LandSense

A Citizen Observatory and Innovation Marketplace for Land Use and Land Cover Monitoring

Deliverable 6.6

Dissemination Tools and Communication Strategies II

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PP	Restricted to other programme participants (including the Commission Services)	
RE	Restricted to a group specified by the consortium	
CO	Confidential, only for members of the consortium (including the Commission Services)	

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Author(s)/Organisation(s):				
Ralf Ryter - GeoVille Franziska Albrecht – GeoVille Maria Lemper – GeoVille				
Contributor(s):				
All project partners.				

Short Description:				
The LandSense Dissemination Tools and Communication Strategy II is an update of D6.2 and provides guidance and direction for all LandSense communication activities with external actors. It ensures a unified approach across the entire LandSense consortium, covering WP6 activities and has a strong link to the future exploitation strategy and to the communication within the different LandSense Campaigns. It explains the available LandSense communication tools in detail and provides measures to evaluate and monitor the impact.				
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Version	Reviewer	Comment	Date
0.1	Inian Moorthy	Review of content, figures, tables	13.12.2019
0.2	Inian Moorthy	Final edits and approval for submission	08.01.2020

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Abbreviations

EC	European Commission
EO	Earth Observation
LEP	LandSense Engagement Platform
LULC	Land Use Land Cover
NGO	Non-governmental organisations
SME	Small and medium size enterprise

1 Introduction

LandSense is building an innovative Citizen Observatory in the field of Land Use Land Cover (LULC), which collects data both actively (through citizens) and passively (from authoritative, and open access sources) and integrates them to provide valuable quality-assured in-situ data for small and medium size enterprises (SMEs), larger businesses, government agencies, Non-governmental organisations (NGO) and researchers. Citizen Observatories are community-based environmental monitoring and information systems. They build on innovative and novel Earth Observation (EO) mobile applications, allowing end-users, i.e. citizens to not only play a key role in the LULC monitoring, but also to be directly involved in the development of such applications. As such, the participation of citizens represents a vital part in the LandSense campaigns.

The EO data economy is moving towards becoming a highly competitive market segment. Solution providers are reliant on high quality data as they need to deliver contextually appropriate EO-based value-added products and services. In-situ data plays a crucial role in ensuring that EO data is properly calibrated and validated and enables EO companies to significantly increase the quality of their products and services.

To increase the awareness and the participatory engagement of key stakeholders like citizens, dissemination and communication activities play a vital role throughout the project. Being a continuous process, the LandSense communication strategy aims at transmitting the added value of the project and to ensure the visibility of project results and their take-up by decision-makers beyond the lifetime of the project. A variety of communication tools are available to guarantee that information is shared with appropriate audiences on a timely basis (see Section 4).

The following document is an update of D6.2 and provides guidance and direction for all LandSense communication activities with external actors. It ensures a unified approach across the entire LandSense consortium, covering WP6 activities and has a strong link to the future exploitation strategy and to the communication within the different LandSense Campaigns. It explains the available LandSense communication tools in detail and provides measures to evaluate and monitor the impact. In order to maximize the efforts and to obtain the best results, the LandSense communication and dissemination plan should be seen as a living document. That is, the communication strategy is constantly revised and extended in accordance with the information received from the work packages and with new dissemination opportunities that may arise during the project lifetime. Dissemination and communication actions will be periodically re-evaluated and realigned based on the analysis of metrics to try to improve the impact of these actions.

2 Dissemination and communication objectives

The LandSense communication and dissemination strategy is about increasing the visibility of the LandSense project activities and results by raising awareness in the community of important stakeholders including researchers, public authorities, citizens as well as professionals. The objectives of the LandSense dissemination and communication strategy include:

✓ **Build awareness**

Distribution of LandSense progress, deliverables, events, outcomes, factsheets and services via open, and transparent channels (i.e. LandSense Engagement Platform, social media channels, existing partner networks, etc.). The project will emphasize the LandSense Engagement Platform (LEP) as the key dissemination and communication vehicle for the project, which will function as a single point of access via **www.landsense.eu**. Furthermore, the consortium will actively engage the existing networks and communication channels of the partners to widely promote and gain high visibility of the project work and outcomes on a European as well as international level.

✓ **Foster participation**

Mobilize and assist the active participation of citizens within LandSense campaigns for in-situ data acquisition and participatory LULC monitoring within Europe and internationally. Facilitate the use of LEP as a key component of the LandSense Citizen Observatory.

✓ **Trigger change**

Promote the development of an innovative citizen observatory for LULC monitoring, which collects data actively through citizens and passively from other sources and integrates them into an open platform.

✓ **Stimulate service uptake**

Target the right audience from the public and private sector to stimulate the uptake of LandSense services via the Services Incubator at strategic times along the project lifetime. Key activities will help to build an ecosystem of actors that promotes the extension of European markets and opportunities in the field of in-situ monitoring.

3 LandSense communication audience

3.1 General audience

The LandSense communication audience is very diverse and the LandSense communication strategy targets a multidisciplinary stakeholder group coming from science, technology, business and policy domains as well as European networks and NGOs.

The transfer of project outputs to **public authorities and European policy makers** are crucial to guarantee the impact of the LandSense project. Hence LandSense is reaching out to institutions and organisations at a local, regional, national and European level. In particular, LandSense results will be shared with decision-makers; specific and targeted communication activities for local policy makers are intended to contribute to the take up of lessons learned and the results arising from the different LandSense campaigns.

The **general public** represents a key target audience as citizens will be actively involved in the various LandSense campaigns. In particular, LandSense targets citizens that are already interested in LandSense relevant topics such as urban landscape dynamics, agricultural land use as well as forest and habitat monitoring, in particular, and land use and land cover issues in general.

LandSense will foster innovative citizen science driven services. **Businesses**, offering innovative technological solutions, might be highly interested in knowing more about the impact of the LandSense campaigns and how existing tools and services can be deployed to offer commercial services. Thus, LandSense communication activities will also take businesses into consideration, by producing materials with a non-specialist, less technological, easily accessible and understandable language.

LandSense will produce cutting-edge results in the LULC domain, making **researchers and scientists** a top target audience. To reach this target group, planned activities include:

- Peer-reviewed articles and other scientific publications
- Presentations at major national and international conferences
- External seminars and workshops
- LandSense workshops and the LandSense Innovation Challenge (WP6)
- Linking LandSense research with other research projects and other established Citizen Observatories (e.g. SCENT, GroundTruth 2.0, GROW, see Section 4.4)

Existing **European networks** as well as **NGOs** are crucial for further distributing LandSense activities and outputs. It is envisaged to use existing networks, taking advantage of the multiplier effect. Promotional materials will be designed so that non-experts with no technical background can easily access and understand the LandSense concepts and campaigns. Furthermore, the content will be translated into different languages depending upon the location. A detailed overview of the respective target group objectives and the content to be communicated is provided in Table 1.

