Co-designed Citizen Observatories Services for the EOS-Cloud

H2020 programme: Research and Innovation action

Deliverable 7.6
Set of Cos4Cloud documentation per stakeholder audience

28th of February 2023

Project funded by the European Commission within the Horizon 2020 Programme (2014-2020)

Grant Agreement No.	863463

Type		
R	Document, report excluding the periodic and final reports	X
DEM	Demonstrator, pilot, prototype, plan designs	
DEC	Websites, patents filing, press & media actions, videos, photos, etc.	
SOF	Software, technical diagram, etc.	
OTHER	Flyers, etc.	

Dissemination level		
PU	Public, fully open.	
CO	Confidential, restricted under conditions set out in Model Grant Agreement	X
CI	Classified	

Revision history

R#	Date	Description/Reason of change	Deliverable contributors
R0.1	14/02/23	First Draft	Earthwatch: Sasha Woods and Luigi Ceccaroni
R0.2	21/02/23	Review of first draft	ICM-CSIC: Sonia Liñán, Karen Soacha; CREAF: Ángela Justamante
V1	28/02/23	Final version	Earthwatch: Sasha Woods and Luigi Ceccaroni

Authors

Sasha Woods and Luigi Ceccaroni (Earthwatch) are the lead authors of D7.6. ICM-CSIC: Sonia Liñán, Karen Soacha, Jaume Piera / CREAF: Ángela Justamante.

Citation

This document is an internal deliverable. This report can be cited as:

Woods, S., Ceccaroni, L., Liñán, S., Soacha, K., Piera, J., Justamante, A. (2023) Cos4Cloud's set of documentation per stakeholder audience - Report (D7.6).

Index

1 Executive summary

Cos4Cloud (Co-designed citizen observatories for the EOS-Cloud) aims to address technological challenges, in the context of Open Science, shared by Citizen Observatories (COs) of biodiversity and the environment. Work Package 7 (WP7), 'Project Dissemination and Exploitation' serves to create opportunities for the Cos4Cloud project outcomes, and guide the project activities to ensure the sustainability of the services created within the European Open Science Cloud (EOSC).

WP7 has produced a number of documents designed to aid in the dissemination and exploitation of the Cos4Cloud project outputs. **Deliverable (D7.3) Strategic plan for the exploitation and dissemination of the results (PEDR)** outlines this strategy, consisting of an output management plan, and an overview of the project's data management plan. **D7.1 Exploitation Plan – ex ante identification and evaluation of project opportunities**, outlines the identification and evaluation of Cos4Cloud opportunities within the EOSC, following a thorough exploration of the EOSC marketplace and an assessment of how best to integrate Cos4Cloud's services within this framework. **D7.2 Dissemination and marketing strategy**, builds on these two previous deliverables to utilise a bottom-up approach of market analysis to finalise a marketing strategy for project outputs; which are safeguarded to maximised project exploitation in **D7.4 IP management plan**.

In the final month of the project, WP7 has produced three deliverables. This deliverable, **D7.6 Set of Cos4Cloud documentation per stakeholder audience** gathers the relevant dissemination materials which will be used to target specific stakeholders now and beyond the lifetime of the project.

D7.5 Exploitation roadmap v2 describes in more detail how these documents will be used to ensure project sustainability. **D7.7 Sustainability strategy for COS4CLOUD services in the EOSC hub** focuses on the exploitation of the services within the EOSC framework.

2 Introduction

2.1 Cos4Cloud project outputs

Cos4Cloud (Co-designed citizen observatories for the EOS-Cloud) aims to address the technological challenges in the context of Open Science shared by Citizen Observatories (COs) of biodiversity and the environment, based on the experience of platforms including Artportalen, Natusfera, Pl@ntNet and iSPot, as well as other environmental quality monitoring platforms such as FreshWater Watch, KdUINO, OdourCollect, iSPEX and CanAir.io.

To this end, through an agile methodology, Cos4Cloud has developed:

- The Cos4Cloud architecture
- Thirteen technological services
- Co-design as a service
- Education and citizen science resources
- A toolbox and evidence hub, packaging the outputs above into an action framework for developing and supporting COs.

