EUROPEAN
COMMISSION

Brussels, 5.7.2023
SWD(2023) 417 final

PART 4/5

COMMISSION STAFF WORKING DOCUMENT

IMPACT ASSESSMENT REPORT

ANNEXES

Accompanying the proposal for a

Directive of the european Parliament and of the Council

on Soil Monitoring and Resilience (Soil Monitoring Law)

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

ANNEX 12: COUNTRY FICHES ON SOIL HEALTH ISSUES

TABLE OF CONTENTS

Background to the maps.....690
AT 692
BE 703
BG 714
CZ 725
DE 736
DK 747
EE 758
EL 769
ES 780
FI 791
FR 802
HR 813
HU 824
IE 835
IT 846
LT 857
LU 868
LV 879
NL 890
PL 901
PT 912
RO 923
SE 934
SI 945
SK 956

BACKGROUND TO THE MAPS

The estimated range of 60-70% of soil degradation expresses the uncertainty of the problem at EU level: this is due to a partial lack of representative data, for example on soil compaction and on soil contamination, lack of thorough monitoring and harmonized definitions, as well as the different situation of soil conditions across the EU. On the other hand, the uncertainty level is mitigated by modelling and case studies, decades of soil science and confirmation from different sources. In this context, the situation of soil degradation at EU level can be seen in graphic detail in the EU Soil Health Dashboard published by the JRC under the EU Soil Observatory. The map shows where scientific evidence converges to indicate areas that are likely to be affected by soil degradation processes and is updated as scientific evidence becomes available. The sources of the data as well as the limitations are described therein.

The following country fiches provide the best available information on soil health issues at Member States level.

The data available, however, identify only the aspects that could be quantified per Member State based on the information available. Quantification is available only for some land uses (namely cropland or agricultural land) or for limited elements of soil degradation (e.g. only copper and mercury concentration for soil contamination; concerning salinization, only areas equipped for irrigation). The fiches provide therefore only an order of magnitude of the distribution of soil health issues in Member States. It is therefore possible to anticipate a provisional distributional impact among Member State, showing which Member States would be likely to have to make more of an effort than others to achieve objectives of healthy soils for each type of soil degradation for which quantification at Member State level are available. The fiches consider soil “unhealthy” when one or more descriptors in table 1-2 are beyond the thresholds defined in table 1-2

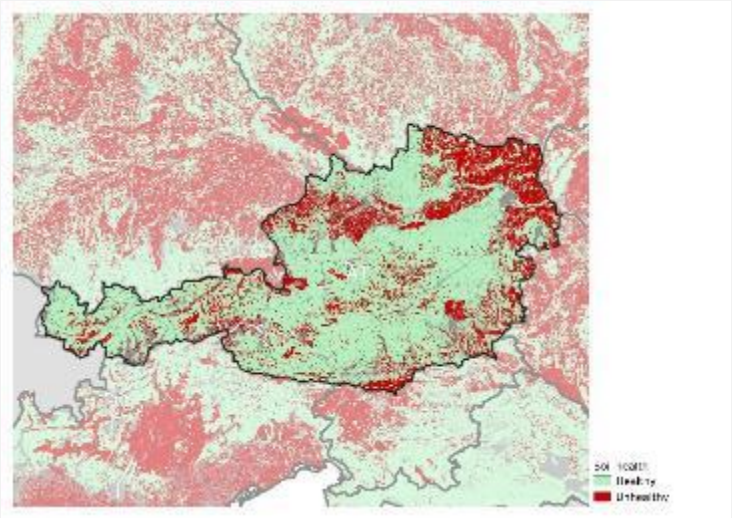
Maps elaborated by JRC EU Soil Observatory (24/03/2023)

Table 1-2 Descriptors, thresholds and sources of data.

Problem area/ indicator	% degraded areas	Target area or land use	Threshold description (units)	Threshold reference source	Links
Soil Erosion (Water, wind, tillage, crop)	54%	Cropland	Soil erosion rates above 2 ton ha^{-1} y^{-1}	Panagos et al. (2020) Borelli et al. (2017) Borelli et al. (2022) Panagos et al. (2019)	https://doi.org/10.3390/rs12091365 https://doi.org/10.1002/ldr.2588 https://doi.org/10.1038/s41893-022-00988-4 https://doi.org/10.1016/j.scitotenv.2019.02.009
Loss of Soil Organic Carbon	53%	Cropland and Grassland (except for land above 1000 m a.s.l.)	**Mineral soils** below 1000 m a.s.l. that have soil organic carbon content that is more than 60 % different from the potential maximum	De Rosa et al. (2023), upcoming publication	-
Soil compaction susceptibility	8%	all area EU	High susceptibility to compaction (class)	Houšková and Montanarella (2008)	https://esdac.jrc.ec.europa.eu/content/natural-susceptibility-soil-compaction-europe
Copper	2%	all area EU	Copper concentrations above 50 mg Kg^{-1}	Ballabio et al (2018)	https://doi.org/10.1016/j.scitotenv.2018.04.268
Mercury	1%	all area EU	Mercury concentrations above 200 µg Kg^{-1}	Ballabio et al (2021)	https://doi.org/10.1016/j.scitotenv.2020.144755
N excess	23%	Agricultural land (CORINE)	Nitrogen surplus above 50 Kg ha^{-1}	Integrated Nutrient Management Action Plan (INMAP), in press	In process in Pubsy
P excess	10%	Agricultural land (CORINE)	Phosphorous concentrations above 50 mg Kg^{-1}	Ballabio et al. (2019)	https://doi.org/10.1016/j.geoderma.2019.113912
Peatland degradation (loss organic soils)	30%	Peatlands	Peatland areas under hotspots of agriculture	UNEP (2022)	https://www.unep.org/resources/global-peatlands-assessment-2022
Salinization	7%	Mediterranean biogeographical region	Areas with at least 30% equipped for irrigation (-)	Siebert et al. (2013)	https://www.fao.org/aquastat/ru/geospatial-information/global-maps-irrigated-areas/latest-version/
Soil sealing	1%	all area EU	Areas above 50% imperviousness (excluded 100% imperviousness)	EEA Impervious Built-up (IBU) 2018	https://land.copernicus.eu/pan-european/high-resolution-layers/imperviousness/status-maps/impervious-built-up-2018

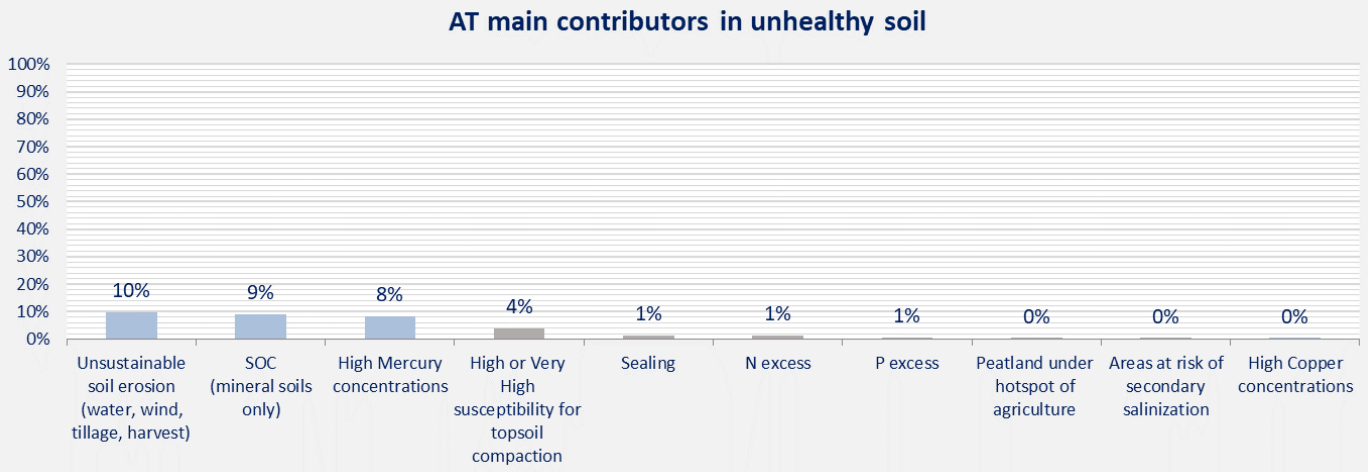
AT

State of soils in Austria

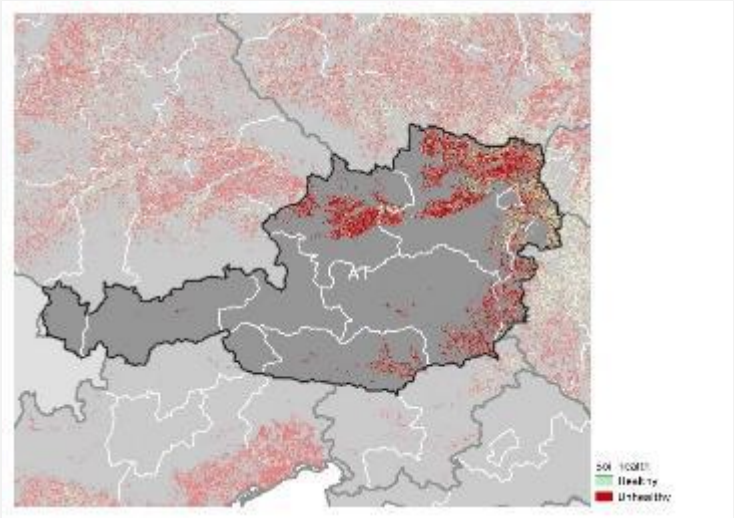


26% area unhealthy

Unsustainable soil erosion (water, wind, tillage, harvest) is the greatest contributor



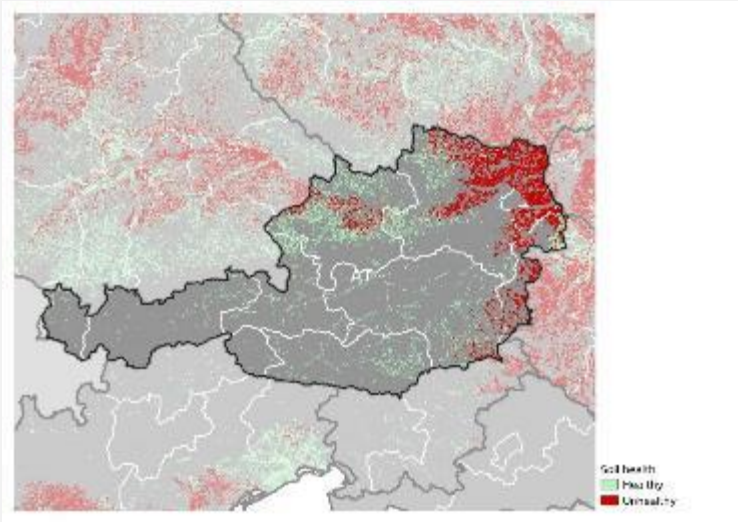
Soil Erosion by Water, Wind, Tillage and Crop in Austria



68% of cropland area unhealthy

10% of national territory

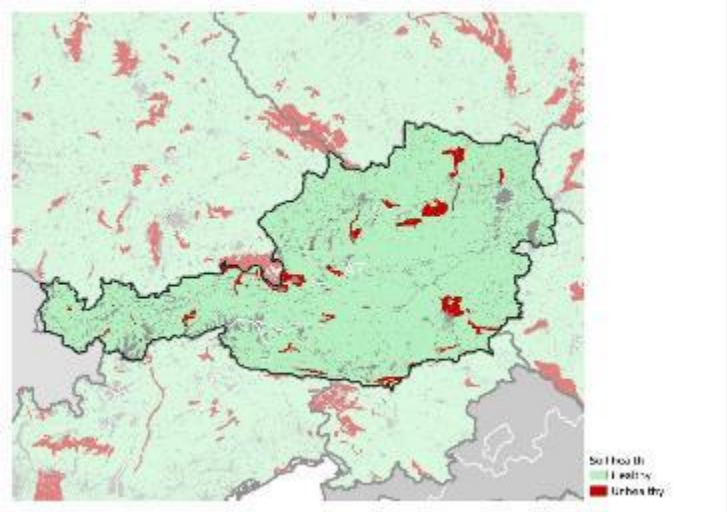
Loss of Soil Organic Carbon in Austria



47% of cropland and grassland area unhealthy (except for land above 1000 m a.s.l.)

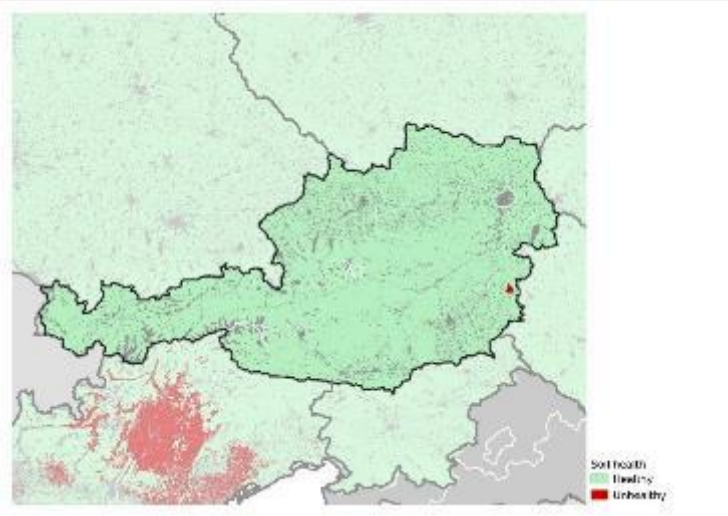
9% of national territory

High or Very High susceptibility for topsoil compaction in Austria



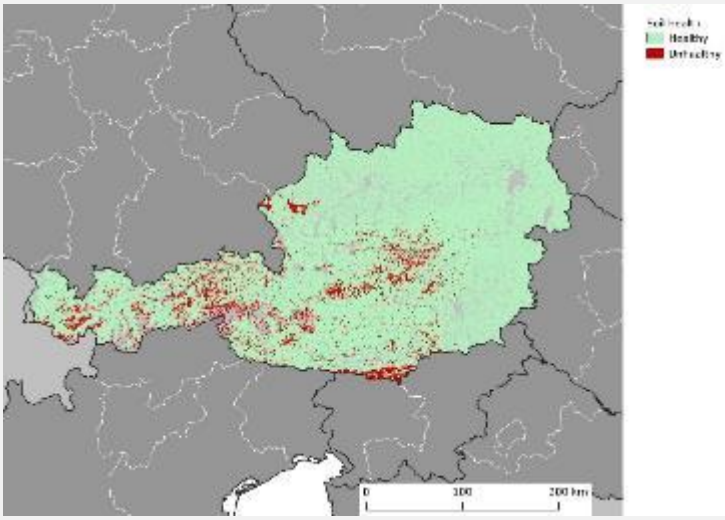
4% of national territory

Contamination by High Copper concentrations in Austria



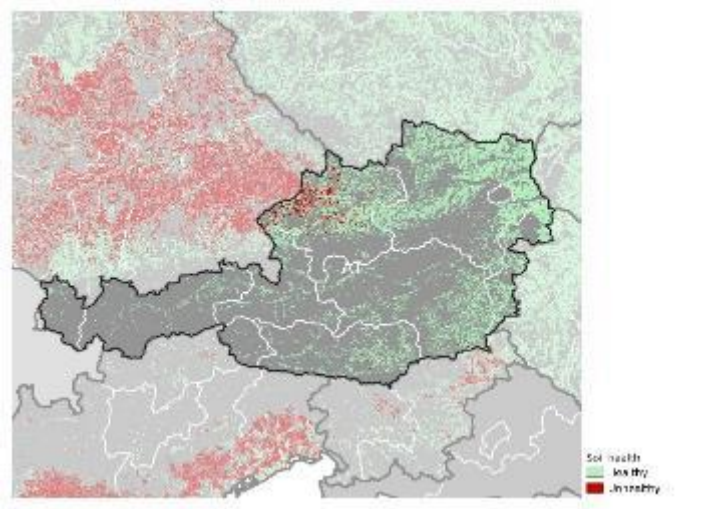
No issue based on current evidence

Contamination by High Mercury concentrations in Austria



8% of national territory

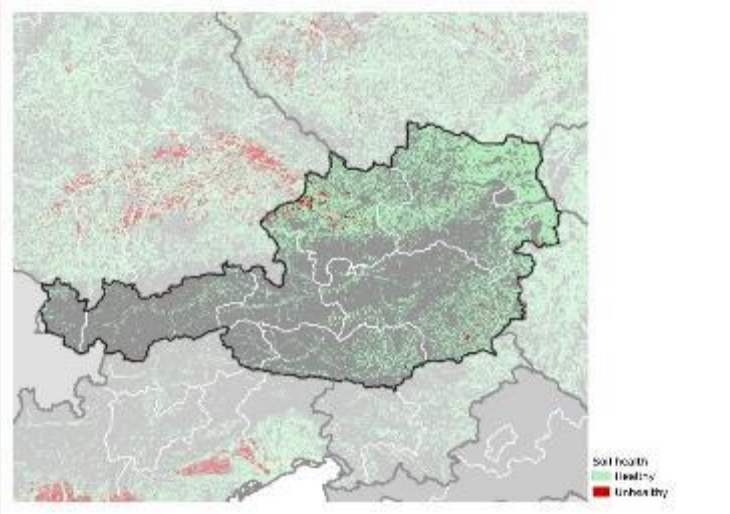
N Excess in Austria



4% of agricultural land area unhealthy (CORINE)

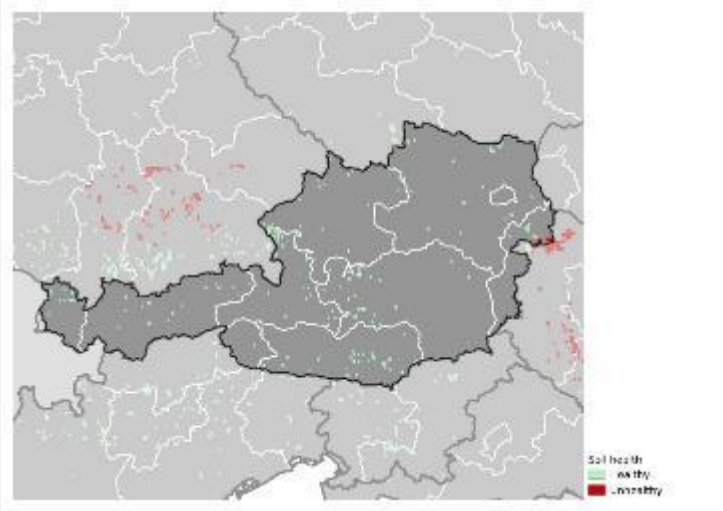
1% of national territory

P Excess in Austria

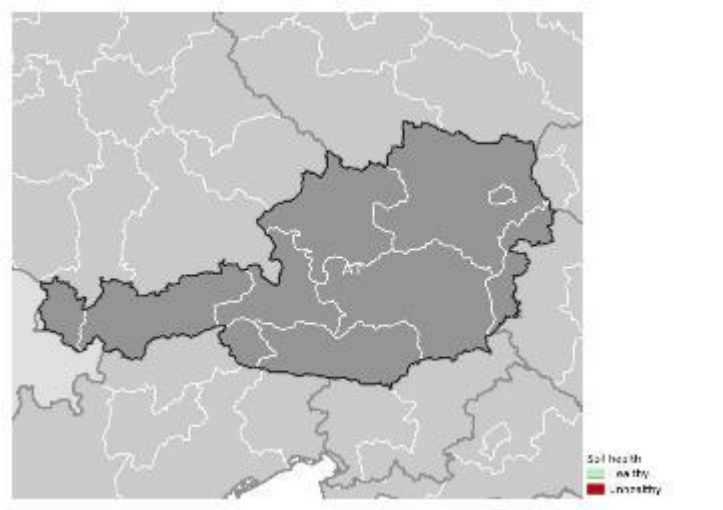


2% of agricultural land area unhealthy (CORINE)

1% of national territory

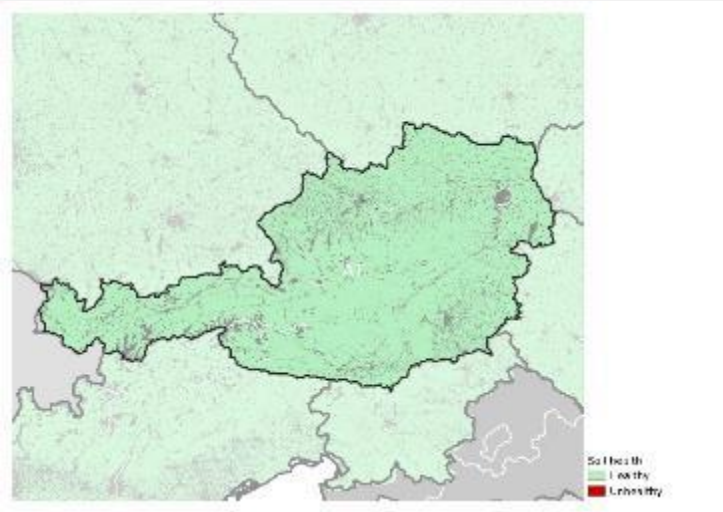
Peatland under hotspot of agriculture in Austria	
	5% of agricultural land area unhealthy (CORINE) <1% of national territory

Areas at risk of secondary Salinization in Austria



No issue based on current evidence

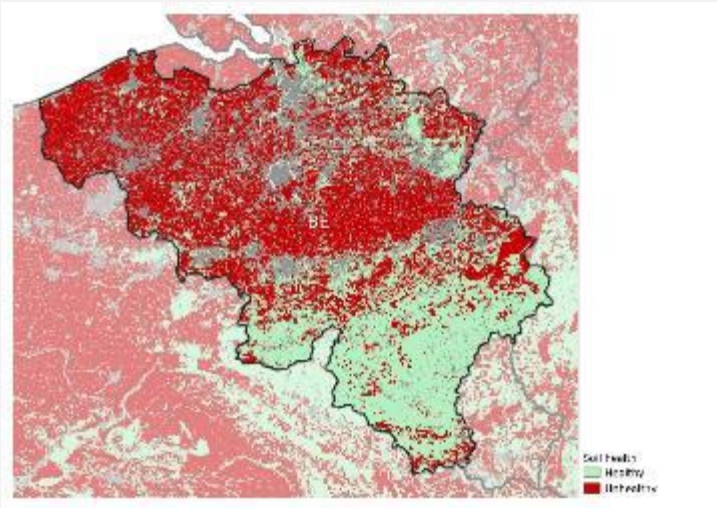
Soil Sealing in Austria



1% of national territory

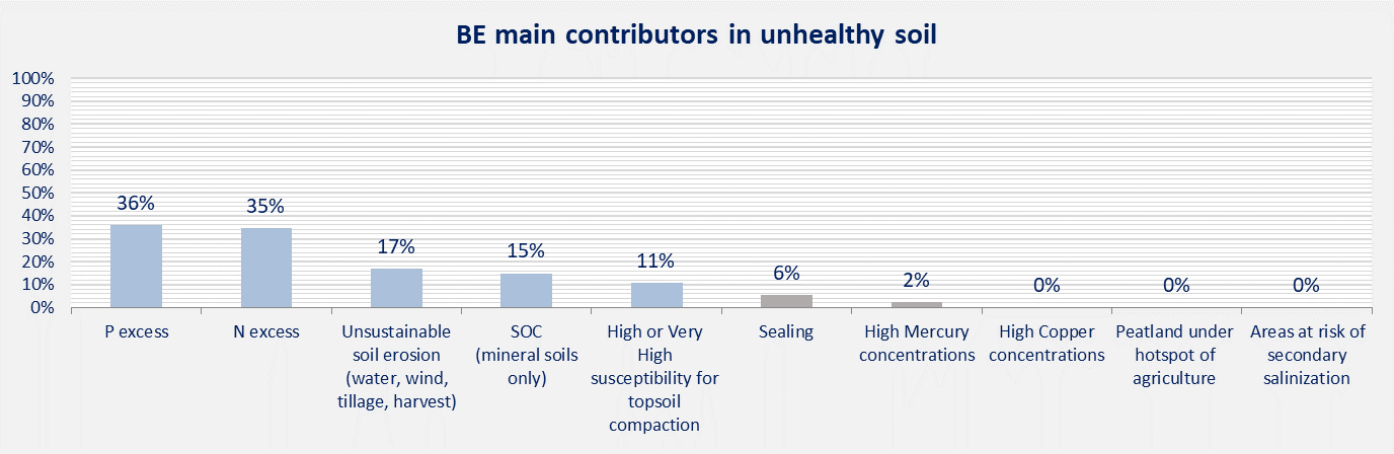
BE

State of soils in in Belgium

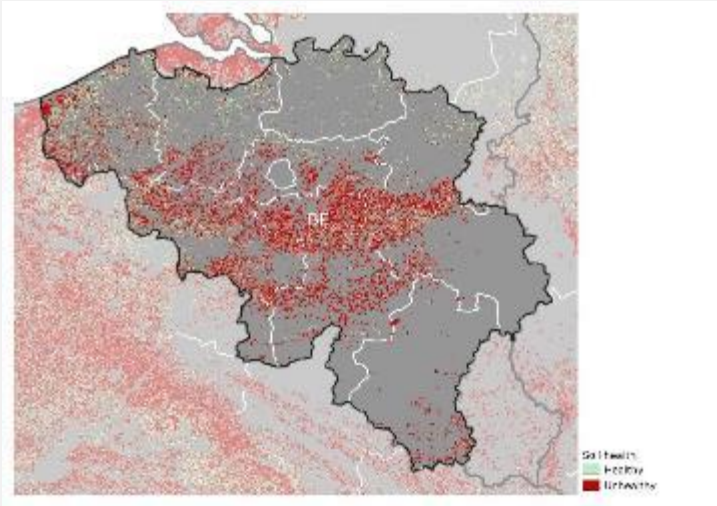


56% area unhealthy

P excess is the greatest contributor



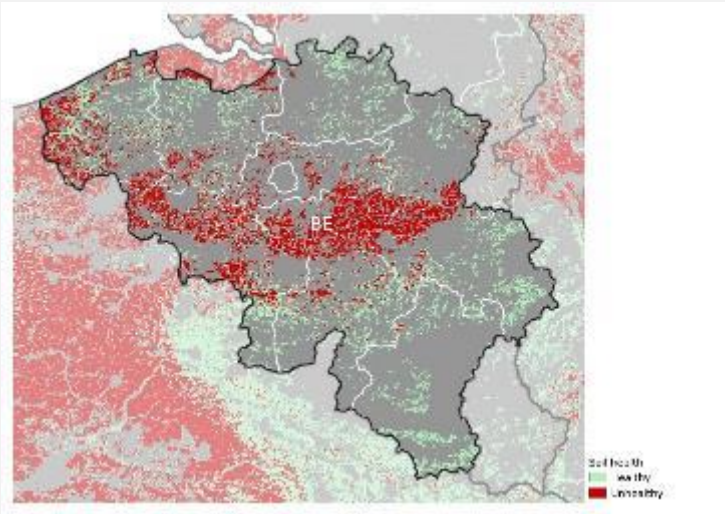
Soil Erosion by Water, Wind, Tillage and Crop in Belgium



63% of cropland area unhealthy

17% of national territory

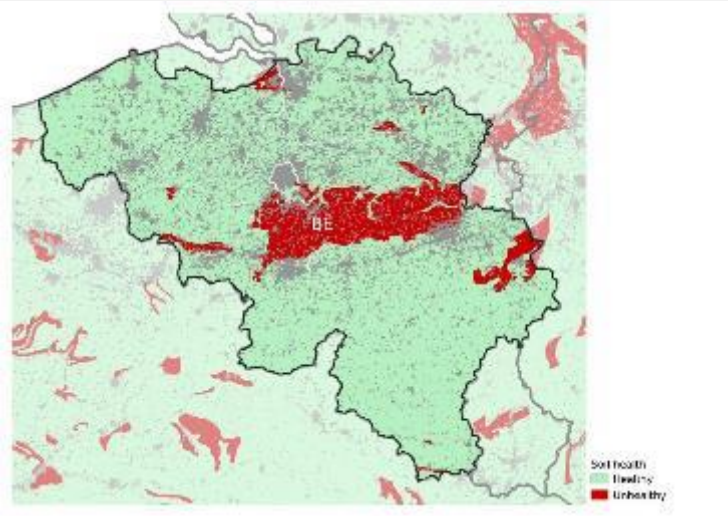
Loss of Soil Organic Carbon in Belgium



46% of cropland and grassland area unhealthy (except for land above 1000 m a.s.l.)

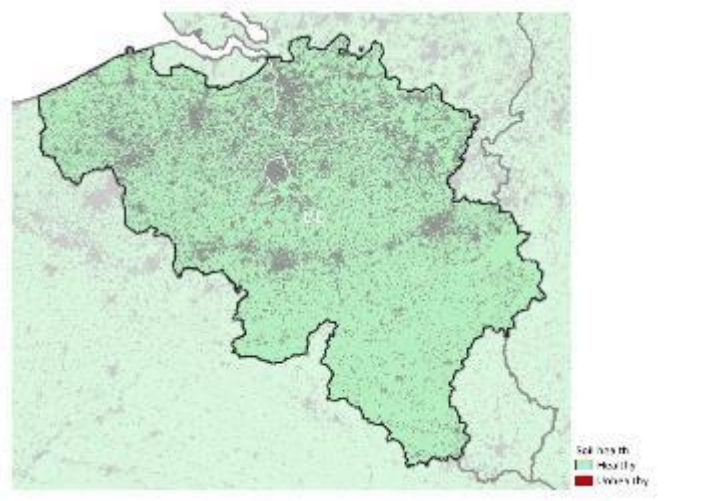
15% of national territory

High or Very High susceptibility for topsoil compaction in Belgium



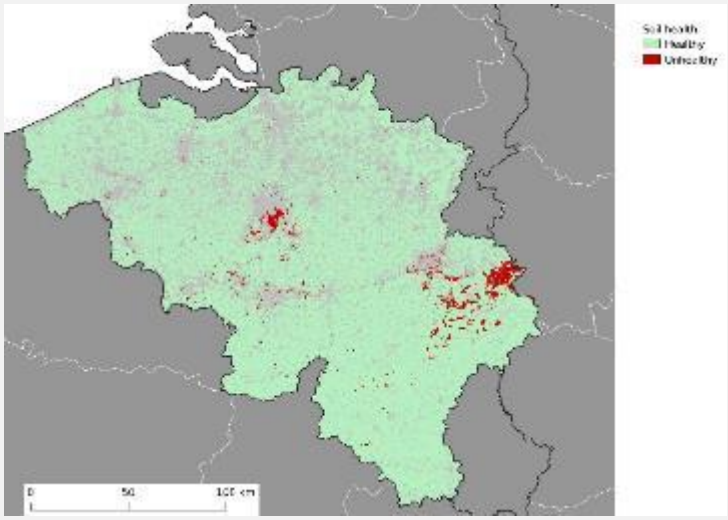
11% of national territory

Contamination by High Copper concentrations in Belgium



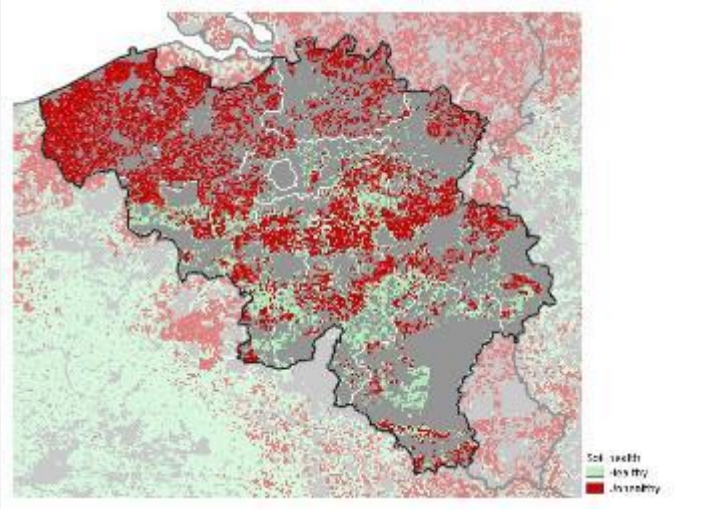
No issue based on current evidence

Contamination by High Mercury concentrations in Belgium



2% of national territory

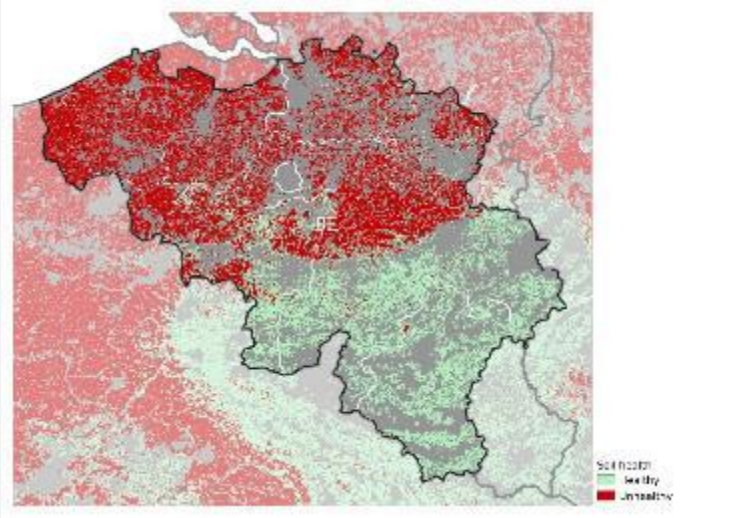
N Excess in Belgium



69% of agricultural land area unhealthy (CORINE)

35% of national territory

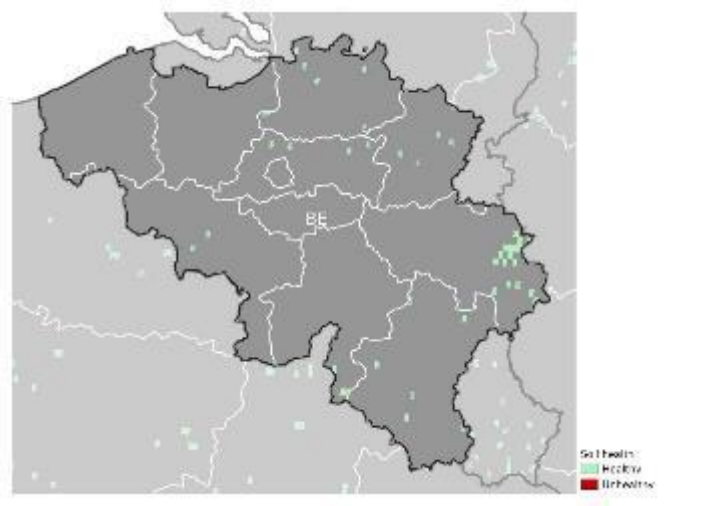
P Excess in Belgium



58% of agricultural land area unhealthy (CORINE)

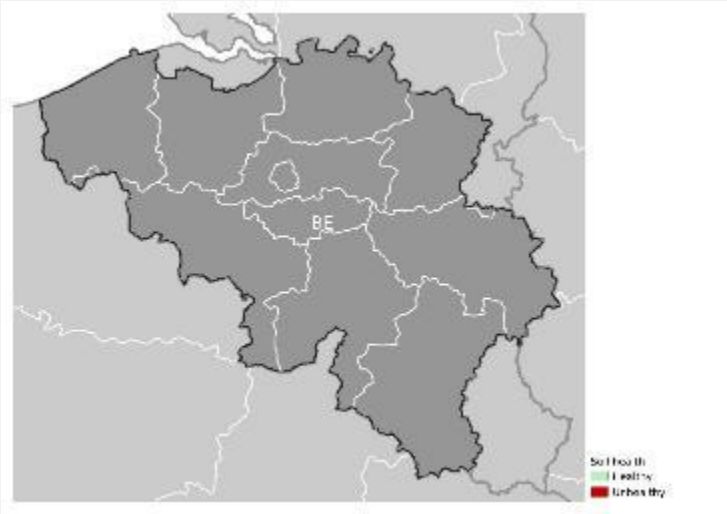
36% of national territory

Peatland under hotspot of agriculture in Belgium



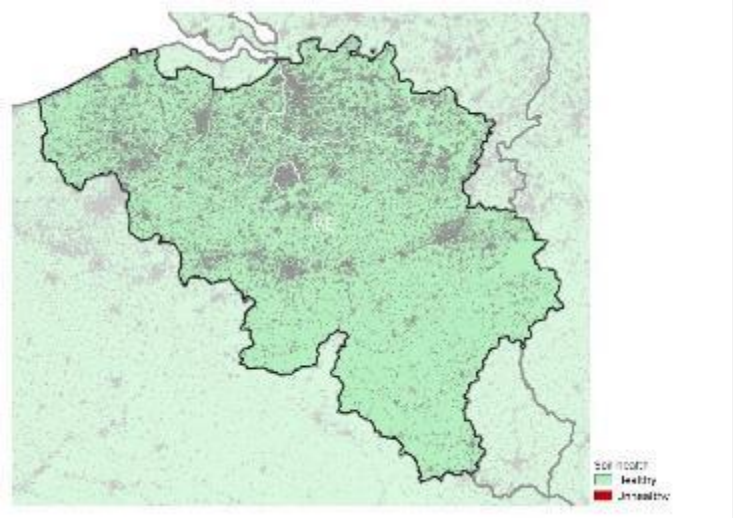
No issue based on current evidence

Areas at risk of secondary Salinization in Belgium



No issue based on current evidence

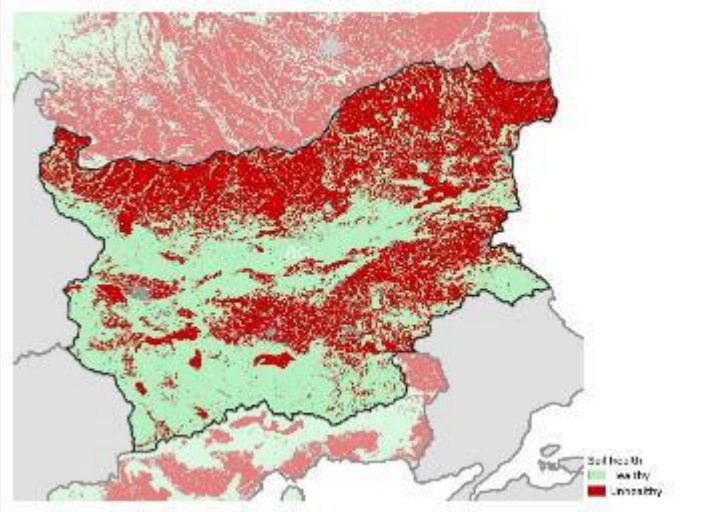
Soil Sealing in Belgium



6% of national territory

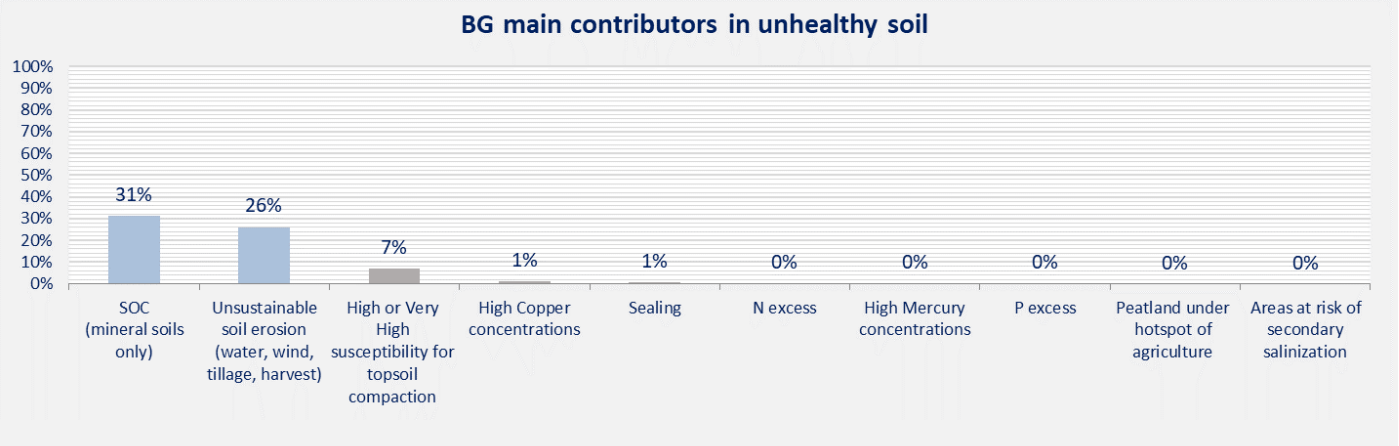
BG

State of soils in Bulgaria

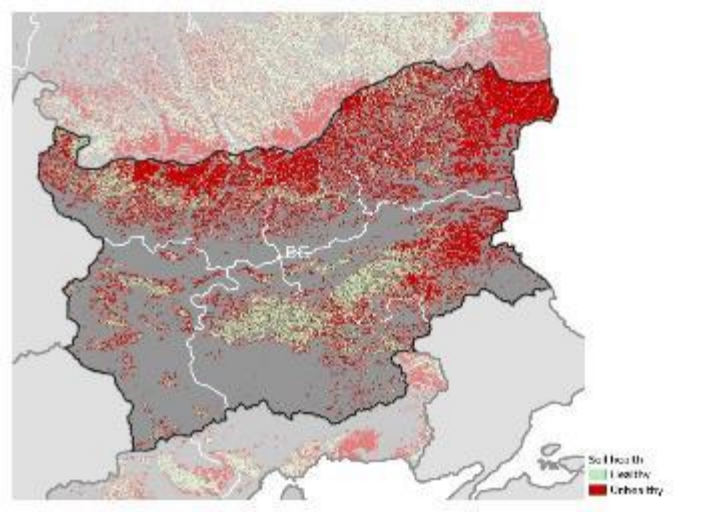


43% area unhealthy

SOC (mineral soils only) is the greatest contributor



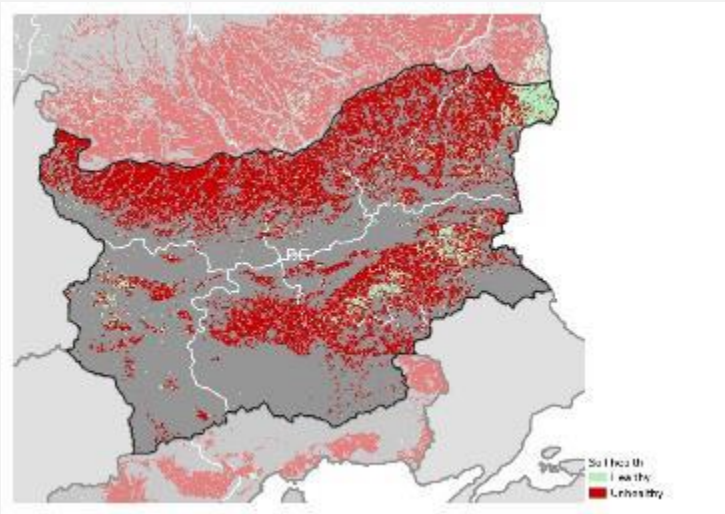
Soil Erosion by Water, Wind, Tillage and Crop in Bulgaria



71% of cropland area unhealthy

26% of national territory

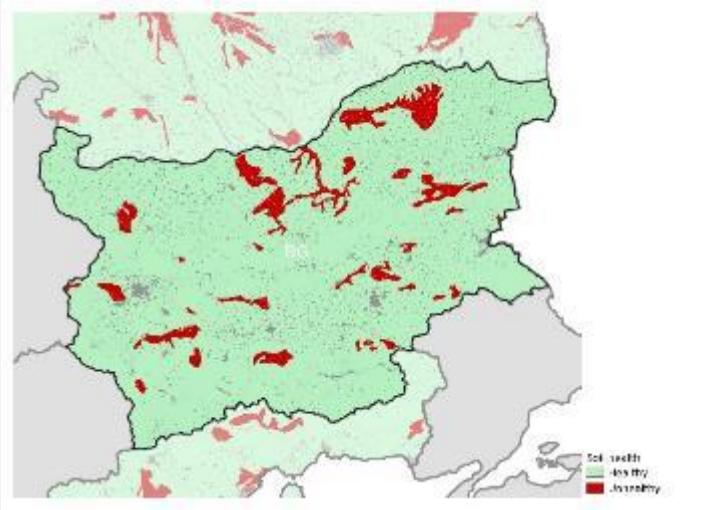
Loss of Soil Organic Carbon in Bulgaria



84% of cropland and grassland area unhealthy (except for land above 1000 m a.s.l.)

