Kmetijski inštitut Slovenije

Program strokovnih nalog s področja okolja za Ministrstvo za okolje, podnebje in energijo v letu 2023

Smernice in postopki za obravnavo tal v okviru priprave prostorskih aktov in celovite presoje vplivov na okolje

Javna predstavitev rezultatov - Poglavje TLA

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- Sklop A: MOPE – strokovna pomoč pri naslavljanju tematike ‚TLA‘
- Sklop B: Smernice za obravnavo kmetijskih tal v CPVO-TLA

PROGRAM STROKOVNIH NALOG S PODROČJA OKOLJA ZA MINISTRSTVO ZA OKOLJE, PODNEBJE IN ENERGIJO V LETU 2023

4 POGLAVJE TLA

2

Directive of the European parliament and of the Council on Soil Monitoring and Resilience
(Soil Monitoring Law)
Soil Health Law

SKLOP A:
AKTIVNOSTI NA PODROČJU NASLAVLJANJA TAL - MOPE

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Sklop A: MOPE – naslavljanje tematike ‚TLA'

- Analiza dokumentov predloga EU direktive ‚Soil Monitoring Law in priprava poročila
- Sodelovanje v Nacionalni delovni skupini za izvajanje Strategije za tla do leta 2030 in predpripravo na novo Direktivo o zdravih tleh
- Prispevek k dokumentu *Comments and questions on the Proposal for a Directive on Soil Monitoring and Resilience* ter k pripravi Stališča Republike Slovenije do predloga Direktive o monitoringu in odpornosti tal
- Directive of the European parliament and of the Council on Soil Monitoring and Resilience (Soil Monitoring Law) po posameznih členih – ŠPANSKI KOMPROMISNI PREDLOG
- Commission staff working document executive summary of the impact assessment report.

4

Chapter I - General provisions
*Chapter II - **Monitoring and assessment of soil health***
*Chapter III - **Sustainable soil management***
*Chapter IV - **Contaminated sites***
Chapter V - Financing, information to the public and reporting by Member States
Chapter VI - Delegation and Committee procedure
Chapter VII - Final provisions

DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL ON SOIL MONITORING AND RESILIENCE (SOIL MONITORING LAW)

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EK: Predlog Direktive o zdravju tal

EUROPEAN COMMISSION

Brussels, 5.7.2023
COM(2023) 416 final

2023/0232 (COD)

Proposal for a

DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

on Soil Monitoring and Resilience (Soil Monitoring Law)

{SEC(2023) 416 final} - {SWD(2023) 416 final} - {SWD(2023) 417 final} -
{SWD(2023) 418 final} - {SWD(2023) 423 final}

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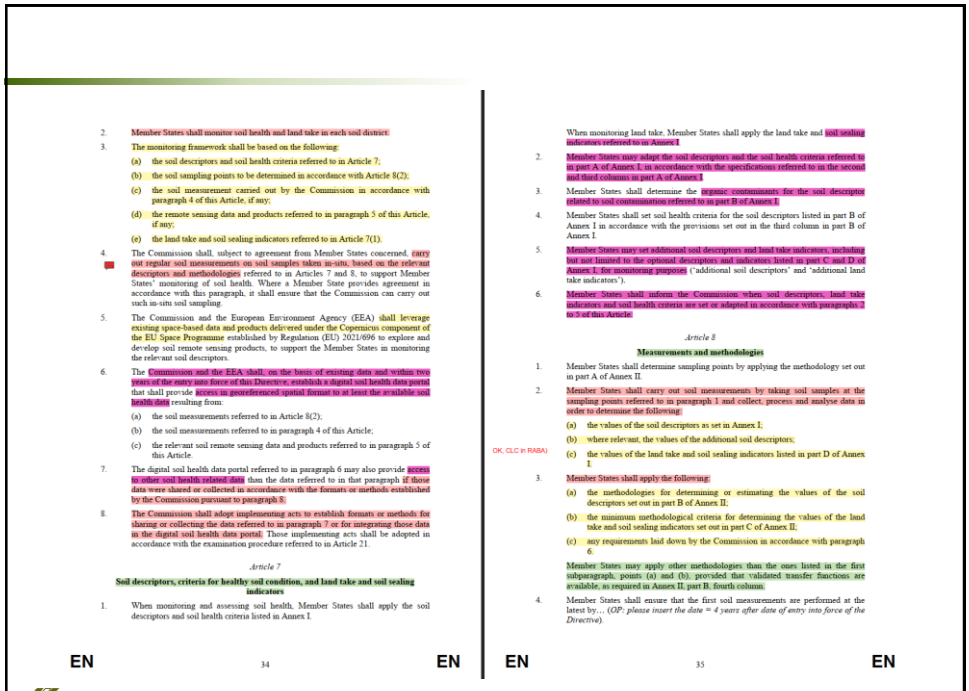

