

ALTER-Net, a long-term biodiversity, ecosystem and awareness research network

- Year 6 -

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Kristine Ulvund
Daniel Terrasson
Geert De Blust
Andy Sier
Leon Braat
Robert Kanka
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Norwegian Institute for Nature Research

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Trondheim, April, 2010

ISSN: 1504-3312

ISBN: 978-82-426-2146-7

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AVAILABILITY

Open

PUBLICATION TYPE

Digital document (pdf)

QUALITY CONTROLLED BY

Roel May

SIGNATURE OF RESPONSIBLE PERSON

Research director Inga E. Bruteig (sign.)

CLIENT(S)

The Research Council of Norway & The Norwegian Directorate for Nature Management

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COVER PICTURE

Logo ALTER-Net

KEY WORDS

Biodiversity

Ecosystem

Awareness

Interdisciplinary research

Research network

NØKKEORD

Biomangfold

Økosystem

Formidling

Tverrfaglig kunnskap

Forskningsnettverk

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Abstract

Van Dijk, J., Ulvund, K. Terrasson, D., De Blust, G., Sier, A., Braat, L., Kanka, R., Mirtl, M., Török, K., Furman, E., Kertész, M., % Stadler, J. 2010. ALTER-Net, a long-term biodiversity, ecosystem and awareness research network – Year 6. – NINA Report 569, 78 pp.

During spring 2009, 22 of the 24 partner institutes decided to maintain and further develop the Network of Excellence on biodiversity research after the end of the European financial support in April 2009. With financial support from the Research Council of Norway and the Norwegian Directorate for Nature Management, NINA hosts the ALTER-Net secretariat and two 0.5 fte positions were filled (one coordinator and one deputy coordinator) to coordinate the network activities.

Year six of ALTER-Net can be seen as a transition year in which our Network of Excellence had to find its way from having the financial luxury of EU funding to a new setting in which partner institutes contributed cash and in-kind person days themselves. It is clear that the Network has to prove its added value of maintaining the network and to prove the significance of the partner contributions that have been spent on our network activities (i.e. Common Research Programme, Communication & Knowledge Transfer, Common Training Programme, Data Sharing Policy, Long Term Ecological Research - LTER, LifeWatch, InterDisciplinary Research - IDR and Multi-Site Experiment).

During year six of ALTER-Net the draft Common Research Programme was approved by the ALTER-Net council and will be worked out in more detail, elaborated upon and implemented in the year to come. A new version of News and Views (<http://newsandviews.ceh.ac.uk/>), as communication tool on awareness, has been launched and a formal partnership between ALTER-Net and Ecsite, the European network of science centres and museums, has been established through the formation of a new Ecsite thematic group, the *Nature Group*. ALTER-Net is represented in Ecsite by CEH and also has a seat on the Steering Committee of the Nature Group. The ALTER-Net website (www.alter-net.info) has been transformed to the new situation showing our core activities and will replace the old version with all the work packages in April 2010. Work on Data Sharing Policy, LifeWatch and IDR are expected to come with visible outputs in the year to come. A Data Sharing Policy will be presented to the ALTER-Net council for approval and implementation and the case study on data exchange in the context of LifeWatch will be finished with publications. The IDR project on the Governance of Ecosystem Services will finish with an international workshop in 2010 and with publications. Although the work on LTER-Europe and ALTER-Net's support to the LTER-Europe secretariat is ongoing and has a maintenance structure the LTER activity has proven to be ALTER-Net's key network driver. Two large EU proposals were sent in, dominated by LTER/ALTER-Net partners and several ALTER-Net partners were involved in debugging and improving LTER's InfoBase.

Also this year ALTER-Net organized it's Summer School which was again a great success and one of our most visible outputs of the network together with the work on Multi-Site Ex-

periment II. Both the ALTER-Net Summer School and the Multi-Site Experiment involve many ALTER-Net partners and prove the added value of the network.

This year our Summer School resulted again in the training of 26 PhD and Postdoctoral student mostly from Europe but also from Asia, Africa, America and Australia. The participants not only learnt about ALTER-Net's research on Biodiversity and Ecosystem Services but also became acquainted with the value of the network and the effectiveness of ALTER-Net's activities. The participants will serve as global ambassadors for ALTER-Net throughout the rest of their careers.

The impressive list of 29 ongoing collaborating projects and 6 new joint proposals as well as the 34 publications with two or more ALTER-Net partners show that the fundament of the network is in place and the network is functioning. At the moment of finalizing this report both the EXPEER¹ proposal and the KNEU² proposal received 14 out of the 15 credit points by the proposal evaluators and are thus likely to be secured for funding. Also, the use of in-kind contributions to network activities shows that partner institutes invest in the network and are actively engaged to achieve our goals.

¹ EXPEER explicitly aims at up-grading and interconnecting both *experimental* and *observational and monitoring sites* for *long term terrestrial ecosystem research*. The overall objective of this project is to improve the quality of the facilities and bring together the 2 main research communities on terrestrial ecosystem in Europe through the enhancement of integrated up-to-date research infrastructures allowing the emergence of a *multidisciplinary approach to how ecosystem functions and services* change under global change impacts.

² The overall objective of the KNEU project is to develop a recommended design for a scientific biodiversity Network of Knowledge (NoK) to inform policy-makers, the policy-making process and other societal actors. This network shall be open, transparent, flexible, equally accessible to all, independent, be scientifically- and evidence-based and have a robust structure. It will develop links to relevant clients to support the science-society interface in Europe and beyond.

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Sammendrag

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Perioden med tilskudd fra EU til drift av ALTER-Net ble avsluttet i april 2009. Imidlertid valgte 22 av de 24 partnerinstituttene å opprettholde og videreutvikle ALTER-Net som et "Network of Excellence" for forskning på biodiversitet. Norges forskningsråd og Direktoratet for naturforvaltning gav tilskudd til drift av nettverket, og NINA overtok sekretariatet for ALTER-Net våren 2009. Sekretariatet koordinerer nettverkets aktiviteter og består av to 50%-stillinger som hhv koordinator og visekoordinator.

Det sjette året for ALTER-Net har vært et overgangsår hvor ALTER-Net har vært nødt til å tilpasse aktiviteten fra full finansiell støtte fra EU til en drift hvor partnerinstituttene selv bidrar økonomisk og med arbeidstimer. ALTER-Net er avhengig av å vise tilleggsverdien som ligger i nettverket, herunder nytteverdien av partnernes bidrag til nettverks aktiviteter. Nettverkets hovedaktiviteter omfatter Common Research Programme, Communication & Knowledge Transfer, Common Training Programme, Data Sharing Policy, Long Term Ecological Research - LTER, LifeWatch, InterDisciplinary Research - IDR og Multi-Site Experiment.

I løpet av ALTER-Net's sjette år har et utkast til Common Research Programme blitt godkjent av ALTER-Net's Council og vil heretter bli utarbeidet i mer detalj og bli implementert i ALTER-Net i året som kommer. En ny versjon av News and Views (<http://newsandviews.ceh.ac.uk/>) har blitt lansert som et verktøy for kommunikasjon rundt biodiversitetsspørsmål. Et formelt partnerskap mellom ALTER-Net og Ecsite (Europas nettverk av vitenskapssentre og musea) har kommet i stand gjennom dannelsen av en ny tematisk gruppe innenfor Ecsite; the *Nature Group*. ALTER-Net er representert i Ecsite ved CEH og har også et sete i styringsgruppen *Nature group*.

Websiden til ALTER-Net (www.alter-net.info) er oppdatert og viser nå ALTER-Net's hovedaktiviteter. Det er forventet at arbeidet med Data Sharing Policy, LifeWatch og IDR får synlige resultater i året som kommer. En policy for deling av data vil bli presentert for ALTER-Net's Council for godkjenning og implementering. Det arbeides også med en eksempelstudie på datautveksling i en LifeWatch kontekst. IDR prosjektet på overvåking av økosystemtjenester skal fullføres med publikasjoner og en internasjonal workshop i 2010. LTER er en viktig drivkraft for ALTER-Net's nettverk, og to store EU søknader er sendt inn med dominans av LTER/ALTER-Net partnere. Flere ALTER-Net partnere har også bidratt i forbedringen av LTER's InfoBase.

Også i 2009 ble det arrangert sommerskole i regi av ALTER-Net. Arrangementet var en stor suksess. 26 PhD-stipendiater og postdoc studenter deltok på sommerskolen. Størparten av deltakerne var fra Europa, men det var også deltakere fra Asia, Afrika, USA og

Australia. Deltakerne fikk blant annet en innføring i ALTER-Net's forskning på biodiversitet og økosystemtjenester, og de erfarte også nytteverdien av ALTER-Net gjennom egen nettverksbygging med unge forskere fra andre land. Deltakerne vil fungere som globale ambassadører for ALTER-Net i resten av sin karriere. Sommerskolen involverer mange ALTER-Net partnere, og sammen med Multi-Site eksperimentet er dette konkrete og synlige produkter som viser tilleggsverdien av ALTER-Net.

Den samlede aktiviteten i ALTER-Net med over 29 pågående samarbeidsprosjekter og 6 nye felles søknader i tillegg til 34 publikasjoner med to eller flere ALTER-Net partnere, viser at fundamentet for nettverket er på plass og at nettverket fungerer. Ved slutføringen av dette dokumentet mottok sekretariatet opplysninger om at to forskningssøknader EXPEER¹ og KNEU² fikk 14 av 15 ved evaluering av prosjektet. Det er derfor sannsynlig at begge prosjektene er sikret økonomisk støtte. Bruken av arbeidstimer til nettverksaktiviteter viser at partnerinstituttene investerer i nettverket og er aktivt involvert i å nå målene som er satt for ALTER-Net.

¹ EXPEER tar sikte på å oppgradere og koble sammen både eksperimentell og observervasjonsbasert forskning samt studiesteder som benyttes til langsiktig forskning på terrestriske økosystemer. Det overordnede målet for prosjektet er å forbedre kvaliteten på fasilitetene og bringe sammen de to viktigste forskningsmiljøene på terrestriske økosystemer i Europa gjennom å forbedre og sikre integrert og oppdatert infrastruktur for forskning. Dette vil muliggjøre tverrfaglig forskning på hvordan økosystemer funksjon og tjenester endrer seg ved påvirkning fra globale endringer.

² Det overordnede målet med KNEU prosjektet er å utvikle en anbefalt design for et vitenskaplig biodiversitets Nettverk for Kunnskap (NoK) for å informere politikere og beslutningstakere og bidra med kunnskap i beslutningsprosessen. Nettverket skal være åpent, gjennomsiktig, fleksibelt, likt tilgjengelig for alle, uavhengig, basert på vitenskap og kunnskap og ha en robust struktur. Nettverket vil utvikle koblinger til relevante klienter som kan støtte opp under den kontaktflaten mellom vitenskap og samfunn både i Europa og ellers.

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Foreword

Alter-net was funded by the European Commission as a Network of Excellence in April 2004 and ran until April 2009 with two highly stimulating objectives: to expend a network of long term research observatories under the umbrella of the LTER (Long Term Ecological Research) label in Europe, and to develop a policy of integration between 24 research institutes focusing on biodiversity research that is scattered through the European area.

In 2009, Alter-net succeeded at two levels: it got a positive assessment of its final report by DG research in June 2009, and 22 of the 24 partner institutes decided to maintain and further develop the network after the end of the European financial support.

Despite this encouraging context the past year was particularly risky: all the partner institutes of the network had to adapt to the new situation. Institutes had to close former working groups and had to start new activities. The network had to follow-up on-going activities with a dramatically reduced budget and needed to reconsider the sharing of responsibilities and new habits of internal communications. The management board has been highly renewed with new members and deputy members and has tackled this challenge in a very good order.

All these changes were not easy. Restarting the engine in a new context needs always more time than expected. The past year has certainly been a year of transition, but a new dynamic is now emerging: new research projects are under preparation, an ALTER-Net conference is scheduled for November 2010, the network facilities have been adapted and the links have been maintained with connected international networks and initiatives (LTER, LifeWatch). I am confident that tangible outputs will now come very soon, which will convince our partner institutions of the usefulness and the efficiency of ALTER-Net.

Daniel Terrasson

Chairman of the Management Board

1 Introduction

Biodiversity is important for the role it plays in its contribution to the sustainable function of different ecosystems and for the goods and services essential for human survival. But never before has biodiversity been so threatened, particularly through pressures such as land use change, pollution, climate change and invasive species. The current European capability in biodiversity and ecosystem research is rich and varied, but it is also dispersed and disconnected and cannot easily be marshalled to deliver the information and knowledge required to address these issues at a European scale.

In 2002, the Parties to the Convention on Biological Diversity called for a *significant reduction of the current rate of biodiversity loss by 2010*. Europe has gone one step further: In 2003, 51 countries in the wider Europe adopted a target (the Kiev Resolution on Biodiversity) to *halt the loss of biodiversity by 2010*. They aim to achieve this through a set of policy actions identified in the European Biodiversity Strategy. However, these responses are seriously hampered by a lack of effective science on both the assessment of biodiversity status and change and its implications for sustainable use.