Table 1: Target groups of LandSense communication strategy, objectives and content

Target group	Objective	Content
Public authorities: *Policy and decision makers* *Open data specialists* *Staff with specialist technical knowledge in technical departments or consultants*	1) Raising awareness of LandSense and the benefits of involving citizens in the planning process through LEP 2) Promoting the collection of high-quality open data which can be fed into the LandSense Citizen Observatory	Reports, deliverables, project results
EU policy makers	1) Sensitizing them to the possibilities of bringing citizens into the planning process via smart means of using open data	Reports, deliverables, project results
General public: *Citizens with a strong interest in land use and land cover data*	1) Raise awareness and encourage active participation in the LandSense Campaigns and engagement with LEP	General information in the project, Project campaigns, Events, Information days
Business: *Multinational companies* *SMEs,* *Start-ups in different fields*	1) Make them aware of the potential of LandSense and the chance to use open data and the LEP to bolster their business	Science-related information, Events (innovation workshops, citizen science conferences), information days, training workshops
Researchers: Universities Research & technology organisations Corporate researchers	1) Make them aware of the potential of LandSense and the chance to use open data and the LEP for their research	Science-related information, Events (academic workshops, bilateral dissemination events), information days, training workshops
European Networks & NGOs	1) Raising awareness of LandSense and tapping into the multiplier effect through their networks	General information on the project, Project campaigns, Events, Information days

3.2 LandSense Campaign specific target groups

Apart from the general audience, the LandSense communication strategy is also targeting specific target groups related to the LandSense Campaigns as identified by the campaign leaders during the user requirements workshop (Table 2). Any communication will be tailored towards the technical and scientific understanding of these target groups in order to achieve the highest possible impact.

Table 2: LandSense Campaign specific target groups

Region	LandSense Campaign	Objective	Key Stakeholders
Toulouse	Map It! Land use and land cover mapping in the Occitanie Region of France with the Paysages app	Evaluate how contributions from interested experts (i.e. public authorities, engineering students, etc.) can be integrated with the French Land Use and Land Cover (LULC) authoritative database.	Urban Planning Agency - Toulouse, Territorial Departmental Direction of Toulouse (31), Regional Direction of IGN (South Wes, Engineering Schools of IGN-France (ENSG), University of Toulouse.
Vienna	CityOases Find the perfect places to spend the day and share them with the City Oases App!	Complement local administration urban planning processes by gaining insights and data from citizens about the usage and perceptions of urban green and open spaces.	City of Vienna (urban development and urban planning department – MA18), Vienna University of Technology, University of Natural Resources and Life Sciences
Heidelberg	Integrate it! OpenStreetMap, satellite imagery and machine learning to improve land cover and land use maps	Demonstrate how citizen-contributed data and Earth Observation (EO) data can update authoritative databases with a strong focus on improving data/map quality	City of Heidelberg
Amsterdam	Feel it! Crowdsourcing perceptions of urban green space quality	Test new methods of obtaining location specific information on subjective perception and preferences for urban green space and assess how this information can inform sustainable urban development.	City of Amsterdam
Vojvodina	Build, Measure, Learn! A New Take on Citizen Science for agricultural monitoring with CropSupport application	Leverage the power of EO systems and crowdsourcing techniques to deliver value added service to farmers and farmer associations in Vojvodina, Serbia.	Center for organic production Selenca, Farmers' Club Selenca, Association Turinka, Agricultural High Schools, University of Novi Sad
Spain	Natura Alert Reporting threats to biodiversity and habitat changes in Spain!	Monitor the state of Important Bird and Biodiversity Areas (IBAs) and Natura 2000 sites by focusing on the threats that affect various habitats (arid lands, wetlands, grasslands, etc.).	Ministry for the Ecological Transition (MITECO): linked to ART12 and art 17 reporting (birds and habitats), Regional authorities: management plans of national parks, reserves, nature parks, etc, SEO regional offices across Spain, IBA caretakers in Spain
Flores Island	Natura Alert Pinpoint the location of threats to biodiversity and habitat changes	Monitor the state of IBAs/KBAs by focusing on the threats that affect the habitats and the biodiversity for select regions on Flores Island, Indonesia.	Development Planning Agency at sub-national level (PAPEEDA), Nature Conservation Agency (KSDA), Environmental Agency (BLH), Forest Management Unit (KPH), Forum Komunikasi Kawasan Mbeliling (FPKM), Village & Comminity Empowerment Agency (DPMD), Village authorities, Local Conservation Group from Mbeliling

4 Communication Tools

The LandSense communication and dissemination team will use a wide variety of **online tools, offline materials, articles, reports, presentations, networking, meetings and events** as well as **press releases and other media channels** to reach the general audience as well as specific target audiences identified in Section 3. To attract a large audience and reach a high number of persons within all target groups, the project will not only create some specific communication material, but it will also actively participate in and use existing channels and networks of the LandSense consortium partners (e.g. Global2000, BirdLife International, University of Heidelberg). These networks are described in detail in D6.1. DEC Strategy, Operative Plan and SOPs and D6.5 DEC Strategy, Operative Plan and SOPs – Update.

