

Резюме на публикациите

на гл. ас. д-р Христина Проданова

представени на участие в конкурс за заемане на академичната длъжност „Доцент“, по професионално направление 4.4. Науки за Земята, научна специалност „Картография и ГИС“ за нуждите на секция „Приложна геоинформатика“ на НИГГГ-БАН, обявен в Държавен вестник, бр. 54, от дата 04.07.2025 г.

Група показатели В

B4_1

Prodanova H, Nedkov S, Petrov G (2024) GIS-based modelling of landscape patterns in mountain areas using climate indices and regression analysis.

Environmental Modelling & Software 180.

<https://doi.org/10.1016/j.envsoft.2024.106160>

Abstract:

The approach of defining landscape patterns based on climate indices is applied in a case study area in North-Central Bulgaria. The results proved the strong interrelation between the climate indices and the elevation, enabling the implementation of a regression model. The results of the regression are used to define threshold values for delineation of all potential contours based on climate indices. The GIS modelling enables the integration of the results from different indices for the delineation of landscape contours of five potential landscape types. Four of them are validated with higher precision, proving the approach's applicability. One of the main capacities of the proposed approach is the opportunity for reconstructing climax vegetation and furthermore, the climax ecosystems that form the matrix of the potential landscapes. This can significantly contribute to assessing ecosystems and their services for restoration measures and implementing nature-based solutions.

B4_2

Nedkov S, Nikolova M, Prodanova H, Stoycheva V, Hristova D, Sarafova E (2022) A multi-tiered approach to map and assess the natural heritage potential to provide ecosystem services at a national level. One Ecosystem 7: e91580.

<https://doi.org/10.3897/oneeco.7.e91580>

Abstract:

Natural heritage (NH) possesses an outstanding universal value that can be described as “natural significance” at a national level. The ecosystems can be considered as the spatial units which represent the NH of the particular area in terms of their value to people. Recreation and tourism are amongst the important values which are strongly dependent on the NH and they have a certain impact on the ecosystems' condition and the quality of the services they provide. The efforts through the Mapping and Assessment of Ecosystems and their Services (MAES) process led to the development of a multi-tiered approach that considers different methods at different levels of detail and complexity and can be applied according to specific needs, data and resource

availability. In this paper, we propose the development of this methodology for the specific need for mapping and assessment of the NH as a source of ecosystem services (ES) for recreation and tourism. The conceptual scheme of the study demonstrates how the MAES framework can be adapted to the specific needs of the work and arrange the methods into three tiers according to the data availability and resources. The mapping and assessment procedure is based on an algorithm for spatial data analyses which enables the evaluation of the NH potential to provide 15 ecosystem services. The results show that the NH of Bulgaria is a valuable source of ES which are well presented in most parts of the country. The areas with very high potential form several clusters that correspond to the country's tourist regions. The proposed approach is applicable on the national scale and solves the problem of data availability limitations for various ES. The algorithm ensures the optimal quality of the results using the available data and resources. Instead of an expert-based assessment for all services which is easier, but less accurate, the proposed approach provides the means how to define more precise indicators, based on statistical data or models where possible. The study provides appropriate data for analyses of the methods' performance at different tiers.

B4_3

Nedkov S, Campagne S, Borisova B, Krpec P, Prodanova H, Kokkoris I, Hristova D, Le Clec'h S, Santos-Martin F, Burkhard B, Bekri E, Stoycheva V, Bruzon A, Dimopoulos P (2022) Modeling water regulation ecosystem services: A review in the context of ecosystem accounting. *Ecosystem Services*, 56, Elsevier.
<https://doi.org/10.1016/j.ecoser.2022.101458>

Abstract:

Natural Capital Accounting (NCA) has evolved rapidly in recent years through substantial efforts of both international organizations and the scientific community. Water regulation ecosystem services (ES) are key elements of regulating services in ecosystem accounting, with most relevant studies strongly relying on models for ES quantification up to now. In this paper, we provide a review of modeling efforts for water regulation ES based on 148 scientific papers, properly systematized, analyzed and interpreted by using a detailed and structured original template. We examined emerging trends and gaps in model applications and the readiness to integrate them into the NCA and SEEA-EA frameworks. We propose a classification scheme which organizes the 92 different models and modeling approaches identified in the review process into eight model categories so that this scheme can be efficiently used in the water ES assessment of and for further integration into the accounting framework. Among the models, the hydrologic model SWAT and the modeling tool InVEST are by far the most popular. The results of the review revealed differences between the general ES literature and the accounting-related papers. Moreover, our analysis sets the basis for useful recommendations of which model categories are the most appropriate for the water regulation ES, included in the SEEA-EA reference list. Based on the number of relevant papers, the reliability and the confidence level of the recommendations for the use of models have been incorporated in our analysis. We highlight as model category with the highest confidence the ones relative to quantification water flow and flood control service aiming at ES accounting. Models for erosion control ES can only be recommended with a lower confidence, while for water purification the results lack clear evidence for using a particular group of models. Based on the research findings we identified the main research priorities on model integration in the accounting of water regulation ES: 1) further development of guidelines for the use of models in ecosystem accounting; 2) analyses of the spatial aspects of the model towards a clear distinction between

ecosystem service supply and use; and 3) development of integrated modeling approaches for water regulation ES accounting.

B4_4

Prodanova H, Varadzhakova D (2022) How Individual Scores Affect the Final Expert-Based Assessments of Ecosystem Services: Range and Mean Scores Analysis of Natural Heritage Supply Maps. *European Journal of Geography* 13 (4):074-097. <https://doi.org/10.48088/ejg.h.pro.13.4.074.097>

Abstract:

Ecosystems representing the Natural Heritage (NH) are considered in this study as an important source of ecosystem goods and services for human well-being. On that spatial base, we conducted an expert-based assessment and mapping of their potential to provide ecosystem services (ES) for recreational purposes in Bulgaria. Twelve experts participated in the expert-based assessment by filling individual matrices for the potential of the NH to provide ES. We analysed the results i.e. individual scores by comparing them, and calculating the minimum, the maximum and the range scores between them. We calculated the mean individual experts' scores by ecosystem types and subtypes for nine prioritized ecosystem services for recreation – 2 provisioning, 2 regulating and 5 cultural. The results show that individual experts have different perceptions for some ecosystems and their services due to their different scientific expertise. This follows from the quite high ranges i.e., 4 or 5 units between maximum and minimum score per spatial unit. There are: (i) significant variations in scoring of Grasslands, Wetlands, Croplands, Rivers and lakes, and Urban ecosystems; and (ii) considerable similarities about Woodland and forest, Sparsely vegetated lands and Marine ecosystems. To compare the spatial discrepancies between the experts' scores, we map them individually. A final integrated map represents the potential of the NH in Bulgaria to provide ecosystem services for recreation with an average score above 3.00. The main outcomes of our study are the analyses we made on the individual and the group experts' scores.

B4_5

Petkova G, Prodanova H, Stoycheva V (2022) Analysis of the national ecosystem database of Bulgaria: (Mis)matches with the MAES framework. *Journal of the Bulgarian Geographical Society* 47: 73-82. <https://doi.org/10.3897/jbgs.e99268>

Abstract:

The mapping of ecosystems is a significant element in the European Biodiversity Strategy and the results of its implementation should support the maintenance and restoration of ecosystems and their services. The quality of the spatial data is of crucial importance for the achievement of these goals. A methodological framework for Bulgaria in the form of nine separate methodologies has been developed in recent years. In this paper, we analyze the ecosystem typology for Bulgaria and the GIS database to assess the possibilities to develop a common database for the needs of integrated water management. The data analyses were carried out in two dimensions: 1) the typology and attributive data were analyzed by cross-tabular approach; and 2) the spatial data were analyzed by topology rules. The results of the study reveal three main problems of the typology: 1) for some types it is developed to the fourth level while for others it is to the third level; 2) in some of the ecosystem types, especially in the freshwater ecosystems, different categories are mixed within a single hierarchical level; 3: there are duplicated numerical designations between grassland and forest ecosystems. This

necessitates a revision of the typology and the development of a correct uniform classification to be used for the needs of integrated assessment. The topology analyses of the merged data from the eight ecosystem GIS layers show extremely large numbers of gaps and overlaps. The main reason is the use of different sources for the mapping of different ecosystem types. The main conclusion is that it is practically impossible to generate topologically correct integrated GIS layers from the eight ecosystem type layers. Therefore, it is necessary to develop a new approach for mapping all ecosystem types into a uniform database.

