

# CITIZEN SCIENCE SDG CONFERENCE

14.–15.10.2020

Knowledge for Change: A decade  
of Citizen Science (2020–2030)  
in support of the Sustainable  
Development Goals

# LANDSENSE

## Coupling citizen science and earth observation data to promote environmental monitoring

**Inian Moorthy**, Linda See, Gebhard Banko, Sofia Capellan,  
Vladimir Mrkajic, Ana-Maria Olteanu-Raimond, Elizabeth A.  
Schrammeijer, Michael Schultz, Matej Batič, Steffen Fritz

**Center for Earth Observation & Citizen Science**  
**International Institute for Applied Systems Analysis**



@LandSense  
Landsense.eu

# Motivation

- Improving the quality of Earth Observation (EO)-based Land Use & Land Cover (LULC) maps/products
- Transforming the conventional top-down approach to EO-based monitoring
- Leveraging citizen science and crowdsourcing methods to engage people in environmental monitoring & stewardship

➔ <https://zenodo.org/communities/landsense/>

## LandSense 2016 – 2020

 **18 partners**

 **9 countries**

 **20+ journal publications**

 **70+ dissemination events**

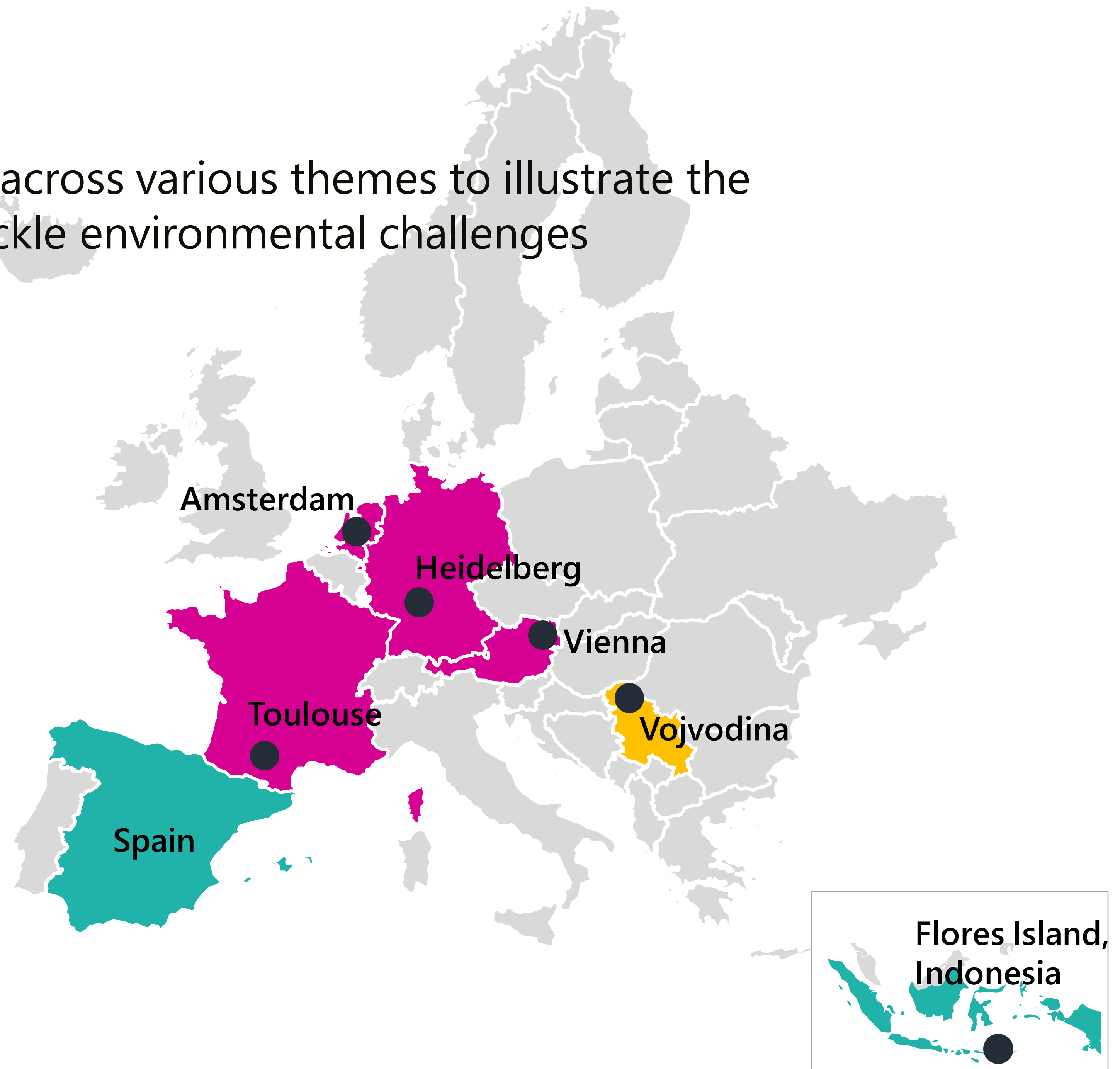
 **5+ open access datasets**



The project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement no 689812

# LandSense Pilots

LandSense technologies are deployed across various themes to illustrate the potential of citizen observatories to tackle environmental challenges