4.1 Online tools

4.1.1 LandSense Website

The main LandSense dissemination channel is its official website (https://landsense.eu/), which hosts a description of the project, the consortium, the LandSense themes, etc. A section is dedicated to the project's updates (see Figure 1) and the website is linked to existing social media platforms by hosting a Twitter and Facebook widget in the home page.
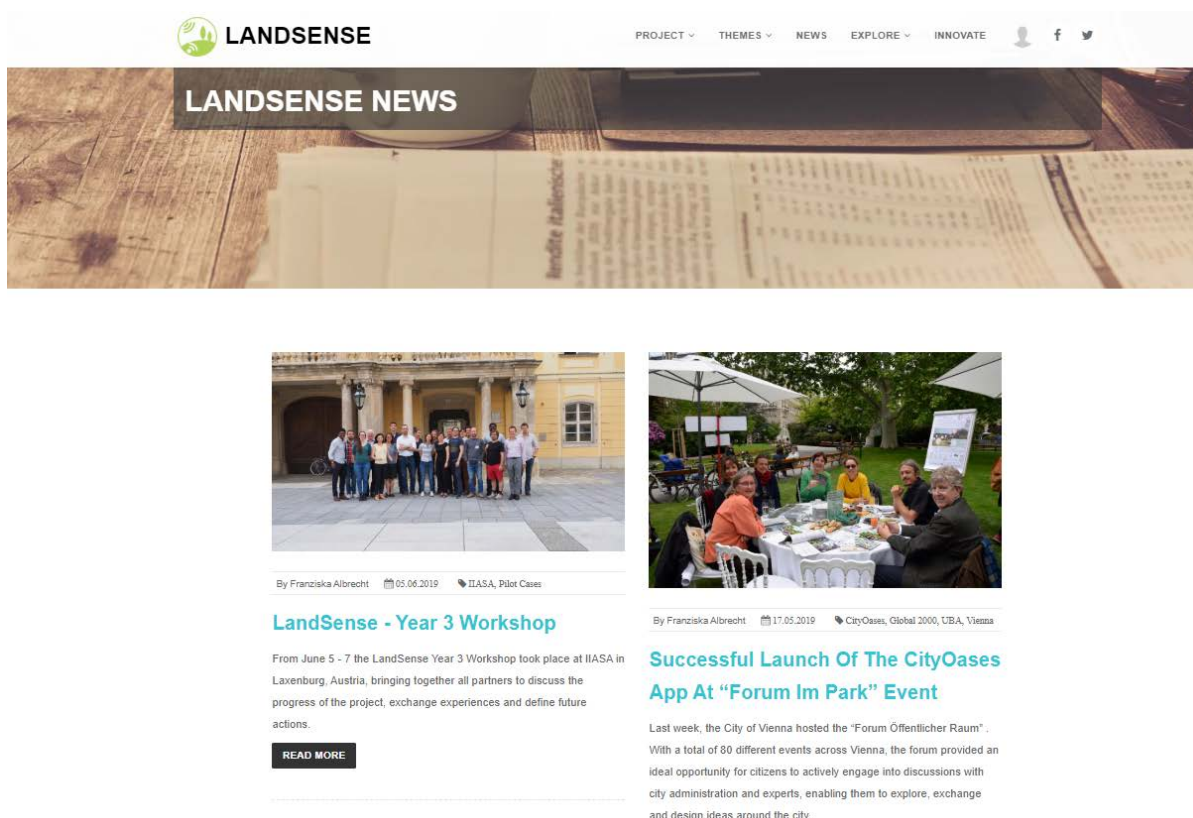
Figure 1: LandSense Webpage – News section

The website is designed to guarantee a high level of accessibility and usability. To increase the impact of the project, the information materials use illustrative visual aids such as charts and infographics. Further, the information on the LandSense website is kept scientific and accurate, to allow the reader to gain good general insights into the project's goals and methodology. However, we are avoiding overly technical jargon in order to allow people from outside the scientific research field to easily understand the information provided.

With the launch of the LEP (Section 4.1.2) planned for February 2020 (Deliverable 3.6), the content of the LandSense website will be moved to the LEP in a step-by-step process and the LEP will be the key dissemination and communication vehicle for the project, functioning as a single point of access via www.landsense.eu. A preview is accessible via lep.landsense.eu

4.1.2 LandSense Engagement Platform (LEP)

An important part of the LandSense Citizen Observatory is the LandSense Engagement Platform, a service platform comprised of highly marketable EO-based solutions that contribute to the transfer, assessment, valuation, uptake and exploitation of LULC data and related results. The platform will offer collaborative mapping functionalities to allow citizens to view, analyze and share data collected from different campaigns and create their own maps, individually and collaboratively. In addition, citizens can participate in ongoing LandSense demonstration cases using their own devices (e.g. mobile phones and tablets), through interactive reporting and gaming applications, as well as launching their own campaigns. This interaction is achieved by bringing together and extending various key pieces of technology like: Geo-Wiki, LACO-Wiki, Geopedia, Sentinel Hub and the Earth Observation Data Centre.

In the long term, all components of the LandSense website will be moved to the LEP, which will act as the key dissemination and communication vehicle for the project, functioning as a single point of access via www.landsense.eu.

4.1.3 Social Media

At present, LandSense has set up two active accounts in the most used social media platforms - Twitter and Facebook - to disseminate its activities, upcoming and past events as well as results, and in general to share experiences, and to initiate and participate in conversations about the project:

- Twitter: @LandSense (https://twitter.com/landsense)
- Facebook page (https://www.facebook.com/LandSense.eu/)

At present, LandSense has a total of 1349 followers on Twitter and 510 on Facebook, respectively. This is for both platforms approximately double the number of followers then in February 2018. For Facebook an advertisement campaign was initiated in December 2019 that will initially last until March 2020 to reach out for more followers. If the campaign is successful, a further campaign could be implemented.

4.2 Offline communication

4.2.1 Brochure and promotional material

LandSense has produced several promotional materials: A folder, a template, a brochure and a roll-up/poster. These visuals are used for promoting events such as dedicated stakeholder workshops and conferences as well as to create and enhance awareness of LandSense. The brochure includes a brief summary of the project, including a description of the LandSense themes, the LEP as well as a list of the consortium partners and contact information. Apart from English, the LandSense brochure is available in German, French and Serbian (Figure 2).

Figure 2: LandSense brochure – Serbian version. Note the brochure is designed as 6-page roll fold

4.2.2 Scientific Publications

In order to disseminate research findings and outputs, while simultaneously keeping the long-term impact of LandSense in mind, the project will also target key relevant scientific journals. A total of 20 scientific journal articles are planned as a dissemination output for the LandSense project. All research partners of the LandSense consortium contribute to disseminating the results in Europe, and globally, via publications in peer-reviewed scientific journals. Because of the broad scope and multidisciplinary nature of the project,

publications will deliberately be aimed at different journals in order to access different audiences. Other scientific dissemination includes presentations or posters at scientific conferences showcasing LandSense research. Posters will follow the LandSense branding rules and guidelines to reference the European Commission's (EC) funding. Up to this point, LandSense partners have delivered 15 peer reviewed articles and 7 conference proceedings, as indicated in CORDIS:

Peer Reviewed Articles

A global dataset of crowdsourced land cover and land use reference data
Author(s): Steffen Fritz, Linda See, Christoph Perger, Ian McCallum, Christian Schill, Dmitry Schepaschenko, Martina Duerauer, Mathias Karner, Christopher Dresel, Juan-Carlos Laso-Bayas, Myroslava Lesiv, Inian Moorthy, Carl F. Salk, Olha Danylo, Tobias Sturn, Franziska Albrecht, Liangzhi You, Florian Kraxner, Michael Obersteiner
Published in: Scientific Data, Issue 4, 2017, Page(s) 170075, ISSN 2052-4463
DOI: 10.1038/sdata.2017.75

Using volunteered geographic information (VGI) in design-based statistical inference for area estimation and accuracy assessment of land cover
Author(s): Stephen V. Stehman, Cidália C. Fonte, Giles M. Foody, Linda See
Published in: Remote Sensing of Environment, Issue 212, 2018, Page(s) 47-59, ISSN 0034-4257
DOI: 10.1016/j.rse.2018.04.014

Towards an Integrated Global Land Cover Monitoring and Mapping System
Author(s): Martin Herold, Linda See, Nandin-Erdene Tsendbazar, Steffen Fritz
Published in: Remote Sensing, Issue 8/12, 2016, Page(s) 1036, ISSN 2072-4292
DOI: 10.3390/rs8121036