Група показатели Г

Г5_1

Проданова Хр (2025) Публикационният процес в научните изследвания. Българско географско дружество, София, 167 с. ISBN: 978-619-90446-5-0 (под печат)

Резюме:

Книгата „Публикационният процес в научните изследвания“ е предназначена за начинаещи в света на международното научно публикуване. Тя разкрива основите на публикационния процес в периодични списания и подчертава значението на добре организирани и документирани научни изследвания за успешно публикуване на научни статии. Книгата е структурирана в две части.

Част първа представя основите на четирите етапа в публикационния процес като обяснява значението на набор от термини от английски на български език и предоставя практически съвети и примери от професионалния опит на автора. Какви операции спадат към подготовката на един ръкопис, неговата обработка, публикуване и разпространение е обяснено с лични примери и подкрепено с подходящи литературни източници. Тази част на книгата завършва с развенчаването на няколко мита и заблуди, които все още битуват сред част от българската научна общност и според автора възпрепятстват свободното развитие и интегритет на науката.

Част втора изследва връзките между публикационния процес и провеждането на научни изследвания. През призмата на процеса по разработване на оригинална научна статия са интерпретирани деветте стъпки, които трябва да измине всяко оригинално изследване. Дефинирането на основния въпрос, набирането на информация, формулирането на базисна хипотеза, подготовката на изследването, извършването на експеримент, анализ на данните, интерпретация и оформяне на изводи, публикуване, и проверка – всички девет стъпки са методически разработени и обяснени. Всяка стъпка е подкрепена с авторски примери от работния процес на проведено научно изследване и публикуваната статия по него, с което са доказани връзките между добре организирани изследвания и публикации.

Книгата се стреми да подкрепи усилията за по-качествена и видима българска наука сред международната аудитория, следвайки целите залегнали в Националната стратегия за развитие на научните изследвания (2017 – 2030), Стратегията за развитие на Българската академия на науките (2018 – 2030) и мисията на Българското географско дружество за усилено развитие на Географията до 2030 г.

„Публикационният процес в научните изследвания“ е първа книга от малка поредица със заглавие „Как да пишем и публикуваме успешни научни статии: съветите на редактора“ и основен автор д-р Христина Проданова, управляващ редактор на сп. „Известия на Българското географско дружество“ (Journal of the Bulgarian Geographical Society).

Г7_1

Kiffner C, Linnell JDC, Capelli S, Ciolli M, Iglesias A, Jewell K, Kaltenborn B, König HJ, Martin-Collado D, Prodanova H, Soriano B, Stoycheva V, Tattoni C, Uthes S, Volani S, Zöller M, Ostermann-Miyashita EF (2025) Comparative stakeholder perceptions of wildlife management across five European multi-use landscapes. Journal of Environmental Management 389, 126186. <https://doi.org/10.1016/j.jenvman.2025.126186>

Abstract:

Human-wildlife coexistence in shared landscapes requires effectively navigating different stakeholder interests. Despite progress in this field, most studies focus on a limited number of “problematic” wildlife species. This narrow scope overlooks the species-specific nature of human-wildlife interactions. To identify general patterns in stakeholder perceptions of diverse wildlife species, we implemented a modified 3i (interest, influence, impact) method to assess how individuals within seven stakeholder groups (crop farmers, livestock farmers, foresters, hunters, tourism operators, protected area managers, and staff of environmental non-governmental organizations) rated their interest in, their influence on, and how they are impacted by twelve wildlife species categories: moose, red deer, wild reindeer, chamois, roe deer, brown bear, wild boar, grey wolf, European ground squirrel, cormorant, eagles, and vultures (some of them were site-specific).

The study design consisted of two steps: 1) assessing expert perceptions of the 3i for each stakeholder-species combination in each of the five study areas in Bulgaria, Germany, Italy, Norway, and Spain, and 2) assessing stakeholder (251 individuals) perceptions of the 3i. We found substantial variation in stakeholder perceptions across groups, sites, and species categories. Within-group heterogeneity and individual respondents belonging to multiple stakeholder categories further challenged simplistic assumptions of distinct and well-defined stakeholder perspectives. Expert perceptions often underestimated stakeholder interest in wildlife species categories and occasionally diverged from stakeholder-perceptions of influence and impact. Notably, perceived impacts of brown bears, wolves, and eagles often exceeded the perceived influence on these species categories, underscoring a sense of powerlessness in managing interactions in some sites.

