NARCOVIEW: DETECTION AND ANALYSIS OF NARCOTIC WASTE DUMPS

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PROJECT GOAL

Strengthen the fight against drugs-related environmental crime by ***gathering, processing and sharing intelligence by means of satellite- and drone-based remote sensing technology, Data Science and AI.***

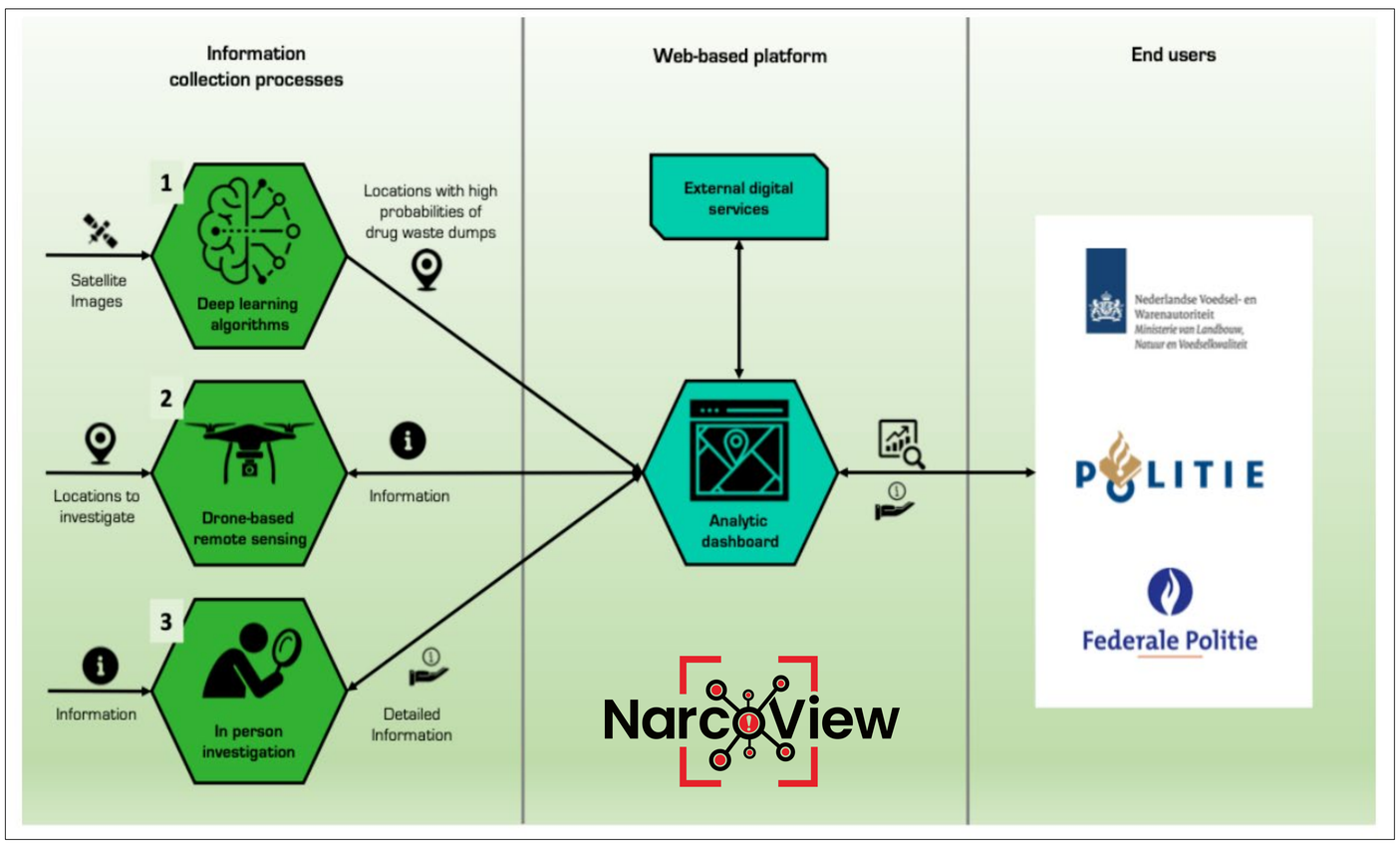

Figure 1: Conceptual representation of the platform

Objectives

Enhance Monitoring: Use remote sensing data and machine learning to detect and monitor environmental crime related to synthetic drug waste.

Develop Methodologies: Formulate and test methodologies for detecting waste dump sites and polluted crop fields.

Integrate into Platform: Incorporate successful methods into a web-based platform for law enforcement and state agencies.