The thirteen technological services are:

- **Cos4Bio**: an online platform that integrates observations on biodiversity from various citizen observatories
- **Cos4Env**: an online platform that integrates environmental monitoring data from various citizen observatories
- **DUNS**: a centralised service to (1) register usage of the citizen science observations downloaded from the Cos4Bio and Cos4Env portals and (2) make this information available to the citizen observatory the observation comes from
- **MOBIS**: a service to create integrative citizen science apps where you can report all your environmental and biodiversity observations in one Android or iOS app
- **MECODA**: an online tools repository to facilitate the analysis and viewing of all sorts of citizen science data
- **FASTCAT-Cloud**: an open website service able to (1) automatically filter out most unwanted pictures and video streams, (2) integrate machine learning technology, and (3) obtain counts (number of species recorded or photographed)
- **FASTCAT-Edge**: allows you to build your own smart camera trap to record only videos and pictures of wildlife activity and quickly identify the species names

- **Pl@ntNet-API**: an API allowing users to integrate Pl@ntNet's visual identification engine into other apps and improve users' experience
- **AI-taxonomist**: integrates automatic identification tools customizable to citizen science project needs
- **AI-GeoSpecies**: integrate artificial intelligence into citizen science apps to predict which species users will be found in a particular area
- **Biodiversity-DL / GBIF-DL**: a service that allows users to create a training set on a particular group of living organisms on-demand
- **Authenix**: allows registered applications and services to log in to multiple digital platforms using one authentication GPDR-compliant service
- **STAplus**: allows the interoperable re-use of citizen science data based on OGC SensorThings API v1.1

Note that the toolbox, case studies and handbooks as supporting outputs will enhance the dissemination and marketing of the services themselves.

2.2 Cos4Cloud stakeholders

We detailed Cos4Cloud audiences in the D8.2 **Communications plan**. They are listed again here, for ease of access:

1. Academia
2. Business and industry
3. Citizen-science community
4. Cos4Cloud consortium partners
5. Developers and data-analytics community
6. Education stakeholders
7. EOSC-related projects
8. European associations or similar entities related to citizen science
9. European Commission
10. General public
11. Government: public authorities and decision-makers
12. NGOs
13. The press and media

2.3 Cos4Cloud communication channels

Cos4Cloud communication channels were also described in the D8.2 **Communications plan**. They are presented here in Figure 1.

Figure 1 Cos4Cloud communication channels

This deliverable presents a set of Cos4Cloud documentation per stakeholder audience, with regards to these identified channels.

All software developers contributed to a Github (for development) and EOSC (for frozen releases) repository with open-source software and markdown documents. Thus this deliverable also finalises documentation of the project results - including the code developed - for end users, partners and developers for further development and use of Cos4Cloud software. This ensures the sustainability of the services beyond the Cos4Cloud project.

3 Documentation per stakeholder audience

Table 1 indicates the documentation / marketing material produced by the project, and its intended audiences; and specifies which materials have been produced by the thirteen services. Links to materials - grouped and explained thematically - are provided in the following pages.

Table 1 Cos4Cloud documentation per stakeholder audience

STAKEHOLDER												
1. Academia				✓	✓	✓	✓	✓		✓	✓	✓
2. Business and industry			✓	✓	✓	✓	✓			✓	✓	✓
3. Citizen-science community			✓	✓	✓	✓	✓	✓	✓	✓		✓
4. Cos4Cloud consortium partners			✓	✓	✓	✓	✓	✓	✓	✓		
5. Data-analytics community				✓		✓	✓			✓		✓
6. Education stakeholders			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
7. EOSC-related projects			✓	✓	✓	✓	✓			✓	✓	
8. European associations related to citizen science			✓	✓	✓	✓	✓	✓	✓	✓		✓
9. European Commission				✓	✓	✓	✓			✓	✓	✓
10. General public			✓	✓	✓	✓	✓	✓	✓			✓
11. Government				✓			✓			✓	✓	✓
12. NGOs			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
13. The press and media			✓	✓			✓		✓			✓
	In the EOSC	EOSC in practice	Website page	Infographic	Guidelines	Video tutorial /webinar	Case study	Toolbox & evidence hub	Website blog post	Publication	Policy brief	Press release
Cos4Bio	✓	✓	✓	✓	✓	✓		✓	✓	Table 6	See section 5	See section 4
Cos4Env			✓	✓				✓	✓			
DUNS			✓	✓				✓	✓			
GBIF-DL			✓	✓	✓			✓	✓			
MOBIS	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Pl@ntNet-API	✓	✓	✓	✓			✓	✓	✓			
AI-taxonomist			✓	✓	✓			✓	✓			
AI-GeoSpecies	✓		✓	✓	✓			✓				
FASTCAT-Cloud	✓	Pending	✓	✓	✓	✓	✓	✓	✓			
FASTCAT-Edge			✓	✓	✓	✓	✓	✓	✓			
MECODA			✓	✓	✓		✓	✓	✓			
Authenix	✓		✓	✓				✓	✓			
StaPlus			✓	✓	✓		✓	✓	✓			
COS4CLOUD SERVICE												