In response to this problem, The European Commission established the ALTER-Net project through its Framework VI research programme in 2004. It is one of several *Networks of Excellence* established to achieve lasting integration of research capacity. ALTER-Net is addressing biodiversity research in terrestrial and freshwater ecosystems. A related Network of Excellence, Marbef, is focusing on marine biodiversity.

ALTER-Net aims to promote a better integrated and stronger European biodiversity research capacity. The result will be the establishment of a lasting infrastructure for integrated ecosystem research, combining ecological and socio-economic approaches, and with greater emphasis on communication with relevant audiences.

The European Commission contributed to ALTER-Net during the first five years (April 2004 - March 2009), but after March 2009 22 partner institutes from 17 countries contribute both financially and with their institute's in-kind resources to help achieve the project's aims.

During April 2009 – March 2010 the sixth year of ALTER-Net was used to finalize activities of the different work packages of the first five years, together with starting new projects falling under our seven core activities (i.e., Common Research Strategy; Communication & Knowledge Transfer; Common Training Programme; Data Sharing Policy; LTER-Europe; LifeWatch; InterDisciplinary Research). This report elaborates on the work done for the new projects falling under our core activities in year six of ALTER-Net. ALTER-Net is currently scheduled to run until March 2012.

2 Partner Institutes and structure ALTER-Net

During the first few months of 2009, 22 of the originally 24 ALTER-Net partner institutes signed the Memorandum of Understanding (MoU); a commitment to durable integration and a recognition to contribute and support the seven core activities of ALTER-Net (i.e., Common Research Strategy; Communication & Knowledge Transfer; Common Training Programme; Data Sharing Policy; LTER-Europe; LifeWatch; InterDisciplinary Research). Two partners were not able to sign the MoU because of institutional changes. In addition to signing the MoU, partner institutes could pledge their cash contribution and specify their in-kind support to the core activities. Table 1 gives an overview of the ALTER-Net consortium that signed the MoU. The MoU and a draft pledge are given in appendix 1 and 2 respectively.

Each partner institute is represented in the Council and has a right to vote during council meetings. The Council has to approve to the proposed activities and budget allocations made by the Management Board. The Council is chaired by Terry Parr, CEH, United Kingdom while the Management Board is chaired by Daniel Terrasson, CEMAGREF, France. The Management Board further consists of 7 members for each core activity and their 7+1 deputies. During the last council meeting under the Framework VI programme it was decided that two deputies should be assigned to the InterDisciplinary Research activity. Table 2 lists the persons involved in the Management Board.

The ALTER-Net secretariat which originally was housed at CEH, Lancaster, United Kingdom was transferred to NINA, Trondheim, Norway. NINA succeeded to get financial support from both The Research Council of Norway and from the Norwegian Directorate for Nature Management. With this support it was possible to run the ALTER-Net secretariat and appoint a coordinator (0.5 FTE) and a deputy coordinator (0.5 FTE). With support from the financial administration at NINA the coordinator and deputy coordinator are responsible for coordination of the network activities.

In the course of 2009 the secretariat received the wish of three different institutes to join the ALTER-Net consortium. The Institute of Social Ecology in Vienna, Austria, and the Institute of Agricultural and Environmental Sciences of the Estonian University of Life Sciences were accepted by the ALTER-Net consortium as new partners. Also the Faculty of Natural Sciences of the Ben-Gurion University, Israel, is in the process of finishing its application. In 2010 the consortium will continue its work with 25 partner institutes. The policy for accepting new members that resulted from the discussion within council on how to go forward with potential new partner institutes is given in appendix 3.

Table 1. The ALTER-Net partnership in year six.

1. Natural Environment Research Council, Centre for Ecology and Hydrology, (CEH at NERC), United Kingdom
Council member and Chairman ALTER-Net: Terry Parr
2. Centre National de la Recherche Scientifique (CNRS) / (Centre Armoricain de Recherches en Environnement (CAREN), France (formally CNRS/INSU)
Council member: Yvan Lagadeuc
3. European Centre for Nature Conservation, (ECNC), the Netherlands
Council member: Ben Delbaere
4. Norwegian Institute for Nature Research, (NINA), Norway
Council member: Tor Heggberget
5. Macaulay Land Use Research Institute, (Macaulay), United Kingdom
Council member: Steve Albon
6. Helmholtz, Centre for Environmental Research - UFZ (UFZ), Germany
Council member: Stefan Klotz
7. Alterra, the Netherlands
Council member: Henk Siepel
8. Corpo Forestale dello Stato, Servizio (CONECOFOR), Italy
Council member: Andrea Rapisarda
9. Department of Systems Ecology, University of Bucharest, (UNIBUC), Romania
Council member: Angheluta Vadineanu
10. Institute of Landscape Ecology, Slovak Academy of Sciences, (ILE SAS), Slovakia
Council member: Julius Oszlanyi
11. The Finnish Environment Institute, (SYKE), Finland
Council member: Heikki Toivonen
12. International Institute of the Polish Academy of Sciences – European Regional Centre for Ecohydrology, u/a UNESCO (ERCE), Poland (formerly ICEPAS)
Council member: Kinga Krauze
13. Swedish University of Agricultural Sciences, (SLU), Sweden
Council member: Ulf Grandin
14. Consejo Superior de Investigaciones Científicas, (CSIC), Spain
Council member: Valladares, Fernando
15. Institute of Ecology and Botany, Hungarian Academy of Sciences, (IEB HAS), Hungary
Council member: Miklos Kertesz
16. Research Institute for Nature and Forest (INBO), Belgium (formerly IN)
Council member: Maurice Hoffmann
17. French Institute for Agricultural and Environmental Engineering Research (CEMAGREF), France
Council member: Phillip Roche
18. Umweltbundesamt GmbH, (UBA), Austria

- Council member: Michael Mirtl
19. The Netherlands Environmental Assessment Agency (PBL), the Netherlands (formerly RIVM)
Council member: Keimpe Wieringa
20. Potsdam Institute for Climate Impact Research, (PIK), Germany
Council member: Wolfgang Cramer
21. Biology Centre, Academy of Sciences of the Czech Republic, (BC-CAS), Czech Republic (formerly HBI-CAS)
Council member: Viera Straskrabova
22. Aarhus Universitet, (AU), Denmark (formerly NERI)
Council member: Kurt Nielsen

Table 2. Management Board ALTER-Net.

Name	Institute	Activity	Member/Deputy
Daniel Terrasson	Cemagref, fr	Chair MB / Common Research Strategy	Deputy
Geert De Blust	INBO, be	Common Research Strategy	Member
Andy Sier	CEH, uk	Communication and Knowledge Transfer	Member
Marjolein Sterk	Alterra, nl	Communication and Knowledge Transfer	Deputy
Leon Braat	Alterra, nl	Common Training Programme	Member
Allan Watt	CEH, uk	Common Training Programme	Deputy
Robert Kanka	ILESAS, sk	Data Sharing Policy	Member
Bert van der Werf	Alterra, nl	Data Sharing Policy	Deputy
Michael Mirtl	UBA, at	Long-Term Ecological Research Europe	Member
Martin Forsius	SYKE, fi	Long-Term Ecological Research Europe	Deputy
Katalin Török	IEBHAS, hu	Life Watch	Member
Flemming Skov	NERI, dk	Life Watch	Deputy
Eeva Furman	SYKE, fi	InterDisciplinary Research	Member
Francis Turkelboom	INBO, be	InterDisciplinary Research	Deputy
Odd Terje Sandlund	NINA, no	InterDisciplinary Research	Deputy

3 Activities of the secretariat

Staff

NINA took over the secretariat on the 1st of April 2009 from CEH and the secretariat's workload was divided between Jiska van Dijk (coordinator from 1st of April 2009) and Kristine Ulvund (deputy coordinator from 1st of October 2009). In addition the secretariat received daily support from NINA administration for financial matters and hired an external secretariat for organizational support (Stien Soeterwey).

To work towards the added value of having the network, the secretariat spent a great deal of effort in getting overviews from the different partner institutes about their activities for the network. These overviews resulted in:

- a frequently updated list of events on the website with an indication whether or not ALTER-Net is involved/participates (see www.alter-net.info)
- a list of contact persons within each partner institutes who are involved in the different ALTER-Net activities (table will be available on the website for LYNX members, April/May 2010)
- a biannually updated list on how many person days the different partner institutes have used on the different activities compared to the originally pledged in-kind contributions (see Chapter 4)
- a list of joint ongoing projects and new proposals (see Chapter 4) (the list will also become available on the website in April/May 2010)
- a list of joint publications (see Chapter 4) (the list will also become available on the website in April/May 2010).

ICSU Visioning process

The International Council for Science (ICSU) started a consultation process in cooperation with the International Social Science Council (ISSC) to engage the scientific community to explore options and propose implementation steps for a holistic strategy on Earth system research. Diversitas, an international programme of biodiversity science, is sponsored by among others ICSU and asked ALTER-Net to contribute to the ICSU Visioning process. A task force with Daniel Terrasson (CEMAGREF), Geert De Blust (INBO), Eeva Furman (SYKE), Terry Parr (CEH) and Jiska van Dijk (coordinator, NINA) came up with "the most important research question" based on ALTER-Net's Common Research Strategy. The question *"How does mankind, responsible for climatic and other anthropogenic changes including geo-political and cultural processes, interact with biodiversity, ecosystems and the services they provide?"* received the highest number of votes during an open voting session which showed that ALTER-Net is active in this field and has a lot of support. After the voting session the task force was further involved in commenting on the draft document entitled "Grand Challenges in Global Sustainability Research: A Systems Approach to Research Priorities for the Decade".

Nordic Biodiversity Beyond 2010 symposium

The Nordic Biodiversity Beyond 2010 symposium – challenges and experiences in a global perspective – was held at 26 and 27 October 2009 in Trondheim. The ALTER-Net coordinator was asked to contribute and represent the scientific community at the plenary session. The project was funded by the Nordic Council of Ministers and organised by the Norwegian Directorate for Nature Management. The conclusions and recommendations of the symposium serves as part of the preparation processes ahead of the CBD COP 10 meeting to take place in Nagoya, Japan, 2010, and will be seen as a Nordic contribution to the COP. For ALTER-Net it was a good opportunity to come forward with its work on biodiversity research, to show the value and impact of the research network activities and to get the Nordic Council, the Norwegian Ministry for the Environment and the Norwegian Directorate for Nature Management more acquainted with the work of ALTER-Net.

Nordic recommendation to the IPBES process & Trondheim Conference on Biodiversity 2010

In preparation, during and after the Trondheim Conference on Biodiversity, February 2010, the coordinator was asked to assist in the preparation of a white paper on the Nordic recommendation to the IPBES process together with Odd Terje Sandlund (NINA), the Norwegian Ministry for the Environment, the Norwegian Directorate for Nature Management and representatives of the different ministries of Environment from Finland, Sweden, Denmark and Iceland. Again was this a good opportunity to get the different parties more acquainted with ALTER-Net.

ALTER-Net had an information stand during the Trondheim Conference on Biodiversity with a poster, flyers, brochures and other examples of our work (Summer School, Life-Watch, LTER and examples of collaboration efforts like the SCALE project). Both Daniel Terrasson (CEMAGREF) and the coordinator participated in the conference.

External funding for the Summer School

The coordinator has been searching alternative funding for the Summer School. The Marie Curie program looked like a possibility, however the call was not appropriate for the Summer School and was more for exchange of laboratory personnel for longer training periods. The Erasmus program that Yvan Lagadeuc (CNRS) found could be applied and the secretariat will try to send in a proposal (deadline 30th of April 2010). Another option will be the European Science Foundation with calls coming this summer (deadline in autumn). The coordinator will also try the Norwegian Research Council. As the Summer School is very successful, a broader advertisement, more directed at non-member institutes may also help in getting more outside funding.

4 Activity plan, working budget and financial overview

April 2009 – March

The ALTER-Net secretariat received all annual cash contributions from the different partner institutes who pledged cash contributions. One partner institute was not able to pay this year's cash contribution (1000 €) and one partner had to pay less than pledged originally (2000 € less). The total income from the partner institutes was therefore 3000 € less than expected. The contribution from the Norwegian Directorate for Nature Management was 11,800 € less than first expected (300,000 NOK instead of 400,000 NOK).

Based on the expected income (table 3) the working budget and activity plan (table 4a and table 4b respectively) were developed during the 1st meeting of the Management Board in Trondheim and later approved by the Council. A total of 279,500 € was allocated in the budget to the different activities (including extra spending after receiving the extra contribution of 20,000 € from NINA which wasn't officially pledged and the pledged cash contribution from UFZ which was received after the MB meeting in Trondheim). The budget and financial system at NINA allows the network to reallocate money if some initiatives are not fulfilled and to reallocate money to different activities when less money is spent on a particular activity for instance.

An overview of the budget spent is also given in table 4a (last column). Looking at the income and the costs for this year, ALTER-Net is about 32,000 € in plus which will be included in next year's budget.