Г7_2

Prodanova H, Dimitrov S (2025) Visibility and research impact of Bulgarian geographers: insights from indexing databases and social media platforms. European Science Editing 51. <https://doi.org/10.3897/ese.2025.e120210>

Abstract:

Background: The requirement of publishing high-quality papers in established peer-reviewed journals is still in the early days of implementation among academic geographers in Bulgaria, which limits the visibility and impact of Bulgarian research and delays the possibilities of academic recognition and international collaboration.

Objectives: To examine the current visibility and impact of Bulgarian geographers using quantitative analysis of publicly available data derived from eight scientometric databases and social media platforms.

Methods: Relevant data were collected for 116 researchers affiliated with five institutions from the following sources: Scopus, Web of Science, Publons, ORCID, Google Scholar, Research Gate, LinkedIn, and X (Twitter). Using Microsoft Excel, the performance of each of the researchers and each of the institutions was quantified in terms of (1) the number of publications, (2) the number of citations, (3) H-index, (4) i10-index, and (5) Research Interest Score. The scores were also plotted using RAWGraphs and Microsoft PowerPoint.

Results: Only half of the researchers had published in internationally indexed journals. The institutions and departments in the capital city, Sofia, enjoyed significantly and disproportionately higher visibility than those from smaller towns. Geographers from the Bulgarian Academy of Sciences (Sofia) and one department from Sofia University showed the highest visibility on Scopus (100%), whereas two rural universities – the University of Veliko Tarnovo and Shumen University – were visible mostly on ResearchGate and Google Scholar. Overall visibility of each institution on social media was very low (8%–16%).

Conclusions: The analysis led to several recommendations on increasing the visibility and impact of Bulgarian research in geography. These recommendations will be valuable in research management, public relations, especially in improving communications and devising development strategies.

Г7_3

Prodanova H, Stoycheva V (2024) Increasing the uptake of ecosystem services research in decision-making and education: Follow-up discussion on the “Twenty years of ecosystem services research in Bulgaria”. *Journal of the Bulgarian Geographical Society* 51: 177-186. <https://doi.org/10.3897/jbgs.e142535>

Abstract:

Ecosystem services research in Bulgaria has been actively studying different aspects of this concept and its implementation. Although it is widely recognizable, the concept has still not been sufficiently implemented in Bulgaria’s decision-making process. Following the European and global initiatives for implementing biodiversity and ecosystem services (BES) into the decision-making process, we have identified the stakeholders’ perceptions regarding the possible initiatives for improving the uptake and the lack of sufficient education program coverage within secondary and higher education. In this short communication, we suggest practical priorities for the future development of BES activities enabling the uptake in Bulgarian education and policy.

Г7_4

Prodanova H, Nedkov S, Yordanov Y (2024) The old good landscape maps: New interpretations enabling ecosystem services assessment of conservation potential at a national scale. *Nature Conservation* 56: 223-242. <https://doi.org/10.3897/natureconservation.56.132537>

Abstract:

The ecosystem services (ES) approach has been widely accepted in environmental policies and management as an adequate platform that can serve as a link between

nature and society. Many ES are influenced by the landscape structure. Thus, national-scale landscape mapping can potentially contribute to nature conservation management. However, there are no attempts to directly link the ES assessment with the landscape units at a national level. In this paper, we propose an approach for the transformation of paper copy information from old landscape maps to enable the assessment of ES conservation potential at the national landscape scale. The conceptual scheme of the approach contains three main elements: (i) data acquisition; (ii) landscape and ES assessment data processing; and (iii) mapping of ES potential at a landscape level. The results reveal the landscape heterogeneity based on landscape classification and mapping at a national level and the ES conservation potential based on the analyses of the Natural Heritage (NH) in the country to provide ES. The assessment of ES conservation potential using the national scale landscape mapping allows us to analyze the spatial relationships between the landscapes with high conservation value and the existing nature protection network. The conceptual scheme of the study demonstrates how the results of the ES potential provided by the NH at a national level can be combined with the landscape units from the traditional landscape classification schemes to produce various spatial and statistical metrics that reveal how the national system of protected areas coincides with the areas of high ES conservation value.

Г7_5

Nedkov S, Stoycheva V, Prodanova H, Ananiev I, Yordanov Y (2024) Twenty years of ecosystem services research in Bulgaria: lessons learned and future directions from a geographical perspective. *BioRisk* 22: 33-52.