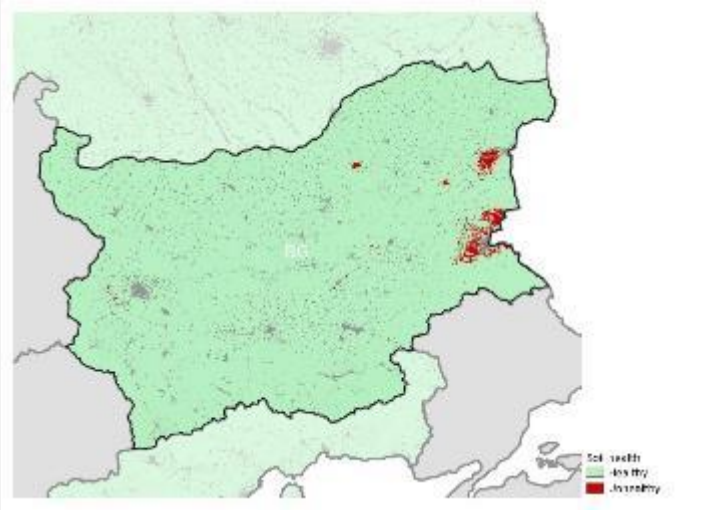
31% of national territory

High or Very High susceptibility for topsoil compaction in Bulgaria



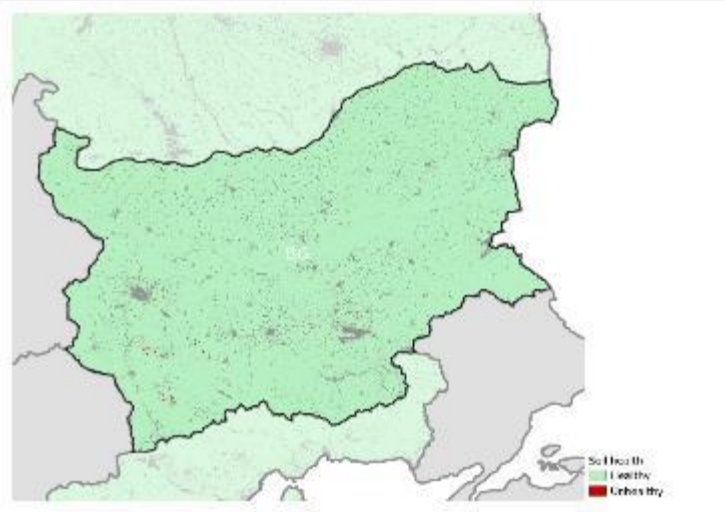
7% of national territory

Contamination by High Copper concentrations in Bulgaria



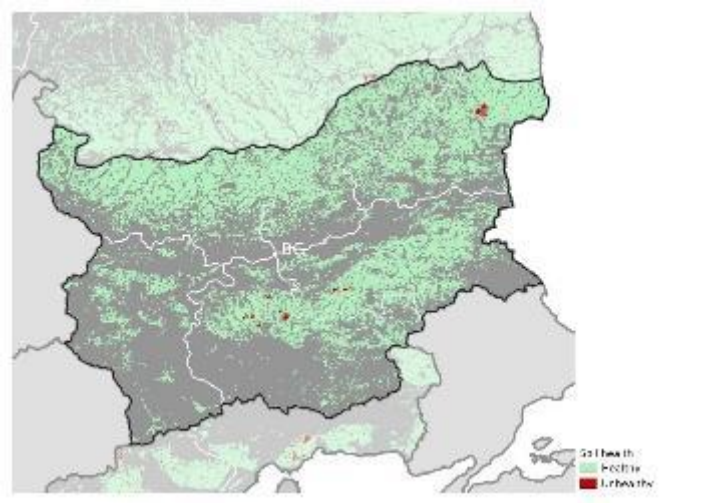
1% of national territory

Contamination by High Mercury concentrations in Bulgaria



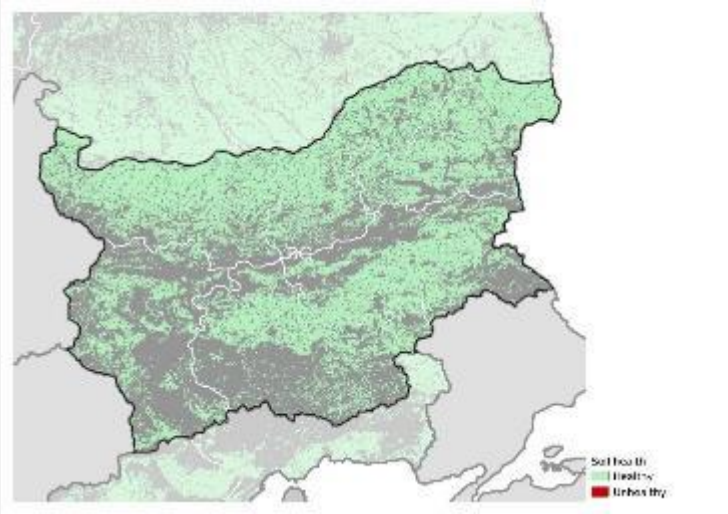
No issue based on current evidence

N Excess in Bulgaria



No issue based on current evidence

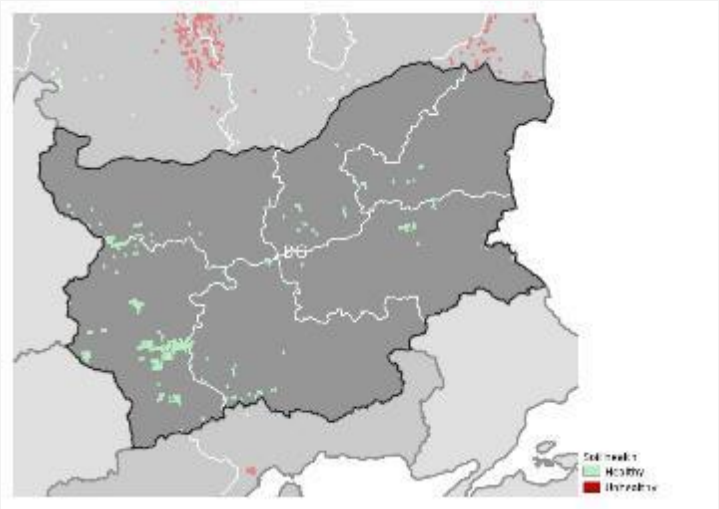
P Excess in Bulgaria



0% of agricultural land area unhealthy (CORINE)

5% of national territory

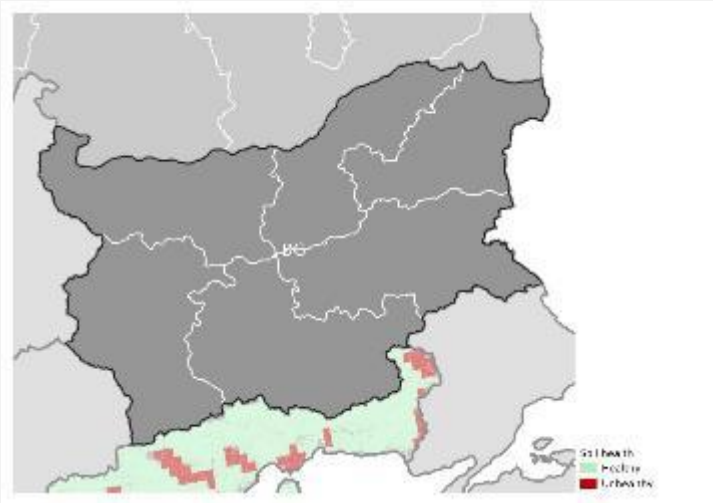
Peatland under hotspot of agriculture in Bulgaria



0% of agricultural land area unhealthy (CORINE)

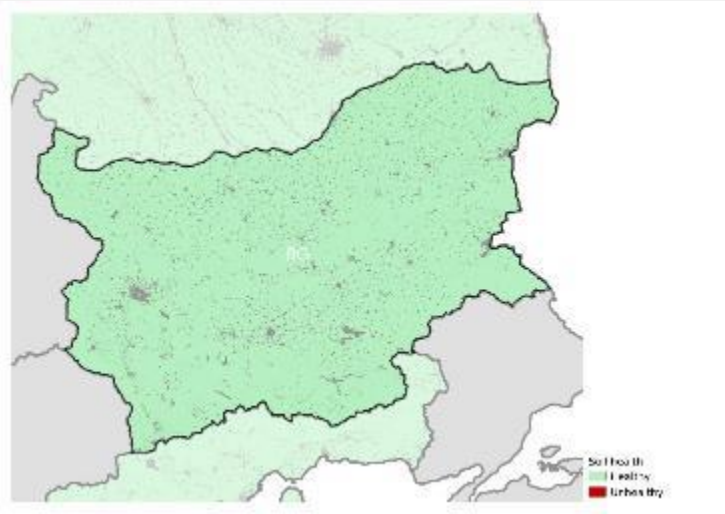
2% of national territory

Areas at risk of secondary Salinization in Bulgaria



No issue based on current evidence

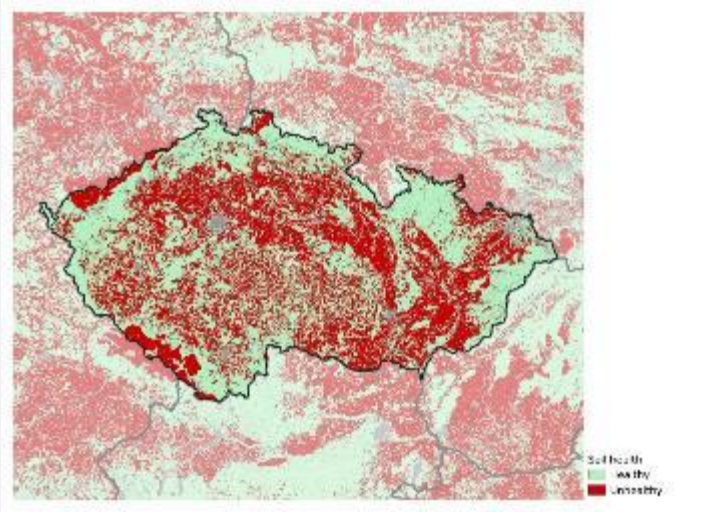
Soil Sealing in Bulgaria



1% of national territory

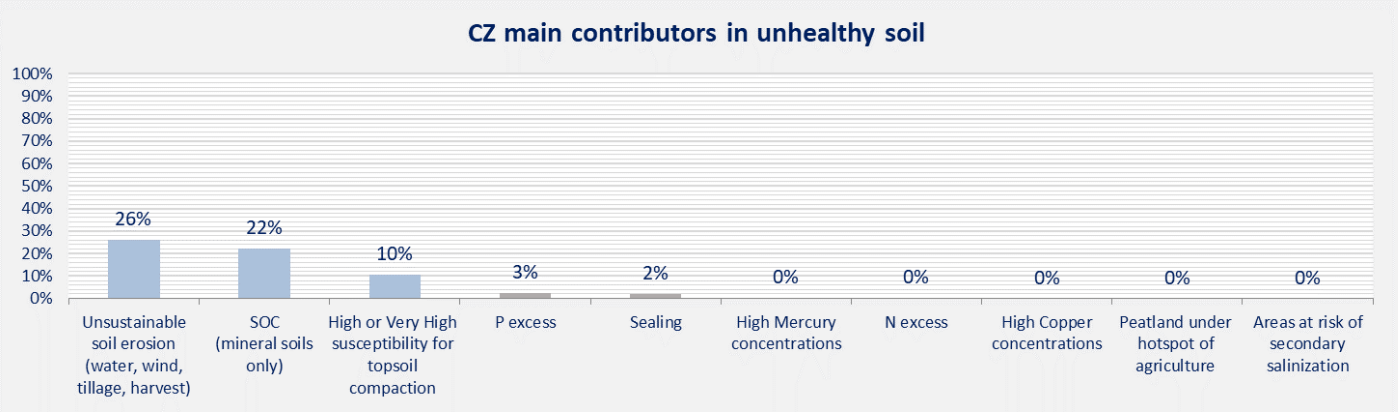
CZ

State of soils in Czechia

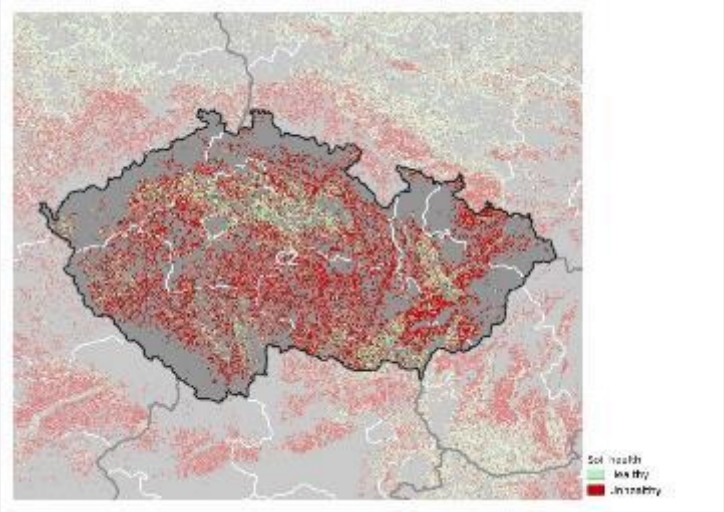


44% area unhealthy

Unsustainable soil erosion (water, wind, tillage, harvest) is the greatest contributor



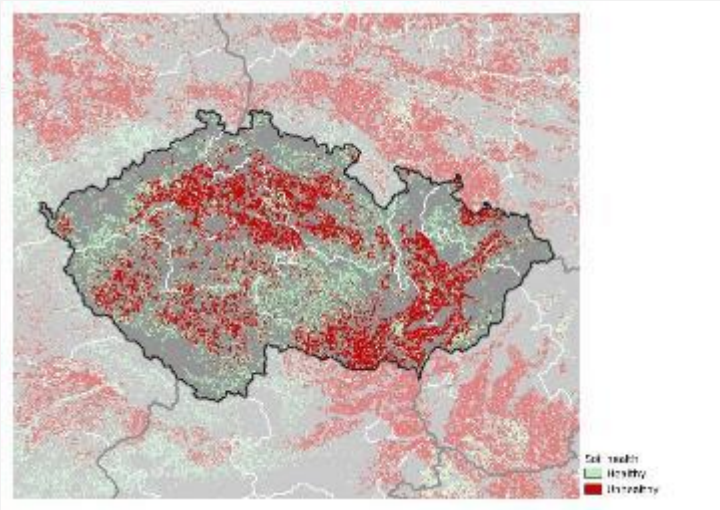
Soil Erosion by Water, Wind, Tillage and Crop in Czechia



64% of cropland area unhealthy

26% of national territory

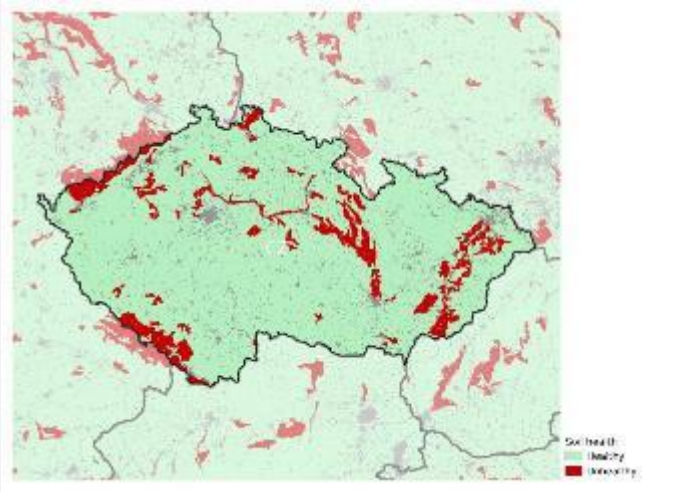
Loss of Soil Organic Carbon in Czechia



52% of cropland and grassland area unhealthy (except for land above 1000 m a.s.l.)

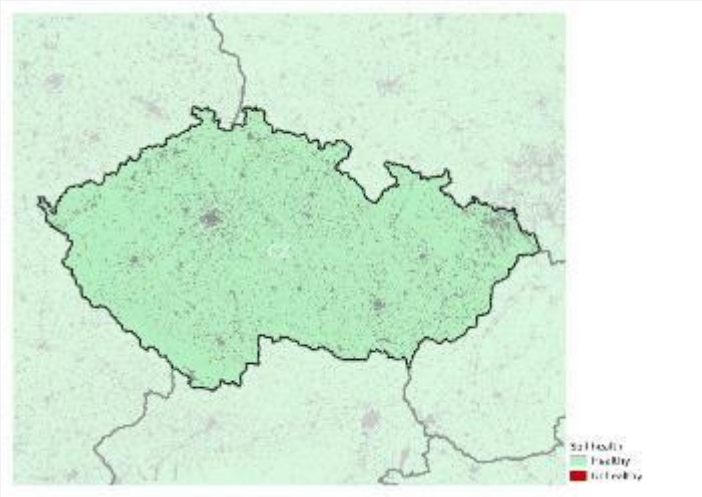
22% of national territory

High or Very High susceptibility for topsoil compaction in Czechia



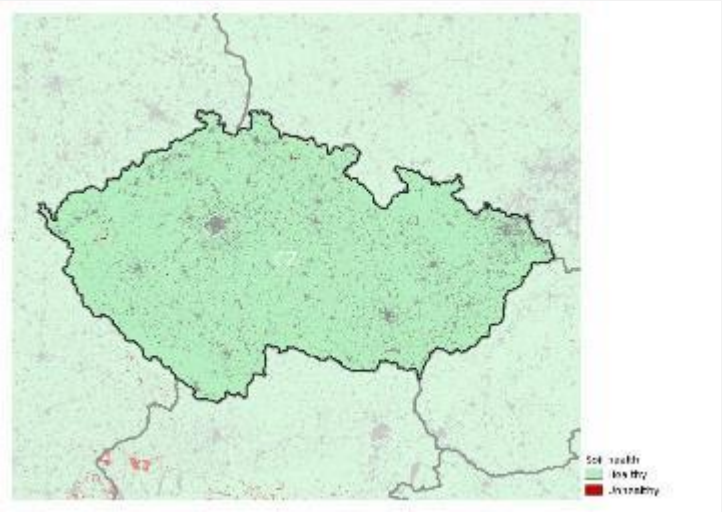
10% of national territory

Contamination by High Copper concentrations in Czechia



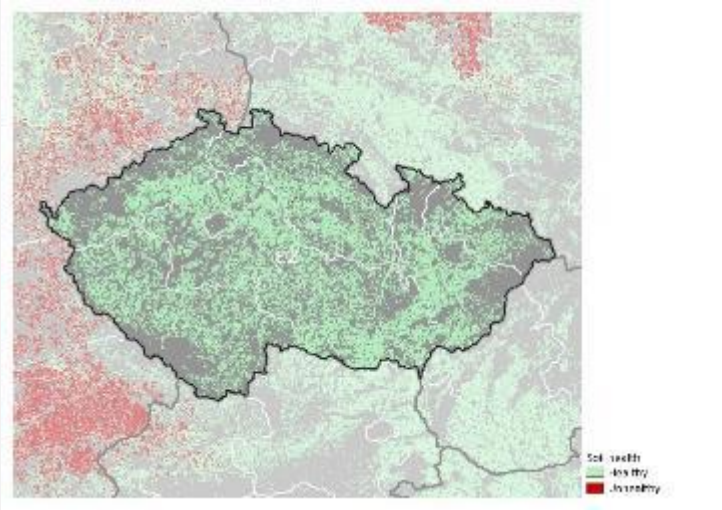
No issue based on current evidence

Contamination by High Mercury concentrations in Czechia



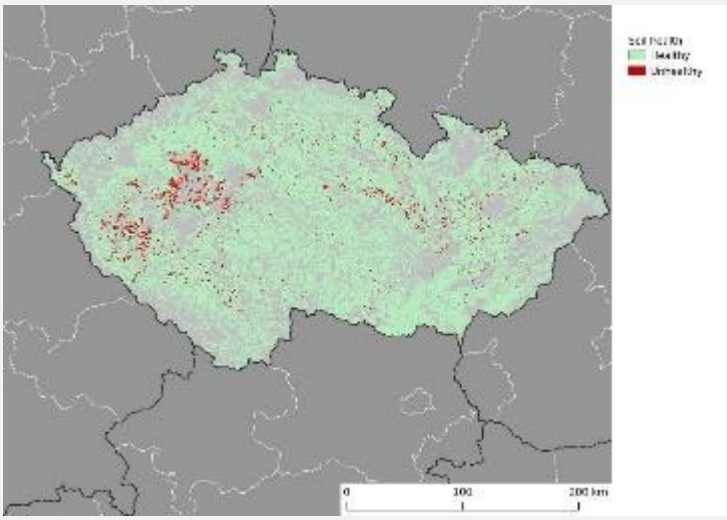
No issue based on current evidence

N Excess in Czechia



No issue based on current evidence

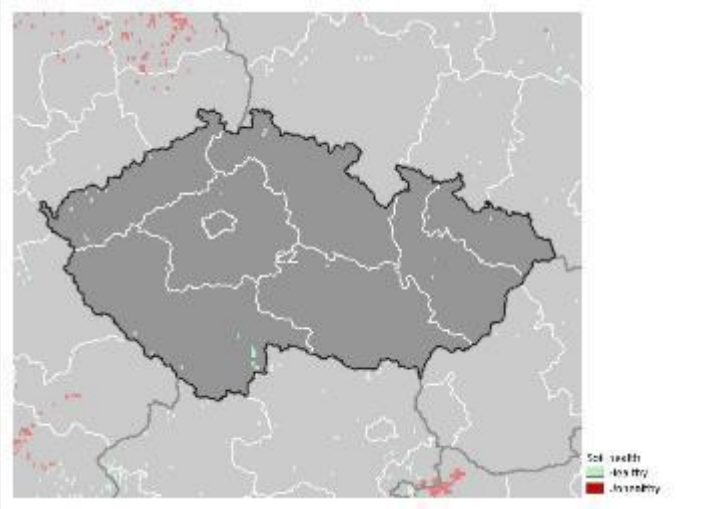
P Excess in Czechia



4% of agricultural land area unhealthy (CORINE)

3% of national territory

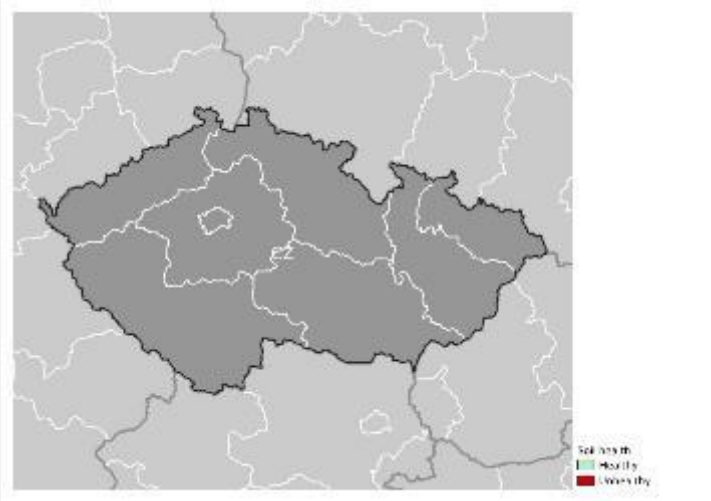
Peatland under hotspot of agriculture in Czechia



0% of agricultural land area unhealthy (CORINE)

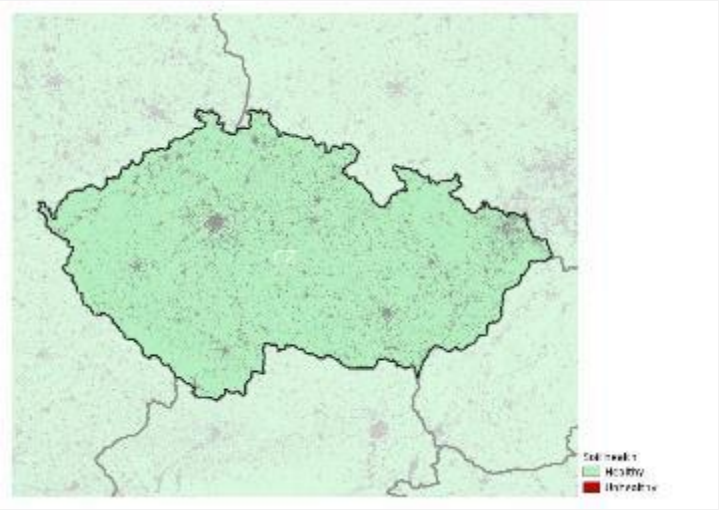
2% of national territory

Areas at risk of secondary Salinization in Czechia



No issue based on current evidence

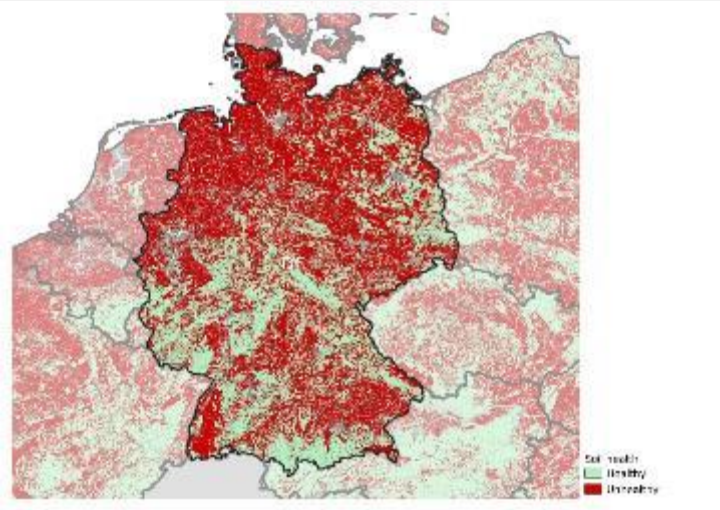
Soil Sealing in Czechia



2% of national territory

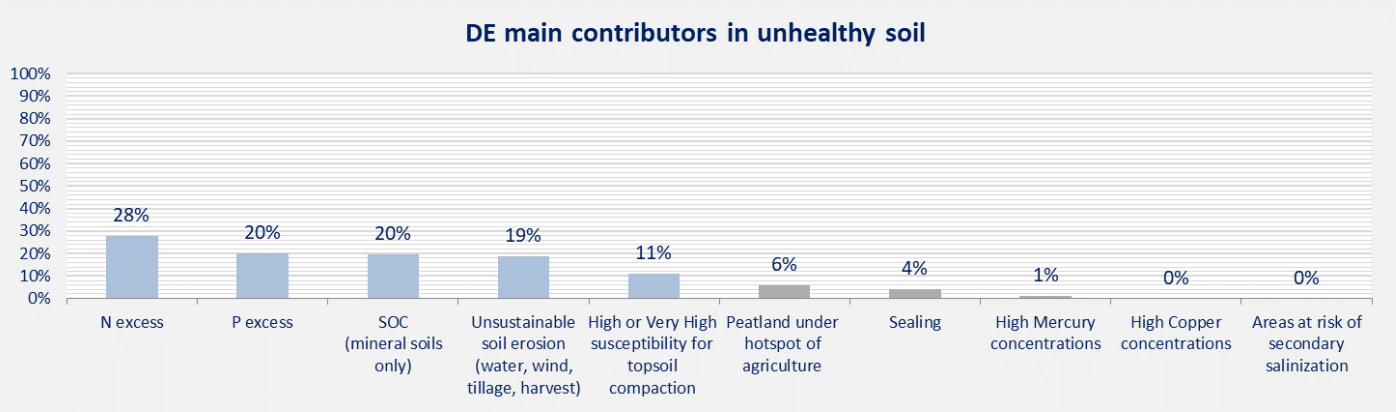
DE

State of soils in Germany

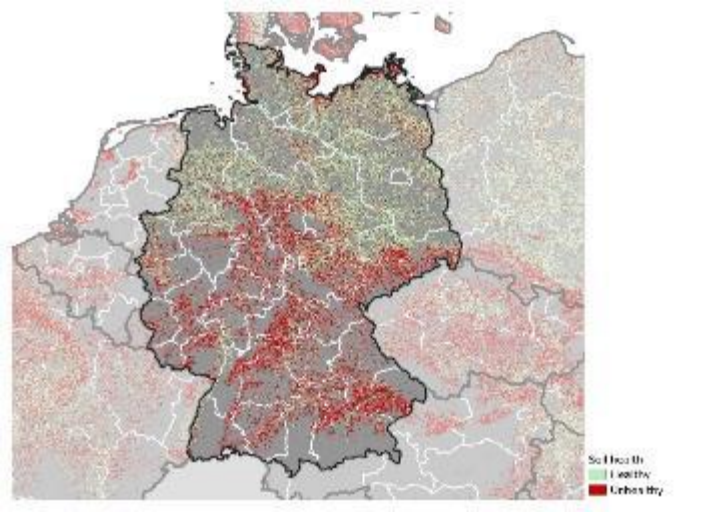


59% area unhealthy

N excess is the greatest contributor

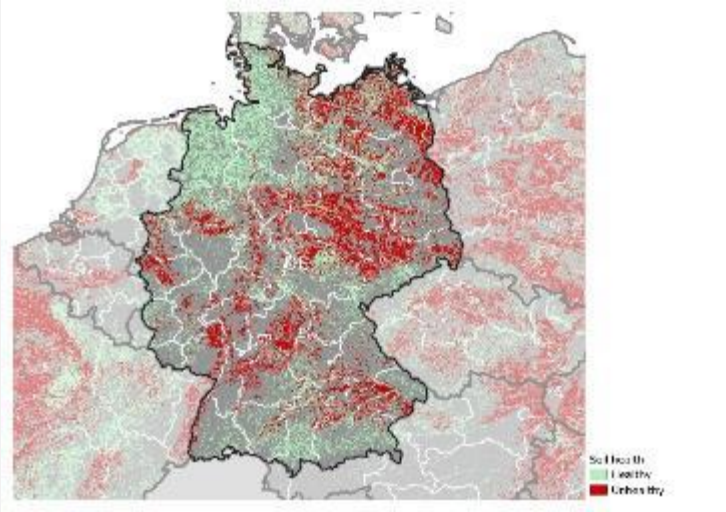


Soil Erosion by Water, Wind, Tillage and Crop in Germany

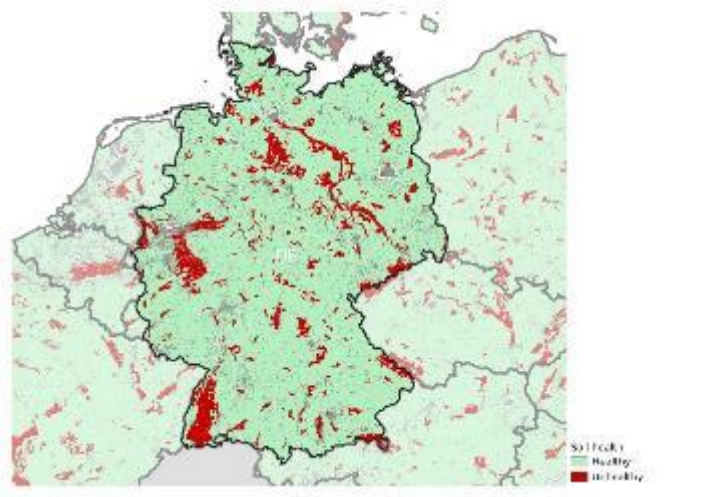


47% of cropland area unhealthy

19% of national territory

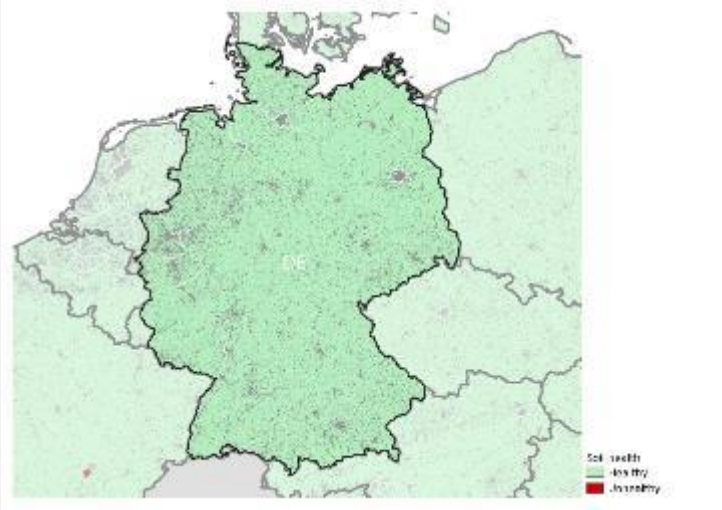
Loss of Soil Organic Carbon in Germany	
	43% of cropland and grassland area unhealthy (except for land above 1000 m a.s.l.)
	20% of national territory

High or Very High susceptibility for topsoil compaction in Germany



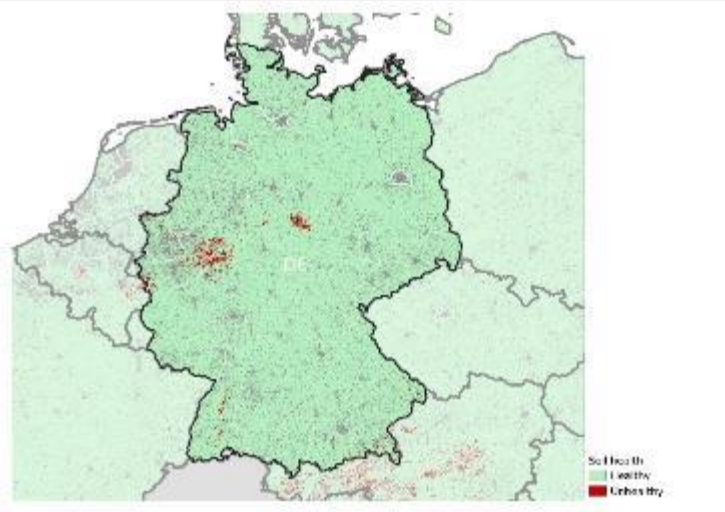
11% of national territory

Contamination by High Copper concentrations in Germany



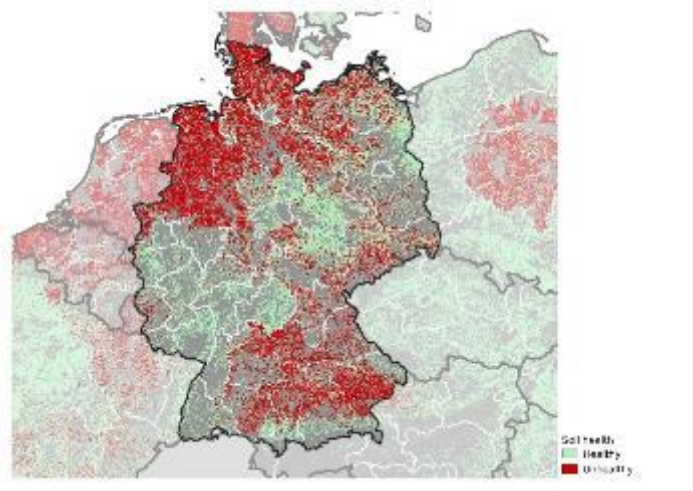
No issue based on current evidence

Contamination by High Mercury concentrations in Germany



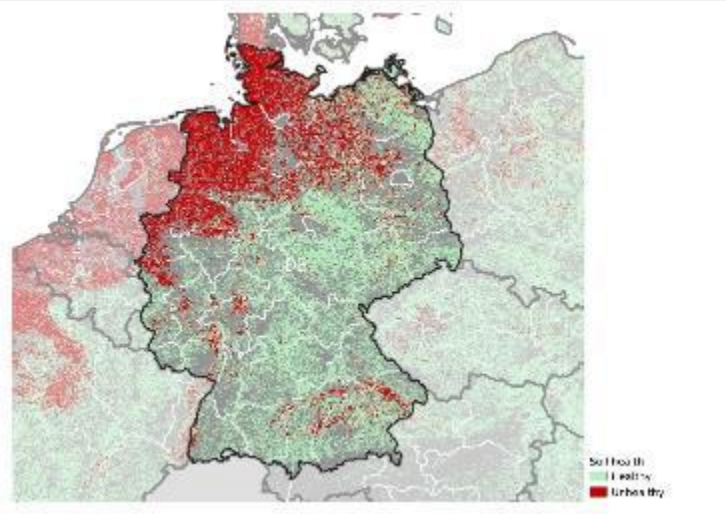
1% of national territory

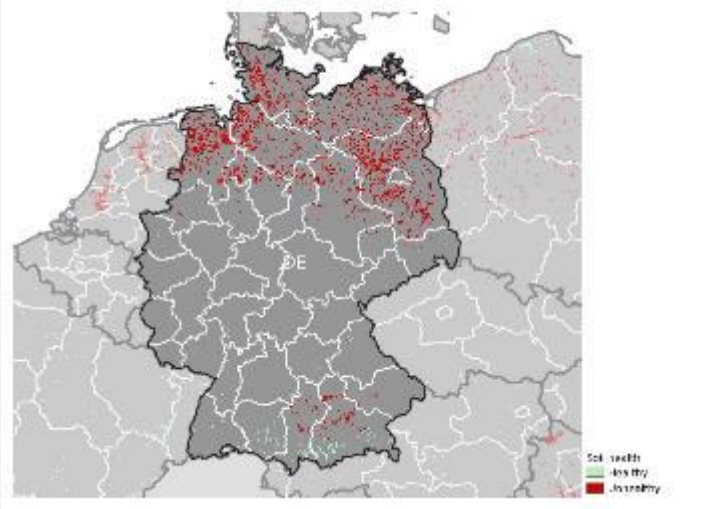
N Excess in Germany



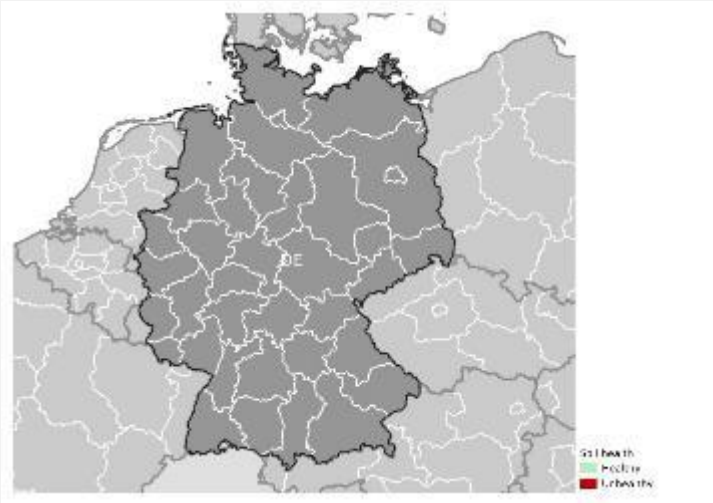
50% of agricultural land area unhealthy (CORINE)

28% of national territory

P Excess in Germany	
	33% of agricultural land area unhealthy (CORINE) 20% of national territory

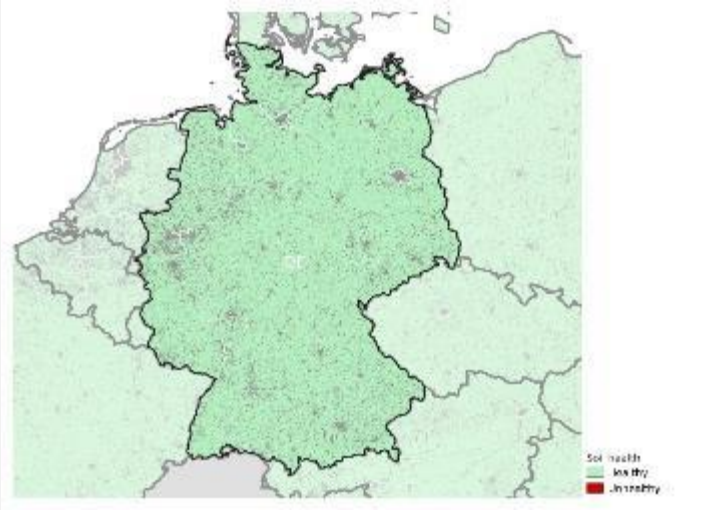
Peatland under hotspot of agriculture in Germany	
	91% of agricultural land area unhealthy (CORINE) 6% of national territory

Areas at risk of secondary Salinization in Germany



No issue based on current evidence

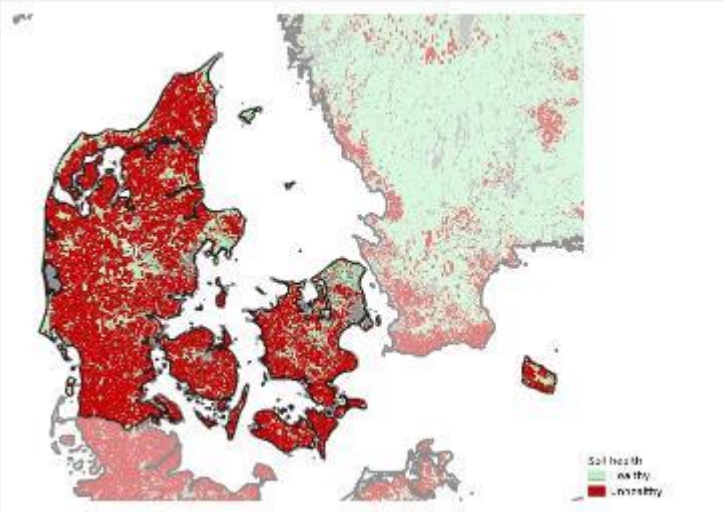
Soil Sealing in Germany



4% of national territory

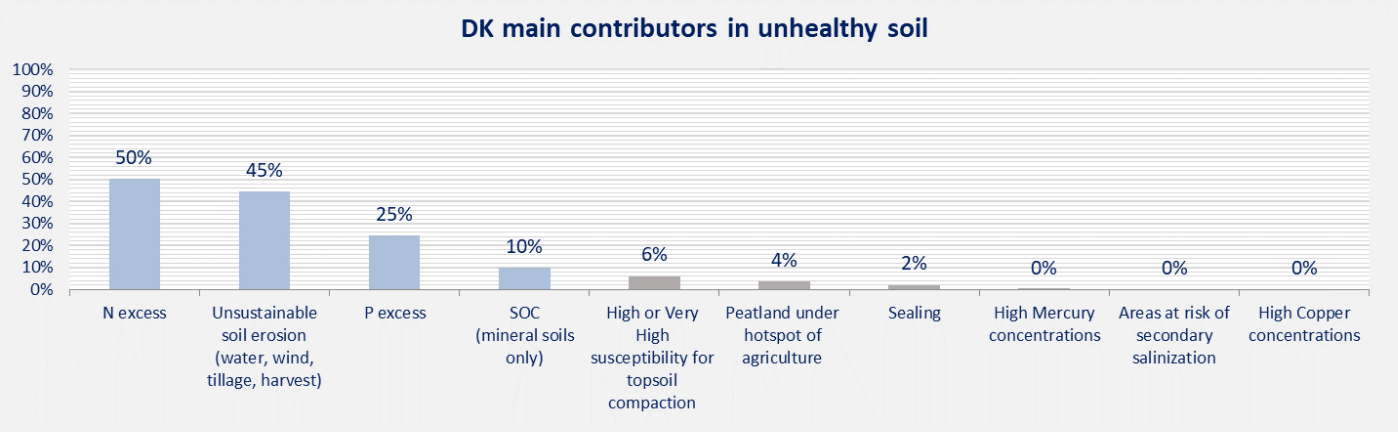
DK

State of soils in Denmark

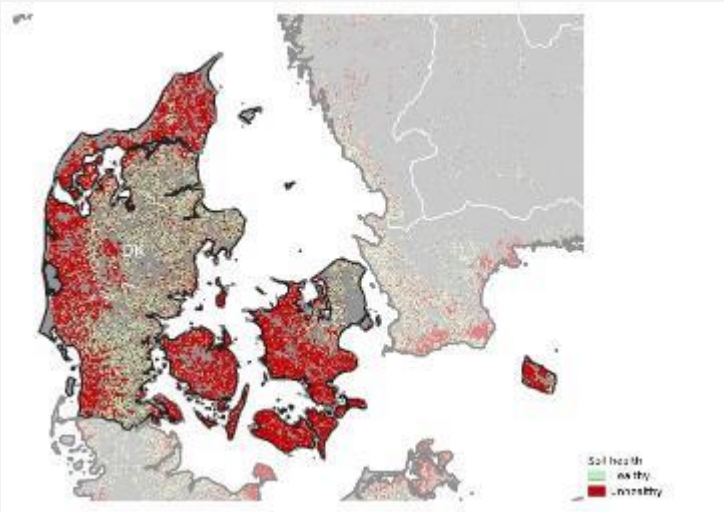


76% area unhealthy

N excess is the greatest contributor



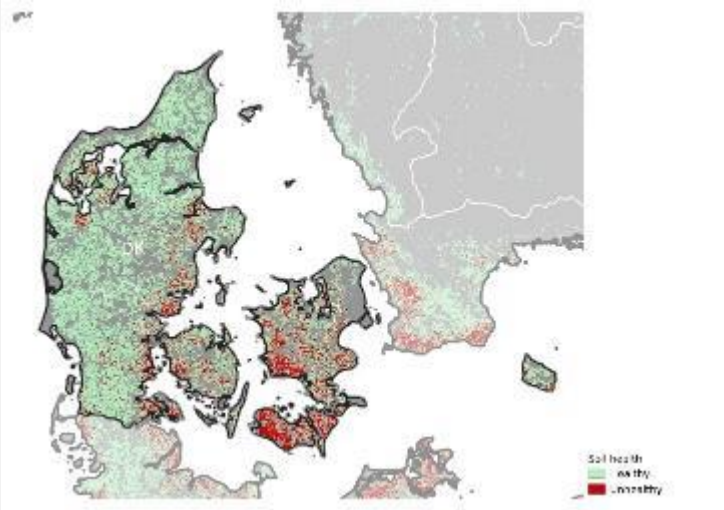
Soil Erosion by Water, Wind, Tillage and Crop in Denmark



65% of cropland area unhealthy

45% of national territory

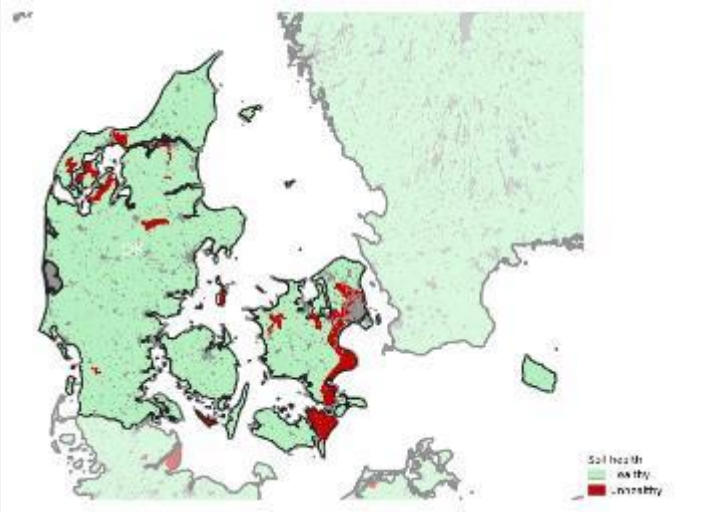
Loss of Soil Organic Carbon in Denmark



16% of cropland and grassland area unhealthy (except for land above 1000 m a.s.l.)

