A contribution to the European research infrastructure eLT TER

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Co-Directors of LTSER “Zone Atelier Alpes”
What is a LTSER platform?

LTSER Platforms features

- Physical infrastructure
- Pro-active involvement of the research community on the regional, national and international level
- Integrative management serving as an open communication space

http://www.lter-europe.net/
LTSM “Zone Atelier Alpes”

Aims & objectives

Functioning and trajectories of mountain socio-ecosystems (SES) in the context of climate change and territorial changes

• Coordination and/or support for long-term observation devices for mountain SES
• Support for exploratory research projects on SES
• Structuring & animation of hybrid collectives (academic/non-academic)
LTSER “Zone Atelier Alpes”
Resources & financing

• 2 Research institutes in charge

• 9 labs involved

• 3 contributing universities

• ~ 35 FTE

• ~ 60 scientists & 30 non-scientists
LT Serif “Zone Atelier Alpes”

Research axes

• Trajectories of SES and mountain territories
  – interdependencies between social dynamics and natural dynamics

• The key processes of coupling between biosphere, geosphere and anthroposphere in mountain SES
  – actions and feedbacks between (bio) climatic forcing, land use, biodiversity and ecosystem functioning
The French LTSER network (RZA)

- 14 labelled platforms
- A multi-partner network
  - ~1800 pers., ~600 FTE, ~350 PhD-candidates
  - More than 100 institutions of which 61 universities & 14 engineering schools
- Financial support
  - ~500 k€/year
  - Third part funding

Source: V. Bretagnolle, chargé de mission Zones Ateliers
The French LTSER network (RZA)
Issues shared by the network

• Observe, understand and anticipate SES response to global change
• Formalize research on SES in a decision-making perspective
• Develop a common conceptual base and enrich it with local variations
• Participate in the dynamic eLT(S)ER

Source: V. Bretagnolle, chargé de mission Zones Ateliers
The French LTSER network (RZA)
Its international implication

– RZA network is the French ILTER representative
  • Member of the ILTER Board

– RZA and OZCAR (CZO) networks are the 2 pillars of eLTER network
  • H2020 eLTER (2015-2019)
  • advance Infradev (2017)
  • ESFRI proposal send in August 2017
  • Audition on February in Brussel
  • Final decision on September 2018

Source D. Joly, DAS INEE Outils et infrastructures - Zones Ateliers
Integration of national into European/intern. level

From the national level ...

Source: D. Joly, DAS INEE Outils et infrastructures - Zones Ateliers
Integration of national into European/intern. level
Responding to social expectations
Integration of national into European/intern. level
... to the European/international level

National

SOERE
RI ECOTRONS
RI AnaEE-Fr
RI ICOS-Fr
RI OZCAR
RZA

Europe

ECOTRONS
Cost action
AnaEE-Eu
I3- ExpeER ERIC
ICOS-Eu ERIC
eLTER
I3-eLTER Advance ESFRI

International

ECOTRONS
MoU Biosphere 2 US
NEON (US) MoU
TERN (AU) Prep-MoU

iLTER
European Environmental & Earth System Research Infrastructures

BEERI
Board Eur Env Res Infra

AnaEE - eLTER

Source D. Joly, DAS INEE Outils et infrastructures - Zones Ateliers
Integration of essential biodiversity variables

• eLTER H2020: concentrates on essential biodiversity variables (EBV)
• Conceptual context: « Ecosystem Integrity (EI) » from ILTER
• A combination of EBV from ecosystem structures and processes (Haase et al. 2018)
Integration of EBVs

<table>
<thead>
<tr>
<th>Ecosystem Integrity</th>
<th>Essential Biodiversity Variables</th>
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<td><strong>Components I</strong></td>
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<td>Co-ancestry</td>
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<td>Biotic diversity</td>
<td>Allelic diversity</td>
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<td>Flora diversity</td>
<td>Population genetic differentiation</td>
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<td>Fauna diversity</td>
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<td>Basic Ecological integrity Indicators III</td>
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<td>Flora diversity</td>
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(Haase et al. 2018)
From local to global
Next generation observatories

• Deploying local, multi-sectorial observatories

→ LTSER “Zone Atelier Alpes”: a contribution to the European research infrastructure eLTER

(Haase et al. 2018)
Merci pour votre attention !
1. Un territoire de référence : 
  *le massif alpin français*  
  (enjeux scientifiques, politiques et de communication)

2. Trois super sites: 
  *Lautaret, sillon alpin, Arves-Mont Blanc*  
  (approche intégrative, systèmes/territoires modèles pour une science des SES)

3. Des réseaux de sites ateliers : 
  *dispositifs Sentinelles des Alpes*  
  (obs. & exp., approfondissements thématiques)
Quelques indicateurs pour la ZAA

Personnels

Source : V. Bretagnolle, chargé de mission Zones Ateliers
Quelques indicateurs pour la ZAA

Publications

Source : V. Bretagnolle, chargé de mission Zones Ateliers
Evolution des financements CNRS-INEE et Allenvi

Source : V. Bretagnolle, chargé de mission Zones Ateliers