



D5.1 eLTER H2020 Knowledge Exchange Strategy 2015-2019

Authors: Andrew Sier, Herbert Haubold, Alessandra Pugnetti

Lead partner for deliverable: NERC-CEH

Other partners involved: EAA, CNR

H2020-funded project, GA: 654359, INFRAIA call 2014-2015

Start date of project: 01 June 2015

Duration: 48 months

Version of this document: 02

Submission date: <insert date>

Dissemination level

PU	Public	X
PP	Restricted to other programme participants (including the Commission Services)	
CO	Confidential, only for members of the consortium (including the Commission Services)	
CI	Classified, as referred to in Commission Decision 2001/844/EC	

Version control	Edited by	Date of revision
Created – V1	Andrew Sier	10/11/2015
Internal review	Alessandra Pugnetti	17/11/2015
Internal review	Herbert Haubold	18/11/2015
Revised – V2	Andrew Sier	18/12/2015
Revised – V3	Andrew Sier	09/02/2016
Revised – V4		
Reviewed		
Revised – V5		
Signed off – co-ordinator		

Publishable Executive Summary

1. This Knowledge Exchange strategy provides a structure for communicating with the stakeholders of the eLTER H2020 project (hereafter referred to as 'eLTER' or 'eLTER project'), including its funder (the European Commission).
2. The strategy is a framework to enable project members to promote eLTER and its outputs, to engage with stakeholders over relevant issues and to help eLTER to best meet user needs.
3. Whilst this strategy will be implemented in the context of the eLTER project, and therefore the main focus will be on the activities and outputs of that project, some communication will also concern the broader LTER-Europe network and the European Critical Zone Observatories community.
4. The strategy identifies a set of knowledge exchange objectives within 4 broad areas: promoting the project; promoting sites & platforms; promoting ecosystem related and socio-ecological data and knowledge; understanding and responding to stakeholder needs
5. eLTER's target audience groups are the research community, policymakers, the environmental conservation sector and existing and potential supporters.
6. Although we have identified these target audiences, we also recognise that eLTER has a wider range of stakeholders. Some communication will inevitably take place with representatives of these groups.
7. Key messages have been identified for the early stages of the project. The list of key messages should be regularly reviewed
8. The strategy identifies some of eLTER's own knowledge needs and ways in which we can obtain this knowledge.
9. A number of possible communication activities are provided. We will aim to achieve these, subject to available resources and time. An annual activity plan sets out planned communications for the current year and will be updated annually.
10. Best practice guidelines for the eLTER beneficiaries and principles for communication are given in Annexes A & B.
11. Annex C contains an assessment of available communication channels in terms of their perceived usefulness in communicating with target user groups.
12. Regular evaluation of communication activities is important. In Annex D we list communication activities undertaken since the start of the project in June 2015, and will update our evaluation of activities periodically.

Contents

Publishable Executive Summary

1. Purpose of the strategy	5
2. Annual action plan	6
3. Background: the need for good communication	6
4. Knowledge exchange objectives	7
5. Stakeholder analysis	8
6. Target stakeholders for knowledge exchange	9
7. Key messages	10
8. eLTER's own knowledge needs	11
9. Branding, image and identity	12
10. Communication channels	12
10.1. External communication channels	12
10.2. Internal communication channels	13
11. Delivering the strategy	14
11.1. Outline of communication plan	14
11.2. Work Package communication activities	15
12. Obligations of the Partners	20
13. Annex A: Good practice in communication	21
13.1. General points	21
13.2. External communication	21
13.3. Internal communication	22
13.4. Emails	22
13.5. Sharepoint	22
14. Annex B: Principles of communication in eLTER	24
15. Annex C: Assessment of communication channels	26
16. Annex D: Evaluation of knowledge exchange to date	28
17. Annex E: List of acronyms and terms	29

1. Purpose of the strategy

This strategy provides a framework to enable eLTER H2020 project members to promote the project and its outputs, to engage with stakeholders¹ in the project environment over issues relevant to long-term ecosystem and socio-ecological research and monitoring and to help eLTER develop to best meet user needs.

Whilst this strategy will be implemented in the context of the eLTER H2020 project, and therefore the main focus will be on the activities and outputs of that project, some communication will also concern the broader LTER-Europe network and the European Critical Zone Observatories community.

¹ By stakeholder we mean anyone who is affected by, or can affect, the project achieving its goals. This includes the members of the eLTER consortium, as well as external people.

2. Annual action plan

Planned communication activities in the first project year, June 2015-May 2016 are shown in table 1.

Table 1. Communication activities planned in the first year of the project

Activity	Lead(s) & key others	WP & task	Deliverable?	By when?
Attend European Ecological Federation congress and annual ILTER meetings in Rome, with posters, leaflets and flyers advertising the eLTER TA scheme	Kinga Krauze, Michael Mirtl, Alessandra Pugnetti, Giorgio Matteucci and others	5.1 (production of flyer & poster); 5.2 (TA site brochure)		September 2015
Restructure LTER-Europe website to include new eLTER H2020 project section	Andy Sier	5.1		End October 2015
Develop graphic design for project materials (posters, leaflets, slides, deliverables, web pages, etc.)	Kinga Krauze, working with design company	5.1		End November 2015
Develop project promotional material using new graphic design	Kinga Krauze, Andy Sier and others	5.1		End December 2015
Develop social media presence, especially on Twitter	Andy Sier	5.1		On-going
Regularly promote eLTER news, developments, data, sites, TA opportunities, events, etc.	Andy Sier, WP5 members and all project members	5.1		On-going
Produce impact sheets, to explain LTER's value to society	Kinga Krauze, WP5 members and all project members	5.4	5.5	First 2-3 by end Nov 2015, then at regular intervals
Attend and distribute promotional material at selected meetings	Kinga Krauze, Michael Mirtl and all project members	5.1		On-going

3. Background: the need for good communication

eLTER is built upon two bottom-up networks: LTER-Europe and Critical Zone Observatories, each with members from across Europe. Whilst both of these networks can demonstrate effective collaborative working, it is now more vital than ever that all those in eLTER – from both LTER-Europe and CZO – work together and support one and another, not only to build a first-class ecosystem and socio-ecological research infrastructure, but also to convince the wider community of its value. This requires effective communication, both internally and externally.