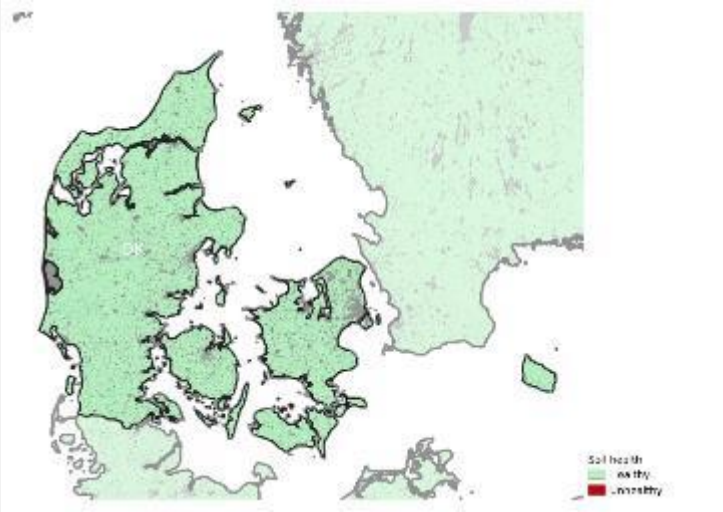
10% of national territory

High or Very High susceptibility for topsoil compaction in Denmark



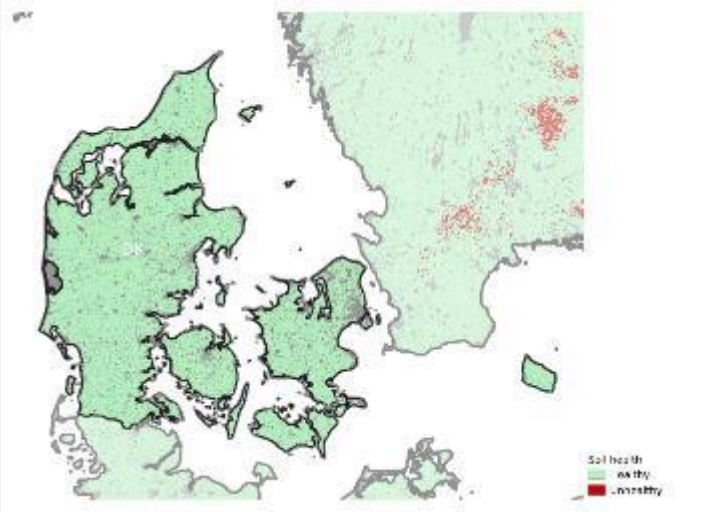
6% of national territory

Contamination by High Copper concentrations in Denmark



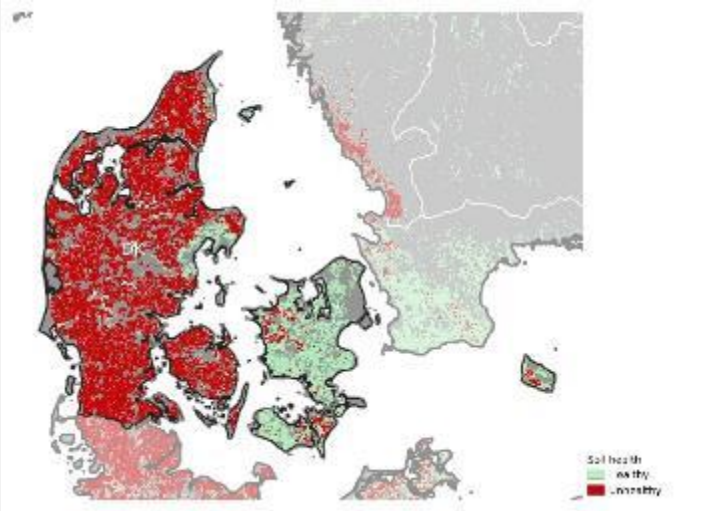
No issue based on current evidence

Contamination by High Mercury concentrations in Denmark



No issue based on current evidence

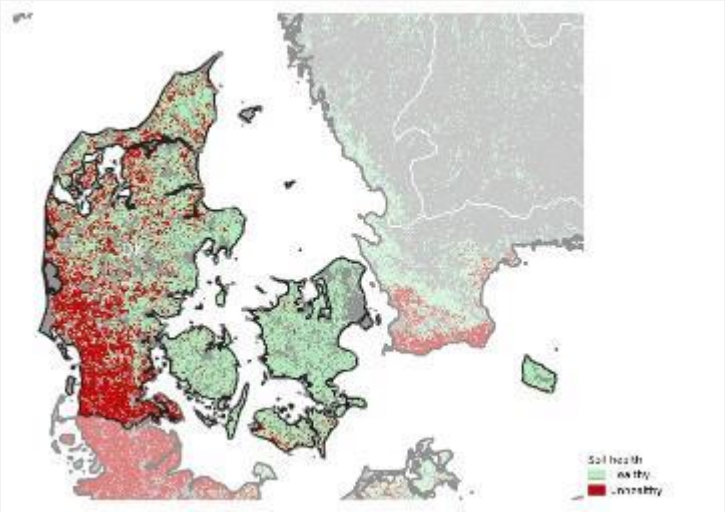
N Excess in Denmark



73% of agricultural land area unhealthy (CORINE)

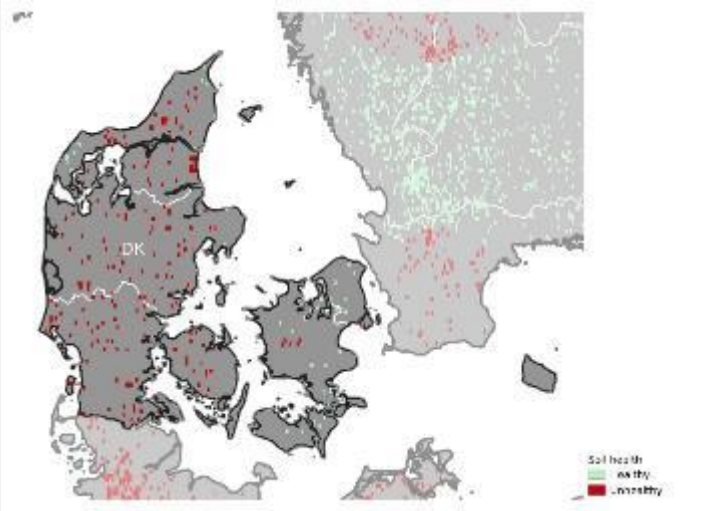
50% of national territory

P Excess in Denmark

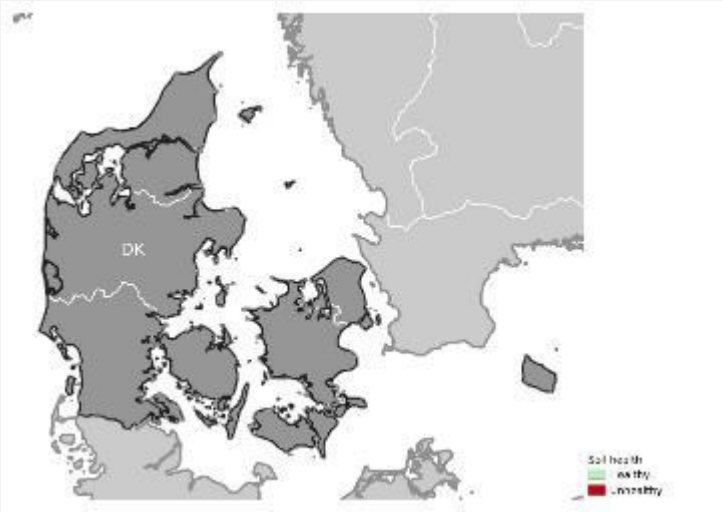


31% of agricultural land area unhealthy (CORINE)

25% of national territory

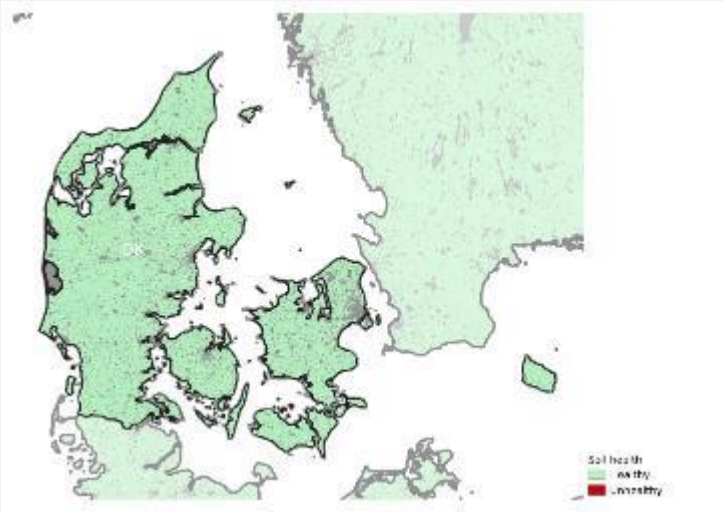
Peatland under hotspot of agriculture in Denmark	
	84% of agricultural land area unhealthy (CORINE) 4% of national territory

Areas at risk of secondary Salinization in Denmark



No issue based on current evidence

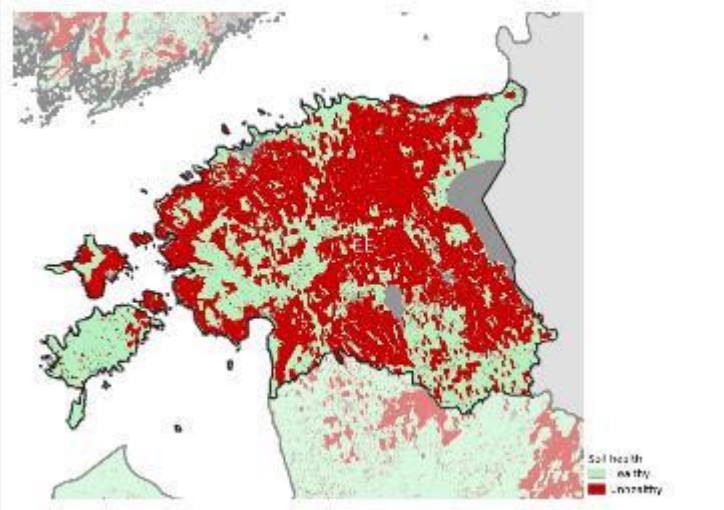
Soil Sealing in Denmark



2% of national territory

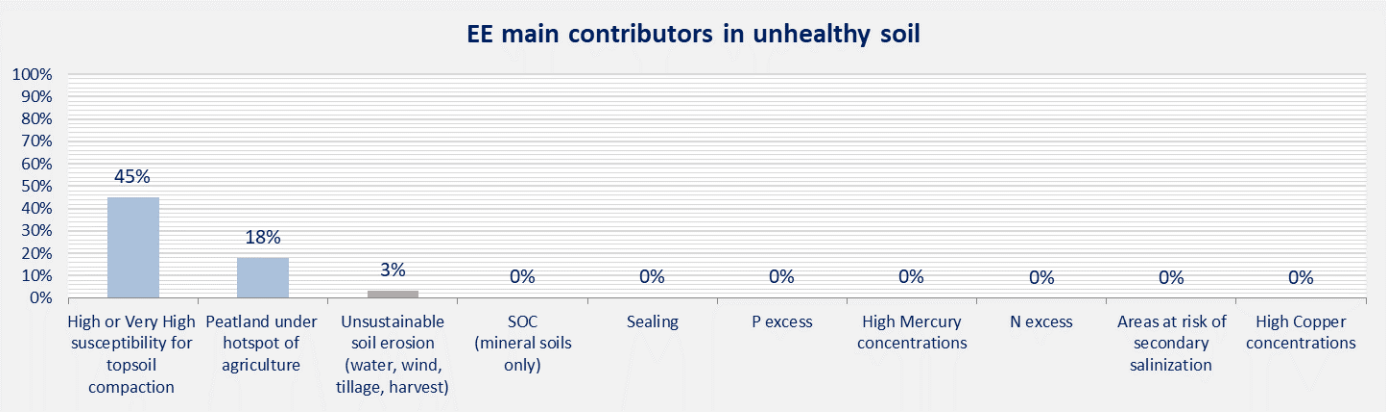
EE

State of soils in Estonia

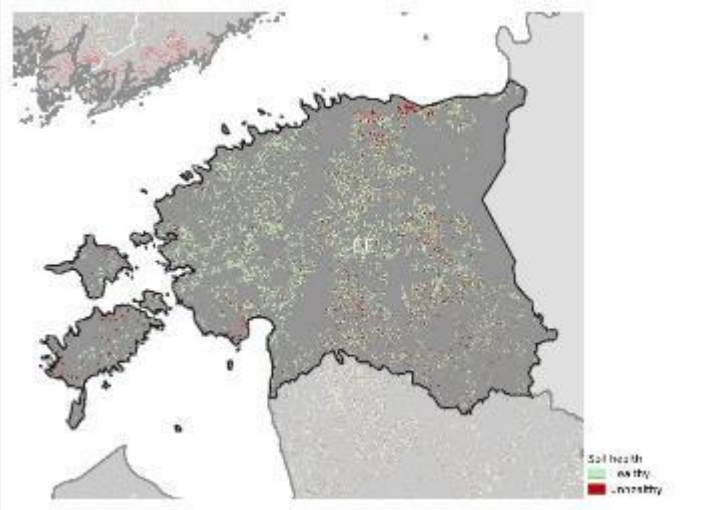


59% area unhealthy

High or Very High susceptibility for topsoil compaction is the greatest contributor



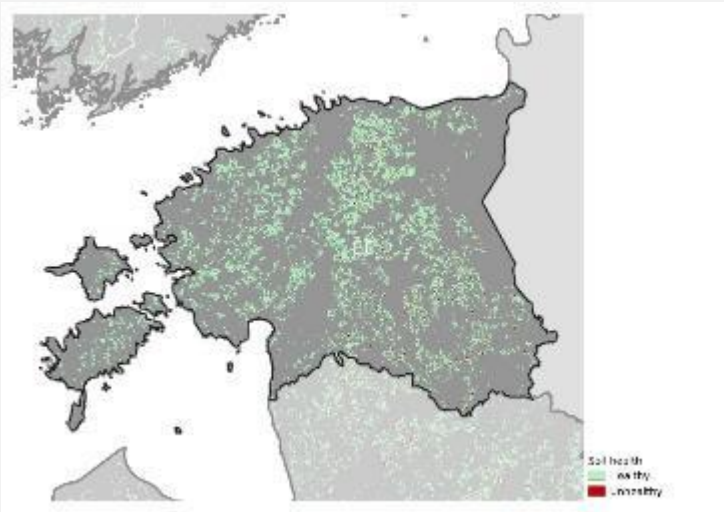
Soil Erosion by Water, Wind, Tillage and Crop in Estonia



22% of cropland area unhealthy

3% of national territory

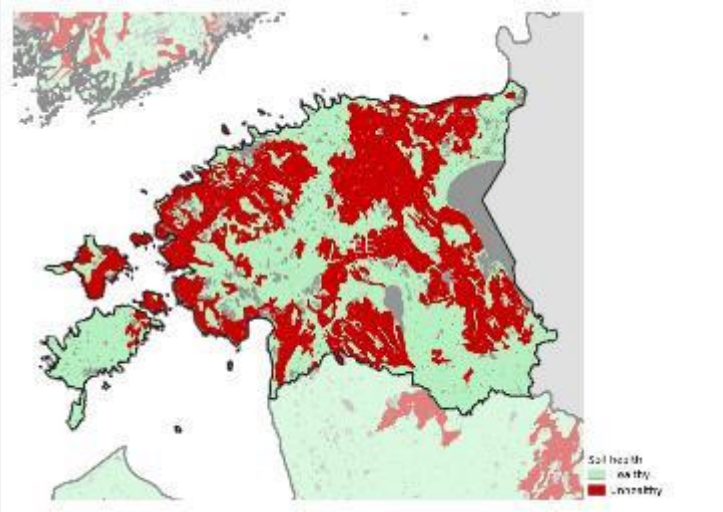
Loss of Soil Organic Carbon in Estonia



2% of cropland and grassland area unhealthy (except for land above 1000 m a.s.l.)

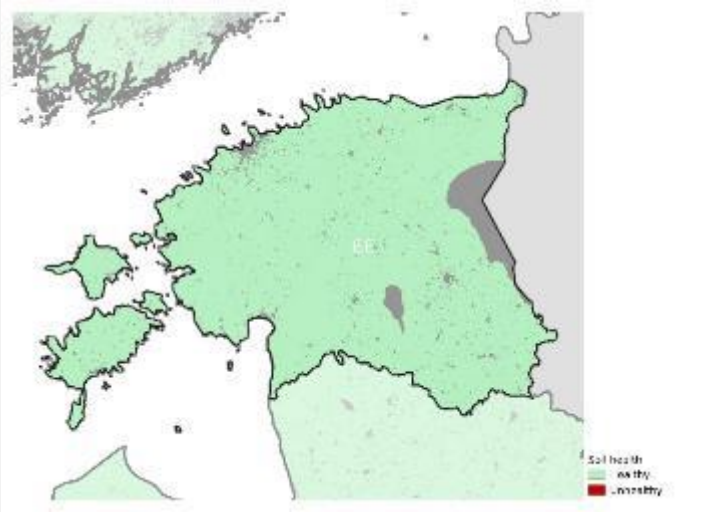
<1% of national territory

High or Very High susceptibility for topsoil compaction in Estonia



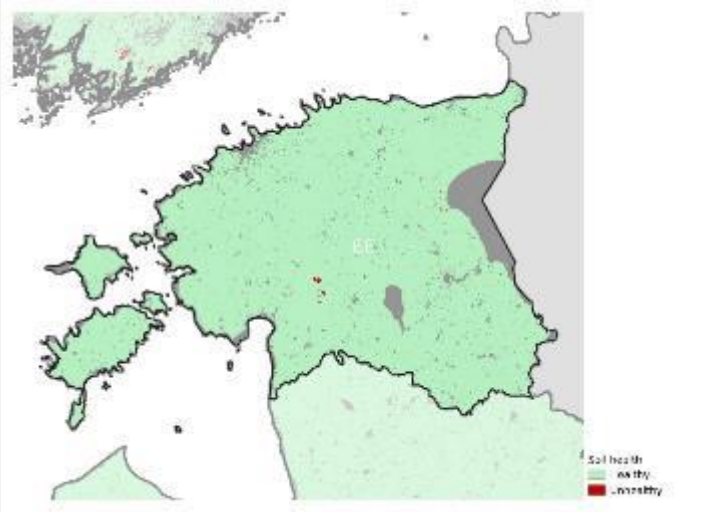
45% of national territory

Contamination by High Copper concentrations in Estonia



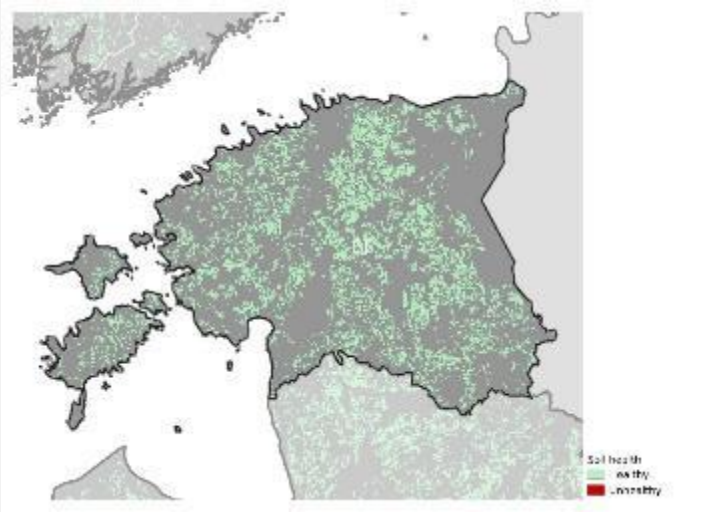
No issue based on current evidence

Contamination by High Mercury concentrations in Estonia



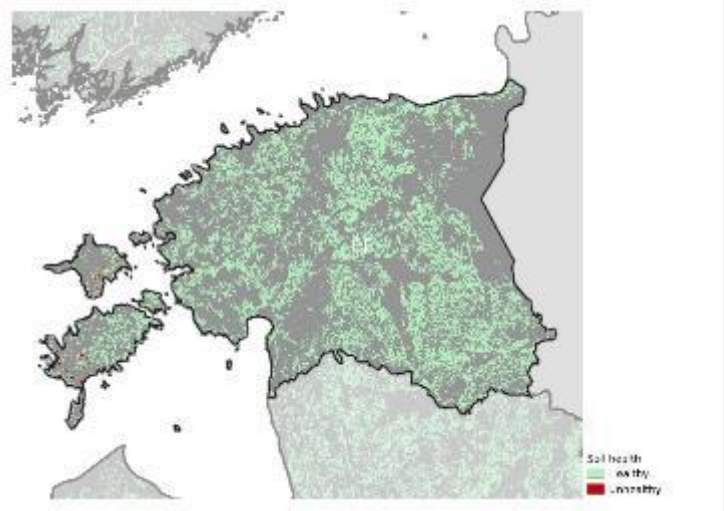
No issue based on current evidence

N Excess in Estonia

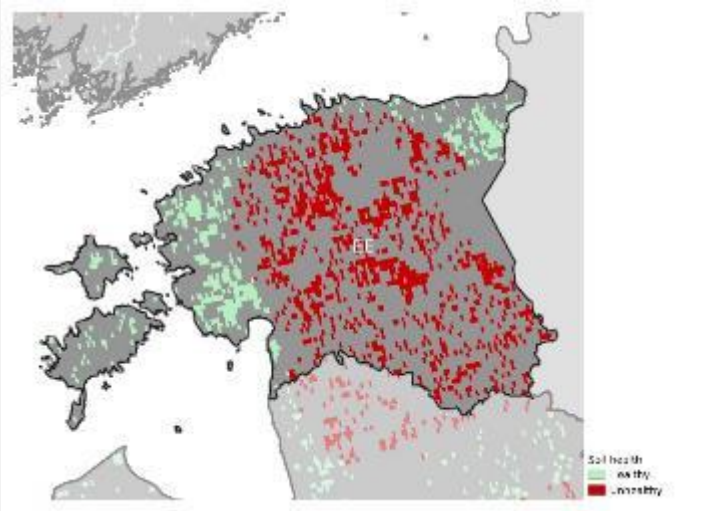


No issue based on current evidence

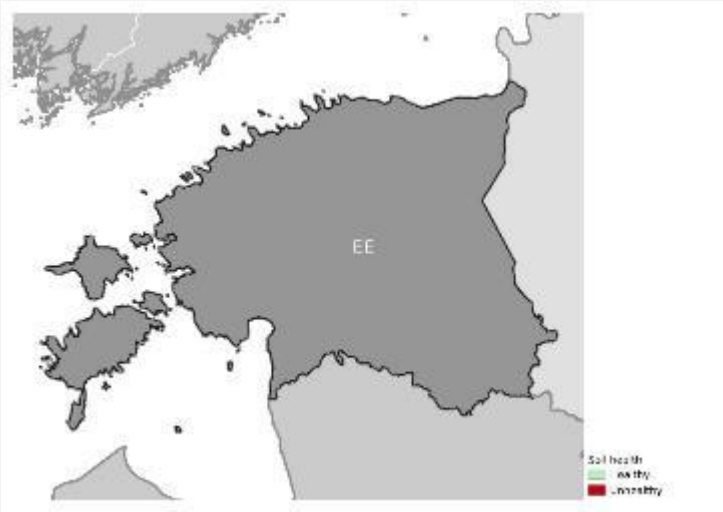
P Excess in Estonia



No issue based on current evidence

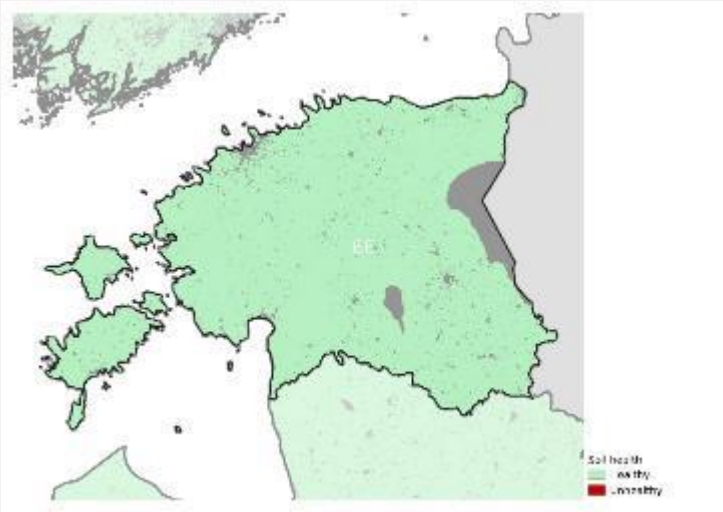
Peatland under hotspot of agriculture in Estonia	
	72% of agricultural land area unhealthy (CORINE) 18% of national territory

Areas at risk of secondary Salinization in Estonia



No issue based on current evidence

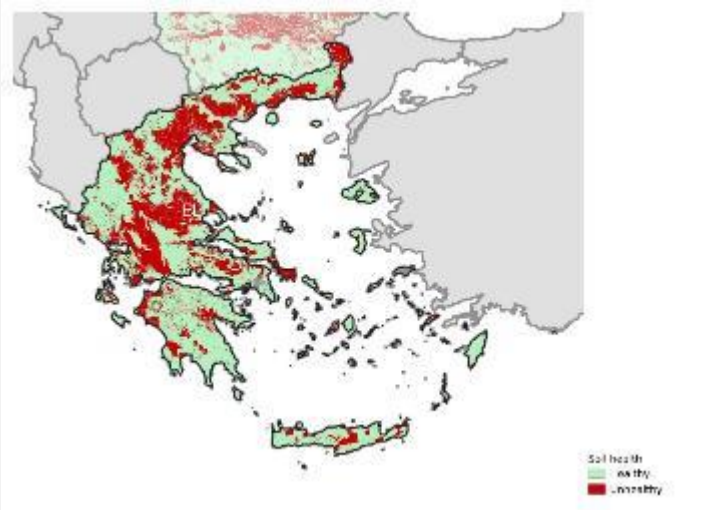
Soil Sealing in Estonia



No issue based on current evidence

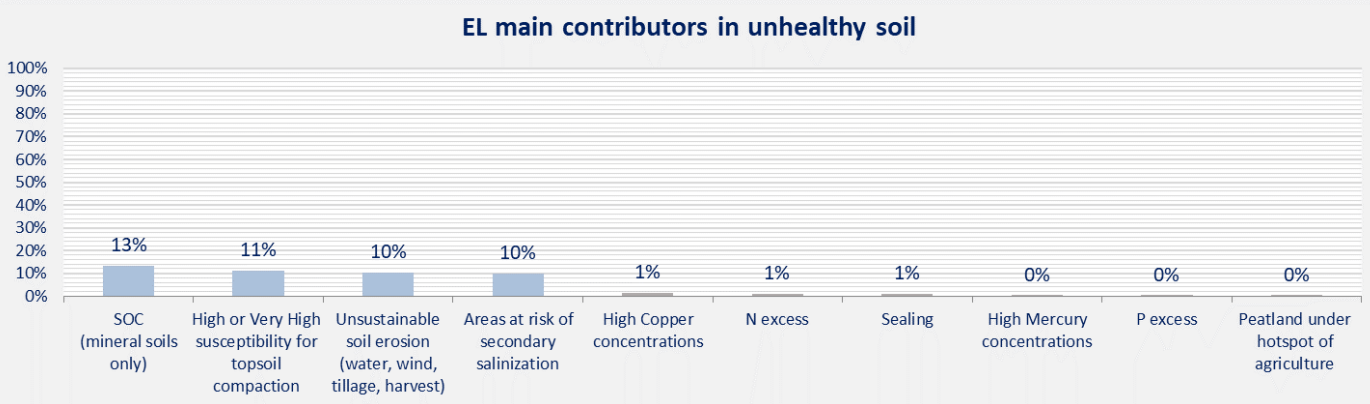
EL

State of soils in Greece

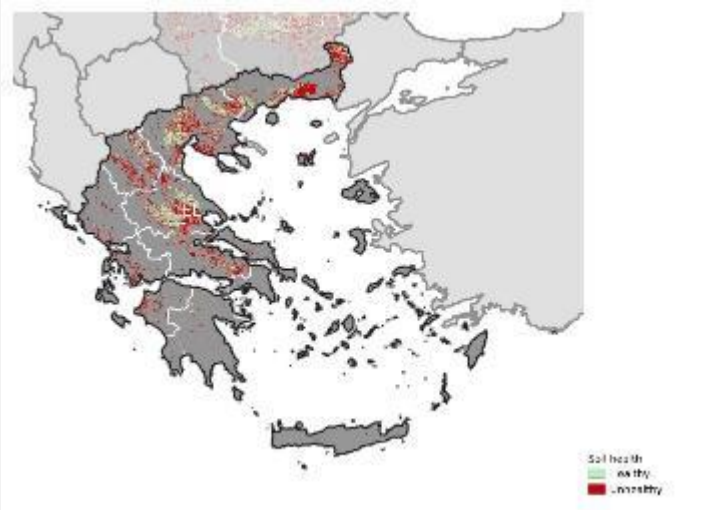


33% area unhealthy

SOC (mineral soils only) is the greatest contributor



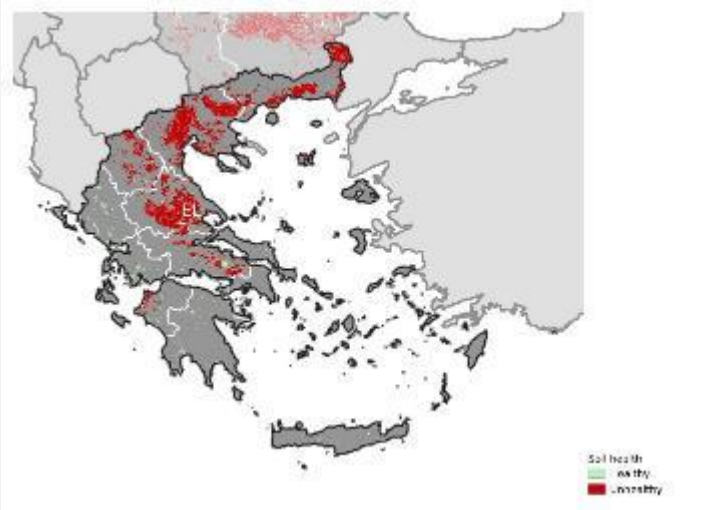
Soil Erosion by Water, Wind, Tillage and Crop in Greece



60% of cropland area unhealthy

10% of national territory

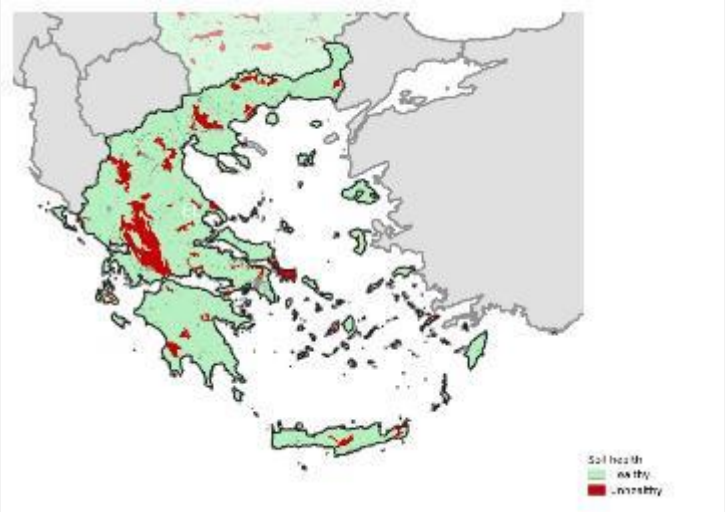
Loss of Soil Organic Carbon in Greece



83% of cropland and grassland area unhealthy (except for land above 1000 m a.s.l.)

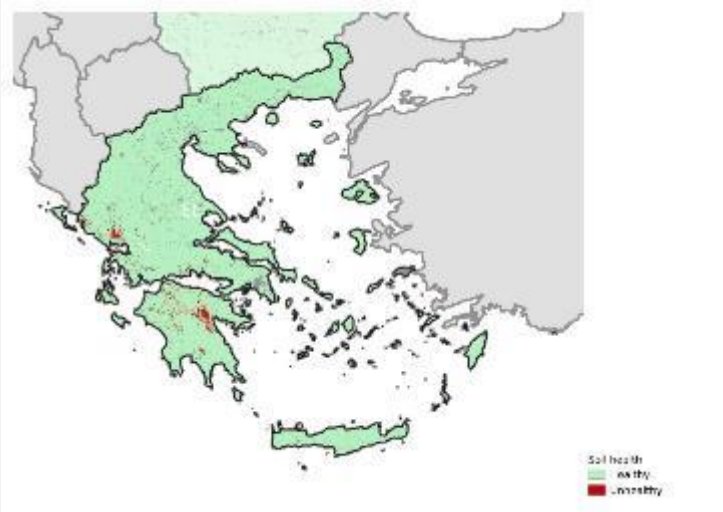
13% of national territory

High or Very High susceptibility for topsoil compaction in Greece



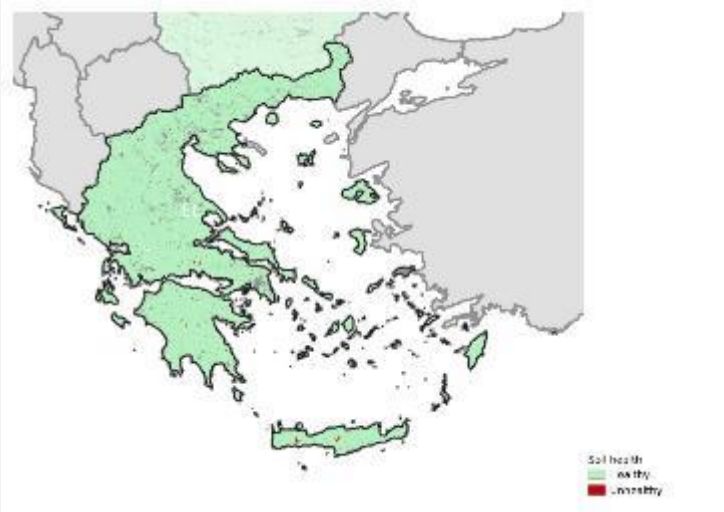
11% of national territory

Contamination by High Copper concentrations in Greece

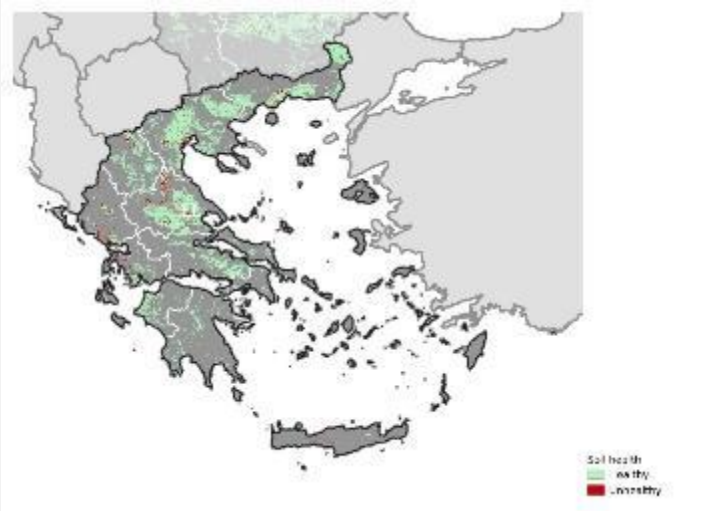


1% of national territory

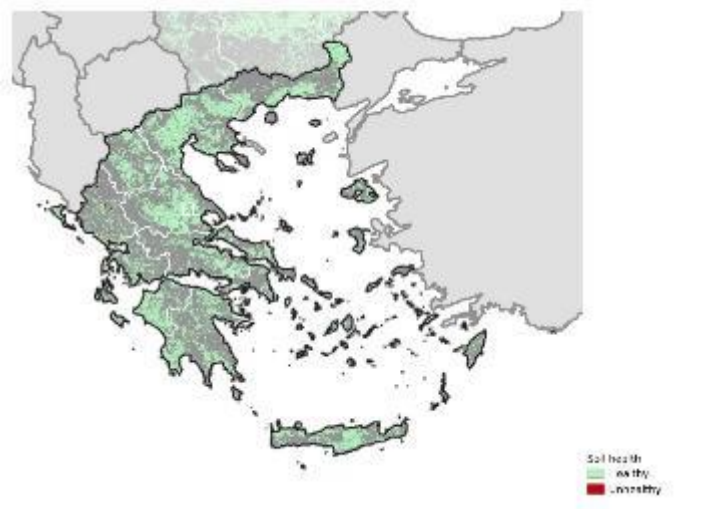
Contamination by High Mercury concentrations in Greece



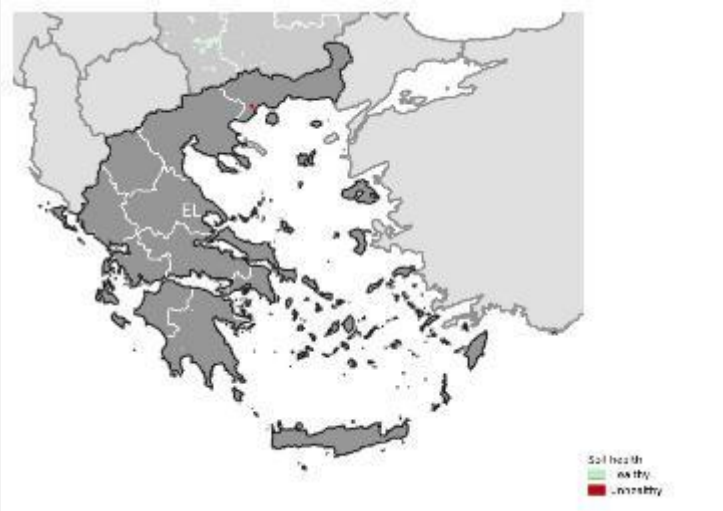
No issue based on current evidence

N Excess in Greece	
	5% of agricultural land area unhealthy (CORINE)
	1% of national territory

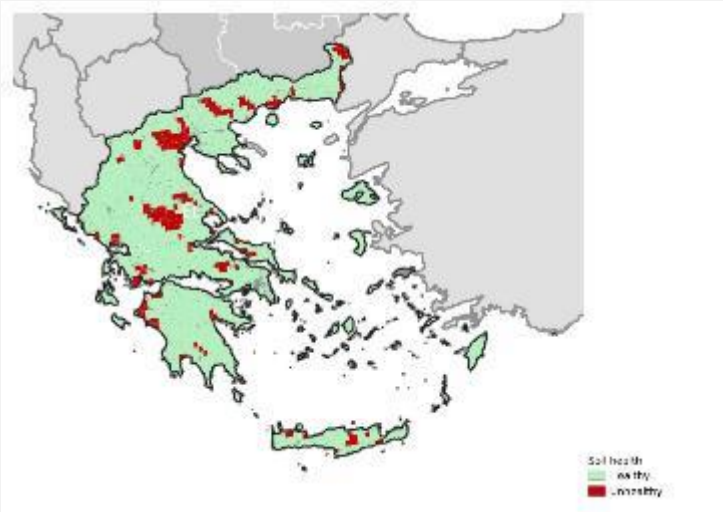
P Excess in Greece



No issue based on current evidence

Peatland under hotspot of agriculture in Greece	
	28% of agricultural land area unhealthy (CORINE) <1% of national territory

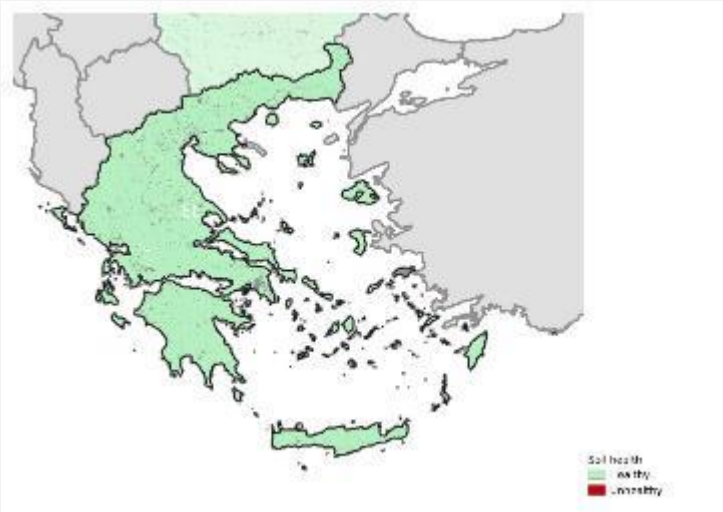
Areas at risk of secondary Salinization in Greece



11% of Mediterranean biogeographical region unhealthy

10% of national territory

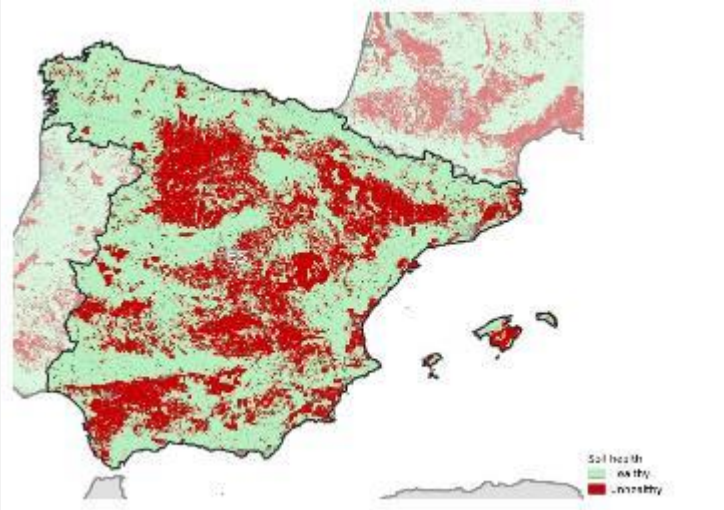
Soil Sealing in Greece



1% of national territory

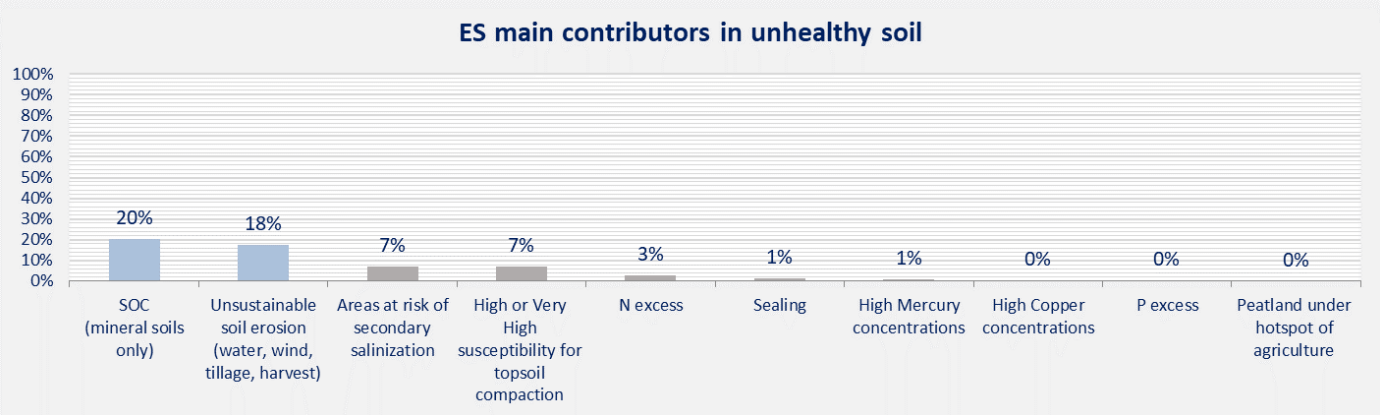
ES

State of soils in Spain

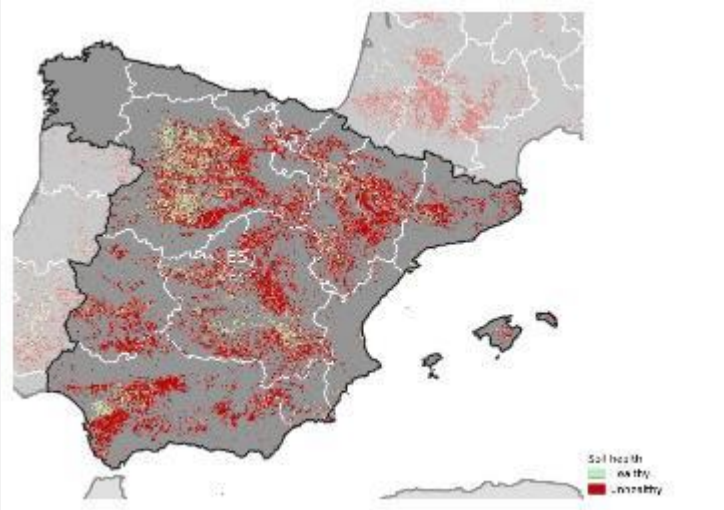


36% area unhealthy

SOC (mineral soils only) is the greatest contributor

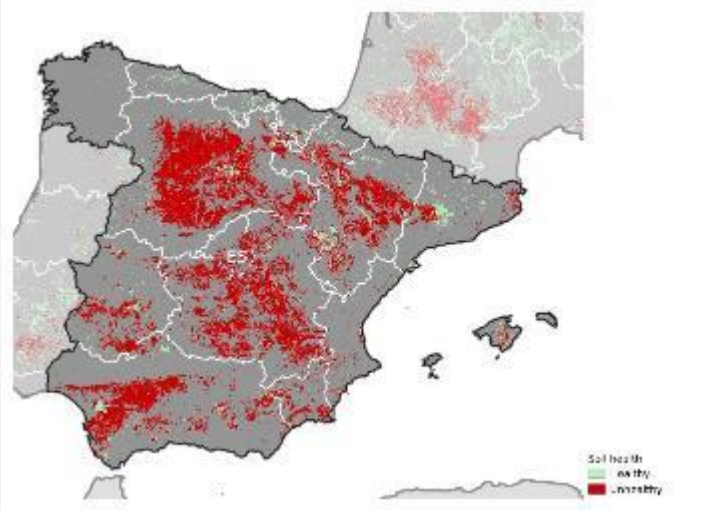


Soil Erosion by Water, Wind, Tillage and Crop in Spain

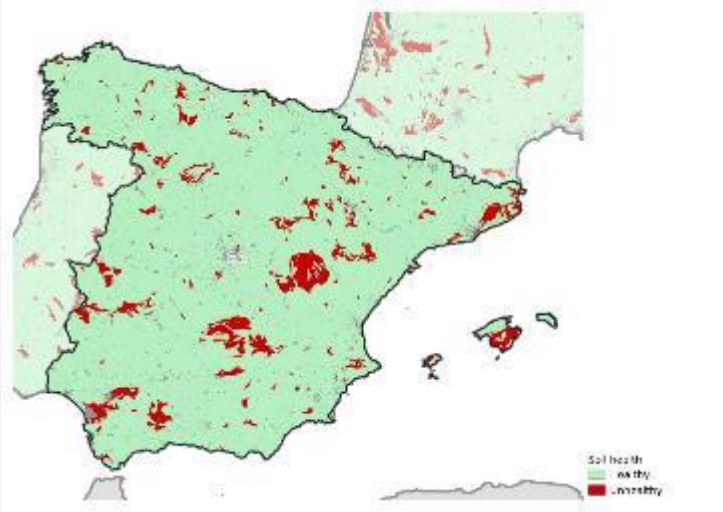


72% of cropland area unhealthy

18% of national territory

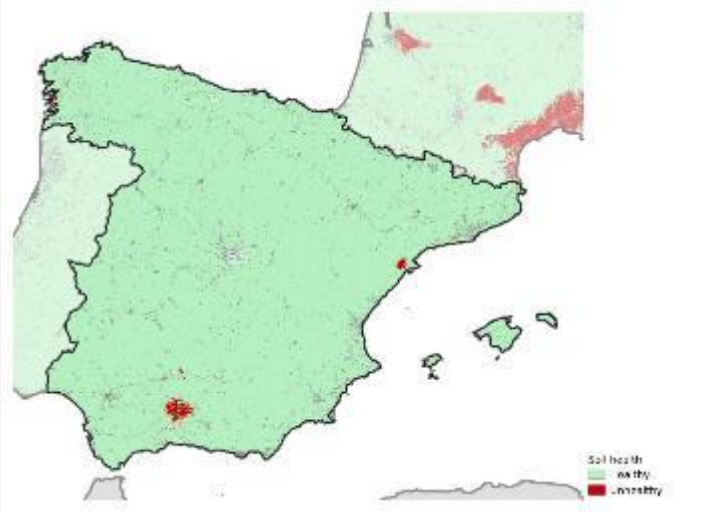
Loss of Soil Organic Carbon in Spain	
	86% of cropland and grassland area unhealthy (except for land above 1000 m a.s.l.)
	20% of national territory

High or Very High susceptibility for topsoil compaction in Spain



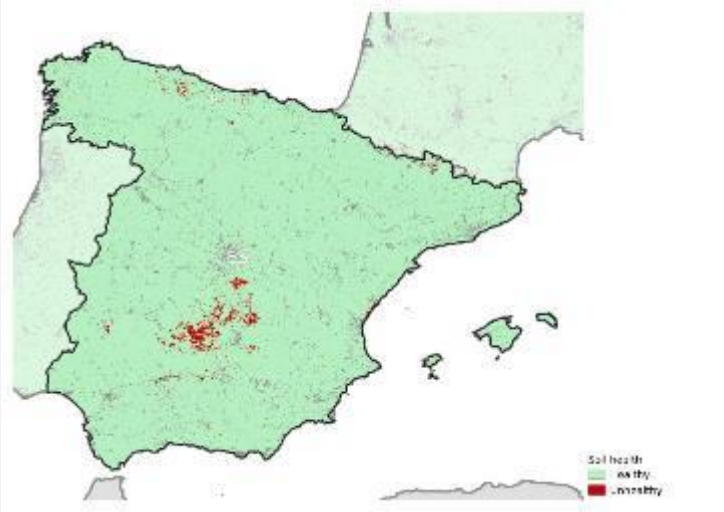
7% of national territory

Contamination by High Copper concentrations in Spain



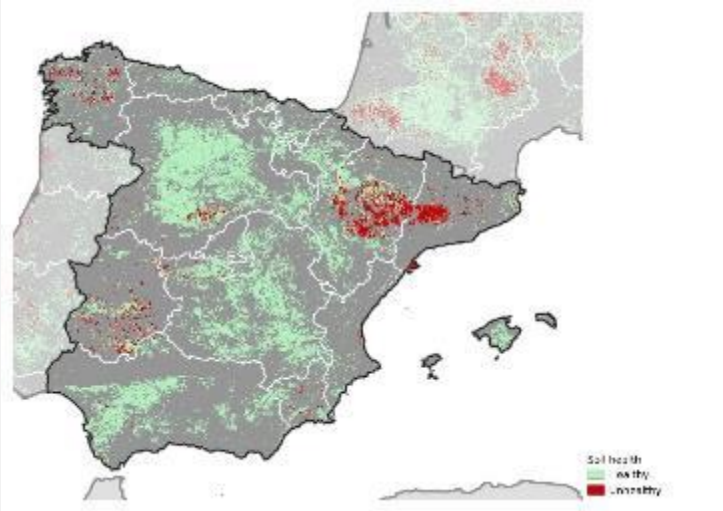
No issue based on current evidence

Contamination by High Mercury concentrations in Spain



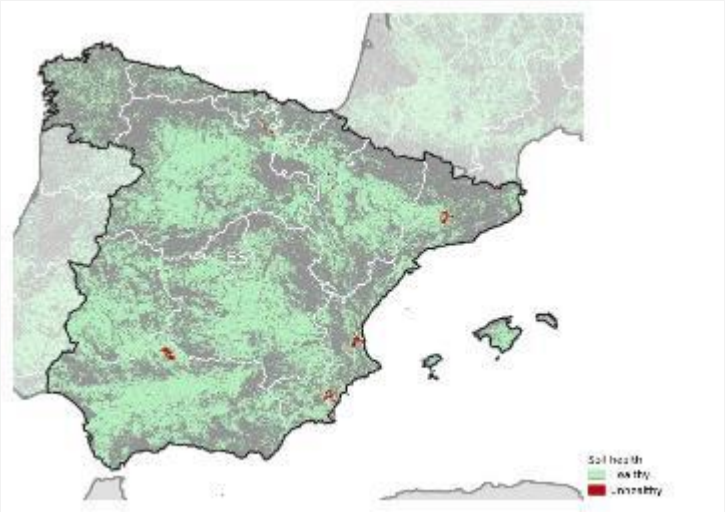
1% of national territory

N Excess in Spain



11% of agricultural land area unhealthy (CORINE)

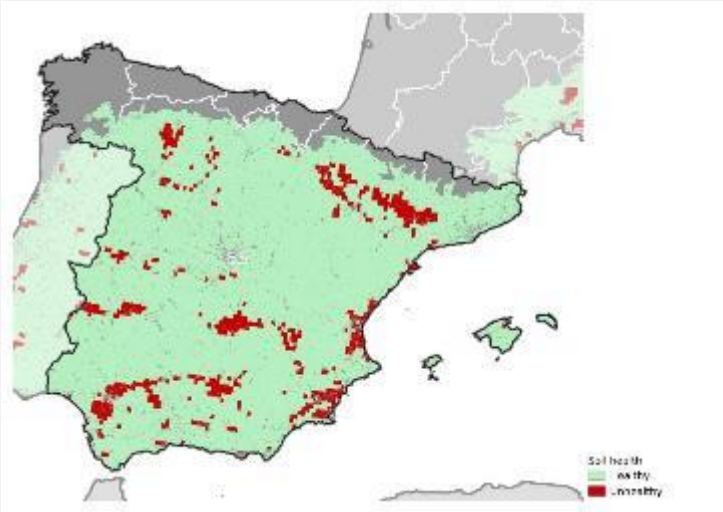
3% of national territory

P Excess in Spain	
	1% of agricultural land area unhealthy (CORINE)
	<1% of national territory

Peatland under hotspot of agriculture in Spain

No issue based on current evidence

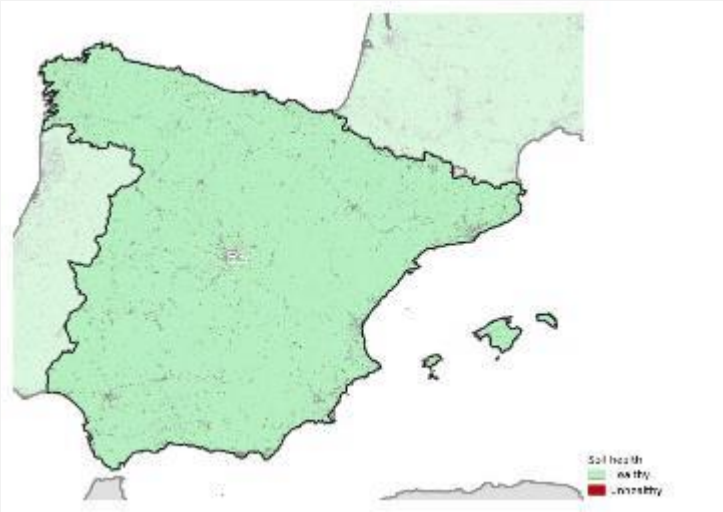
Areas at risk of secondary Salinization in Spain