The final financial overview (see table 4a, BUDGET spent) of the Summer School shows that 43,000 € was used of the 50,000 € originally budgeted. The expenditures with regard to LTER (UBA), the LTER secretariat (ERCE), LifeWatch (IEB-HAS) and IDR (SYKE) were in accordance with the agreements that were signed between the different institutes and the ALTER-Net secretariat and in accordance with what the Management Board decided. Also the Multi-Site Experiment II (see also Chapter 12) is going according to plan. The salary costs for running the secretariat were higher than planned and especially the coordinator used too many hours. This was especially due to the delay in appointing the deputy coordinator and the extra coordinator's work needed to convert a Network of Excellence financed by the EU to a Network of Excellence financed by ALTER-Net's own partner institutes. Also being responsible for the Summer School budget (including receiving the participant fees) and its expenditures (including all invoices and travel reimbursements) took a considerable amount of the coordinator's time.

Although included in the activity plan (see Table 4b) and working budget, the work on the International Press Centre on Biodiversity, the Greenlink expert database for journalists and the journal *Inspired* for Biodiversity was not fulfilled. In addition, the planned workshop on Common Research Strategy was delayed and no further activities were undertaken for the Common Training Programme and for the TEEB project (The Economy of Ecology and Biodiversity). Also in the area of ALTER-Net's Science-Policy interface no particular activity was undertaken.

Table 3. Overview of expected income April 2009 – March 2010

Institute	Status (01.06.2009)	Yearly cash con- tribution in €
Alterra	Signed	20 000
CEH	Signed	25 000
CEMAGREF	Signed	15 000
CNRS	Signed	0
CONECOFOR	Signed	5 000
CSIC	Signed	0
ECNC	Signed	0
ERCE	Signed	1 500
HBI CAS	Signed	3 000
IEB-HAS	Signed	0
ILE-SAS	Signed	1 000
INBO	Signed	10 000
Macaulay	Signed	0
NERI	Signed	15 000
NINA	Signed	40 000
PBL	Signed	3 000
PIK	Signed	0
SLU	Signed	10 000
SYKE	Signed	3 000
UBA	Signed	5 000
UFZ	Signed	20 000
UNIBUC	Signed	3 000
	SUM	179 500
Research Council of Norway (500.000 NOK)		58 824
Directorate for Nature Management (400.000 NOK)		47 059
	SUM	285 382

Table 4a. Budget allocation and budget spent, April 2009 – March 2010

ACTIVITY	SPECIFICATION	ALLOCATED BUDGET	BUDGET Spent
Proposed at the MB meeting in Trondheim '09			
Comm Research Strategy	5000 for 1 workshop	5 000	0
Communic and KnowTransf	10 000 to INBO, other commun activities go to NINA secretariat and CEH	10 000	0
Common Training	500 for training, 50 000 for Sum school 2009, 3000 for 2010 Sum school	53 500	42 958
Data Sharing Policy	using in-kind contribution	0	0
LTER-Europe (network)	10 000 for LTER secr ERCE + 13 000 for proposal nr 4	23 000	23 000
Life Watch	5000 for LifeWatch proposal nr 8	5 000	5 000
IDR	2yrs x 11 000 for proposal nr 6 - Eeva Furman	11 000	11 000
Salary costs (2x50%) secretariat	Official: (1280 hours * 875 NOK)/8,5 euro= 131 765	122 000	127 182
Running secretariat	Running secretariat (20 000)	20 000	19 077
		249 500	228 217
Proposed after the MB meeting in Trondheim when additional money (NINA and UFZ) became available			
	N2000 proposal (Lead by Alterra)	5 000	0
	TEEB (Lead by UFZ & Alterra)	5 000	0
	Multi-site experiment (lead by UFZ & Macaulay)	10 000	10 000
	Science-Policy interface ¹	10 000	0
	SUM	279 500	238 217
	TOTAL BALANCE	5 882	32 401
	¹ Pending		
	Expected income		285 382
	Real income		270 618

Table 4b. Working plan, April 2009 – March 2010

Activity	Priority Tasks	(Leading) part- ners involved
1. Common Re- search Strategy	Distribute and discuss the CRS amongst ALTER-Net2 partners in order to reach an amended version	INBO, Cemagref, CEH and all partner institutes
	Position the partners regarding the CRS objectives and map their strengths in order to obtain a condensed overview of the ALTER-Net2 research strength and capacity	Secretariat and all partner institutes
	Select a priority research topic or development objective and facilitate collaborative action between the partners	All
	Organise a workshop on 'the start of a concrete collaborative research activity' to explore synergies, opportunities etc.	All interested partners

2. Communication and Knowledge Transfer	Website management (update old information, make small changes)	secretariat NINA, CEH
	IPCB, Greenlink and INSPIREDD	INBO
	News and Views	CEH, ECSITE
	ECSITE Partnership: membership, meetings + conference	CEH
	Finish the communication strategy	CEH, NINA
	General input for website (announcements, content, etc.)	All
	Write and implement an annual activity plan	CEH, Alterra, NINA
	Develop promotion material to send out agreed messages via e.g. websites, meetings, lobby activities	ECNC
	Internal communication : present the new strategy of ALTER-Net2 and designate a responsible/contact person for each activity at each institute	Secretariat, all
3. Common Train- ing Program	Further organise Summer School 2009	CEH, Alterra, PIK, NINA and all partner institutes
	Start organising Summer School 2010/2011: 2 day preparatory workshop	Alterra, PIK, CEH and other interested partners
	Organise two training courses at Wageningen, the Netherlands, on Communication & Knowledge Transfer, including science policy interface	Alterra and CEH, two students/scientists per partner
	In cooperation with LTER/LTSER: organise two training courses in Vienna on standard observation methods, data information access and multi-site experiment	all interested partners, UBA, Alterra, CEH
4. Data Sharing Policy	Study the report on ALTER-Net1 and its data policies. Define the scope of (potential) data sharing policy – copy-rights/standards etc	ILESAS, Alterra and other partner institutes
	Enquire designated specialists at the institutes about existing data policies and analyse the results	All
	Present results *and suggestions to the Council	ILESAS, Alterra
5. LTER	Support the maintenance and further development of the LTER network	UBA, ERCE
	Define the potential technologies and which research questions they would answer → output	
	Promote the significance of the LTER network	
6. Life Watch	Speed up the development of data sharing policy and protocols (in cooperation with activity 4 and activity 5) and provide 'best practice' examples	IEBHAS, NERI and all other partner institutes
	Develop regional cases to demonstrate LTER site information integration, or successful data integration	IEBHAS, NERI
7. Interdisciplinary Research	Elucidate lessons learned of governance from successful cases, preferably LTSER sites (This should lead to a design for an ecosystem services governance framework in 2010, and a specific training in the subject and support of framework applications in 2011)	SYKE, INBO, NINA and all other partner institutes
Generally	Lobbying and fundraising	Secretariat and all partner institutions

5 Involvement of the partner institutes and its researchers

NINA internal advisory group for the ALTER-Net secretariat

NINA internal advisory group was formed (four representatives from NINA, both secretariat coordinators, one representative from the Norwegian Directorate for Nature Management and one representative from the Norwegian University of Technology and Sciences). The advisory group will discuss among others a way to increase participation of NINA researchers in ALTER-Net activities and increased involvement in joint proposal writing with regard to EU-funded projects and initiatives. During the discussions with the internal advisory group it was suggested to look for possibilities to establish a mobility fund to enable individual researchers to travel and meet other ALTER-Net researchers. It was also suggested to organize special ALTER-Net social events during larger biodiversity related conferences of which you can assume that a high number of ALTER-Net researchers will participate. During such ALTER-Net social events individual researchers can meet other ALTER-Net researchers informally, lowering the threshold to get into contact next time for proposal writing. Both the suggestion to establish a mobility fund and to organize social events during conferences has been discussed by the Management Board (Hungary meeting, March 2010) and is included in next year's work plan proposal to the Council.

New research initiative fund

During the Council meeting in Bordeaux, October 2009, the Council was given "homework" to come up with ideas for supporting bottom-up activities at the research level. One of the ideas that was put forward was the "New research initiative fund"; a small amount of money (5.000 € per proposal) to serve as seed money to be able to build a small network within ALTER-Net to work together on a specific feasible and "hot" research topic and to work towards a successful proposal. Terry Parr (CEH), Daniel Terrasson (CEMAGREF) and the coordinator wrote a call and sent it out to all partner institutes to distribute it among the researchers at the partner institutes. One condition was that at least 3 different ALTER-Net institutes would be involved in the proposal. The deadline was 1st of March 2010 and the secretariat received in total three proposals. The proposals will further be discussed during the Council meeting in Uppsala, 27th of April 2010.

Involvement of the partner institutes and use of their in-kind contribution

Twice a year partner institutes are asked to update their information how many person days the different partner institutes have used on the different ALTER-Net activities compared to the originally pledged in-kind contributions. 16 institutes had officially pledged in-kind contributions and 2 more institutes (NINA and PIK) contributed in-kind although not officially pledged. The originally pledged in-kind contribution of SLU was reformulated and the originally pledged in-kind contribution of ILE-SAS was extended to 155 person days. Table 6 gives the overview of person days used on the different ALTER-Net activities whereas the text below the table is the specifications given by the different institutes. Although the Council decided to exclude the in-kind contributions assigned to national LTER and LifeWatch processes as being

not strictly part of ALTER-Net core activities the table and specifications show that ALTER-Net in-kind contributions are, in some cases, used for national LTER and LifeWatch processes (with the exception of SLU).

Table 6. Overview in-kind person days for April 2009 - March 2010

Institutes	Activity	Comm Research Strat	Commun & Knowl Trans	Comm Training Progr	Data Sharing Pol	LTER	LW	IDR
Alterra*	Originally pledged			10	30			5-10
	used April '09 - March '10			10	30			5-10
	still left			0	0			0
CEH*	Originally pledged		15	15				
	used April '09 - March '10		15	27				
	still left		0	-12				
CEMAGREF*	Originally pledged							
	used April '09 - March '10							
	still left							
CNRS	Originally pledged							
	used April '09 - March '10							
	still left							
CONECOFOR	Originally pledged					60		
	used April '09 - March '10					60		
	still left							
CSIC	Originally pledged							
	used April '09 - March '10							
	still left							
ECNC	Originally pledged	1	2+2				2+2	2
	used April '09 - March '10	1	2				2	2
	still left	0	2				2	0
ERCE	Originally pledged	10	2	3		50		10
	used April '09 - March '10	7	2	2		80	2	10
	still left	3	0	1		-30		0
HBI CAS	Originally pledged	40	40	40	60	60	intern	intern
	used April '09 - March '10	20	40	0	30	60		
	still left	20	0	40	30	0		
IEB-HAS	Originally pledged	10	10	10	10	20	20	20
	used April '09 - March '10	0	10	0	10	0	7	22
	still left	10	0	10	0	20	13	-2
ILE-SAS*	Originally pledged							
	used April '09 - March '10	1	5	20	50	40	5	2
	still left	4	0	0	0	10	0	18
INBO*	Originally pledged		10					4,5
	used April '09 - March '10		0					0
	still left		10					4,5
Macaulay	Originally pledged							
	used April '09 - March '10							
	still left							
NERI*	Originally pledged					7	7	6
	used April '09 - March '10					3,5	3,5	3
	still left					3,5	3,5	3
NINA*	Originally pledged							
	used April '09 - March '10							3
	still left							
PBL	Originally pledged					10		10
	used April '09 - March '10							
	still left					10		10
PIK	Originally pledged							
	used April '09 - March '10			33				
	still left							
SLU	Originally pledged							
	used April '09 - March '10							
	still left							
SYKE*	Originally pledged							60
	used April '09 - March '10	2				25	5	35
	still left							0
UBA*	Originally pledged					40		
	used April '09 - March '10							
	still left					40		
UFZ	Originally pledged				40	15	15	10
	used April '09 - March '10							
	still left				40	15	15	10
UNIBUC	Originally pledged	5			10	5	5	5
	used April '09 - March '10	0			0	5	5	5
	still left	5			10	0	0	0

* also member of MB

Yellow: secretariat received the information from the institute

Specifications received:

Alterra

10 days Common Training Programme used for Summer School tutor Eric Arets

30 days Data Sharing Policy used for specific MORIS (including SERONTO) & LTER Infobase:

- Finishing some leftover work from AlterNet1 (papers and discussions)
- Discussions with UBA about new implementation of Moris-2 at UBA and study of their 'novel' methods used to implement Moris-2
- Startup of study to implement SERONTO with the tools developed within SEAMLESS on a PostgreSQL server at Alterra (for this also the final SEAMLESS meeting in the Netherlands was attended)
- Maintenance and bug fixing of programs for the LTER Infobase

5-10 days InterDisciplinary Research will be used by Leon B, Ecos Serv Mapp

CEH

15 days Communication & Knowledge Transfer used for website and e-news, Ecsite and News & Views

27 days Common Training Programme used for organizing and lecturing (15), speakers (12) for and during Summer School

ECNC

7.25 days of senior days used for:

