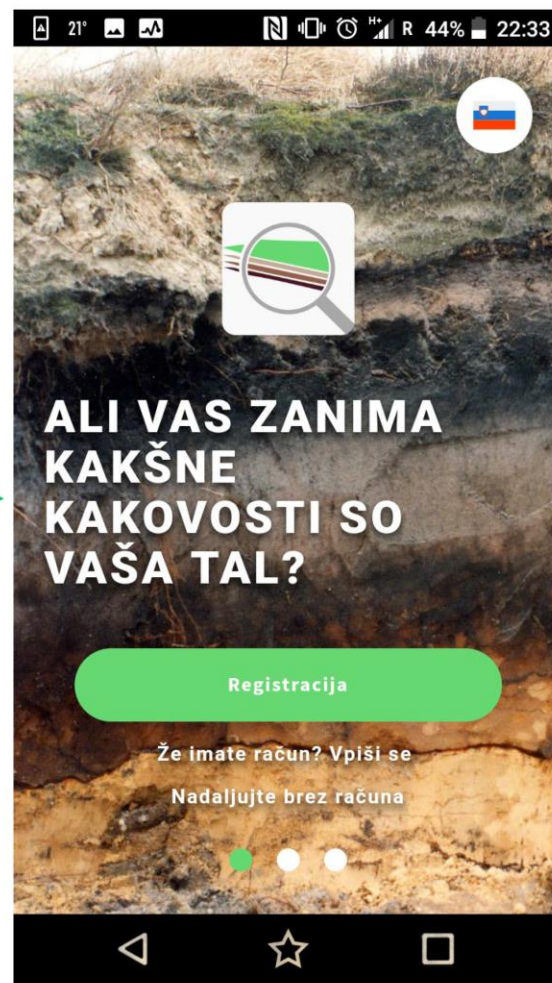
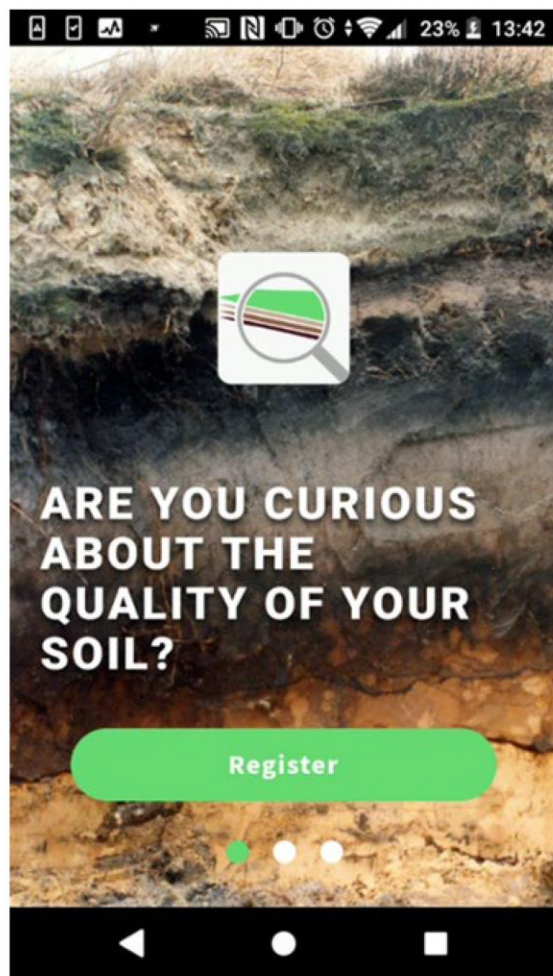


Interactive Soil Quality Assessment App

SQAPP Version 2

Matjaž Glavan, Univerza v Ljubljani, Biotehniška fakulteta
Luuk Fleskens, Wageningen University and Research