8% of Mediterranean biogeographical region unhealthy

7% of national territory

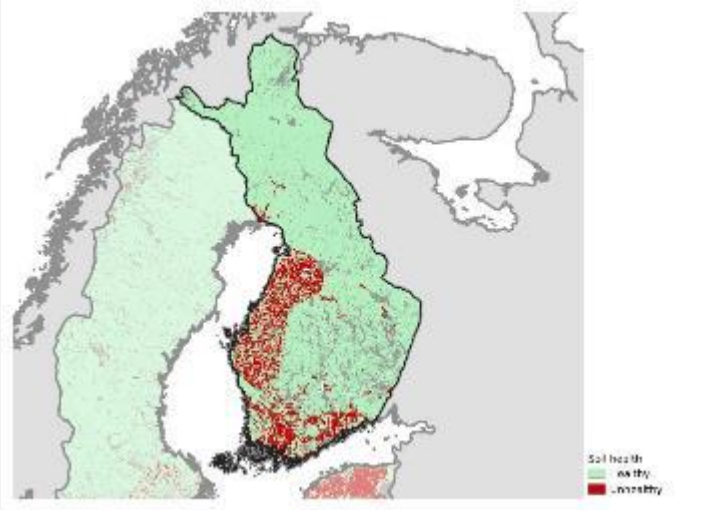
Soil Sealing in Spain



1% of national territory

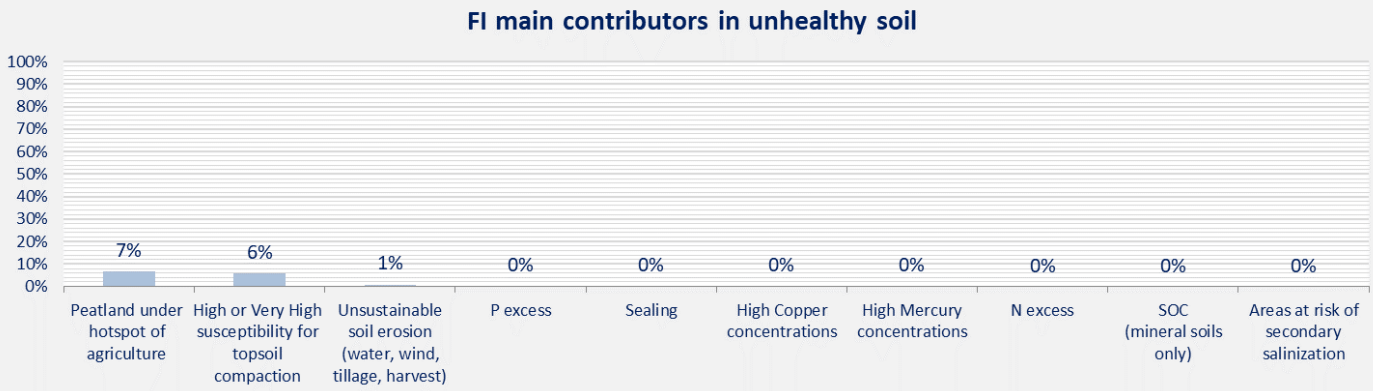
FI

State of soils in Finland

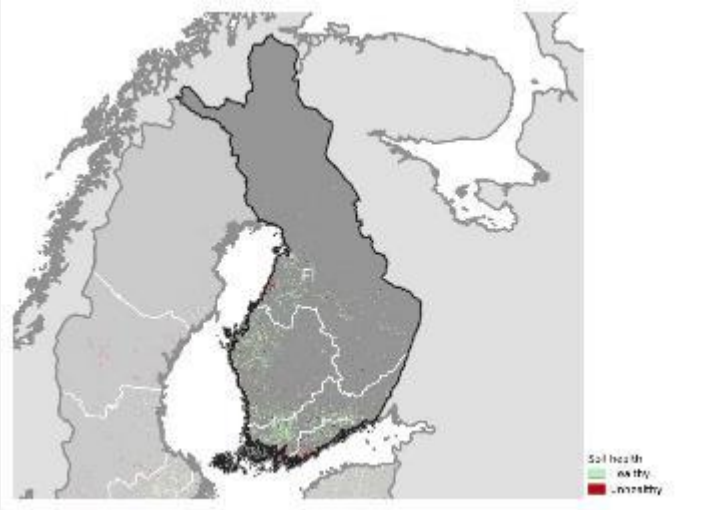


13% area unhealthy

Peatland under hotspot of agriculture
is the greatest contributor



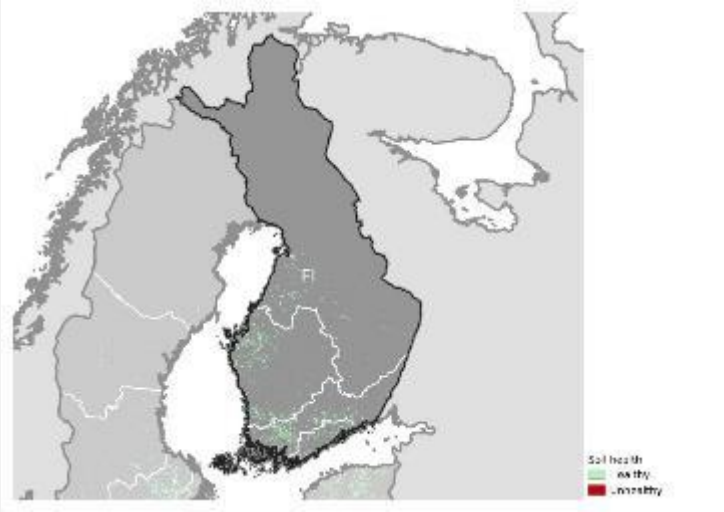
Soil Erosion by Water, Wind, Tillage and Crop in Finland



17% of cropland area unhealthy

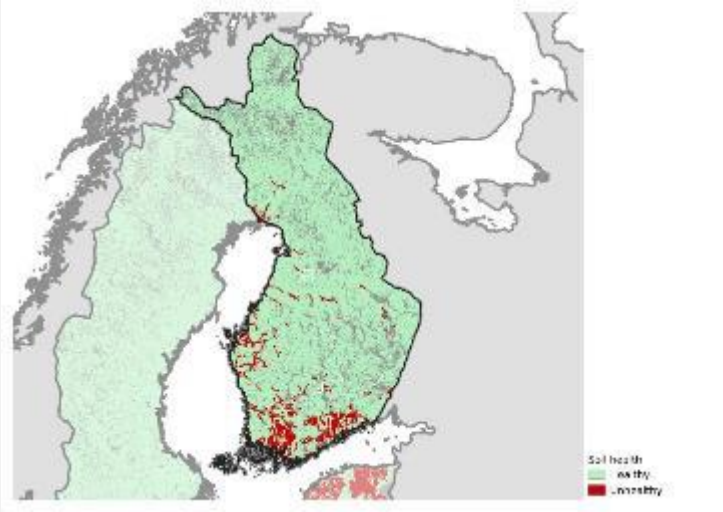
1% of national territory

Loss of Soil Organic Carbon in Finland



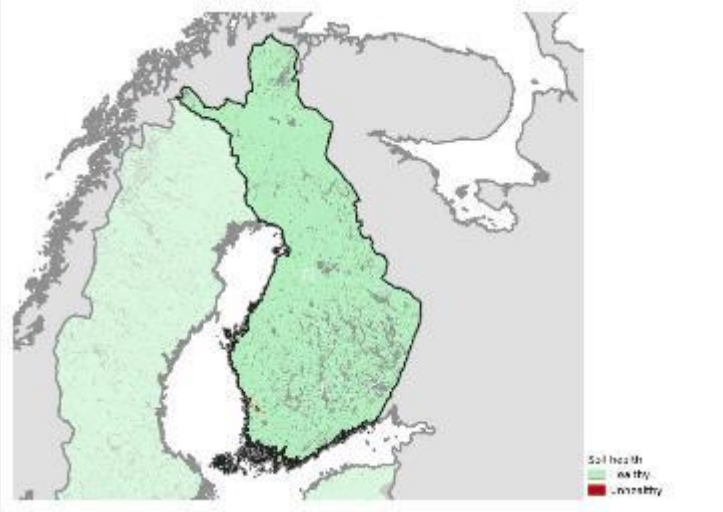
No issue based on current evidence

High or Very High susceptibility for topsoil compaction in Finland



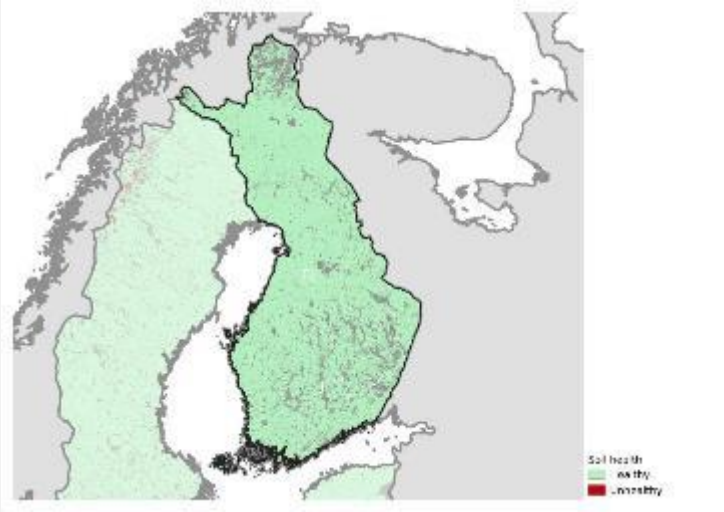
6% of national territory

Contamination by High Copper concentrations in Finland



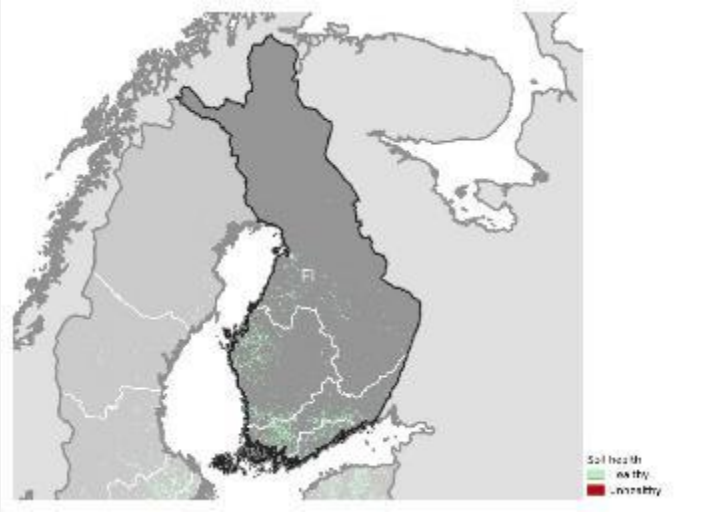
No issue based on current evidence

Contamination by High Mercury concentrations in Finland

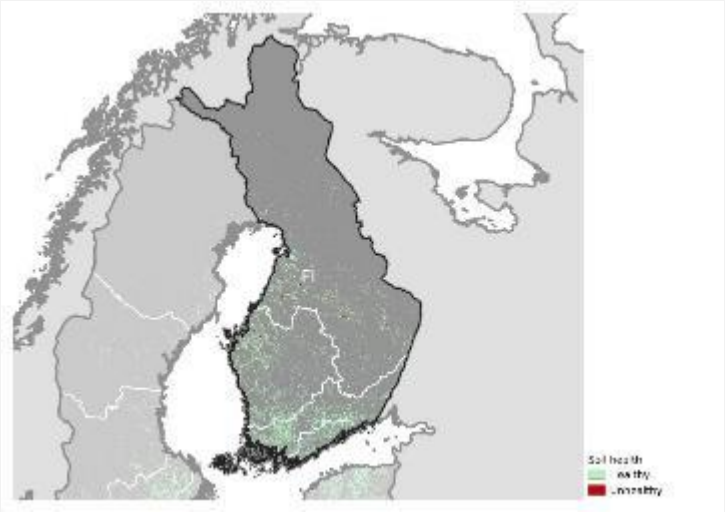


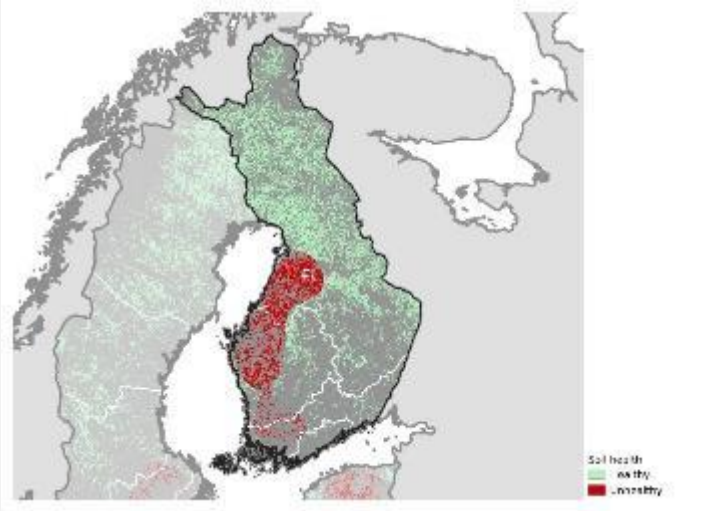
No issue based on current evidence

N Excess in Finland

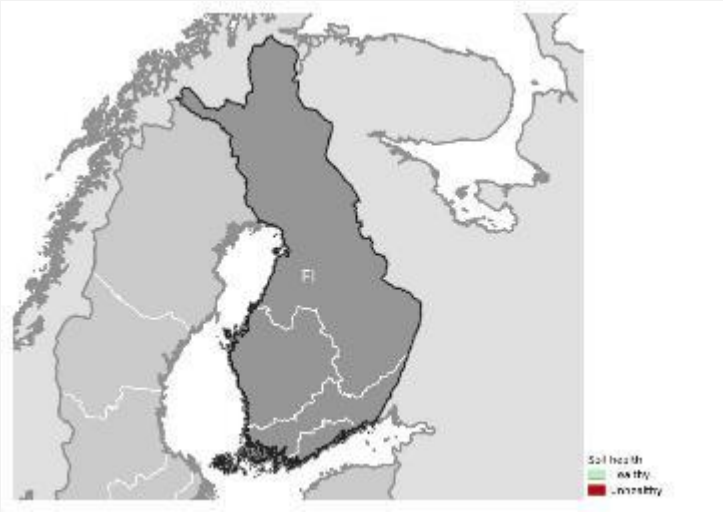


No issue based on current evidence

P Excess in Finland	
	2% of agricultural land area unhealthy (CORINE) <1% of national territory

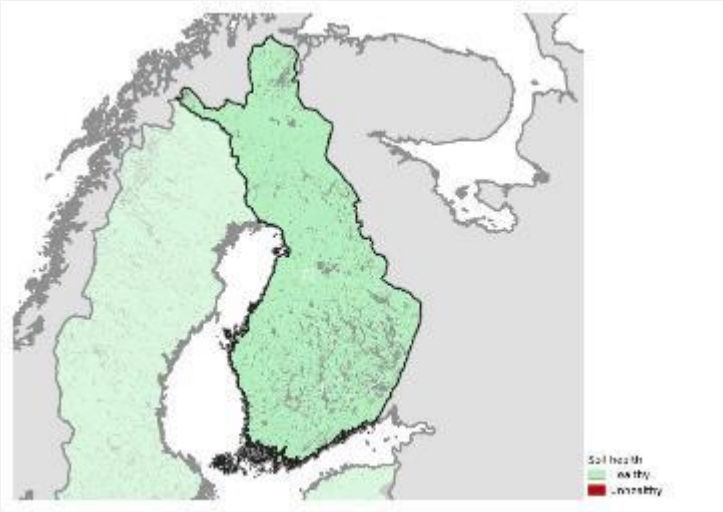
Peatland under hotspot of agriculture in Finland	
	19% of agricultural land area unhealthy (CORINE)
	7% of national territory

Areas at risk of secondary Salinization in Finland



No issue based on current evidence

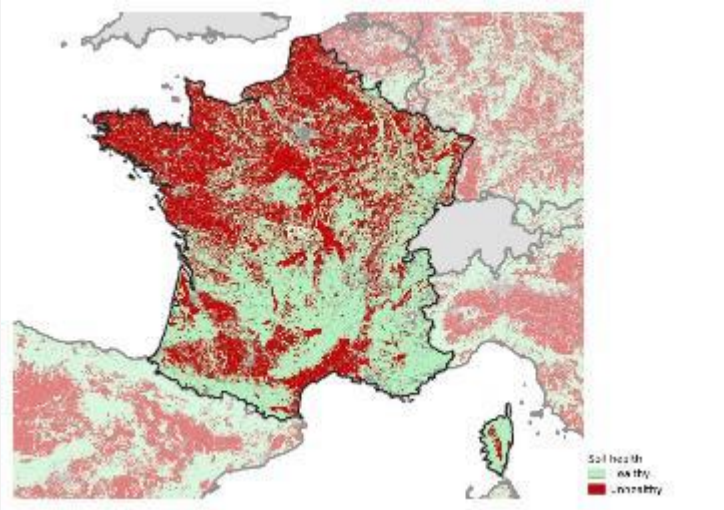
Soil Sealing in Finland



No issue based on current evidence

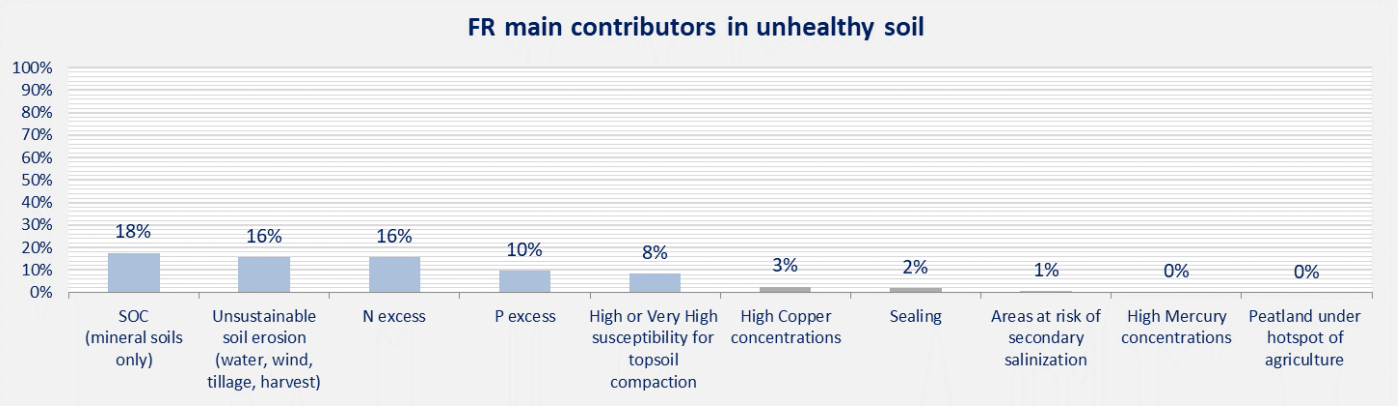
FR

State of soils in France

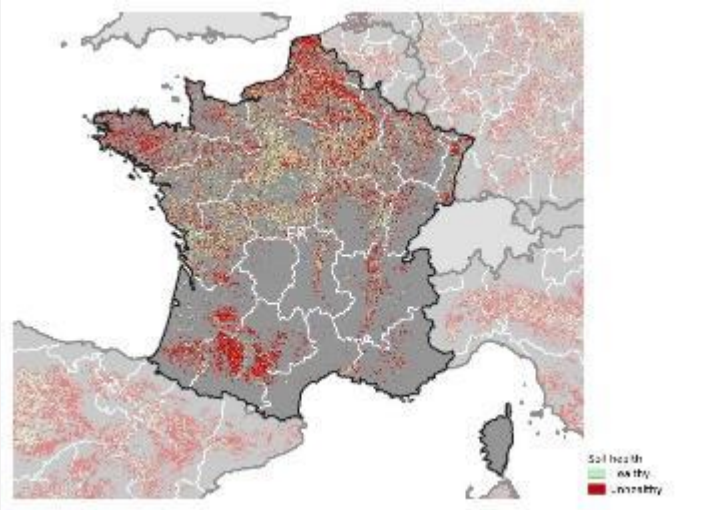


44% area unhealthy

SOC (mineral soils only) is the greatest contributor

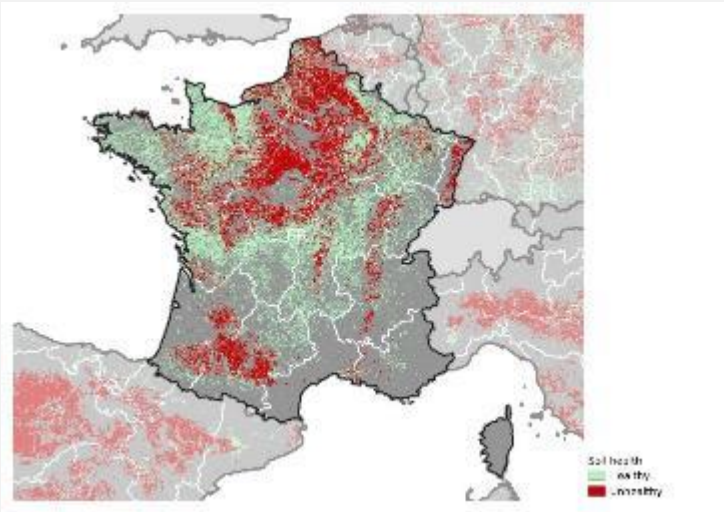


Soil Erosion by Water, Wind, Tillage and Crop in France

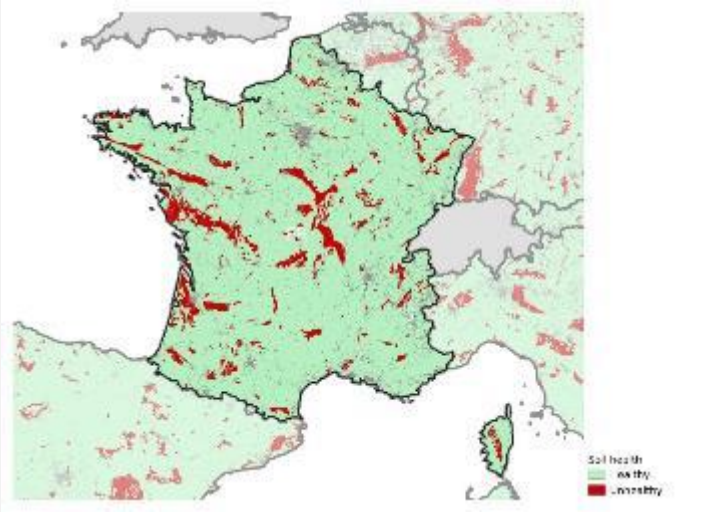


53% of cropland area unhealthy

16% of national territory

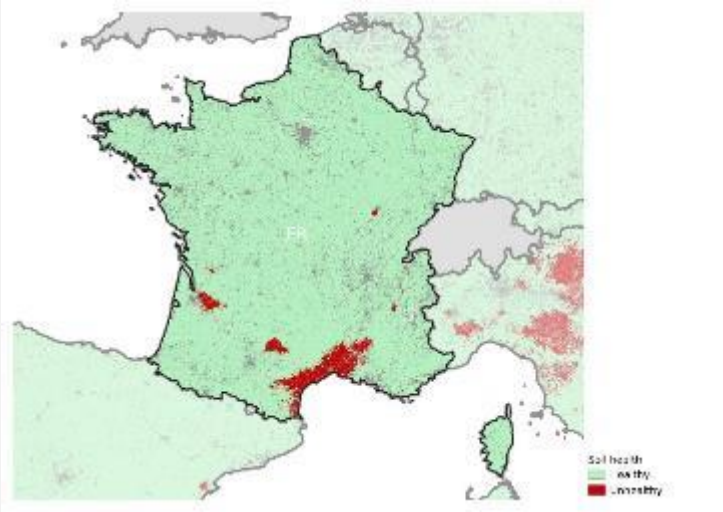
Loss of Soil Organic Carbon in France	
	41% of cropland and grassland area unhealthy (except for land above 1000 m a.s.l.)
	18% of national territory

High or Very High susceptibility for topsoil compaction in France



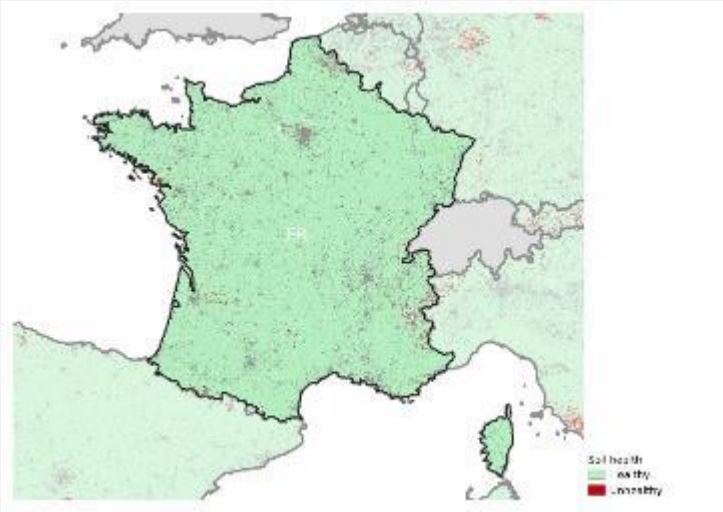
8% of national territory

Contamination by High Copper concentrations in France

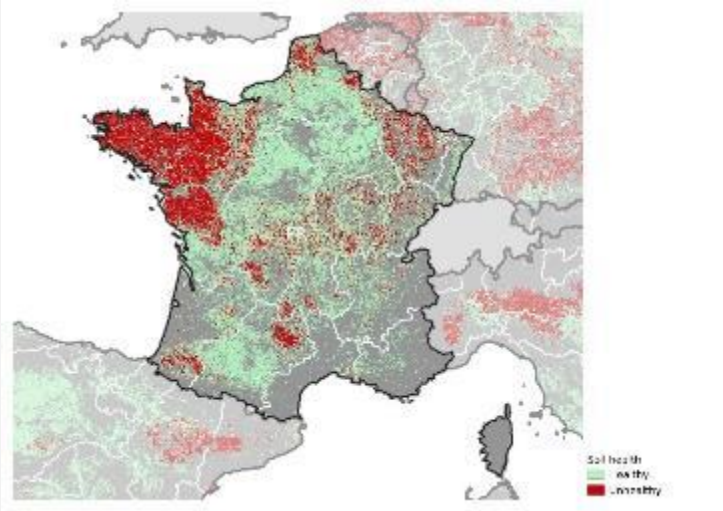


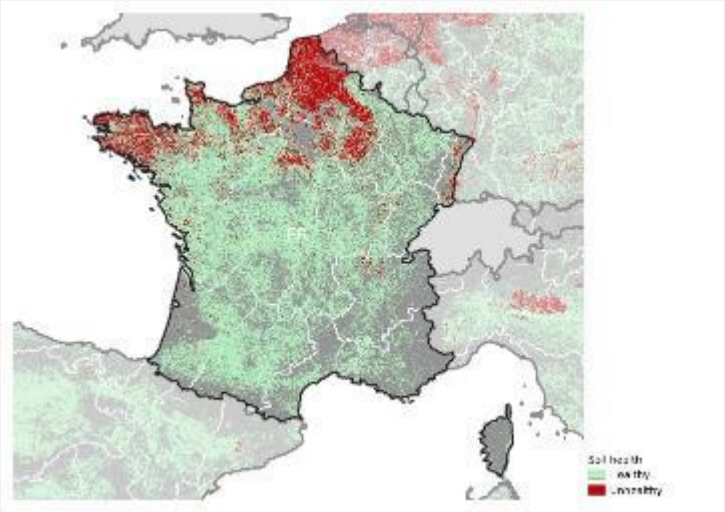
3% of national territory

Contamination by High Mercury concentrations in France

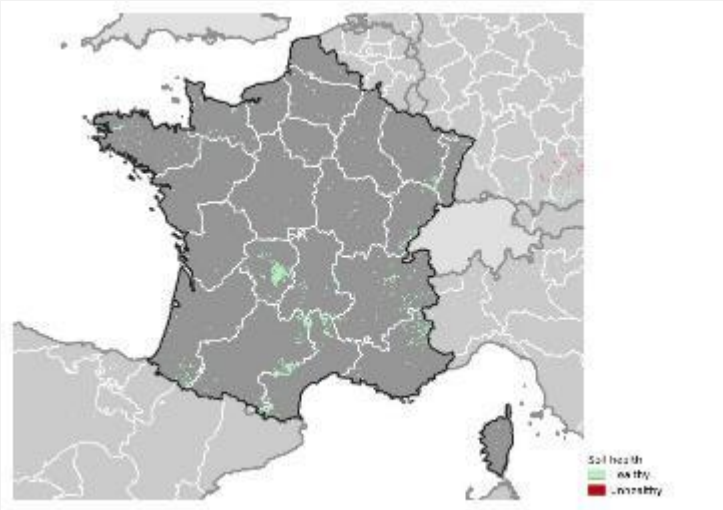


No issue based on current evidence

N Excess in France	
	28% of agricultural land area unhealthy (CORINE) 16% of national territory

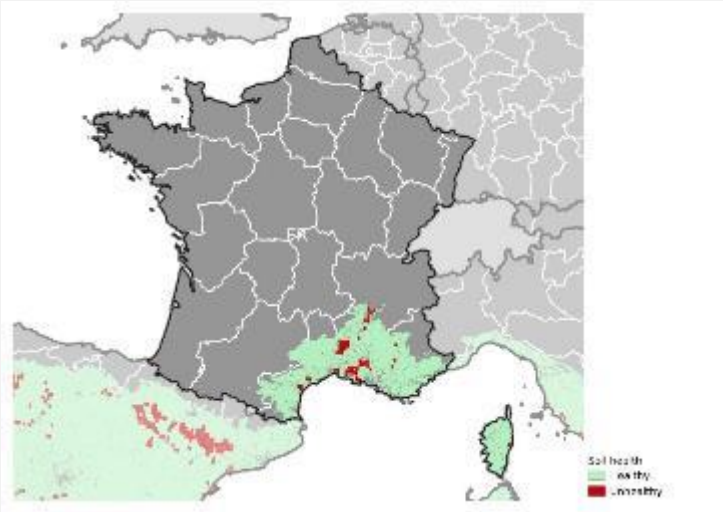
P Excess in France	
	16% of agricultural land area unhealthy (CORINE) 10% of national territory

Peatland under hotspot of agriculture in France



No issue based on current evidence

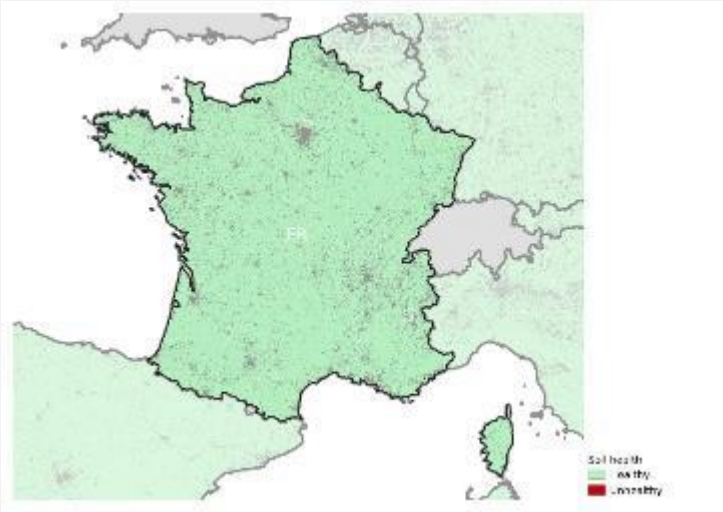
Areas at risk of secondary Salinization in France



5% of Mediterranean biogeographical region unhealthy

1% of national territory

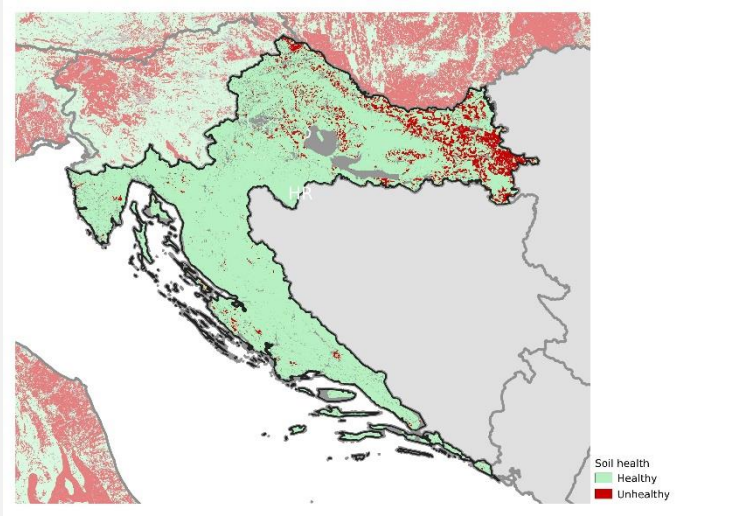
Soil Sealing in France



2% of national territory

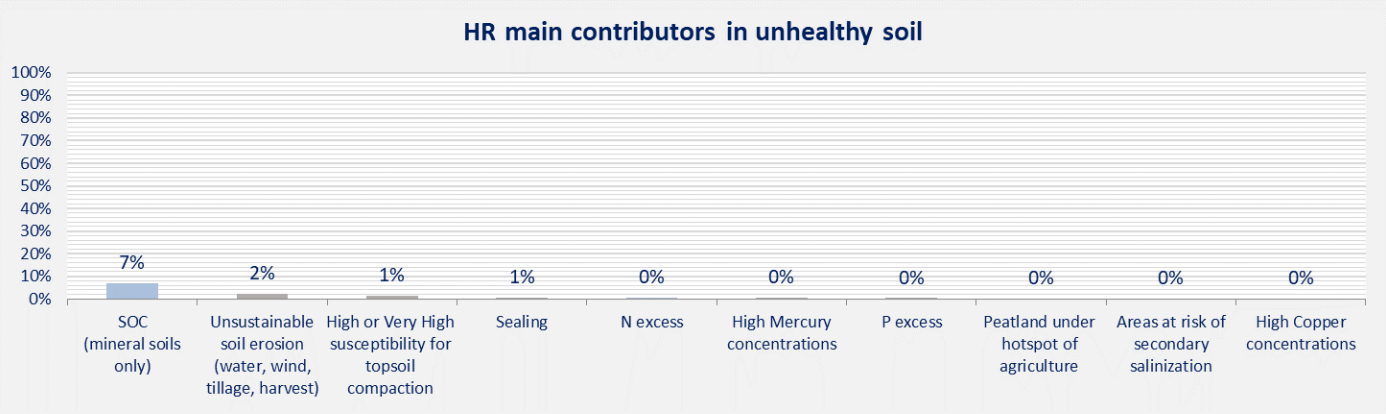
HR

State of soils in Croatia

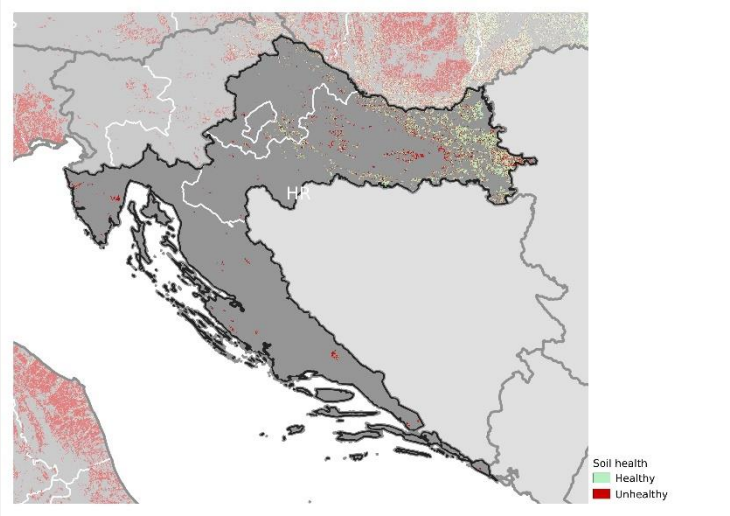


9% area unhealthy

SOC (mineral soils only) is the greatest contributor



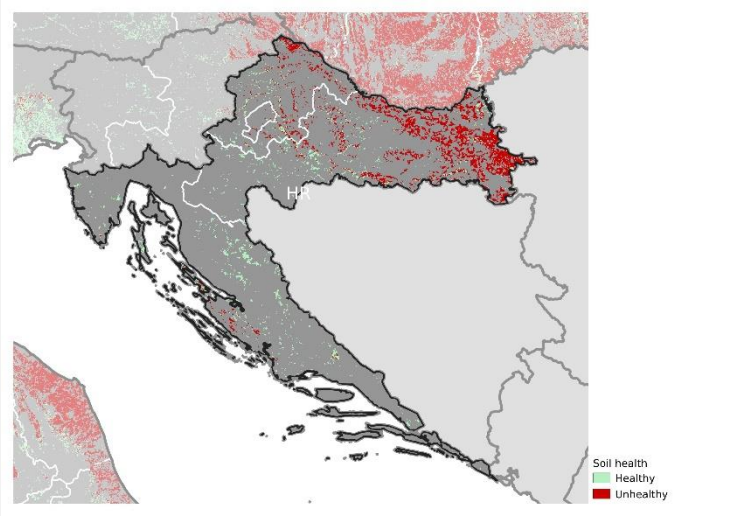
Soil Erosion by Water, Wind, Tillage and Crop in Croatia



31% of cropland area unhealthy

2% of national territory

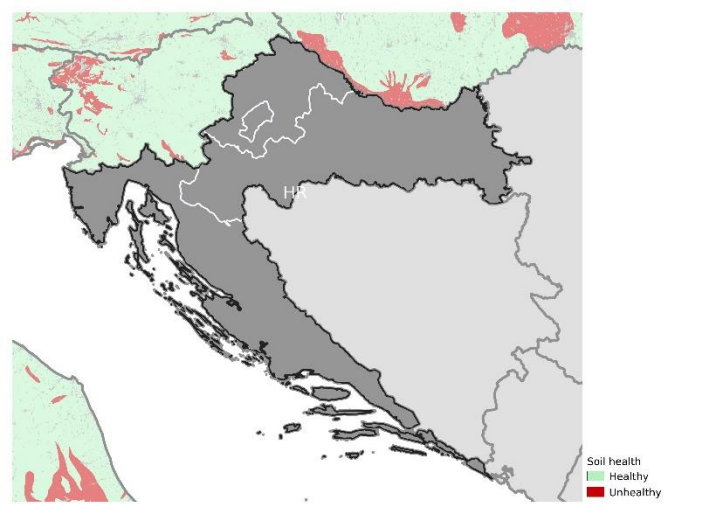
Loss of Soil Organic Carbon in Croatia



76% of cropland and grassland area unhealthy (except for land above 1000 m a.s.l.)

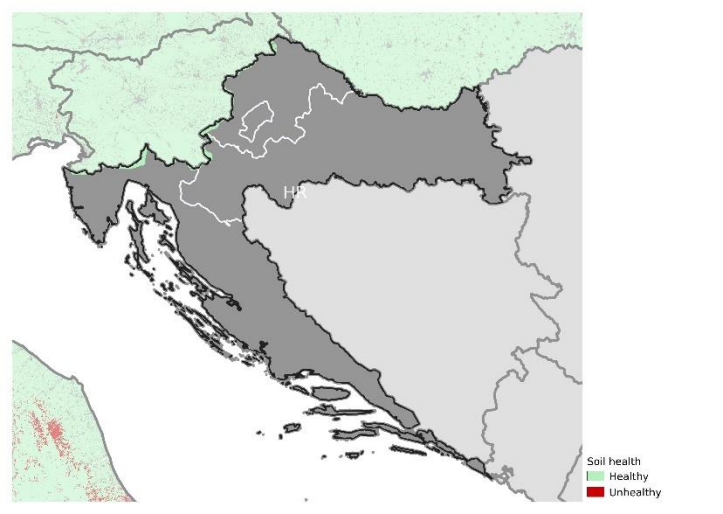
7% of national territory

High or Very High susceptibility for topsoil compaction in Croatia



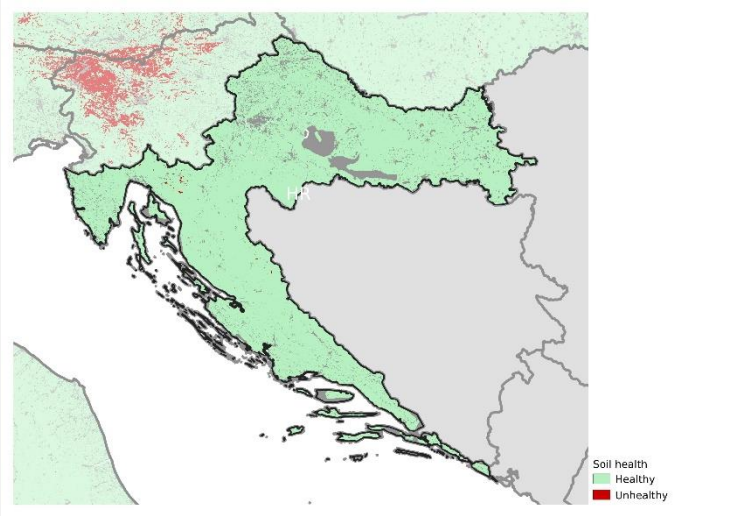
1% of national territory

Contamination by High Copper concentrations in Croatia



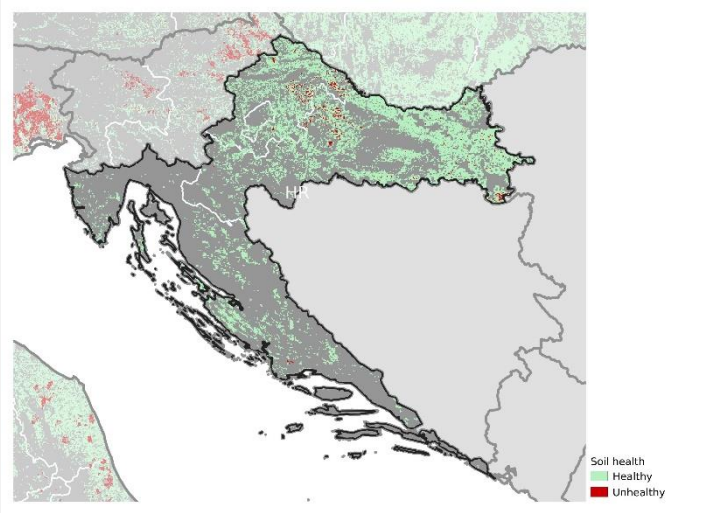
No issue based on current evidence

Contamination by High Mercury concentrations in Croatia



No issue based on current evidence

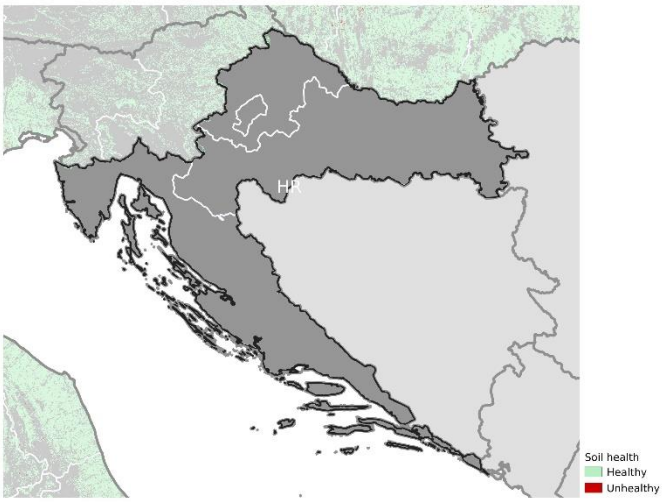
N Excess in Croatia



2% of agricultural land area unhealthy (CORINE)

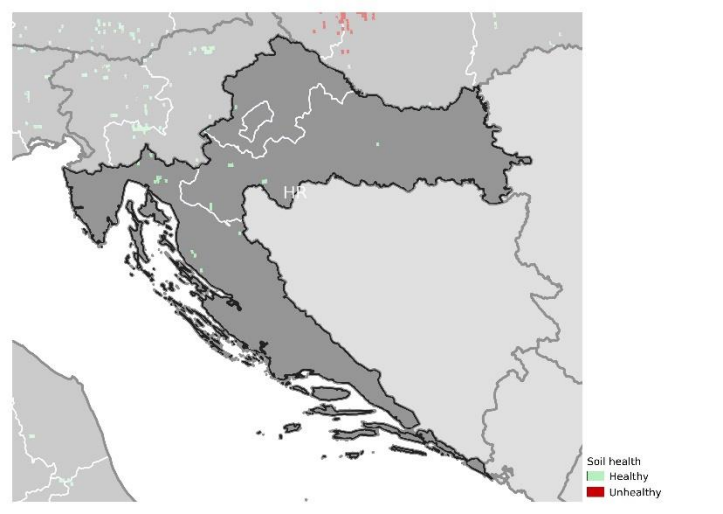
<1% of national territory

P Excess in Croatia



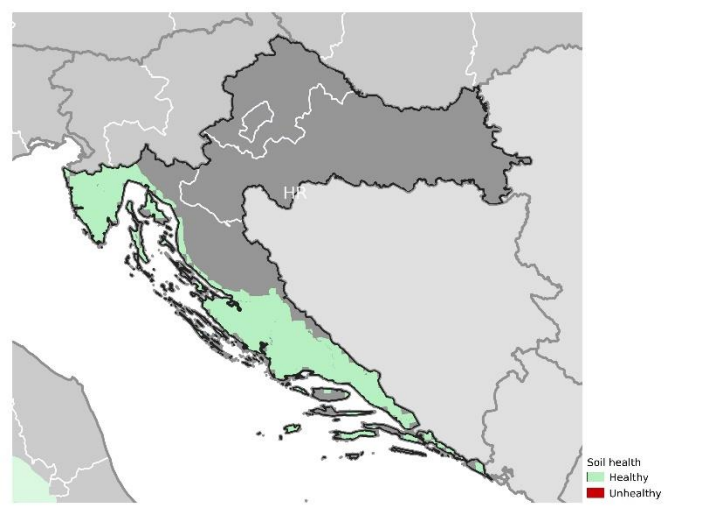
No issue based on current evidence

Peatland under hotspot of agriculture in Croatia



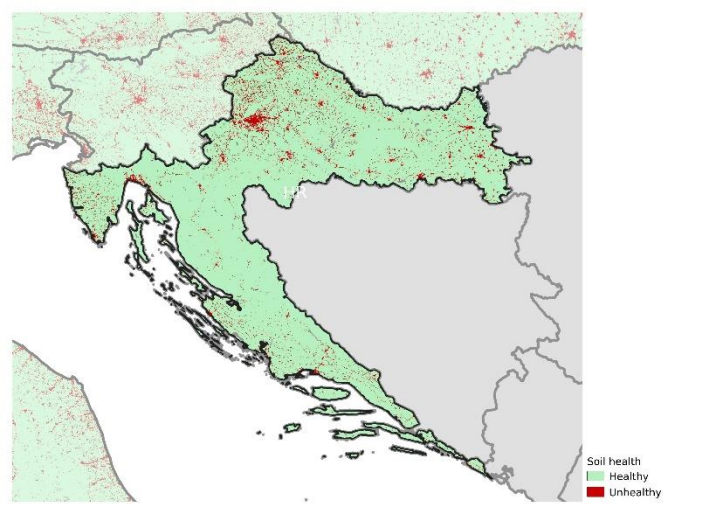
No issue based on current evidence

Areas at risk of secondary Salinization in Croatia



No issue based on current evidence

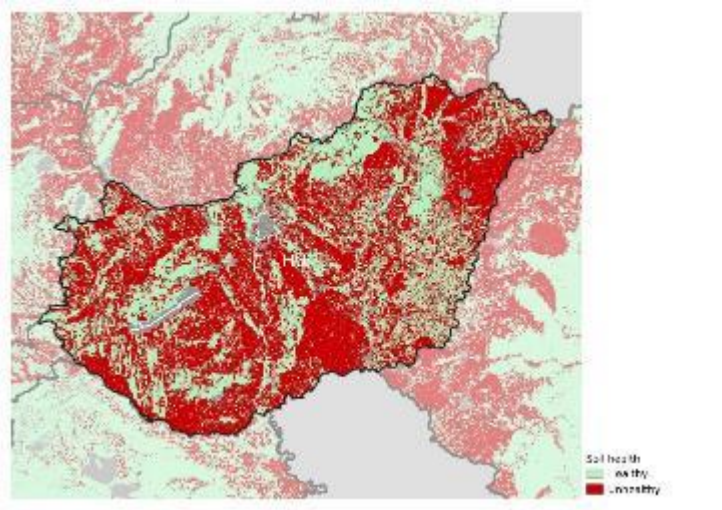
Soil Sealing in Croatia



1% of national territory

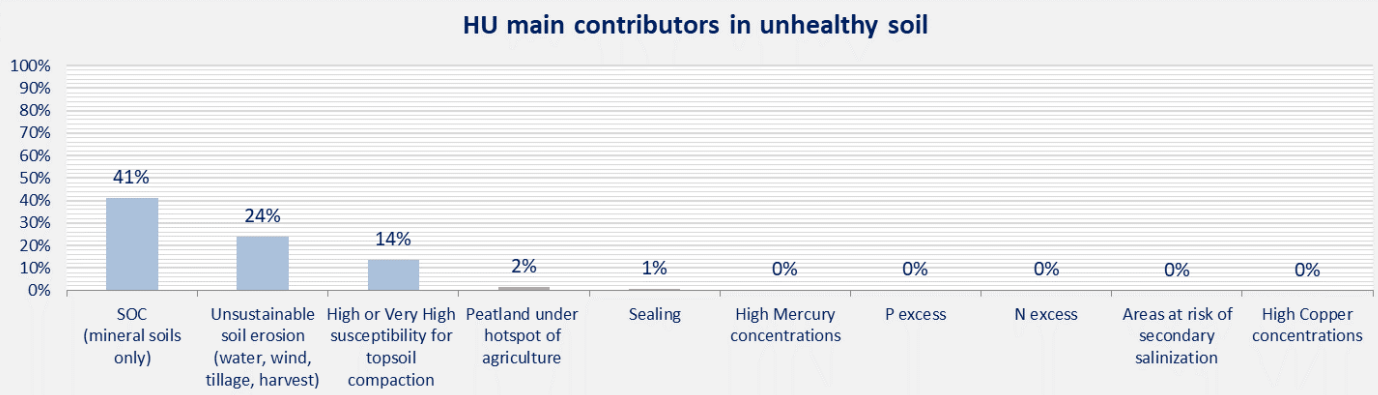
HU

State of soils in Hungary

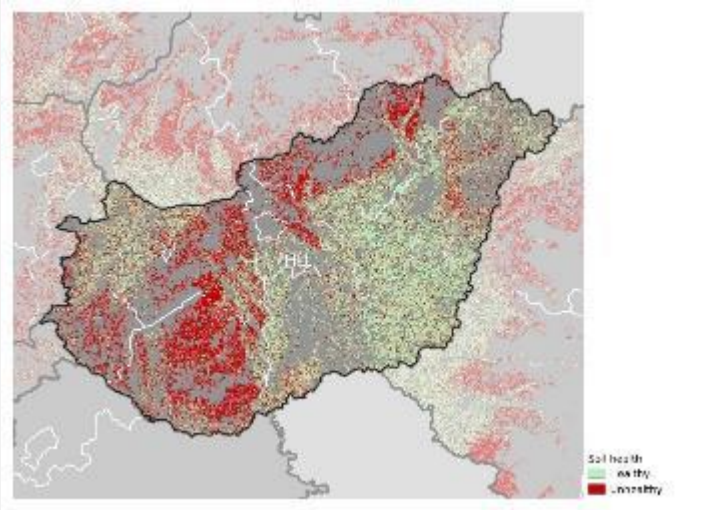


58% area unhealthy

SOC (mineral soils only) is the greatest contributor



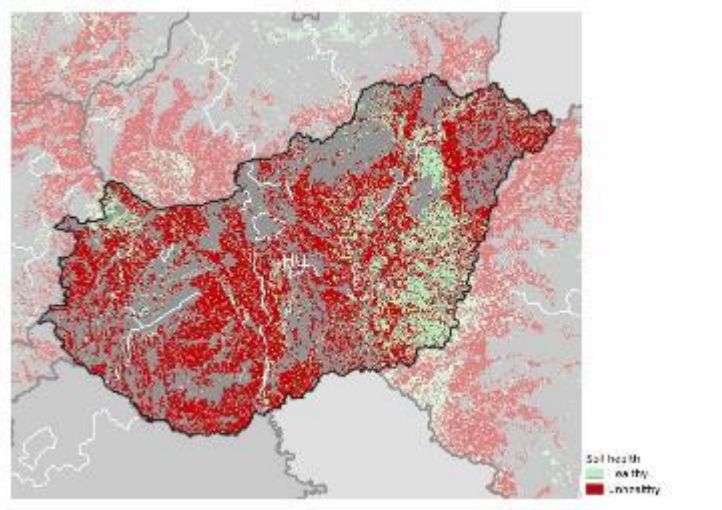
Soil Erosion by Water, Wind, Tillage and Crop in Hungary



41% of cropland area unhealthy

24% of national territory

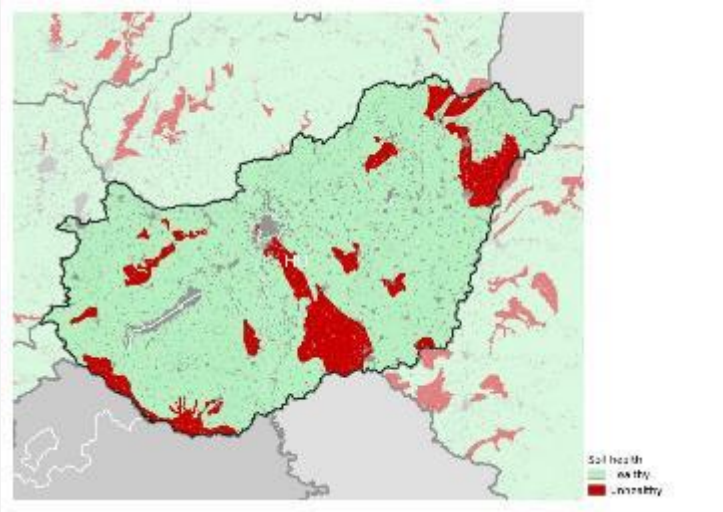
Loss of Soil Organic Carbon in Hungary



70% of cropland and grassland area unhealthy (except for land above 1000 m a.s.l.)