Generating Up-to-Date and Detailed Land Use and Land Cover Maps Using OpenStreetMap and GlobeLand30
Author(s): Cidália Fonte, Marco Minghini, Joaquim Patriarca, Vyron Antoniou, Linda See, Andriani Skopeliti
Published in: ISPRS International Journal of Geo-Information, Issue 6/12, 2017, Page(s) 125, ISSN 2220-9964
DOI: 10.3390/ijgi6040125

Crowdsourced Street-Level Imagery as a Potential Source of In-Situ Data for Crop Monitoring
Author(s): Raphaël d'Andrimont, Momchil Yordanov, Guido Lemoine, Janine Yoong, Kamil Nikel, Marijn van der Velde
Published in: Land, Issue 7/4, 2018, Page(s) 127, ISSN 2073-445X
DOI: 10.3390/land7040127

Open land cover from OpenStreetMap and remote sensing
Author(s): Michael Schultz, Janek Voss, Michael Auer, Sarah Carter, Alexander Zipf
Published in: International Journal of Applied Earth Observation and Geoinformation, Issue 63, 2017, Page(s) 206-213, ISSN 0303-2434
DOI: 10.1016/j.jag.2017.07.014

Using Citizen Science to Help Monitor Urban Landscape Changes and Drive Improvements
Author(s): Karin Wannemacher, Barbara Birli, Tobias Sturn, Richard Stiles, Inian Moorthy, Linda See, Steffen Fritz
Published in: GI_Forum, Issue 1 journal refereed, 2018, Page(s) 336-343, ISSN 2308-1708
DOI: 10.1553/giscience2018_01_s336

Recent Advances in Forest Observation with Visual Interpretation of Very High-Resolution Imagery
Author(s): Dmitry Schepaschenko, Linda See, Myroslava Lesiv, Jean-François Bastin, Danilo Mollicone, Nandin-Erdene Tsendbazar, Lucy Bastin, Ian McCallum, Juan Carlos Laso Bayas, Artem Baklanov, Christoph Perger, Martina Dürauer, Steffen Fritz
Published in: Surveys in Geophysics, Issue 40/4, 2019, Page(s) 839-862, ISSN 0169-3298
DOI: 10.1007/s10712-019-09533-z

An Experimental Framework for Integrating Citizen and Community Science into Land Cover, Land Use, and Land Change Detection Processes in a National Mapping Agency
Author(s): Ana-Maria Olteanu-Raimond, Laurence Jolivet, Marie-Dominque Van Damme, Timothée Royer, Ludovic Fraval, Linda See, Tobias Sturn, Mathias Karner, Inian Moorthy, Steffen Fritz
Published in: Land, Issue 7/3, 2018, Page(s) 103, ISSN 2073-445X
DOI: 10.3390/land7030103

Targeted Grassland Monitoring at Parcel Level Using Sentinels, Street-Level Images and Field Observations
Author(s): Raphaël d'Andrimont, Guido Lemoine, Marijn van der Velde
Published in: Remote Sensing, Issue 10/8, 2018, Page(s) 1300, ISSN 2072-4292
DOI: 10.3390/rs10081300

Increasing the Accuracy of Crowdsourced Information on Land Cover via a Voting Procedure Weighted by Information Inferred from the Contributed Data
Author(s): Giles Foody, Linda See, Steffen Fritz, Inian Moorthy, Christoph Perger, Christian Schill, Doreen Boyd
Published in: ISPRS International Journal of Geo-Information, Issue 7/3, 2018, Page(s) 80, ISSN 2220-9964
DOI: 10.3390/ijgi7030080

Highlighting Current Trends in Volunteered Geographic Information
Author(s): David Jonietz, Vyron Antonio, Linda See, Alexander Zipf
Published in: ISPRS International Journal of Geo-Information, Issue 6/12, 2017, Page(s) 202, ISSN 2220-9964
DOI: 10.3390/ijgi6070202

LACO-Wiki: A New Online Land Cover Validation Tool Demonstrated Using GlobeLand30 for Kenya
Author(s): Linda See, Juan Laso Bayas, Dmitry Schepaschenko, Christoph Perger, Christopher Dresel, Victor Maus, Carl Salk, Juergen Weichselbaum, Myroslava Lesiv, Ian McCallum, Inian Moorthy, Steffen Fritz
Published in: Remote Sensing, Issue 9/7, 2017, Page(s) 754, ISSN 2072-4292
DOI: 10.3390/rs9070754

The Value of Stakeholder Mapping to Enhance Co-Creation in Citizen Science Initiatives
Author(s): Artemis Skarlatidou, Monika Suskevics, Claudia Göbel, Baiba Prūse, Loreta Tauginiené, Andre Mascarenhas, Marzia Mazzonetto, Alice Sheppard, Judy Barrett, Muki Haklay, Avinoam Baruch, Elina-

Aikaterini Moraitopoulou, Kat Austen, Imane Baïz, Aleksandra Berditchevskaia, Eszter Berényi, Simon Hoyte, Lotte Kleijssen, Gitte Kragh, Martine Legris, Alicia Mansilla-Sanchez, Christian Nold, Michalis Vit
Published in: Citizen Science: Theory and Practice, Issue 4/1, 2019, ISSN 2057-4991
DOI: 10.5334/cstp.226

The Role of Citizen Science in Earth Observation
Author(s): Steffen Fritz, Cidália Fonte, Linda See
Published in: Remote Sensing, Issue 9/12, 2017, Page(s) 357, ISSN 2072-4292
DOI: 10.3390/rs9040357

Conference Proceedings

The LandSense Engagement Platform: Connecting citizens with earth observation data for Land Use and Land Cover Monitoring
Author(s): Moorthy, I.; See, L.; Batič, M.; Matheus, A.; Milčinski, G.; Fritz, S.
Published in: Living Planet Symposium 2019, 2019

CropSupport CropSupport – a new tool for crowdsourcing of agricultural field level data
Author(s): Mrkajic, V.; Vukasovic, S.; Batič, M.; d'Andrimont, R.; Moorthy, I.
Published in: Living Planet Symposium 2019, 2019

Citizen Scientists Monitoring the Environment: The Latest Apps from IIASA
Author(s): Laso Bayas, J.C.; Moorthy, I.; Sturn, T.; Karner, M.; Perger, C.; Fraisl, D.; Domian, D.; Gardeazabal, A.; Vargas, L.; Capellan, S.; Danylo, O.; Lesiv, M.; Dürauer, M.; Dresel, C.; Hager, G.; Saad, M.; Subash, A.; Smith, B.; Joshi, N.; Schepaschenko, D.; McCallum, I.; See, L.; Fritz, S.
Published in: 2nd International Conference Citizen Observatories for natural hazards and Water Management, 2018

