

UČNI NAČRT PREDMETA / COURSE SYLLABUS

Predmet:	UVOD V EKOSISTEMSKO STORITVE
Course title:	INTRODUCTION TO ECOSYSTEM SERVICES

Študijski program in stopnja Study programme and level	Študijska smer Study field	Letnik Academic year	Semester Semester
Okoljske in regionalne študije, doktorski študij 3. stopnje	Skupni	1	1,2
Environmental and Regional Studies, doctoral study 3 rd level	Common	1	1,2

Vrsta predmeta / Course type

Izbirni / Elective

Univerzitetna koda predmeta / University course code:

DI013

Predavanja Lectures	Seminar Seminar	Sem. vaje Tutorial	Lab. vaje Laboratory work	Teren. vaje Field work	Samost. delo Individ. work	ECTS
30		20		10	120	6

Nosilec predmeta / Lecturer:

doc. dr. Mateja Šmid Hribar, doc. dr. Daniela Alexandra Teixeira da Costa Ribeiro

Jeziki /

Languages:

Predavanja / Lectures:

Vaje / Tutorial:

slovenščina, angleščina / Slovene, English

slovenščina, angleščina / Slovene, English

Pogoji za vključitev v delo oz. za opravljanje študijskih obveznosti:

Končana druga bolonjska stopnja ustrezne smeri ali univerzitetni študij VII stopnje.

Prerequisite:

Finished second Bologna level in the appropriate field or University degree VII.

Vsebina:

Predmet obravnava potencialne nedavno razvitega koncepta ekosistemskih storitev. Med predavanji bodo razloženi ključni koncept ekosistemskih storitev ter njegove zmožnosti in omejitve pri uporabi v ustreznih politikah.

Vsebina bo razdeljena na tri vsebinske sklope:

1. Teoretični del (različne klasifikacije in tipi ekosistemskih storitev, omejitve

Content (Syllabus outline):

The course discusses the potentials of the recently developed concept of ecosystem services. During the course, the key concept of ecosystem services, its capacities and limitations when applied to relevant policies will be explained.

The content is divided into three main parts, as following:

1. Theoretical part (Different classifications and types of ecosystem services; limits of

<p>njihove rabe, najnovejši trendi v svetovnih raziskavah, ...)</p> <ol style="list-style-type: none"> Praktični del, ki osvetljuje rabo koncepta in dileme (potencialna raba koncepta v politikah; ocena in vrednotenje; kompromisi in sinergije ekosistemskih storitev pri upravljanju pokrajine; prednosti in slabosti vrednotenja ekosistemskih storitev; etična vprašanja, ...) Terensko delo (vaje in kritični razmislek o tem, kako v praksi uporabiti priučen koncept; razmislek o tem, katere koristi nam nudi okolje okrog nas). <p>Tematika se vsebinsko povezuje s sorodnimi koncepti kot so: podnebne spremembe, biodiverziteteta, raba naravnih virov, rešitve temelječe na naravi, upravljanje s skupnimi viri in dobrim počutjem ljudi. Vsi omenjeni koncepti prispevajo k učinkovitemu in trajnostnemu upravljanju z naravnimi viri in k prehodu v bolj prožne družbe.</p>	<p>it's application; recent trends in global research ...)</p> <ol style="list-style-type: none"> Practical part highlighting the use of the concept and dilemmas (Potential application of this concept in politics; assessment and evaluation; trade-offs and synergies of ecosystem services in landscape management; pros & cons of valuing ecosystem services; ethical questions ...) Field work (exercise and critical thinking to apply the concepts learned; reflection upon what we're benefiting from the environment around us). <p>The theme is linked to other concepts such as climate change, biodiversity, natural resource use, nature based solutions, governing of common-pool resources and human well-being, all aiming to contribute to efficient and sustainable management and governance of natural resources and transition to more resilient societies.</p>
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Temeljna literatura in viri / Readings:

- Millennium Ecosystem Assessment (2005). Ecosystems and human well-being: Synthesis. Washington. <https://www.millenniumassessment.org/documents/document.356.aspx.pdf>
- de Groot, R. S., Alkemade, R., Braat, L., Hein, L., Willemsen, L. (2010). Challenges in integrating the concept of ecosystem services and values in landscape planning, management and decision making. *Ecological Complexity* 7-3, 260-272.
- Burkhard, B., Kroll, F., Nedkov, S., & Müller, F. (2012). Mapping ecosystem service supply, demand and budgets. *Ecological Indicators* 21, 17-29.
- Howe, C., Suich, H., Virac, B., Maceo, G. M. (2014). Creating win-wins from trade-offs? Ecosystem services for human well-being: A meta-analysis of ecosystem service trade-offs and synergies in the real world. *Global Environmental Change* 28(1): 263-275.
- Loft L., Mann, C., Hansjürgens, B., (2015). Challenges in ecosystem-services governance: Multi-levels, multi-actors, multi-rationalities. *Ecosystem Services* 16, 150-157.
- Heydinger, J. M., (2016). Reinforcing the Ecosystem Services Perspective: The Temporal Component. *Ecosystems* 19: 661-673. DOI: 10.1007/s10021-016-9959-0
- Bennet, E. M. (2017). *Research Frontiers in Ecosystem Service Science*. *Ecosystems* 20, 31-37.
- Burkhard, B., & Maes, J. (eds) (2017). *Mapping Ecosystem Services*. Pensoft Publishers, Sofia, 374 pp.