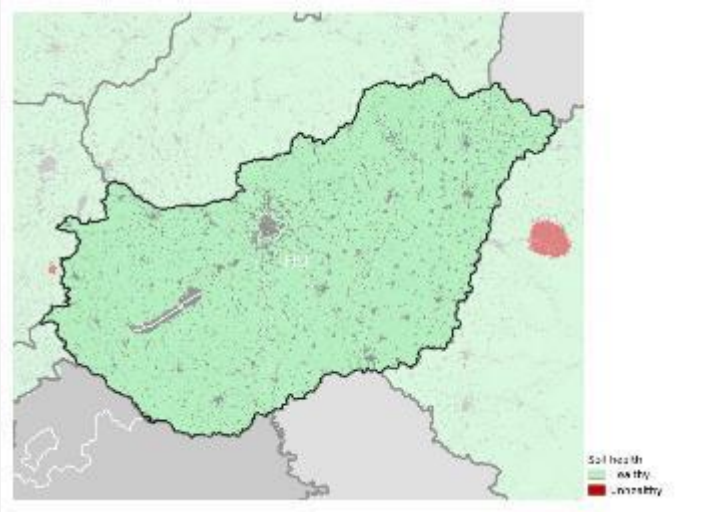
41% of national territory

High or Very High susceptibility for topsoil compaction in Hungary



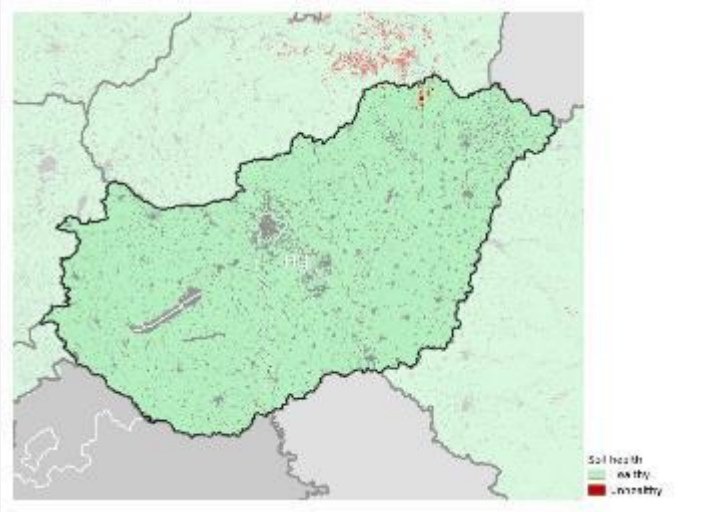
14% of national territory

Contamination by High Copper concentrations in Hungary



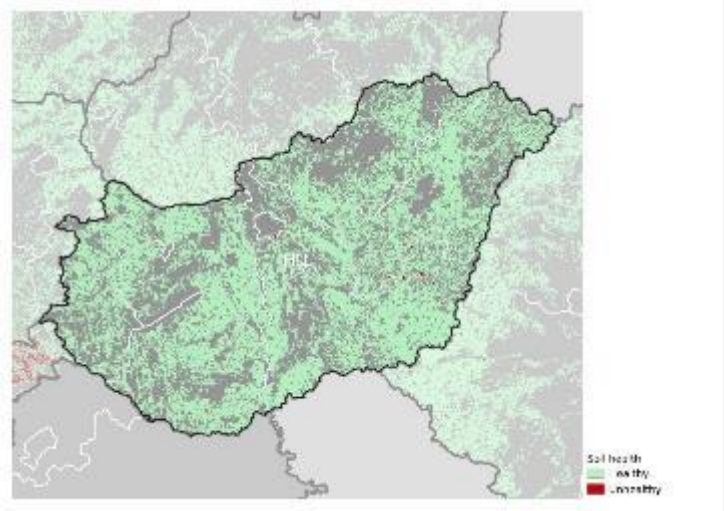
No issue based on current evidence

Contamination by High Mercury concentrations in Hungary



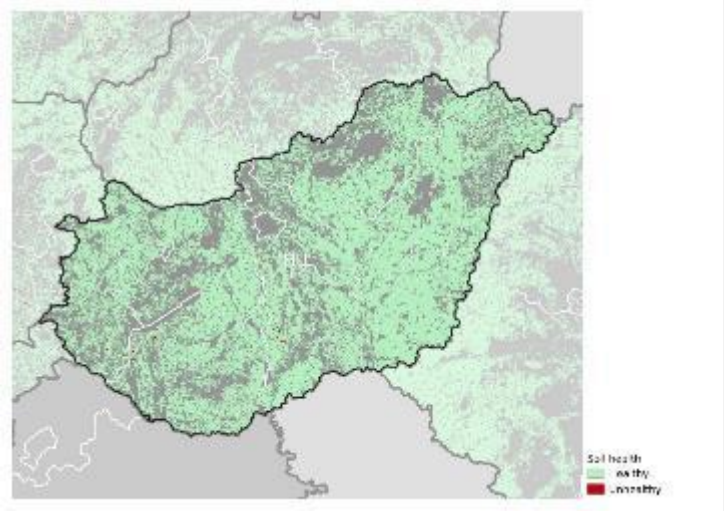
No issue based on current evidence

N Excess in Hungary

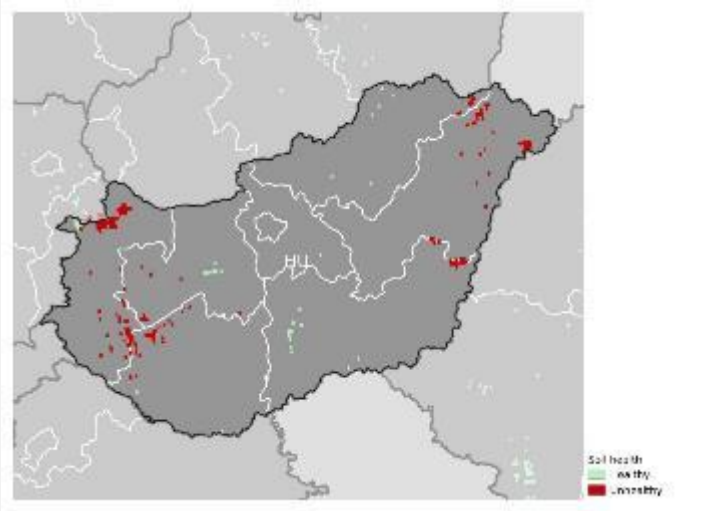


No issue based on current evidence

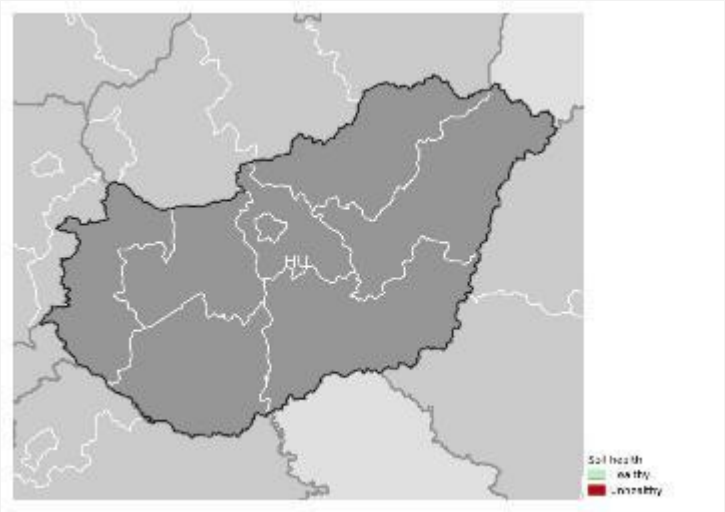
P Excess in Hungary



No issue based on current evidence

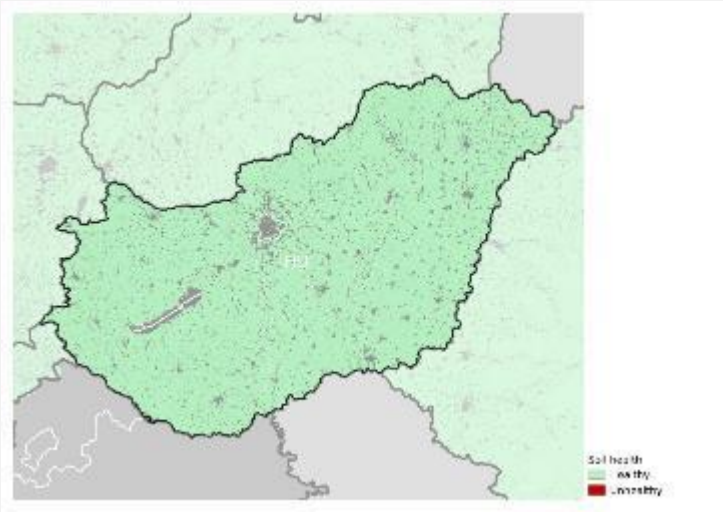
Peatland under hotspot of agriculture in Hungary	
	80% of agricultural land area unhealthy (CORINE) 2% of national territory

Areas at risk of secondary Salinization in Hungary



No issue based on current evidence

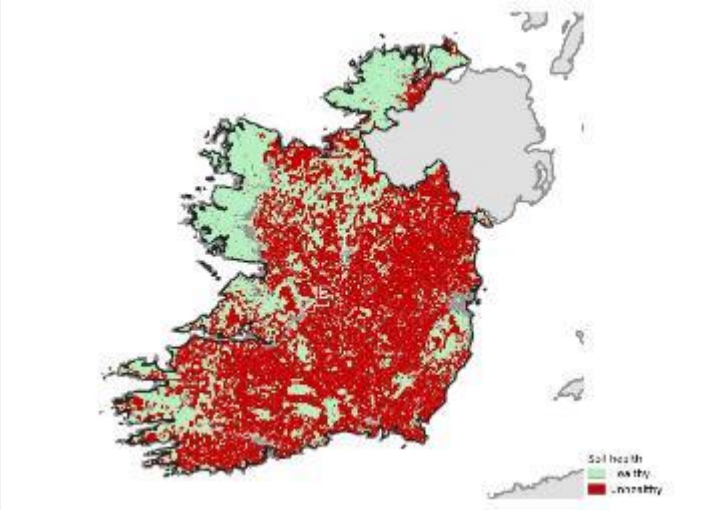
Soil Sealing in Hungary



1% of national territory

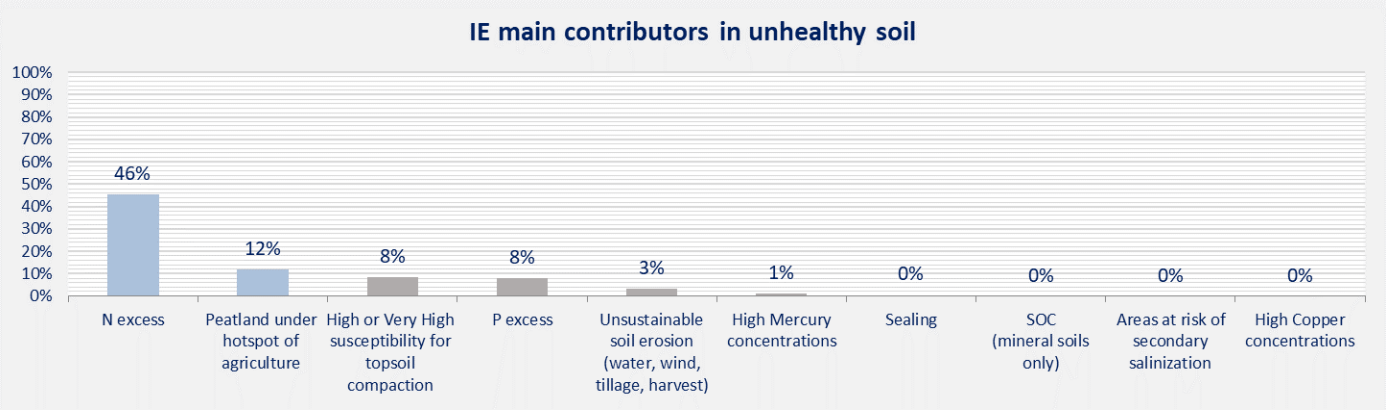
IE

State of soils in Ireland

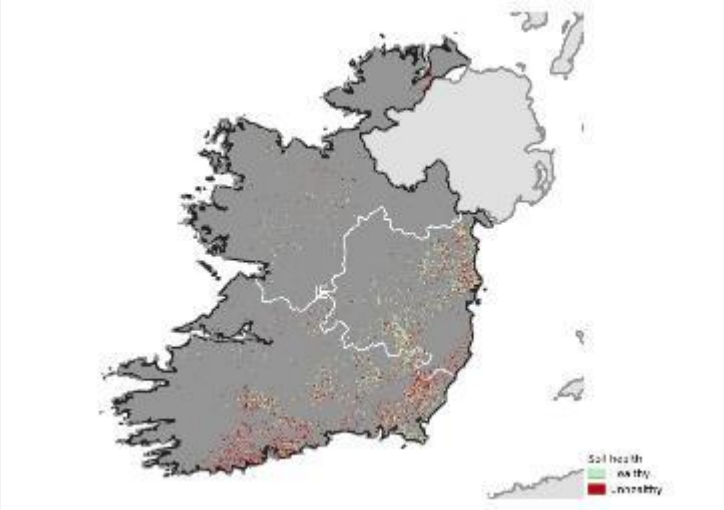


59% area unhealthy

N excess is the greatest contributor



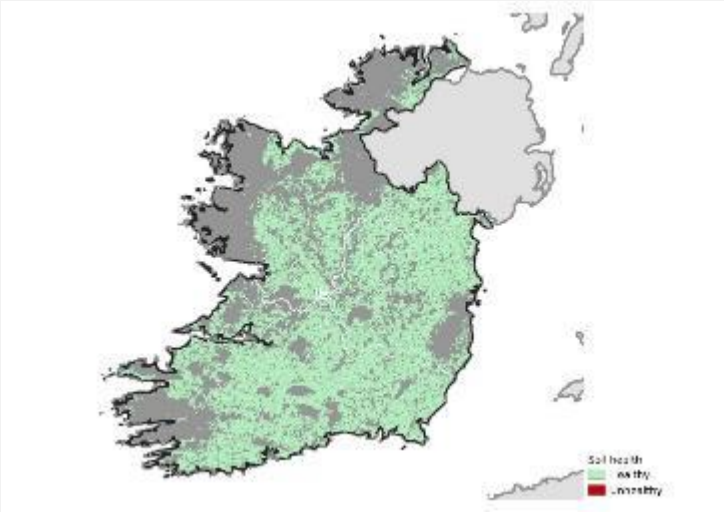
Soil Erosion by Water, Wind, Tillage and Crop in Ireland



42% of cropland area unhealthy

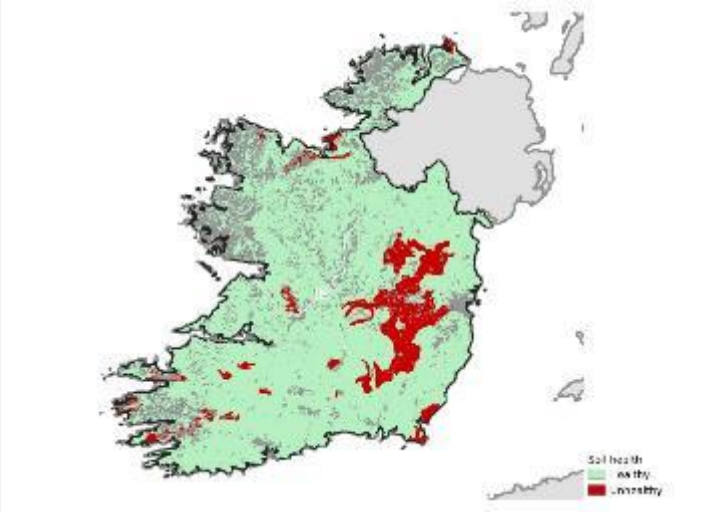
3% of national territory

Loss of Soil Organic Carbon in Ireland



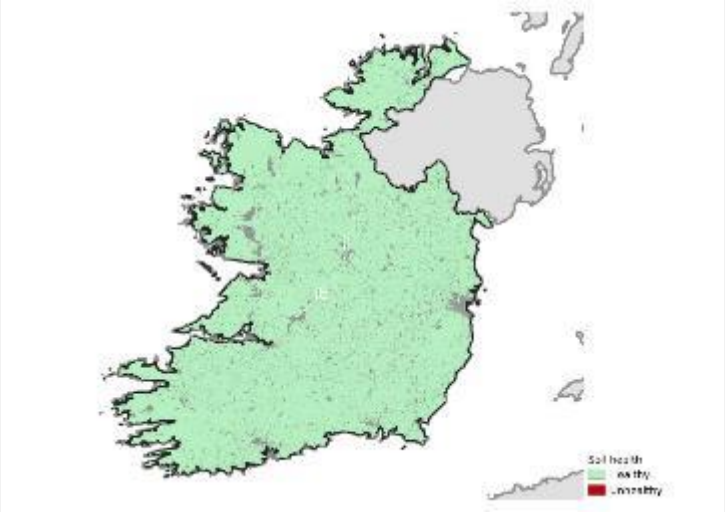
No issue based on current evidence

High or Very High susceptibility for topsoil compaction in Ireland



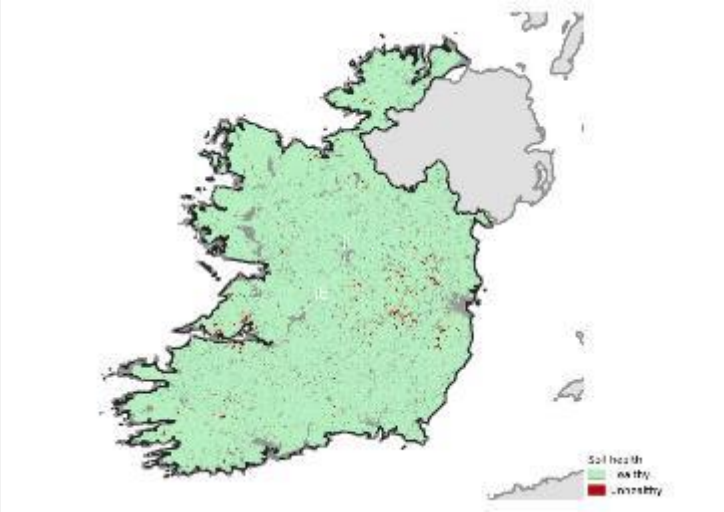
8% of national territory

Contamination by High Copper concentrations in Ireland



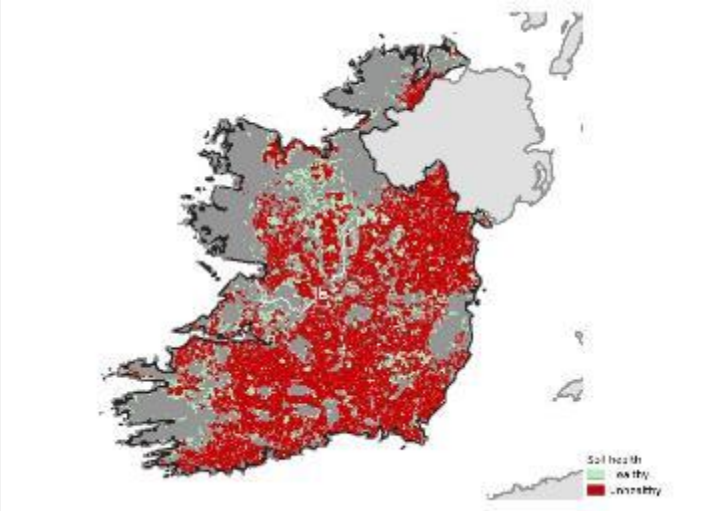
No issue based on current evidence

Contamination by High Mercury concentrations in Ireland



1% of national territory

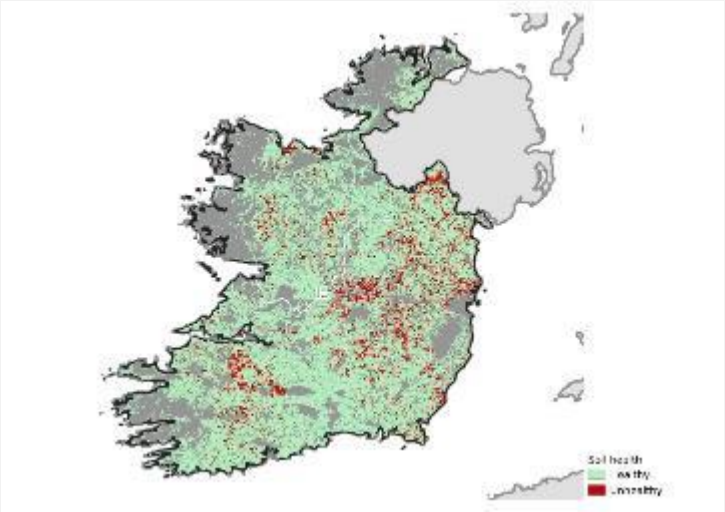
N Excess in Ireland



79% of agricultural land area unhealthy (CORINE)

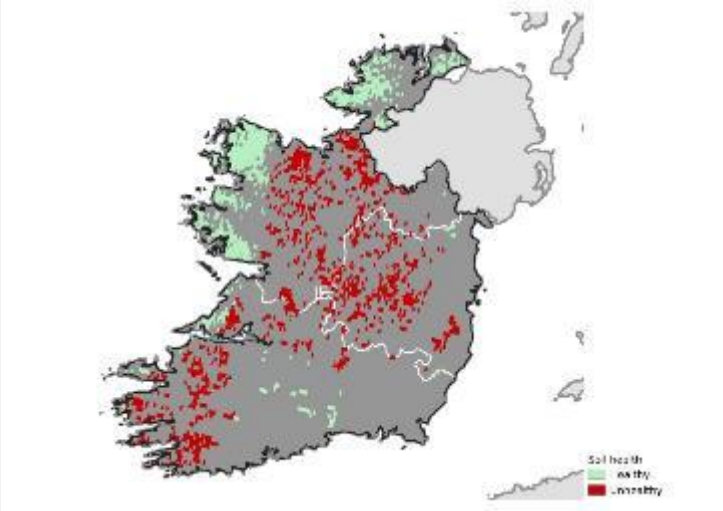
46% of national territory

P Excess in Ireland

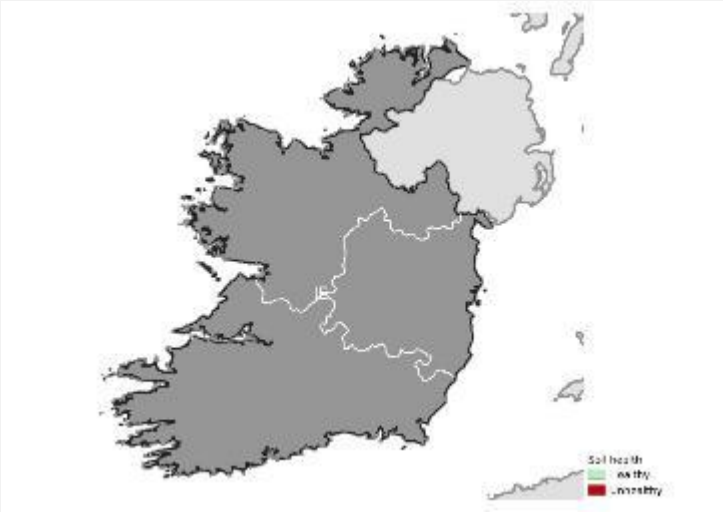


11% of agricultural land area unhealthy (CORINE)

8% of national territory

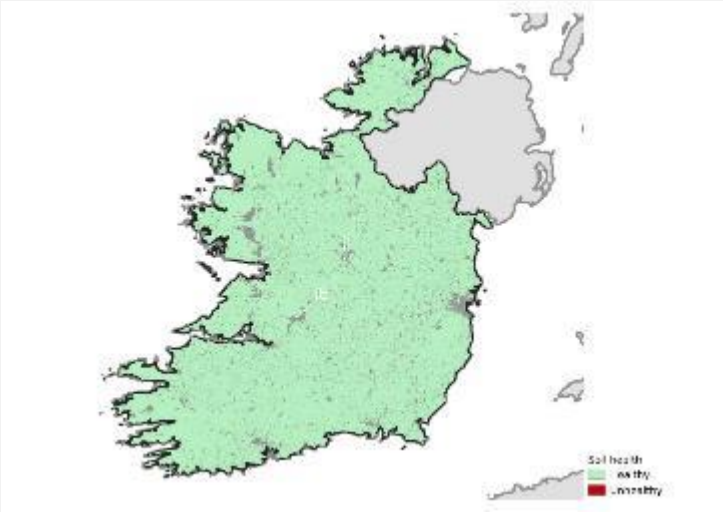
Peatland under hotspot of agriculture in Ireland	
	62% of agricultural land area unhealthy (CORINE) 12% of national territory

Areas at risk of secondary Salinization in Ireland



No issue based on current evidence

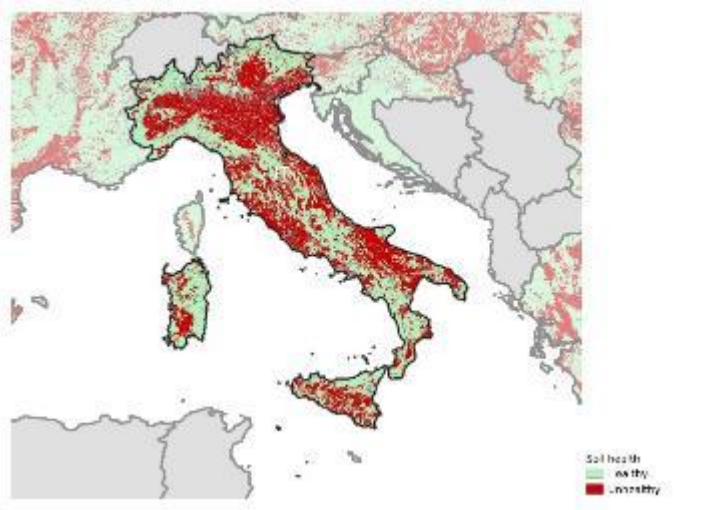
Soil Sealing in Ireland



No issue based on current evidence

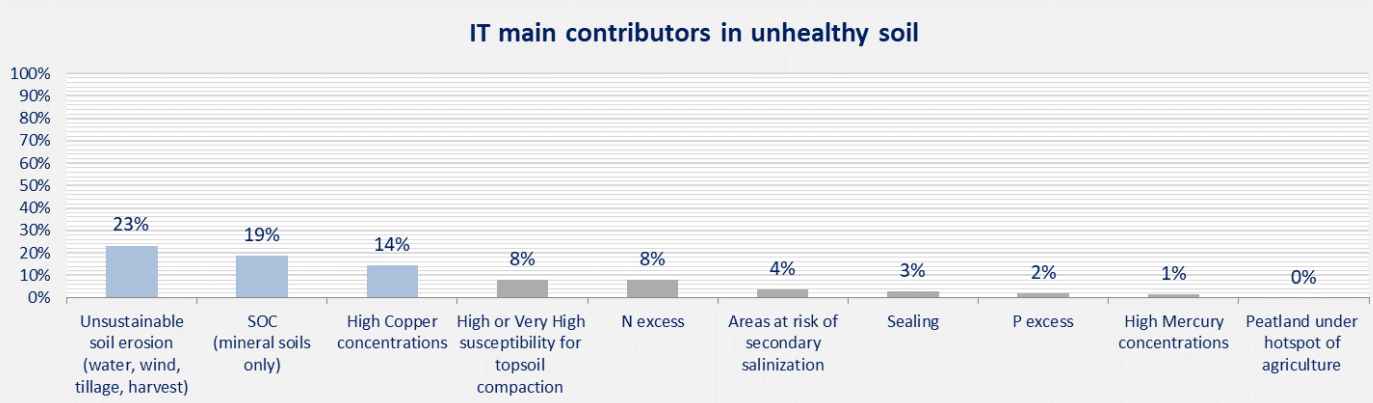
IT

State of soils in Italy

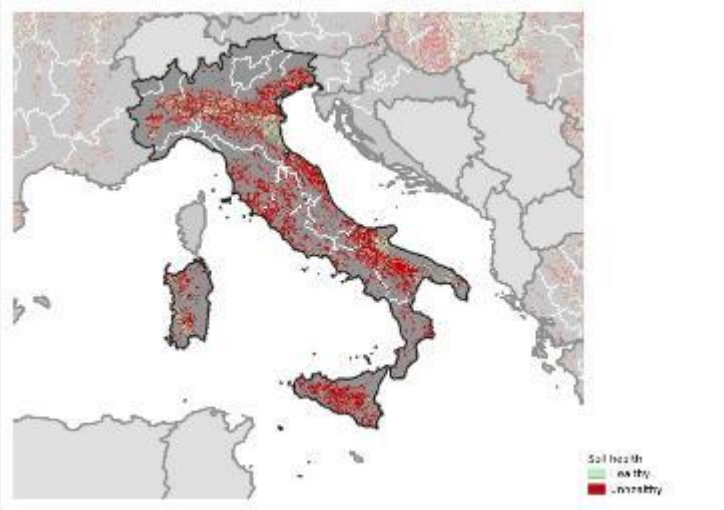


47% area unhealthy

Unsustainable soil erosion (water, wind, tillage, harvest) is the greatest contributor



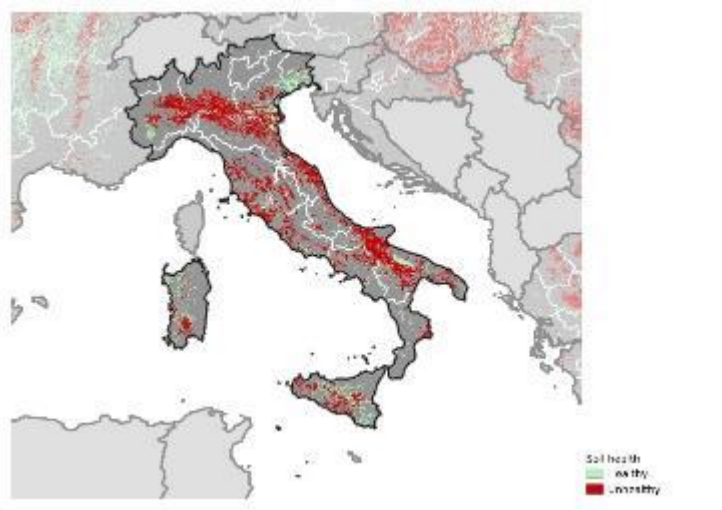
Soil Erosion by Water, Wind, Tillage and Crop in Italy



80% of cropland area unhealthy

23% of national territory

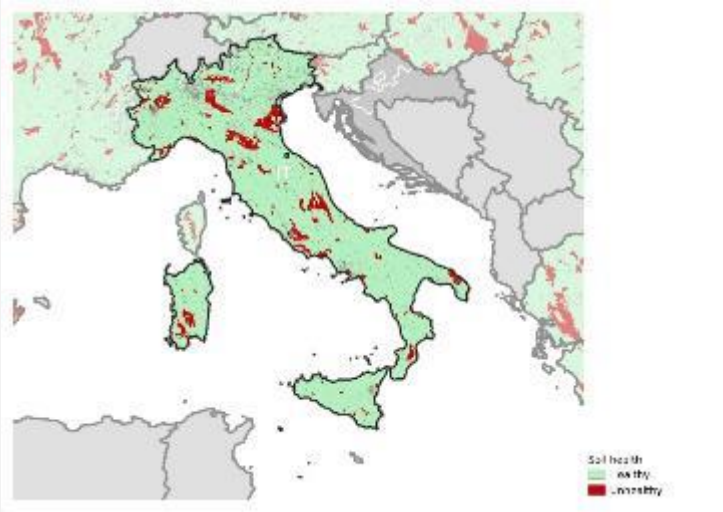
Loss of Soil Organic Carbon in Italy



68% of cropland and grassland area unhealthy (except for land above 1000 m a.s.l.)

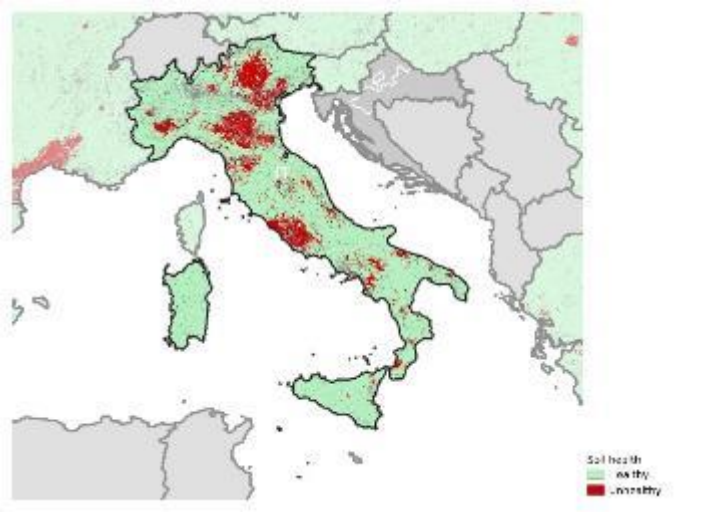
19% of national territory

High or Very High susceptibility for topsoil compaction in Italy



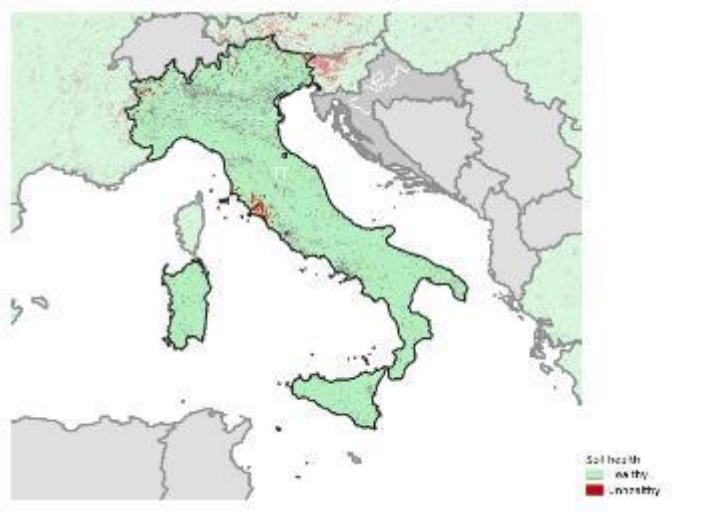
8% of national territory

Contamination by High Copper concentrations in Italy



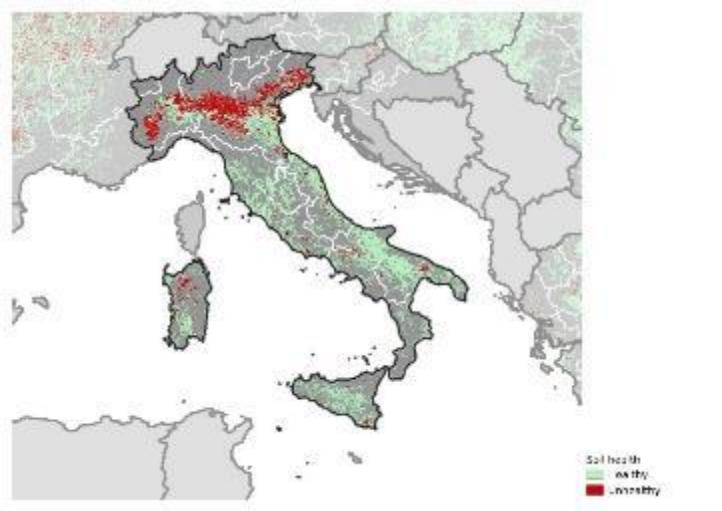
14% of national territory

Contamination by High Mercury concentrations in Italy



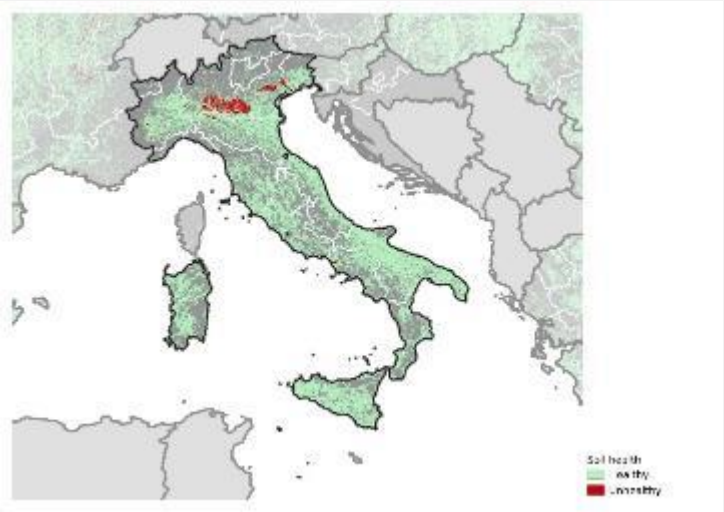
1% of national territory

N Excess in Italy



23% of agricultural land area unhealthy (CORINE)

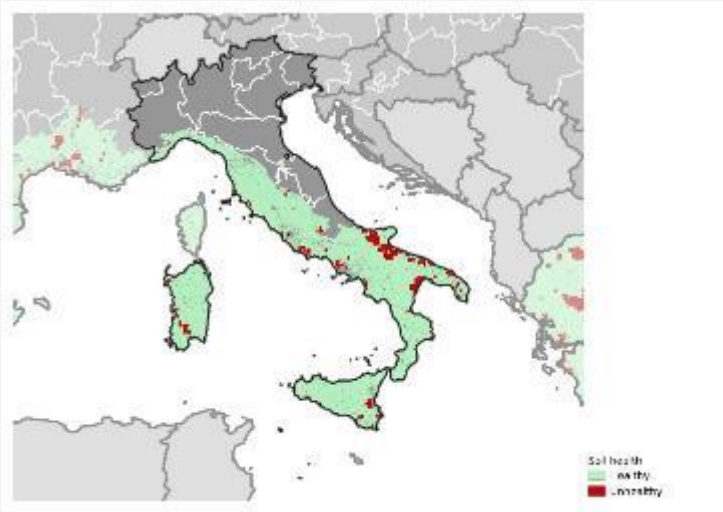
8% of national territory

P Excess in Italy	
	3% of agricultural land area unhealthy (CORINE) 2% of national territory

Peatland under hotspot of agriculture in Italy

No issue based on current evidence

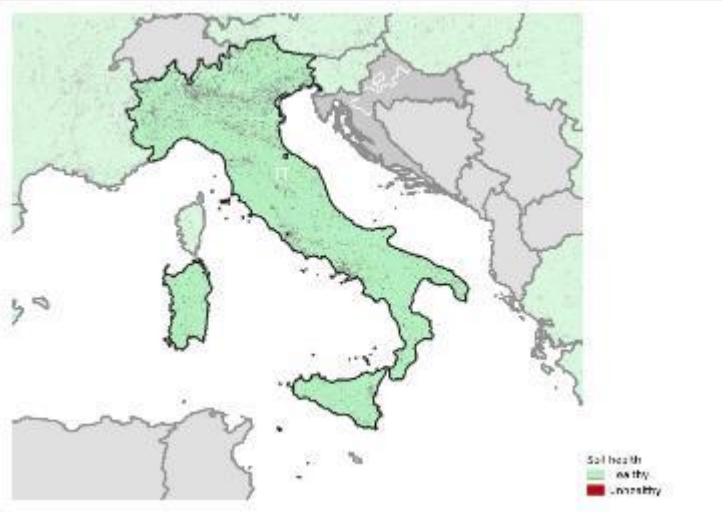
Areas at risk of secondary Salinization in Italy



7% of Mediterranean biogeographical region unhealthy

4% of national territory

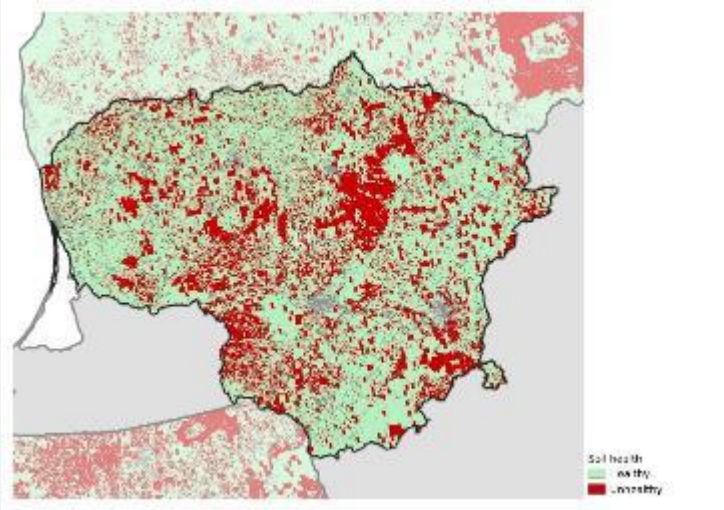
Soil Sealing in Italy



3% of national territory

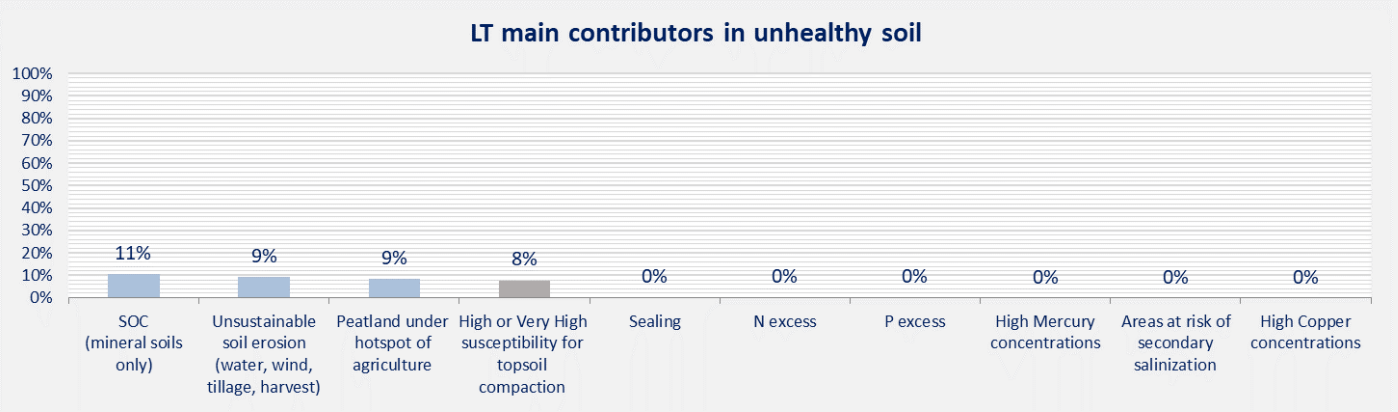
LT

State of soils in Lithuania

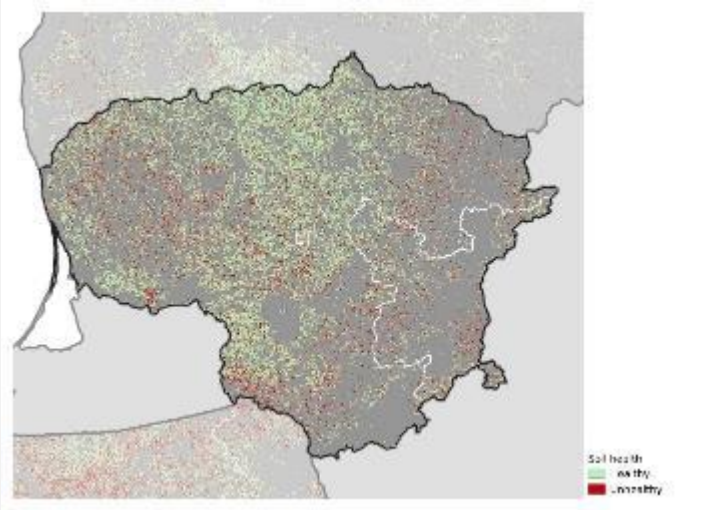


31% area unhealthy

SOC (mineral soils only) is the greatest contributor



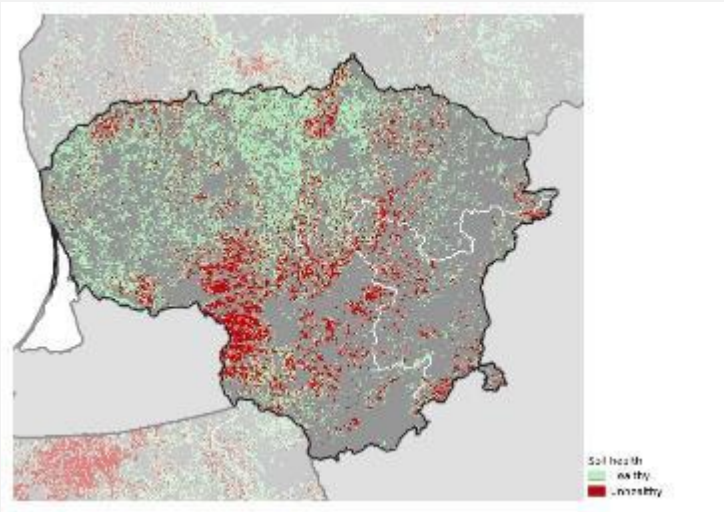
Soil Erosion by Water, Wind, Tillage and Crop in Lithuania



26% of cropland area unhealthy

9% of national territory

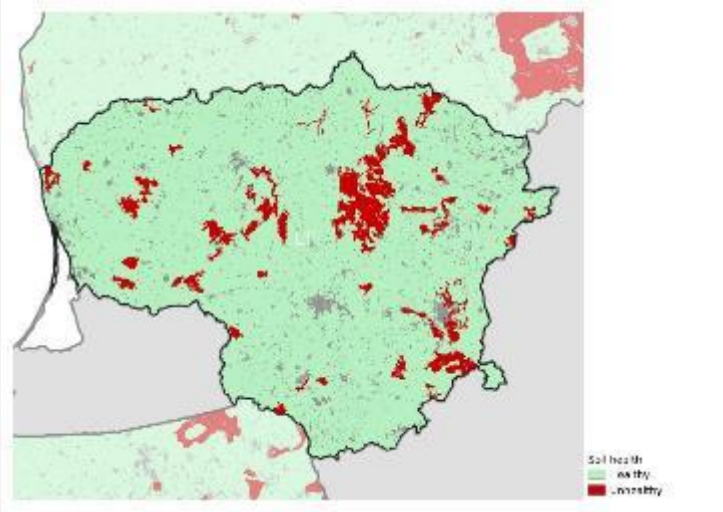
Loss of Soil Organic Carbon in Lithuania



29% of cropland and grassland area unhealthy (except for land above 1000 m a.s.l.)