The LandSense Engagement Platform: Connecting citizens with earth observation data to promote environmental monitoring
Author(s): Moorthy, I.; See, L.; Batic, M.; Matheus, A.
Published in: ESA Earth Observation Phi Week, 2018

LandSense: A Citizen Observatory and Innovation Marketplace for Land Use and Land Cover Monitoring
Author(s): Moorthy, I.; Fritz, S.; See, L.; McCallum, I.
Published in: European Geosciences Union (EGU) General Assembly, 2017

The Next Generation Citizen Observatories
Author(s): Hemment, D.; Amditis, A.; Fritz, S.; Wehn, U.; Moorthy, I.; Tsertou, A.
Published in: First International ECSA Citizen Science Conference, 2016
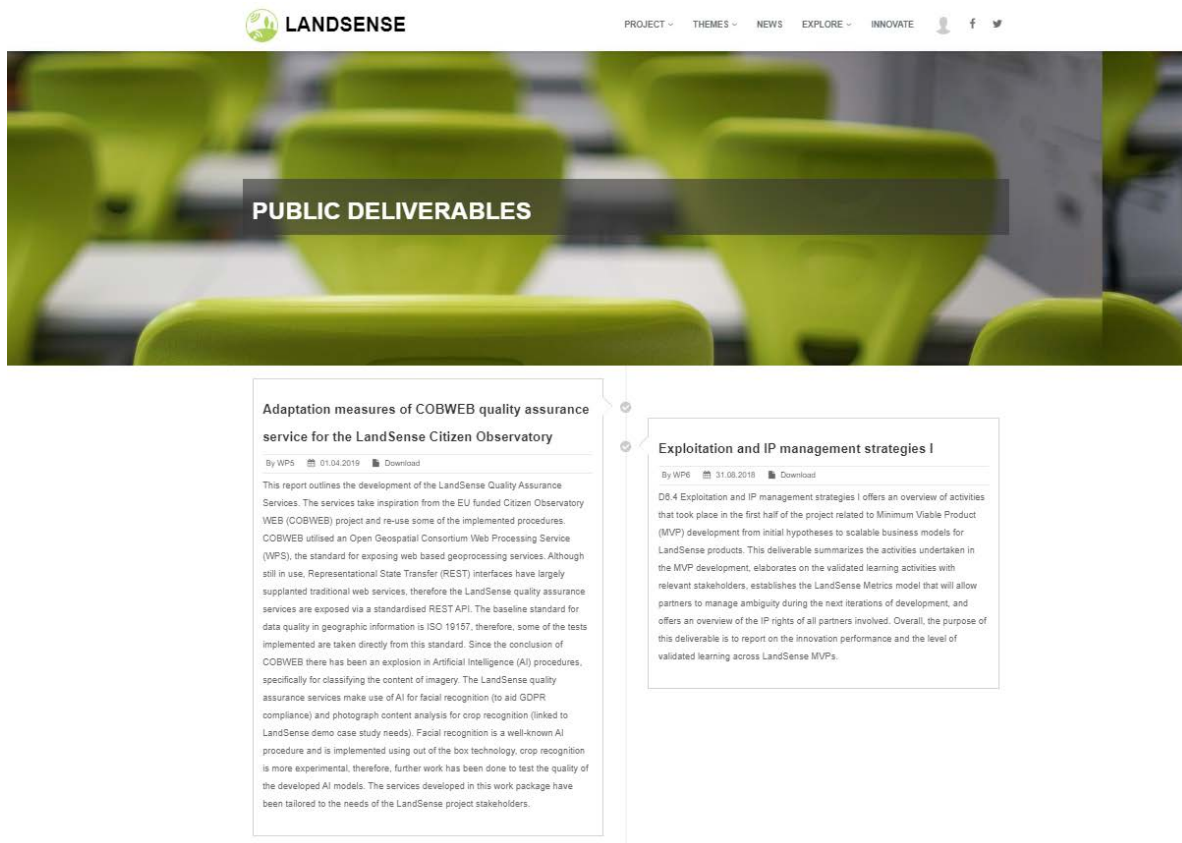
LandSense: A Citizen Observatory and Innovation Marketplace for Land Use and Land Cover Monitoring
Author(s): Moorthy, I.; Fritz, S.; See, L.; McCallum, I.; Laso Bayas, J. C.
Published in: First International ECSA Citizen Science Conference, Issue 1, 2016

4.2.3 Deliverables

LandSense deliverables are official project outputs, presenting specific results in relation to the work packages of the project. Some of the LandSense deliverables are public reports and are prominently posted on the LandSense homepage (see Figure 3) and can be accessed here. For each public deliverable we have provided a short summary of the content for the reader.

Figure 3: Deliverables on the LEP

Depending on the specific content, the deliverables are interesting for various target groups. In order to make them available, public deliverables will be downloadable from the LandSense project website as well as the LandSense Engagement Platform. Further, dedicated news entries on the website and social media channels will inform the wider public about new LandSense outputs.

4.2.4 Networking, meetings and events

Well-chosen scientific and popular science conferences and events are crucial channels for raising awareness and promoting LandSense activities and outputs. Since 2016, LandSense partners have taken part in a total of about 90 dissemination events, addressing topics such as Citizen Sciences, Earth Observation, Land cover and big data processing.

Table 3 summarizes a series of recent project related events and workshops. This list will be progressively expanded as further events are planned.

Table 3: LandSense participation in dissemination events (as of Dec 2019)

Date	Event	Location
05/2018	EU Green Week	Brussels
06/2018	Second International ECSA Conference	Geneva
06/2018	Toulouse Space Show	Toulouse
07/2018	AGIT/GI Forum	Salzburg
10/2018	European Crowdfunding Network CrowdCon	Brussels
01/2019	Citizen Science Award Workshop	Vienna
03/2019	UN Science Policy Business Forum on the Environment / UNEA 4	Nairobi
04/2019	European Geoscience Union General Assembly	Vienna
05/2019	Living Planet Symposium	Milan
06/2019	Austrian Sustainability Days	Vienna
06/2019	SCENT Final Showcase	Athens
07/2019	EARSel Symposium	Salzburg
07/2019	EuroGEOSS Workshop	Lisbon
07/2019	H2020 ICTurkey	Istanbul
08/2019	Natura Alert Training Workshop	LabuanBajo
10/1029	4 Citizen Observatories Joint Event	Brussels
11/2019	GEO Week 2019 / Ministerial Summit	Canberra
11/2019	Citizen Science Award Ceremony	Vienna
05/2020	ESCA conference	Trieste

4.3 Press and media work

Press and media work will include press releases, publishing articles in thematic magazines or the general press as well as interviews. Press releases will be produced as relevant pieces of news on the main LandSense project milestones. Network related press releases will be elaborated by GeoVille, and translated in turn by partners to local languages, if necessary. If the press releases are related to a specific event, the host partner will be responsible for the local distribution of the press release among national mass media.

