Deliverable D4.4

Land Use Mapper communication toolkit

Deliverable Title	Land Use Mapper communication toolkit
Status	Final
Related Work Package	WP4 Dissemination and communication
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Dissemination level	Public
Due submission date	30.11.2019 (M39)
Actual submission	17.12.2019 (M40)
Project acronym	Ground Truth 2.0
Grant agreement number	689744
Funding scheme	H2020-SC5-2015-two-stage/Topic SC5-17-2015/Innovation Actions
Abstract of deliverable	Ground Truth 2.0 delivers the demonstration and validation of six scaled up citizen observatories in real operational conditions, both in the EU and Africa. This document describes the development of the Ground Truth 2.0 Land Use Mapper communication toolkit, which has evolved into a communication toolkit for the Land Use Maps validation campaigns aimed at comparing and evaluating the accuracy and completeness of different citizen-based approaches for Land Use Maps.

Versions and Contribution History

Version	Date	Modified by	Modification details
v0.1	12.11.2019	Ester Prat	Initial draft
V0.2	13.12.2019	Hans van der Kwast, Alberto Masa	Review
V0.3	16.12.2019	Ester Prat	Incorporation of revisions

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List of abbreviations

CO	Citizen Observatory
EU	European Union
H2020	Horizon 2020
GT2.0	Ground Truth 2.0
GDrive	Google Drive
LULC	Land Use Land Cover
LUM	Land Use Mapper
OSM	Open Street Maps
WP	Work Package

Executive Summary

During the project development, the approach for the Land Use Mapper tool was completely rewritten and a new description of activities was made, as explained in deliverable D2.14 Land Use Mapper web service.

In this new framework, the Land Use Mapper communication toolkit has evolved from being aimed at promoting the Land Use Mapper tool to being useful to the new developments. To that end, the communication toolkit will be used in this case to give support to the new activities foreseen, especially in the promotion of the validation campaigns for the different land use maps approaches.

This deliverable describes the new Ground Truth 2.0 Land Use Mapper communication toolkit developed to provide diverse communication materials based on an agreed Ground Truth 2.0 visual identity to help in promoting the calibration and validation campaigns aimed at stating the accuracy assessment of the different existing land use products.

The Land Use Mapper communication kit includes a banner, a flyer, an article post and a hashtag and messages to be used during the promotion of the validation campaigns. All these materials are described below and are available in the GT2.0 webpage: www.gt20.eu.

1 Introduction

1.1 Background

Ground Truth 2.0 is a three year project funded under H2020 by the European Commission. It will deliver the demonstration and validation of 6 scaled-up citizen observatories in real, operational conditions, with 4 European and 2 African demonstration cases. Ground Truth 2.0 will demonstrate the technological feasibility, the sustained use and the societal and economic benefits of such citizen observatories. The ultimate objective is the global market uptake of the concept and enabling technologies.

This is done via the following Work Packages:

- WP1 Social dimensions: co-designing citizen observatories
- WP2 Enabling technologies: customization, deployment and upscaling
- WP3 Business development to accelerate uptake
- WP4 Dissemination and communication
- WP5 Project management

The main objective of WP4 is to effectively communicate and disseminate information about the activities, progress and results of Ground Truth 2.0 to the widest possible range of key stakeholders in Africa and Europe. To achieve this, a detailed Dissemination and communication strategy has been developed (Deliverable 4.1). The strategy is driven by specific and relevant objectives to ensure the awareness raising and understanding of the activities and results of Ground Truth 2.0 among the identified target audiences and to promote action within the citizen science community.

1.2 Purpose of this document

Ground Truth 2.0 has intended to influence, through a bottom up approach, the decision makers on citizen observatory activities related to land-use actions, environmental quality, water and conservation to ensure that both EU and Africa are better prepared in land-use management.

With this purpose, an innovative web-based service (Land Use Mapper) was planned to be developed for (1) worldwide mapping and updating of land use to improve the availability of land-use data; (2) the consistency of time series of land-use maps; and (3) the accessibility to land-use information.

Original specific objectives of the Ground Truth 2.0 Dissemination and communication strategy were to increase the understanding of land use change and promote the continuity of the GT2.0 Land Use Mapper, to contribute to the main goal of supporting the sustainability and promoting the continuity of the Land Use Mapper beyond the lifetime of the project.

Nevertheless, during the project development, the approach for this task was completely rewritten and a new description of activities was made, considering not only GT2.0 contributions, but also identified existing contributions to land use mapping, as explained in deliverable D2.14 Land Use Mapper web service. The approach for the Land Use Mapper shifted and this document reflects also this progress and update of the Land Use Mapper (LUM) communication toolkit.

The original approach for the GT2.0 Land Use Mapper was changed due to the fact that similar concepts had been already worked out into prototypes and beta version web services by University of Coïmbra and University of Heidelberg (outputs of the LandSense project). A parallel development of a Land Use Mapper by the GT2.0 project was not considered useful. It was concluded that joining forces to develop a Global LULC Map with the different partners would be a better approach.

Together with researchers from University of Heidelberg and University of Coimbra a new concept was developed with the aim to use different sources of LULC maps (derived from remote sensing or derived from OSM) in order to give more robust results globally. The methodology includes harmonizing diverse land-use data sources, filling of gaps, calibration and validation of algorithms using reference data, producing quality indicators and lineage, and providing time series of LULC maps.

In this new framework, the LUM communication toolkit has evolved from being aimed at promoting the Land Use Mapper tool to being useful to the new developments, since the Land Use Mapper is not existing as foreseen at the beginning of the project anymore. To that end, the communication toolkit will be used in this case to give support to the new activities foreseen, especially in the promotion of the validation campaigns for the different land use maps approaches.