<https://doi.org/10.3897/biorisk.22.125194>

Abstract:

The ecosystem services (ES) concept has established itself in recent years as the predominant paradigm for framing environmental research and policy-making. The EU Biodiversity Strategy to 2020 with its task for member countries to map and assess the state of ecosystems and their services has contributed vastly to the development of the ES studies in the European countries. Bulgaria was among the countries that made substantial progress in its implementation and the contribution of the geographers was of vital importance. This paper aims to provide an overview and analysis of the ES research in Bulgaria focusing on the contributions of the geographers and the spatial aspects of the studies. The information on the ES research was performed through a literature review by collecting all available published works that address the main objectives of the study. To systematize and characterize the content of the reviewed papers, a special database with a standard nomenclature was constructed. The findings from the review allowed us to identify both achievements and research gaps in the ES studies conducted by Bulgarian geographers. This enabled us to define the main research priorities of the coming years which can trace the future directions of ES research in the country. They include the development of the spatial aspects in the methodological frameworks for mapping and assessment of ES, better use of GIS-based tools for mapping ES alongside models' integration, and improvement of the publication's quality and increase of the papers published in highly rated indexed journals.

Г7_6

Stefanov P, Prodanova H, Stefanova D, Stoycheva V, Petkova G (2023) Monitoring of water cycle in karst geosystems and its integration into ecosystem assessment

framework. Journal of the Bulgarian Geographical Society 48: 15-26.
<https://doi.org/10.3897/jbgs.e101301>

Abstract:

Karst is a widely spread natural phenomenon which provides essential benefits to human society, such as drinking water. The water cycle in the karst geosystems is the main factor for their formation and at the same time one of the main drivers for ecosystem services (ES) provision. The monitoring of the water cycle can provide valuable information regarding its functioning and ensure data for ES assessment. This paper aims to present an overview of the monitoring of the water cycle in the karst geosystems and the opportunities to integrate the monitoring data into the water regulation ES assessment. The monitoring of the water cycle is based on the methodological framework ProKARSTerra. It is applied in model karst geosystems, which are representative of the main karst types in Bulgaria. One of them is the Brestnitsa karst geosystem, which is the case study of this work. The monitoring ensures data for analyses of the water cycle which can be used in the assessment of water-related ecosystem services. The results from the analyses of the data requirements and availability show that some services such as water flow regulation and regulation of chemical condition of freshwaters can be easily provided through data for quantification, while for others further studies are needed. The results of the long-term integrated monitoring in Brestnitsa karst geosystem provide the foundation for important conclusions and models for the karst genesis and function under global changes and active anthropogenic pressure. Their integration into the assessment framework and mapping of ecosystem services is an essential step towards the development of models for sustainable use of natural resources in the karst areas.

Г7_7

Prodanova H (2021) Experimental mapping and assessment of ecosystem services based on multi-level landscape classification. Journal of the Bulgarian Geographical Society 45: 31-39. <https://doi.org/10.3897/jbgs.e78692>

Abstract:

The importance of the landscapes for the development of recreation and ecotourism is significant but very little studied. Usually, scientists use spatial units to map and assess the ecosystem services CORINE land cover or similar classifications. Traditional multi-level landscape classifications, very well-known and developed in the XXth century in Bulgaria, Russia, and other Eastern and Central European countries, could give valuable information for various indicators for ecosystem services assessment. From another hand, these classical landscape ecological maps are very little-known for the international scientific audience. We decided to conduct an experimental mapping and assessment of ecosystem services based on multi-level landscape classification. For this, we have chosen a case study area with hilly karst relief, which is part of the inner Predbalkan Region, located in North-Central Bulgaria. The site represents a scientific interest in terms of its transitional position between the Stara Planina Mountain and the Danube Plain and the presence of various anthropogenic changes. The study aimed to develop and test an original methodology for mapping and assessment of the capacity of the contemporary landscapes in the Strazhata syncline upland and Melovete hills to provide cultural ecosystem services – recreation and ecotourism. The results showed that 70% of the territory has medium or higher capacity, dominated mainly by karst areas with natural vegetation in protected sites.