It is necessary for eLTER to build support amongst external stakeholders – at EU, national, regional and local scales – for the European ecosystem and socio-ecological research

infrastructures it develops. The project must attract researchers and other key stakeholders to use the infrastructure (sites, etc.) and its outputs (data and knowledge). For this reason, the infrastructure must be aligned with major societal knowledge needs (the “grand challenges”). eLTER must also encourage and improve stakeholder engagement by long-term ecosystem and socio-ecological researchers, enabling us to better scan and address current and future research demands, so that the eLTER infrastructure remains fit for purpose.

This strategy – if followed – will help ensure that eLTER can communicate well, both between project partners and with external parties.

4. Knowledge exchange objectives

The eLTER project’s communication objectives are shown below, grouped into the following categories: promoting the project; promoting sites & platforms; promoting data; understanding and responding to stakeholder needs. There is inevitably some overlap between these objectives.

Table 2. eLTER’s knowledge exchange objectives

<p>Promoting the project</p> <ol style="list-style-type: none"> 1. Increase awareness of eLTER and its relevance to specific end users, including the opportunities funded through the project (e.g. training courses, TA scheme, offered by eLTER) 2. Help maintain or increase support for the European LTER and CZO networks 3. Increase project visibility by promoting its achievements 	<p>Promoting sites & platforms</p> <ol style="list-style-type: none"> 4. Encourage the use of European LTER and CZO sites and platforms for site-based research (with a focus on those specifically included in the eLTER TA scheme) 5. Build & maintain links with relevant stakeholders local to sites & platforms, particularly from among the target stakeholder groups identified in this strategy
<p>Promoting data and knowledge</p> <ol style="list-style-type: none"> 6. Promote European LTER data and knowledge as an up-to date resource for research, policy and decision-making 7. Promote the data and research results access interfaces and tools developed by eLTER beyond eLTER community 	<p>Understanding and responding to stakeholder needs</p> <ol style="list-style-type: none"> 8. Develop and maintain effective communication channels to and from stakeholders (including ensuring good internal communication) 9. Identify stakeholder needs with respect to long-term, place-based ecosystem & socio-ecological research infrastructures and data in line with the grand societal challenges 10. Communicate these needs within the project, so that they inform and supplement the work we do 11. Inform the wider LTER/CZO community about eLTER activities and achievements and involve them in project activities

5. Stakeholder analysis

Some major groups of stakeholders already identified are listed in table 2. A more detailed stakeholder analysis will be conducted as part of the project, and the list of stakeholders will be regularly reviewed.

Table 3. Major stakeholder groups and specific organisations and networks. This list is not exhaustive. The list of acronyms and terms is provided in Annex E

Stakeholder group	European	European Nat. & regional	Global	Non-European nations
Policy making & science-policy interface	EC, UNECE, CLRTAP, Biodiversity Knowledge	Government ministries, National environment agencies, administrations local to LTER sites		
Expert panels, environmental control and reporting	EEA	National environment agencies	IPCC, IPBES, Belmont Forum, Future Earth	
Infrastructure development funders, research funding & commissioning	ESFRI, ESFRI ENV, DG Research & Innovation, BiodivERsA	National research funders, e.g. NERC (UK)	Belmont Forum	Nat. research funders, e.g. NSF (USA)
Related <i>in-situ</i> research & monitoring infrastructures and networks	ICOS, INTERACT, AnaEE, EUBON, ICP Integrated Monitoring, ICP Forests CRITEX, EMEP, SoilTrEC	TERENO (DE), National forest services	GEO BON,ILTER, non-European CZO, GLEON, GLORIA	NEON, TERN, USLTER, NOAA
Related remote sensing based initiatives and networks	Copernicus, ESA		GEOSS, GEO	
On-going pertinent projects	ENVRI+, ECOPOTENTIAL, EUDAT 2020			
Supporting infrastructures	LifeWatch, EUDAT, BioFresh, IS-ENES, BISE	LifeWatch Service Centers	DataONE	
Users of <i>in-situ</i> research infrastructures & data	ALTER-Net, BiodivERsA Higher Ed. (university) sector, Copernicus, EFI, JRC, EEF, EPBRS	Higher Education (university) sector	Higher Ed. (university) sector	Higher Ed. (university) sector
Commercial partners/end users	e.g. Sensor manufacturers (Delta-T, Campbell Scientific, Vaisala)			

Stakeholder group	European	European Nat. & regional	Global	Non-European nations
Industry	Water resources & supply, energy generation, forestry, agriculture, inshore & coastal fishing, construction, transport, rural tourism, etc., European Round Table of Industrialists			
Citizens , citizen science; users of ecosystem services; voters	European public, ECSA-Citizens & other citizen science initiatives, science outreach	National level citizen science & outreach initiatives e.g. Sparkling Science (AT), British Science Association (UK)		Non-European public, projects & citizen science initiatives outside Europe
Communicators	Biodiversity Knowledge, media & press agencies (e.g. Eurochannel, European Voice, Research Innovation), Ecsite	National media & press agencies (reached via National PR agencies and services like Alpha-Galileo)	Global media & press agencies (e.g. BBC, CNN, Alpha-Galileo)	National media & press agencies (reached via services like Alpha-Galileo)
Education	INNGE, Scientix, European Schoolnet, inGenious	National education ministries, science education programmes, e.g. STEMNET (UK)		

6. Target stakeholders for knowledge exchange

Whilst eLTER has many stakeholders, when it comes to knowledge exchange, we need to focus effort on communicating effectively with a subset of Target Stakeholder groups (TSGs). At this stage in the project, the TSGs are those shown in table 3.