In the EOSC" refers to whether or not the service is already available within the EOSC marketplace; "**EOSC in practice"** indicates where the EOSC has published an article on the service. "**Website page"** notes whether the service has a dedicated page on the Cos4Cloud website, and "**website blog posts"** relate to news items published on the Cos4Cloud website. **"Infographics"** are visual explanations of each service, whilst "**guidelines"** give clearer information on uses. "**Video tutorials and webinars"** are presented as interviews with the developers, and "**case studies and success stories"** show real-world examples of these services being used. **Publications** are peer-reviewed academic articles or conference submissions, "**policy briefs"** are documents intended for policy-makers, and "**press-releases"** are general media articles produced for non-scientific audiences. Once the "**Toolbox and evidence hub**" - produced by the OU - is live, all services will have a dedicated page showcasing their added value.

The Cos4Cloud website (https://cos4cloud-eosc.eu/) hosts web pages containing much of the documentation covered in this deliverable. However, for ease of access we have created a community space on Zenodo where all documentation will be uploaded; further cementing the legacy of the project.

Documentation described in Table 1 is grouped in the following pages as follows:

1. **Technical documentation** relating to the thirteen services, including codes, guidelines and deliverables
    - **Technical documentation relating to the EOSC**, specifically links to the marketplace and EOSC in practice stories
2. **Communication and engagement documentation** which can be used to target and engage all stakeholders with project results; these being videos, leaflets, infographics and case studies
3. **Educational resources** generated through activities centred around co-design, education and citizen science
4. **Academic results** consisting of peer-reviewed documentation
5. **Agency documentation** targeted at policy- and decision-makers

3.1 Technical documentation

Technical documentation describes the application, purpose, creation or architecture of the services developed in Cos4Cloud. It includes the code repository, manuals and guidelines related to each of the services, and public deliverables listed in Table 2. These documents will be useful for targeting stakeholders interested in the technological details of the services; academia, business and industry, and the data-analytics community, for example.

Table 2 Cos4Cloud services: code, guidelines, datasets and deliverables

Service	Code	Guidelines	Deliverable
Cos4Bio	https://github.com/Bineo-Consulting/Cos4Cloud	https://cos4bio.eu/en/help.html	D4.2 Experts portal for biodiversity data validation (to be uploaded to Zenodo)
Cos4Env	https://github.com/Bineo-Consulting/Cos4Env	-	D4.1 General purpose integration platform (to be uploaded to Zenodo)
DUNS	https://github.com/Bineo-Consulting/DUNS	-	D4.6 Data Use Notification Services (to be uploaded to Zenodo)
MOBIS	Server: N/A Mobis front end plugins: https://github.com/DDQ-NL/mobis_canairio https://github.com/DDQ-NL/mini-secchi https://doi.org/10.5281/zenodo.7561656	https://mobis.ddq.nl/manual/en/index.html	D4.5 MOBIS / Customizable Interface service for COS4CLOUD Apps https://zenodo.org/record/7615472
MECODA	https://github.com/eosc-cos4cloud/mecoda-orange	https://pypi.org/project/Mecoda-Orange/	Confidential
FASTCAT-Cloud	not planned; API available	-	D4.4 Platform for interactive pre-processing camera trap images (to be uploaded to Zenodo)
FASTCAT-Edge	https://dynaikon.com/trap for software and hardware	https://dynaikon.com/trap-docs/user-docs.html	Confidential
Pl@ntNet-ID	https://github.com/plantnet/my.plantnet	https://my.plantnet.org/	Confidential
AI-taxonomist	https://github.com/plantnet/ai-taxonomist-webcomponent	https://github.com/plantnet/ai-taxonomist#readme	Confidential
AI-GeoSpecies	-	https://my-api.plantnet.org/#/partners/getV2PredictionGeoSpecies	Confidential