A press kit (.zip) containing the LandSense project logo in TIFF, a LandSense Brochure along with relevant press contacts is already prepared. The press kit will be available on the LEP as well as internally to each LandSense partner.

4.4 Collaboration with other projects – The EC Common Dissemination Booster

LandSense envisages a close collaboration with other projects and Citizen Observatories across different disciplines, which is explained in detail in D6.1. DEC Strategy, Operative Plan and SOPs and D6.5 DEC Strategy, Operative Plan and SOPs – Update.

Under the umbrella of the European Commission's **Common Dissemination Booster (CDB)**, a special relationship has been established with other H2020 citizen observatories, namely GroundTruth 2.0, GROW,

WEObserve and SCENT. A project group has been formed for supporting Europe's leading role in integrating citizen science and building resilient communities that is led by the LandSense Citizen Observatory. The overall aim is to demonstrate the societal and economic benefits of involving citizens in environmental decision making and cooperative planning to enable citizens to become the 'eyes' of the policy makers and to complement existing environmental monitoring systems.

Figure 4: Common Dissemination Booster Project Group

The project group has successfully applied for the Service 2 - Stakeholder mapping, starting in May 2018, as well as the Service 5 - Dissemination Campaign Management (starting Q2/2018):

4.4.1 Service 2 – Stakeholder mapping

The aim of Service 2 was to identify and prioritize LandSense stakeholders and built a solid network to reach them and this way to maximize and coordinate the dissemination and communication efforts of the projects. Under the guidance of the EC, the project group identified its main dissemination channels, multipliers and most appropriate networks to foster the level of engagement and the capacity to influence. This included the definition of a clear methodology and strategy to overcome existing and potential barriers to successful dissemination and communication. The results of the study were summarized in the CDB Service 2: Stakeholder End-User Mapping report and the main conclusion and advices included:

1. **Civil society -** jointly communicate the benefits that all of the different but complementary activities the projects run will bring to the land management panorama.
2. **Policy makers and activists -** joint effort to be undertaken to transfer appropriate information, messages and results to decision makers in Europe.

3. **Commercial (land) map providers, ICT Operators and Service Providers** and **research** actors

The main barriers to dissemination were:

1. **Civil society -** The geographical limitations of the pilot areas may affect the overall citizens' awareness.

2. **Policy makers and activists -** Local environmental agencies and associations of spatial planners must be engaged.

3. **Commercial (land) map providers, ICT Operators and Service Providers** and **research** actors: The real commercial opportunities for Start-ups and SMEs are not yet clear

Further, the CDB team outlined the influence and importance of the stakeholders, which defines the strengths of the stakeholders in supporting the uptake of the research output versus interest in facilitating the uptake. The results are shown in Figure 5.
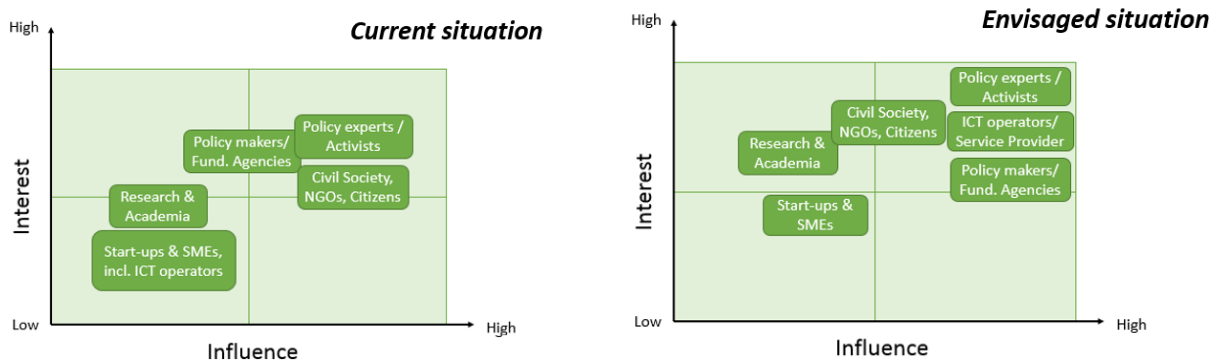
Figure 5: Common Dissemination Booster - Influence and importance of the stakeholders (left = current situation, right – envisaged situation)

Another aspect of the analysis was the geographic dimension and the level of engagement, which determines the most appropriate dissemination channels that should be adopted (Figure 6).
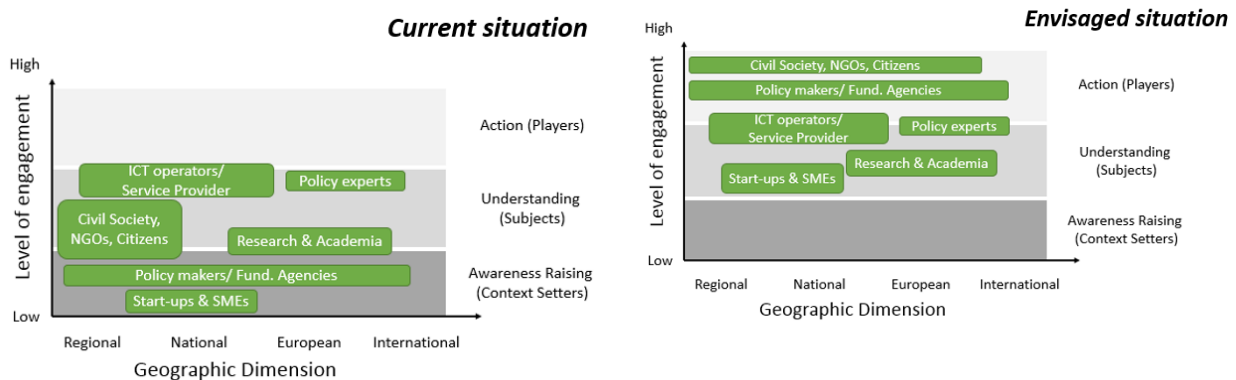
Figure 6: Common Dissemination Booster – Geographic dimension and level of engagement (left = current situation, right – envisaged situation)

Further, the CDB team outlined the dissemination channels based on the desired level of engagement and the dissemination network (Figure 7).

Figure 7: Common Dissemination Booster - dissemination Channels.

4.4.2 Service 5 – Dissemination Campaign Management

Service 5 concentrates on hands-on support for successfully delivery the dissemination campaigns. As such, the project group got practical expert feedback on the dissemination activities and was guided to improve the dissemination skills on the field. Further, the service provided a dedicated session on legal consultancy to clarify issues related to Intellectual Property and copyrighting. Within the service several achievements have been realized including a project group policy brief, a project group landing page, a joint event list as well as a joint flyer. The material is available for further dissemination and is described in more detail below.