This deliverable describes the new Ground Truth 2.0 Land Use Mapper communication toolkit developed to provide diverse communication materials based on an agreed Ground Truth 2.0 visual identity to help in promoting the calibration and validation campaigns aimed at stating the accuracy assessment of the different existing land use products.

2   Land Use Mapper communication toolkit

Based on an agreed Ground Truth 2.0 visual identity, the LUM communication kit includes a set of promotional messages and graphical materials such as a banner, a flyer, an article post and a social media hashtag to be used during the promotion of the validation campaigns designed to assess and validate the accuracy of the different approaches to land use maps. All these materials are described below and are available in the GT2.0 webpage: www.gt20.eu.

2.1   Messages

One of the most important things when communicating are the messages to be spread. These messages need to be clearly set and be specific to the audience. The GT2.0 communication strategy addressed this question in section 4 of deliverable D4.1. The most generic messages related to the LUM communication action have had to be changed as a consequence of the shift in the LUM approach. New messages to be used in the promotion of the new validation campaign are summarized in Table 1:

Table 1   Key messages in the LUM validation campaign communication actions

Target group	Key messages to disseminate	Proposed slogans
Social group Scientific group	Collaborative validation improves land-use mapping and contributes to the availability and accessibility of better land-use data and land-use information.	*Want to participate in a collaborative land use map validation campaign?* *Collaborate in the quality evaluation of land use maps!*
	Validated Land Use Maps are a trusted and useful tool to know and manage the land use change	*Contribute to provide improved knowledge of your environment.* *Knowing the environment for a better management.* *Let's keep proper track of what's changing.*
Social group	Good collaborative land use mapping needs citizens to validate	*Join the Land Use Maps validation community!* *Help to create better Land Use Maps.* *Participate in improving Land Use mapping.*

These messages are intended to be used in the online promotion of the campaign, including news, posts and newsletters as well as in the designed graphic materials.

2.2   Online banner

Since the main activity in the validation campaigns will be performed online (using the LACO-Wiki tool), online promotion has been also prioritized in the communication strategy of the campaign. Dissemination through online channels and social media networks will be a priority, for which a promotional banner (Figure 1) has been developed to illustrate and provide a visual content to the distributed messages. The banner is based on the GT2.0 visual identity and aligned with other promotional banners used in the project. It contains a brief explanation of the campaign and the link to access each of the validation sessions within the platform.

Figure 1 LUM communication toolkit: online banner

The banner will be included also in the GT2.0 newsletter foreseen by the end of the project.

2.3 Flyer

In line with the previous online banner, a small flyer has been designed to be printed and distributed in any face to face activity or event foreseen during the validation campaign. Since the flyer offers a bigger space, instructions on how to access and participate in the campaign have been included as a guideline. The format of the flyer is a DINA-5 sheet and it is shown in Figure 2.

Figure 2   Front cover and back cover of the promotional flyer for the LUM validation campaign.

2.4 Article/post

To help in explaining and disseminating what the LUM validation campaign is going about, a brief text article or post has been prepared to be used in any kind of communication activity, as well as to help in creating content for a dedicated webpage in the GT2.0 website.

Ground Truth 2.0 Land Use Maps validation campaign

The Ground Truth 2.0 project is launching a citizen science collaborative campaign to help in the validation of several land use mapping initiatives.

More than ever before, planners and policy makers need tools to anticipate and assess the impact of their decisions on the areas that they have to manage. Land-use maps are one important input data for the decision support tools and many land-use products exist, but they are hard and expensive to produce based on remote sensing image interpretation. Experimental web-services are emerging that are based on deriving LULC from OpenStreetMap vector data that can be more robust in areas where either remote sensing data is scarce or acquisition is hampered by frequent cloud cover.

In order to test and compare the precision and accuracy of all those different approaches, the Ground Truth 2.0 project is promoting a pilot validation campaign in a given area, the Metropolitan Area of Barcelona (Spain) where different land use maps from different sources and origins are available. The idea is to document the accuracy for each of the maps and to compare citizen-based effort with expert work in terms of accuracy, validity and completeness.

For this reason, two citizen-based and one official Land Use Maps for that region are being checked to validate their accuracy and to evaluate the precision of three different approaches for land use mapping. Two maps, developed by Coimbra University and Heidelberg University, are based on approaches using OpenStreetMap and created with citizen collaboration and another Land Use Map was created by experts and based on remote sensing. The **LACO-Wiki platform** will be used for their validation.

The campaign will be open until **20ᵗʰ December 2019** and is looking for volunteer citizens to contribute in an easy validation process. The three datasets can be accessed through the following links: **https://laco-wiki.net/c/bcn-coimbra - https://laco-wiki.net/c/bcn-heidelberg - https://laco-wiki.net/c/bcn-remotesensing.** Login to the LACO-Wiki platform can be done using a GEO-Wiki, Facebook or Google Account. The validation process takes less than a minute for each point and is easy to perform by visual inspection of a high resolution image.

For more information please visit www.gt20.eu.

The article can be accompanied by the online banner described in section 2.1 and by some of messages listed in section 2.3.

2.5 Social media hashtag

#VALLUM has been defined as an identification hashtag for promoting the campaign through social media networks and online platforms. It should help in creating a recognisable trademark for the campaign and to identify all communications about it in the network.

3 References

Deliverable 4.1 Dissemination and communication strategy

Deliverable 2.14 Land Use Mapper web service

www.gt20.eu

https://laco-wiki.net/

https://www.openstreetmap.org/