Pretočite novo verzijo



Slovenski jezik in še 10 drugih

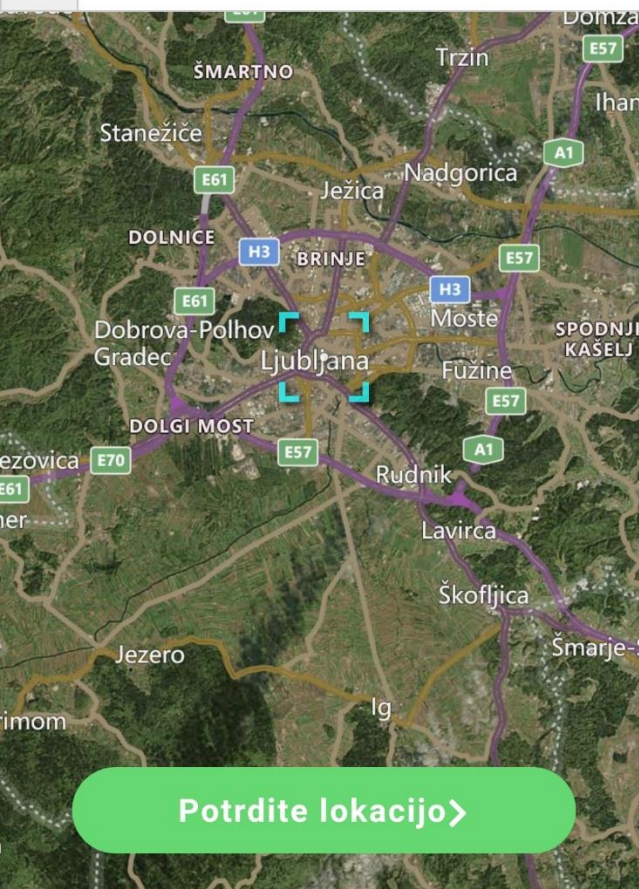
- | | |
|-------------|---------------|
| 1. Chinese | 7. Italian |
| 2. Dutch | 8. Portuguese |
| 3. Estonian | 9. Romanian |
| 4. French | 10. Spanish |
| 5. German | |
| 6. Greek | |

← NASTAVITE LOKACIJO

🔍 Poiščite lokacijo


46.05139923095702

14.505999565124492



Potrdite lokacijo>

← ZNAČILNOSTI



Vnesite lastnosti polja

Naslov

Nadmorska višina (metri)
302

Letne padavine (milimetri)
1353

Položaj v krajini
Ravne ravnice

Naklon (%)
0,3

Pokrovnost tal
Drugo

← ZNAČILNOSTI

No management recommendations provided

The current version of SQAPP only provides management recommendations for agricultural and grazing land. You can still see available soil properties and soil threat indicators, but no management recommendations are provided for land cover 'Other'.

Potrdite

Land cover (if user selects below category in previous screen, then show corresponding crop types):	Specified land cover types
Arable land	Cereals Maize Rice Root crops Oleaginous crops Leguminous crops Other
Grazing land	Pasture (intensively managed) Rangeland (extensively managed)
Permanent crops without soil cover	Vineyards Olives/nut trees Citrus Fruit trees Other
Permanent crops with soil cover	...As above category
Vegetables	Indoor vegetables Open field vegetables
Other	n/a

Specified land cover options per land cover category

← ZNAČILNOSTI

Obdelovalno zemljišče
☒

Pašnik
☐

Trajni nasadi brez ozelenitve
☐

Trajni nasadi z ozelenitvijo
☐

Zelenjava
☐

Drugo
☐

Nadaljujte >

← ZNAČILNOSTI

Določite pokrovnosti tal

<input checked="" type="checkbox"/> Cereals	<input checked="" type="checkbox"/> Maize
<input type="checkbox"/> Rice	<input type="checkbox"/> Root crops
<input type="checkbox"/> Oleaginous crops	<input checked="" type="checkbox"/> Leguminous crops
<input type="checkbox"/> Other	

Ali želite prejemati priporočila glede: ⓘ

<input checked="" type="checkbox"/> terrain management
<input checked="" type="checkbox"/> soil management
<input checked="" type="checkbox"/> vegetation management
<input checked="" type="checkbox"/> Water management
<input checked="" type="checkbox"/> nutrient management
<input checked="" type="checkbox"/> pest management
<input checked="" type="checkbox"/> pollutant management
<input checked="" type="checkbox"/> grazing management

← ZNAČILNOSTI

Določite pokrovnosti tal

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<input checked="" type="checkbox"/> Water management
<input checked="" type="checkbox"/> nutrient management
<input checked="" type="checkbox"/> pest management
<input checked="" type="checkbox"/> pollutant management
<input checked="" type="checkbox"/> grazing management