# Amsterdam Rembrandt Park



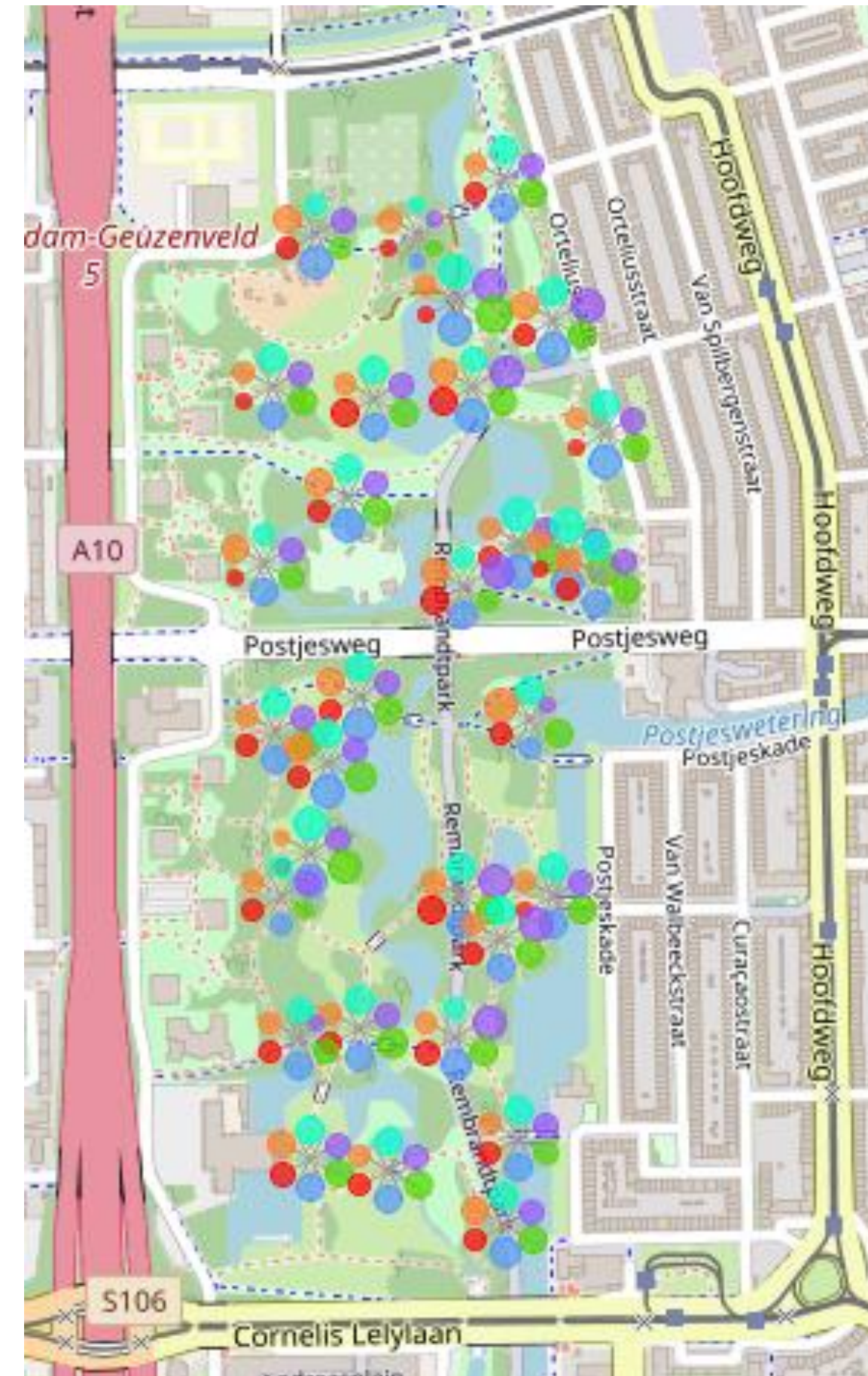
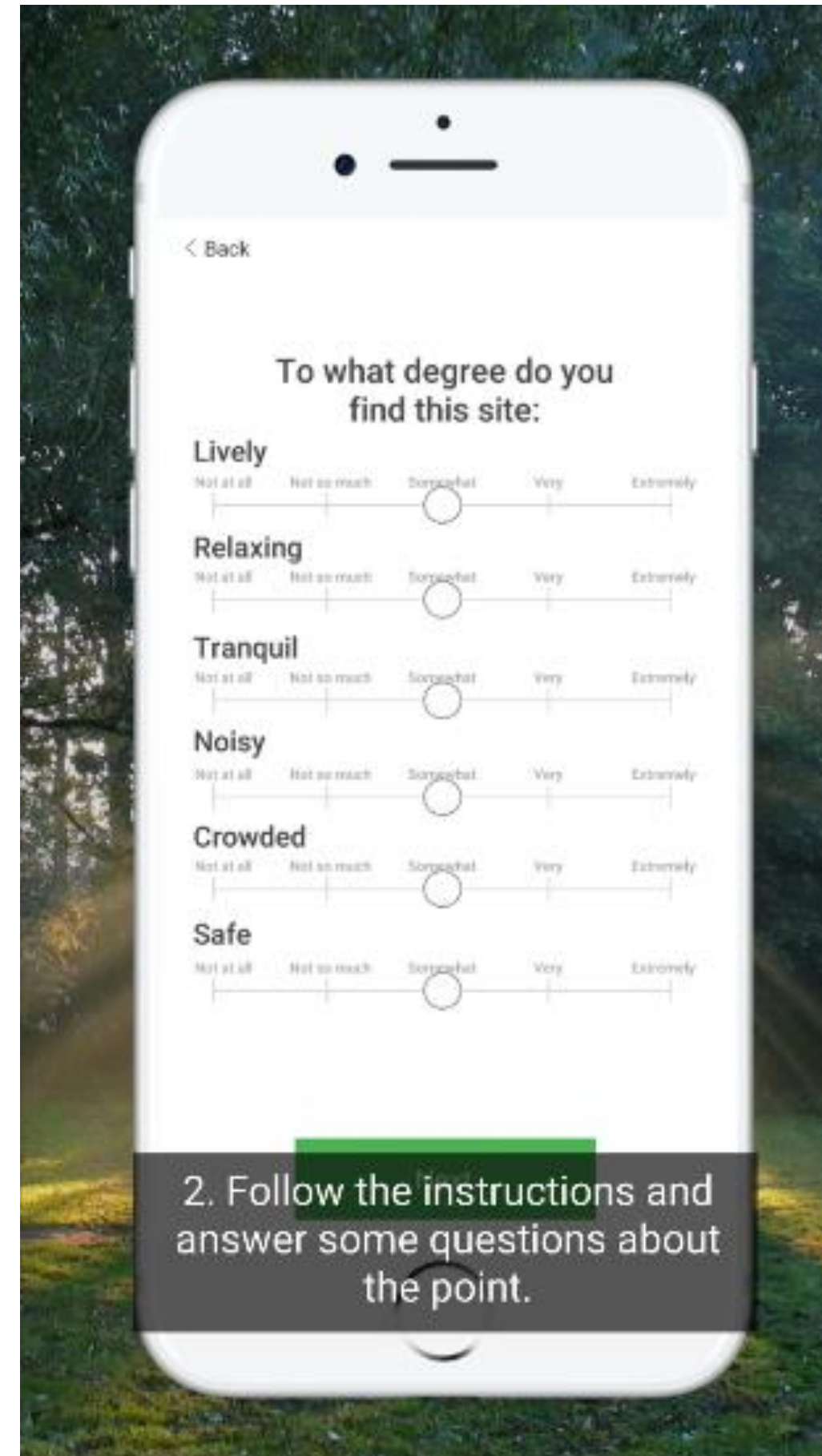
Promoting sustainable urban development with citizen insights on the perceptions of green and open spaces