- communication to ECNC Bureau meeting (9/6/09)
- visit of ALTER-Net coordinator to ECNC (17/6/09)
- internal discussions on SPI, Trondheim conference, work proposal
- cooperation discussion with partner PBL (7/7/09)
- input into FP7 call on Network of Knowledge
- participation in EPBRS meeting on behalf of ALTER-Net + writing brief (week 40)
- discussion at ECNC Scientific Council meeting (22/10/09)
- preparatory teleconference Trondheim side event (12/11/09) and preparation of concept note for the side event
- communication about ALTER-Net via ECNC website, newsletter (May, June, October; <http://www.ecnc.org/publications/update>) and dissemination of brochures
- input to the IPBES gap analysis on the possible links with the ALTER-Net science-policy interface

ERCE

2 days used for lectures about Alter/LTER tools and approaches at the International Advanced Study Course: "Ecohydrology & Ecosystems Biotechnologies in Water Resources Management". No involvement in Summer School

2 days used for LifeWatch due to prof. Zalewski involvement in Polish ESFRI activities, including LW

10 days used for InterDisciplinary Research: ISSE meeting in US, and related activities under ILTER/LTER, currently preparation of COST action

HBI-CAS

20 days used for Common Research Strategy: questionnaire filled

40 days of Communication & Knowledge Transfer: completing databases with long term data, discussion with Biofresh on data sharing

30 days of Data Sharing Policy: discussion with Biofresh on data sharing, looking for contacts

60 days of LTER: organized three meetings of CZ LTER, participation in all events organized by LTER Europe, no participation in ILTER meetings - no money for travelling

IEB-HAS

10 days Communication & Knowledge Transfer: István Tátrai - participation in preparing two papers*

* Birgit Bednar-Friedl et al. 2009. Public views on biodiversity change - a study in eight European sites. Book chapter (in press)

* Bednar-Friedl, B. et al. 2009. Public perceptions of biodiversity change - results from a (pilot) survey in 8 European countries. Report. ALTER-Net, Macaulay Land Use Institute, Alterra, UBA, p. 1-52

10 days for Data Sharing Policy: Miklós Kertész - LW pilot project

7 days for LifeWatch: 3 to Miklós Kertész - work related to EXPEER and LW data Provider Platform meetings and activities, 3 to Miklós Kertész - Participation in ILTER ISSE project, 2 to Miklós Kertész - work LW data Provider Platform meeting

22 days for InterDisciplinary Research: 10 to Katalin Török - LW lead, 10 to Miklós Kertész - LW pilot project, 2 to Miklós Kertész - work LW data Provider Platform meeting

ILE-SAS

Totally 123 days used of the 155 days newly pledged (01.April.2010)

1 day for Common Research Strategy: used for questionnaire of Geert De Blust

5 days Communication & Knowledge Transfer used for preparation of news for the webpage until mid of March - after negotiation with Andy Sier

20 days for Common Training Programme: It was used for preparation and participation at the Summer School - 1 person from ILE SAS

50 days for Data Sharing Policy: It was used for preparation of the draft "DSP" and questionnaire

40 days for LTER: used for LTER conference, Slovak LTER committee meeting, work on LTER projects proposals and documents

5 days for LifeWatch: It was used for work on "Collecting data across LTER Europe"

2 days for InterDisciplinary Research: used for responding and preparation of documents for "Governance of ecosystem services"

NERI

According to the attached overview NERI has promised 20 person days. This is correct, but all person days are allocated to the InterDisciplinary Research column. This is not correct as we wish to contribute to three columns: the development of LTER sites, LifeWatch and InterDisciplinary Research. Of the 20 person days we have spent ca. half on meetings (and preparations) in Trondheim and Amsterdam and on the further development of a modelling- and data interface for LTSEr-sites.

NINA

3 days for InterDisciplinary Research: used for meeting Helsinki on governance project

PBL

Interpretation is OK. Nothing used so far (1 dec. 09)

PIK

33 days for Common Training Programme: 15 for Wolfgang Cramer - Preparation, implementation, lecturing at the Summer School; 15 for Diana Reckien - Summer School tutor; 3 for Gitta Krukenberg - Preparation of the Summer School

SLU

In the summary of in-kind work (first draft), SLU was put up on several activities. However, we have not promised all this in-kind contribution. In the accompanying letter SLU wrote that "7 weeks of staff time for national coordination of ALTER-Net activities and LTER-network". By this we meant that time was allocated for setting up a Swedish LTER network. Giving the amount of 7 weeks was thus obviously a misunderstanding from our side as, the 7 weeks was allocated to other activities than pure work for the A-Net core activities

SYKE

SYKE promised 60 days to InterDisciplinary Research. We have used the days besides IDR also to LTER and LW

UFZ

Has used a number of days on Multi-Site Experiment II (Jutta Stadler)

Ongoing collaboration projects and new joint proposals

Partner institutes were asked to provide information on which ongoing projects and new proposals they were involved in that proves the added value of the network. The Council decided to include collaboration projects when two or more ALTER-Net partners are involved. Table 7a and 7b give the overview of the information received. 29 collaboration projects are ongoing and 6 EU proposals have been sent in during April 2009 – March 2010. Guidelines how to improve the processes for new joint proposals, to increase the number of joint proposals and to increase our effort in evaluation processes on former and new calls will be discussed during the Council meeting in Uppsala, 27th of April 2010.

Table 7a. Overview of ongoing collaboration projects

TITLE PROJECT	Funding	Period	Coordinator	ALTER-Net Partners (all)
BACCARA	FP7	2009-2012	external	ALTERRA, SLU
BIOFRESH	FP7	2010-?		ALTER-Net as stakeholder, represented by HBI-CAS
BIOSTRAT	FP6	2006-2010	external	CEH, CSIC, ILE-SAS, NERI, SLU, SLU, UFZ
Dealing with conflicts in the implementation and management of the Natura 2000 network	EC DG ENV	2008-2010	ALTERRA	ALTERRA, ECNC
EBONE	FP7	2008-2012	ALTERRA	ALTERRA, CEH, CEMAGREF, ILE-SAS, INBO, NINA, SLU, SLU, UBA, UFZ
ENCI	FP7	2009-2011	PIK	CNRS, PIK
EnvEurope	Life+ 2009	2010-2013	external	CONECOFOR, ERCE, UFZ, UBA, UNIBUC, IEB-HAS, CSIC, SLU
European Topic Centre on Biological Diversity	EEA	2009-2013	external	ECNC, ILE-SAS, SLU, UBA
EVOLTREE	FP6	2006-2010	external	ALTERRA, CEH, CNRS, PIK, SLU, SLU
FUME	FP7	2010-2014	PIK	CNRS, CSIC, PIK
GLOWA	national	2000-2010	external	PIK, UFZ
HUNT	FP7	2009-2012	Macaulay	Macaulay, NINA
ISOIL	FP7	2008-2011	UFZ	ALTERRA
Journal for Nature Conservation	-	ongoing	ECNC	ALTERRA, SYKE, UNIBUC
LIFEWATCH	FP7	2008-2012	UvA	CEH, CSIC, ILE-SAS, INBO, NERI, NINA, SYKE, UBA
MEDIATION	FP7	2010-	PIK	ALTERRA, PIK, SYKE
METIER	FP6	?	UFZ	CEH, CEMAGREF, NERI, SYKE, UFZ
MILLENNIUM	FP6	?	external	CEH, UFZ
MIRAGE	FP7	2009-2011	ALTERRA	ALTERRA, CEH
MODAP	FP7	2009-2012	external	ALTERRA
MOTIVE	FP7	2009-2013	external	ALTERRA, PIK, SLU
NANOIMPACTNET	FP7	2008-2012	external	ALTERRA
NITROEUROPE-IP	FP6	2006-2011	CEH	ALTERRA, CEH, PBL, SYKE
POLICYMIX	FP7	2010-?	NINA	NINA, UFZ, SYKE
RUBICODE	FP6	2009	external	ALTERRA, CEH, CNRS, SLU, SLU, UFZ
SCALES	FP7	2009-2013	UFZ	NINA, UFZ, SLU, SYKE
SCENES	FP6	2007-2010	SYKE	ALTERRA, CEH, SYKE
WATCH	FP6	2007-2011	CEMAGREF	CEH, CEMAGREF, CNRS, CSIC, PIK
WISER	FP7	2009-2012	external	CEH, ALTERRA, SLU, SYKE

Table 7. Overview of new proposals sent in

TITLE PROJECT	Funding	Period	Coordinator	ALTER-Net Partners (all)
KNEU	FP7	planned	UFZ	ALTERRA, CEH, CSIC, ECNC, IEB-HAS, NINA, SYKE, UFZ
EPEH	FP7-REGPOT-2010-1	planned	ERCE	CEH, ERCE, EAA7UBA, UFZ, UNIBUC
EXPEER	INFRA-2010.1.1.17	planned	INRA	UFZ, UBA, ERCE, BGU, IEB-HAS, SYKE, CEH, CSIC
FOREBIO	ENV.2010.2.1.4.1	planned	CEH	CEH, ILE-SAS
HECSA	CostAction	planned	tbd	ERCE, UBA, SYKE, CEH, IEB-HAS, CONECOFOR, ILE-SAS, HB-CAS
REFRESH	FP7	planned		HBI-CAS

EXPEER proposal

EXPEER explicitly aims at up-grading and interconnecting both *experimental* and *observational and monitoring sites* for *long term terrestrial ecosystem research*. The overall objective of this project is to improve the quality of the facilities and bring together the two main research communities on terrestrial ecosystem in Europe through the enhancement of integrated up-to-date research infrastructures allowing the emergence of a *multidisciplinary approach of ecosystem functions and services* changes under global change impacts. The *key research infrastructures in Europe* such as in vitro experimental facilities (Ecotrons), field experimental sites (HIES) and observation sites (HIOS) will be integrated together (Figure 1) by developing mutual interactions for large data set collections in order to calibrate and validate models for simulation and forecasting ecosystem functions and services under different global and regional impact scenarios.

FOREBIO proposal

This project has five main components: a) to develop our understanding how forest biodiversity impacts ecosystem function and the provision of ecosystem services by producing a synthesis of currently available theories, information and data; b) to conduct a pilot programme of research that reflects our initial assessment crucial data and information we lack; c) to investigate needs and understanding of ecosystem services among stakeholders and policy makers; d) to transfer knowledge to forest owners and managers, policy makers and society at large who benefit from the goods and services provided by forests; and e) to develop a durable platform for research on forest ecosystem services, the functional significance of forest biodiversity and the role of forest management, involving both researchers and stakeholders.

KNEU proposal

This project aims at developing a European scientific biodiversity Network to inform policy-making and economic actors. The overall objective of the project is to develop a recommended design for a scientific biodiversity Network of Knowledge (NoK) to inform policy-makers, the policy-making process and other societal actors. This network shall be open, transparent, flexible, equally accessible to all, independent, be scientifically- and evidence-based and have a robust structure. It will develop links to relevant clients to support the science-society interface in Europe and beyond.

No information was received on the EPEH, HECSA and REFRESH proposals.

Joint publications on biodiversity research

A list of joint publications on biodiversity research (see Table 8) was created by searching ISI Web of Science, using the information send to Andy Sier (CEH) for placing on the website and by asking the Council members to send information on joint publications. Especially with the help from Flemming Skov (NERI) the table currently shows 34 publications for April 2009-March 2010.

Table 8. ALTER-Net Journal papers April 2009 – March 2010 (Updated: 06.04.2010)

Boulant N, Garnier A, Curt T, et al. 2009. Disentangling the effects of land use, shrub cover and climate on the invasion speed of native and introduced pines in grasslands. *Diversity and Distirubutions*, 15(1), 1047-1059.

Institute first author: CNRS

Institutes co-authors: CEMAGREF

Brittain, C.A., Vighi, M., Bommarco, R., Settele, J., Potts, S.G. 2010. Impacts of a pesticide on pollinator species richness at different spatial scales. *Basic and Applied Ecology*, 11(2), 106-115.

Institute first author: other

Institutes co-authors: SLU, UFZ, others

Brucet S, Boix D, Gascon S, et al. 2009. Species richness of crustacean zooplankton and trophic structure of brackish lagoons in contrasting climate zones: north temperate Denmark and Mediterranean Catalonia (Spain). *Ecography*, 32(4), 692-702

Institute first author: NERI

Institutes co-authors: CSIC, other

Burylo, M., Rey, F., Roumet, C., Buisson, E., Dutoit, T. 2009. Linking plant morphological traits to uprooting resistance in eroded marly lands (Southern Alps, France). *Plant and Soil*, 324(1), 31-42.

Institute first author: CEMAGREF

Institutes co-authors: CNRS, other

Campagne, P., Baumel, A., Affre, L., Juin, M., Duong, N., Roche, P., Tatoni, T. 2009. Genetic signs of connectivity in *Primula vulgaris* (Primulaceae) in a hedgerow network landscape. *Comptes Rendus – Biologies*, 332(7), 652-661.