2. Member States shall monitor soil health and land take in each soil district.
3. The monitoring framework shall be based on the following:
(a) the soil descriptors and soil health criteria referred to in Article 7;
(b) the soil sampling points to be determined in accordance with Article 8(2);
(c) the soil measurement carried out by the Commission in accordance with paragraph 4 of this Article, if any;
(d) the remote sensing data and products referred to in paragraph 5 of this Article, if any;
(e) the land take and soil sealing indicators referred to in Article 7(1).
4. The Commission shall, subject to agreement from Member States concerned, carry out regular soil measurements on soil samples taken in-situ, based on the relevant descriptors and methodologies referred to in Articles 7 and 8, to support Member States' monitoring of soil health. Where a Member State provides agreement in accordance with this paragraph, it shall ensure that the Commission can carry out such in-situ soil sampling.
5. The Commission and the European Environment Agency (EEA) shall leverage existing space-based data and products delivered under the Copernicus component of the EU Space Programme established by Regulation (EU) 2021/696 to explore and develop soil remote sensing products, to support the Member States in monitoring the relevant soil descriptors.
6. The Commission and the EEA shall, on the basis of existing data and within two years of the entry into force of this Directive, establish a digital soil health data portal that shall provide access in georeferenced spatial format to at least the available soil health data resulting from:
(a) the soil measurements referred to in Article 8(2);
(b) the soil measurements referred to in paragraph 4 of this Article;
(c) the relevant soil remote sensing data and products referred to in paragraph 5 of this Article.
7. The digital soil health data portal referred to in paragraph 6 may also provide access to other soil health related data than the data referred to in that paragraph if those data were shared or collected in accordance with the formats or methods established by the Commission pursuant to paragraph 9.
8. The Commission shall adopt implementing acts to establish formats or methods for sharing or collecting the data referred to in paragraph 7 or for integrating those data in the digital soil health data portal. Those implementing acts shall be adopted in accordance with the examination procedure referred to in Article 21.

Article 7

Soil descriptors, criteria for healthy soil condition, and land take and soil sealing indicators

1. When monitoring and assessing soil health, Member States shall apply the soil descriptors and soil health criteria listed in Annex I.

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When monitoring land take, Member States shall apply the land take and soil sealing indicators referred to in Annex I.
2. Member States may adapt the soil descriptors and the soil health criteria referred to in part A of Annex I, in accordance with the specifications referred to in the second and third columns in part A of Annex I.
3. Member States shall determine the organic contaminants for the soil descriptor related to soil contamination referred to in part B of Annex I.
4. Member States shall set soil health criteria for the soil descriptors listed in part B of Annex I in accordance with the provisions set out in the third column in part B of Annex I.
5. Member States may set additional soil descriptors and land take indicators, including but not limited to the optional descriptors and indicators listed in part C and D of Annex I, for monitoring purposes ("additional soil descriptors" and "additional land take indicators").
6. Member States shall inform the Commission when soil descriptors, land take indicators and soil health criteria are set or adapted in accordance with paragraphs 2 to 5 of this Article.

Article 8

Measurements and methodologies

1. Member States shall determine sampling points by applying the methodology set out in part A of Annex II.
2. Member States shall carry out soil measurements by taking soil samples at the sampling points referred to in paragraph 1 and collect, process and analyse data in order to determine the following:
(a) the values of the soil descriptors as set in Annex I;
(b) where relevant, the values of the additional soil descriptors;
(c) the values of the land take and soil sealing indicators listed in part D of Annex I.
3. Member States shall apply the following:
(a) the methodologies for determining or estimating the values of the soil descriptors set out in part B of Annex II;
(b) the minimum methodological criteria for determining the values of the land take and soil sealing indicators set out in part C of Annex II;
(c) any requirements laid down by the Commission in accordance with paragraph 6.

Member States may apply other methodologies than the ones listed in the first subparagraph, points (a) and (b), provided that validated transfer functions are available, as required in Annex II, part B, fourth column.
4. Member States shall ensure that the first soil measurements are performed at the latest by… (*OP: please insert the date = 4 years after date of entry into force of the Directive*).

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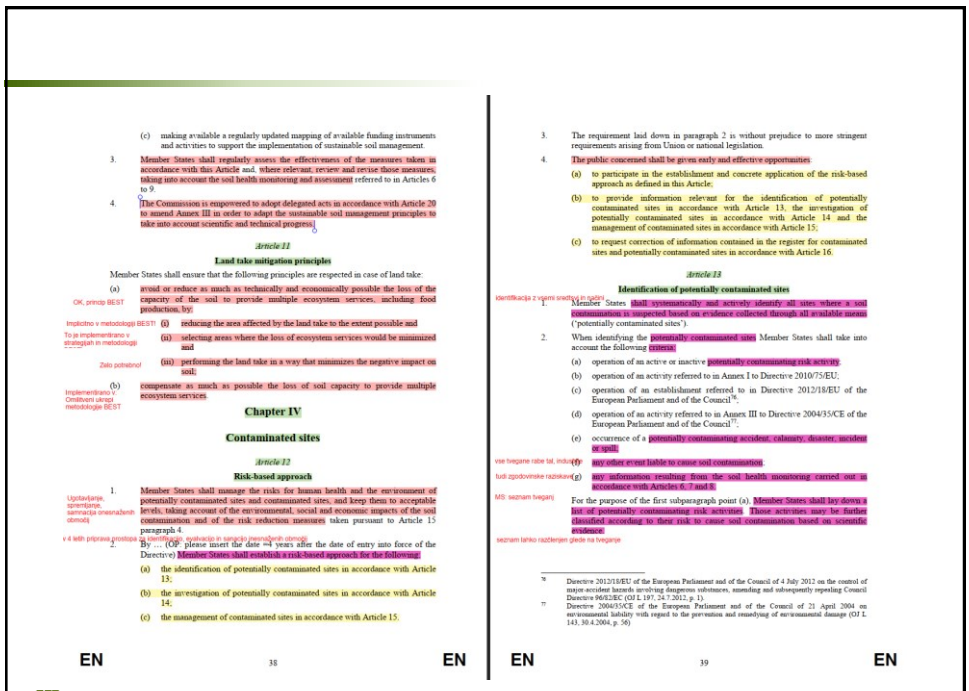

(c) making available a regularly updated mapping of available funding instruments and activities to support the implementation of sustainable soil management.
3. Member States shall regularly assess the effectiveness of the measures taken in accordance with this Article and, where relevant, review and revise those measures, taking into account the soil health monitoring and assessment referred to in Articles 6 to 9.
4. The Commission is empowered to adopt delegated acts in accordance with Article 20 to amend Annex III in order to adapt the sustainable soil management principles to take into account scientific and technical progress.