**125+**  
participants



**375+**  
observations



Feeling

- Tranquil
- Lively
- Relaxing
- Safe
- Crowded
- Noisy



# Toulouse – LULC Dynamics

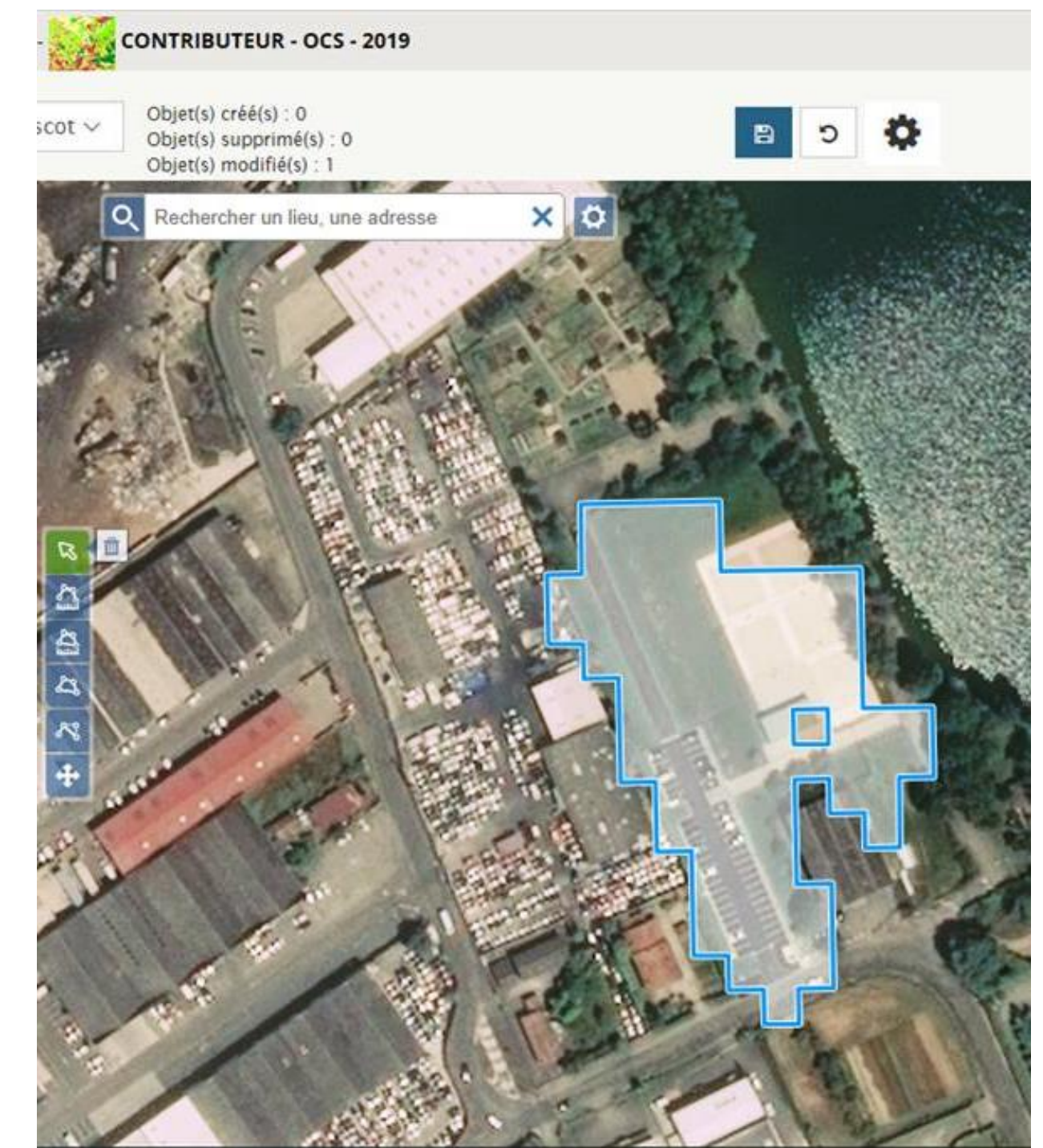
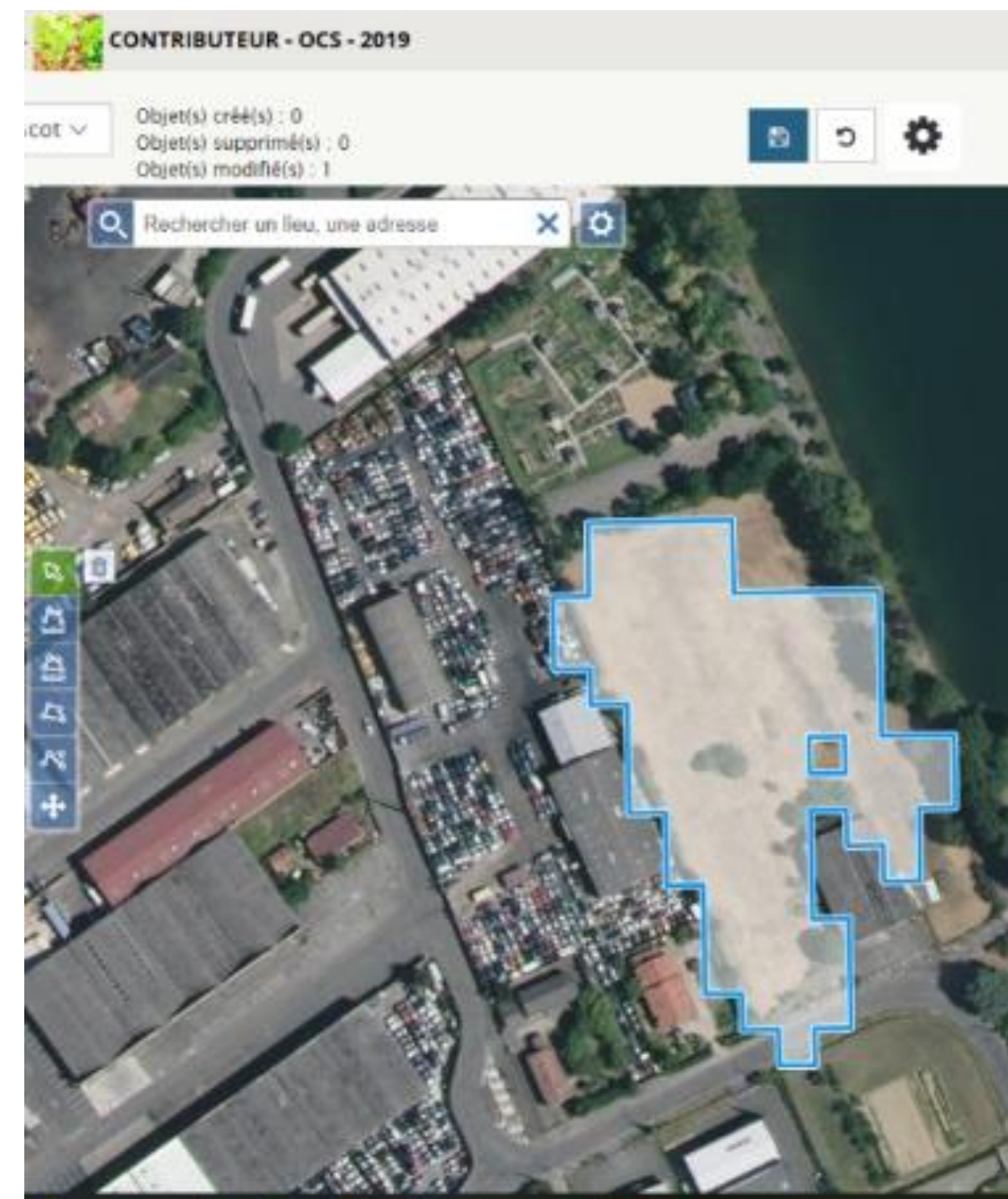
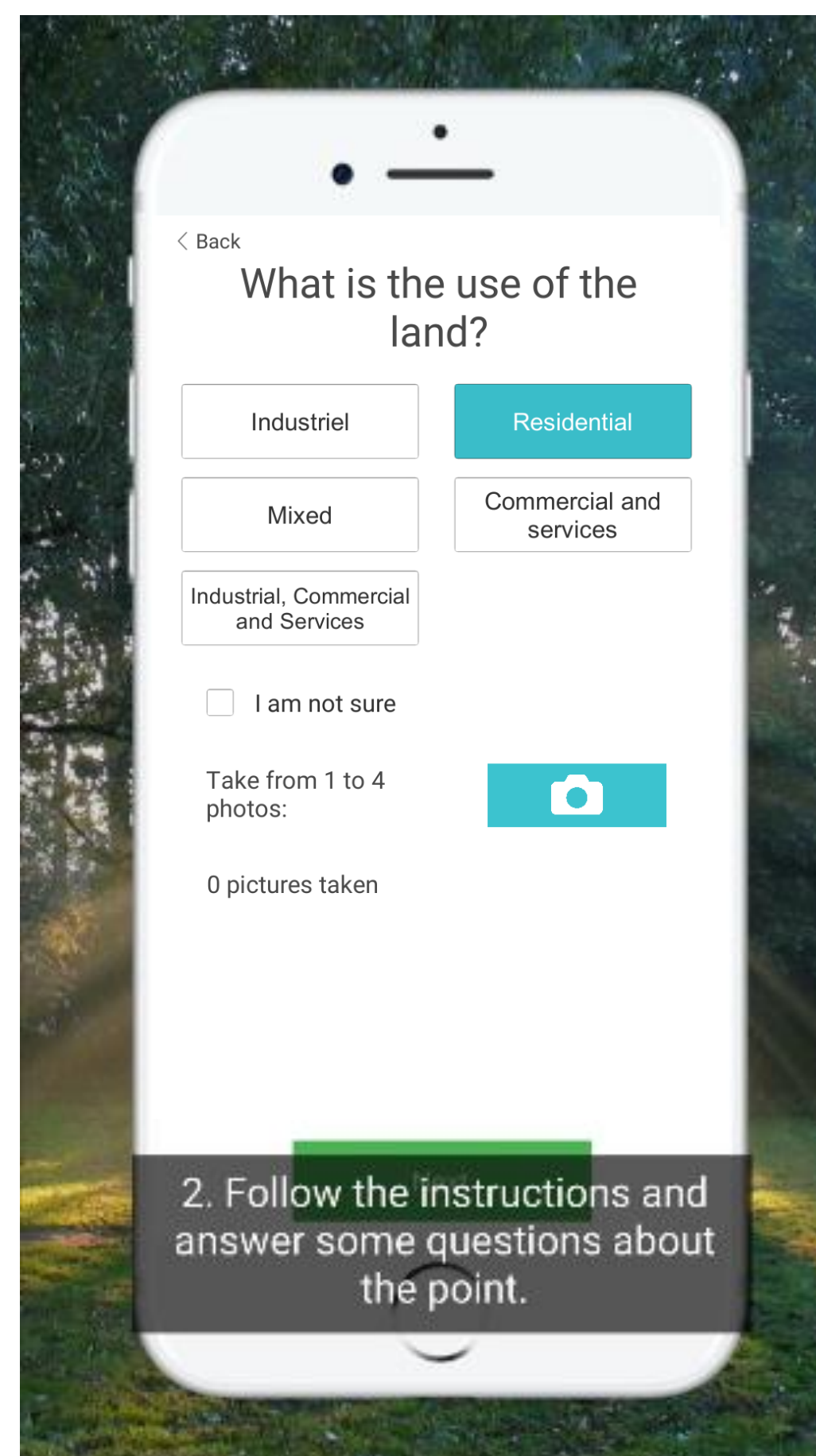