A note on languages:

The working language of the project is English and all internal communications should be in English so that no one is excluded. All written communication by the main communication work package, WP5, will be in English. This includes the website, e-newsletters, social media messages, flyers, posters and brochures. Similarly, all project deliverables will be in English.

Partners may themselves translate material into other languages where they feel this is necessary². Specific situations should first be discussed with Andy Sier (leader, WP5). The project managers may request a translation into English of any non-English communications by partners.

² Project funds for translating material are very limited. As such, partners may need to cover any costs of translation from other sources.

Table 4. eLTER’s Target Stakeholder Groups

<p>Research The wider environmental research community, particularly current and potential users of European LTER data and sites, and experts in relevant environmental issues, habitats, species and methods. ► <i>As primary direct users of European LTER data, likely to value sites and training</i></p>	<p>Policy Environmental policymakers who need information on long-term environmental change, and also policy experts who could ensure eLTER provides policy-relevant outputs. ► <i>Likely to value information concerning the status of, and trends in, ecosystem components/services, as well as knowledge of drivers of change and predictions of future states.</i></p>
<p>Funders and supporters Existing and potential funders (public and private) and supporters of the network ► <i>Most likely to be interested in the impacts of eLTER activities, as well as new developments in European LTER and CZO</i></p>	<p>Conservation, environmental protection & land management People involved in environmental protection and habitat management including statutory agencies and NGOs. ► <i>Likely to value information concerning the status of, and trends in, ecosystem components/services, as well as knowledge of drivers of change and predictions of future states.</i></p>

Notes on table

1. These groups are not mutually exclusive, e.g. a research organisation may also be a potential funder of eLTER activities
2. Decision-makers are likely to draw upon evidence from more than one source. eLTER is just one component of the evidence base for policymaking
3. Although priority will be given to communicating with these target audiences, we will also communicate more widely via the eLTER website, newsletters, social media, etc. Where possible, we will provide information that can be used for environmental education and awareness-raising. Furthermore, we will listen to anyone with good ideas.

7. Key messages

These are the key messages we should aim to convey. **This list is likely to change during the course of the project, and should be regularly reviewed:**

Key messages for the early stages of the project

- KM1. The overall aim of the eLTER H2020 project is to advance and connect the European network of Long-Term Ecosystem Research sites and socio-ecological research platforms to provide highest quality services for multiple use of a distributed research infrastructure.
- KM2. The eLTER project is closely connected with the LTER-Europe network and the European Critical Zone Observatories community.

- KM3. eLTER aims to develop Europe's long-term ecosystem and socio-ecological research infrastructure to help address major societal and environmental challenges.
- KM4. eLTER offers the opportunity for funded access to 18 research facilities.
- KM5. eLTER is developing a new online portal for accessing a range of long-term environmental data from some 160 sites across Europe.
- KM6. Long-term studies of ecosystems and related socio-ecological systems are essential to fully understand ecosystem processes, ecosystem change, the causes of change and the various impacts of environmental pressures.
- KM7. eLTER will support knowledge based decision making at various levels.

8. eLTER's own knowledge needs

eLTER has many knowledge requirements. Significant knowledge needs include:

- Understanding policies, decisions, frameworks, etc. relating to the European ecosystems that are typically studied by European LTER and CZO networks (mainly terrestrial, freshwater and coastal waters)
- Opportunities for, e.g. funding, publications, presenting and promoting eLTER, new collaborations
- Relevant events such as scientific conferences, data management conferences, short-term scientific missions, etc.
- New research (published or otherwise) that relates closely to eLTER work
- Feedback from users of eLTER products, services and sites, and from other stakeholders.

Actions to help us acquire this knowledge include:

- Providing ways for people to contact us via e-mail, phone, Twitter, etc.
- Maintaining good communication channels, both internally and with key external stakeholders
- Regular meetings/communications with (a) the Infrastructure Harmonisation Board and (b) the Infrastructure Globalisation Board, two formal bodies established by the project and including non-consortium members
- Effectively sharing relevant information between eLTER partners via e-mail, teleconferencing, meetings, SharePoint, etc. Relevant information includes (but is not limited to): new research; events; opportunities for funding, training, etc.; policy developments
- Actively engaging with the wider LTER-Europe, ILTER and CZO networks, so that we are alerted to opportunities, events, publications, etc. and can learn from other LTER practitioners
- Attending relevant events and reporting back to project members.

These actions are included in the activities table (see 'Delivering the strategy').

9. Branding, image and identity

Strong project branding is necessary to ensure our target audiences instantly recognize eLTER and associate the project with the development of European long-term ecosystem research infrastructures. Branding eLTER is important because this identity:

- Helps us deliver and receive key messages more effectively
- Confirms our credibility
- Connects to our target audiences emotionally
- Motivates and facilitates the building of trust (a) among the project participants and (b) between external stakeholders and the project.

That said, our capacity to build a 'brand image' is limited by available resources. It is proposed that eLTER's image should – at least initially - consist of its short name, a full title ("Integrated European Long-Term Ecosystem & Socio-Ecological Research Infrastructure)", the eLTER logo, a colour scheme and a graphic design applied across as many outputs as possible (e.g. website, newsletters, posters, PowerPoint slides, reports).