Change

Location #0

Prikaži lastnosti tal

Pokaži grožnje tlem

Priporočila

Več informacij

Tla

Profil

← LASTNOSTI		
Soil pH in H2O in depth of 0-30 cm	6.4	↗
CEC	21cmolc/kg	>
Electrical conductivity in soil depth of 0-29cm (dS/m)	0.1dS/m	↗
Exchangeable potassium in soil depth of 0-29cm (cmol/kg)	0.37cmol/kg	↗
Amount of phosphorus using Olsen method (ppm weight)	2.65mg/kg	↗
Total nitrogen in soil depth of 0-29cm (g/kg)	17.78g/kg	↗
Biološke lastnosti ⓘ		
Soil microbial abundance (g Cmic/m2)	150g Cmic/m²	↗
Soil macrofauna groups	8 groups in 25*25 cm²	↗
Tla		
Profil		

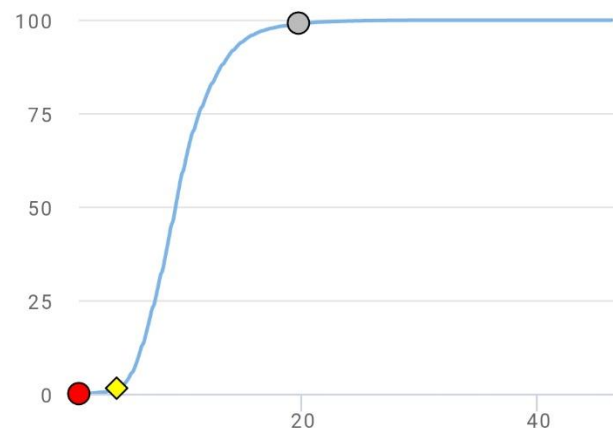
← LASTNOSTI		
Fizične lastnosti ⓘ		
Depth to bedrock	>200cm	↗
Bulk density (fine earth) in kg /m3 in depth of 0-30 cm	1362kg/m³	↗
Clay	25%	↗
Silt	40%	>
Sand	34%	↗
Coarse fragments (volume)	9%	>
Plant-available water storage capacity (mm) in depth of 0-30 cm	42mm	↗
Kemijske lastnosti ⓘ		
Soil organic carbon content (fine earth fraction) in percentage in depth of 0-30 cm	3.4%	↗
Soil pH in H2O in depth of		
Tla		
Profil		



LASTNOST

Soil organic carbon content (fine earth fraction) in percentage in depth of 0-30 cm

Posredujte povratne informacije



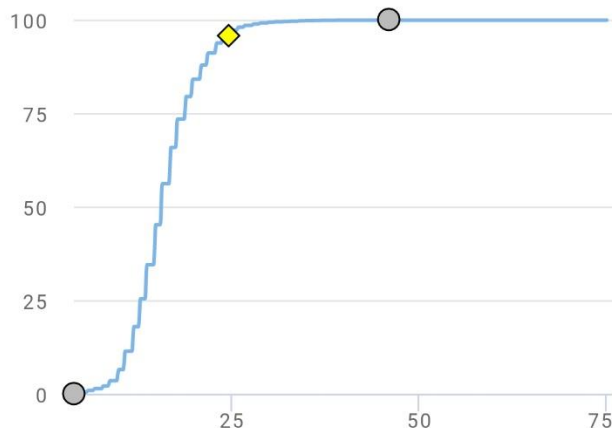
◆ Value (4.50%)
● Min (1%)
● Max (19.70%)



LASTNOST

Clay content (0-2 micro meter) mass fraction in % in depth of 0-30 cm

Posredujte povratne informacije



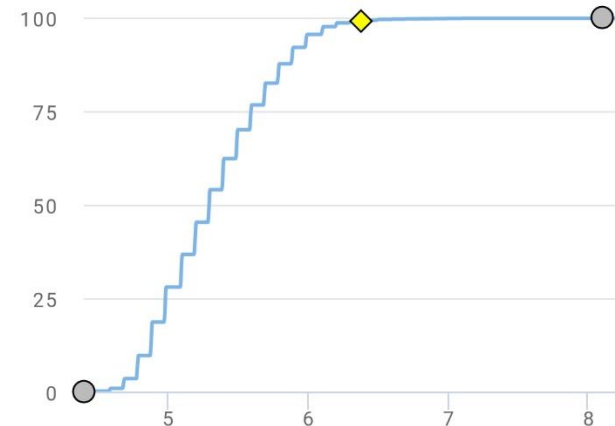
◆ Value (25%)
● Min (4%)
● Max (46%)