Г7_8

Nedkov S, Mitova R, Nikolova M, Borisova B, Hristova D, Semerdzhieva L, Zhiyanski M, Prodanova H (2021) Prioritization of ecosystem services related to the natural heritage of Bulgaria. Journal of the Bulgarian Geographical Society 45: 19-30. <https://doi.org/10.3897/jbgs.e73687>

Abstract:

Natural heritage (NH) is an important element of the natural capital of each country, and as such, represents key assets that deliver various benefits to the citizens. The rich and diverse NH of Bulgaria is a prerequisite for the development of various activities such as recreation and tourism, but these activities have also negative impact on some of the NH's elements. The concept of ecosystem services (ES) has the potential for bridging the gap between the conservation and exploitation needs. In this paper, we propose an approach to prioritizing the ES provided by the natural heritage of Bulgaria for the needs of recreation and tourism. The approach is designed for the mapping of the NH but it can also support the overall process of mapping and assessment of ES. It is based on application of ES prioritization matrix (ESPM) and a five-step algorithm designed to differentiate ES into priority levels according to their significance to recreation and tourism. Through the application of the proposed approach we were able to sort out the ES into three groups (high, medium and low priority) according to their importance to recreation and tourism. The first group contains obligatory ES for each mapping and assessment activity from national to local level. The second group contains optional ES recommended for studies at regional level, while the services can be selected according to the specifics of the study. The low priority ES are recommended for local level studies in cases where the assessment requires high details and accuracy. The mapping of high priority ES at national level shows that the products of the approach can be easily adapted for various studies for assessment of NH and sustainable tourism practices using the conventional mapping methods.

Г7_9

Nedkov S, Borisova B, Nikolova M, Zhiyanski M, Dimitrov S, Mitova R, Koulov B, Hristova D, Prodanova H, Semerdzhieva L, Dodev Y, Ihtimanski I, Stoyanova V (2021) A methodological framework for mapping and assessment of ecosystem services provided by the natural heritage in Bulgaria. Journal of the Bulgarian Geographical Society 45: 7-18. <https://doi.org/10.3897/jbgs.e78680>

Abstract:

Natural heritage (NH) includes natural features that can be described as outstanding universal value at a national level. It refers to the importance of ecosystems, biodiversity, and geodiversity for their existence value, and the ecosystems can be considered as the spatial units for its mapping and assessment. The ecosystem services (ES) concept provides an appropriate basis in the form of assessment and mapping methods that enable linking the state of ecosystems with human well-being. Thus, it can be used as a platform to find solutions to the problems related to the conflicts between conservation and the use of the NH. In this paper, we aim to present the process of developing a methodological framework for mapping and assessment of ecosystem services provided by the natural heritage in Bulgaria for recreation and tourism. The conceptual framework of the ecosystem-based assessment of NH in Bulgaria is based on the assumption that the generation of NH for the needs of tourism can be presented as the linkages between the natural

systems and tourism in the form of ES potential, flow, and demand. The results demonstrate that the NH can be presented as a spatial phenomenon conceptualized by the flows of benefits from ecosystems to people which contribute to human well-being. The mapping and assessment procedures are fully developed for application at a national level, while for the regional and local level, few pilot studies mark some basic foundations for further development.

Г7_10

Nedkov S, Pickles J, Naydenov K, Prodanova H (2021) Journal of the Bulgarian Geographical Society: the new vision and perspectives. Journal of the Bulgarian Geographical Society 44: 3-5. <https://doi.org/10.3897/jbgs.e68981>

Abstract:

The Journal of Bulgarian Geographical Society was the first scientific geographical journal in the country established in 1933. During the long period of its development, it became a leading journal for publishing scientific results in geography and related interdisciplinary fields in Bulgaria. Geography of the 21st century is expected to contribute to the development of human capital and the knowledge society, to offer place-specific solutions for sustainable regional development and use of the planet's natural and human capital. One of the main goals of the Bulgarian Geographical Society is to stimulate the geographic community to search for smart spatial solutions which can contribute to meet the challenges of modern society. The Journal of the Bulgarian Geographical Society will contribute to the achievement of this goal by providing a platform for scientists in the main fields of geography and the interrelated sciences as well as decision-makers, and the interested public to share their knowledge in an efficient and open manner. In these days of continuous speeding up of paces of work and life, the idea of facilitating the sharing of existing knowledge in order to create synergies, new knowledge, and innovation is more than timely and our journal can join the efforts to achieve these goals.