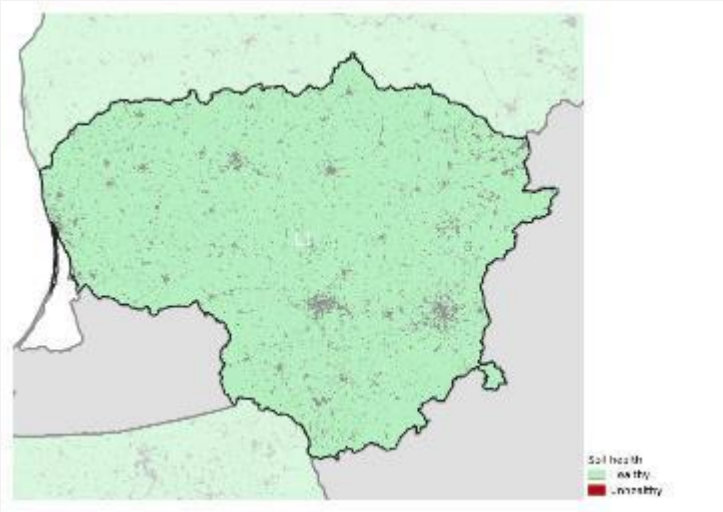
11% of national territory

High or Very High susceptibility for topsoil compaction in Lithuania



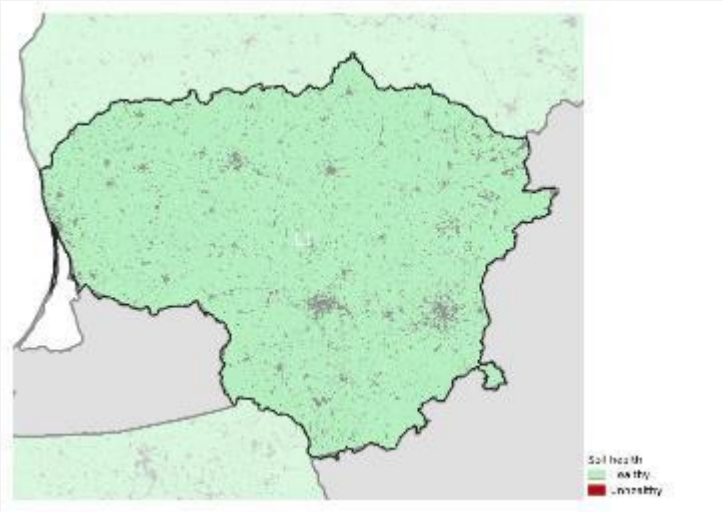
8% of national territory

Contamination by High Copper concentrations in Lithuania



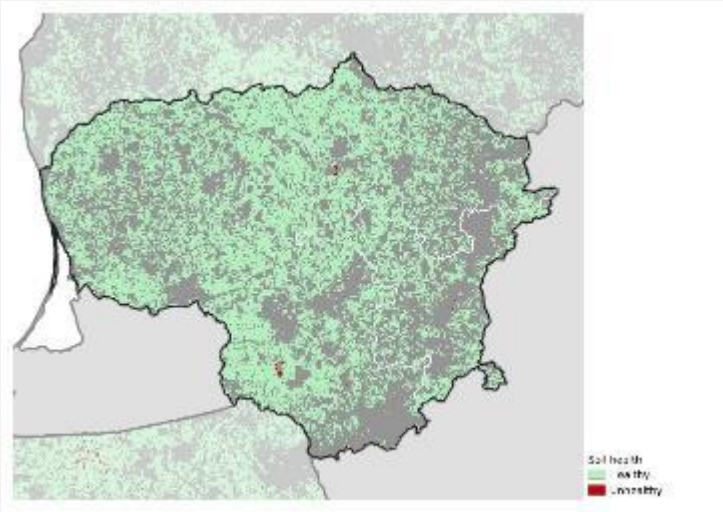
No issue based on current evidence

Contamination by High Mercury concentrations in Lithuania



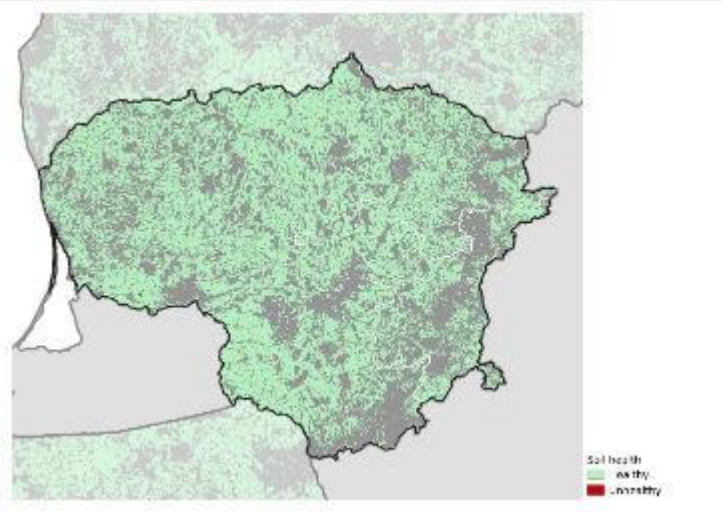
No issue based on current evidence

N Excess in Lithuania

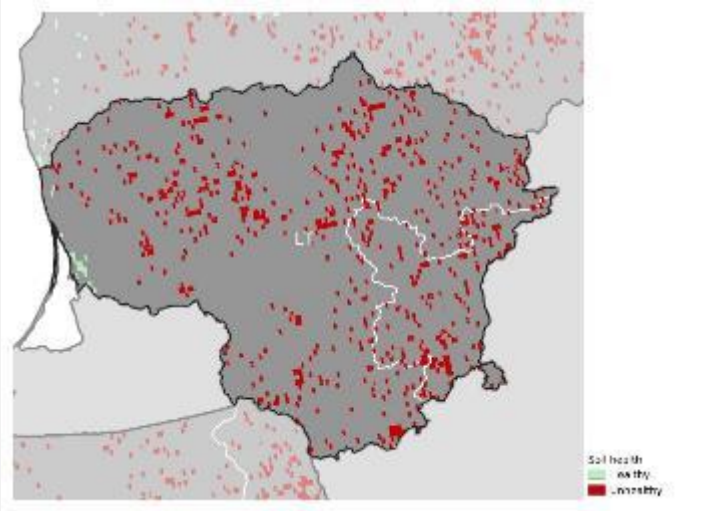


No issue based on current evidence

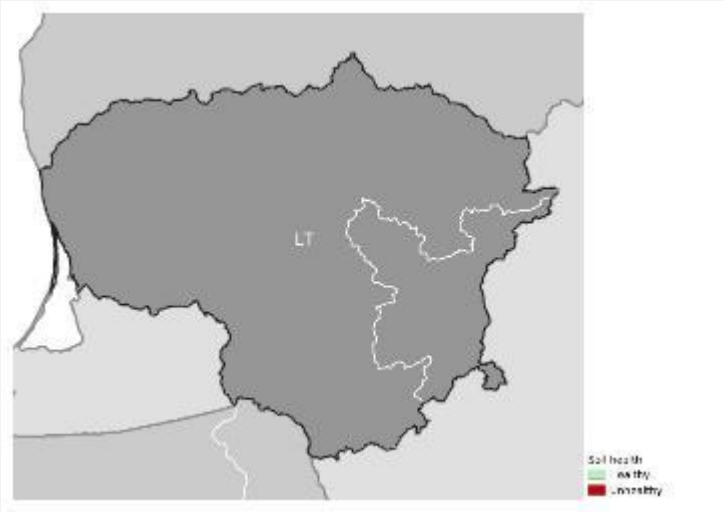
P Excess in Lithuania



No issue based on current evidence

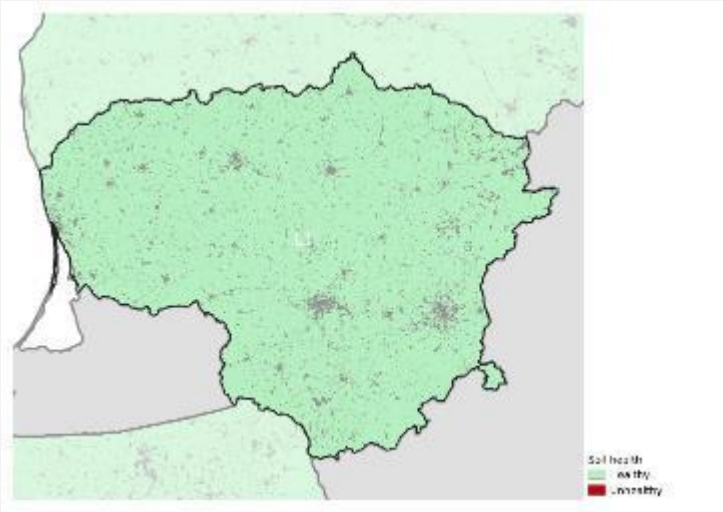
Peatland under hotspot of agriculture in Lithuania	
	98% of agricultural land area unhealthy (CORINE) 9% of national territory

Areas at risk of secondary Salinization in Lithuania



No issue based on current evidence

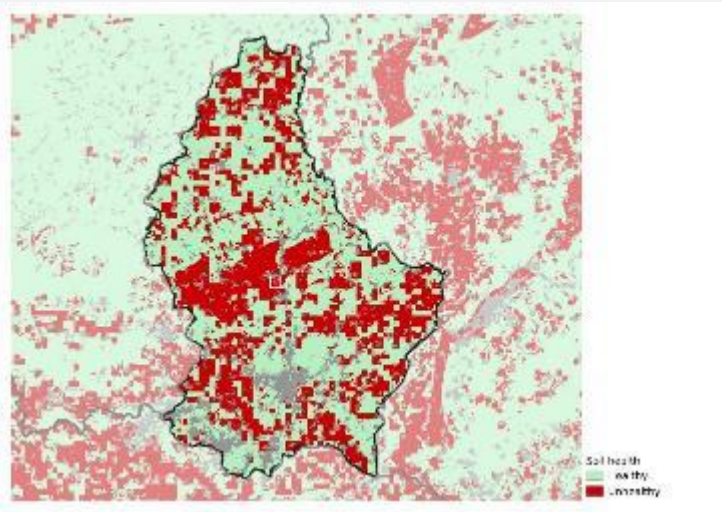
Soil Sealing in Lithuania



No issue based on current evidence

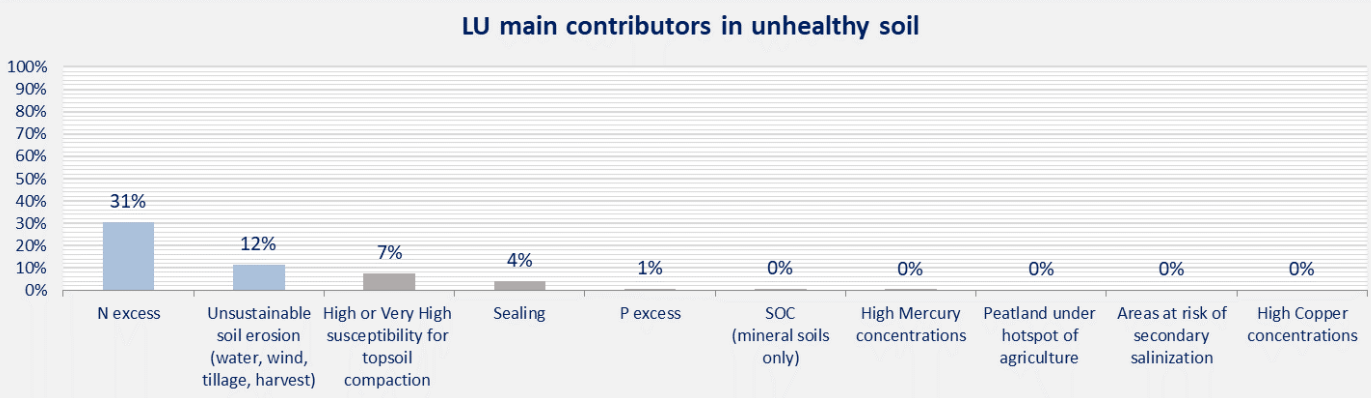
LU

State of soils in Luxembourg

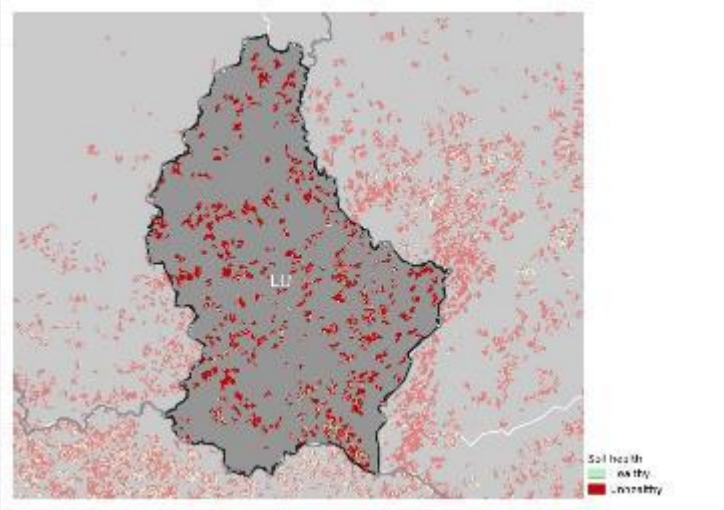


41% area unhealthy

N excess is the greatest contributor



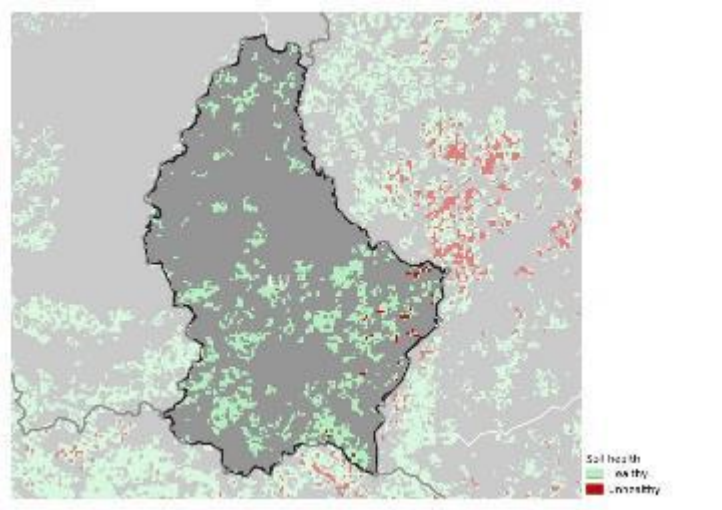
Soil Erosion by Water, Wind, Tillage and Crop in Luxembourg



87% of cropland area unhealthy

12% of national territory

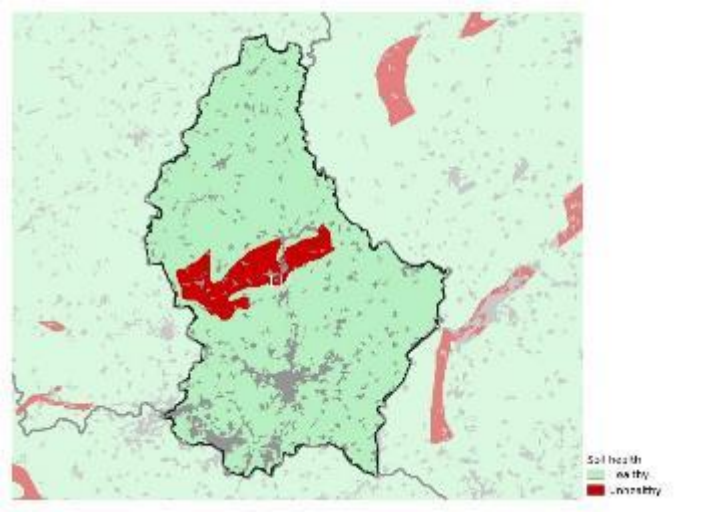
Loss of Soil Organic Carbon in Luxembourg



2% of cropland and grassland area unhealthy (except for land above 1000 m a.s.l.)

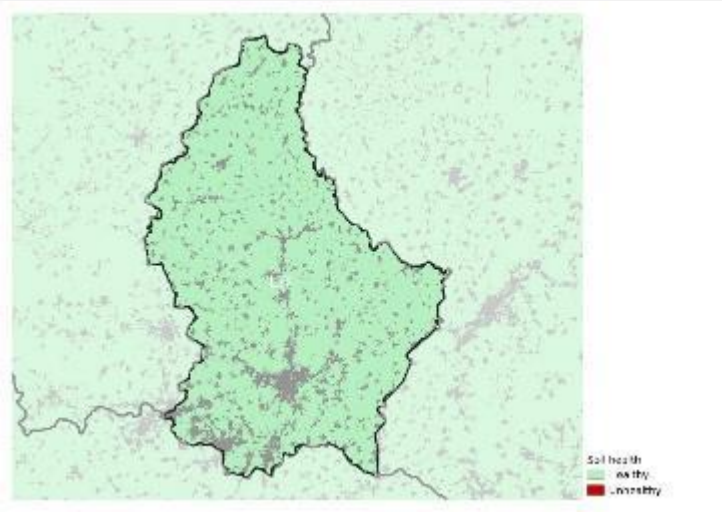
<1% of national territory

High or Very High susceptibility for topsoil compaction in Luxembourg



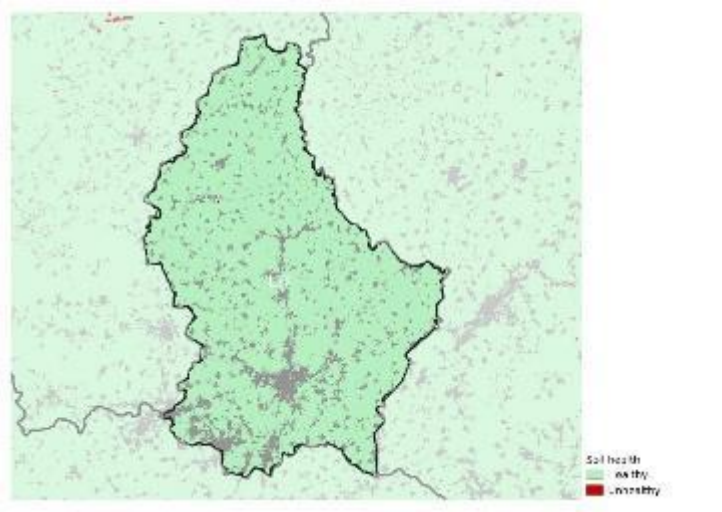
7% of national territory

Contamination by High Copper concentrations in Luxembourg



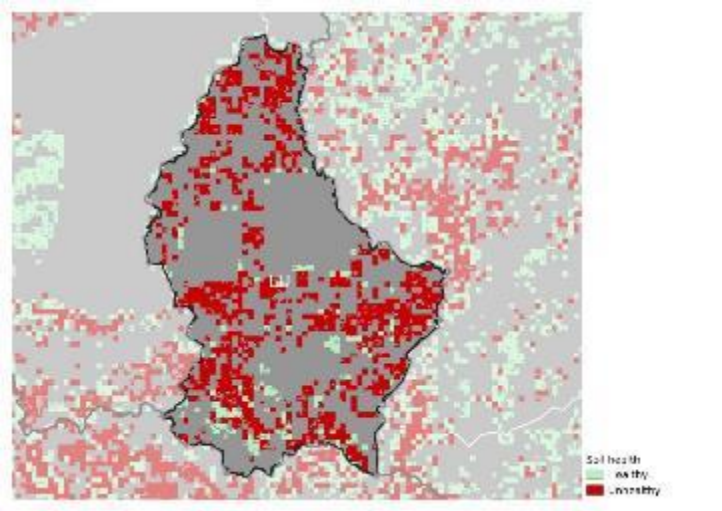
No issue based on current evidence

Contamination by High Mercury concentrations in Luxembourg



No issue based on current evidence

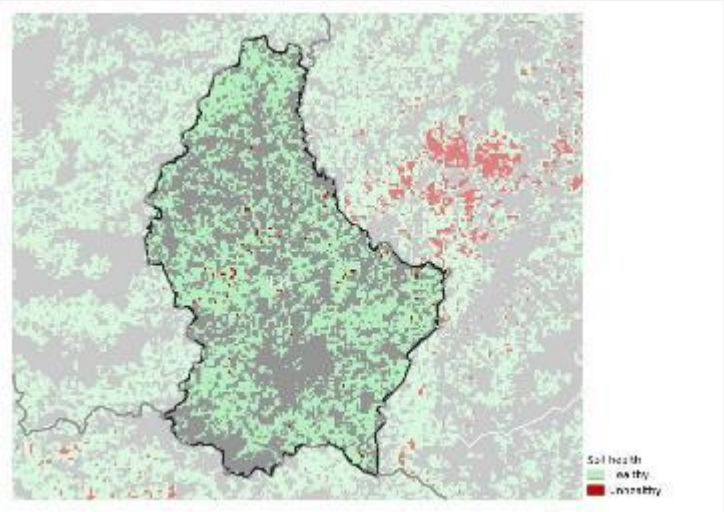
N Excess in Luxembourg



86% of agricultural land area unhealthy (CORINE)

31% of national territory

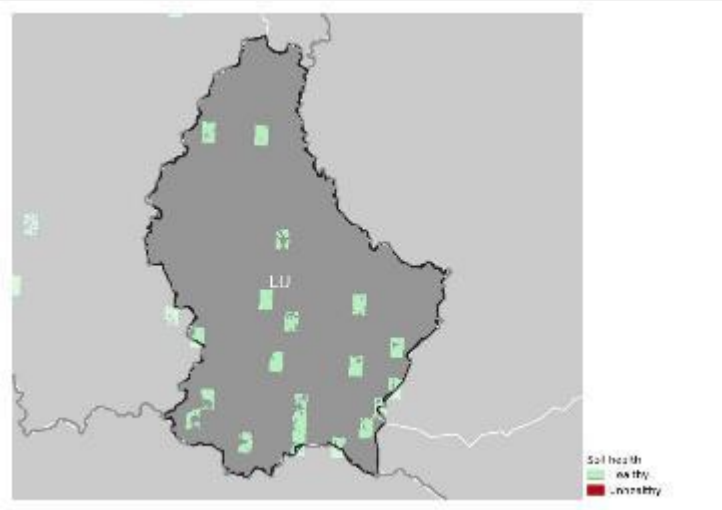
P Excess in Luxembourg



1% of agricultural land area unhealthy (CORINE)

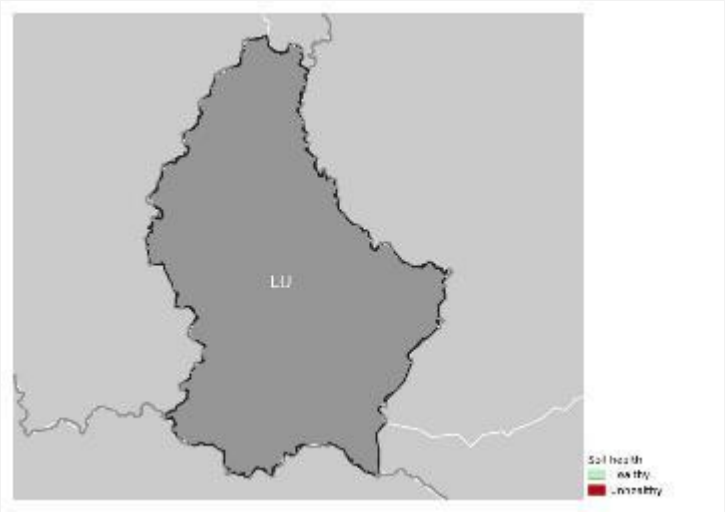
1% of national territory

Peatland under hotspot of agriculture in Luxembourg



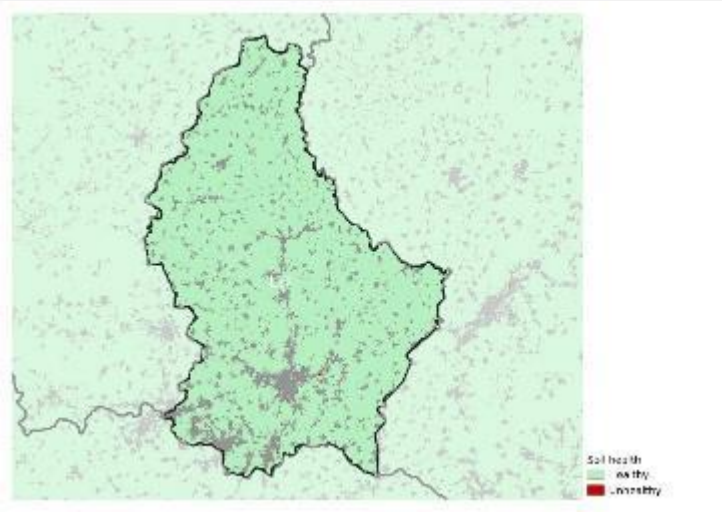
No issue based on current evidence

Areas at risk of secondary Salinization in Luxembourg



No issue based on current evidence

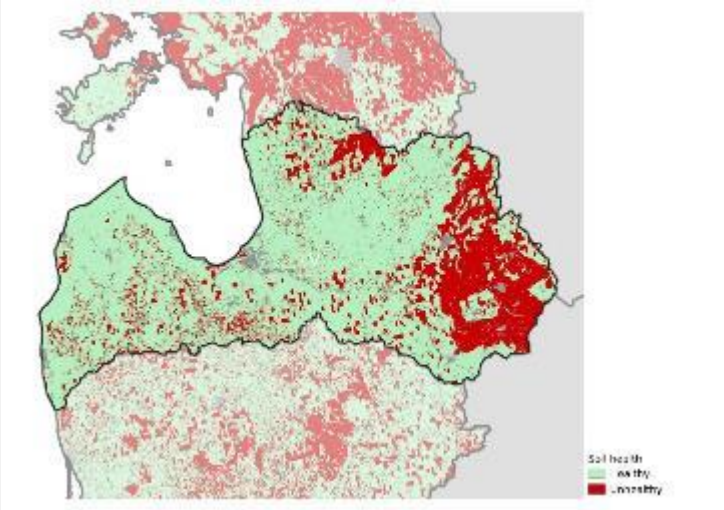
Soil Sealing in Luxembourg



4% of national territory

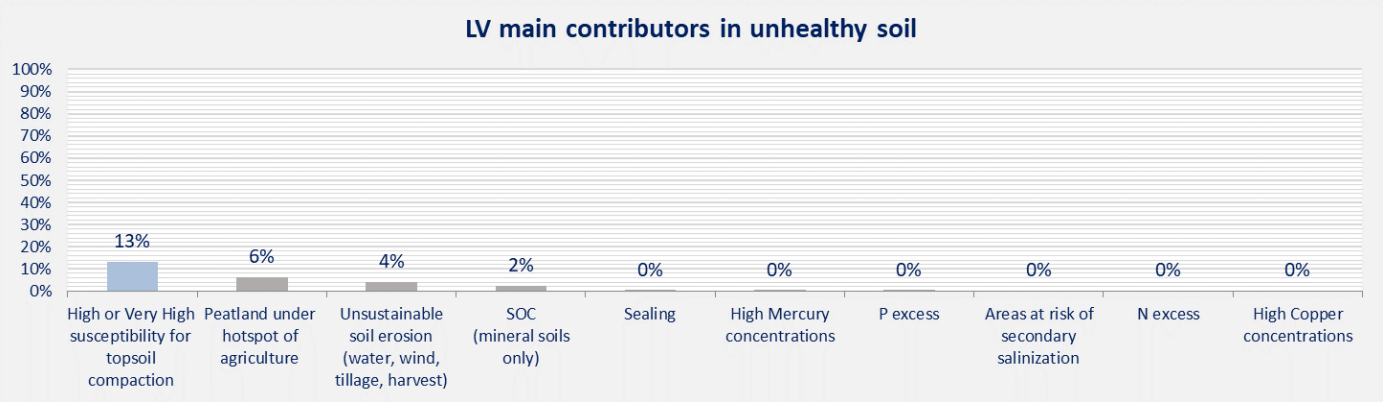
LV

State of soils in Latvia

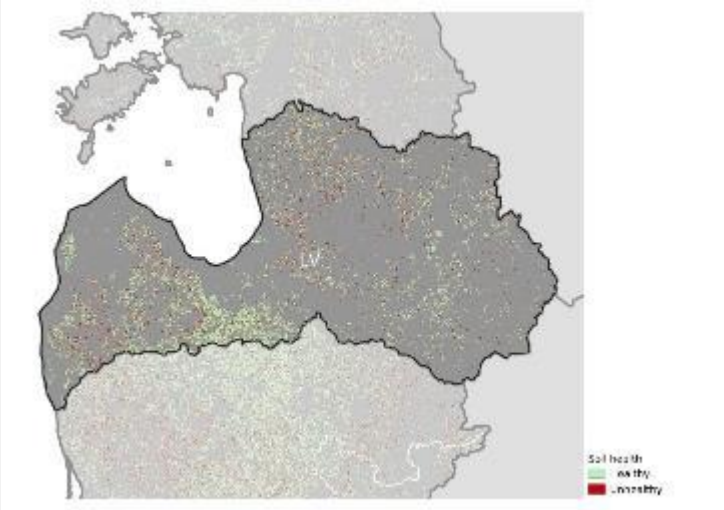


24% area unhealthy

High or Very High susceptibility for topsoil compaction is the greatest contributor



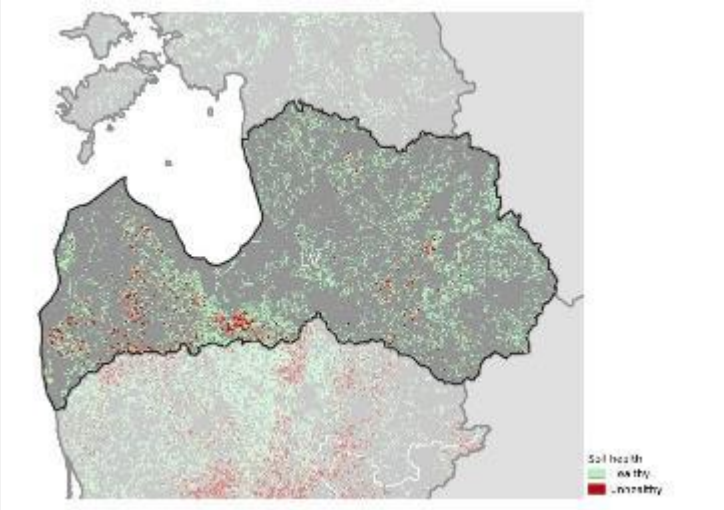
Soil Erosion by Water, Wind, Tillage and Crop in Latvia



25% of cropland area unhealthy

4% of national territory

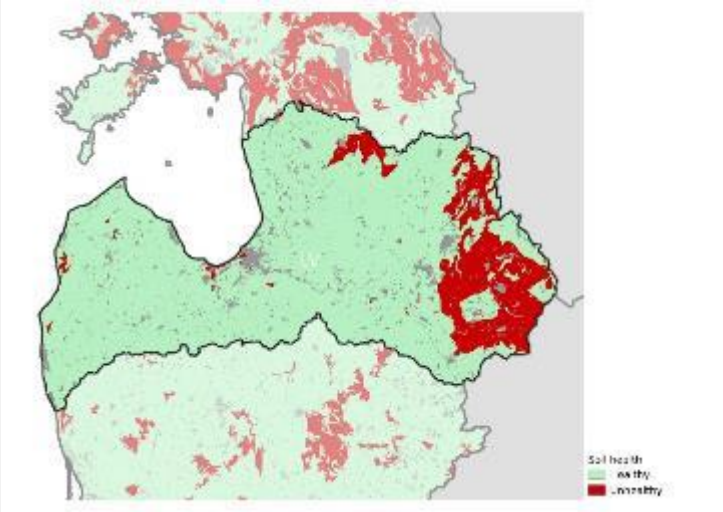
Loss of Soil Organic Carbon in Latvia



10% of cropland and grassland area unhealthy (except for land above 1000 m a.s.l.)

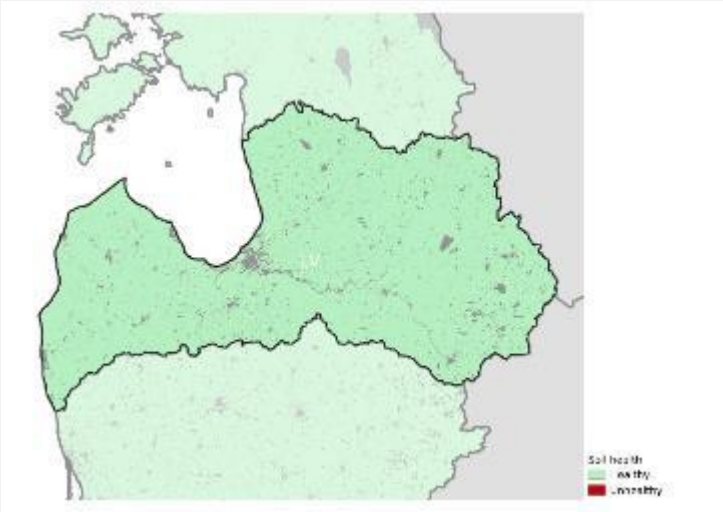
2% of national territory

High or Very High susceptibility for topsoil compaction in Latvia



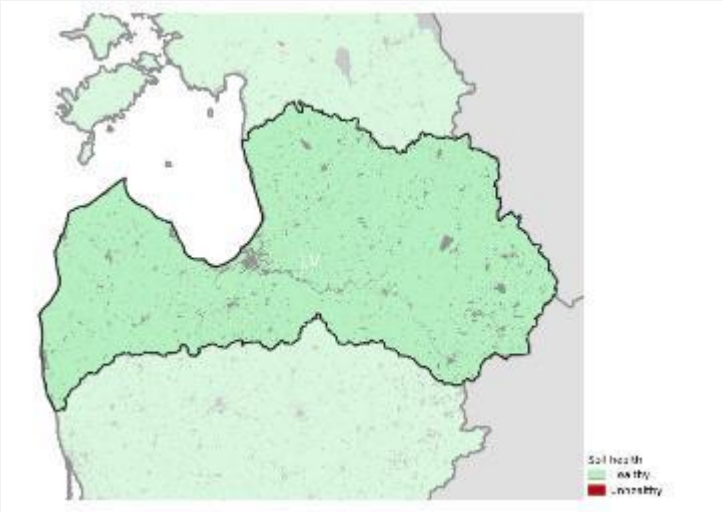
13% of national territory

Contamination by High Copper concentrations in Latvia



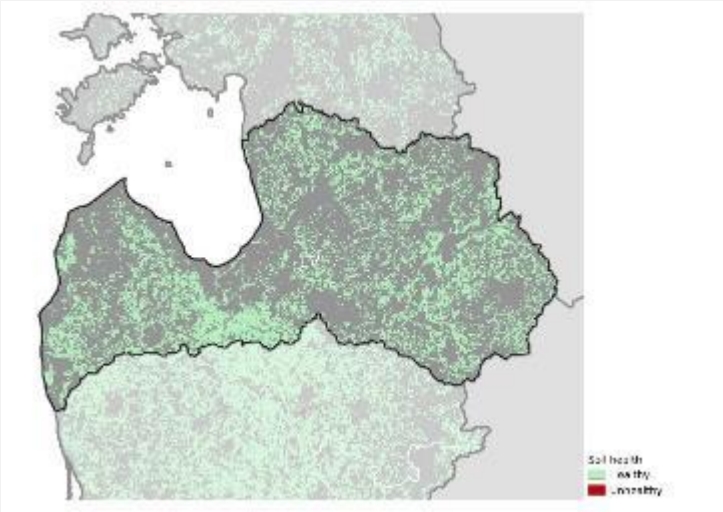
No issue based on current evidence

Contamination by High Mercury concentrations in Latvia



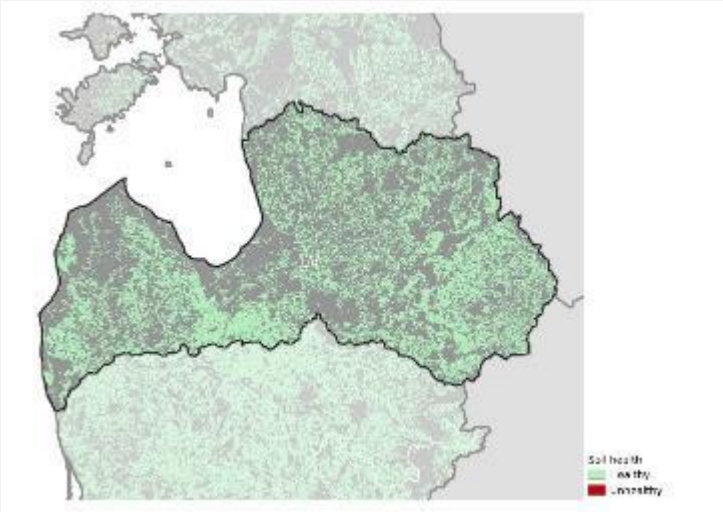
No issue based on current evidence

N excess in Latvia



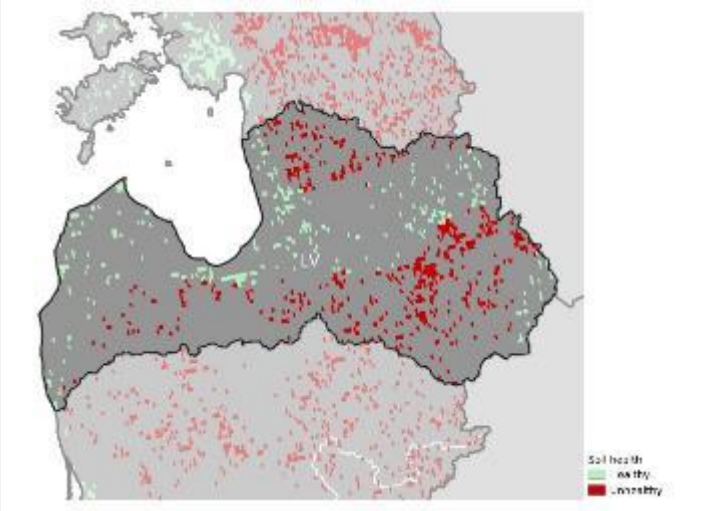
No issue based on current evidence

P excess in Latvia



No issue based on current evidence

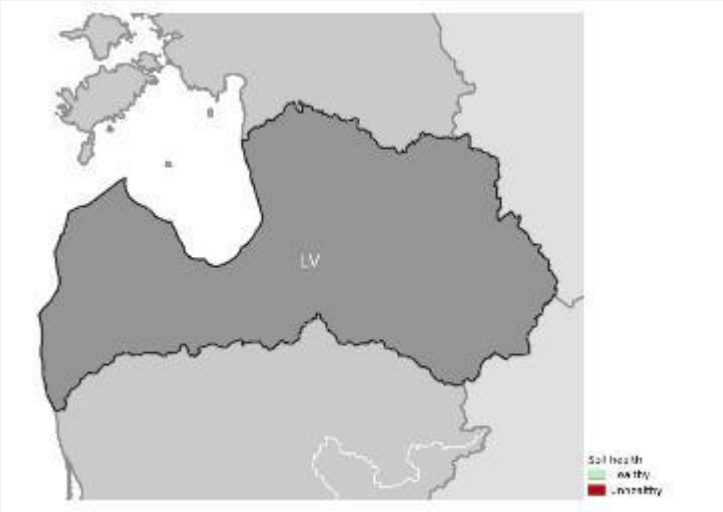
Peatland under hotspot of agriculture in Latvia



62% of agricultural land area unhealthy (CORINE)

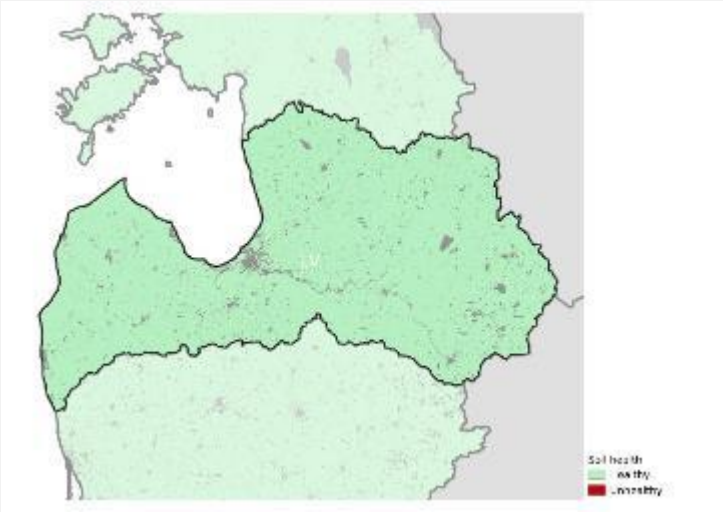
6% of national territory

Areas at risk of secondary Salinization in Latvia



No issue based on current evidence

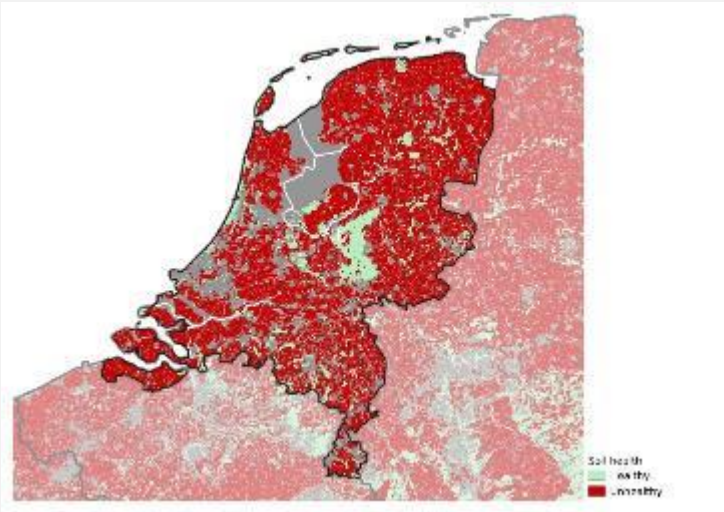
Soil Sealing in Latvia



No issue based on current evidence

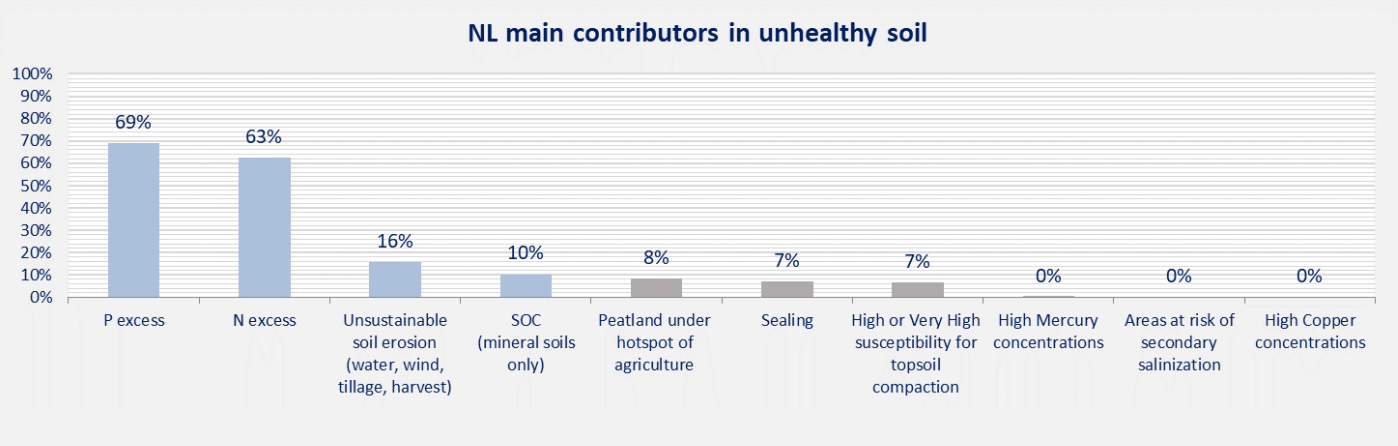
NL

State of soils in Netherlands

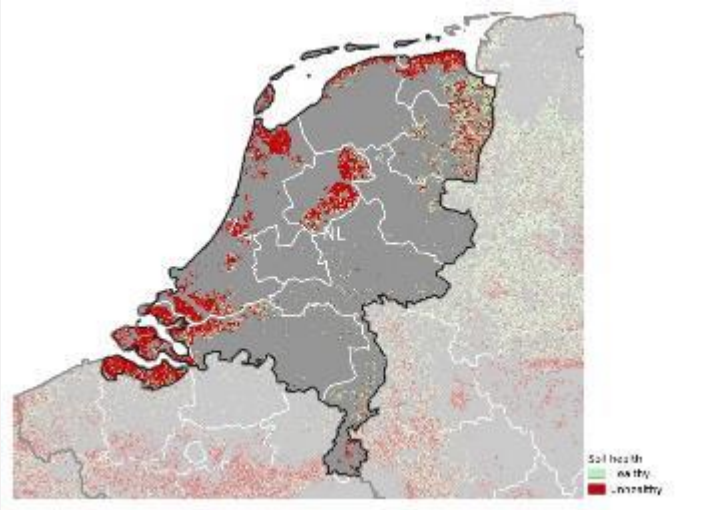


83% area unhealthy

P excess is the greatest contributor



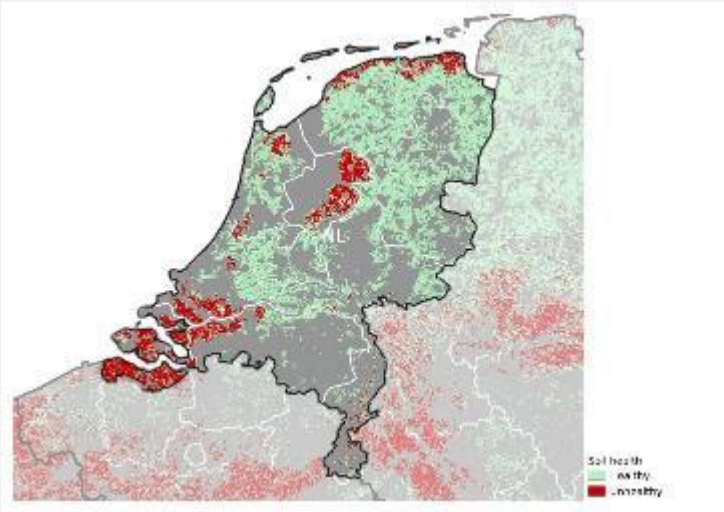
Soil Erosion by Water, Wind, Tillage and Crop in Netherlands



63% of cropland area unhealthy

16% of national territory

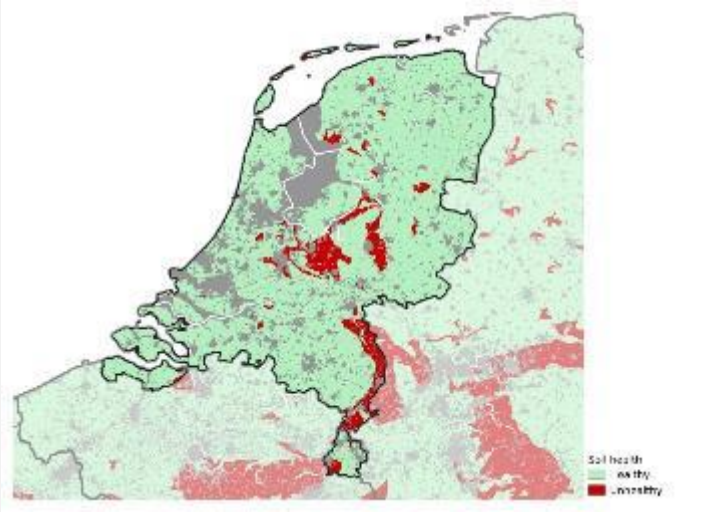
Loss of Soil Organic Carbon in Netherlands



19% of cropland and grassland area unhealthy (except for land above 1000 m a.s.l.)