Institute first author: CNRS

Institutes co-authors: CEMAGREF, other

Carré, G., Roche, P., Chifflet, R., Morison, N., Bommarco, R., Harrison-Cripps, J., Krewenka, K., Potts, S.G., Roberts, S.P.M., Rodet, G., Settele, J., Steffan-Dewenter, I., Szentgyörgyi, H., Tscheulin, T., Westphal, C., Woyciechowski, M., Vaissière, B.E. 2009. Landscape context and habitat type as drivers of bee diversity in European annual crops. *Agriculture, Ecosystems and Environment*, 133(1-2), 40-47.

Institute first author: other

Institutes co-authors: CEMAGREF, SLU, UFZ, others

Cheptou, P.-O., Massol, F. 2009. Pollination fluctuations drive evolutionary syndromes linking dispersal and mating system. *American Naturalist*, 174(1), 46-55.

Institute first author: CNRS

Institutes co-authors: CEMAGREF

Eggers J., K. Tröltzsch, A. Falcucci, L. Maiorano, P.H. Verburg, E. Framstad, G. Louette, D. Maes, S. Nagy, W. Ozinga & B. Delbaere (2009) Is biofuel policy harming biodiversity in Europe? *Global Change Biology Bio-energy* 1, 18-34

Institute first author: other

Institutes co-authors: ALTERRA, ECNC, INBO, NINA

Erb, K.H., Krausmann, F., Gaube, V., Gingrich, S., Bondeau, A., Fischer-Kowalski, M., Haberl, H., 2009. Analyzing the global human appropriation of net primary production - processes, trajectories, implications. An introduction. *Ecological Economics* 69, 250-259.

Institute first author: IFF

Institutes co-authors: IFF

Note: ALTER-Net acknowledged

Erb, K.H., Krausmann, F., Lucht, W., Haberl, H., 2009. Embodied HANPP: Mapping the spatial disconnect between global biomass production and consumption. *Ecological Economics* 69, 328-334.

Institute first author: IFF

Institutes co-authors: PIK

Note: ALTER-Net acknowledged

Ferrer M, Newton I, Pandolfi M. 2009. Small populations and offspring sex-ratio deviations in Eagles. *Conservation Biology*, 23(4), 1017-1025.

Institute first author: CSIC

Institutes co-authors: CEH

Feld, C.K., da Silva, P.M., Sousa JP, et al. 2009. Indicators of biodiversity and ecosystem services: a synthesis across ecosystems and spatial scales. *OIKOS*, 118(12), 1862-1871

Institute first author: ALTERRA

Institutes co-authors: CEH, SLU

Gaube, V., Kaiser, C., Wildenberg, M., Adensam, H., Fleissner, P., Kobler, J., Lutz, J., Schaumberger, A., Schaumberger, J., Smetschka, B., Wolf, A., Richter, A., Haberl, H., 2009. Combining agent-based and stock-flow modelling approaches in a participative analysis of the integrated land system in Reichraming, Austria. *Landscape Ecology* 24, 1149-1165.

Institute first author: IFF

Institutes co-authors: UMB

Note: ALTER-Net acknowledged

Gosselin, F., 2009. Management on the basis of the best scientific data or integration of ecological research within management? Lessons learned from the Northern spotted owl saga on the connection between research and management in conservation biology. *Biodiversity and Conservation* 18, 777-793.

Institute first author: Cemagref

Institutes co-authors: n.a.

Note: ALTER-Net acknowledged

Haberl, H., Gaube, V., Diaz-Delgado, R., Krauze, K., Neuner, A., Peterseil, J., Plutzer, C., Singh, S.J., Vadineanu, A., 2009. Towards an integrated model of socioeconomic biodiversity drivers, pressures and impacts. A feasibility study based on three European long-term socio-ecological research platforms. *Ecological Economics* 68, 1797-1812.

Institute first author: IFF

Institutes co-authors: CSIC, ERCE, UNIBUC

Note: ALTER-Net acknowledged

Harding, A.M.A., Egevang, C., Walkusz, W., et al. 2009. Estimating prey capture rates of a planktivorous seabird, the little auk (*Alle alle*), using diet, diving behaviour, and energy consumption. *Polar Biology*, 32(5), 785-796.

Institute first author: ERCE

Institutes co-authors: NERI

Heikkinen, R.K., Luoto, M., Leikola, N., et al. 2010. Assessing the vulnerability of European butterflies to climate change using multiple criteria. *Biodiversity and Conservation*, 19(3), 695-723.

Institute first author: SYKE

Institutes co-authors: UFZ

Kohlheb, N., Krausmann, F., 2009. Land use change, biomass production and HANPP: The case of Hungary 1961-2005. *Ecological Economics* 69, 292-300.

Institute first author: IFF

Institutes co-authors: IFF

Note: ALTER-Net acknowledged

Krause-Jensen, D., Carstensen, J., Dahl, K., et al. Testing relationships between macroalgal cover and Secchi depth in the Baltic Sea. *Ecological Indicators*, 9(6), 1284-1287.

Institute first author: NERI

Institutes co-authors: SYKE

Kuussaari, M., Bommarco, R., Heikkinen, R.K., Helm, A., Krauss, J., Lindborg, R., Öckinger, E., Pärtel, M., Pino, J., Rodà, F., Stefanescu, C., Teder, T., Zobel, M., Steffan-Dewenter, I. 2009. Extinction debt: a challenge for biodiversity conservation. *Trends in Ecology and Evolution*, 24(10), 564-571.

Institute first author: SYKE

Institutes co-authors: EMU, SLU, others

Lepart, J., Boulant, N., Garnier, A., Curt, T. 2009. Disentangling the effects of land use, shrub cover and climate on the invasion speed of native and introduced pines in Grasslands.

Diversity and Distributions, 15(6), 1047-1059.

Institute first author: CNRS

Institutes co-authors: CEMAGREF, other

Lienhoop, N., Fischer, A., 2009. Can you be bothered? The role of participant motivation in the valuation of species conservation measures. *Journal of Environmental Planning and Management* 52, 519-534.

Institute first author: UFZ

Institutes co-authors: Macaulay

Louette G., D. Maes, J.R.M. Alkemade, L. Boitani, B. de Knecht, J. Eggers, A. Falcucci, E. Framstad, W. Hagemeyer, S.M. Hennekens, L. Maiorano, S. Nagy, A. Nieto Serradilla, W.A. Ozinga, J.H.J. Schaminée, V. Tsiaousi, S. van Tol & B. Delbaere. Cost-effective assessment of policy impact on biodiversity using species sensitivity scores. *Journal for Nature Conservation* (in press)

Institute first author: other
Institutes co-authors: ECNC, NINA, others?

Matesanz, S., Brooker, R.W., Valladares, F., Klotz, S., 2009. Temporal dynamics of marginal steppic vegetation over a 26-year period of substantial environmental change. *Journal of Vegetation Science* 20, 299-310.

Institute first author: CSIC
Institutes co-authors: Macaulay, UFZ
Note: ALTER-Net acknowledged

Moron, D., Lenda, M., Skorka, P., et al. 2009. Wild pollinator communities are negatively affected by invasion of alien goldenrods in grassland landscapes. *Biological Conservation*, 142(7), 1322-1332.

Institute first author: ERCE
Institutes co-authors: UFZ

Mucci N, Arrendal J, Ansoorge H, et al. 2010. Genetic diversity and landscape genetic structure of otter (*Lutra lutra*) populations in Europe. *Conservation Genetics*, 11(2) Special Issue: Sp. Iss. SI, 583-599.

Institute first author: other
Institutes co-authors: NERI, SYKE

Paillet, Y., Berges, L., Hjalten, J., Odor, P., Avon, C., Bernhardt-Romermann, M., Bijlsma, R.J., De Bruyn, L., Fuhr, M., Grandin, U., Kanka, R., Lundin, L., Luque, S., Magura, T., Matesanz, S., Meszaros, I., Sebastia, M.T., Schmidt, W., Standovar, T., Tothmeresz, B., Uotila, A., Valladares, F., Vellak, K., Virtanen, R., 2010. Biodiversity Differences between Managed and Unmanaged Forests: Meta-Analysis of Species Richness in Europe. *Conservation Biology* 24, 101-112.

Institute first author: Cemagref
Institutes co-authors: SLU, ALTERRA, ILE-SAS, CSIC
Note: ALTER-Net acknowledged

Prevosto, B., Kuiters L., Bernhardt-Römermann B., Dölle M., Schmidt W., Hoffmann M., Uytvanck J., Bohner A., Kreiner D., Stadler J., Klotz S. (2010): Impacts of land abandonment and woody colonisation on vegetation: similarities and differences along successional pathways in European habitats. *Folia Geobotanica*, submitted.

Institute first author: CEMAGREF
Institutes co-authors: ALTERRA; UFZ, INBO, others

Pysek, P., Jarosik, V., Pergl, J., et al. 2009. The global invasion success of Central European plants is related to distribution characteristics in their native range and species traits. *Diversity and Distributions*, 15(5), 891-903

Institute first author: HBI-CAS
Institutes co-authors: UFZ

Renetzeder, C., Schindler, S., Peterseil, J., et al. 2010. Can we measure ecological sustainability? Landscape pattern as an indicator for naturalness and land use intensity at regional, national and European level. *Ecological Indicators*, 10(1), Special Issue: Sp. Iss. SI, 39-48.

Institute first author: ALTERRA
Institutes co-authors: UBA

Sandin, L., Solimini, A.G. 2009. Freshwater ecosystem structure-function relationships: From theory to application. *Freshwater Biology*, 54(10), 2017-2024.

Institute first author: SLU

Institutes co-authors: Ispra

Schmeller, D.S., Henry, P.Y., Julliard, R., et al. 2009. Advantages of Volunteer-Based Biodiversity Monitoring in Europe. *Conservation Biology*, 23(2), 307-316.

Institute first author: CNRS

Institutes co-authors: UFZ

Simonsen, V., Klok, C., 2010. Genetic and ecological impacts of heavy metal and flooding stress on the earthworm *Lumbricus rubellus* in floodplains of the Rhine river. *Soil Biology & Biochemistry* 42, 270-275.

Institute first author: NERI

Institutes co-authors: ALTERRA

Note: ALTER-Net acknowledged

Verheyen, K., Adriaenssens, S., Gruwez, R., et al. 2009. *Juniperus communis*: victim of the combined action of climate warming and nitrogen deposition? *Plant Biology*, 11(1), 49-59.

Institute first author: CEH

Institutes co-authors: CSIC

6 Common Research Strategy

In May 2009, the first version of ALTER-Net's Common Research Strategy (CRS) was adopted by the consortium. This CRS can be interpreted as a synthesis and prioritisation of the research and integration areas that were the subject of several work packages during the first phase of ALTER-Net. The strategy is set within a simple framework with four focuses: '*why biodiversity matters*', '*the way things are*', '*how it got like this*', and '*what to do about it*'. The result is a CRS with four areas of research, each with specific objectives, and four development objectives, that all require the highest priority (Watt, A. 2009. ALTER-Net Common Research Strategy. Report ALTER-Net 3.I1.D2):

1. Climate change adaptation

Research Questions:

How are biodiversity, ecosystems and the services they provide responding to climate change across Europe?

How are people responding to these changes and what are the implications of adaptation strategies?

2. Rural development, land use, wilderness and biodiversity

Research Questions:

How can green infrastructures and wilderness support conservation of biodiversity?

How do sectoral policies impact on biodiversity and its sustainable use, and what approaches improve cross-sectoral integration, including conflict management?

3. Ecosystem services

Research Questions:

How do biodiversity, ecosystem functions and services interact across different biogeographic, geo-political and cultural areas?

How are ecosystem services provided, used and valued across different biogeographic, geo-political and cultural areas, and how does their use, including the conflicts between different uses, affect biodiversity?

How can the heterogeneity of preferences between services be aggregated and mechanisms developed to improve the management of these services?

4. Protected areas, including Natura2000

Research Questions:

How effective is the current Natura2000 network in supporting the conservation of Europe's threatened species and habitats and how can it be adapted to meet environmental change?

How can local applications and innovations in collaborative conservation in EC member states contribute to the acceptance and effectiveness of Natura2000?

Besides the research priorities, **four development objectives** are determined:

5. Sharing of environmental data and information

Development Objective

To develop policies, standards and mechanisms for sharing ecological data across partners that are consistent with emerging standards in Europe (e.g. INSPIRE) and globally.

6. Development of biodiversity and ecosystem observatories and observation systems

Development Objective

To design and implement a European network of biodiversity and ecosystem observatories to provide the observational and experimental data necessary for the assessment of trends and drivers of change in protected areas and the wider countryside.

7. The policy-science interface and “Network of Knowledge”

Development Objective

To develop the infrastructure and tools to respond to the needs of decision makers concerned with the loss of biodiversity and its consequences by (i) answering requests for information with policy relevant information, policy options and scenarios; (ii) providing early warnings; and (iii) coordinating multiple-scale assessments with stakeholders and the public.

8. Horizon Scanning

Development Objective

To identify emerging challenges in research on biodiversity and ecosystems.

The aim of the CRS is twofold, corresponding to an external and an internal objective:

- External: to show what the objectives and functions are of ALTER-Net; its strength and research capacity as a network;
- Internal: to work towards a more detailed document that stimulates and facilitates research collaboration between the partner institutes.