Г7_11

Nedkov S, Ananiev I, Prodanova H, Stoycheva V (2023) Integrated mapping of ecosystems and assessment of forest ecosystem services at river basin scale. Silva Balcanica 24(3): 43-60. <https://doi.org/10.3897/silvabalcanica.24.e115856>

Abstract:

Ecosystems provide various goods and services to society and their valuation is among the main objectives of the concept of ecosystem services (ES). The mapping of ecosystems is the main building block of the whole process of the Mapping and Assessment of Ecosystems and their Services (MAES). The analyses of the ecosystem data produced during the implementation of the national methodology for mapping ecosystems in Bulgaria (MAES BG) reveal some problems that may cause confusion in cases of integrated assessment of all ecosystem types. In this paper, we present an approach that enables formulation of a uniform spatial dataset based on the mapping of the main ecosystem types, that can be used for mapping of ES at a river basin scale. It has been applied to the upper part of the Ogosta River basin and the result is a topologically correct uniform spatial data layer. The approach gives one possible solution to problems related to the different sources of information and the discrepancies between ecosystem types in the national mapping of ecosystems in Bulgaria. It is based on the use of a uniform spatial framework that outlines the ecosystem types and sets the initial database for further mapping. This ensures a topologically correct spatial dataset for the ecosystems and a background for further updates for each ecosystem at the

different levels of MAES typology. The most appropriate spatial basis for the territory of Bulgaria is the database for the physical blocks of the Ministry of Interior. Its application to the studied river basin gives encouraging results and can be used as an example for similar areas. Further development of the approach will ensure the mapping of the forest ecosystems at level 3 of the MAES BG typology and more precise delineation of the grassland, heathland, freshwater, and sparsely vegetated ecosystems.

Г7_12

Проданова Хр., Ананиев И, Недков Ст. Картиране на екосистемите за нуждите на басейновото управление на водите. Космос, Екология, Сигурност, ИКИТ-БАН, 2024, ISSN:p-ISSN 2603–3313, e-ISSN 2603–3321, 164-169.

http://space.bas.bg/SES/archive/SES%202024_DOKLADI/3_Remote%20Sensing/2_Prodanova.pdf

Резюме:

Методическата рамка за картографиране на екосистемите и услугите, които те предоставят, е разработена от работната група MAES (Mapping and Assessment of Ecosystems and their Services). Методиката за България е разработена в рамките на проекта MetEcosMap (Methodological assistance for ecosystems assessment and biophysical valuation) и включва девет отделни методики, всяка от които обхваща определен тип екосистема според типологията на MAES. При последващото картографиране бяха разработени девет отделни бази данни за всеки тип екосистема. В настоящото изследване анализирахме типологията на екосистемите за България и коригирахме установените недостатъци. Подходът на интегрирано картиране на екосистемите, който съчетава деветте типологии, беше доразвит, за да се улесни по-точното очертаване на сладководните екосистеми. Подходът беше приложен за горната част на басейна на река Огоста и резултатът е под формата на топологично коректен единен слой пространствени данни и карти на екосистемите.

Г7_13

Проданова Хр, Петкова Г, Стоянова Е (2022) Моделиране на рекреационно-туристическия потенциал на областта Порече в Република Северна Македония. Е-списание Географ, 6, Български географски портал - Географ БГ, 2022, ISSN:2534-949X (online), 77-90. <https://geograf.bg/sites/default/files/emagazine/emagazine2022.pdf>

В оригинал няма е публикувано резюме, заради спецификите на изданието.

Резюме:

Целта на това изследване е да извърши пилотно моделиране на рекреационно-туристическия потенциал в район с наличие на карстови обекти, какъвто е областта Порече в Република Северна Македония (PCM) посредством моделиране в InVEST. В изследването са интегрирани емпирични данни от приложени полеви методи, геоинформационни системи (ГИС) и моделиране.

Г7_14

Недков Ст, Проданова Хр, Найденов Кл (2020) Известия на Българското географско дружество: минало, настояще и бъдеще. Известия на Българското географско дружество 43: 107-120. <https://doi.org/10.3897/jbgs.2020.43.17>

Abstract:

The article presents a comprehensive historical review of the development of “Journal of the Bulgarian Geographical Society” since its establishment, and points out the

perspectives that lie ahead. We highlighted three periods of development of the journal: First (1933–1943), Second (1953–1993), and Third (2018–2020) based on key moments within the life-cycle of the Society caused by various socio-political situations in Bulgaria across time. We conducted the review following several key points: (1) periodization; (2) analysis of the publications based on the publishing language, types of the articles, and the major research topics; (3) expansion of the editorial board; and (4) design of the journal including its format, cover and paper layout. We pointed out a few challenges in the present state of the publication process in Bulgaria within the geographic community in particular, and gave valuable recommendations on how to deal with them in the light of the global tendencies in the academic publishing process. For the future development of the journal, we have marked major goals and changes that will lead to improving the quality of the geographic publications in the country. They are as follows: building a journal management concept, determination of the focus and scope, types and characteristics of the publications, and improvement of the graphic design. In conclusion, we highlighted the strengths and the weaknesses of the past development of the journal, and underlined the new changes, which will give the journal an international recognition.