Article 11

Land take mitigation principles

Member States shall ensure that the following principles are respected in case of land take:
(a) avoid or reduce as much as technically and economically possible the loss of the capacity of the soil to provide multiple ecosystem services, including food production, by:
(i) reducing the area affected by the land take to the extent possible and
(ii) selecting areas where the loss of ecosystem services would be minimized and
(iii) performing the land take in a way that minimizes the negative impact on soil;
(b) compensate as much as possible the loss of soil capacity to provide multiple ecosystem services.

Chapter IV

Contaminated sites

Article 12

Risk-based approach

1. Member States shall manage the risks for human health and the environment of potentially contaminated sites and contaminated sites, and keep them to acceptable levels, taking account of the environmental, social and economic impacts of the soil contamination and of the risk reduction measures taken pursuant to Article 15 paragraph 4.
2. By … (*OP: please insert the date =4 years after the date of entry into force of the Directive*) Member States shall establish a risk-based approach for the following:
(a) the identification of potentially contaminated sites in accordance with Article 13;
(b) the investigation of potentially contaminated sites in accordance with Article 14;
(c) the management of contaminated sites in accordance with Article 15.

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3. The requirement laid down in paragraph 2 is without prejudice to more stringent requirements arising from Union or national legislation.
4. The public concerned shall be given early and effective opportunities:
(a) to participate in the establishment and concrete application of the risk-based approach as defined in this Article;
(b) to provide information relevant for the identification of potentially contaminated sites in accordance with Article 13, the investigation of potentially contaminated sites in accordance with Article 14 and the management of contaminated sites in accordance with Article 15;
(c) to request correction of information contained in the register for contaminated sites and potentially contaminated sites in accordance with Article 16.

Article 13

Identification of potentially contaminated sites

1. Member States shall systematically and actively identify all sites where a soil contamination is suspected based on evidence collected through all available means ("potentially contaminated sites").
2. When identifying the potentially contaminated sites Member States shall take into account the following criteria:
(a) operation of an active or inactive potentially contaminating risk activity
(b) operation of an activity referred to in Annex I to Directive 2010/75/EU;
(c) operation of an establishment referred to in Directive 2012/18/EU of the European Parliament and of the Council[76];
(d) operation of an activity referred to in Annex III to Directive 2004/35/CE of the European Parliament and of the Council[77];
(e) occurrence of a potentially contaminating accident, calamity, disaster, incident or spill;
(f) any other event liable to cause soil contamination.
(g) any information resulting from the soil health monitoring carried out in accordance with Articles 6, 7 and 8.

For the purpose of the first subparagraph point (a), Member States shall lay down a list of potentially contaminating risk activities. Those activities may be further classified according to their risk to cause soil contamination based on scientific evidence.

[76] Directive 2012/18/EU of the European Parliament and of the Council of 4 July 2012 on the control of major-accident hazards involving dangerous substances, amending and subsequently repealing Council Directive 96/82/EC (OJ L 197, 24.7.2012, p. 1).
[77] Directive 2004/35/CE of the European Parliament and of the Council of 21 April 2004 on environmental liability with regard to the prevention and remedying of environmental damage (OJ L 143, 30.4.2004, p. 56)

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*ANNEX I : **SOIL DESCRIPTORS,CRITERIA FOR HEALTHY SOIL** CONDITION, AND **LAND TAKE AND SOIL SEALING INDICATORS***
*ANNEX II – **METHODOLOGIES***
*ANNEX III - **SUSTAINABLE SOIL MANAGEMENT PRINCIPLES***
ANNEX IV - PROGRAMMES, PLANS, TARGETS AND MEASURES REFERRED TO IN ARTICLE 10
*ANNEX V - INDICATIVE LIST OF **RISK REDUCTION MEASURES***
*ANNEX VI - **PHASES AND REQUIREMENTS FOR SITE-SPECIFIC RISK ASSESSMENT***
*ANNEX VII - CONTENT OF **REGISTER OF POTENTIALLY CONTAMINATED SITES** AND CONTAMINATED SITES*

ANNEXES

9

Annex I: A, B

Subsoil compaction	Bulk density in subsoil (upper part of B or E horizon[1]). Member States may replace this descriptor with an equivalent parameter (g per cm³)	Soil texture[2]	range	Non-managed soils in natural land areas
		sand, loamy sand, sandy loam, loam	<1.80	
		Sandy clay loam, loam, clay loam, silt, silt loam	<1.75	
		silt loam, silty clay loam	<1.65	
		Sandy clay, silty clay, clay loam with 35-45% clay	<1.58	
		Clay	<1.47	
		In case a Member State replaces the soil descriptor "bulk density in subsoil" with an equivalent parameter, it shall adopt a criterion for healthy soil condition for the chosen soil descriptor that is equivalent to the criterion set for "bulk density in subsoil".		
Part B: soil descriptors with criteria for healthy soil condition established at Member States level				
Excess nutrient content in soil	Extractable phosphorus (mg per kg)	< "maximum value"; The "maximum value" shall be laid down by the Member State within the range 30-50 mg kg⁻¹		No exclusion

[1] As defined in the FAO Guidelines for Soil Description, Chapter 5 (https://www.fao.org/3/a0541e/a0541e.pdf)
[2] As defined in Arshad, M.A., B. Lowery, and B. Grossman. 1996. Physical tests for monitoring soil quality. p.123- 142. In J.W. Doran and A.J. Jones (eds.) Methods for assessing soil quality. Soil Sci. Soc. Am. Spec. Publ. 49. SSSA, Madison, WI.