Table 4: Main outcomes of the Common Dissemination Booster – Service 5

Outcome	Description
Joint One Pager	A joint promotional material that can be distributed on future events the LANDSENSE PG will attend or in digital format.
Joint Flyer	A joint flyer that can be distributed on future events the LANDSENSE PG will attend or in digital format.
Joint Event List	A shared list of potential future events with some activities recommended.
Joint Web Page	A common web page that briefly present the projects and most importantly the results produced divided by sections so: Platform and tools, Reports, Training material, Pilots & Demos.
Joint Policy Brief	A Policy Brief that aims at empowering citizens to become the 'eyes' of the policy makers and to complement existing environmental monitoring systems.
Joint Article	A joint article to be used to promote the joint event the Project Group will held in October.
Social Media Posts	A set Twitter and LinkedIn posts have been provided to the Project Group to promote the joint event in October
Images	Four images were produced to accompany the dissemination material produced in Service 5.

Policy Brief:

By addressing the readiness level of policy and decision makers in terms of awareness, acceptability and sustainability, the Policy Brief targets one of the main issues for the successful implementation of Citizen Science and Citizen Observatories in the policy agenda. It provides dedicated recommendations that highlight the need for citizen participation in environmental policy making. It further, stresses the fact that citizen science initiatives should be actively supported, outlines the need to reduce the gap between bottom-up and top-down approaches and directly addresses the concerns of policy makers on citizen science.

Figure 8: Common Dissemination Booster – Policy Brief

Group Landing Page

A group landing page has been designed that provides an overview of the projects involved in the innovative project group. It further details the available platform and tools, provides access to best practices, guides and lessons learned as well as training material. Users also get an overview of existing campaigns as well as pilot and demo cases (Figure 9).
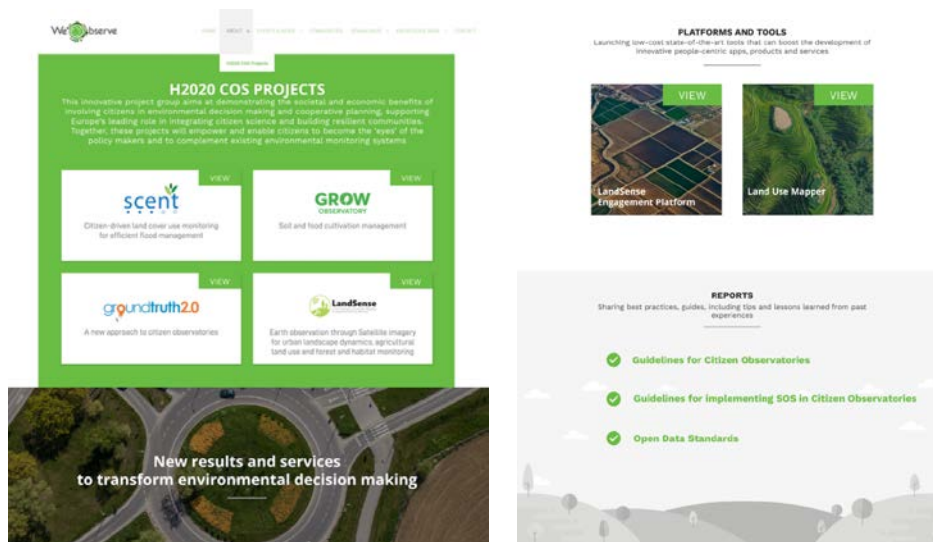
Figure 9:Common Dissemination Booster – Group Landing Page

Joint One Pager:

One of the earliest joint dissemination activities to be implemented was the development of a simple One Pager to help the projects in their dissemination activities (Figure 10). The One Pager aims at summarising in a simple yet catchy way:

- The context in which the PG operate, and the specific challenges related to its topic.
- The activities of the PG and their impact
- Specific stakeholders targeted by the PG activities
- A brief overview of each project individually

The project group can use this to increase visibility in future events.

Figure 10:Common Dissemination Booster – Joint Project Group Flyer

Social Media Posts

A series of Tweets and LinkedIn posts has been produced for the project group to promote their participation in the joint event in October. Social media posts are designed to be used in Twitter and LinkedIn and contain suggested hashtags and handles to increase visibility and engagement.
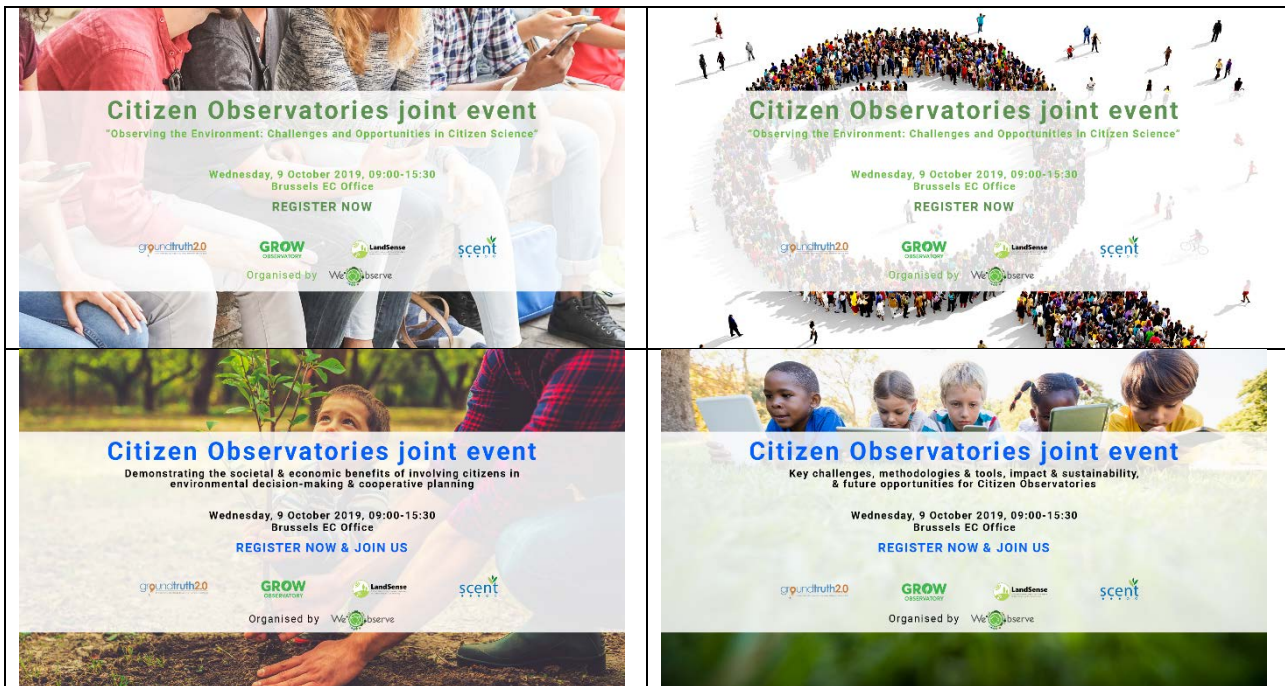
Figure 11:Common Dissemination Booster – Social Media Posts

