti na lokalnem nivoju. Ko se kmetijska zemljišča spreminjajo v neko drugo rabo ali se prepustijo procesom ekološke sukcesije, je degradacija krajinskih kvalitiet neizogibna.

Da bi zagotovili trajnostnost prihodnjega razvoja, je zelo pomembno, da so poleg vrednotenja razvojnih zmožnosti v proces prostorskega načrtovanja vključeni tudi varovalni ukrepi.

Članek obravnava potencialno degradacijo krajinskih kvalitiet zaradi razvoja tradicionalnega mediteranskega kmetijstva z vidika varstva krajine. Predstavljen je metodološki pristop k vrednotenju primernosti prostora za gojenje nekaterih mediteranskih kmetijskih kultur (oljka, smokva, granatno jabolko) na primeru širšega območja ob reki Krki (Dalmacija). Rezultati kažejo (1) učinkovitost postopka pri določanju optimalnega prostorskega potenciala tako za razvoj kot varovanje dragocenih ruralnih območij in (2) možnosti vključitve novih metod v obstoječe načrtovalske postopke. Aplikacija predstavljene analize primernosti kot metode krajinskega vrednotenja omogoča sistematični pristop k optimizaciji sprejemanja odločitev v procesu prostorskega načrtovanja, saj hkrati upošteva vse vidike razvojnih ciljev in tudi krajinskih kvalitiet. Predstavljena metoda lahko torej prispeva k varovanju dragocenih ruralnih območij, kar je pomemben vidik strateškega pristopa k trajnostnemu razvoju.

*(Prevedel K. Natek)*