LASTNOST

Soil pH in H₂O in depth of 0-30 cm

Posredujte povratne informacije



◆ Value (6.40)
● Min (4.40)
● Max (8.10)



Tla



Profil



Tla



Profil



Tla



Profil

Soil properties list

● - taken into account for soil improvement potential

Physical properties

Depth to bedrock (cm)

Bulk density (kg/m^3)

Clay content (%)

Silt content (%)

Sand content (%)

Stoniness (%)

Plant-available water storage capacity (mm)

Chemical properties

Soil organic carbon content (%) ●

Soil pH

Cation exchange capacity (cmolc/kg) ●

Electrical conductivity (dS/m) ●

Exchangeable K (cmol/kg) ●

Available P (Olsen method) (mg/kg) ●

Total N (g/kg) ●

Biological properties

Soil microbial abundance (g Cmic/m^2) ●

Soil macrofauna groups ●

← GROŽNJE			← GROŽNJE		
Soil erosion by water			Soil organic matter decline		
Global water erosion vulnerability, or Soil water erosion in Europe	Ni podatkov	>	Soil organic carbon content (fine earth fraction) in percentage in depth of 0-30 cm	3.4 %	↗
Soil erosion by wind			Soil nutrient depletion		
Global wind erosion vulnerability, or Soil wind erosion in European agricultural soils	Ni podatkov	>	Exchangeable potassium in soil depth of 0-29cm (cmol/kg)	0.37 cmol/kg	↗
			Amount of phosphorus using Olsen method (ppm weight)	2.65 mg/kg	↗
Soil compaction			Total nitrogen in soil depth of 0-29cm (g/kg)	17.78 g/kg	↗
Natural soil susceptibility to compaction	Ni podatkov	>	Soil acidification		
Soil salinization			Soil pH in H2O in depth of 0-30 cm	6.4	↗
Electrical conductivity in soil depth of 0-29cm (dS/m)	0.1 dS/m	↗	Soil contamination		
			Contamination - Arsenic in	5.06	↗

← GROŽNJE		
Contamination - Arsenic in European topsoils	0.00 mg/kg	>
Contamination - Cadmium in European topsoils	0.28 mg/kg	↗
Contamination - Copper in European topsoils (pH <5.5)	26.29 mg/kg	↗
Contamination - Chromium in European topsoils	18.91 mg/kg	↗
Contamination - Lead in European topsoils	21.19 mg/kg	↗
Contamination - Mercury in European topsoils	0.06 mg/kg	↗
Contamination - Nickel in European topsoils (pH <5.5)	17.24 mg/kg	↗
Contamination - Zinc in European topsoils	66.58 mg/kg	↗
Soil biodiversity		
Global soil biodiversity index	high class	>

Soil threat indicator list

Soil erosion by water

- *Soil loss (t/ha/year)*

Soil erosion by wind

- *Soil loss (t/ha/year)*

Soil compaction

- *Natural susceptibility (low, medium, high)*

Soil salinization

- *Electrical conductivity (dS/m)*

Soil organic matter decline

- *Soil organic matter content (%)*

Soil nutrient depletion

- *Exchangeable K (cmol/kg), Available P (Olsen method) (mg/kg), Total N (g/kg)*

Soil acidification

- *Soil pH*

Soil contamination

- *Show heavy metal concentration with worst score, e.g.: Copper concentration (mg/kg)*

Soil biodiversity

- *Soil biodiversity index (low, medium, high)*



GROŽNJA



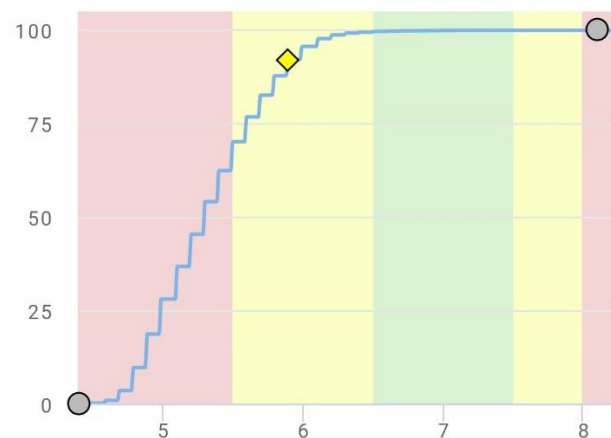
GROŽNJA



GROŽNJA

Soil pH in H₂O in depth of 0-30 cm

Posredujte povratne informacije



◆ Value (5.90)
● Min (4.40)
● Max (8.10)