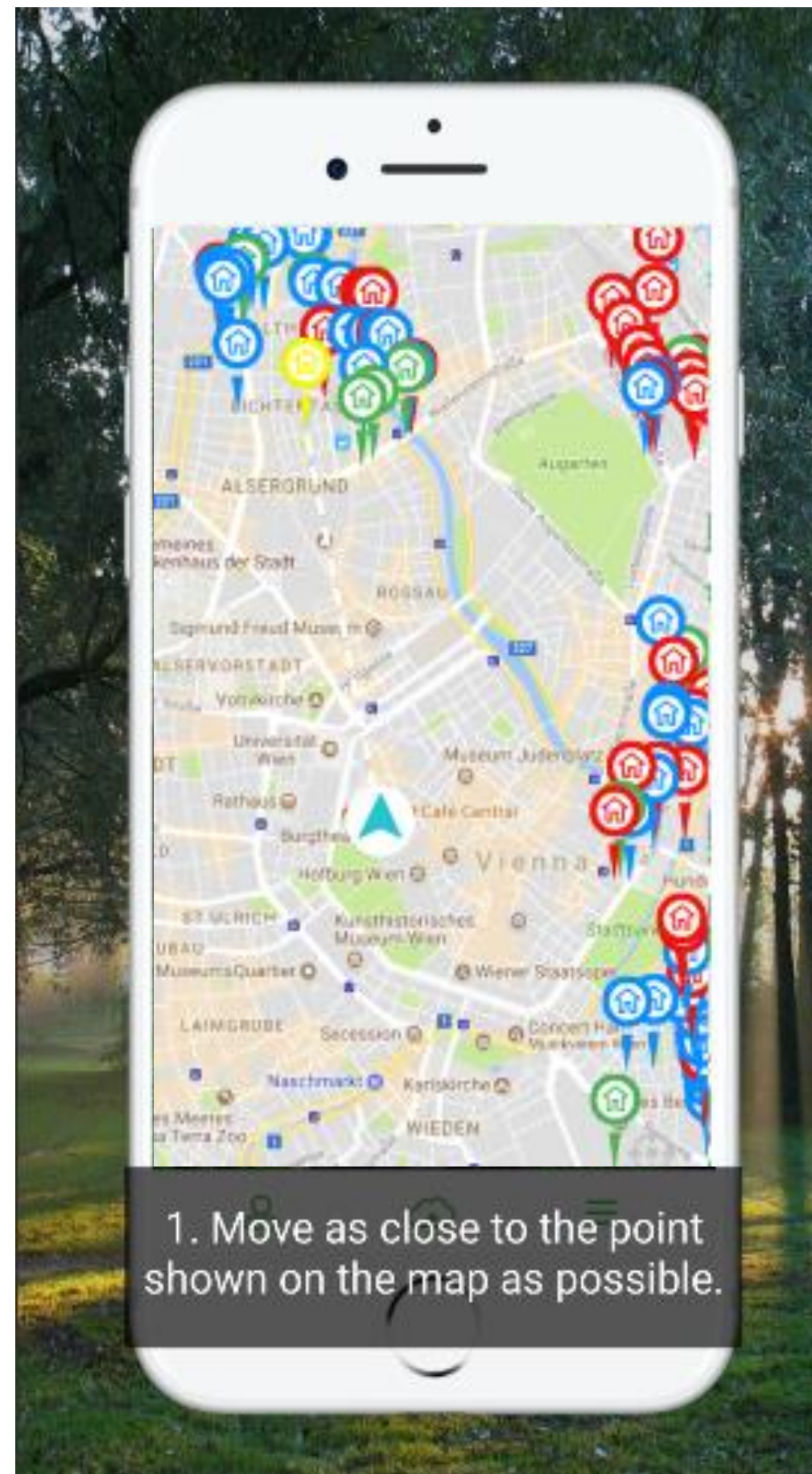
Integrating expert contributions using crowdsourcing approaches into LULC authoritative databases



