International Institute for Applied Systems Analysis
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CITIZEN SCIENCE & SDGs:
Opportunities, Challenges, Recommendations

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UN Sustainable Development Goals

IIASA Workshop on Citizen Science and SDGs

3-5 October 2018, Austria

How can we improve the understanding and acceptability of citizen science by national statistical offices, UN custodian agencies and other policy makers?

Citizen Science
Citizen-generated Data

- **Citizen science:**
  - Involvement of citizens in scientific research
  - Inclusive generation of knowledge

- **Citizen-generated data:**
  - Data produced by citizens

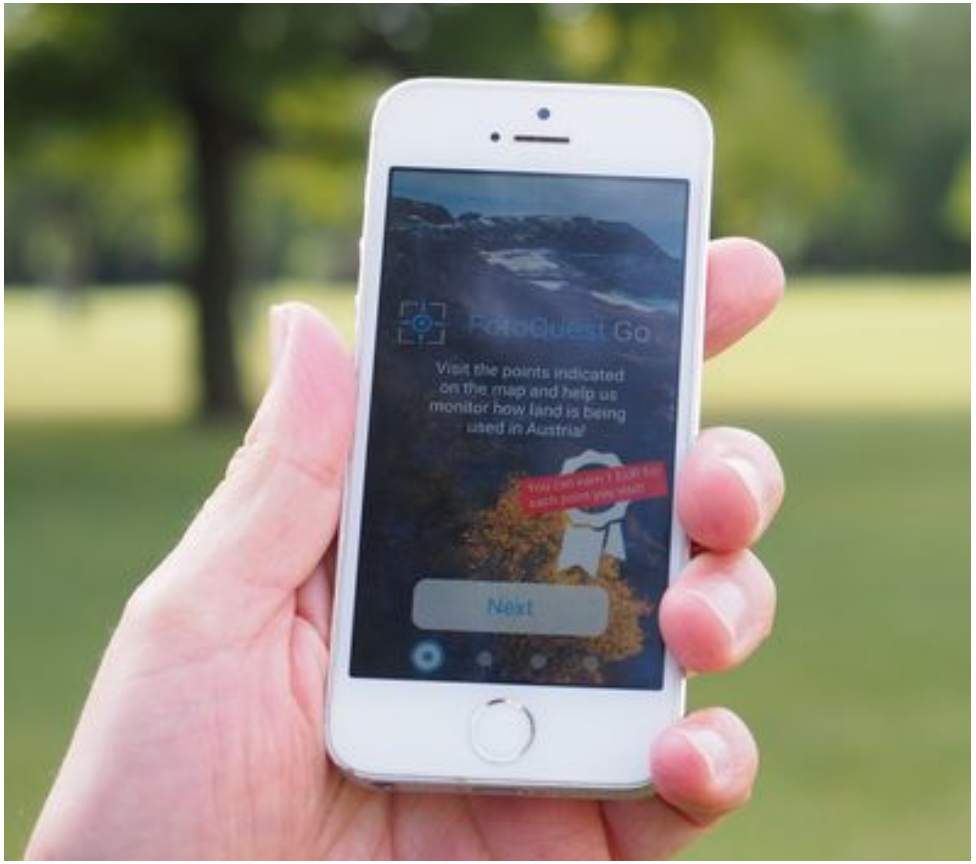
FotoQuest Go: An Example

Motivation

- Improving the quality of Earth Observation-based Land Use & Land Cover maps/products
- Uncovering the potential of citizen science and earth observation to improve the way we see, map and understand the world
- Lowering cost of in-situ (ground-based) data collection methods

FotoQuest Go: Mobile App

Mobile application for in-situ data collection to promote community-based LULC monitoring and awareness.