Soil organic carbon content (fine earth fraction) in percentage in depth of 0-30 cm

Posredujte povratne informacije



◆ Value (3.40%)
● Min (1%)
● Max (19.70%)

Exchangeable potassium in soil depth of 0-29cm

Posredujte povratne informacije



◆ Value (0.37cmol/kg)
● Min (0.02cmol/kg)
● Max (1.70cmol/kg)



Tla



Profil



Tla



Profil



Tla



Profil

← **POVZETEK**

Potencial za izboljšanje lastnosti tal



Parametri tal, ki potrebujejo pozornost

1. Bulk density (fine earth)
2. Soil organic carbon
3. Plant-available water storage capacity

Skupna stopnja ogroženosti



Grožnje tlem, ki potrebujejo pozornost

- Phosphorus using the Olsen method
- Soil biodiversity index (classified)



Tla



Profil

← **POVZETEK**

Potencial za izboljšanje lastnosti tal



Parametri tal, ki potrebujejo pozornost

1. Bulk density (fine earth)
2. Soil organic carbon
3. Plant-available water storage capacity

Skupna stopnja ogroženosti



Grožnje tlem, ki potrebujejo pozornost

- Phosphorus using the Olsen method
- Soil biodiversity index (classified)



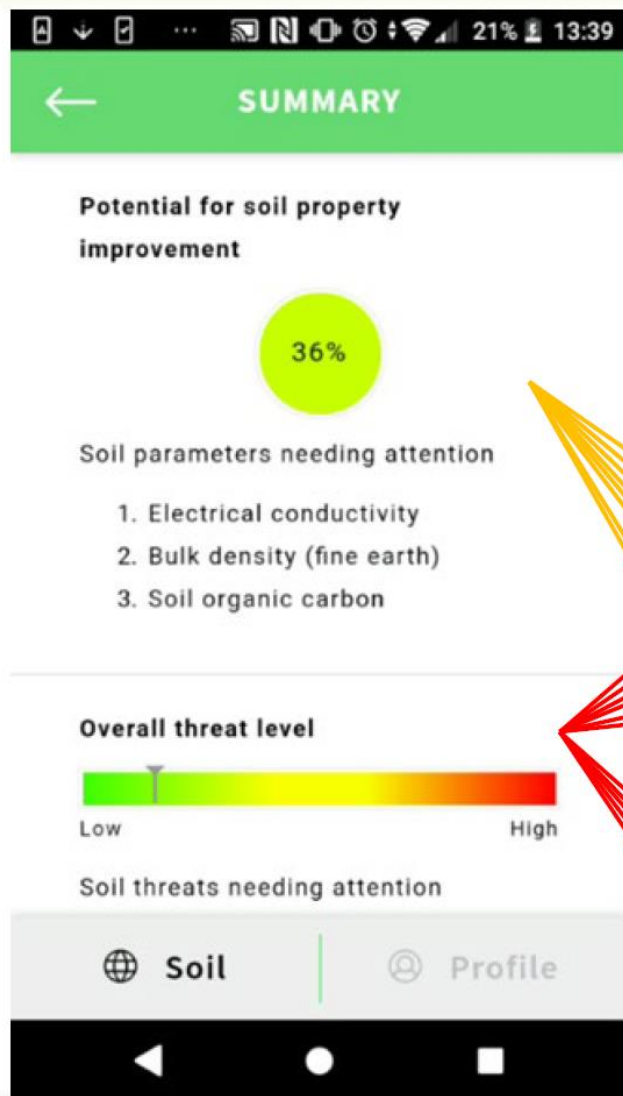
Tla



Profil

Linking of soil parameters/soil threat indicators to effects section of AMP table