**130+**  
participants



**7500+**  
observations



**Dataset 1: Sentinel 2 change detection validation 2019**  
**Dataset 2: Land use classification 2019**  
**Dataset 3: In-situ validation 2018**



# Vojvodina

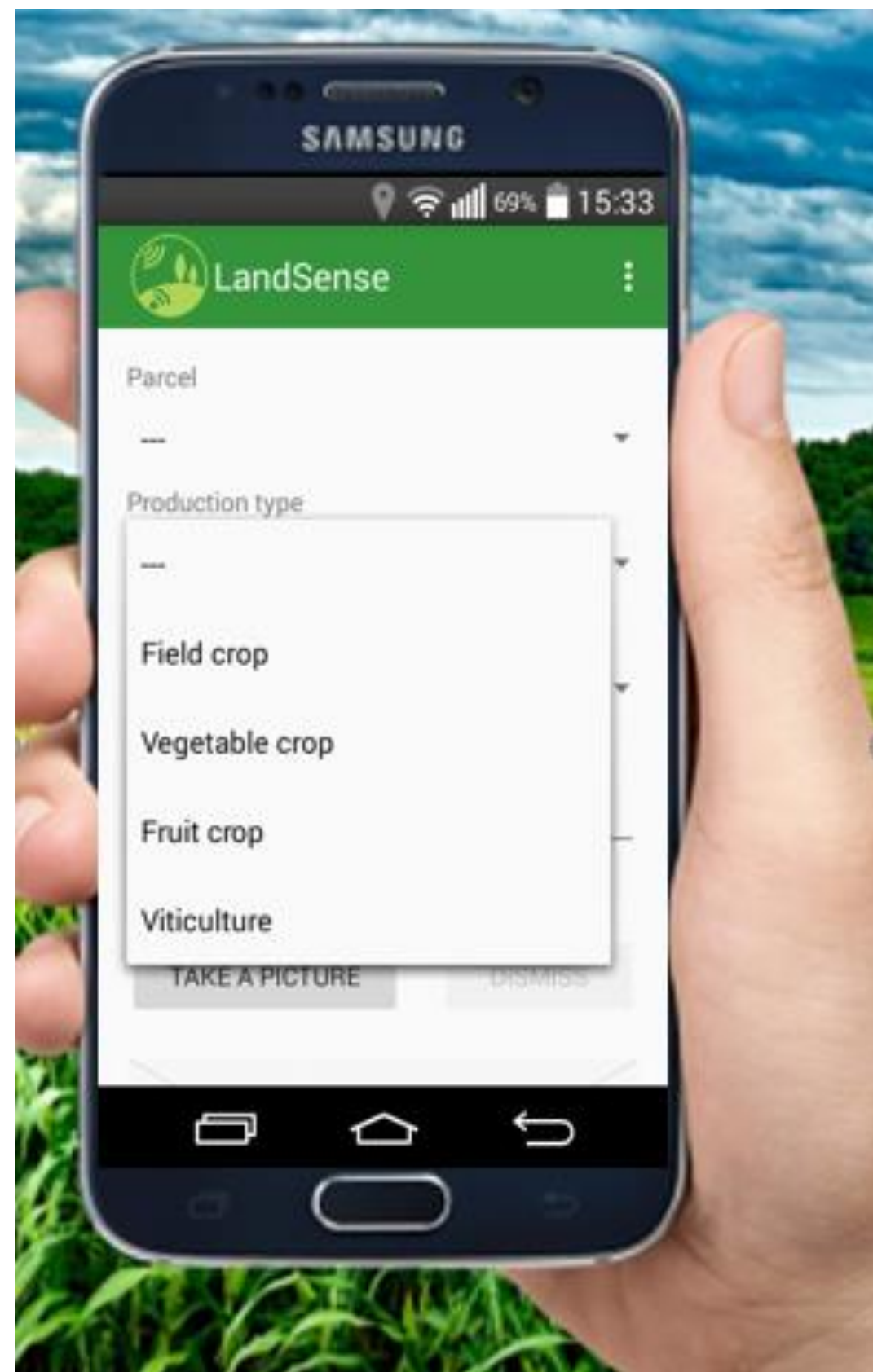
Leveraging the power of EO systems and crowdsourcing to deliver value added service to farmers