Lessons learned:

Through the dissemination activities carried out and the campaigns organised under the CDB Service 5 as well as the earlier joint dissemination actions carried out, the LANDSENSE project group, through the CDB has produced the following impacts:

- Increased visibility through the common web page which, once completely implemented, should give immediate visibility to the results of the projects therefore clarify their practical impact on environmental decision making.
- Closer engagement to primary stakeholder group such as policy and decision makers with recommendations coming from the project group's activities and results summarized in the Policy Brief.
- Active support on the promotion of the joint event in late October 2019.
- The Project Group can now benefit of ready-to-use social media posts to increase its overall visibility but also increase each individual project's visibility.
- New dissemination materials have been added the

4.5 Citizen Science Award

In 2019, the Center for Citizen Science and the Citizen Science Award projects organised and hosted the Citizen Science Award Day. School classes and individuals had the possibility to get to know the organisations and the projects by taking part in workshops, guided tours and many other activities throughout the year. The most enthusiastic citizen scientists were awarded monetary and non-monetary prizes by the Federal Ministry of Education, Science and Research together with the research projects during a festive event on November 19, 2019.

In the morning, as part of the Citizen Science Day, LandSense project partner GLOBAL2000 delivered a workshop on 'Cities of the future'. It was hosted at Umweltbundesamt and attended by students from Viennese grammar schools. Martin Wildenberg from GLOBAL2000, who works on the CityOases use case, and Barbara Birli from the Umweltbundesamt organised and attended the workshop.

In the afternoon the Citizen Science Award ceremony took place at the University of Vienna.

Henriette Spyra, Head of Expert Management at the Umweltbundesamt, attended the event together with Barbara Birli who coordinates the dissemination and user engagement for the CityOases team. Rewards went to the school classes who collected the most data. The winning school class was from the Sir Karl Popper Schule in Vienna while the pupils from the BRG14, also from Vienna, took second place.

The CityOases App was one of seven research projects taking part in this year's Citizens Science Award campaign (Figure 12).

Figure 12: Citizen Science Award - CityOases

Through this campaign, the CityOases app received significant media attention and was promoted during public workshops as well as local newspapers (Figure 13). Further, Global2000 created a short video introducing the app to the public.

Figure 13: Local newspaper reports about CityOases.

4.6 2nd LandSense Challenge

In order to promote and stimulate the fast adoption of the project outcomes, the LandSense Innovation Challenge will take place on 27th of May 2020, as a part of 3rd ECSA Conference in Trieste. This interactive session will facilitate collaboration and innovation among stakeholders within the value chain related to land mapping and citizen science. As such, the LandSense Innovation Challenge targets individuals, web-entrepreneurs, start-ups and SMEs coming from all participating Horizon 2020 countries, to present innovative IT solutions addressing one of the three LandSense domains: Urban Landscape Dynamics, Agricultural Land Use, and Forest & Habitat Monitoring. The challenge focuses on exploiting data streams coming from the LandSense Citizen Observatory, which consist of a diverse set of data including land cover change detection, threats to natural habitats, greenspace monitoring, etc., to design novel LULC solutions targeted at the citizen science community. In addition, participants will be encouraged to access data from the Sentinel Hub Service or other relevant EO data sources as well as the LandSense Quality Assurance Service in their solution.

The process for the LandSense Innovation Challenge is divided into two stages: First, there will be public call for ideas (Feb/March 2020) to which teams can submit proposals. After a review of the applications, a selected number of shortlisted teams (5 to 10) will be invited to join the finals in Trieste to pitch their ideas to a jury of experts. Teams attending the finals will have the opportunity to discover more about LandSense, get coaching/mentoring to improve their pitches and network with the vibrant EO and citizen science communities. The winning team will not only receive a grand prize but also continue collaboration with the LandSense consortium to further advance their solution.

5 Detailed Communication plan

5.1 Communication Language

Most of LandSense's communication and dissemination materials and tools will be in English. However, some materials and other communication activities, specifically targeting citizens and local communities, will be published in other languages, e.g. promotional materials concerning the LandSense Campaigns as well as the campaign descriptions will also be available in the country language.

5.2 Communication channels

Some dissemination, communication and engagement channels are directed to one specific target group, while others address all the target groups in general. An overview can be found in the following table.

Table 5: Overview of target group specific communication channels

Target group	Website LEP	Social Media	E-News-letter	Blog	Brochure Flyer	Publication	Deliverables	Networking	Press media
Public authorities	x	x			x		x		x
EU policy makers	x				x		x		x
General public	x	x	x	x	x				x
Businesses	x	x	x	x	x			x	x
Researcher	x	x	x			x	x	x	
European Networks & NGOs	x	x	x	x	x			x	x

5.3 Communication plan

Table 6 details the communication plan for the year 2020. The plan provides a framework and a living document, which will be updated and adapted throughout the year.

Table 6: LandSense Communication Plan 2020 (as of Dec 2019)

Activities	Description of activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Website	Maintenance of the LandSense website and the LEP and step by step merging of both into the LandSense Citizen Observatory								
LEP									
Facebook	Facebook presence to reach a variety of stakeholders as well as the interested citizens								
Twitter	Strong Twitter presence to reach a variety of stakeholders as well as the interested citizens								
Blog of Partners	Communication of LandSense activities, events and results through partner blogs								
Brochure and Flyers	Distribution of flyers and brochures at key conferences and events								
Scientific publications	Submission of scientific papers								
Deliverables	Communication of submitted and approved deliverables								
Networking & meetings	Attend key conferences on Citizen Science and other relevant topics								
Press and media	Communication of important LandSense activities and events through the media								

6 Impact Monitoring and Evaluation

A variety of measures to monitor the impact of the LandSense dissemination tools and the communication strategy will be used. The analysis of actions and tools will further allow us to realign and maximize efforts where most effective, and to revise or abandon paths that consistently do not meet expectations.

For our social media outreach, the TFF, or the followers/following ratio will be implemented for Twitter. We will further use Google Analytics to measure traffic to the website, time spent there and popular sections. For further measurements resulting from targeted dissemination activity, dissemination outputs paired with respective measurements are summarized in the table below.

Table 7: Criteria for dissemination output and current achievements (based on D6.1)

Dissemination tool	KPI	Goal	Current
Webpage	Visitors per month	300+	275
Twitter	Followers	2000+	1349
Facebook	Likes	2000+	510
E-newsletter	Total audience	1000+	226
Promotional material (online and offline)	People reached	3000+	>3000
Dissemination Events	Number	50+	92
Scientific publications	Number	20+	22