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Soil contamination	- concentration of heavy metals in soil: As, Sb, Cd, Co, Cr (total), Cr (VI), Cu, Hg, Pb, Ni, Tl, V, Zn (µg per kg) - concentration of a selection of organic contaminants established by Member States and taking into account existing concentration limits e.g. for water quality and air emissions in Union legislation	Reasonable assurance, obtained from soil point sampling, identification and investigation of contaminated sites and any other relevant information, that no unacceptable risk for human health and the environment from soil contamination exists. Habitats with naturally high concentration of heavy metals that are included in Annex I of Council Directive 92/43/EEC[3] shall remain protected.	No exclusion
Reduction of soil capacity to retain water	Soil water holding capacity of the soil sample (% of volume of water / volume of saturated soil)	The estimated value for the total water holding capacity of a soil district by river basin or subbasin is above the minimal threshold. The minimal threshold shall be set (in tonnes) by the Member State at soil district and river basin or subbasin level at such a value that the impacts of flooding following intense rain events or of periods of low soil moisture due to drought events are mitigated.	No exclusion

[3] Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (OJ L 206, 22.7.1992, p. 7).

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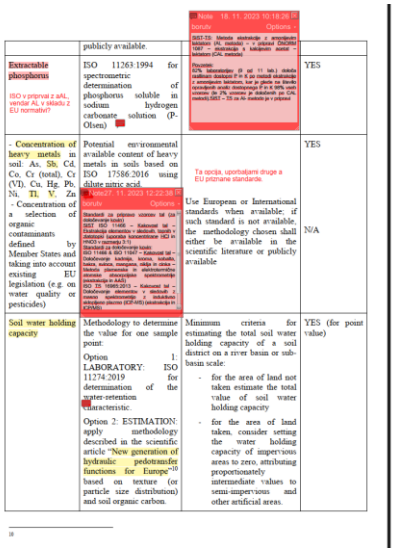
Annex II: Methodologies



	publicly available.		
Extractable phosphorus ISO v pripravi z aAL, vendar AL v skladu z EU normativi?	ISO 11263:1994 for spectrometric determination of phosphorus soluble in sodium hydrogen carbonate solution (P-Olsen)		YES
- Concentration of heavy metals in soil: As, Sb, Cd, Co, Cr (total), Cr (VI), Cu, Hg, Pb, Ni, Tl, V, Zn - Concentration of a selection of organic contaminants defined by Member States and taking into account existing EU legislation (e.g. on water quality or pesticides)	Potential environmental available content of heavy metals in soils based on ISO 17586:2016 using dilute nitric acid.	Ta opcija, uporabljami druge a EU priznane standarde. Use European or International standards when available; if such standard is not available, the methodology chosen shall either be available in the scientific literature or publicly available	YES N/A
Soil water holding capacity	Methodology to determine the value for one sample point: Option 1: LABORATORY: ISO 11274:2019 for determination of the water-retention characteristic. Option 2: ESTIMATION: apply methodology described in the scientific article "New generation of hydraulic pedotransfer functions for Europe"[10] based on texture (or particle size distribution) and soil organic carbon.	Minimum criteria for estimating the total soil water holding capacity of a soil district on a river basin or sub-basin scale: - for the area of land not taken estimate the total value of soil water holding capacity - for the area of land taken, consider setting the water holding capacity of impervious areas to zero, attributing proportionately intermediate values to semi-impervious and other artificial areas.	YES (for point value)

Nitrogen in soil OK	ISO 11261:1995 for determination of total soil nitrogen using a modified Kjeldahl method		YES
Soil acidity OK	ISO 10390:2005 for determination of pH in H2O and CaCl2 extract (pH-H2O and pH-CaCl2)		YES
Bulk density in "topsoil" (A-horizon[11])	ISO 11272:2017 for determination of dry bulk density		YES
Soil basal respiration Member States may also select optional soil biodiversity descriptors such as: -Metabarcoding[12] of bacteria, fungi, protists and animals; - Abundance and diversity of nematodes; - Microbial biomass; - Abundance and diversity of earthworms (in cropland)	Follow indications described in the scientific article "Microbial biomass and activities in soil as affected by frozen and cold storage"[13] Nimamo standarda, ne merimo.	Use European or international standards when available; if such standard is not available, the methodology chosen shall either be available in the scientific literature or publicly available.	YES For other soil biodiversity descriptors: N/A

Part C: minimum methodological criteria for determining the values of land take and soil sealing indicators

11 As defined in the FAO Guidelines for Soil Description, Chapter 5 (https://www.fao.org/3/a0541e/a0541e.pdf)

12 Sequencing of DNA barcodes for measuring taxonomical and functional diversity of archaea, bacteria, fungi and other eukaryotes as was done for LUCAS Soil Biodiversity based on https://doi.org/10.1111/ejss.13299 https://www.sciencedirect.com/science/article/abs/pii/S0038071797001219