A project graphic design is currently being developed, based on the orange and blue colours of the logo. The eLTER logo is itself derived from the LTER-Europe logo. The intention is that LTER-Europe and eLTER are clearly recognised as being related activities.

Separate guidance will be provided to project partners on the correct use of project branding.

10. Communication channels

eLTER will establish mechanisms for exchanging knowledge with its target audiences. The following communication channels are likely to be utilised:

10.1. External communication channels

Website – provides an overview of the project, news, outputs, contact details, forms for event registration, etc.

E-Newsletter – users can subscribe to receive e-mailed updates

Leaflets and flyers – useful at events or if someone wants a printable summary of the project

Events – presentations about eLTER can be given at external events such as conferences as well as at events organised by the project itself. Dissemination will be aided by a general slide presentation with essential information about the project

Blogs, Twitter and other social networks – provide tools to quickly disseminate information, interact with many different groups, including specialists, and receive feedback from audiences

Formal groups and platforms – can be useful when deeper engagement with particular stakeholders is necessary, e.g. to explore issues or obtain feedback

Broadcast media – to publicise major outputs of eLTER

Newspapers and magazines – useful to reach a large number of a specialized audience group (e.g. policymakers, land managers).

10.2. Internal communication channels

Project extranet (EAA hosted Sharepoint site) – provides a secure online space for posting essential information required by project partners such as key documents and contact information

E-mail – the primary way in which we will keep in contact with project members

Targeted mailing lists – e.g. per project work package.

Telecons & Skype – extremely useful for verbal communication with small groups, and much cheaper than face-to-face meetings

Meetings & events – useful when we need to gather larger groups of project members together, or to debate significant issues (when a telecon or Skype call may be a barrier to effective communication)

The table in Annex C considers the value of each external communication method as a means of communicating with specific audience groups.

11. Delivering the strategy

11.1. Outline of communication plan

The general plan for communications during the project is as follows:

Early in project

1. Create project pages on LTER-Europe website as an interim step whilst completely overhauling the LTER-Europe website to incorporate eLTER project and establish a "LTER in Europe" brand identity
2. Launch eLTER on Twitter and other social media channels as deemed necessary, and build a following
3. Develop and adopt "LTER in Europe" and related eLTER project branding as soon as possible
4. Encourage people to subscribe to e-newsletter mailing list
5. Develop stock communication material (leaflet, poster, slides and associated templates) for use by project partners and ensure uptake by partners
6. Conduct detailed stakeholder analysis and establish contact with key stakeholders

During middle phase of project

7. Send regular e-newsletters throughout the project
8. Determine user needs in terms of data, infrastructure, etc. and respond to these needs accordingly.
Regularly identify important events at which eLTER could and should have a presence. Identify individuals who could attend and present the project, and support this with appropriate branded material (slides, leaflets, etc.)
9. Publicize opportunities offered by the project as widely as possible. These include: Transnational Access calls, access to data, training courses, mobility and exchange, workshops and other events, surveys and other opportunities to input ideas
10. Encourage and support work package teams to engage with stakeholders through appropriate channels (workshops, surveys, etc.)
11. Document, as far as possible, stakeholder engagement activities (culminating in a 'best practice' report); continually learn from the activities we do
12. Produce a series of impact sheets to demonstrate the value of LTER in addressing societally-relevant issues
13. Produce a site catalogue to help raise awareness of the eLTER sites and their value to the ecosystem research community

Towards end of project

14. Publicize outputs and achievements in a variety of forms and through appropriate channels (website, newsletter, social media, events, etc.)
15. Host a final conference and produce a final brochure, both aimed at promoting the project's achievements, celebrating success and looking to the future (next steps).

11.2. Work Package communication activities

WP5 (Stakeholder interaction and communication) is the principal work package dedicated to communication and stakeholder engagement. It is led by Andy Sier (NERC CEH, UK) and includes 12 consortium partners. WP5 has four main objectives:

1. Promote and build support amongst stakeholders at EU, regional and local scale for the European ecosystem and socio-ecological research infrastructures (LTER and CZO) developed by the project
2. Attract researchers and other key stakeholders to use the infrastructure (sites, etc.) and its outputs (data and knowledge)
3. Encourage and improve stakeholder engagement by long-term ecosystem and socio-ecological researchers, enabling scanning and addressing of research demand, and greater exploitation of research outcomes
4. Enable effective internal communication and help develop a networking culture.

WP5 is organised into four tasks:

1. Task 5.1: Strategic development and use of essential communication channels
2. Task 5.2: Site catalogue and final project brochure
3. Task 5.3: Best practices in stakeholder engagement
4. Task 5.4: Demonstration of impact

The work package aims to produce the following five deliverables:

- D5.1 Communication strategy including Data Management Plan, initial communication materials and social media channels
- D5.2 Site catalogue
- D5.3 Report: Best practices in stakeholder engagement
- D5.4 Final project brochure
- D5.5 Series of 20-30 impact information sheets

Although WP5 will play a major role in eLTER knowledge exchange, all consortium partners and WPs have a role to play in effective project communication, both internal and external. For example, some WPs have a specific need to understand external stakeholder perspectives and needs, and have planned suitable activities (e.g. facilitated workshops and surveys) to help gather and share these. WP5 can provide some support and advice.

WP6 (Mobility, training and building the culture of access to infrastructures) will lead on communicating eLTER's mobility, staff exchange and training programmes, and will gather feedback from the users of eLTER infrastructure.

WP7 (Transnational Access Supervision) will lead on promoting the physical Transnational Access scheme.

Possible activities that could help deliver the strategy are shown in table 4. Specific actions to achieve in each year are listed earlier in the strategy as an **Annual Action Plan**. Specific WP tasks are indicated.