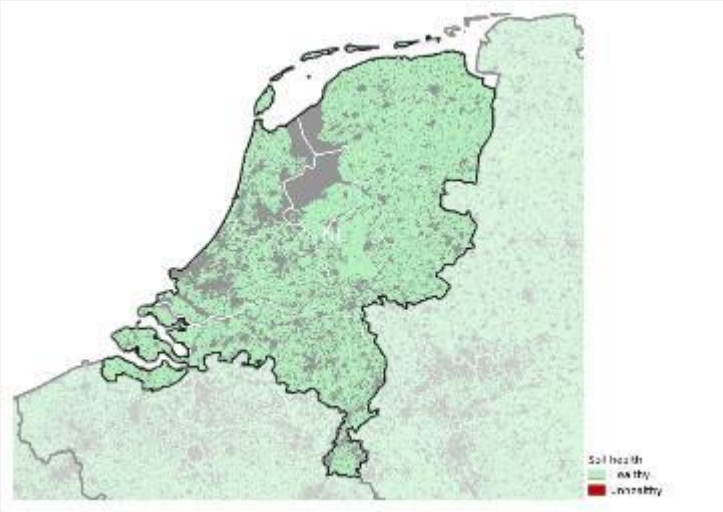
10% of national territory

High or Very High susceptibility for topsoil compaction in Netherlands



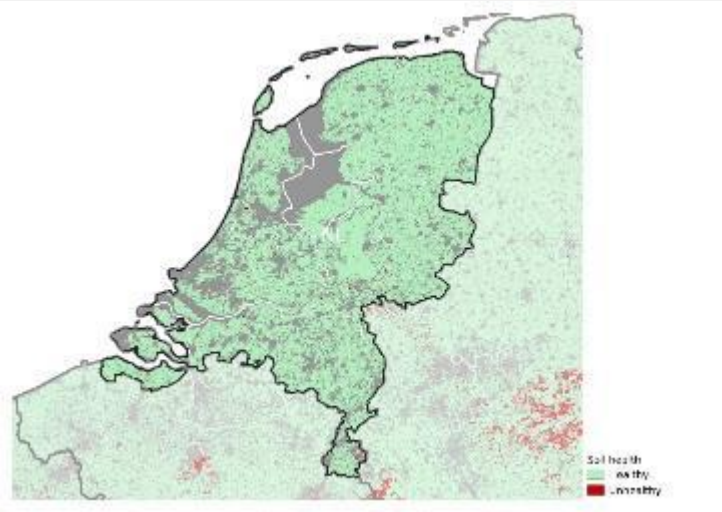
7% of national territory

Contamination by High Copper concentrations in Netherlands



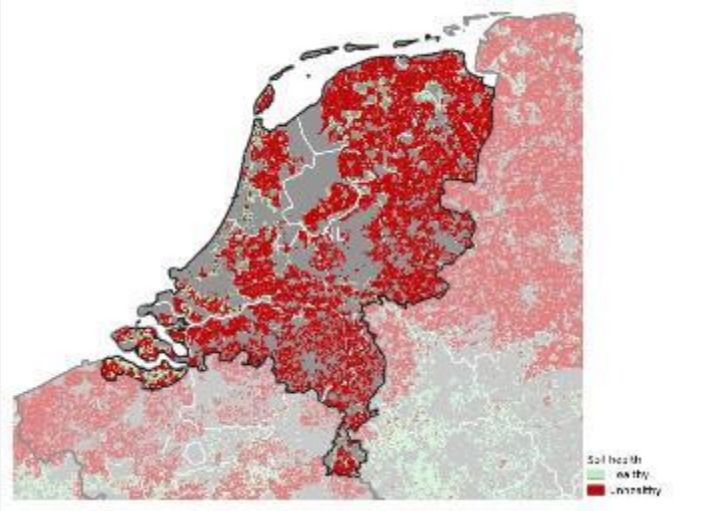
No issue based on current evidence

Contamination by High Mercury concentrations in Netherlands



No issue based on current evidence

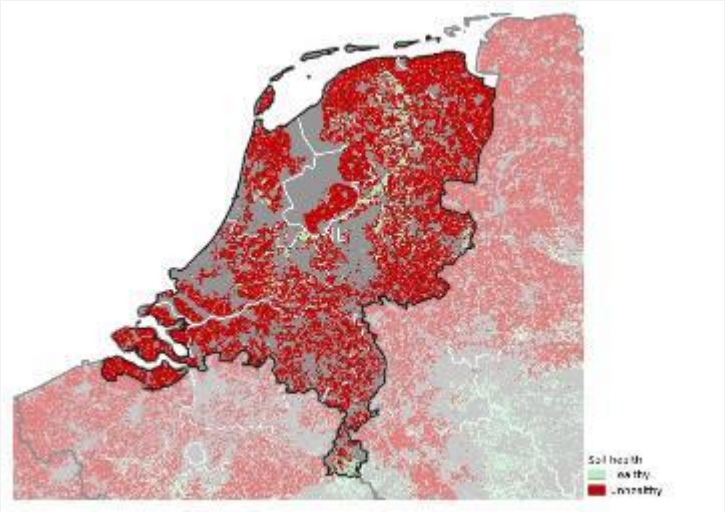
N Excess in Netherlands



87% of agricultural land area unhealthy (CORINE)

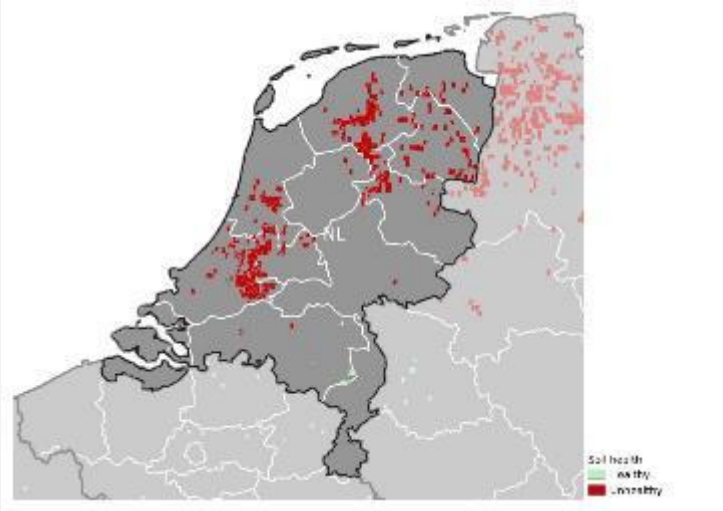
63% of national territory

P Excess in Netherlands



90% of agricultural land area unhealthy (CORINE)

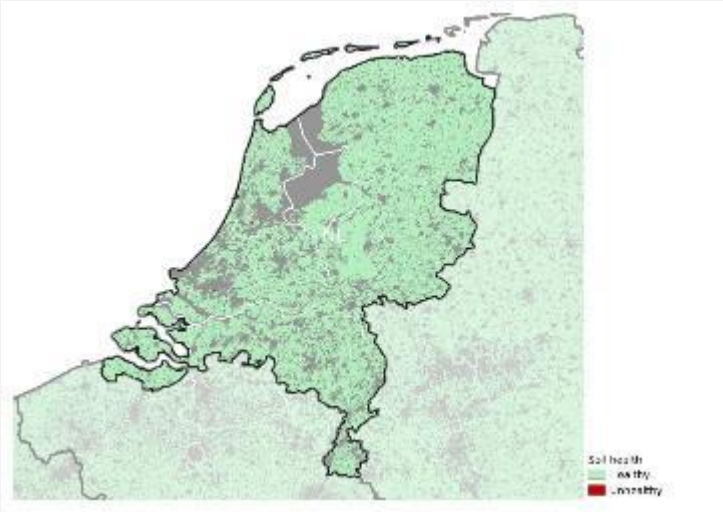
69% of national territory

Peatland under hotspot of agriculture in Netherlands	
	97% of agricultural land area unhealthy (CORINE)
	8% of national territory

Areas at risk of secondary Salinization in Netherlands

No issue based on current evidence

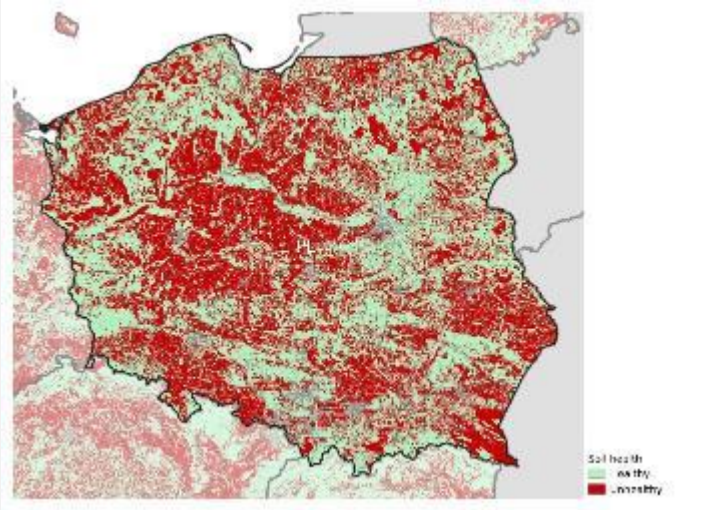
Soil Sealing in Netherlands



7% of national territory

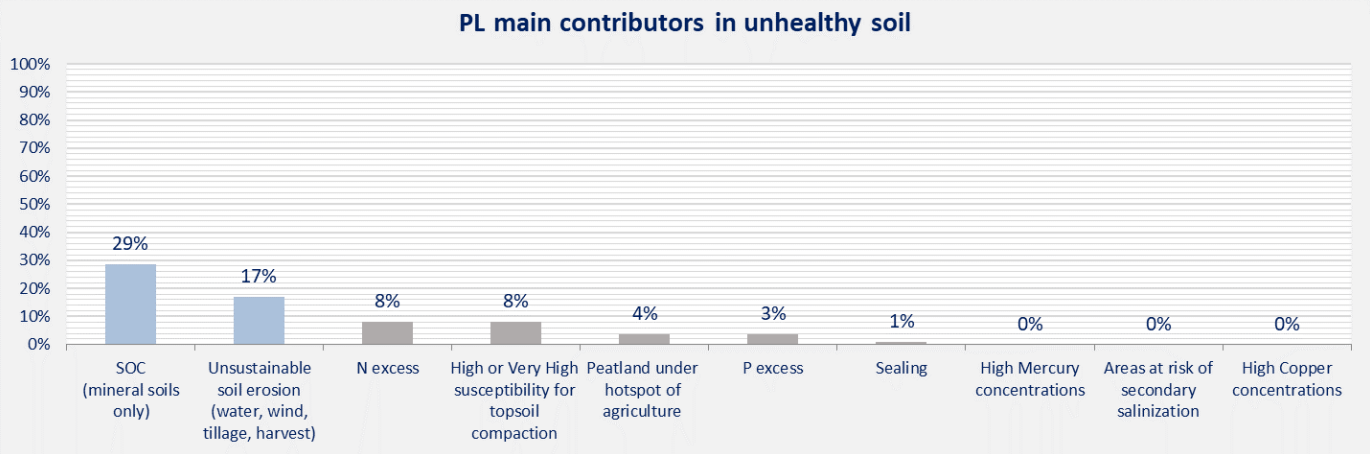
PL

State of soils in Poland

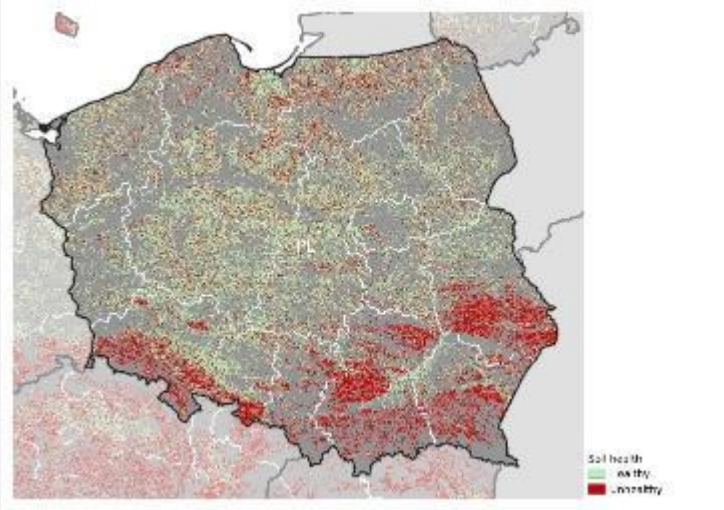


48% area unhealthy

SOC (mineral soils only) is the greatest contributor



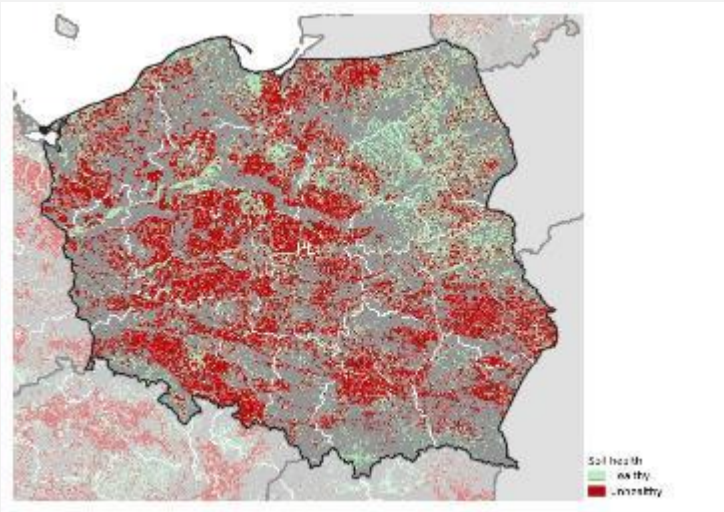
Soil Erosion by Water, Wind, Tillage and Crop in Poland



36% of cropland area unhealthy

17% of national territory

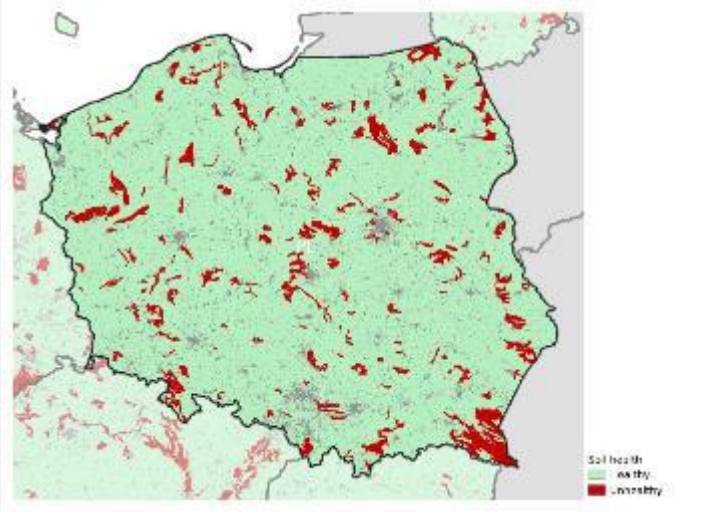
Loss of Soil Organic Carbon in Poland



58% of cropland and grassland area unhealthy (except for land above 1000 m a.s.l.)

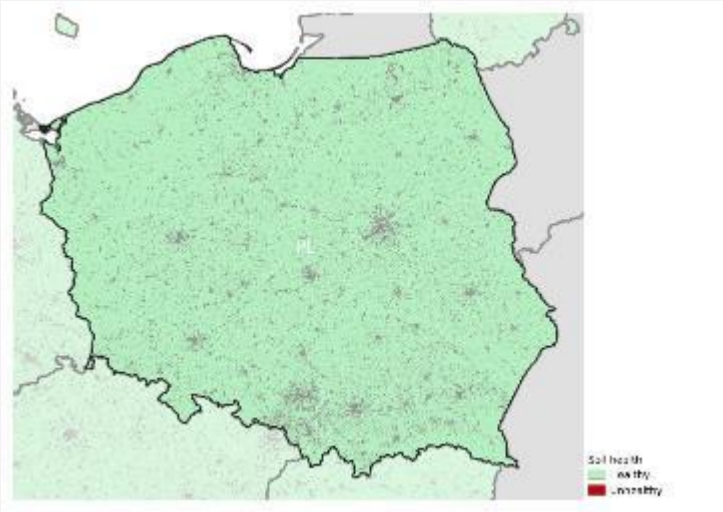
29% of national territory

High or Very High susceptibility for topsoil compaction in Poland



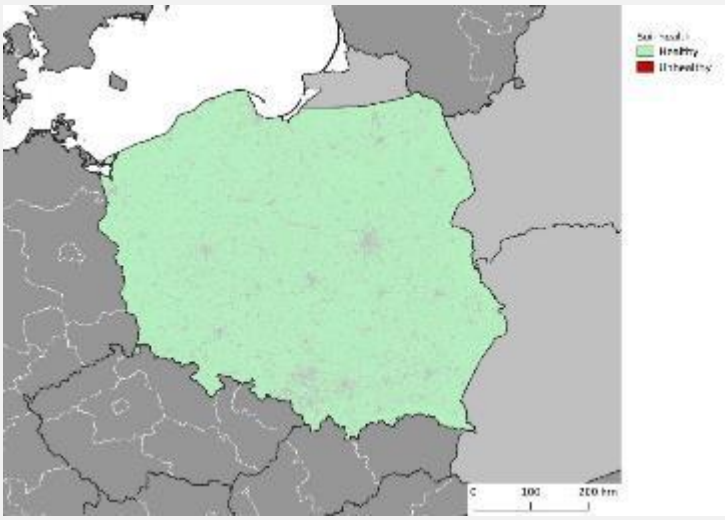
8% of national territory

Contamination by High Copper concentrations in Poland



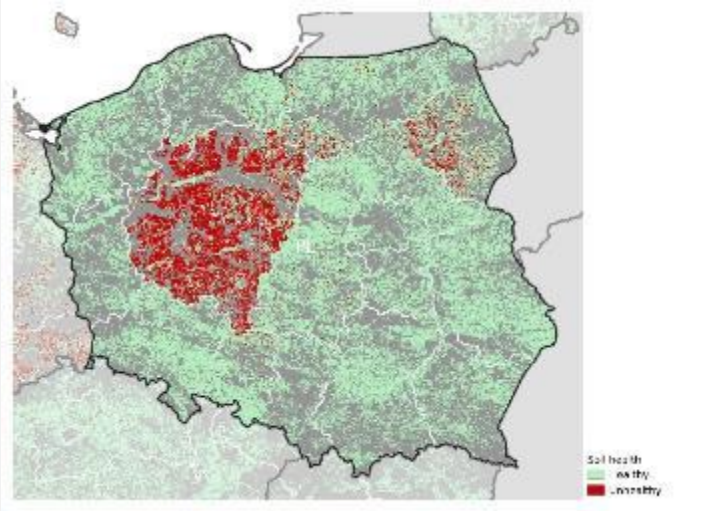
No issue based on current evidence

Contamination by High Mercury concentrations in Poland



No issue based on current evidence

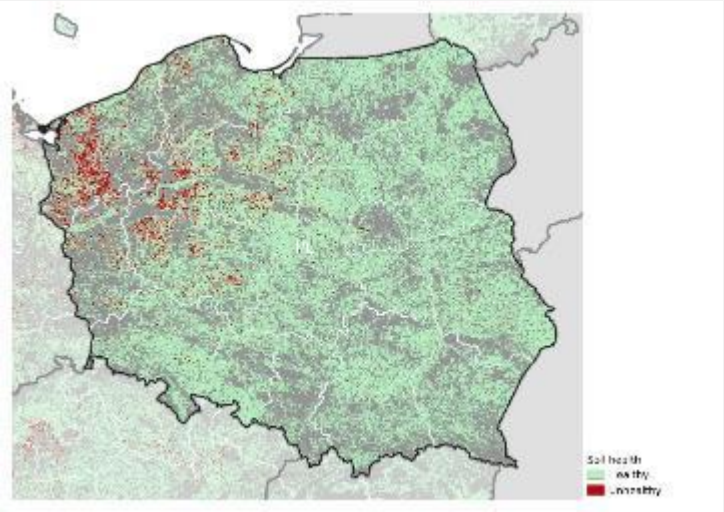
N Excess in Poland



15% of agricultural land area unhealthy (CORINE)

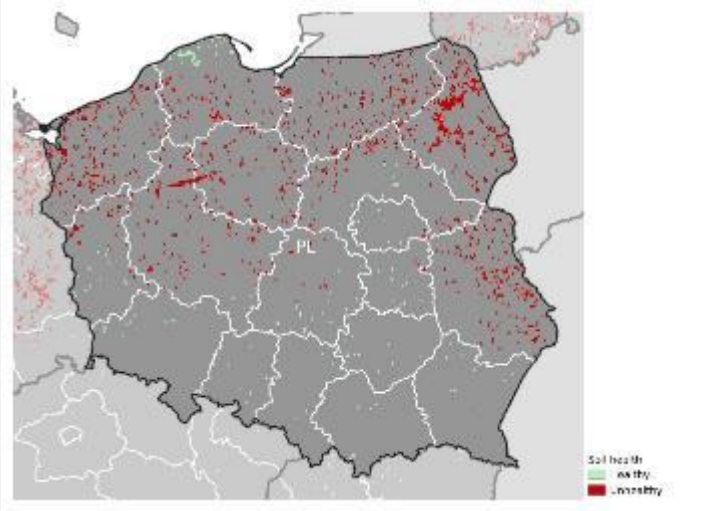
8% of national territory

P Excess in Poland

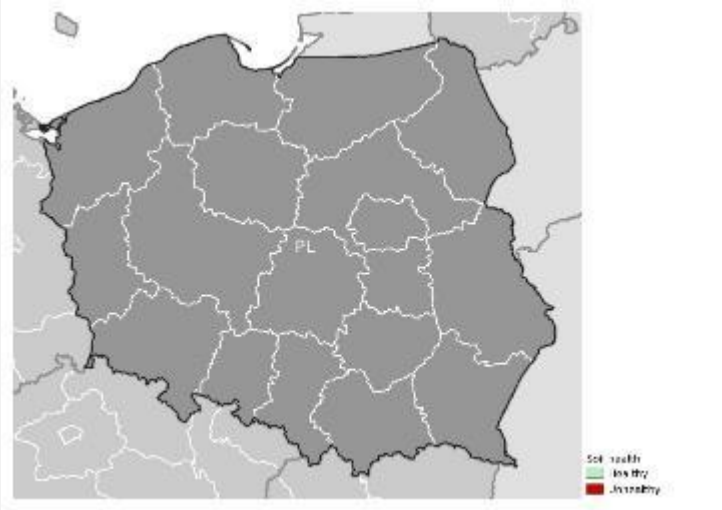


6% of agricultural land area unhealthy (CORINE)

3% of national territory

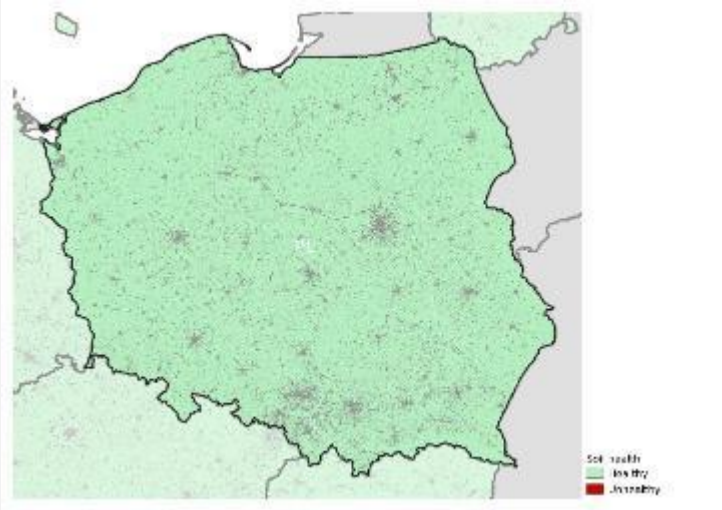
Peatland under hotspot of agriculture in Poland	
	87% of agricultural land area unhealthy (CORINE) 4% of national territory

Areas at risk of secondary Salinization in Poland



No issue based on current evidence

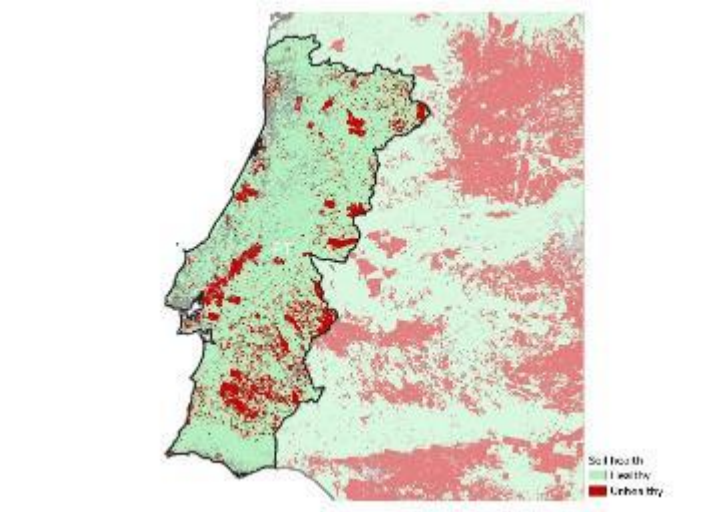
Soil Sealing in Poland



No issue based on current evidence

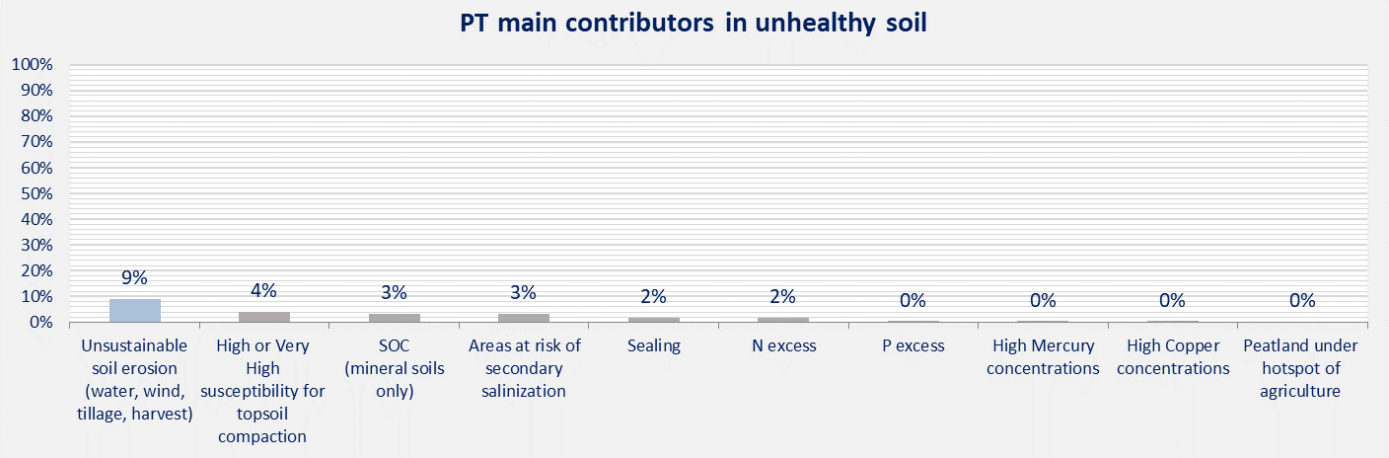
PT

State of soils in Portugal

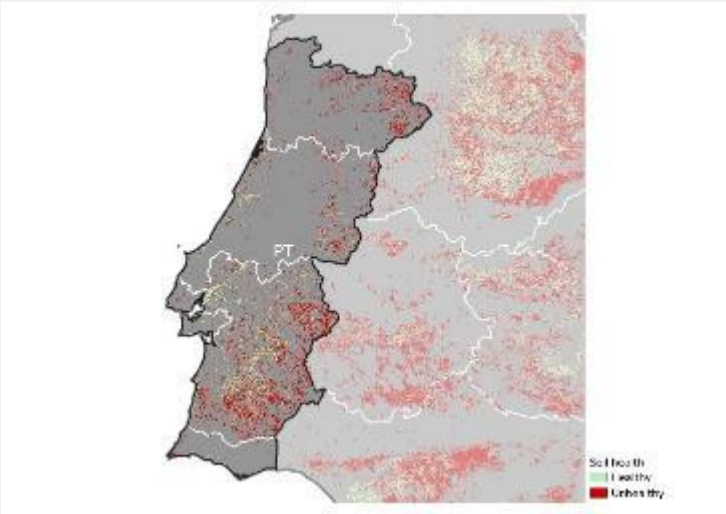


18% area unhealthy

Unsustainable soil erosion (water, wind, tillage, harvest) is the greatest contributor

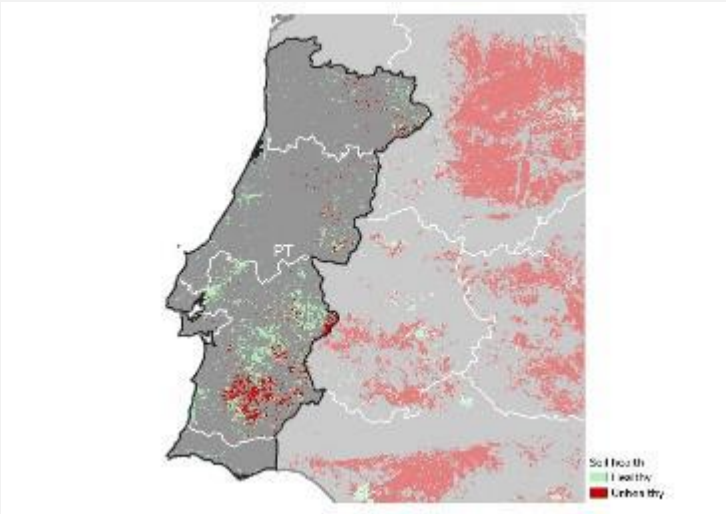


Soil Erosion by Water, Wind, Tillage and Crop in Portugal

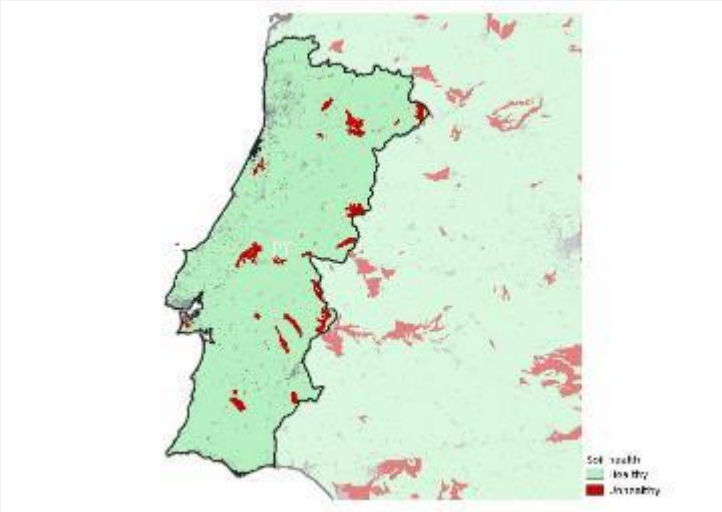


60% of cropland area unhealthy

9% of national territory

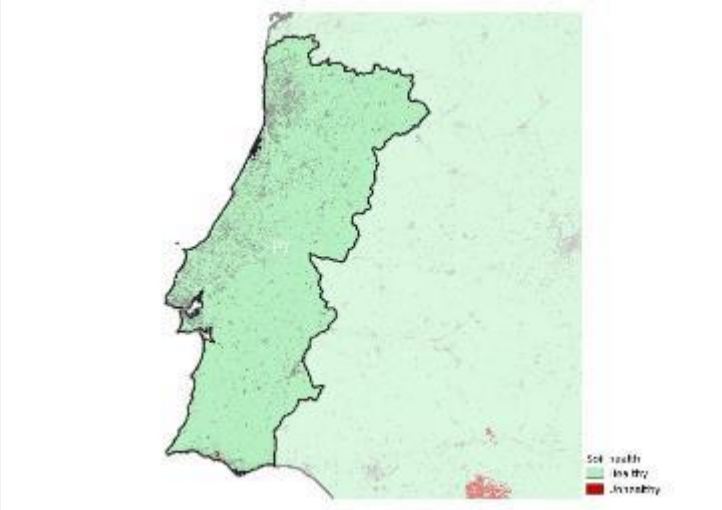
Loss of Soil Organic Carbon in Portugal	
	29% of cropland and grassland area unhealthy (except for land above 1000 m a.s.l.) 3% of national territory

High or Very High susceptibility for topsoil compaction in Portugal



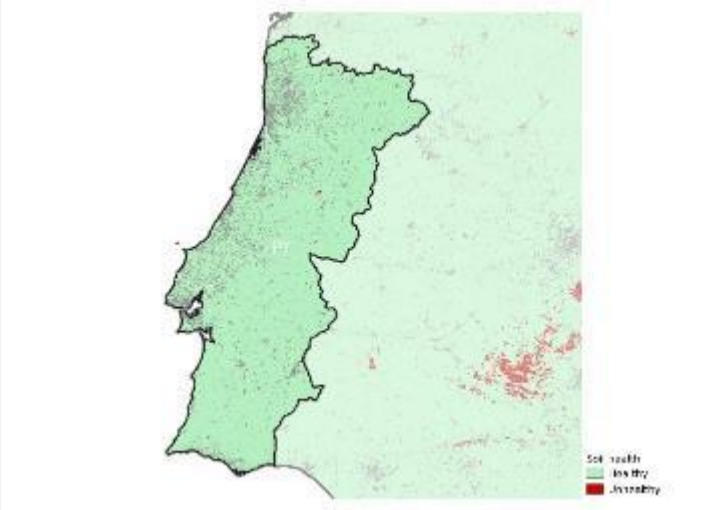
4% of national territory

Contamination by High Copper concentrations in Portugal

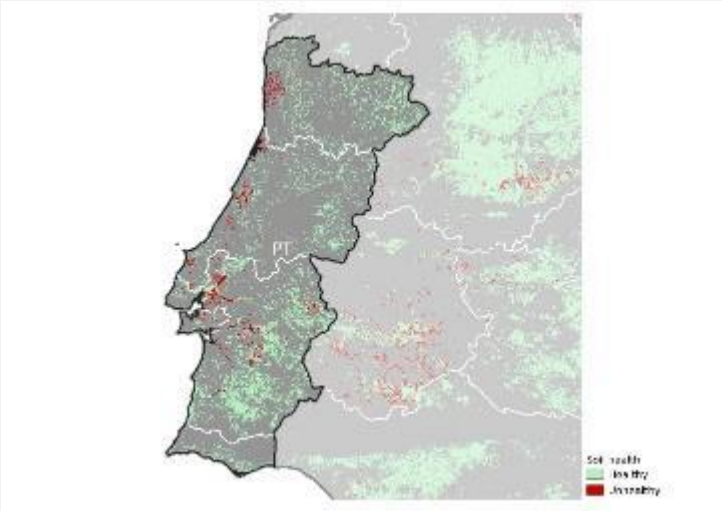


No issue based on current evidence

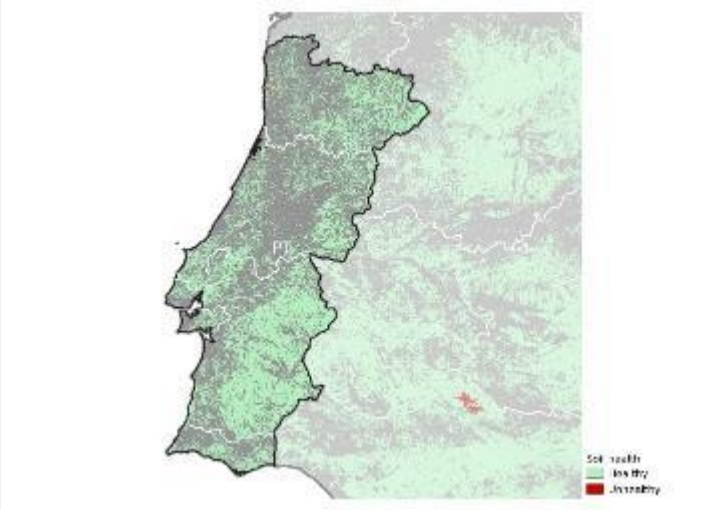
Contamination by High Mercury concentrations in Portugal



No issue based on current evidence

N Excess in Portugal	
	9% of agricultural land area unhealthy (CORINE) 2% of national territory

P Excess in Portugal

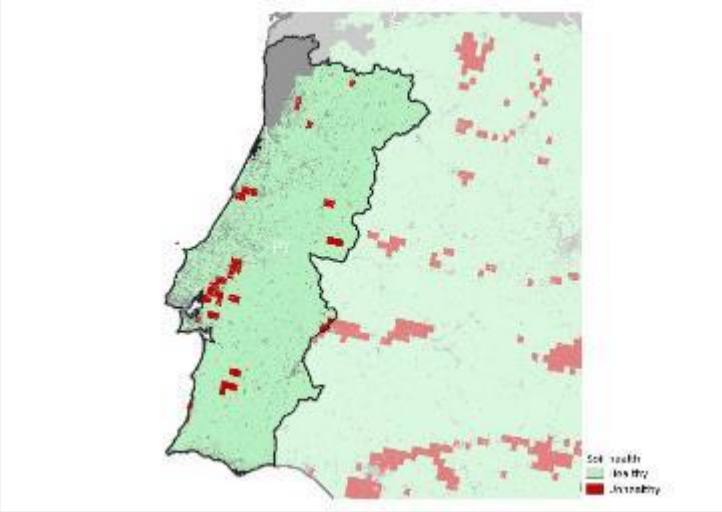


No issue based on current evidence

Peatland under hotspot of agriculture in Portugal

No issue based on current evidence

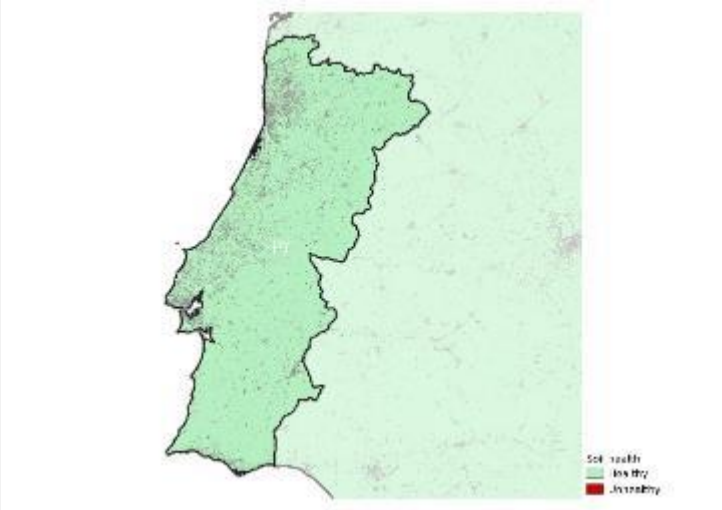
Areas at risk of secondary Salinization in Portugal



3% of Mediterranean biogeographical region unhealthy

3% of national territory

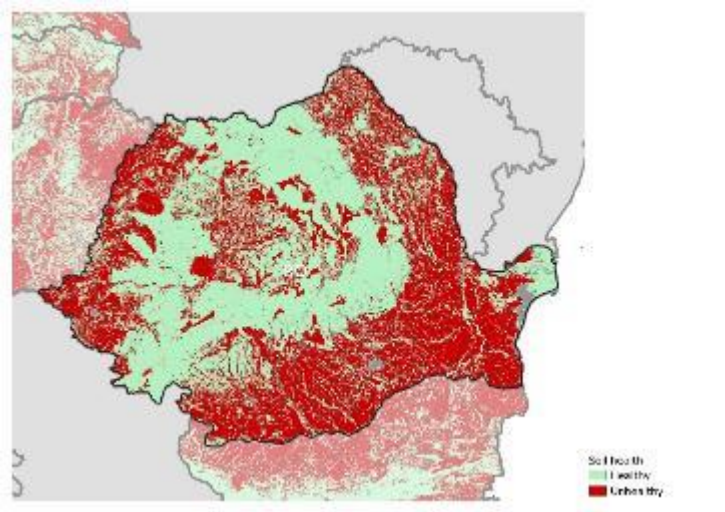
Soil Sealing in Portugal



2% of national territory

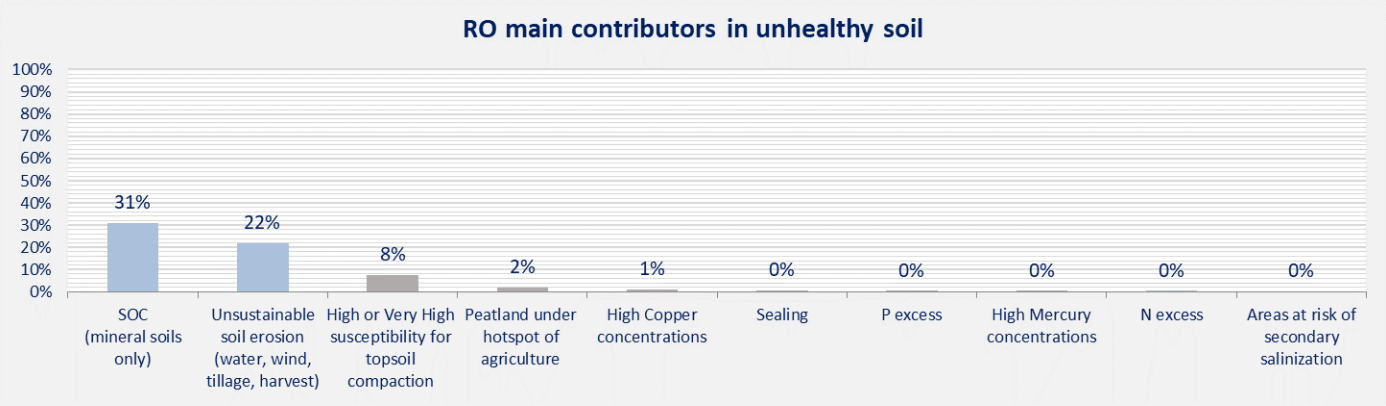
RO

State of soils in Romania

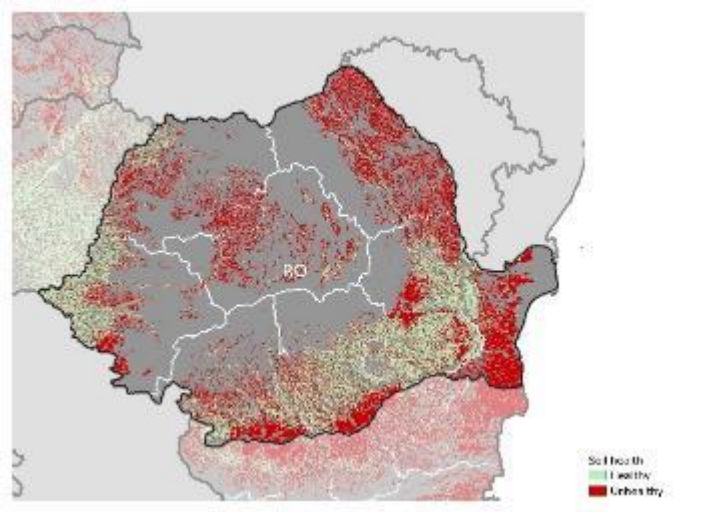


45% area unhealthy

SOC (mineral soils only) is the greatest contributor



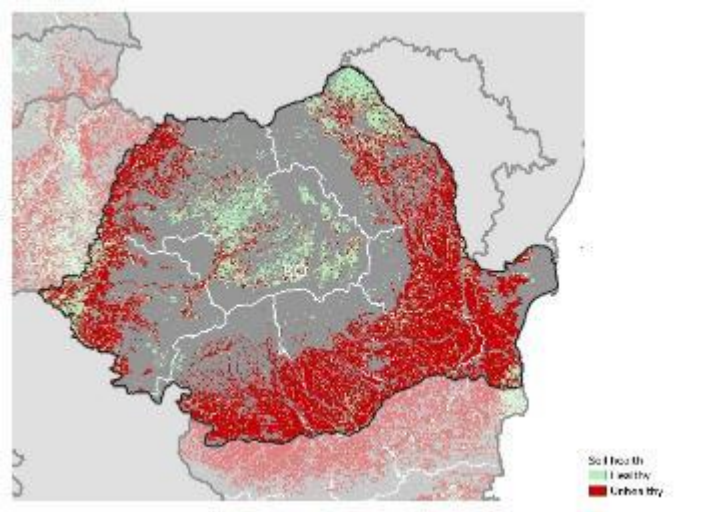
Soil Erosion by Water, Wind, Tillage and Crop in Romania



59% of cropland area unhealthy

22% of national territory

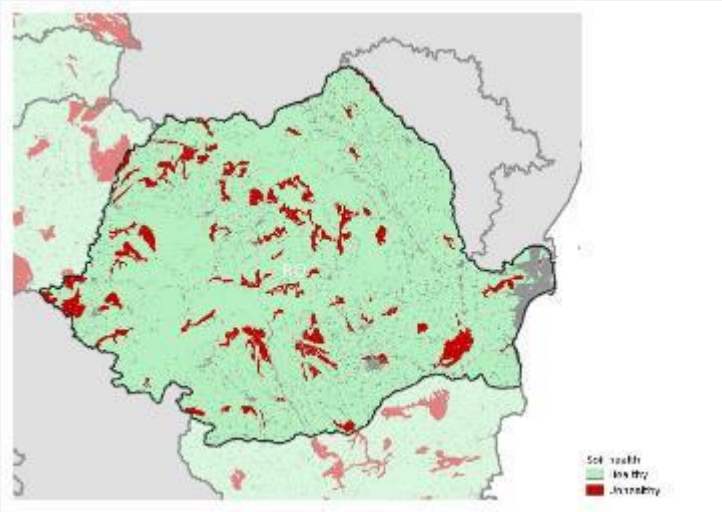
Loss of Soil Organic Carbon in Romania



71% of cropland and grassland area unhealthy (except for land above 1000 m a.s.l.)

