LandSense
WeObserve

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Earth Observations Group
Ecosystems Service and Management (ESM)
Geo-Wiki Engagement Platform

Geo-Wiki is an open platform that provides citizens with the means to engage in environmental monitoring by providing feedback on existing spatial information overlaid on satellite imagery or by contributing entirely new data.

Get involved now!
Participate in these ongoing projects and join the citizen science movement to help address global land cover issues.

- **Picture Pile**: Sort pictures and win great prizes! You can help us tackle global issues like deforestation.
- **FootQuest Australia**: Join FootQuest Australia and explore the outdoors! Help us monitor changes in land use and land cover.
- **LACO-Wiki**: Discover the new web portal to validate your map products from local to global scales.

Visualize and provide feedback!
Engage in global environmental monitoring and collaborate with leading scientists.

http://www.geo-wiki.org/

10,000+ Registered users
Downgrading recent estimates of land availability using crowdsourcing

Cai et al., 2011
1107 mil. hectares

Fritz et al.
375 mil. hectares

Fritz et al, 2013, Environmental Science and technology
Picture pile - Cropland Capture

http://geo-wiki.org/oldgames/croplandcapture

About Cropland Capture

By 2050 we will need to feed more than 2 billion additional people on the Earth. By playing Cropland Capture, you will help us to improve basic information about where cropland is located on the Earth’s surface. Using this information, we will be better equipped at tackling problems of future food security and the effects of climate change on future food supply.

Get involved and contribute to a good cause! Help us to identify cropland area!
FotoQuest Austria

FotoQuest Austria

Unterstütze die Wissenschaft beim Landschaftsschutz mit deinem Smartphone!

Weiter

Bewege dich 3.87 km näher zum Ziel...

ZEIG MIR DEN WEG! BEGINNE QUEST!

Freunde Meine Quests Rangliste
THE NEXT GENERATION OF SATELLITE IMAGERY SERVICE


ABOUT HUB  REQUEST TRIAL

Try our WMS/WMTS service
LandSense
A Citizen Observatory and Innovation Marketplace for Land Use and Land Cover Monitoring
Motivation

- Improving the quality of remotely-sensed LULC products

- Uncovering the potential of EO for citizen in the field of LULC

- Lowering cost and extension of in-situ component of LULC monitoring and management

- Business innovation and bringing technologies to market
LandSense

17 Partner Institutions
9 Countries

5 Research institutes, 5 SMEs, 3 NGOs, 3 Public Authorities, 1 Professional Network

September 2016
LandSense CO concept

**Communities**
- Researchers
- Citizens
- Policy Makers
- Industries & SMEs
- NGOs

**LandSense Engagement Platform**
- Mobile Applications
- LandSense Campaigns
- Hotspot Alert System
- LandSense Games
- Services Incubator
- Crowdfunding Links
- Social Media
- Discussion Forum

**Resources & Data Layers**
- In-situ
- Authoritative
- Open Access
- Earth Observations

**Demonstration Cases**
LandSense Services

LandSense Campaigner

Farmland Support

Change Detector

Quality Assurance & Control
We are coming together to

GROW Food. GROW Soil. GROW Science.
We Observe
**AN ECOSYSTEM OF CITIZEN OBSERVATORIES FOR ENVIRONMENTAL MONITORING**

**VISION**
Citizen observatories are an integral component of managing environmental challenges and empowering resilient communities.

**MISSION**
Move citizen science into the mainstream by building a sustainable ecosystem of citizen observatories and related activities.

**KEY CHALLENGES TO MAINSTREAMING CITIZEN SCIENCE**
- **AWARENESS**
  - Generating awareness to build and sustain a critical mass to support citizen science initiatives
- **ACCEPTABILITY**
  - Showcasing the added value of citizen-driven science to decision and policy makers
- **SUSTAINABILITY**
  - Creating an ecosystem that can support and scale-up citizen science to various sectors

**EU-FUNDED CITIZEN OBSERVATORIES**
- Citizen Science Projects
- Citizen Science Associations
- Citizen Science Platforms
- Citizens
- Researchers
- NGOs
- Policy Makers
- Industries & SMEs
- Decision Makers
- Group on Earth Observations

**IMPACTS**
- Connect key stakeholders in citizen science and build a knowledge base
- Extend the geographical coverage and use of citizen science for environmental monitoring
- Foster the uptake of citizen-science results for evidence-based decision making
- Promote downstream applications for citizen science data within SMEs and businesses
- Demonstrate the added value of citizen observatories for GEOSS and Copernicus
Lessons learned - Quality

• The quality of CO based data can be improved over the lifetime of the project and depends on
  – Clarity of the tasks
  – Difficulty of the task
  – In build near real time learning and training
  – Feedback and communication
  – Multiple Observations?

• Fit for purpose question is really important, e.g. calibration or validation
Lesson learned

• Quality is key – need to make a real effort to understand the uncertainties of CS data
• Co-design is essential – not easy to work with public authorities
• Be open about it what CS can do and cannot do
• Fun versus usefulness of data – gamification
• Think about scalability – harmonization issue
• Try to make as much open as possible
Summary

- There is massive potential for CS

- Citizen Science and Crowdsourcing projects need to be attractive / incentives need to be clear

- Mainstreaming CS will have multiple benefits
Thanks!

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