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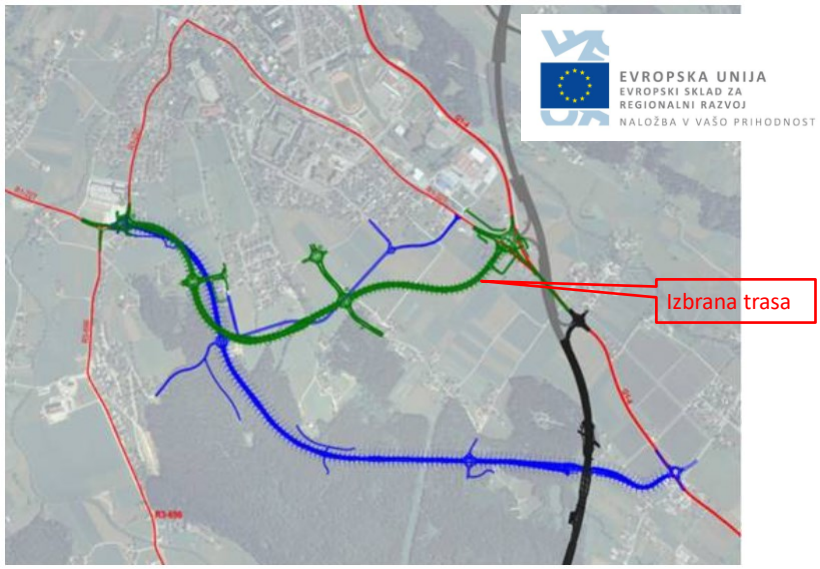
SKLOP B - SMERNICE ZA OBRAVNAVO KMETIJSKIH TAL V CPVO-TLA

12

Aktualen primer



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Postopki PVO in CPVO

IZHODIŠČA PRI VAROVANJU TAL, POSEBEJ DOBRIH KMETIJSKIH TAL

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Tla so bistven del okolja

…so osnova kopenskih ekosistemov in temeljni naravni vir.

Z varovanjem in trajnostnim upravljanjem tal

- izboljšujemo trajnostno upravljanje celotnega okolja;
- prispevamo k obstoju ključnih ekosistemskih storitev;
- ohranjamo biotsko raznovrstnost in zagotavljamo dobro počutje ljudi;
- prispevamo k blaženju klimatskih sprememb.

Zato nujno:

→ ustrezno (o)vrednotiti pri presojah vplivov posegov v okolje (torej posegov v tla);

→ zasnovati primerne omilitvene ukrepe, ki zmanjšajo vplive posega v/na tla.

Ekosistemska kakovost tal

Ekosistemska kakovost tal se odraža v sposobnosti tal da v okolju zagotavljajo ekosistemske storitve tal.

Bistvene ekosistemske storitve tal (BEST) so:

- **Zagotavljanje kakovosti površinskih in predvsem podzemnih voda**, preskrba s pitno vodo. t.j. sposobnost tal za filtriranje, čiščenje meteornih in poplavnih voda in napajanje podzemnih virov pitne vode.
- **Zagotavljanje hrane, krme energetske biomase, in industrijskih vlaken, zdravilnih rastlin, dišavnic, itd.**.
  Pomembne so lastnosti tal, ki zagotavljajo ustrezno rodovitnost;- omogočanje pogojev primerne rasti biomase za pridelavo hrane (v okviru kmetijske rabe prostoru); prirasta biomase (v okviru gozdarske rabe prostora), kakor tudi prirasta rastlinske biomase v urbanih in naravnih okoljih.
- **Sposobnosti tal za zadrževanje, razgradnjo oz. nevtralizacijo škodljivih snovi v okolju**.
  Za izvedbo teh so pomembne sposobnost tal za zmanjšanje prehajanja in učinka onesnaževal v različnih delih okolja, zmanjšan prehod v prehrano človeka in živali, ter zmanjšanje neposrednega prehajanja v telo preko dihalni poti, zaužitje delcev kontaminiranih tal in skozi kožo (ter s tem zmanjšanje možnosti vplivov onesnaženja tal na zdravje človeka in živali)
- **Sposobnost tal za vezavo atmosferskega ogljika in s tem blaženj podnebnih sprememb** (tla kot ponor atmosferskega ogljika).
  Gre za lastnosti tal, ki imajo za posledico zmanjševanje toplogrednih plinov v ozračju. Pri tem šteje tudi stanje tal, ki zmanjšuje izpuste drugih toplogrednih plinov kot so metan (CH_4) in dušikovi oksidi (NO_x).

Kmetijska tla

Kmetijska tla so (glede na naravna tla) pogosto:

- Spremenjena;
- a praviloma neonesnažena, nedegradirana;
- bolj ali manj založena s hranili in organsko snovjo;
- primernejše kislosti kot nekatera 'naravna tla‘;
- → boljše ekosistemske kakovosti.

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Kmetijska tla

Zagotavljajo najširši nabor ekosistemskih storitev tal v okolju.

Dobra kmetijska tla prispevajo k ekosistemskim storitvam tal v okolju, kar v splošni javnosti še vedno ni dovolj dobro (pre)poznano.

Varovanje kmetijskih tal predstavljan zagotavljanje ostalih ekosistemskih storitev tal, ne samo pridelave hrane.

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Okoljske lastnosti/kakovosti kmetijskih tal

Poleg hrane in biomase:

- Tla so odcedna; **omogočajo pronicanje in odtok padavinskih oz. poplavnih voda v podtalje → podzemne vode**.
- Tla dobro **filtrirajo, čistijo in bogatijo padavinske in poplavne vode** in **napajajo podzemne vode s pitno vodo**.
- So **ponor atmosferskega ogljika** (in vir → kroženje C!) ; lahko pomembno prispevajo k skladiščenju C in razbremenjevanju ozračja toplogrednega CO_2.
- So biotsko pestra – so ‚**rezervoar' genov**.
- **Ne vsebujejo ostankov odpadkov in antropogenih primesi**.