Г7_15

Проданова Хр, Петрова М (2020) Доц. д-р Никола Тодоров (1955-2018) – живот в името на географията. Известия на Българското географско дружество 42: 115-131. <https://doi.org/10.3897/jbgs.2020.42.17>

Abstract:

The paper is devoted to Assoc. Prof. PhD Nikola Todorov's life and professional contributions (1955-2018) – a prominent Bulgarian geographer, unreservedly dedicated to the science and field researches, who left a rich creative heritage in the field of Physical Geography and Landscape Science. He was the leading author in the development of the second landscape classification system of Bulgaria and in the creation of a landscape map of Bulgaria on a 1:500 000 scale, which is one of his main contributions. An important contribution in his research activity is the developed classification system of anthropogenic changes and landscape disturbances in Bulgaria, which is applicable to the whole country and encompassing the enormous variety of natural-territorial complexes and their changes. He was a scientific mentor for 26 master students and 4 PhD students. Assoc. Prof. Nikola Todorov was a Lecturer who inspired generations of students and many young researchers with his erudition and oratory skills.

Г7_16

Петров Г, Проданова Хр (2019) Относно съществуването на иглолистен пояс по северните склонове на Шипченска планина в миналото. Известия на Българското географско дружество 40: 30-34. <https://doi.org/10.3897/jbgs.2019.40.5>

Abstract:

The names of geographical objects on a particular area are peculiar store for conservation of historical-geographical information. Typical versatility of the toponymic system gives possibility for usage of different approaches for analysis of it, including spatial analysis. Information for state of natural environments and their changes is coded in the toponymic system. Historical localization of landscapes with coniferous vegetation on the northern slopes of Shipchenska Mountain (Balkan Mountains, Bulgaria) on toponymic basis is presented in the article. Some conclusions about probability for existence of coniferous belt in the past are formulated. The study is an initial attempt to

build a link between toponymy and onomastics on the one hand and historical geography of landscapes on the other. The used approach has some weaknesses and could be used successfully in combination with the results of other studies such as paleobotanical, paleoecological, etc.

Г7_17

Проданова Хр, Тодоров Н (2016) Разрушаване на ландшафти във възвишението Стражата, Среден Предбалкан. В: Сборник доклади от Научна конференция "Географски аспекти на планирането и използването на територията в условията на глобални промени", Българско географско дружество, 2016, ISBN:978-619-90446-1-2, 120-125. <https://geography.bg/images/dokladi/39.pdf>

Абстракт:

Карстовият релеф на Стражата е създал редица природни феномени – пещери, скални откоси, понори, въртопи, карстово езеро и др. В тази природна обстановка допреди 60-70 години е съществувал баланс между антропогенната дейност и ландшафтите, но след изграждането на двете големи каменни кариери и асфалтови бази към тях в селата Кози рог и Скалско, се довежда до голям дисбаланс в ландшафтите, с което се осъществява разрушаване на местообитания, екосистеми и т.н.

Г7_18

Проданова Хр (2016) Пушевските кактуси - необичайна атракция или скрита опасност?. Е-списание Географ, 1, Български географски портал - Географ БГ, ISSN:2534-949X, 92-101. <https://geograf.bg/sites/default/files/emagazine/emagazine2016.pdf>

В оригинал няма е публикувано резюме, заради спецификите на изданието.

Резюме:

Статията представя физико-географските особености на находището с кактуси обикновена опунция *Opuntia humifusa* (Raf.) Raf. в землището на с. Пушево и анализира потенциалните опасности от разпространението на този инвазивен чуждоземен вид. Направени са препоръки за провеждането на по-задълбочени изследвания и мониторинг за информирането на решения за управлението на територията.

28.08.2025 г.

гр. София

Изготвил:

гл. ас. д-р Христина Проданова