To achieve these two objectives, the CRS should be broadly discussed among the partners, so that it fits the partner's expertises and capacities, their missions, expectations and ambitions for the future. Therefore, the strategy is now being updated. For that purpose, a questionnaire has been distributed to collect the opinions and positions of the partners regarding this CRS. The aim is to explore to what extent the current strategy can be or has been adopted as a framework for institute's activities, how research projects fit in with the strategy and how a more concrete and detailed CRS may stimulate cooperation on different research topics within the consortium. Items of the questionnaire concern prioritisation of the CRS research areas by the institutes, current and preferred future function of a CRS, actions undertaken or foreseen by the institutes to implement the CRS, and suggestions for improvements of the CRS. As yet, the number of completed and returned questionnaires is too low to allow us to draw significant conclusions.

Through an analysis of websites and a literature search, the profiles of partner institutes are further detailed, indicating the competencies and capacities of the partners. All this will increase the opportunities for networking and collaborative research activities within the ALTER-Net consortium.

The screening of the institute's websites provided a good insight in the research activities of the 23 ALTER-Net partners (including IFF as new partner). The research areas and the current and past research projects mentioned and presented on the websites, were, if appropriate, categorised according the objectives of the areas of research and to the first two development areas of the CRS. Only one partner, CSIC in Spain, has no proper research department and doesn't do research itself. It is indeed a governmental institute responsible for managing and implementing the Spanish science policy while research is done by supported scientific institutes. The 22 other ALTER-Net partners however, are all active in one or more research domains of the CRS. Approximately one third of the institutes have projects in maximum 4 of the 10 priority areas of the CRS, while another third is active in 7 or more priority areas (5 institutes with 9 or all 10 of the priority areas). So the consortium consists of very specialized (often smaller) institutes along with broad scope institutes (the larger partners).

The general research area where the greatest part of the partners is active in is 'Rural development, land use, wilderness and biodiversity'. 'Climate change adaptation' and 'Protected areas, including Natura2000' are the second best. Only half of the consortium partners however have elaborated research projects on 'Ecosystem services'.

As for the more detailed research questions, 'How can green infrastructures and wilderness support conservation of biodiversity?' and 'How effective is the current Natura2000 network in supporting the conservation of Europe's threatened species and habitats and how can it be adapted to meet environmental change?' are the most popular and show very elaborated and extent research programmes dealing with them. Not surprising indeed, as these topics relate most to the traditional research activities of many of the institutes.

These, as well as the more detailed conclusions from the publication review and the questionnaires, will serve as the input for the elaboration of the new CRS. The content of that strategy and the role it may play in the further functioning and development of the consortium, will be the subject of a targeted workshop that will be organised at the end of 2010. Until then, partners will have ample opportunity to discuss the Common Research Strategy in order to be willing to adopt it under the best conditions as a guiding instrument for ALTER-Net and its individual members.

7 Communication & Knowledge Transfer

Introduction

Effective internal and external communication is essential to help ensure that the network operates effectively and promotes itself to key stakeholders. The Management Board members responsible are: Andrew Sier, CEH (lead) and Marjolein Sterk, Alterra (deputy).

ALTER-Net has a communication strategy, which helps guide its communication priorities. The strategy is still in draft form, but should be formally adopted by the Network Council in 2010. The strategy will be reviewed at least annually, and an annual action plan will set out short-term activities. The action plan for 2009-10 is shown below.

Overview of progress with CKT tasks (ALTER-Net communication action plan April 2009 - March 2010)

More information is given in later sections where indicated in the table.

Task	Responsible	Progress / notes
Website management	CEH, Secretariat	On-going. Regularly updated with news and events. Software company has made agreed structural changes. See <i>note below</i>
IPCB, Greenlink and INSPIREDD	INBO	See separate report from INBO
Promote and further develop News and Views	CEH	New version launched during UK's National Science Week (12-21 March 2010), with additional topics added. Encouraging response but further promotion is necessary <i>See note below</i>
Ecsite partnership: membership, meetings and conference	CEH	Nature Group session at Ecsite conference (June 2010) will go ahead. Hopefully a few ALTER-Net staff will be involved. <i>See note below</i>
Finish communication strategy	CEH, Secretariat	See latest draft version
General input for website	All	Limited input from ALTER-Net members, but improving. Partner profiles being updated.

		<i>See note below under 'website'</i>
Develop promotional material to send out agreed messages via e.g. websites, meetings, lobby activities	Secretariat, ECNC	See separate report from NINA
Internal communication: present new strategy of ALTER-Net and designate a responsible/contact person for each activity at each institute	Secretariat, all partner institutes	On-going. A table of partner contacts by activity is available on Lynx (Lynx>Contacts). E-mailed newsletter and other ad hoc e-mails are sent regularly to ALTER-Net members and registered (external) users of the website

Communication strategy

- This has been recently revised and the Management Board members have provided their comments. A new version will be submitted to the ALTER-Net Council.

Website

- The website is a key communication tool for ALTER-Net. Redevelopment of the website continues. The home page has been further re-styled, with more prominent buttons for ALTER-Net initiatives such as the Summer School. The software company (SIFT), who host the website have completed a number of structural changes to the site. These include changing the 'long-term programmes' section, adding a section for each of our main activities, removing references to 'work packages' in the main menu and removing some of the menu entries in Lynx (i.e. the web pages that are visible for those that become member of the website)(e.g. Mobility and Funding).
- Partners are in the process of reviewing their online partner profile (About ALTER-Net>Partners).
- ALTER-Net partners have been reminded on several occasions (via the e-news bulletin) that they can provide content for the site such as news items, event details, etc. Recently several partners have provided information, but the website is still under-used by partners.

E-news service

- Linked to the website is the ALTER-Net e-News service. Two different e-mail bulletins are sent out, one to ALTER-Net members (>600 recipients) and one to external people who have registered on the website (>360 recipients). The aim is to send a bulletin approximately every month.
- In addition to the bulletin, a number of additional e-mails have been sent to ALTER-Net members, with specific items of interest (e.g. concerning the Summer School and the 'new initiatives' call).

Publication lists

- To demonstrate the range of relevant, high quality science outputs generated by ALTER-Net members. We wish to continue listing selected publications by partners (e.g. those most relevant to ALTER-Net's scientific objectives). During the EC-funded phase of ALTER-Net, we listed publications (reports, journal papers, etc.). An approach will be developed during 2010. This task will require some input from partners. Outputs are currently listed at: <http://www.alter-net.info/outputs/default.asp>.

Partnership with Ecsite

- A partnership with Ecsite, the European network of science centres and museums was established during phase 1 of ALTER-Net. It could provide opportunities for us to communicate our science more widely and develop new communication skills. We are represented in Ecsite through CEH (officially a member of Ecsite). We are also represented on the Steering Group of the Ecsite Nature Group, which was launched at the Ecsite annual conference in 2009. Andrew Sier is the ALTER-Net representative on the Steering Group and gave a presentation about ALTER-Net at the inaugural meeting of the Nature Group during the conference.
- The next Ecsite conference is from 3-5 June 2010 in Dortmund, Germany. The Nature Group is organising one pre-conference and one main conference session. We are seeking one expert from ALTER-Net to take part in the main conference session.

News and Views

- This is a website targeted towards the general public (ages of about 12 and up). It aims to present topics concerning biodiversity and the natural world (written by scientists) to a general audience, introducing them to subjects they may be unfamiliar with and enabling them to share their views on the issues raised.
- A new version of News and Views has been launched: <http://newsandviews.ceh.ac.uk>. The aim is to focus on promoting the website in the UK initially, and – if successful – to develop it further later. News and Views has been launched to coincide with the UK's annual National Science and Engineering Week (which takes place in March each year). The theme for 2010 is 'earth'. News and Views is one of the online resources being promoted by the organisers of NSEW. This is an excellent opportunity. Although it is early days, we have been successful in attracting visitors to the site, some of whom have added comments and answered the online multi-choice questions.
- The aim is to add further topics and to promote the website more widely during 2010.

8 Common Training Programme

ALTER-Net Summer School 2009

ALTER-Net held its 4th Summer School on “Biodiversity and Ecosystem Services” in September (5-17 Sep 2009). The 27 participants came from 14 countries, mainly European but also Australia, Indonesia, India and South Africa and spent two weeks looking at aspects of biodiversity and ecosystem services.

The 4th Summer School was again organized in the small village of Peyresq, in the French Alps in Southern France. The village is managed by the “Association Nicolas-Claude Fabri de Peiresc”, a Belgian foundation dedicated to art and science, which has assigned it as a location for scientific and cultural meetings. Again, this place has proven to be simply ideal for this endeavour which is why all ALTER-Net Summer Schools have taken place there.

This Summer School's participants (students, lecturers, tutors, conveners) strived towards an integration of natural and social science aspects of biodiversity and ecosystem services. The aim was, besides the aspect of environmental awareness, the dissemination and critical review of the approach of integrated assessment of vulnerable ecosystems and their services under global change. The Summer School presented state-of-the-art scenario techniques, ecosystem modelling approaches for selected ecosystem services and allowed intensive dialogue between the participants and the lecturers. Target groups were graduate students and young scientists from environmental and social sciences from ALTER-Net partner institutes and universities.



After each presentation, time for discussion was available which nurtured good contacts between the students, tutors and speakers. The students formed three working groups, each working on a case study of different sectors in the nearby region of the Verdon catchment, i.e. agriculture, nature conservation and tourism. One delegate from each group and four permanent members formed a synthesis group who summarized the results of the three case studies for policy-makers. The case study was prepared as an experimental project apparently funded by the EU with the acronym MASSIF: Mapping Regional Vulnerability in the Southern Alps – Evaluating Trends and Developing Sustainable Adaptation Strategies for the Verdon Catchment. At the end of the Summer School the working groups presented the results of their case study and then all groups prepared a press release of their results which were announced at the final dinner.

New elements this year included the introduction of Fuzzy Cognitive Mapping, the preparation of Press Releases (as an element of communication training) and a contribution to the

e-conference on post-2010 policy targets for biodiversity that was running at the same time and organized by BioStrat in assignment of EPBRS. The entire Summer School (speakers presentations, lectures and work group results) are available on CD. Please contact Sabine Lütke-meier (sabinelu@pik-potsdam.de) to obtain the CD.

The 4th Summer School was ALTER-Net's first Summer School funded by the partner institutes themselves. In addition the participants had to pay a participant fee of 850 €. Allan Watt from CEH (Edinburgh, Scotland), Uta Fritsch from EURAC research (Bolzano, Italy) and Wolfgang Cramer and Sabine Lütke-meier from PIK (Potsdam, Germany) were the four ALTER-Net conveners. CEH and PIK thereby used the institute's in-kind contribution to the network to support the school. In addition the Summer School had five tutors coming from IFF, PIK, EURAC research, Alterra and Bergen University Norway. Sabine Lütke-meier from PIK was responsible for organizing the Summer School while the secretariat at NINA took care of the financial administration. There were 28 speakers, including five local/regional stakeholders and Martin Sharman (EC, DG Research), Terry Parr (ALTER-Net chair) and Hal Mooney (Stanford University, DIVERSITAS chair). Speakers from ALTER-Net institutes had their contribution to the Summer School (travel costs and working hours) reimbursed by their own institute, speakers from non-ALTER-Net partners had their travel expenses reimbursed by the ALTER-Net secretariat. Furthermore the "Association Nicolas-Claude Fabri de Peiresc" (which already has a non-profit price setting) provided a further special discount for accommodation and for using their facility in order to make the school possible.

In 2009, the ALTER-Net Summer School switched from a fully-funded model (where participants paid for only travel) to a mode with substantial participants' fees. A direct consequence appears to be the reduction of overall applications by more than 50%, mostly through a strong reduction of East European participation. The quality of the school was again considered by everyone to be very high. In our view, however, there is a substantial risk that, by having fewer participants from economy-in-transition countries, we are losing ground on a crucial aspect of European integration.

The initial feedback from the students on the 2009 ALTER-Net Summer School has been very good: it clearly resulted in another set of young ambassadors for ALTER-Net. The Summer School also provides a clear opportunity to advertise the ALTER-Net brand. A community of about 130 young professionals have now been trained in the essentials of biodiversity and ecosystem services, and they consider themselves a living "alumni" network. On the Summer School website (<http://www.pik-potsdam.de/alter-net/>) a special site has been created for all Summer School participants, conveners, tutors and speakers (<http://www.pik-potsdam.de/alter-net/alumni>) and now at LinkedIn a special group (ALTER-Net- Summer School Alumni group, <http://tinyurl.com/linkedin-peyresq>) is developing through their own initiative.

The Summer School also provides training of potential future staff of the ALTER-Net institutes. About 40% of the 2009 students were currently based at ALTER-Net institutions. The proportion of students and staff from ALTER-Net partners could be increased but the benefit of learning from students from outside the ALTER-Net network, particularly those

from outside Europe, should not be underestimated. In addition to the mix of students from ALTER-Net, 13 of the speakers and tutors were from ALTER-Net, providing a unique opportunity to promote integration.