WP5 will monitor and evaluate the effectiveness knowledge exchange activities as far as possible, and will produce regular reports for the Core Team (Project Coordinators, Work

Package Leaders and WP deputies). Possible measures of success that will be used to assess knowledge exchange efforts are listed in table 4.

Table 4. Activities to help deliver this knowledge exchange strategy

Activity	Objectives addressed (main in bold)	Target stakeholder(s)	Key message(s) to convey	Desired outcome	Available method(s)	Lead(s) and key others	Measure(s) of success
Whole project level							
Clearly communicate essential information about eLTER, including objectives, anticipated outputs and outcomes, what we mean by the LTER research infrastructure, why it is needed, etc. (5.1)	1,2	Research Policy Conservation Supporters	1, 2, 3	Increased awareness of the what eLTER is and aims to do	<ul style="list-style-type: none"> • Website • Press releases • e-mail • e-newsletters • Social media • Flyers, posters, etc. • Events • Other networks 	WP5 and coordinators, with support from partners and collaborators	<ul style="list-style-type: none"> • Increase in website visits, newsletter subscribers, social media followers, etc. • New collaborations, MoUs, etc.
Communicate about the potential of European LTER sites/platforms as research locations and the opportunities to use the eLTER afforded by the TA scheme (5.1, 5.2, 7.1)	4	Research	4	People external to LTER-Europe conduct their research at LTER sites/platforms; TA scheme is a success	<ul style="list-style-type: none"> • Brochures & site catalogue • Digital media channels • Events • Site-led initiatives • DEIMS 	WP5, WP7, coordinators with support from site/platform operators	<ul style="list-style-type: none"> • Applications for TA funding • Increase in visits to DEIMS sites section • Evidence of general increase in enquiries about/actual use of LTER sites/platforms for research
Understand user data needs and promote eLTER data resources (3.1, 5.1)	6, 7	Research Policy Conservation	5	People actively use & acknowledge eLTER data and knowledge for research, policy development, education, etc.	<ul style="list-style-type: none"> • Questionnaires • Digital media channels • Workshops and other events • DEIMS 	WP5, WPs 3 & 8, data providers	<ul style="list-style-type: none"> • Increase in visits to DEIMS datasets section • Increase in data accesses via eLTER data portal
Communicate mobility & training opportunities offered by eLTER (6.1, 6.2, 5.1)	1	Early-career researchers & their supervisors/managers/mentors		Greater knowledge of LTER approaches	<ul style="list-style-type: none"> • Website • e-mail • Social media 	WP6, WP5	<ul style="list-style-type: none"> • Number of people attending training

Activity	Objectives addressed (main in bold)	Target stakeholder(s)	Key message(s) to convey	Desired outcome	Available method(s)	Lead(s) and key others	Measure(s) of success
Explore and communicate the policy/societal relevance of European LTER (1.1, 1.2, 5.4)	9 , 6	Policy Conservation Research Supporters	6	More secure long-term future funding for European LTER, based on an appreciation that what we do has value	<ul style="list-style-type: none"> • Activities of WP1, exploring grand challenges • Meetings and events • Monitor literature, social media, etc. • Questionnaires • All eLTER's comms channels • Impact sheets 	WP1, WP5	<ul style="list-style-type: none"> • Positive feedback on initiatives to convey eLTER's relevance • eLTER becomes an ESFRI project
Inform, engage with and listen to stakeholders, so we are alert to issues & opportunities (5.1)	8	All stakeholders		Project activities take account of user needs wherever possible; we don't miss opportunities when they arise; we know and respond to issues	<ul style="list-style-type: none"> • All eLTER comms channels • IHB • IGB • Stakeholder workshops • Questionnaires • Social media • E-mail • Meetings and events 	WP2, WP5, with support from all WPs	<ul style="list-style-type: none"> • Effective meetings • New collaborations, MoUs, etc. • More engagement with stakeholders on ways to effectively communicate with specific user groups
Encourage & enable good communication within the project	3	eLTER consortium		Exchange of ideas, smooth project operation, maintaining enthusiasm & commitment	<ul style="list-style-type: none"> • e-mail • eLTER SharePoint • Website 	Coordinators, WP5, with support of project members	<ul style="list-style-type: none"> • Evidence of widespread use of SharePoint • No major issues arising during course of project • Happy and content project members

eLTER site/platform level							
Communicate eLTER-developments, outputs & opportunities with relevant people local to sites/platforms	5	All the site's/platform's local stakeholders (particular focus on TA sites)		Increased awareness of eLTER sites/platforms and of the whole network; more requests to use data and/or to use sites/platforms for research. Successful TA scheme, with all sites being visited at least once	<ul style="list-style-type: none"> • Communication & networking led by site managers • Website • Social media • Events (e.g. open days, field visits) • Site-specific material 	Site/platform managers	<ul style="list-style-type: none"> • Increase in data requests • Increase in research use by externals

12. Obligations of the Partners

Partners will:

- Adhere to the Grant Agreement in relation to the dissemination of “foreground” (results and information generated under the project)
- Observe the best practice communication guidelines (Annex A) and the general principles of communication (Annex B)
- Support the WP5 communication team to ensure that outputs and syntheses are produced and disseminated to appropriate audiences. This means (a) alerting the WP5 team to new outputs & developments and (b) providing information, images, etc. in a timely fashion when requested
- Contribute to the appropriate focusing of communications for the specific cultural contexts of their respective regions. This may mean reformatting some messages to suit particular local contexts, and/or translating texts from English (the project’s working language).
- In some cases, perform their own targeted communication related activities as set out in the project’s Grant Agreement.