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Parametri kmetijske in okoljske kakovosti tal
Smernice za obravnavo tal

SMERNICE ZA OBRAVNAVO TAL V CPVO-TLA

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Parametri kmetijske kakovosti tal

Osnovni in lahko merljivi ter prepoznavni parametri kakovostnih kmetijskih tla so:

- **Funkcionalna globina tal**: tla so globoka (horizonti A in B skupne globine večje od 60 cm)
- **Humoznost** tal: V vrhnjih slojih (v A horizontih) so primerno humozna - založena s talno organsko snovjo (Mihelič idr., 2010).
- **Založenost z rastlinskimi hranili**: v vrhnjih slojih (v A in B horizontih) so primerno založena z rastlinskimi hranili (Mihelič idr., 2010).
- **Neonesnaženost tal**:
  - So neonesnažena z težkimi kovinami in drugimi mineralnimi onesnaževal za katere obstajajo mejne vrednosti, ki določajo onesnaženost tal (Republika Slovenija, 1996).
  - oz. Bistveno ne presegajo naravne vsebnosti tistih težkih kovin v površinskih slojih tal, ki niso opredeljena z mejnimi vrednostmi, ki določajo onesnaženost s težkimi kovinami in drugimi mineralnimi prvinami (Gosar idr., 2019) .
  - So neonesnažena z organskimi onesnaževali (Republika Slovenija, 1996).
- Imajo primerno **sposobnost zadrževanja vode**; so srednje in bolj odporna na sušo.

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Merljivi parametri kakovosti tal za CPVO

- Skupna globina tal. Glede na talni tip je to lahko:
  - skupna globina A In B horizonta do C oz. R horizontov;
  - skupna globina A, E in Bt/Bfe do Bg horizonta;
  - skupna globina A, B (če so prisotni) Go do Gr horizonta.
- Vsebnost talne organske snovi (t.j. ogljika).
- Kislost A in B horizontov.
- Vsebnost glavnih rastlinskih hranil:
  - vsebnost rastlinam dostopnega kalija (Mihelič idr., 2010);
  - vsebnost rastlinam dostopnega fosforja (Mihelič idr., 2010).

22

Smernice za obravnavo tal v okviru CPVO – TLA

V prvem delu predstavljajo:

- Povzetek lastnosti tal in ekosistemskih storitev, ki jih tla opravljajo v okolju.
  → nakazani razlogi za upoštevanje smernic za obravnavo tal v CPVO-TLA.

Smernice so razdeljene v tri sklope:

1. **Splošne smernice za obravnavo tal v CPVO-TLA,**
2. **Smernice za obravnavo kmetijskih tal** in
3. **Smernice za obravnavo ekosistemske vloge tal v okolju.**

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1. SPLOŠNE SMERNICE ZA OBRAVNAVO TAL V CPVO-TLA

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Splošne smernice za obravnavo tal v CPVO-TLA

1. Varujemo ekosistemsko boljša tla
   → usmerjanje v pozidavo slabših tal.
2. Ponovna uporaba degradiranih in opuščenih urbanih prostorov ima prednost pred pozidavo /urbanizacijo tal v kmetijski ali naravni rabi.
3. Posege v prostor načrtujemo racionalno in tako, da pozidamo kar se da malo kakovostnih (kmetijskih) tal.
4. Zgoščevanje urbanega prostora ima prednost pred pozidavo/urbanizacijo naravna oz. pol-naravnih tal.

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Splošne smernice za obravnavo tal v CPVO-TLA (nad.)

5. Preprečiti je treba razpršeno poselitev;
   urbane površine je treba zaokrožati in zgoščevati.
6. Pri obravnavi tal za CPVO presojamo
   - vplive na kmetijska zemljišča in
   - vplive na ekosistemske storitve tal.
7. Vplive izgub kmetijskih zemljišč in zmanjšanje ekosistemskih storitev tal zaradi pozidave/urbanizacije presojamo za obdobje vsaj 50, če ne 100 let.

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2. SMERNICE ZA OBRAVNAVO KMETIJSKIH TAL

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Smernice za obravnavo kmetijskih tal

Stopnja samooskrbe s hrano v Sloveniji je nezadostna in zaskrbljujoče nizka.
Slovenija ima glede na primerljive države Evrope:

- premajhen delež kmetijskih zemljišč in
- nadpovprečen delež gozda.

1. Kmetijska zemljišča so pomemben naravni vir.
2. Zemljišča je treba smotrno upravljati:
   Ustava RS v 71. členu naslavlja smotrno izkoriščanje zemljišč.
3. Kmetijske zemljišča je treba posebej varovati:
   Ustava RS v istem členu naslavlja posebno varstvo kmetijskih zemljišč.

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Smernice za obravnavo kmetijskih tal (nad.)

4. **Izgubo/urbanizacijo KZ** pri posegih v prostor je **potrebno nadomestiti z vzpostavitvijo drugih kmetijskih zemljišč v regiji**.
5. Izgubo/urbanizacijo dobrih KZ je potrebno **nadomestiti s površino novih kmetijskih zemljišč katerih površina je obratno sorazmerna kakovosti novih zemljišč** (je proporcionalno večja).
6. **Nova KZ je potrebno primerno usposobiti** (kondicionirati) **za kmetijsko pridelavo** (npr. izravnati kislost, po potrebi in v obdobju nekaj let primerno založiti s hranili ter povečati vsebnost talne organske snovi).
   Strošek usposobitve novih kmetijskih zemljišč in kompenzacijo zmanjšanja pridelka za 5 let je treba financirati v okviru stroškov posega – spremembe rabe zemljišč.