The Summer School had the pleasure to have a speaker from European Commission DG Research and Ladislav Miko, Nature Director of DG Environment would have attended the Summer School if he had not accepted the temporary position of Environment Minister of the Czech Republic. The Summer School is highly regarded by the European Commission.

ALTER-Net Summer School 2010

ALTER-Net council decided in October 2009 to again financially support the next Summer School which will be held in Peyresq in September 2010. Sabine Lütke-meier from PIK will take care of the organization. A working group consisting of Henk Siepel (Alterra), Sabine Lütke-meier (PIK), Wolfgang Cramer (PIK), Philip Roche (Cemagref), Maurice Hoffmann (INBO), Allan Watt (CEH), Jiska van Dijk (NINA) and Kristine Ulvund (NINA) have discussed the framework (theme Summer School, duration and target group) of the Summer School 2010.

The Summer School expects again 50.000 € in funding from the ALTER-Net general budget. The participant fees will come in addition to this. The duration of the 2010 Summer School will be 10 days this time instead of the 14 days as before. The target group will remain PhD-students, young post-docs and ALTER-Net staff. Since 2010 is the International Year of Biodiversity, the Summer School will keep the theme "biodiversity and ecosystem services". The participant's fee has been set to 800 € per participant but the budget allows us to support fully up to 5 participants.

9 Data Sharing Policy

On the base of Annex 4 “Data sharing policy” of the Memorandum of Understanding, which was approved and signed by the all partner institutions the work and progress have been carried out during the period: 1.4.2009 – 31.3.2010. The first proposed work plan was presented at ALTER-Net Management Board meeting which took place in Trondheim, Norway, 26-27 May, 2009. The draft of data sharing policy respecting both general and concrete principles of sharing of data and questionnaire collecting information across ALTER-Net partner institutions was recognised the essential.

Study of the final Activity Report of ALTER-Net¹ brought several references related to data sharing policy. However, there are no proposals and solutions related to sharing of real data. Much effort and work was done in the field of gathering metadata and an excellent tool – InfoBase – was created and represents the first, very important step to operational, functional, durable and sustainable sharing of data. Sharing of data in the absence of policies that mandated attribution is unsound. The common data sharing policy secures data free of charge and supports easy access to data from the networks of LTER sites and LTSEER areas for the research community.

The first draft of Data Sharing Policy including analysis of LTER metadata stored in InfoBase and the questionnaire “Enquiring people about existing data policies” was prepared and presented at the second Management Board meeting and the Council meeting in Bordeaux, France, 20-21 October 2009. The in-kind contributions have been used to create the questionnaire on Data Sharing Policy. Consequently, the remarks and suggestions of the Management Board and Council were incorporated into the draft data sharing policy and the questionnaire and both were sent to contact persons dealing with Data Sharing within the different institutes in December 2009. Because only two responses were obtained, the process was repeated by sending documents also to Council members. At the Management Board meeting in Vácrátót, Hungary, 9-10 March 2010, a short overview of the seven by that time returned – UK, Hungary, Spain, Germany, Norway, Belgium and Slovakia – completed questionnaires was presented. Although the number was relatively small, the geographic coverage is wide. The responses brought very valuable and complex information and pointed out that the different institutes have different institutional data sharing policies, different data access categories and reward systems and different experiences with data sharing. Most of the institutes are using the InfoBase in the same way and have a similar database storage and management system. Answerers included many comments and characteristics, which will significantly help us to understand the state and possibilities of particular partners, and they will be included in the final draft of data sharing policy.

It was decided and agreed upon, that data sharing policy will in the next period continue together with the LifeWatch pilot project “Collecting data across LTER Europe” to test how concrete data on above ground biomass from forest ecosystems) is/could be/should be shared and how functional the data sharing policy is in this case. The questionnaire spe-

cifically for this LifeWatch pilot project will be sent to a broader auditorium selected on the basis of the InfoBase contact platform analysis. The common cover letter has been prepared and distributed.

10 LTER-Europe

Overview and conclusions

The formal end of the FP6 Network of Excellence project ALTER-Net (briefly addressed as ALTER-Net1) did not entail the feared loss of momentum and activities in the field of LTER. Five main factors accounted for that:

- Appropriate calls for European projects.
- Liaison with the new ALTER-Net consortium (support in the two key areas) plus integration on the institutional level.
- Proper governance structures set up under the auspices of ALTER-Net1 with the formal “Expert Panels” as key mechanism for distributed responsibilities.
- Continued support of a big number of institutions (in-kind LTER activities), most of which form part of ALTER-Net2
- Increasing strength and number of national LTER networks

The interaction of a network of institutions (ALTER-Net) with a network of sites and national networks is highly complementary. Mutual reference and information have proved to strengthen the entire cluster and its outside perception. Active and engaged institutions form the backbone of both wherever legal entities are required as actors (project consortia, budget).

10.1 LTER-Europe as engine for project proposals

The ALTER-Net Annex 5 activity “LTER” has been intensely engaged in developing project proposals responding to recent calls of FP 7:

- **EXPEER**, responding to INFRA.1.1.17 “Sites for exp. platforms and long-term ecosystem research”
- **FOREBIO**, responding to ENV.2010.2.1.4.1 “Functional significance of forest biodiversity”
- **EcoBioERA**, responding INFRA-2010-3.1: ERA-NET supporting cooperation for research infrastructures in all S&T

EXPEER has been accepted (14 out of 15 points) and EcoBioERA rejected. The review of FOREBIO is still pending. In addition the Life+ project proposal **EnvEurope** was accepted and started in January 2010. The success rate of the four European proposals with ALTER/LTER involvement will in any case be 50% or more. Efficiently building the respective project consortia would not have been possible without the preparatory work of ALTER-Net until 2009 and the operative support of the ALTER-Net consortium. In return, Activity 5/ LTER has managed to involve the ALTER/LTER community on the network level in key emerging projects:

15 ALTER-Net institutions (current consortium) are involved in at least one of the four projects. Ten institutions involved in more than one project. Given the specific focus of the respective calls and the varying role of ALTER-Net institutions in national LTERs and as site infrastructure holders, which by definition can exclude institutions, the impact of

ALTER/LTER on the consortium building has been substantial. Several models of involvement on the consortium/network level were tested and will be discussed at the forthcoming LTER-Europe Conference in Lodz.

A key dilemma and testing of options for future work

Given the specific focus of the calls (mentioned above) and the varying role of ALTER-Net institutions in national LTERs and as site infrastructure holders, which by definition can exclude institutions, the impact of ALTER/LTER on the consortium building has been substantial.

Still, the co-ordination was faced with an intrinsic conflict emerging from the fact that most European calls request consortia of institutions to develop and submit project proposals answering to specific calls. No calls have so far exclusively addressed a Network of Excellence or a network of sites or national networks, even though the EC has put major investments in building such networks.

Consequently, calls create what they ought to create on the free market of research in order to raise quality, namely competing institutions and competing consortia.

There is little probability that a specific call would coincidentally fit 100% of institutions comprised by one NoE as their scientific foci, available scientists and infrastructure vary. In addition, especially the successful big consortia (such as ALTER-Net) have more members than are useful for project consortia, especially if additional partners need to be taken on board.

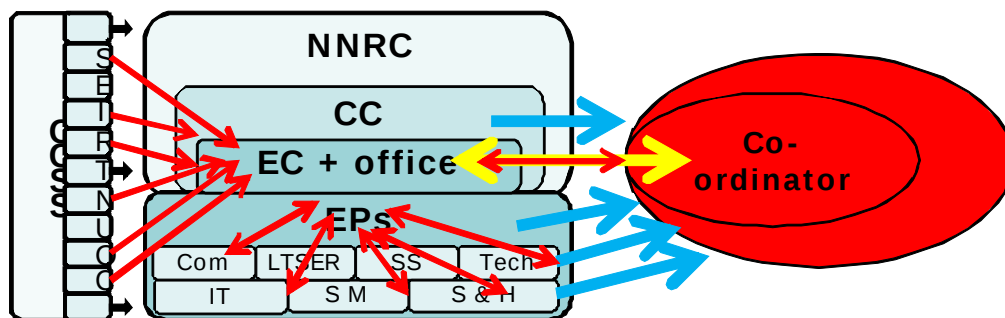
We were heavily confronted with all negative effects of these frame conditions:

- How to inform properly?
- How to initiate competitive core consortia, which requires rather small groups especially in the beginning?
- How to select institutions/sites/country networks quick and transparently and considering strategic aspects (old/new EC countries, environmental zones, habitats)?
- How to award engagement without engaging a small group of partners too often?
- How to use existing governance structures to divide tasks and as a criterion for selections of institutions?

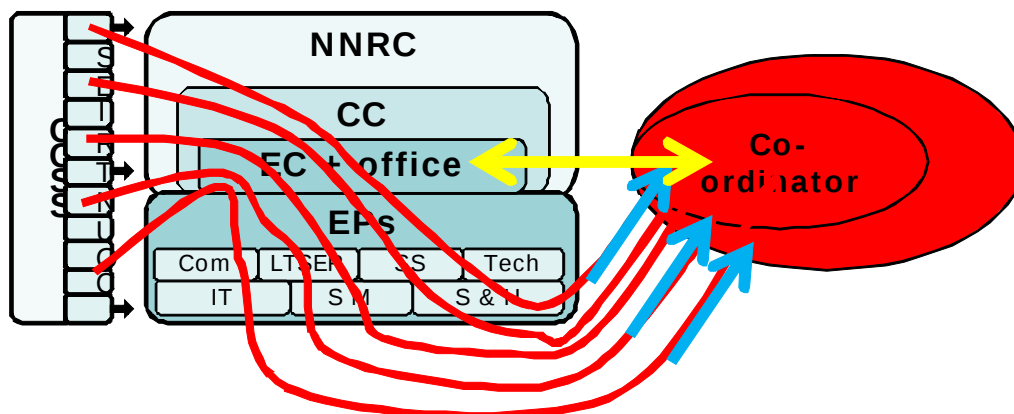
LTER has taken the advantage of several parallel calls to develop and test models of involvement on the consortium/network level. They have been presented at the ALTER-Net Management Board meeting in Vacratot/Hungary and will be discussed at the forthcoming LTER-Europe Conference in Lodz:

- Model A: Central initiation of consortium through co-ordination and involvement of the network through governance structures (e.g. Expert Panels or Action leads and their institutions/sites/countries) especially, where strategic network

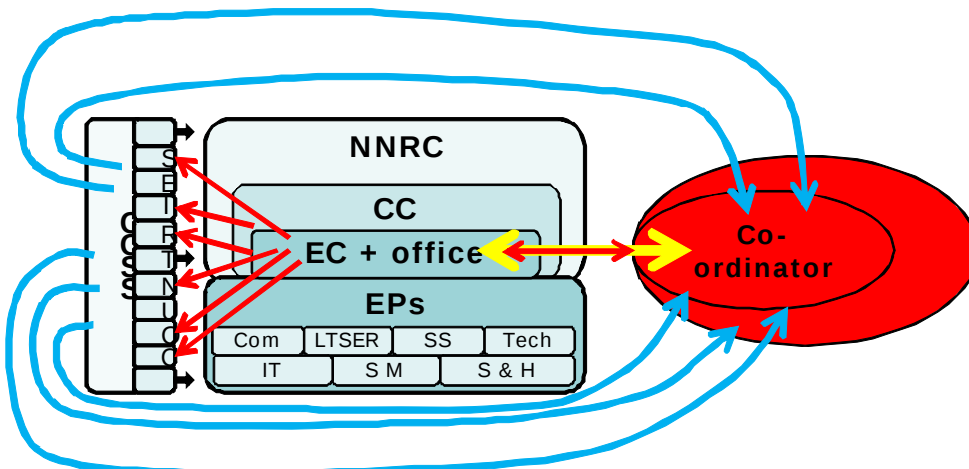
interest are at stake (applied in the case of EXPEER)



- Model B: Co-initiation of project consortium, establishment of a core group and co-ordinator, which then continue the consortium and project development without network-restrictions or obligations according to call requirements, but using information channels of the network (tested in FOREBIO, earlier applied in EnvEuorpe)



- Model C: Existing group contacts the network. Further project development through i) interaction of network co-ordination with the core group and ii) information of the network through the co-ordination on the country- or institution level (tested in EcoBioERA)



The offer is to present the models, advantages and disadvantages in more detail at the forthcoming ALTER Council meeting in Uppsala, including the results from the LTER-Europe Conference the week before.

Information management as bottleneck to proposal writing

Proper information management and the ad hoc availability of actual metadata on sites are the key for promoting and involving LTER/ALTER on the network level in projects. If features and characteristics of sites needed to be collected “on request”, the long response time would seriously hamper efficient involvement or even make such involvement impossible. Experiences also show that metadata collection is a continuous process, both due to necessary updates and new requirements. The scientific documentation of LTER facilities (research topics, parameter groups, etc.) has reached a high level, but technical and infrastructural documentation need to be improved in order to comply with requirements of the ongoing re-organisation of the European Research Area and its distributed research infrastructures.