GBIF-DL	https://github.com/plantnet/gbif-dl	https://github.com/plantnet/gbif-dl#readme	Confidential
Authenix	-	-	Confidential
STAplus	-	https://docs.ogc.org/bp/21-068.pdf	Confidential

3.1.1 Technical documentation relating to the EOSC

An important element in the Cos4Cloud project has been the availability of services within the EOSC marketplace. Table 3 provides links to the services already available within the EOSC and, where applicable, an EOSC in practice article.

Table 3 EOSC documentation

Service	EOSC marketplace	EOSC in practice
Cos4Bio	https://marketplace.eosc-portal.eu/services/cos4bio	https://zenodo.org/record/6516724#.Y8qv7y8rzs2
MOBIS	https://marketplace.eosc-portal.eu/services/mobis-mobile-observation-integration-service	https://zenodo.org/record/6448793#.Y8qwlC8rzs0
Pl@ntNet-ID	https://marketplace.eosc-portal.eu/services/pl-ntnet-identification-service	https://zenodo.org/record/7049755#.Y8qvri8rzs1
AI-Geospecies	https://marketplace.eosc-portal.eu/services/ai-geospecies?q=AI-GeoSpecies	-
FASTCAT-Cloud	https://marketplace.eosc-portal.eu/services/fastcat-cloud-flexible-ai-system-for-camera-trap-images-on-the-cloud	Pending publication
Authenix	https://marketplace.eosc-portal.eu/services/authenix	-

Note that a number of services still in development will be available within the EOSC beyond the lifetime of the Cos4Cloud project.

3.2 Communication and engagement documentation

Communication and engagement documentation describes the materials produced to explain the results of the project to as wide an audience as possible, including the general public who may be less familiar with citizen science or the EOSC. Table 4 describes these documents including those which relate to the project as a whole, and those which relate to specific services. These documents include videos, leaflets, infographics and case studies.

Table 4 Communication and engagement documentation

Project / service	Document type	Zenodo link
Project	D8.3 Project video	https://doi.org/10.5281/zenodo.7661082
	Cos4Cloud informative poster	https://zenodo.org/record/7660096
	Cos4Cloud scientific poster	https://zenodo.org/record/7660176
	Cos4Cloud leaflet	https://zenodo.org/record/7660138
	Interactive infographic Cos4Cloud: its story and legacy for the citizen science community	https://doi.org/10.5281/zenodo.7673757
Cos4Bio	Infographic	https://zenodo.org/record/7657902
Cos4Env	Infographic	https://zenodo.org/record/7647131
DUNS	Infographic	https://zenodo.org/record/7657532
MOBIS	Infographic	https://zenodo.org/record/7657810
	Case study	To be uploaded to the Cos4Cloud Zenodo community
MECODA	Infographic	https://zenodo.org/record/7657828
	Case study	To be uploaded to the Cos4Cloud Zenodo community
FASTCAT-Cloud	Infographic	https://zenodo.org/record/7657698
FASTCAT-Edge	Infographic	https://zenodo.org/record/7657727
	Case study	To be uploaded to the Cos4Cloud Zenodo community
Pl@ntNet-ID	Infographic	https://zenodo.org/record/7657684

	Case study	To be uploaded to the Cos4Cloud Zenodo community
AI-taxonomist	Infographic	https://zenodo.org/record/7657617
AI-GeoSpecies	Infographic	https://zenodo.org/record/7657594
GBIF-DL	Infographic	https://zenodo.org/record/7657640
Authenix	Infographic	https://zenodo.org/record/7657733
STAplus	Infographic	https://zenodo.org/record/7657751
	Case study	To be uploaded to the Cos4Cloud Zenodo community

3.3 Educational resources

Educational resources related to the **co-design methodology** outputs and those related to **education** in combination with citizen science. Although primarily useful for education stakeholders, these documents are designed to be accessible by all stakeholder audiences. The toolbox and evidence hub, in particular, will act as a "one stop shop" for resources produced by the project, available to other citizen scientists and the general public.