Cilji in kompetence:

Objectives and competences:

Predmet prispeva predvsem k razvoju naslednjih splošnih in specifičnih kompetenc:

- poznavanje ekosistemskih storitev, njihovih vlog in ocenjevanja;
- seznanitev z različnimi metodami in pristopi za ocenjevanje različnih tipov ekosistemskih storitev;
- razvijanje znanja in veščin v znanosti, ki podpira okoljska vprašanja;
- ovrednotenje vloge družbe v svetu narave in v medsebojnih odnosih med človekom in naravo;
- razvijanje sposobnosti razmišljanja o okolju in našem mestu v njem;
- izboljšanje raziskovalnih sposobnosti pri seminarski nalogi in
- seznanitev z izbranimi primeri uporabe koncepta ekosistemskih storitev na različnih prostorskih ravneh.

The mainly contributes to the development of the following general and specific competences:

- knowledge of ecosystem services, its roles and assessment;
- get familiar with various methods and approaches to assess different types of ecosystem services;
- develop knowledge and skills in the science underpinning environmental issues;
- evaluate societies' role in the natural world and human-nature interactions;
- develop ability to thinking about the environment and our place in it;
- improve research skills in a seminar work, and
- get familiar with selected examples of the concept of ecosystem services at different spatial levels.

Predvideni študijski rezultati:

Med predavanji bodo študentje pridobili znanje in razumevanje o povezavi med naravo in družbo. Poglobljena študij študentom omogoča samostojno analizo potencialov, izzivov in dilem koncepta ekosistemskih storitev. Študentje bodo:

- sposobni razložiti koncept 'ekosistemske storitve';
- razumeli različne tipi storitev, ki jih nudijo ekosistemi;
- seznanjeni z glavnimi metodami in pristopi za kartiranje in ocenjevanje ekosistemskih storitev;
- razumeli dileme, povezane z vrednotenjem in rabo ekosistemov, in
- sposobni uporabiti koncept pri svojem nadaljnjem študiju.

Intended learning outcomes:

Through lectures the students will gain knowledge and understanding about the linkage between nature and society. The in-depth study enables students to independently analyze the potentials, challenges and dilemmas of the concept of ecosystem services. The students will:

- be able to explain the concept of 'ecosystem services';
- understand different types of services that ecosystems provide;
- be familiarized with the main methods and approaches for mapping and assessing ecosystem services;
- understand the dilemmas associated with valuing and use of ecosystems, and
- be able to apply the concept to their future study.

Metode poučevanja in učenja:

- Predavanja
- Terenske vaje
- e-učenje
- Razgovor/ diskusija/debata

Learning and teaching methods:

- Lectures
- Field work
- e-learning
- Conversation/discussion/debate

Načini ocenjevanja:

Delež (v %) /
Weight (in %)

Assessment:

<ul style="list-style-type: none"> ● študentska angažiranost ● izpit ● seminarska naloga (izdelava in predstavitev) 	<p>10</p> <p>50</p> <p>40</p>	<ul style="list-style-type: none"> ● student engagement ● exam ● seminar work (delivery and presentation)
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Reference nosilca / Lecturer's references:

<ol style="list-style-type: none"> 1. Ribeiro, D., & Šmid Hribar, M. (2019). Assessment of land-use changes and their impacts on ecosystem services in two Slovenian rural landscapes. <i>Acta Geographica Slovenica</i> 59 (2), 143-159. 2. Rodela R., Tucker C.M., Šmid Hribar M., Sigura M., Bogataj N., Urbanc M., Gunya A. (2019). Intersections of ecosystem services and common-pool resources literature: An interdisciplinary encounter. <i>Environmental Science and Policy</i> 94, 72–81. 3. Burkhard, B., Maes, J., Potschin-Young, M., Santos-Martín, F., Geneletti, D., Stoev, P., Kopperoinen, L., Adamescu, C.M. Adem Esmail, B., Arany, I., Arnell, A., Balzan, M., Barton, D.N., Van Beukering, P., Bicking, S., Borges, P.A.V., Borisova, B., Braat, L., Brander, L.M., Bratanova-Doncheva, S., Broekx, S., Brown, C., Cazacu, C., Crossman, N., Czúcz, B., Daněk, J., de Groot, R., Depellegrin, D., Dimopoulos, P., Elvinger, N., Erhard, M., Fagerholm, N., Frélichová, J., Grêt-Regamey, A., Grudova, M., Haines-Young, R., Inghe, O., Kallay, T.K., Kirin, T., Klug, H., Kokkoris, I.P., Konovska, I., Kruse, M., Kuzmova, I., Lange, M., Liekens, I., Lotan, A., Lowicki, D., Luque, S., Marta-Pedroso, C., Mizgajski, A., Mononen, L., Mulder, S.an, Müller, F.o, Nedkov, S.au, Nikolova, M.av, Östergård, H.aj, Penev, L.aw, Pereira, P.ac, Pitkänen, K., Plieninger, T., Rabe, S.-E., Reichel, S., Roche, P.K., Rusch, G., Ruskule, A., Sapundzhieva, A., Sepp, K., Sieber, I.M., Šmid Hribar, M., Stašová, S., Steinhoff-Knopp, B., Stępniewska, M., Teller, A., Vackar, D., Van Weelden, M., Veidemane, K., Vejre, H., Vihervaara, P., Viinikka, A., Villoslada, M., Weibel, B., Zulian, G. 2018: Mapping and assessing ecosystem services in the EU-Lessons learned from the ESMERALDA approach of integration. <i>One Ecosystem</i> 3: e29153. DOI: 10.3897/oneeco.3.e291 4. Šmid Hribar, M., Japelj, A., Vurunić, S. (2020). Pregled raziskav s področja ekosistemskih storitev v Sloveniji. <i>Geografski vestnik</i>, 92-2. (submitted into evaluation process)
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