13. Annex A: Good practice in communication

To be effective, all partners should aim to follow these guidelines when communicating any information relating to eLTER:

13.1. General points

1. Where people are asked to respond, e.g. during a consultation exercise, or in making key decisions, sufficient time (at least 3 weeks) should be allowed for this

13.2. External communication

1. Refer to the Grant Agreement and Consortium Agreement for detailed information on obligations concerning external communication
2. Always consult with the WP5 team (led by Andy Sier) before undertaking major external communication activities, such as issuing a press release
3. Refer to the key messages listed in this knowledge exchange strategy and ensure your activity communicates at least one of these messages
4. Use the agreed eLTER logo and other branding on all publications, slides and promotional material. Files and templates will be available on the eLTER Sharepoint system
5. Always refer to eLTER as the eLTER H2020 project. This is to distinguish it from the separate eLTER ESFRI initiative. In a long document, where this is repeated often, you may – early on – use a sentence like “eLTER H2020 project (hereafter referred to as ‘eLTER’ or ‘eLTER project’)”
6. Always try to refer people to the eLTER website for more information (www.lter-europe.net/elter)
7. Keep Andy Sier and Herbert Haubold informed about new external contacts, so that they can be added to mailing lists
8. There is no need for internal review of journal papers, but it is mandatory to keep each other informed about them and to ensure that potential authors from within the project partners are invited in time to contribute if they wish to. This means all prospective publications should be communicated *at the planning stage*.
9. In order to present eLTER as a dynamic, active project, we rely on project members to provide appropriate information as the basis for news items, social media messages, and, not least, the interim reporting which requires a sub-section on dissemination. All partners and individuals should share responsibility for this. Examples of information that can be shared widely include: details of workshops, etc. organised by eLTER; reports from events attended by project members at which eLTER is presented; new outputs (data, portals, deliverable reports, other publications, etc.); opportunities such as training courses, invitations to take part in questionnaires, developments within the wider LTER community, such as new facilities at sites
10. Please let Andy Sier know of any published work produced as a direct result of eLTER activities and/or outputs. We will try to maintain a list on the website.

13.3. Internal communication

13.4. Emails

1. Emails (usually in English) will play a big part in the project but please be mindful that English is not the first language for many participants
2. There is no need to copy everyone into every email but please think before sending it about who else might need to be aware of the content. This is particularly important when dealing with topics that have dependencies between Work Packages and when planning meetings
3. Where appropriate, use the centrally-maintained mailing lists when contacting members of the project, to avoid missing out key people
4. Please think before using “reply to all” – is this really necessary?
5. To help recipients of e-mails know whether they are being asked to do something or just copied in for information, please send messages “To:” those who need to act and “Copy” in those who have been included just for information
6. Ensure the subject line in each email is appropriate to the content of the message. Always include “eLTER” and, if appropriate, the relevant WP. If the message is just for information then say so, equally if action is required from the recipient, make that clear
7. When a response is required, please set a due by date. If you are not able to deliver by the due date then inform the person who has requested this in good time
8. Try to keep emails as short and concise as possible. It may be better to send two or more shorter messages, each one dealing with a single issue, rather than one long message dealing with multiple issues
9. If you plan to contact all participants asking them to do something, such as complete a survey, please discuss this first with the Project Manager, so that requests can be coordinated
10. Avoid sending files as attachments but instead, place them on the project's Sharepoint site (see below) and then send people the link.

13.5. Sharepoint

1. Become familiar with the eLTER Sharepoint system³ and use it to share content, edit documents as a team, etc. It is a tool to serve internal communications and collaboration
2. Please ensure that all scheduled meetings and conference calls that others might be interested in are posted on the Sharepoint calendar
3. Store all key documents that will be useful to others on Sharepoint in the relevant folder. It saves you having to store them locally or attach them to emails. There are folders for each WP
4. Sharepoint can be used to edit documents collaboratively. There is advice on this on Sharepoint⁴. Working on one shared version of a file makes joint drafting and

³ <https://office.umweltbundesamt.at/avh/a001/id000235>

⁴ See the file with a name beginning “eLTER Sharepoint How To ...” on the eLTER Sharepoint site

editing of deliverables and other reports much simpler, since it avoids creating multiple versions of a file and losing track of which is the most current version.

14. Annex B: Principles of communication in eLTER

The following key principles apply to all communications undertaken by project members and which either mention, or are clearly relevant to, eLTER:

1. All activities should be undertaken in a spirit of partnership and respect
2. External communication should be conducted using agreed rules and procedures to help ensure consistency of message and style
3. Communication processes should be clear and known to all members
4. Communication should be purposeful and timely, particularly in relation to consultation and decision-making
5. Communication must be open, honest and frank
6. Communications should be clear and plainly written
7. Information should be made available on an open basis and aim to serve the widest possible audience
8. Communication should be multi-dimensional: up and down between the project's management groups and its members, as well as horizontal communications at all levels
9. Communication systems should be easy to use, accessible, robust and reliable
10. Decision-making and organisational structures will support effective communication by ensuring clear accountability for outcomes. All members of the Core Team in particular should take responsibility for good communication.

A spirit of partnership & respect

Ideally all activities of eLTER, including those related to communication, should be undertaken in a spirit of partnership and respect: partner organisations and individuals should aim to support one another, on the understanding that those activities are to the benefit of all partners. Without this cooperation we cannot effectively communicate as one entity with the wider world.

A sensible approach to external communications

Two types of external communication can be identified: 'central' (i.e. from the coordinators, the WP5 central communication team and the Core Team) and 'non-central' (i.e. from partners). Individual project partners should communicate externally but they should be able to do so aided by centrally-prepared material and centrally-managed channels such as the website. The central communication team (WP5) should be kept aware of major external communication activities. All partners should aim to deliver eLTER's key messages (see this strategy) consistently and using the agreed branding. All partners should be aware of their obligations concerning external communication as specified in the Grant Agreement.

