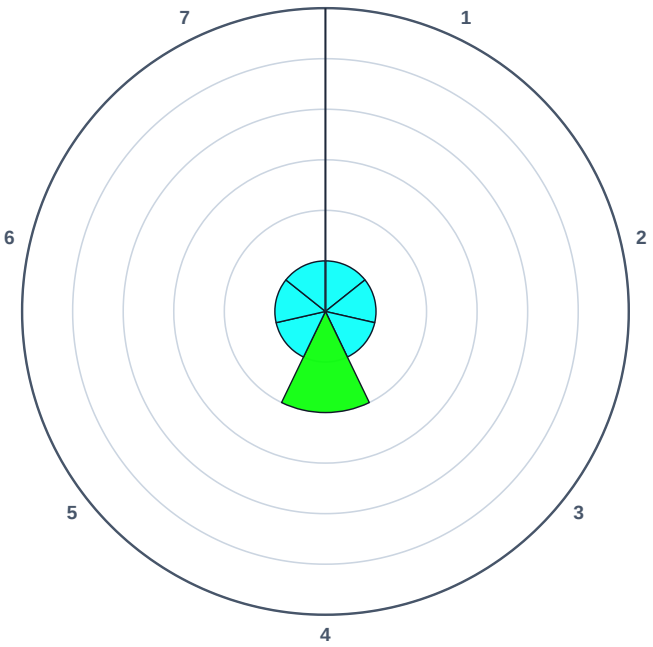
Ecotoxicology Analysis

Before Remediation

Locality:	Falassarna, Crete, Greece, Agricultural field
Bioremediation method:	Before Bioremediation
Sample type:	soil
Collection date:	2023-05-04



Initial soil

ORGANISMS

1. *A. fischeri 15*
2. *A. fischeri 30*
3. *Algae*
4. *Lettuce terestric*
5. *Daphnids*
6. *A. fischeri kinetic 15*
7. *A. fischeri kinetic 30*

CATEGORIES

- **A** Non-toxic
- **B** Low toxicity
- **C** Medium toxicity
- **D** High toxicity
- **E** Very high toxicity
- **F** Extreme toxicity

Category Distribution (% of organism readings)

A: 86% **B: 14%**

Resulting category: **B** Low toxicity

Test Organisms by Type

Consumers:	*Daphnids*
Producers:	*Algae*, *Lettuce terestric*
Destruent:	*A. fischeri 15*, *A. fischeri 30*, *A. fischeri kinetic 15*, *A. fischeri kinetic 30*

Most sensitive organism: Lettuce terestric

Low toxicity — continued monitoring

Samples fall into category B. Inhibition in the undiluted sample is 20–50% and no test organism exceeded the threshold for a higher category.

- It is recommended to track toxicity trends in the following steps.

Ecotoxicity Assessment Criteria

CATEGORY	DESCRIPTION	CRITERIA (ACTIVE RULES)
A	Non-toxic	Undiluted sample: inhibition / stimulation -19.99% – 19.99%
B	Low toxicity	Undiluted sample: stimulation 20% – 50%, or Undiluted sample: inhibition 20% – 50%
C	Medium toxicity	Undiluted sample: stimulation 51% – 90%, or Undiluted sample: inhibition 51% – 90%
D	High toxicity	At 10% sample concentration: inhibition / stimulation -50.99% – 50.99%, or EC50 10% – 50%
E	Very high toxicity	At 10% sample concentration: inhibition 51% – 100%, or EC50 1% – 10%
F	Extreme toxicity	At 1% sample concentration: inhibition 10.01% – 100%, or EC50 0% – 0.99%

Notes: A sample's category is the worst (most toxic) grade reached by any single test organism. Determination of EC50 takes precedence over the inhibition value. In a luminescence bacterial test, an undiluted sample corresponds to a sample concentration of 500 mL/L.