Table 5 Education documentation

Resource	Zenodo link
Co-design	
Co-design infographic	https://zenodo.org/record/7657921#.Y_T55C8rwdU
Co-design of citizen science tools presentation (English version)	https://zenodo.org/record/6783606
Co-design of citizen science tools presentation (Spanish version)	https://zenodo.org/record/6783594
Co-design as a service: Methodological guide	https://zenodo.org/record/7472450#.Y_T6Vi8rwdX
Sustainability of citizen science platforms	https://zenodo.org/record/7584329#.Y9zbInbP02w
BioMARató success stories	
BioMARató results 2022 (English version):	https://zenodo.org/record/7515568
BioMARató results 2022 (Catalan version)	https://zenodo.org/record/7515524
BioMARató results 2022 (Spanish version)	https://zenodo.org/record/7515518
BioMARató results 2021 (Catalan version)	https://zenodo.org/record/7658370
BioMARató results 2021 (Spanish version)	https://zenodo.org/record/7660012
BioMARató results 2021 (English version)	https://zenodo.org/record/7658110
Education	
Educational toolkit for the online teacher training course "Citizen Science and Environmental Education for Sustainability"	Produced by NKUA and to be added to the Cos4Cloud community on Zenodo
(D6.3) Production of a citizen science toolbox and Evidence Hub	Produced by the OU and to be added to the Cos4Cloud community on Zenodo
(D8.4) Evaluation of Knowledge Transfer materials	https://doi.org/10.5281/zenodo.7661124

3.4 Academic results

Table 6 provides a list of peer-reviewed publications produced by the Cos4Cloud project. Although primarily intended for academic stakeholders, peer-reviewed publications are also relevant for business and industry, the data analytics community, as well as policy-makers and NGOs.

Table 6 Academic publications

Title	Journal or equivalent	Year	DOI
PUBLICATION IN JOURNAL			
Mapping citizen science contributions to the UN Sustainable Development Goals	Sustainability Science	2020	10.1007/s11625-020-00833-7
How citizen scientists contribute to monitor protected areas thanks to automatic plant identification tools	Ecological Solutions and Evidence	2020	10.1002/2688-8319.12023
Citizen Science Monitoring for Sustainable Development Goal Indicator 6.3.2 in England and Zambia	Sustainability	2020	10.3390/su122410271
AI naturalists might hold the key to unlocking biodiversity data in social media imagery	Patterns	2020	10.1016/j.patter.2020.100116
Protecting small populations of rare species. Case study on dactylorhiza viridis (orchidaceae) in Fancott Woods and Meadows SSSI, Bedfordshire, UK	Nature Conservation Research	2020	10.24189/ncr.2020.028
How Networks of Citizen Observatories Can Increase the Quality and Quantity of Citizen-Science-Generated Data Used to Monitor SDG Indicators	Sustainability	2022	https://doi.org/10.3390/su14074078
Motion vectors and deep neural networks for video camera traps	Science Direct	2022	https://doi.org/10.1016/j.ecoinf.2022.101657
Pl@ntNet: Harnessing the power of artificial intelligence for biodiversity conservation	IEEE Consumer Electronics Magazine	2022	https://doi.org/10.3390/su14074078
A new theoretical engagement framework for citizen science projects: using a multi-temporal approach to address long-term public engagement challenges	Environmental Research Letters	2022	https://iopscience.iop.org/article/10.1088/1748-9326/ac939d
Citizen science in environmental and ecological sciences	Nat Rev Methods Primers	2022	https://doi.org/10.1038/s43586-022-00158-y
POSTER / PRESENTATION AT CONFERENCE			
LifeCLEF 2020 Teaser: Biodiversity Identification and Prediction Challenges	Advances in Information Retrieval	2020	10.1007/978-3-030-45442-5_70

