European Long-Term Ecosystem and Socio-Ecological Research Infrastructure

D6.1 Mobility Scheme

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

Start date of project: 01 June 2015 Duration: 48 months

Version of this document: V2 Submission date: 02/2017

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 - draft	Giorgio Matteucci, CNR	11/2016
Revised – V2	Giorgio Matteucci, CNR	01/2016
Revised – V3	Giorgio Matteucci, CNR	02/2017
Signed off – co-ordinator	Giorgio Matteucci, CNR	

Publishable Executive Summary

The step forward from being a network to become a Research Infrastructure (RI) of global relevance, such that developing from LTER Europe, needs successful coordination, strategic design and clear science direction. Further to this, the sharing of skills, competences and expertises across the network(s) is of paramount importance to reach a common ground for research undertaking, harmonise methods, standardise procedures. Apart from capacity buiding, the ultimate goal is to improve comparability and increase confidence in the results to deliver credible answers at European scale.

The mobility of personnel among research groups working at eLTER institutions and sites will be targeted at propagating skills and knowledge. Further to „person to person“ contacts and opportunities, the scheme will address topics of relevance to eLTER as a project and to the emerging eLTER infrastructure. Preference will be given to coupled mobility of senior experts and young scientists. The mobility scheme will include both staff and young scientists visiting laboratories and sites to learn, and experts travelling to advise eLTER-LTER Europe activities at sites. Involving young scientists will also target the education of the new generation of ecologists to a new working culture of joint use of resources

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1. Mobility scheme in a developing Research Infrastructure

The current structure of LTER Europe, now arrived at 25 national member networks, is the result of a bottom-up process starting from the multitude of LTER sites under the responsibility of research institutions, universities, agencies in a country, passing through national coordination and adhering to a common network at European-level.

The step forward from being a network to become a Research Infrastructure (RI) of global relevance, such that developing from LTER Europe, needs successful coordination, strategic design and clear science direction. Further to this, the sharing of skills, competences and expertises across the network(s) is of paramount importance to reach a common ground for research undertaking, harmonise methods, standardise procedures. Apart from capacity buiding, the ultimate goal is to improve comparability and increase confidence in the results to deliver credible answers at European scale.

1.1. Rationale

A consortium such that of the eLTER project, made of 28 partners from 23 European countries, of different size and distribution in the respective countries, including SMEs, has a great asset in the distributed expertise of people, top class laboratories and research sites as well as places of technological breakthrough and improvement. Hence, fostering staff exchange through an effective, although simple, mobility scheme is an efficient way for capacity building and sharing of expertises and, ultimately, to raise the overall level of the rising infrastructure.

The mobility of personnel among research groups working at eLTER institutions and sites will be targeted at propagating skills and knowledge. Further to „person to person“ contacts and opportunities, the scheme will address topics of relevance to eLTER as a project and to the emerging eLTER infrastructure. Priorities for such topics will tap into i) the grand challenges for research (as defined in WP NA 1); ii) methods, parameters and technology needs (as developed WP NA 4, both at labs and field sites, and trained in WP NA 6), looking also at harmonisation; iii) improvement of data management capacity (WP NA 3, JRA 1) and on services provided by the infrastructure (WP JRA 2/3). Capacity building for less developed networks will be also particularly considered, both for management and coordination, but also for completeness of approaches at sites (the whole-ecosystem approach).

Preference will be given to coupled mobility of senior experts and young scientists. The mobility scheme will include both staff and young scientists visiting laboratories and sites to learn, and experts travelling to advise eLTER-LTER Europe activities at sites. Involving young scientists will also target the education of the new generation of ecologists to a new working culture of joint use of resources.

1.1. Objectives

The overall objective is capacity building and sharing of expertises among eLTER partners. In the following sub-paragraphs, the topics/aims, in general and related to eLTER NAs-JRAs, will be shortly described.

The overall target of the mobility scheme is to have at least 10 exchanges during the eLTER project duration. The length of the exchanges will depend on the type of capacity building looked for (generally a few days – site visit – up to a couple of weeks at labs/information management structures).

1.1.1. Grand challenges for research

For an emerging RI such as eLTER-RI is important that the grand challenges for research are common among the participating networks and institution. In this respect, exchange of visits among partners may provide ground for harmonising priorities for research development and sharing common goals to the grand challenges. Documents produced by the consortium and the coordination could not be always sufficient, while visits may raise awareness in a better way

1.1.2. Targeting interoperability

Devoping a high-performance, complementary and interoperable ecosystem and socio-ecological research infrastructure needs the effective sharing of approaches. This is particularly needed for the “up scaling” from ecological to socio-ecological research, not only in terms of the spatial scale of sites of relevance for socio-ecology but more importantly in terms of the required transdisciplinarity. This is one of the topic for which staff exchange would result in effective step forward.