AMP - agricultural management practice



51	
52	Effects on soil parameters
53	Physical properties
54	Bulk density (fine earth) in kg /m3 in depth of 0-30 cm
55	Plant-available water storage capacity (mm) in depth of 0-30 cm
56	Chemical properties
57	Soil organic carbon content (fine earth fraction) in g per kg in depth of 0-30 cm
58	Soil pH x 10 in H2O in depth of 0-30 cm
59	Electrical conductivity in soil depth of 0-29cm (dS/m)
60	Exchangeable potassium in soil depth of 0-29cm (cmol/kg)
61	Amount of phosphorus using Olsen method (ppm weight)
62	Total nitrogen in soil depth of 0-29cm (g/kg)
63	Biological properties
64	Soil microbial abundance (g Cmic/m2)
65	Soil macrofauna groups
66	
67	Effects on soil threat indicators
68	Global water erosion vulnerability, or Soil water ersion in Europe
69	Global wind erosion vulnerability, or Soil wind ersion in European agricultural soils
70	Natural soil susceptibility to compaction
71	Contamination (linked to highest ranked heavy metal risk)
72	Global soil biodiversity index

Selecting recommendations

Identified problems:

Lists of options (~80 AMPs)

AMP - agricultural management practice

	AMP1	AMP2	AMPx
Soil organic carbon content (%)	1	-1	1
Soil threats			
Soil erosion by water <i>- Soil loss (t/ha/year)</i>	1	1	1
Soil compaction <i>- Natural susceptibility (low, medium, high)</i>	1	-1	0
	Total: 3	Total: -1	Total: 2
Rank:	1	3	2

PRIPOROČILA

Rank the recommendations below

Implemented = ✓

Inappropriate = ✗

Potentially interesting = 💡

Definitely interesting = 👍

Apply animal manures	✓
Compost application	💡
Sprinkler irrigation	👍
Liquid manure or slurry	✗
Inorganic fertilisers	✓
Leguminous crops	✓
Avoidance of traffic	💡
Respect wheel load carrying	👍
Agroforestry	✗

Naslednji

VAŠA UVRSTITEV

Prosimo, razvrstite po prednosti od najbolj do najmanj želenega

- Sprinkler irrigation
- Compost application
- Avoidance of traffic
- Respect wheel load carrying capacity
- Mechanical weed control

Shrani

PREGLED

Ali so bila za vas priporočila koristna?

Da **Delno** **Ne**

Ali menite, da boste katero of priporočil izvedli?

Da **Delno** **Ne**

Komentarji

Nazaj na glavni zaslon

Shrani

AMPs characterisation

Terrain management

Soil management

Vegetation management

Water management

Nutrient management

Pest management

Pollutant management

Grazing management

AMP - agricultural management practice

Cross-slope barriers

Runoff control

Tillage

Traffic management

Soil replacement

Soil amendments

Conservation agriculture

Vegetation cover

Fallow management

Vegetation bands

Crop choice

Crop rotation

Multi-layered vegetation

Diversion

Drainage

Water harvesting

Water conservation

Irrigation

Irrigation management

Irrigation scheduling

Runoff conveyance

Organic amendments

Inorganic amendments

Green manuring

Retain crop residues

Mulching

Weed management

Pest management

Disease management

Remediation

Balanced applications

Grazing management

RESPECT WHEEL LOAD CARRYING CAPACITY

Razred: soil management
Kategorija: traffic management

Opis:
Wheel load-carrying capacity is the maximum wheel load for a specific tyre and inflation pressure that does not result in soil stress in excess of soil strength. It is a useful and easily interpreted parameter for portraying compaction risk, and is therefore an effective guide for preventing soil compaction.

Prikaži primere

Zapri

APPLY ANIMAL MANURES

Razred: nutrient management
Kategorija: organic amendments

Opis:
Animal manure application is a commonly used measure to supply plant nutrients to a field. Addition of organic matter is generally a secondary objective, but is an important way to avoid soil organic matter depletion. There is a potential risk of eutrophication, affecting water quality.

Prikaži primere

Zapri

CATTLE MANURE

Zapletenost ***

Kratka razlaga
Cattle manure, basically made up of digested grass, can be applied directly to the field or it can be composted. It contains relatively high levels of ammonia and relatively low levels of nitrogen.



Zapri

Tla

Profil

Tla

Profil

Tla

Profil



iSQAPER 5th Plenary meeting
11-14 June 2018, Ljubljana, Slovenia



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Ministry of Science and
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