Overview of LifeCLEF location-based species prediction task 2020 (GeoLifeCLEF)	Cross-Language Evaluation Forum for European Languages	2020	hal-02989077
Design and Development of Interoperable Cloud Sensor Services to Support Citizen Science Projects	EGU General Assembly	2020	10.5194/egusphere-egu2020-13338, 2020
Pl@ntNet Services, a Contribution to the Monitoring and Sharing of Information on the World Flora	Biodiversity Information Science and Standards	2020	10.3897/biss.4.58933
LifeCLEF 2022 Teaser: An Evaluation of Machine-Learning Based Species Identification and Species Distribution Prediction	Lecture Notes in Computer Science book series	2022	10.1007/978-3-030-99739-7_49
Towards an Interdisciplinary Citizen Science Interoperable Service in EOSC	EGI 2022 Conference	2022	http://www.opengis.net/doc/bp/21-068.
Engaging teachers in the co-design of educational scenarios aiming to integrate citizen observatories technologies into school-based environmental education.	Proceedings of EDULEARN - 14th International Conference on Education and New Learning Technologies	2022	https://www.ocean.upatras.gr/7c/
With the Citizen Observatory of Pl@ntNet in the National Garden. Implementation and evaluation of an educational scenario in the context of a Citizen Science project and Environmental Education	Proceedings of the 7th Panhellenic Scientific Congress on "Integration and Use of ICT in the Educational Process"	2022	To be published
Integrating Citizen Science into Environmental Education for Sustainability. Design and implementation of an online training course to foster participation in building sustainable and just societies through school education	Proceedings of the 1st International Virtual Conference on "Innovative practices in teaching and learning for building a sustainable and just society"	2022	10.21125/iceri.2022.1345
Integrating Citizen Observatories into school environmental education for sustainability: Design and Evaluation of a case study engaging students with Pla@ntNet and OdourCollect	Proceedings of ICERI-15th annual International Conference of Education, Research and Innovation	2022	https://www.ocean.upatras.gr/7c/
Citizen Science and Environmental Oral History in Climate Education. Integrating the use of a citizen observatory for biodiversity monitoring into a climate change education project	Proceedings of ICERI-15th annual International Conference of Education, Research and Innovation	2022	http://www.opengis.net/doc/bp/21-068.
THESIS			
Designing a digital game on the biodiversity of the school garden in the context of utilizing educational activities concerning Environmental Science with the aid of Citizen's science digital tools	Polynoe	2022	https://dx.doi.org/10.21125/edulearn.2022.2414

OTHER DOCUMENT			
Best Practice for using SensorThings API with Citizen Science	OGC Best Practice	2022	https://polynoe.lib.uniwa.gr/xmlui/handle/11400/2607?show=full

3.5 Agency documentation

Here we provide links to two policy briefs produced by the Cos4Cloud project; intended specifically for policy-makers.

Fabó Cartas, C. & Davies, C. (2023) **Citizen science to support progress of the SDGs and Cos4Cloud's contribution through its services and tools**. Policy Brief. Cos4Cloud project. Zenodo. https://zenodo.org/record/7646512

Fabó Cartas, C. (2023) **Sustainability of Cos4Cloud services for Citizen Observatories**. Policy Brief. Cos4Cloud project. Zenodo. https://doi.org/10.5281/zenodo.7646615

A further policy brief (draft title, **Exemplary Digital Services Enabling Open Science**) is being developed as part of the Horizon Results Booster (HRB) initiative. This initiative, from the European Commission, aims to bring a continual stream of innovation to the market and maximise the impact of public funded research within the EU.

Cos4Cloud has been grouped with two other EU-funded projects, TRIPLE, and CS3MESH4EOSC; all of which are tightly linked to the EOSC. The policy brief summarising the combined policy recommendations of the group will be produced beyond the lifetime of Cos4Cloud, supporting the project's ongoing legacy.

4 Conclusion

This deliverable outlines the documentation per stakeholder audience produced in Cos4Cloud, with a particular emphasis on the documentation produced by each of the thirteen services.

All thirteen services have produced infographics; key documentation for all stakeholder groups identified at the start of the project. Depending on their developmental stage, many services are already available within the EOSC, complete with codes in GitHub and supporting guidelines. Those that have been used by Citizen Observatories within Cos4Cloud also have tutorials, webinars or associated case studies, demonstrating their usability and added value (as described in **D7.2 Dissemination and marketing strategy**).

Each type of documentation / marketing material produced by the services – and by the Cos4Cloud project more generally – will be instrumental in disseminating the final results and outputs of the project; generating stakeholder interest in the short-, medium- and long-term.

D7.5 Exploitation roadmap v2, published alongside this deliverable, describes in more detail how these documents will be used to generate this interest, and to ensure project sustainability.