Scenario Development and Detection Techniques

Scenario 1: Waste dumped in agricultural parcels

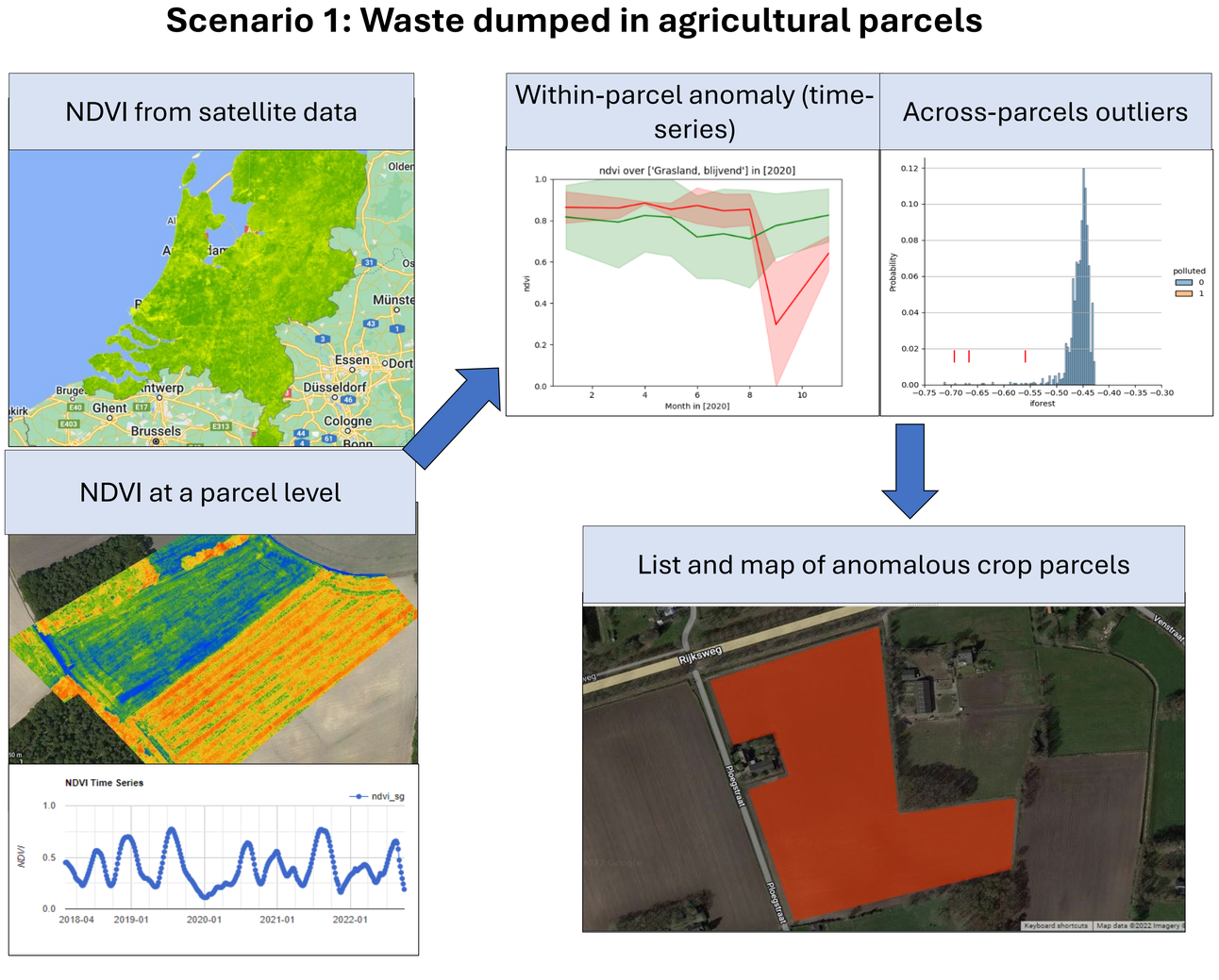

Figure 2: Conceptual workflow for detection of anomalous crop fields

Scenario 2: Classic dumps (jerry cans, barrels, IBC)