1.1.3. Usability of information, data and services

Promote staff exchanges targeting to stimulate standardisation of technologies and methods at sites.

The overall aims is better data comparability across sites to ultimately maximize the use of information and data across the national networks (moving to be an “coordinated” infrastructure). This will target also standard parameters for LTER, looking also at stakeholders and user communities needs across domains.

Another important objective is the enhancement of people operating the LTER Infrastructure (sites, laboratories, data infrastructure) to a common information management, the use of standard data tools and protocols

1.1.4. Link to training

Training is Task 6.2 of WP-NA6, whereas Maobility and Staff Exchange is Task 6.1. The topics selected for training “internal” to eLTER partners are in line with task 6.1 objectives. The training will be on methods and parameters (1.1.2 and 1.1.3 above), data tools (1.1.3) and LTSER approaches (1.1.2). In this respect, people participating to training, when coming from eLTER partners, will have the opportunity to learn from trainers and share with other eLTER members similar approaches, that will be later brought to their home institutions.

1.2. Preliminar/basic analysis of available expertise

A preliminar desk analysis of expertise among eLTER participants has been conducted. This has been based on i) institutions and members profiles provided in the Description of Action of the project; ii) main responsibilities in the Networking and Joint Research Activities of the project; iii) exchanges of view during project meetings. Summary of results is reported in table 1.

In this version, table 1 does not report the eLTER members expertises at site level, although it is envisaged that staff exchange will target also visit at sites to learn methods using „hands-on“ approaches.

Table 1: Potential expertise to offer for staff exchange by the eLTER partnes (preliminary desk analysis)

Acronym of partner	**Expertise to offer to staff of other eLTER partners (not exhaustive list)**
EAA	Project management, data tools and methods, grand societal challenges, thesaurus
SYKE	Modelling (climate, biodiversity, nitrogen), ecosystem services
CNRS	Large scale LTER approaches (Zone Atelier) – LTSER, Critical Zone
FZJ	Technological advances, Tereno approaches
UFZ	Biodiversity, Horizon scanning, parameters and standardisation, Ecosystem Integrity approaches
TUC	Critical Zone
CNR	Training, Involving citizen in LTER, data methods, trans and multidomain LTER analysis
MI-PAN-ERCE	Socio-ecology, hydrology, connection with UNESCO
BIOSENSE – UNS	Data methods and tools, big data, bioinformatic
SLU	LTSER
NERC	Communication and dissemination, ecosystem services, hydrology, virtual access to data node
VLO-INBO	Soil, connection to ICP Forest
IBER-BAS	Macroecology, multidomain LTER
GISAT S.R.O	Remote sensing
UHEL	Connections to ICOS, building Research Infrastructure (different aspects), atmospheric stations
MASINOTEK OY	Sensor technologies
SENCKENBERG (SGN)	Multidomain LTER
GEOHIRES GMBH	Wireless sensor networks
MTA-OK	Grassland research, biodiversity
BGU	LTSER, Remote Sensing, LTER in Arid zones
LUBI-IBUL	LTSER, baltic regions
UOG	Coastal zone, bird diversity, integration
FFCUL	Nitrogen studies, isotopic methods
UNIBUC	Connection to Danubius, freshwater and rivers
ILE-SAS	Landscape ecology
ZRC-SAZU	Karst research, caves
UGR	LTSER, Connection to LifeWatch, Sierra Nevada platform
CSIC	Donana platform, Remote Sensing

Activities of task 6.1 in months 20-24 of the project will be targeted to identify effective opportunities among those listed in table 1 and to start with first mobility(ies) within month 23-30.

1.3. Tools for making it happen

A list of mobility opportunities will be created (target: at least 10) and shared among partners. This will be done by using the following tool:

Advertisement of opportunities: a specific page in the web site will be created together with WP5-NA5, where the offer for staff exchange (in terms of topics and places). This will later be connected to the "System of Feedback" platform to be created in task 6.3.

Use of social network and mailing lists: requests for opportunities of staff exchange and offers will be advertised using the eLTER communication tools, including twitter and Sympa mailing lists.

Connection to training: the eLTER training events will be used also as a multiplier of staff exchange opportunities, starting from trainers that can go visiting sites or partners' premises for sharing of methods to trainees bringing back their experience at their laboratories.

Advertisement of other training opportunities from eLTER partners: task 6.1 will deliver a request to eLTER partners to share and advertise other training occurring during the project duration, asking for the possibility of offering a "preferential" option to participate for 1-2 persons from other eLTER members.

1.4. Evaluation of the impact and success of the mobility

The impact of the mobility will be evaluated in terms of the number of exchanges realised during the project (the minimum target is 10) and by using a questionnaire. All people involved in mobility (staff and young scientists) will be asked to to contribute to the feedback system created in Task NA 6.3.

1.5. Review steps

The mobility scheme will be firstly reviewed at eLTER annual meeting of June 2017 – Vienna.