**181**  
participants



**2850+**  
observations



**Phase 1: Two high schools & University of Novi Sad**



Crop Support



# Spain

Monitoring threats to biodiversity with a focus of Important Bird & Biodiversity Areas (IBAs) & Natura 2000 sites



**40+**  
**participants**

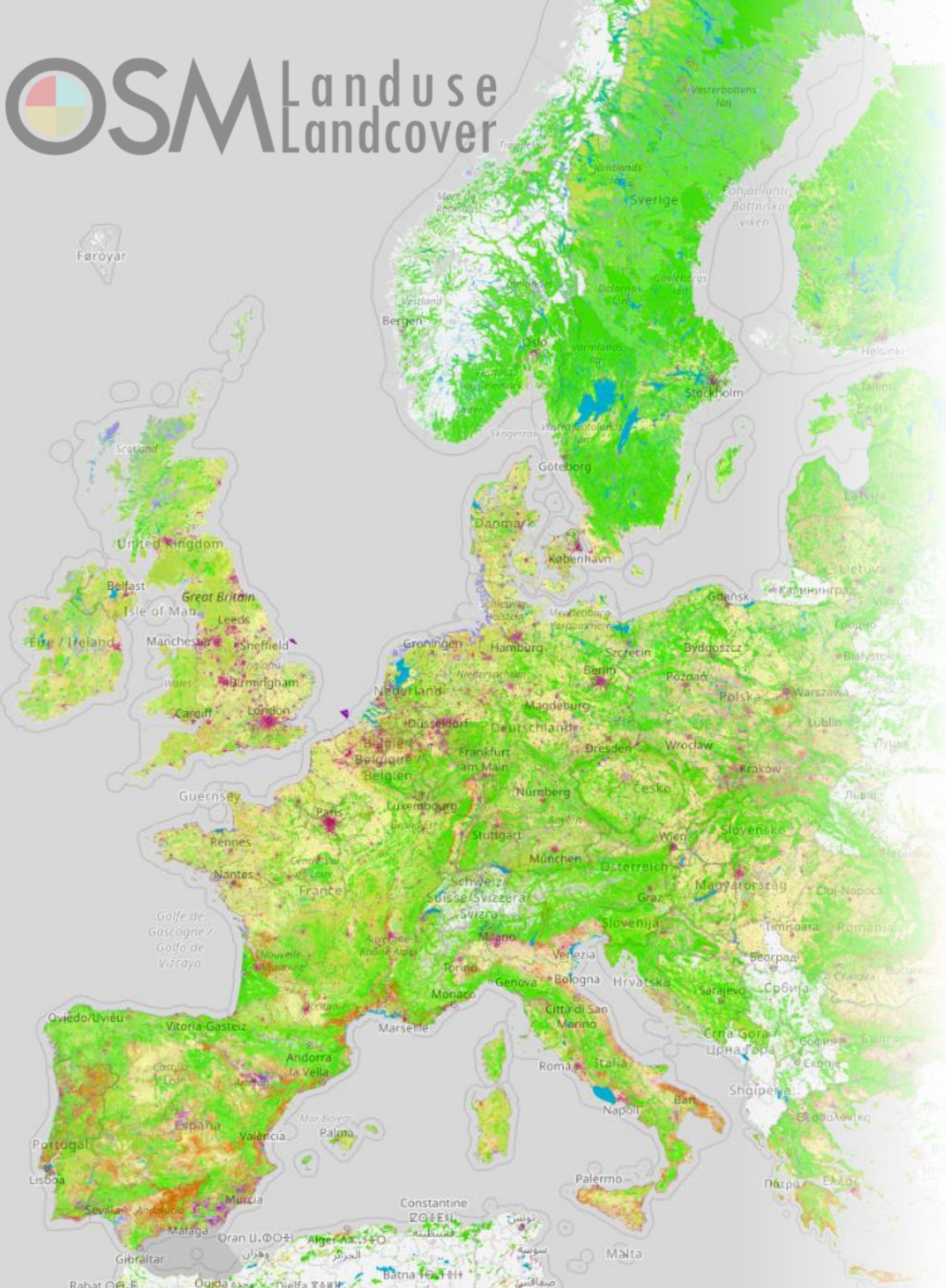


**450+**  
**observations**

Volunteers → IBA Caretakers → National Coordinators







# LANDSENSE MAPATHON

Connecting citizens and satellite data for land use mapping across the EU



**Contribute now!**

<https://landsense.eu/Mapathon>

**@LandSense**

**#EURegionsWeek**

**#territorialdata**



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