FotoQuestGo

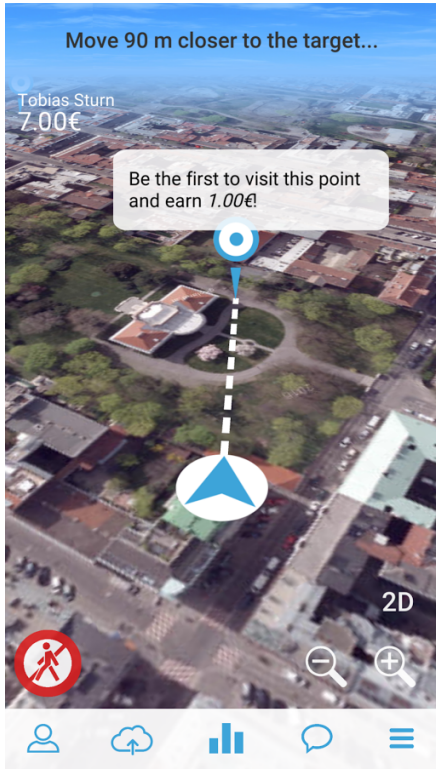
fotoquest-go.org

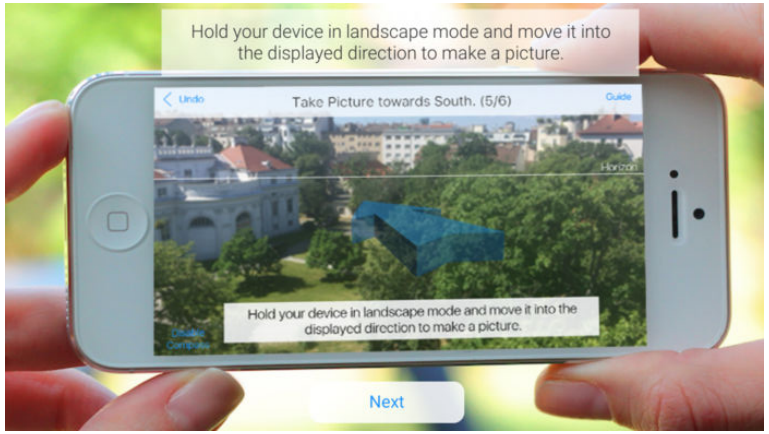
Available on the App Store

Get it on Google play

FotoQuest Go: Process

Step 1	Step 2	Step 3	Step 4	Step 5
Navigate to Location	Take photos	Answer questions	Submit for QA	Feedback to contributor





Photos in 4 cardinal directions plus target location itself

FotoQuest Go: Campaign

- Quality control & assurance process
- Feedback to contributors via app & email
- Monetary incentive of 1 to 3 EUR per point

User Survey – 2017 Campaign

Contribute to science	4.7
Strong interest in project	4.6
Enjoy being outdoors	4.5
Discover new landscapes	4.3
Enjoy using the app	4.2
User friendly app	4.1
Excited about rewards	4.1

11 weeks

140+ Contributors

1680+ Quests = 1647 accepted (%98) - about 46% perfect - %52 good quality

7677+ Photos

Potential of Citizen Science

Help leverage the SDG efforts with the application of new methodologies to enhance the quality of such data.*

Support SDG implementation through transformative practices - attitude and behaviour change.

* UN. (2017). *The Sustainable Development Goals Report 2017*. New York: UN. Retrieved from https://unstats.un.org/sdgs/files/report/2017/TheSustainableDevelopmentGoalsReport2017.pdf

Opportunities: Citizen Science

- Addresses current data gaps
- Contributes to the achievement of SDG 17 Partnerships for the Goals - inclusive
- Cost effective
- Increases accountability and trust
- Contributes to transformation towards Sustainability

Challenges/Solutions: Citizen Science

CHALLENGE	SOLUTION
Geographical and thematic coverage	Scaling-up to different locations (FotoQuest Go for Europe), and other themes (Picture Pile)
Data Quality and Reliability	FotoQuest Go – Near Real Time Feedback Quality Assurance Tool
Data Privacy	Anonymizing data sets
Reluctance on its use for policy making	Recognition for citizen science

Way Forward

- Build partnerships with official data producers
- Liaising with UN custodian agencies for input in developing methodologies (e.g. particularly for Tier III, where there is no methodology agreed)
- Evaluating where actively generated citizen science/data may contribute most to SDG in order to increase the acceptability. Examples from Libby!

Thank you!

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