Chemical Risk Assessment

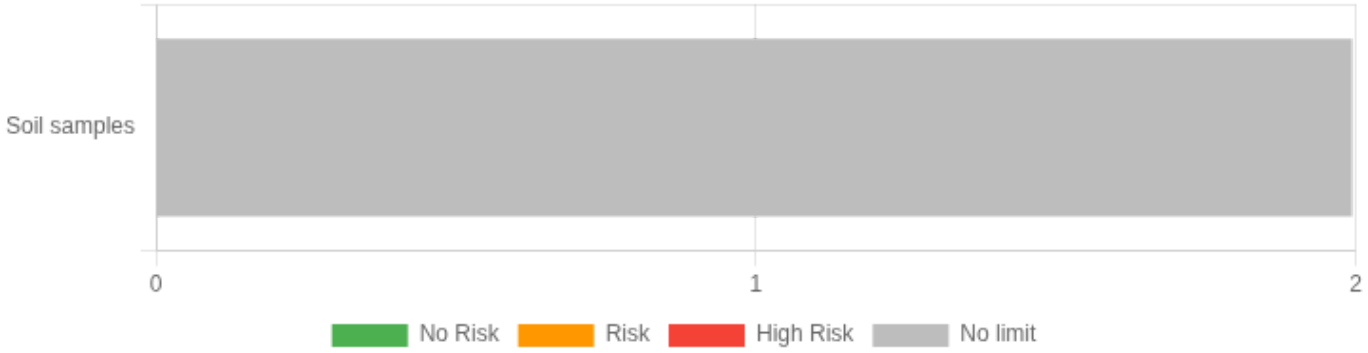
Before Remediation

Locality:	Falassarna, Crete, Greece, Agricultural field
Bioremediation method:	Before Bioremediation
Sample type:	soil
Collection date:	2023-05-04

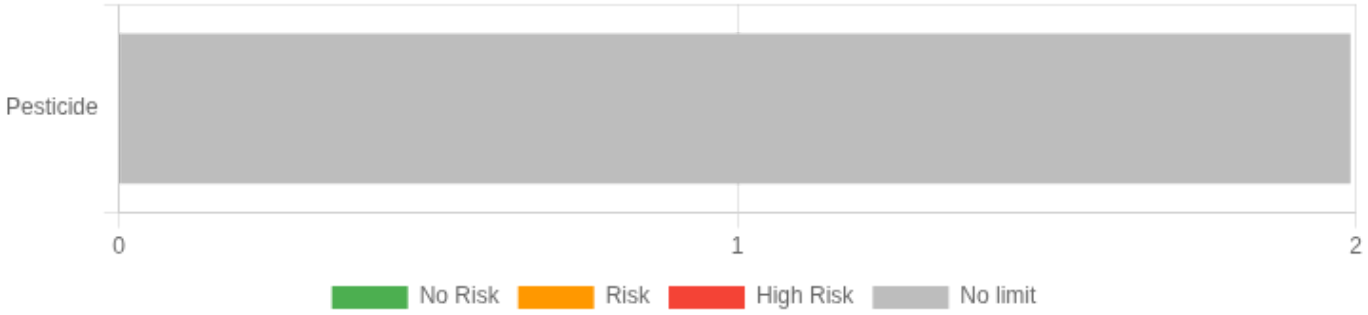
No Risk — at/below limit Risk — over limit (up to 50%) High Risk — more than 50% over limit

No limit — not defined

Risk distribution by sample type



Soil samples



No risk 0% Risk 0% High risk 0% No limit 100%

CLASS	NUMBER	OVER LIMIT	SUM CONCENTRATION
Pesticide	2	0	0.014 mg/kg, 0.049

SAMPLE	COMPOUND / ELEMENT	CLASS	MEASURED	UNIT
Initial soil	**Boscalid**	Pesticide	**0.014**	mg/kg
Initial soil	**Indoxacarb**	Pesticide	**0.049**	—