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3. SMERNICE ZA OBRAVNAVO EKOSISTEMSKE VLOGE TAL V OKOLJU

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Smernice za obravnavo ekosistemske vloge tal v okolju

1. **Posebej varujemo** ekosistemsko pomembna tla - **tla z visokimi sposobnostmi izvajanja večine ekosistemskih storitev tal** ne glede na vrsto rabe tal.
2. Zmanjšana vsebnost hranil in večja kislost ali alkalnost nista razloga za pozidavo tal.
3. Močno **onesnažena tla ‚imajo prednost' za urbanizacijo/pozidavi pred neonesnaženimi**.
4. **Samo zelo onesnažena tla**, ki so vir onesnaževal in predstavljajo tveganje za človeka in okolje, so **predmet sanacije in urbanizacije oz. pozidave**.
   S pozidavo tal v veliki meri omejimo prehajanje onesnaževal v druge dele okolja in podzemne vode.

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Smernice za obravnavo ekosistemske vloge tal v okolju (nad.)

5. Za **onesnažena tla** je treba uporabiti **smiselne, racionalne in izvedljive remediacijske ukrepe**, ki bodo preprečevali tveganja t.j. prehod onesnaževal iz tal v druge dele ekosistema (bioto ali podzemne vode), v prehransko verigo ali človeka.
6. Tla dodatno presojamo z vidika podpore nadzemni biotski pestrosti.
7. V Sloveniji redke, **posebne morfološke oblike tal ali talne tipe varujemo kot naravno znamenitost oz. naravno dediščino**.
8. V urbanem prostoru je potrebno nameniti **pomemben delež površin nepozidanim tlom** za zagotavljanje ekosistemskih storitev tal v mestih.
   Izogibamo se pretirane prekritju tal z nepropustnimi snovmi (asfalt, beton, za vodo in zrak nepropustni tlaki vseh vrst).

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- *Postopek presoje vplivov na tla v okviru PVO oz. CPVO*
- *Zloženka „Vrednotenje tal v postopkih presoje vplivov na okolje“*

SKLOP B - SMERNICE ZA OBRAVNAVO KMETIJSKIH TAL V CPVO-TLA

ORODJA, POSTOPKI, MATERIALI

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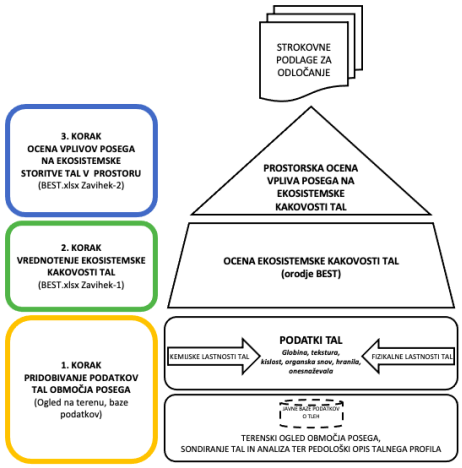
Postopek presoje vplivov na tla v okviru PVO oz. CPVO



Izdelava postopka naslavljanja tal v vplivov na tla v okviru PVO oz. CPVO

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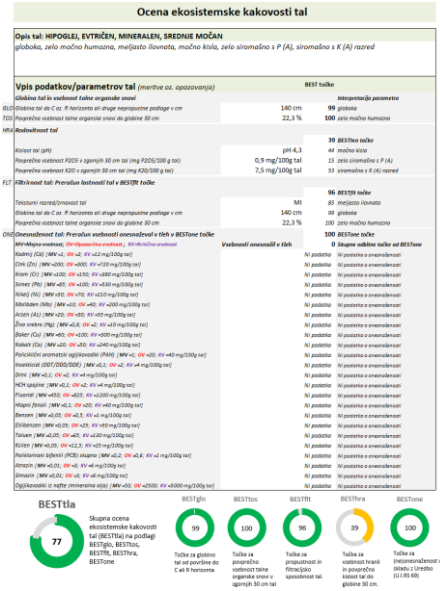
Orodje za presoje vplivov na tla v okviru PVO oz. CPVO



Orodje BEST.xlsx - izračun točk ekosistemske kakovosti tal

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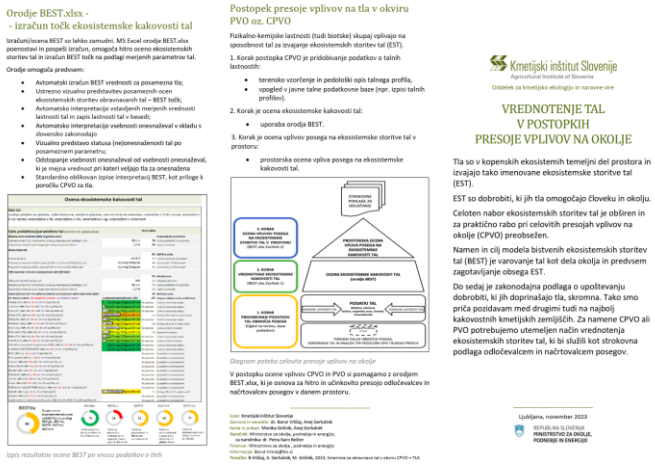
Zloženka „*Vrednotenje tal v postopkih presoje vplivov na okolje*“



Zgibanka predstavlja orodje BEST.xlsx s celovito presojo vplivov na okolje (CPVO).

- Diagram poteka CPVO s pomočjo vrednotenja bistvenih ekosistemskih storitev tal (BEST).
- Izpis orodja BEST I BEST.xlsx

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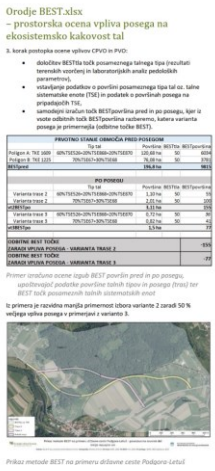
Zloženka „*Vrednotenje tal v postopkih presoje vplivov na okolje*“ (nad.)