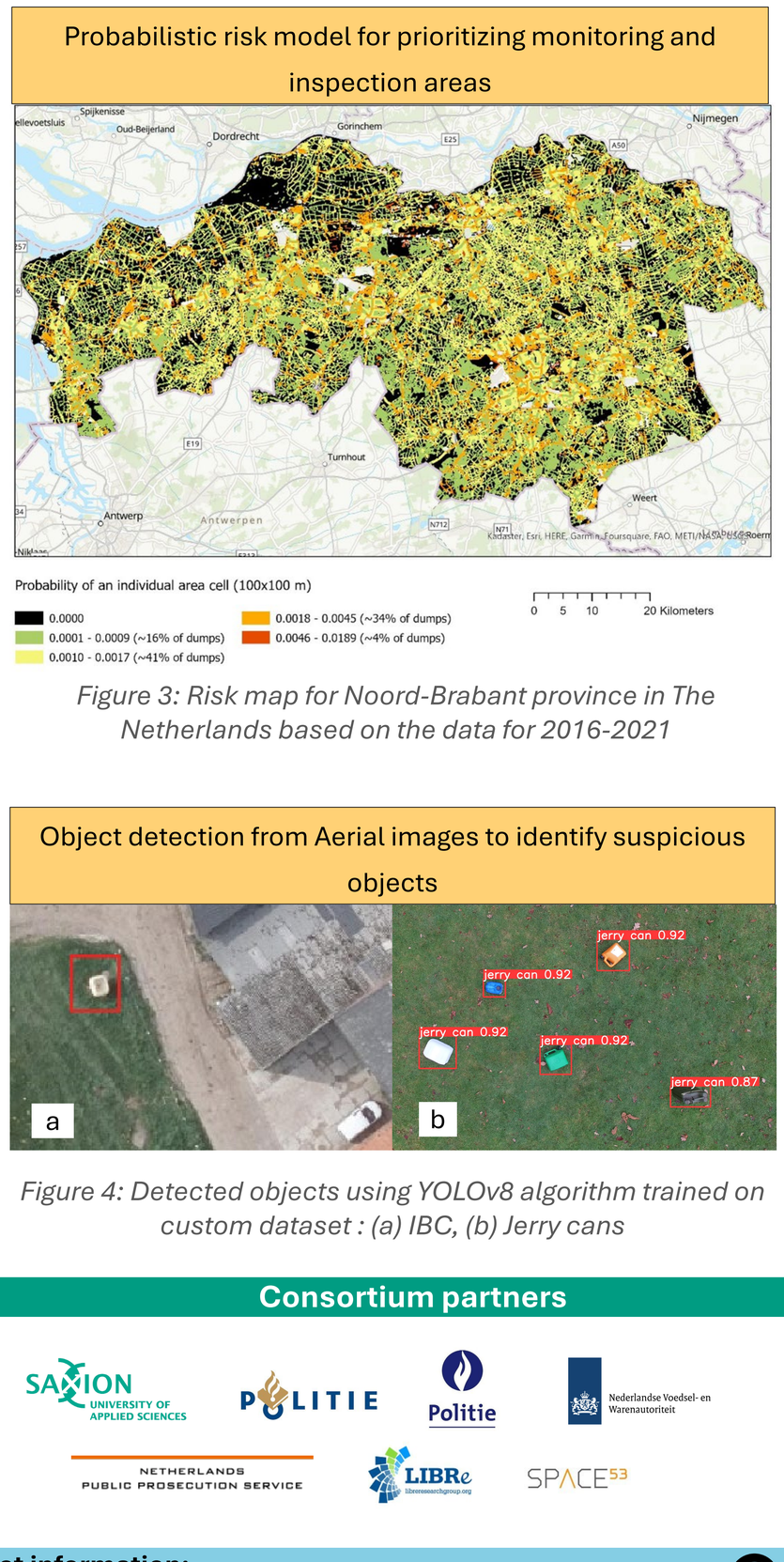

Figure 3: Risk map for Noord-Brabant province in The Netherlands based on the data for 2016-2021

Figure 4: Detected objects using YOLOv8 algorithm trained on custom dataset : (a) IBC, (b) Jerry cans

Closer inspection using UAV

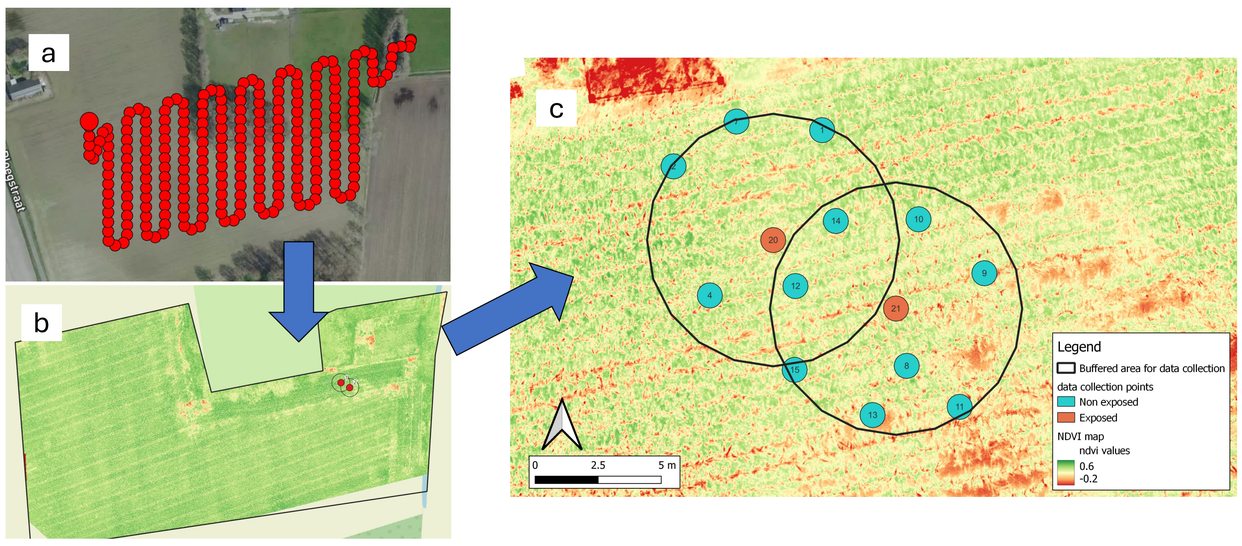

Figure 5: (a) Flight plan, (b) NDVI of crop parcel and (c) close up of area of interest with sample points

Consortium partners

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