Communication processes should be clear and known to all partners

Any rules, procedures and guidelines governing internal and external communication (Annex A) should not be complicated, and they should be easily accessible to all partners and their staff.

Communication should be purposeful and timely, particularly in relation to consultation and decision making

In an information-rich age, participants should strive to limit communication to that which is essential. Too much trivial communication should be avoided. Individuals should have the option to opt out of any mailing lists etc. Where people are asked to respond, e.g. during a consultation exercise, or in making key decisions, sufficient time (at least 3 weeks) should be allowed for this.

15. Annex C: Assessment of communication channels

Communication channels and their relative value (rating 1-5 stars) for communicating with different audience groups. Notes: (i) This table only includes communication channels which eLTER will directly utilise. (ii) The effectiveness ratings for each channel are intended as a guide only.

Channel	Target Stakeholder Groups					Notes
	Researchers	Policymakers	Supporters & funders	Conservation, environmental protection & land management	(non-target groups)	
Website & online document repository	4*	4*	4*	1-5*	3*	<ul style="list-style-type: none"> • Main interface between eLTER and the users of outputs • People must first find the site; requires using more direct channels to build web visits, and links from key websites, social media, etc. • A 'digital divide' exists – not everyone has web access
E-mail / e-news service / blog services	5*	5*	4*	1-5*	3*	<ul style="list-style-type: none"> • Low cost, direct comm. channel • Good for conveying summary info • Ideal for maintaining direct contact • Can allow people to subscribe, but for eLTER to target specific people requires knowing a person's e-mail address: Not always easy to locate direct e-mail for company employees • Beware of the 'digital divide' • Production of podcasts and visual materials is possible
Leaflets, flyers, brochures, etc.	4*	4*	4*	3*	3*	<ul style="list-style-type: none"> • Relatively low-cost to produce • In paper format, can be distributed widely through meetings, conferences, post • As PDFs, can be e-mailed and placed on websites • Relatively easy to tailor for different audiences, including different language variants
Impact sheets	4*	4*	5*	3*	4*	<ul style="list-style-type: none"> • These are case studies of LTER's contribution to addressing environmental issues • Written in plain language (English unless translated) – so should have wide appeal • Should contain very clear messages and evidence of LTER's relevance to issues that matter (pollution, climate change, etc.)

Talks and posters at events	3*	2*	3*	3*	2*	<ul style="list-style-type: none"> • Can only reach limited numbers, and may be hard to gain access to some sectors • Potentially a good way to directly engage with audiences • May be more effective when the event is organised by eLTER • Project members can participate in meetings
Display stand at event	3*	2*	3*	3*	2*	<ul style="list-style-type: none"> • Initial production cost may be high • Requires people to staff the stand • Potential for two-way dialogue with users • Good way to demonstrate digital outputs • Can only reach limited numbers, and may be hard to gain access to some sectors • Enables in-depth discussions with interested audiences
Formal groups, forums, platforms	4*	3*	4*	4*	2*	<ul style="list-style-type: none"> • Provide two-way communication with a small number of people tasked with representing a wider group • Useful for 'deep' stakeholder engagement • Not ideal for wide-scale dissemination • Require managing
TV & radio news	3*	3*	3*	3*	3*	<ul style="list-style-type: none"> • Needs a very good news story & press release • Tends to be national (star ratings reflect this)
Newspapers & magazines	3*	3*	3*	3*	3*	<ul style="list-style-type: none"> • Probably requires a very good news story • Newspapers - generally local/national • Magazines – generally sector/interest-specific (star ratings assume we find good magazines for each target audience)
Social networking services (e.g. Twitter, Facebook, LinkedIn)	4*	3*	4*	4*	4*	<ul style="list-style-type: none"> • If used well, can reach a large number of people • Low non-labour cost, but can be time-consuming • Rather untargeted

16. Annex D: Evaluation of knowledge exchange to date

Since the start of the project (1 June 2015), the following has been achieved:

- Temporary eLTER pages (<http://www.lter-europe.net/projects/eLTER>) added to LTER-Europe website, whilst new LTER-Europe/eLTER website created (<http://192.171.153.45/>)
- New “LTER in Europe” website (<http://www.lter-europe.net>) launched in early 2016, incorporating the eLTER H2020 project
- eLTER Twitter account set-up (@eLTER_EU; https://twitter.com/eLTER_EU); >100 followers (at 10 Nov 2015)
- Initial TA site brochure prepared (digital and hard-copy), and distributed at EEF and ILTER meetings in Rome, September 2015
- Early flyer and poster prepared and used at EEF and ILTER meetings in Rome, September 2015
- Material prepared for ENVRI+ joint stand at American Geophysical Union conference, USA, November 2015.
- Graphic designs developed
- Work started on first impact sheets, to serve as examples for others.

We will review the effectiveness of communication activities at regular intervals and update this strategy accordingly.