Orodje BEST.xlsx
– prostorska ocena vpliva posega na ekosistemsko kakovost tal

3. korak postopka ocene vplivov CPVO in PVO:

- določitev BESTtla točk posameznega talnega tipa (rezultati terenskih vzorčenj in laboratorijskih analiz pedoloških parametrov),
- vstavljanje podatkov o površini posameznega tipa tal oz. talne sistematske enote (TSE) in podatek o površinah posega na pripadajočih TSE,
- samodejni izračun točk BESTpovršina pred in po posegu, kjer iz vsote odbitnih točk BESTpovršina razberemo, katera varianta posega je primernejša (odbitne točke BEST).

PRVOTNO STANJE OBMOČJA PRED POSEGOM

	Tip tal	Površina: BESTtla	BESTpovršina
Poligon A: TKE 1609	60%TSE52b+20%TSE88b+20%TSE870	120,68 ha	6034
Poligon B: TKE 1225	70%TSE67+30%TSE68	76,08 ha	3761
BESTpovrsi		**196,8 ha**	**9815**

PO POSEGU

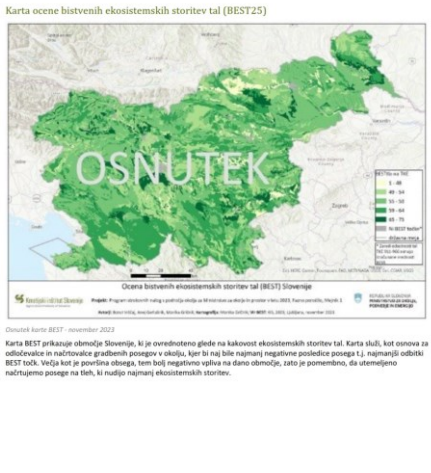
	Tip tal	Površina: BESTtla	BESTpovršina
Varianta trase 2	60%TSE52b+20%TSE88b+20%TSE870	1,10 ha	55
Varianta trase 2	70%TSE67+30%TSE68	2,01 ha	100
st2BESTpo		**3,11 ha**	**155**
Varianta trase 3	60%TSE52b+20%TSE88b+20%TSE870	0,72 ha	36
Varianta trase 3	70%TSE67+30%TSE68	0,82 ha	41
st3BESTpo		**1,5 ha**	**77**

ODBITNE BEST TOČKE	
ZMANJŠ VPLIVA POSEGA - VARIANTA TRASE 2	-155
ODBITNE BEST TOČKE	
ZMANJŠ VPLIVA POSEGA - VARIANTA TRASE 3	-77

Primer izračuna ocene izgub BEST površin pred in po posegu, upoštevajoč podatke površine talnih tipov in posega (tras) ter BEST točk posameznih talnih sistematskih enot

Iz primera je razvidna manjša primernost izbora variante 2 zaradi 50 % večjega vpliva posega v primerjavi z varianto 3.

Prikaz metode BEST na primeru državne ceste Podpora-Letuš



Osnutek karte BEST - november 2023

Karta BEST prikazuje območje Slovenije, ki je ovrednoteno glede na kakovost ekosistemskih storitev tal. Karta služi, kot osnova za odločevalce in načrtovalce gradbenih posegov v okolju, kjer bi naj bile najmanj negativne posledice posega t.j. najmanjši odbitki BEST točk. Večja kot je površina obsega, tem bolj negativno vpliva na dano območje, zato je pomembno, da utemeljeno načrtujemo posege na tleh, ki nudijo najmanj ekosistemskih storitev.

Predstavitev prostorskega izračuna za oceno ekosistemske kakovosti tal v postopkih CPVO
Karta ocene bistvenih ekosistemskih storitev tal (BEST25)

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Torej,
aktivnosti Poglavja TLA v letu 2023 usmerjene v …

PROGRAM STROKOVNIH NALOG S PODROČJA OKOLJA ZA MINISTRSTVO ZA OKOLJE, PODNEBJE IN ENERGIJO V LETU 2023

4 POGLAVJE TLA

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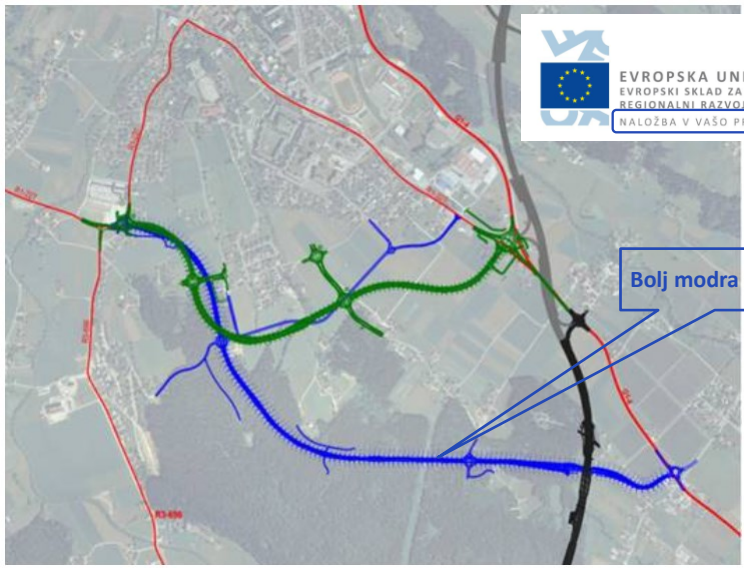
… razvoj in zmanjševanje izgube najboljših tal



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Borut.Vrscaj@kis.si

HVALA ZA POZORNOST!

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