



# Turabna - Janoub Soil Monitoring

## Pilot Assessment Findings

Nabatieh and Marjaayoun Districts, Lebanon  
August - November 2025

### IN BRIEF:

- **40 Soil Samples Analysed**
- **122 Farmers Interviewed**
- **3 Focus Group Discussions**



## Main Takeaways

- Livelihood loss and environmental destruction, leaves farmers unable to cultivate their land.
- Soil analysis indicates diffuse regional contamination, “hotspots” with elevated metal concentrations
- No substantial evidence of soil contamination uniquely linked to white phosphorus.

## Assessment Overview

In response to the Israeli invasion of Lebanon and the persistent attacks following the November 2024 ceasefire, [Amel Italia](#), [Amel Association International](#), and [Source International](#) have launched a joint initiative. Given that recovery and remediation are now urgent priorities, this assessment seeks to enhance local knowledge and awareness, by providing reliable, data-driven findings.

Turabna is a project conducted in collaboration with:



# 🚧 Destruction, displacement and loss of livelihoods

➡️ **75%** of assessed farmers were displaced following the Israeli attack on Southern

🌾 **46%** of assessed farmers were directly affected by military activities

✈️ Of the directly affected, **96%** reported having been hit by at least one airstrike.

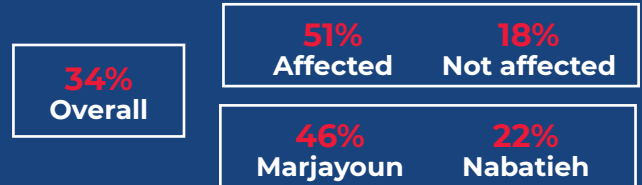
🐄 **49%** decrease across affected farmers in number of livestock owners at the time of data collection.

☢️ **95%** of farmers reported not having analysed the soil and **81%** not having received a UXO assessment

📍 Main reported elements on land before October 2023\*:

<b>78%</b> Olive Trees	<b>56%</b> Crops
<b>48%</b> Fruit Trees	<b>43%</b> House
<b>16%</b> Water Well	<b>11%</b> Greenhouse

🌾 Farmers reporting being unwilling or unable to cultivate their land at the time of data collection:



## 🌿 Environmental toll



### FIRES

**39%** of farmers in Marjayoun reported a **fire occurring** in their land. **20%** across overall farmers.



### TREES DESTRUCTION

Among those directly affected, **88%** reported that their **olive trees were damaged or destroyed**. **25%** reported **vegetation not recovering** after being burned.



### DRINKING WATER\*

**75%** of farmers reported **bottled water** as main source of drinking water. **17%** reported water trucking.



### IRRIGATION WATER\*

**60%** of farmers reported using **water trucking** as main source to irrigate their field, **37%** reported relying on **rain**.

*"Our land is shared. We share the same air, the same water, and the same molokhia that we eat together"*

- Farmer from Nabatieh

## ☢️ Focus on soil contamination

Soil sample analysis revealed a clear connection between warfare and contamination. These findings demonstrate 24 years of sustained land degradation and point to a 'legacy of war-related pollution that extends beyond the most recent conflict and impacts the entire study area.' Identified 'hotspots' further highlight areas where contamination levels were significantly exceeded.

2001 - 2025 Average increase of heavy metals directly associated with warfare concentration:

<b>+ 4.4 TIMES</b> COPPER	<b>+ 4.6 TIMES</b> ANTIMONIUM
<b>+ 5.3 TIMES</b> ZINC	<b>+ 4.0 TIMES</b> LEAD

### WHITE PHOSPHORUS & DEPLETED URANIUM

No traces of environmental impacts directly attributable to white phosphorus use was found and no evidence of depleted uranium use was detected in the analysed samples.

\*Multiple choice question, results might not add up to 100%

## Methodology and limitations

Findings in this factsheet are based on data collected through purposive sampling. **Soil samples were collected between 12 and 20 August 2025** in areas identified through the triangulation of georeferenced airstrikes and confirmed white phosphorus strikes, specifically focusing on locations accessible through UNIFIL and Lebanese Army facilitation. **Samples were taken using international standard procedures by an accredited biologist from Source International.** The full methodology is available in the technical report.

**Key informant interviews were conducted remotely by phone using a structured questionnaire on KoboCollect.** The farmers interviewed were randomly selected by district from lists of participants registered in previous Amel Association International programs or trainings. **Data collection occurred between August and November 2025.** The three focus group discussions (FGDs) included farmers from both the Marjaayoun and Nabatieh districts, consisting of individuals who had been previously interviewed and consented to participate in a group discussion.

As Southern Lebanon remains under the direct threat of Israeli airstrikes and violations, data collection and field visits were limited to areas accessible through humanitarian coordination systems. Access to areas closer to the border and to territories currently under Israeli occupation was therefore impossible. **Given the purposive nature of this assessment, the findings presented should be considered indicative rather than exhaustive.**

### **ABOUT AMEL ITALIA**

Amel Italia is the Italian branch of Amel Association International, a Lebanese organization working on the frontline in the defense of the most vulnerable communities in Lebanon. Amel Italia contributes to their efforts in Lebanon by co-developing environmental interventions. In Italy, Amel Italia works on mainstreaming environmental action through science in communities affected by environmental challenges.



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