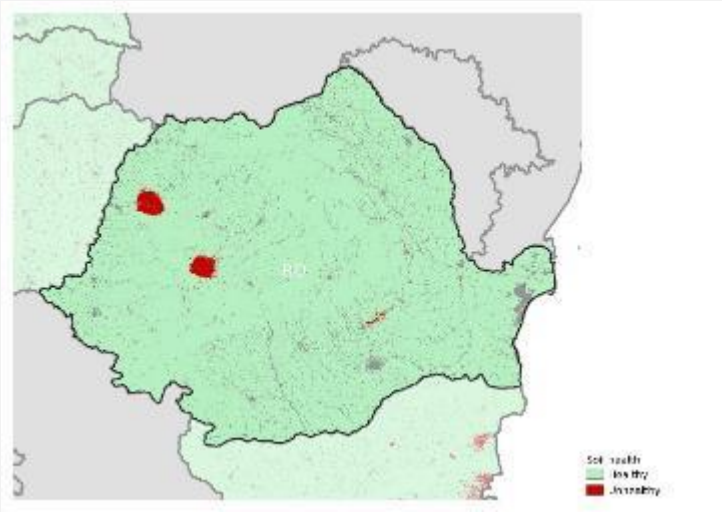
31% of national territory

High or Very High susceptibility for topsoil compaction in Romania



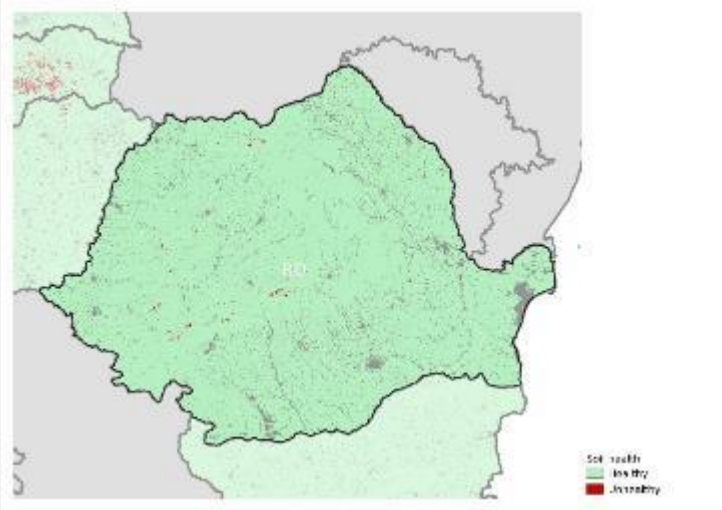
8% of national territory

Contamination by High Copper concentrations in Romania



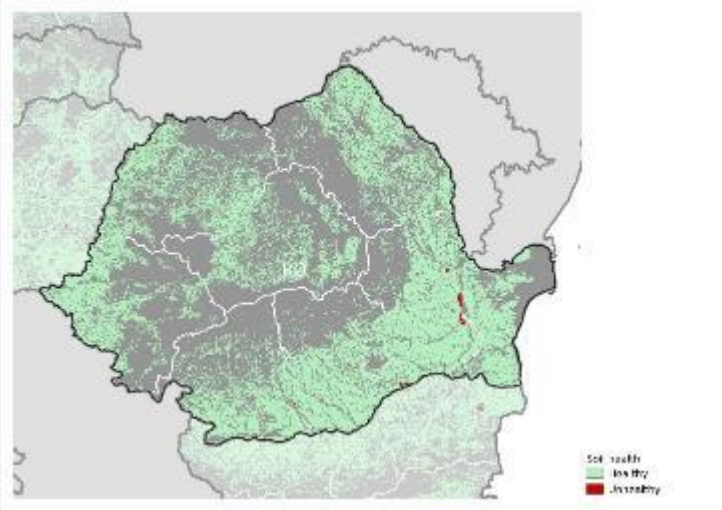
1% of national territory

Contamination by High Mercury concentrations in Romania



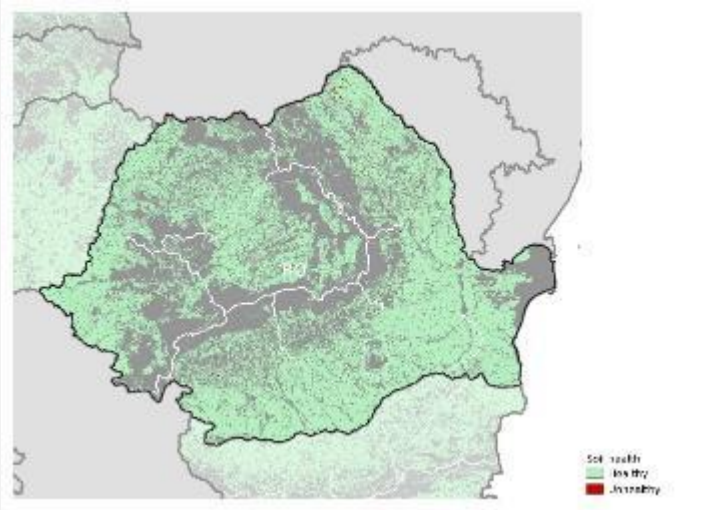
No issue based on current evidence

N Excess in Romania

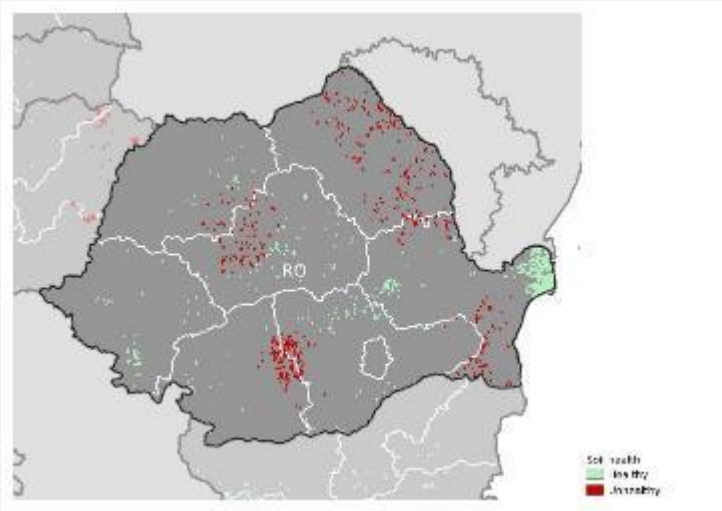


No issue based on current evidence

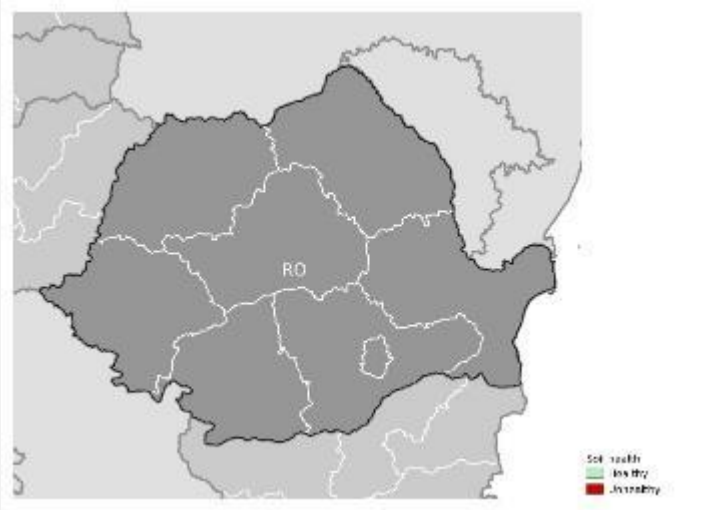
P Excess in Romania



No issue based on current evidence

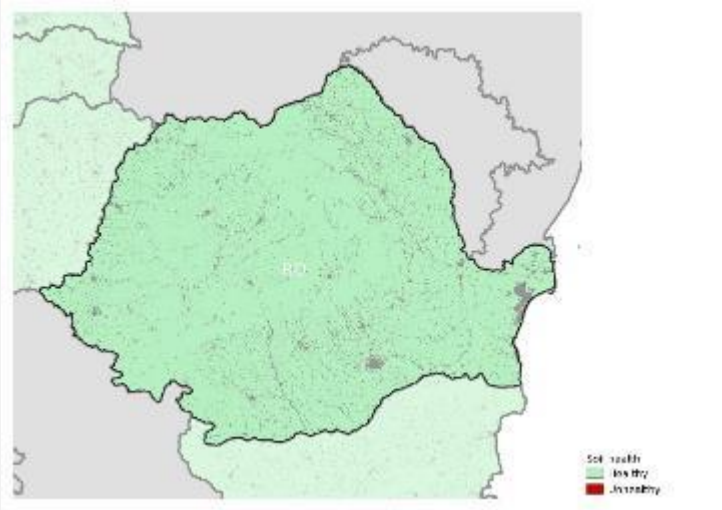
Peatland under hotspot of agriculture in Romania	
	50% of agricultural land area unhealthy (CORINE) 2% of national territory

Areas at risk of secondary Salinization in Romania



No issue based on current evidence

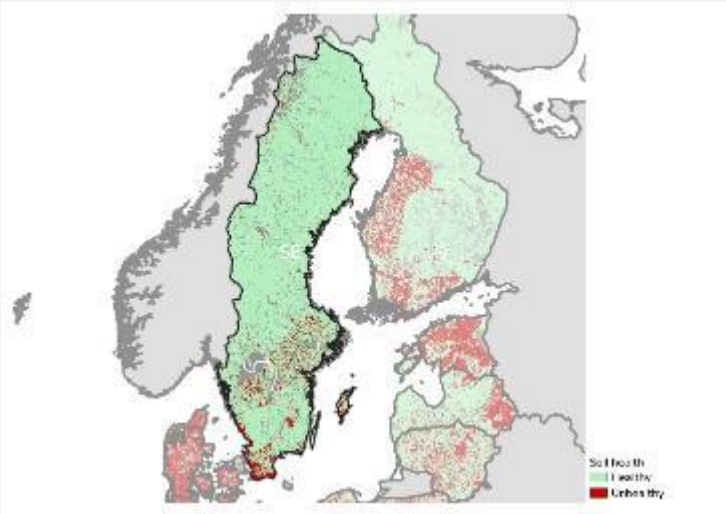
Soil Sealing in Romania



No issue based on current evidence

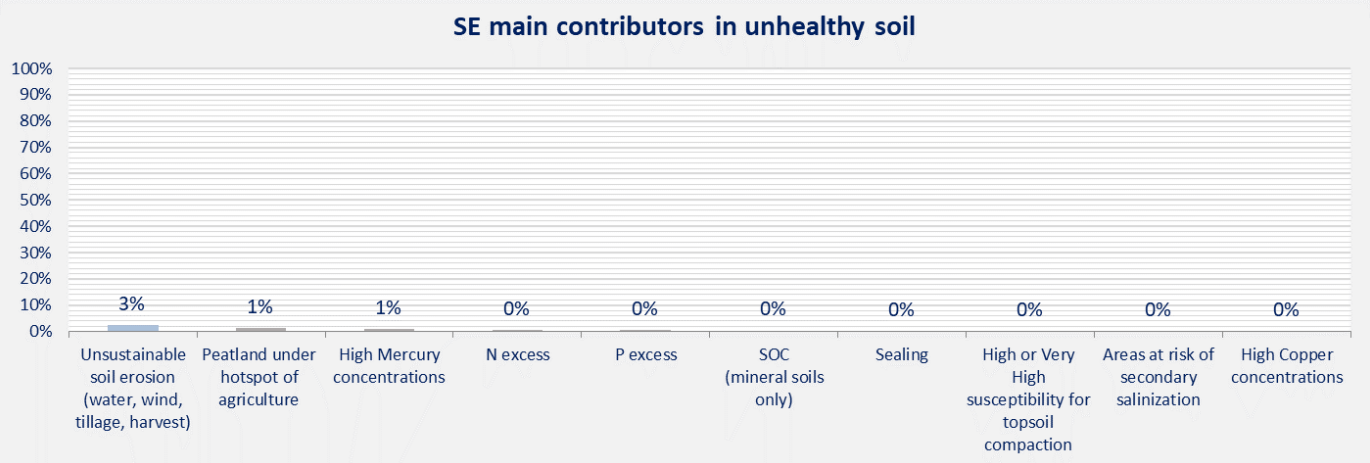
SE

State of soils in Sweden



5% area unhealthy

Unsustainable soil erosion (water, wind, tillage, harvest) is the greatest contributor



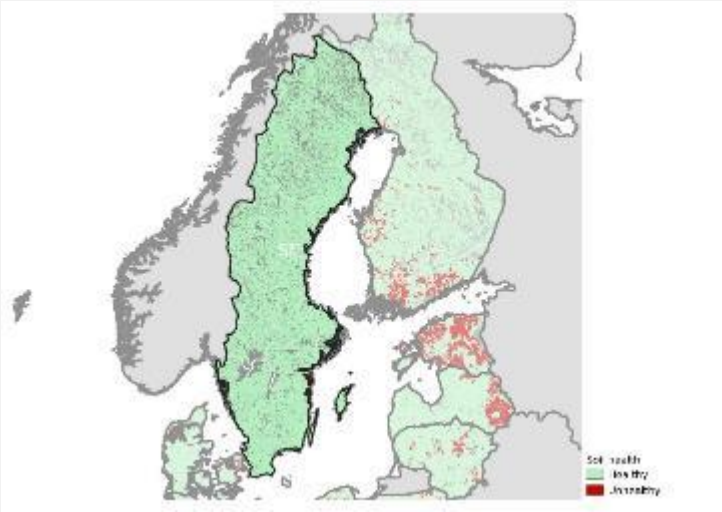
Soil Erosion by Water, Wind, Tillage and Crop in Sweden

37% of cropland area unhealthy

3% of national territory

Loss of Soil Organic Carbon in Sweden	
	7% of cropland and grassland area unhealthy (except for land above 1000 m a.s.l.)
	<1% of national territory

High or Very High susceptibility for topsoil compaction in Sweden



No issue based on current evidence

Contamination by High Copper concentrations in Sweden

No issue based on current evidence

Contamination by High Mercury concentrations in Sweden

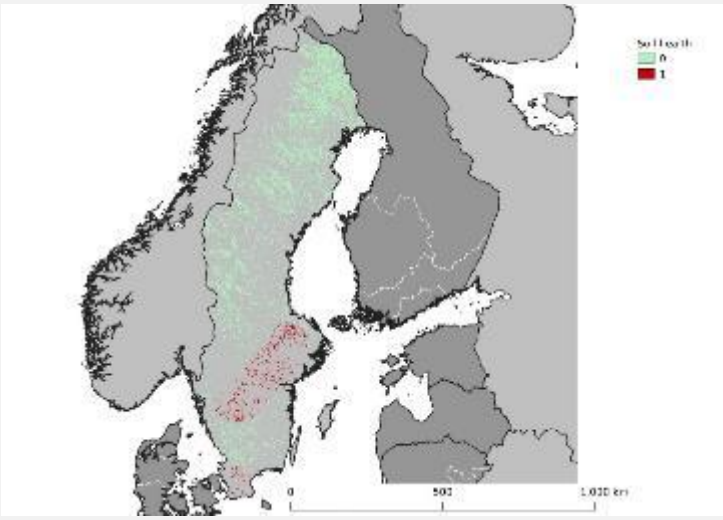
1% of national territory

N Excess in Sweden

No issue based on current evidence

P Excess in Sweden

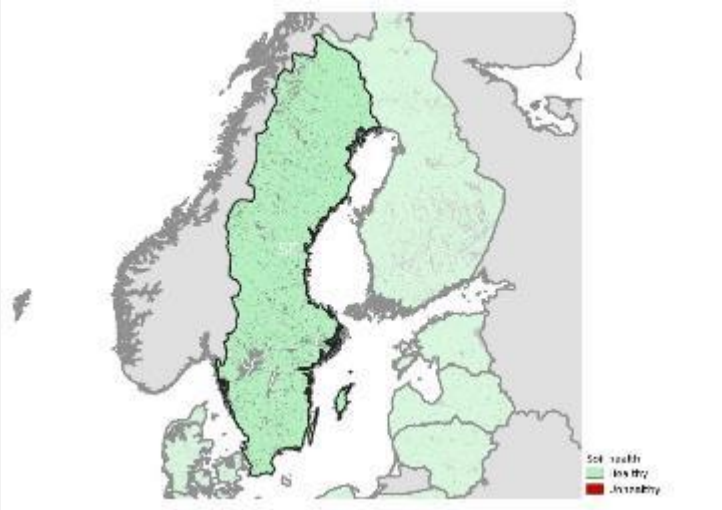
No issue based on current evidence

Peatland under hotspot of agriculture in Sweden	
	6% of agricultural land area unhealthy (CORINE)
	1% of national territory

Areas at risk of secondary Salinization in Sweden

No issue based on current evidence

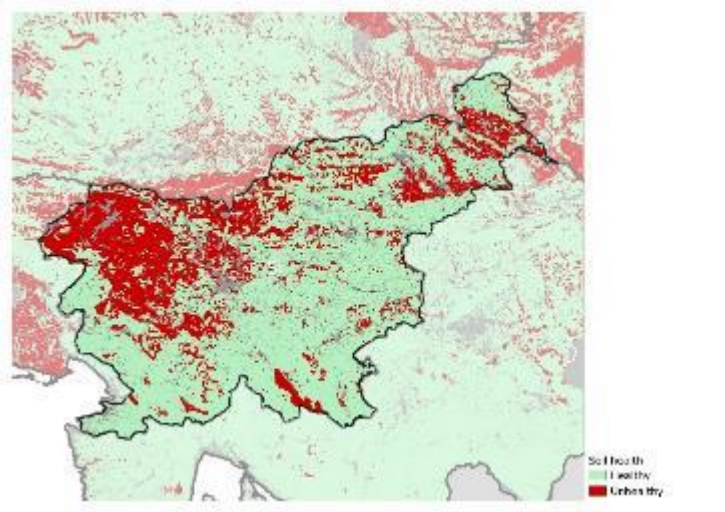
Soil Sealing in Sweden



No issue based on current evidence

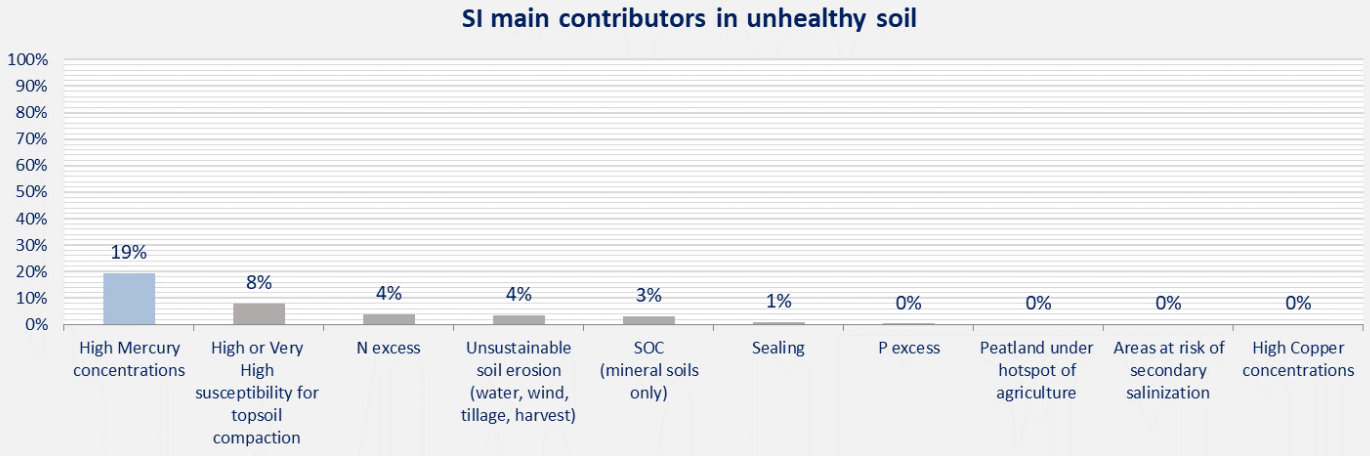
SI

State of soils in Slovenia

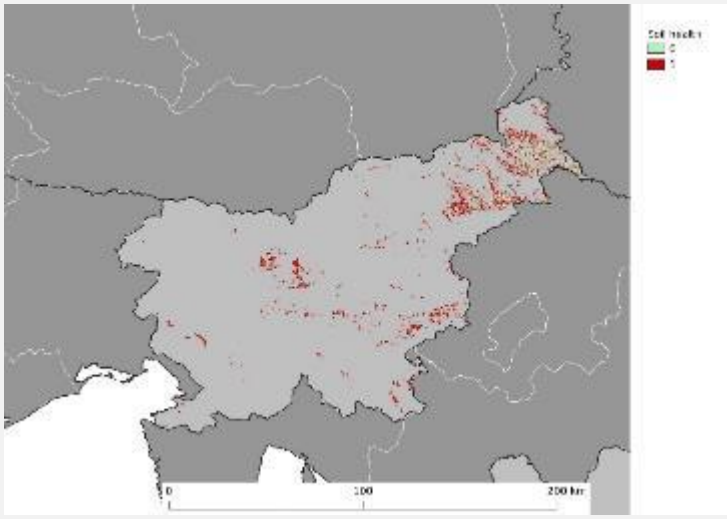


30% area unhealthy

High mercury concentrations are the greatest contributor



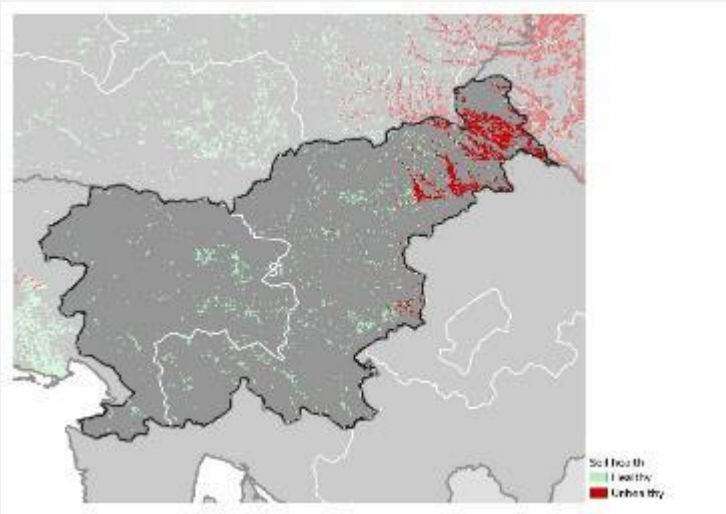
Soil Erosion by Water, Wind, Tillage and Crop in Slovenia



64% of cropland area unhealthy

4% of national territory

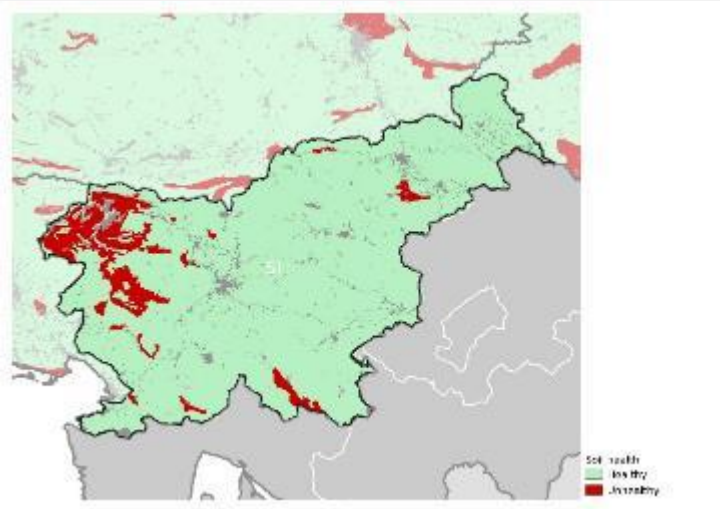
Loss of Soil Organic Carbon in Slovenia



41% of cropland and grassland area unhealthy (except for land above 1000 m a.s.l.)

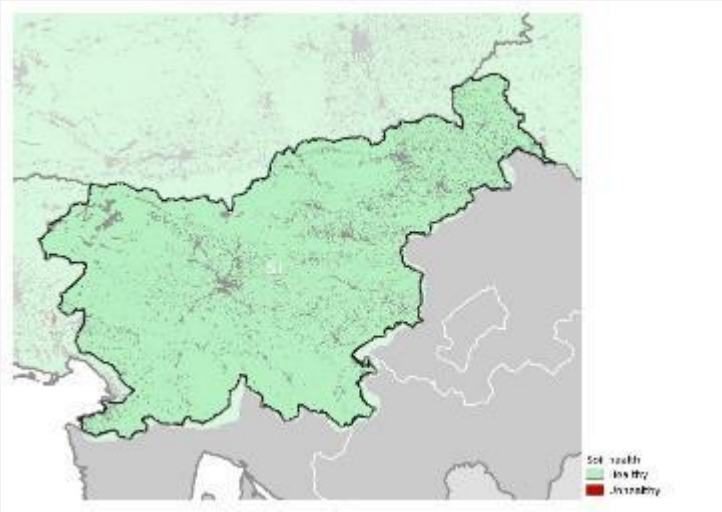
3% of national territory

High or Very High susceptibility for topsoil compaction in Slovenia



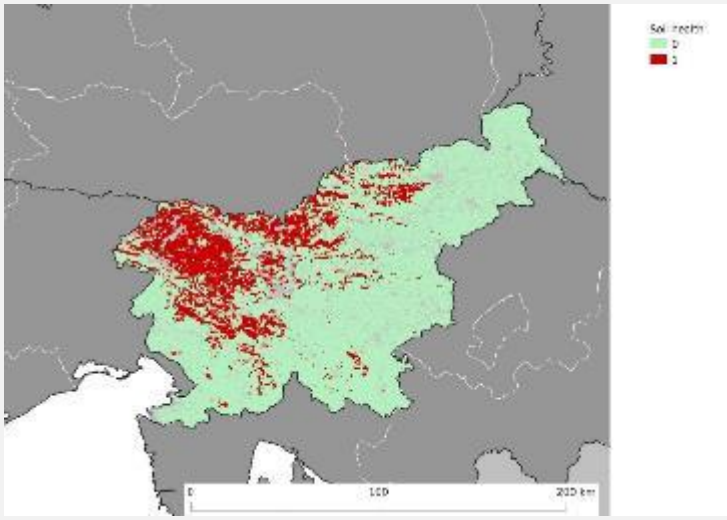
8% of national territory

Contamination by High Copper concentrations in Slovenia



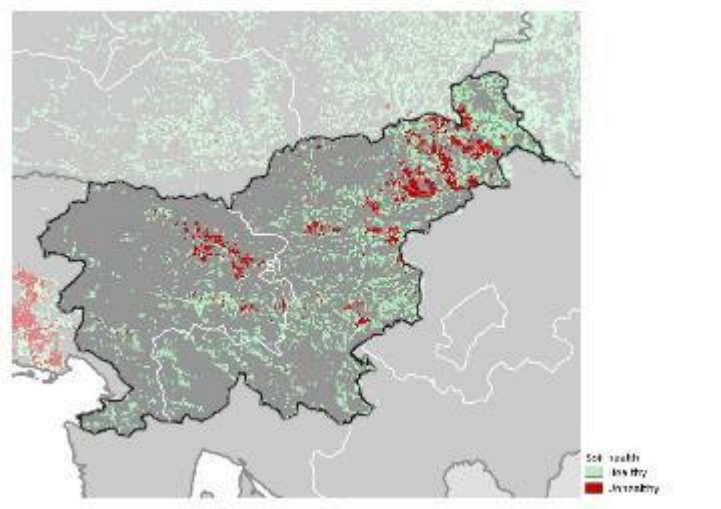
No issue based on current evidence

Contamination by High Mercury concentrations in Slovenia



19% of national territory

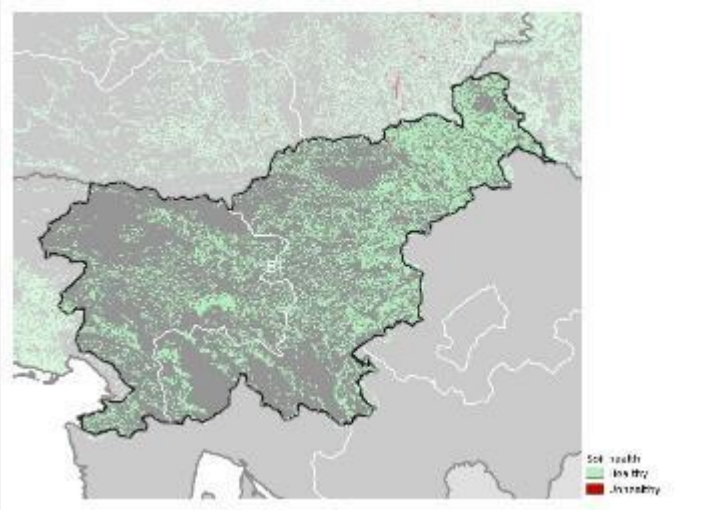
N Excess in Slovenia



18% of agricultural land area unhealthy (CORINE)

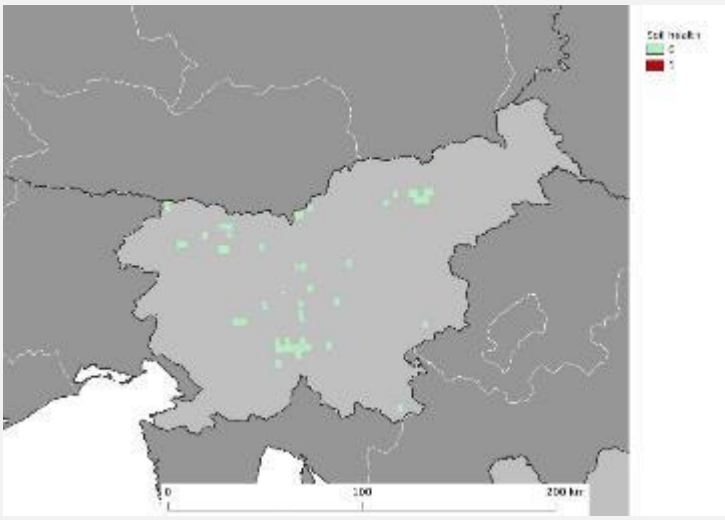
4% of national territory

P Excess in Slovenia



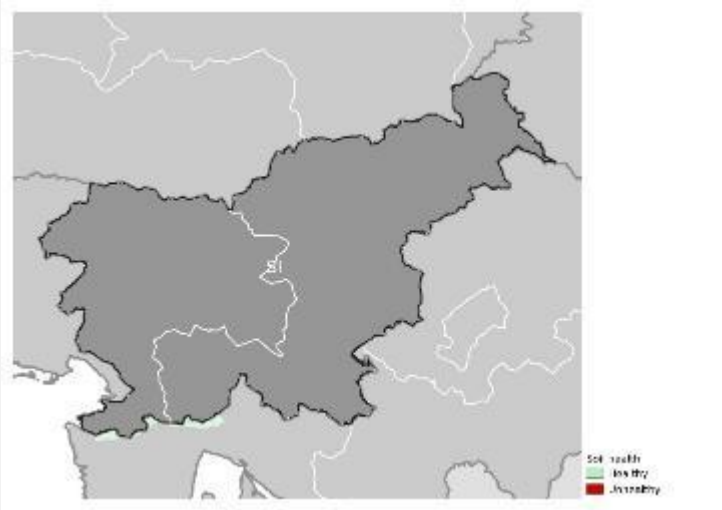
No issue based on current evidence

Peatland under hotspot of agriculture in Slovenia



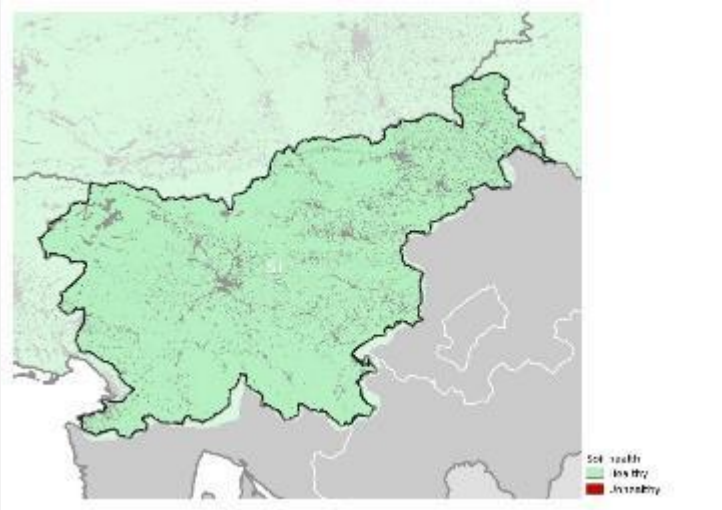
No issue based on current evidence

Areas at risk of secondary Salinization in Slovenia



No issue based on current evidence

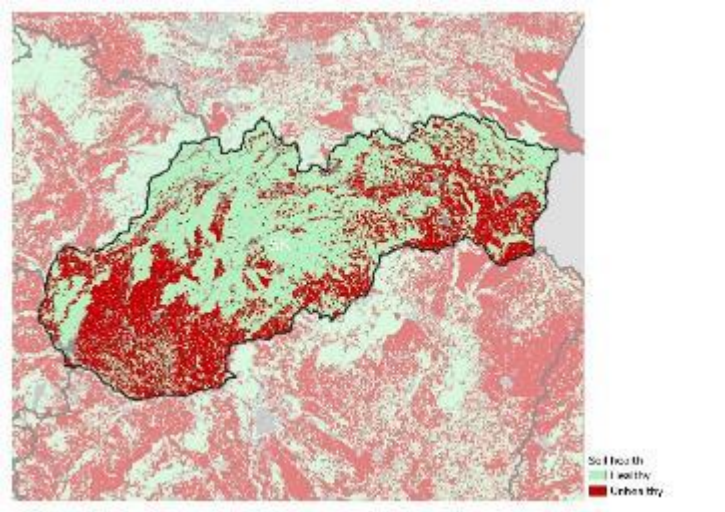
Soil Sealing in Slovenia



No issue based on current evidence

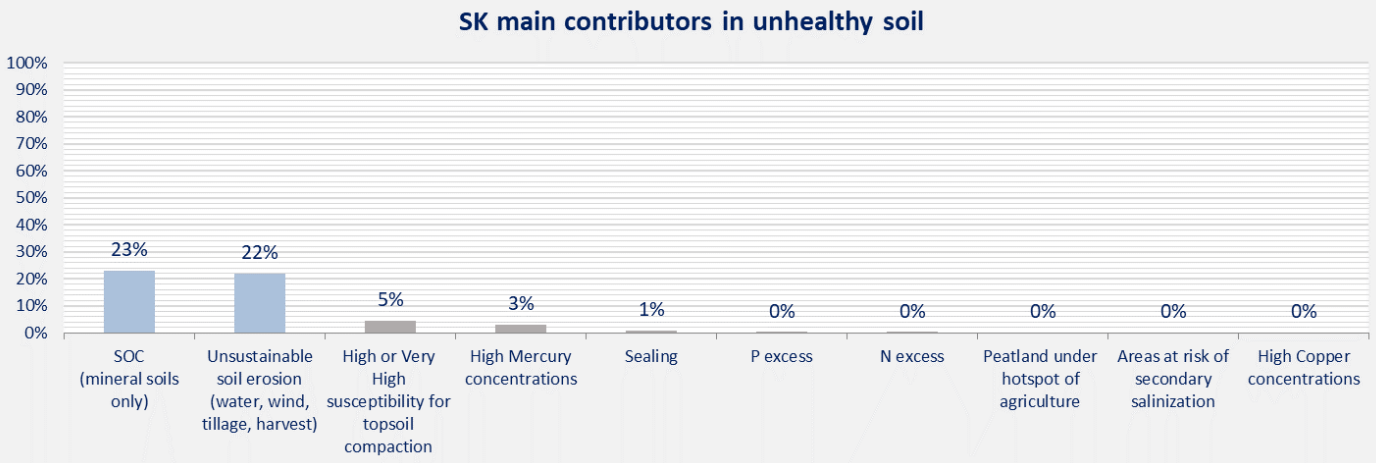
SK

State of soils in Slovakia

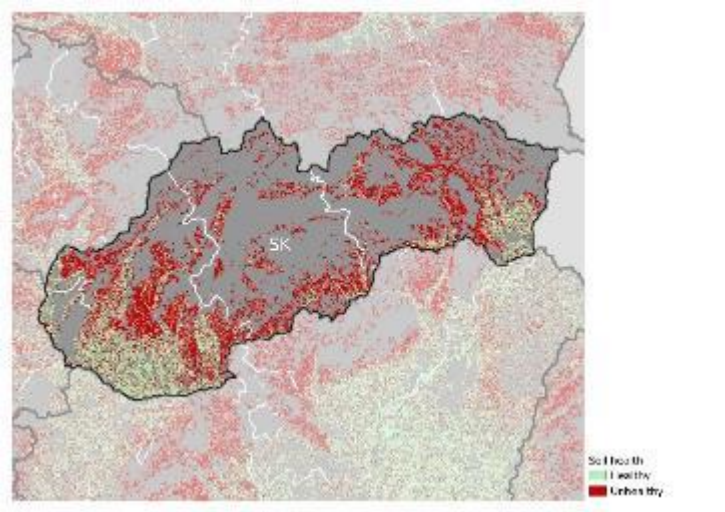


37% area unhealthy

SOC (mineral soils only) is the greatest contributor

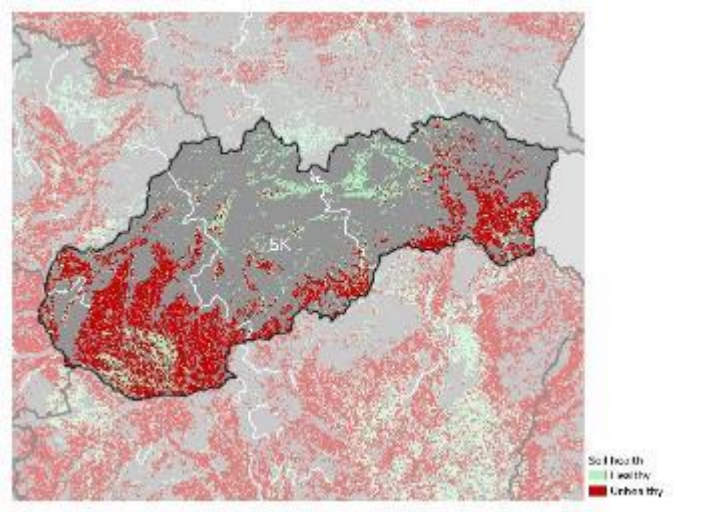


Soil Erosion by Water, Wind, Tillage and Crop in Slovakia

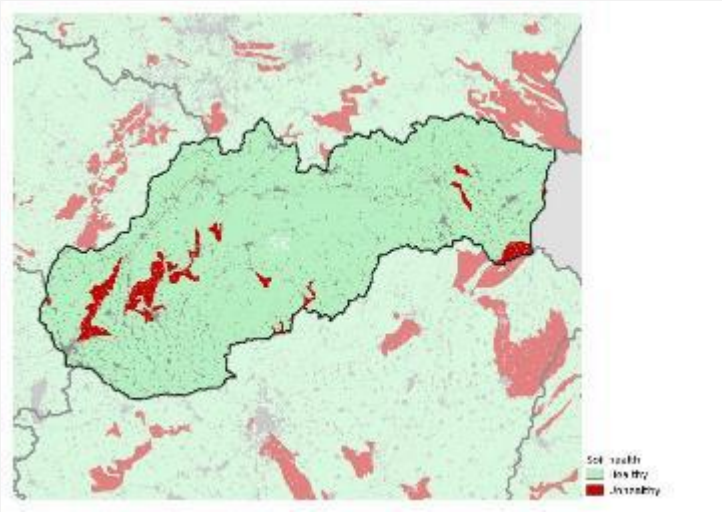


62% of cropland area unhealthy

22% of national territory

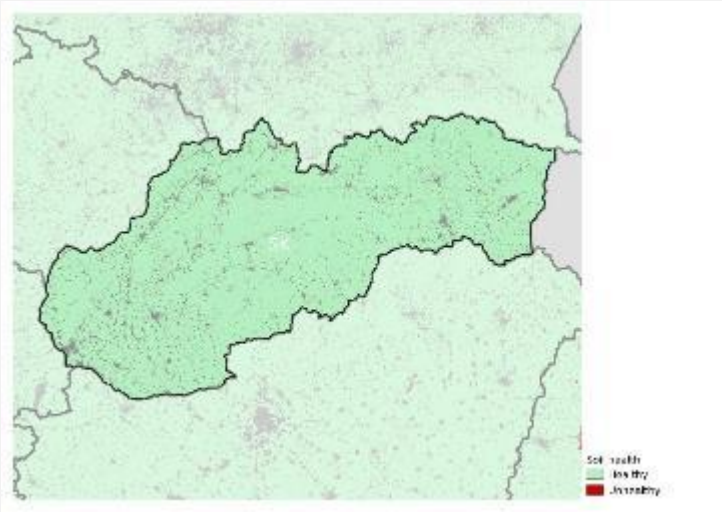
Loss of Soil Organic Carbon in Slovakia	
	68% of cropland and grassland area unhealthy (except for land above 1000 m a.s.l.)
	23% of national territory

High or Very High susceptibility for topsoil compaction in Slovakia



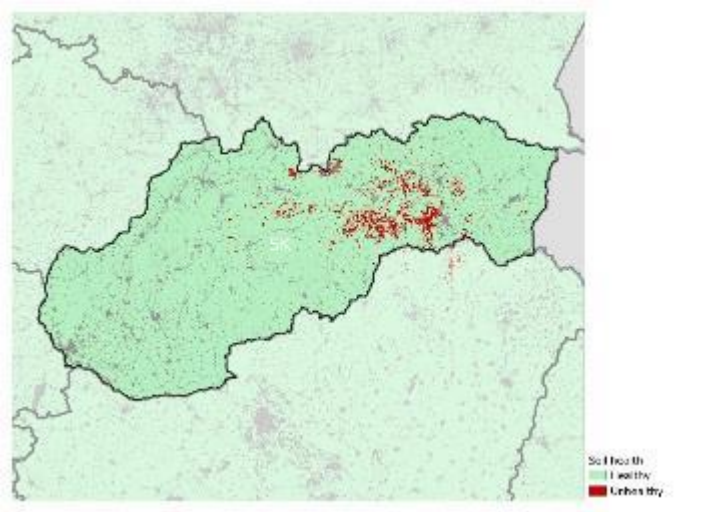
5% of national territory

Contamination by High Copper concentrations in Slovakia



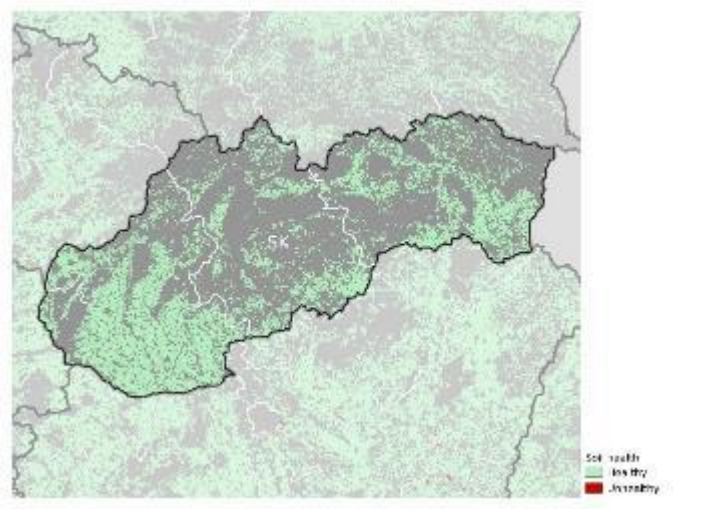
No issue based on current evidence

Contamination by High Mercury concentrations in Slovakia



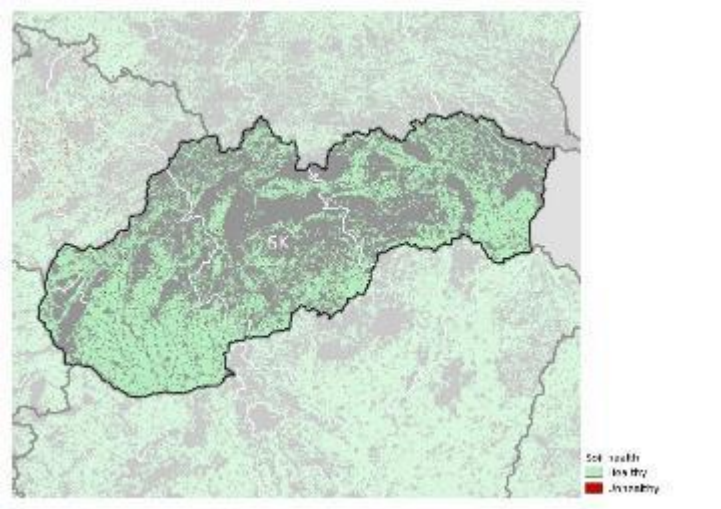
3% of national territory

N Excess in Slovakia



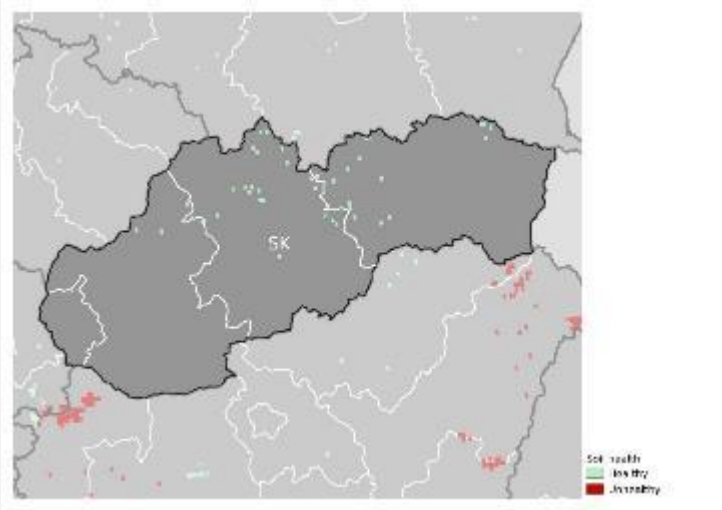
No issue based on current evidence

P Excess in Slovakia



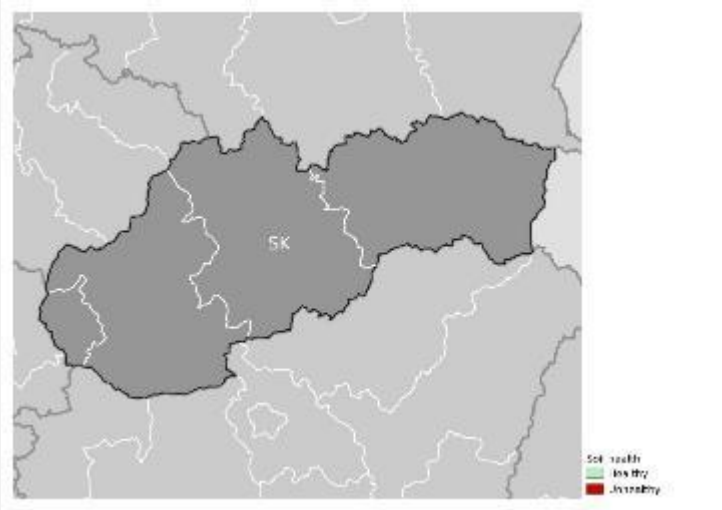
No issue based on current evidence

Peatland under hotspot of agriculture in Slovakia



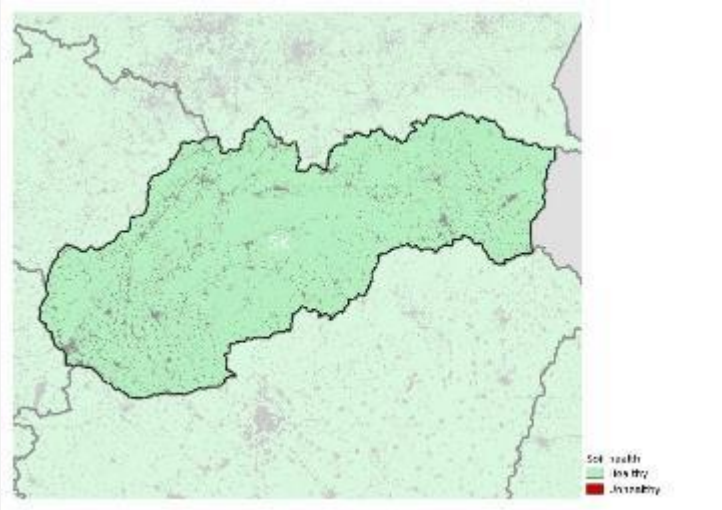
No issue based on current evidence

Areas at risk of secondary Salinization in Slovakia



No issue based on current evidence

Soil Sealing in Slovakia



1% of national territory