17. Annex E: List of acronyms and terms

ALTER-Net - FP6 Network of Excellence, which facilitated the development of LTER-Europe. Now a self-financing network of 27 institutions in the field of biodiversity & ecosystems research

AnaEE - ESFRI preparatory project on a RI for ecosystem experimentation

Belmont Forum - High level group of the world's major and emerging funders of global environmental change research and international science councils

BiodivERsA - Network of national funding organisations promoting pan-European research for the conservation and sustainable management of biodiversity (ERA-NET)

BioFresh - The Global Freshwater Biodiversity Information Platform

BISE - Biodiversity Information System for Europe (single entry point for data on biodiversity)

CLRTAP - Convention on Long-Range Transboundary Air Pollution in the UNECE

Copernicus - Global Monitoring for Environment and Security programme (remote sensing)

CRITEX - National network for the spatial and temporal study of the French Critical Watershed Zone

CSW - Catalogue Service Web (OGC Standard); service based publishing of metadata

CZ, CZO - Critical Zone concept; CZ research sites are Critical Zone Observatories

DataONE - Data Observation Network for Earth (US)

DEIMS - Drupal Ecological Information Management System operated by ILTER and LTER-Europe and providing a web client interface for documenting metadata and data from research sites

DMP - Data Management Plan

DOI - Digital Object Identifier (ISO 26324)

EcoPAR - Interactive web tool "Parameters and Methods for Ecosystem Research & Monitoring"

ECSA - European Citizen Science Association

EEA - European Environment Agency

EEF - European Ecological Federation

EF - INSPIRE data theme Environmental Monitoring Facility

EFI - European Forest Institute

EGI - European Grid Infrastructure

eLTER Site - Site within the LTER infrastructure pool, which contributes to eLTER

eLTER DIP - eLTER Data Integration Platform, providing interoperable data from different data nodes

eLTER DN - eLTER Data Node, the IT infrastructure providing service-based access to metadata and data

eLTER-S2 - eLTER Software Suite, the set of tools and services needed to set up an eLTER Data Node

EMBRC - European Marine Biological Resource Centre

EMEP - European Monitoring and Evaluation Programme (belongs to CLRTAP)

EML - Ecological Metadata Language, a standard metadata schemata for observation data

EnvEurope - European Life+ Project “Environmental quality and pressures assessment across Europe: the LTER network as an integrated and shared system for ecosystem monitoring”

ENVRI, ENVRI+ - FP7 project “Common Operations of Environmental Research infrastructures”, a collaboration in the ESFRI Environment Cluster. ENVRI+ might be a successor under H2020

EnvThes - Environmental Thesaurus. A multilingual thesaurus developed in the framework of the projects Life + EnvEurope and ExpeER

EPBRS - European Platform for Biodiversity Research Strategy

ERA - European Research Area

ERIS - Environmental Research Infrastructures Strategy (a product of ENVRI)

ESFRI, ESFRI ENV - European Strategy Forum on Research Infrastructures. ESFRI ENV concerns environmental research

EU NEC directive - Proposal for a directive on National Emission Ceilings

EUBON - European Biodiversity Observation Network (FP7)

EUDAT - European Collaborative Data Infrastructure (FP7)

ExpeER - A major European Infrastructure project (2010-2014) in ecosystem research

FOAF - Friend of a Friend (FOAF) metadata schemata

GEO BON - Group on Earth Observations Biodiversity Observation Network (part of GEOSS)

GIS - Geographic Information Systems

GLEON - Global Lake Ecological Observatory Network

GLORIA – Global observation network for climate change impact in high alpine areas

ICOS - Integrated Carbon Observation System. An ESFRI research infrastructure

ICP - International Co-operative Programs of the UNECE/CLRTAP. Specific monitoring programs are ICP Forests; ICP Integrated Monitoring, ICP Vegetation, ICP Modelling and Mapping, ICP Waters, ICP Materials

ILTER - International Long Term Ecosystem Research network

INCREASE - Integrated Network on Climate Research (FP7I3, experimentation)

INNGE - International Network of Next Generation Ecologists

INSPIRE – EU Directive, and aims to create an EU spatial data infrastructure

INTERACT - International Network for Terrestrial Research and Monitoring in the Arctic (FP7 RI)

IPBES - Intergovernmental Platform on Biodiversity and Ecosystem Services

IPCC - Intergovernmental Panel on Climate Change

IPR - Intellectual Property Rights

IS-ENES - RI of the European Network for Earth System Modeling

Jerico - Joint European Research Infrastructure Network For Coastal Observatories (FP 7)

JRA - Joint Research Activities

JRC - Joint Research Centre, the European Commission's in-house science service

LifeWatch - European e-Science infrastructure for biodiversity and ecosystem research

ILTER Infrastructure - The integrated ecosystem and socio-ecological research infrastructure to be established by eILTER

ILTER infrastructure pool - The pool of long-term ecosystem research infrastructures on which eILTER builds (ILTER-Europe network plus Critical Zone Observatory sites)

ILTER Site - Natural scientific research sites of LTER-Europe

LTSER Platform - Regional infrastructure for socio-ecological research (of the LTER-Europe)

ILTER-Europe - European Long-Term Ecosystem Research Network, consisting of 21 formal national LTER networks and representing Europe as ILTER regional group

MD - Metadata

M&T - Mobility and Training

NA - Networking Activity

NEON - National Ecological Observatory Network, USA

OGC - Open Geospatial Consortium. 481 companies collaborating on interface standards

RCM - Regional Climate Model

RDA - Research Data Alliance

RI - Research Infrastructure

SensorML - Sensor Model Language (OGC Standard)

SoilTrEC - Soil Transformations in European Catchments (FP7 project)

SOP - Standard Operating Procedure

SOS - Sensor Observation Service (OGC Standard)

SWE - Sensor Web Enablement (OGC Standard)

TA - Transnational Access (in-person)

TERENO – Integrated “Terrestrial Environmental Observatories”, Germany

TERN - Terrestrial Ecosystem Research Network, Australia

TSAP - Thematic Strategy on Air Pollution

UNECE – United Nations Economic Commission for Europe

VA - Virtual Access

VRI - Virtual Research Infrastructure

WP, WPs - Work Package, Work Packages

WFS - Web Feature Service (OGC Standard)

WMS - Web Map Service (OGC Standard)

W3C - World Wide Web Consortium; standardization organization