10.2 LTER-Europe secretariat

Activities undertaken by LTER Europe Secretariat in period from October 2009 to March 2010 are continuity of actions initiated in April 2009 and forthcoming months.

In 2009 the critical issues for maintaining LTER-Europe activity were: i) establishing of the secretariat e-mail platform and file depository, development of the website, establishing of workflows, and securing communication, ii) broader and more effective advertisement of LTER-Europe, iii) proof of usefulness of the LTER data for problem solving, planning of experiments, supporting policy, that was demonstrated by ALTER-Net initiatives, iv) completion of LTER-Europe report defining its role in European research area, challenges for the network, critical interfaces (including ALTER-Net2), and opportunities, v) defining framework for initiatives and a base line, which were derived from and linked to ALTER-Net action plan, vi) facilitation of process of completing contact data base with information about the network itself, associated networks, key stakeholders, vii) preservation of critical contacts with task groups and leads that emerged from ALTER- community. None of those activities would be possible without assistance of ALTER-Net consortium, management group and the Council.

Simultaneously LTER-Europe with support of the LTER secretariat helped in development, implementation and dissemination of ALTER-Net products and achievements, like: projects (LifeWatch, EnvEurope) and surveys - ecosystem service study (ISSE survey with follow up of two COST Action Proposals), multi-site experiment; ideas – clarified LTER concept enriched with InterDisciplinary Research component, approach to harmonization of data acquisition, common research agenda, Summer School; tools – DAPSET, mind maps and fuzzy cognitive models, questionnaires and meta-analyses. Finally LTER actively advertise ALTER-Net publications, meetings and events.

Strengths built thanks to ALTER-Net support and inherent LTER-Europe multiplicative potential are helpful in increasing impact of both ALTER-Net and LTER-Europe. The areas

where such impact are visible, are: i) development of science-policy interface for more effective biodiversity monitoring and policies, through maintaining communication with stakeholders linked to biosphere reserves, national parks, and other core/reference LTER-Europe sites, ii) streamlining of research and knowledge synthesis among LTER community including key themes defined by ALTER-Net's CRS: climatic change adaptation, land use and biodiversity ecosystem services (collaborative cross site and cross network analysis of data and publications, to be finally framed during LTER meeting), iii) integration of ALTER-Net and LTER communities through facilitation of communication on project proposals of common interest, e.g. HECSA Cost Action "Harmonization of ecosystem service assessment", EXPEER - INFRA project on development instrumented sites for multi-site observations and experiments, iv) communication and knowledge transfer – the secretariat continuously updates the websites with news and event information of common interest to LTER and ALTER-Net, distributes news using LTER contact data base and communication channels, v) dissemination of information about InterDisciplinary Research possibilities with special emphasis on ecosystem services and urban areas among LTER community and potential external groups of interests.

Current reporting period included a number of activities related to information flow, networking and building the stronger link between ALTER-Net and LTER Europe communities.

For maintenance of information flow between LTER-Europe and ALTER-Net and information exchange on common activities, the secretariat focused on:

- Cross-checking and simultaneous **updating of contacts** data base, contact information associated with LTER-Europe website membership and access and address books
- **Checking and updating** the LTER-Europe **website** in cooperation with Expert Panel on Communication and members of ALTER-Net Task Group on Communication and Knowledge Transfer
- Final check of **website information on national networks** and their websites (planned for March)
- Collection of **documents** for the website (**downloads**) and **sharepoint**
- Facilitation of **information flow** among LTER-Europe, European Commission and national LTER networks
- Update of **presentation materials** (poster, brochure)
- Continuation of work on collation of info-base on key scientific events requiring LTER-Europe representation in cooperation with LTER-Europe EC
- Continuation of work on collation of info-base on possibilities to fund different LTER-Europe activities in cooperation with LTER-Europe EC

In order to support of LTER-Europe and ALTER-Net managing bodies, and relevant expert groups in their initiatives, the secretariat launched **networking** activities which comprise:

- organization of LTER-Europe teleconference for Expert Panel leads to discuss further research plans and their links and contributions to IDR and Common Research Strategy of ALTER-Net
- preparation of LTER-Europe National Networks conference to be held in Lodz, 21-22 April 2010
- obtaining information on past and current LTER-Europe research products on Science Strategy – first phase – guidance for paper collation to be completed before LTER-Europe conference
- planning for ILTER scientific event and regional presentation.

Finally to support link between LTER-Europe and ALTER-Net secretariat:

- continues editorial work for **LTER-Europe best examples book**:
 - formatting of chapters
 - searching for reviewers
 - correspondence with reviewers and authors
 - searching for extra papers that help to present in ALTER-Net /LTER-Europe achievements
- Re-established contact with ALTER-Net1 working group on **DAPSET online tool for analysing drivers and pressures**, in order to update the tool's database and progress towards its testing at the City of Lodz, the Long Term Social Ecological Research site
- Continues **collecting the contributions to the guideline** for methods relevant to analyzing of drivers and pressures.



10.3 Information centre and data management

Technical framework

Meta data collection – with LTER InfoBase Tool

Meta data presentation – with eMORIS <https://secure.umweltbundesamt.at/eMORIS/>

Targets

- Establishing a ALTER-Net information centre on the infrastructure of ALTER-Net and LTER-Europe as technical interface with strategic partners and research projects
- Regular updates of the information on infrastructure (sites, platforms) of the ALTER-Net2 consortium and LTER-Europe

- Securing the maintenance and adaptation of appropriate information structures and tools to collect this information, process it and make it available on the WEB (building on ALTER-Net products such as LTER Infobase, SERONTO and eMORIS).

Planned 1st year outputs/outcomes

- The ALTER-Net information centre with its database of LTER facilities will be the central and most current reference for ecosystem research infrastructure in Europe.
- The tools developed by ALTER-Net¹ will be adapted, if necessary, and kept operational so that information on the network of sites and platforms can be accessed on-line.
- The LTER-Europe database will be used as basis for updates in the WEB presentation
- The LTER-Europe database will also be the source for central updates of other databases to avoid double and triple efforts by the units operating the facilities (many ALTER-Net partners)

Activities

1. Adaptation of LTER Infobase Entry tool and annual calls for updates on existing and reporting of new facilities
 - Feedbacks on LTER InfoBase (all parts) collected and prioritized
 - Update of the eMORIS query/selection structure and interface according to priority list under consideration of technical feasibilities and costs
 - Preparation of LTER InfoBase Entry database for the next update round (2010 Annual National Reports, April 2010) – extraction of meta information from the central database and transfer to the input tool.
 - Preparation of an EXCEL version for the metadata entry as alternative to the LTER InfoBase Entry Tool (February 2010) – will be on the website soon. February 2010: using the LTER Germany metadata call as test case.
 - Planned: Call for 2010 metadata update in the context of the 2010 Annual National Reports
2. Collection of Feed-backs from ALTER partners and national networks representatives:
 - in kind: secretariat, site co-ordinators, platform managers and national co-ordinators
3. Processing of feed-backs, harmonisation of new metadata structures, imports to eMORIS
 - Review of the meta data fields (including descriptive information about the biogeophysical characteristics of the sites, e.g. temperature, precipitation, elevation) based on global available data sets (e.g. BioClim) June 2009
 - Development of infrastructure characteristics for HIOS (Highly Equipped Observational Sites) and collection of metadata of European top sites.

- Ongoing harmonisation of data flags and reference lists in the database (January 2010)
 - Complete cross-check of reported locations the LTER sites and LTSE Platforms against country borders and land surface of Europe.
 - Central quality checks
 - Harmonization of LTER Infobase with launched collation of key LTER publications (consistent metadata for sites and publications, e.g. re-search topic, site-IDs, contact data)
 - Planned: Consistency check of new metadata and import from 2010 Annual National Report
4. Annual central updates
- Updates of all European national maps and tables of facilities on the WEB site AND Update of the ILTER database with actual information of the European LTER infrastructure
 - Annual update of LTER Europe site information in the ILTER meta database July 2009 including adaptations of the LTER InfoBase Fields to the needs of the ILTER meta database.
 - Ongoing process in delivering map material (see coordinate checks)
 - Planned: 2010 update of the ILTER database July 2010
5. Processing of special requests (interested networks, projects)
- PhD metadata on observation on saprophytic insects May 2009
 - EnvEurope project proposal June 2009
 - Cross-check of LTER InfoBase metadata against infrastructure requirements of FP7 EXPEER (November 2009)
 - Production of a list of forested sites with biodiversity data of potential interest for FP7 FOREBIO
 - Provide metadata about the European LTER network for the FP7 project EBONE (European biodiversity observation network) – spatial analysis on the distance between LTER Europe sites and EBONE organisations (December 2009).
 - ALTER-Net2 LifeWatch Project (IEB-HAS) – support and metadata extraction for National Platforms containing climate related observations (January 2010)

Remark: the POSSIBLE ADDITION on exchange with data related processes/strategies (SEIS, INSPIRE) and the information management in LifeWatch to scrutinize possibilities to use ALTER-Net and LTER-Europe as a test case for new approaches was not covered (third of the three options, of which the second one was ordered)

10.4 Meetings, representation and development of LTER-Europe

1. 7th LTER-Europe Conference in Lodz, 21-22 April
The 2010 LTER Conference will be held in Lodz.

- The interface with ALTER-Net will be given special attention as well as the agreement on standard procedures for project involvements of institutional consortia (ALTER-Net) or consortia composed of national networks and/or sites (LTER).
 - Another key issue consists in sharpening the scientific profile of the network, also a matter of interest for ALTER-Net (see CRS meeting, 5th November in Vienna) and the global LTER.
2. LTER Annual Conference, 28th August – 3rd September
See <http://www.ilternet.edu/events/2010-ilter-CC>
 3. ALTER-Net Conference, 3rd – 4th November, Vienna
Details will be fixed from 9th April onwards (first teleconference with the task force). Of LTER relevance is the proposed national LTER meeting back to back (2nd November) with the ALTER-Net Conference to attract and link the national community (one of the missions of the research attaché at the French Embassy hosting the meeting). At this national meeting the “LTER-Austria White Paper” shall be presented to an international auditorium, which is of direct relevance to the CRS to be tackled on 5th November.

10.5 Other activities

1 Visibility of the scientific profile through key publications as contribution to the Science Strategy (or Common Research Strategy)

LTER is having difficulty to identify the CURRENT scientific profile, research teams and distribution of research across sites, countries etc. At the same time we're facing a high need to present scientific productivity. Research outcomes are difficult to be assigned to sites and vice versa as many authors do not or not explicitly mention the LTER-context in their publications. Therefore the idea was born to collect the key scientific publications related to LTER, LTER sites, LTER national networks etc and to assign these publications to

- research topic(s)
- site(s)
- year
- (country, if not implicitly clear through site = information in Infobase)

As the above requirements and challenges are to a wide extent also valid for ALTER-Net, it was decided at the Management Board meeting in Vacratot to use the LTER activity as an example for a wider ALTER-Net initiative with including the following:

➤ Analysis and visibility to be achieved (Targets)

Possible analyses and questions that can be answered by use of the collected information

- What are the CURRENT key topics investigated at LTER sites
- How is work on topics distributed across countries, environmental zones etc.
- What is the fit between principal information/metadata about sites and REAL activities reflected by publications
- How have research emphases changed over time/decades

➤ **Targets & visualisation**

We shall be able to quickly answer the following questions:

- In which field of research can LTER contribute in the best way (maximum of EXISTING teams, sites, sites with best long-term data...)
- Where shall we try to set up multi-site projects, because there is evidence of a fair geographical coverage of sites, where work is done by good teams on a specific research topic (high interest of researchers to invest additional time/energy for a complex project)

Graphs to be produced on this basis:

- Totals of publications across research topics in time
- Distributions of publications concerning research topics across countries
- Distribution: total of publications per site

➤ **Where to use the products/outcomes of the exercise**

- Overall statistics in LTER-E website
- Country specific statistics

➤ **Technical Solution**

Collected attributes to be entered (pragmatically focussed on targets of analyses)

- Full citation
- Year
- assigned research topic (selection from topics as in Infobase/ choice from pull down)
- assigned site or sites (selection from registered LTER sites/ choice from pull down)
- (Keywords, as used in publication)

➤ **Collection of information**

- preferred option: online-entry at the LTER website
- alternatively: EXCEL sheet

2. LTER-Portugal site network review

LTER-Europe was invited to the review of proposed Portuguese LTER sites, based on a call of the Portuguese Ministry of Science. A review team consisting of experts from Spain, Austria and the United States of America examined more than thirty applications and proposed four top sites for further consideration. The outcome of the process will be presented by the Portuguese national representative at the LTER-Europe conference in Lodz, 21-22 April 2010.

11 LifeWatch

Contribution to LifeWatch Data Providers Platform

LifeWatch Data Providers Platform (LW DPP) was founded in Zandvoort, the Netherlands, 21-23 April 2009. LW DPP forms an interface between LifeWatch ERIC (European Research Infrastructure Consortium) and the community of potential data providers, including national and international agencies, networks, with ALTER-Net and LTER-Europe among them, regional and global data aggregators, and national data provider nodes. (Another interface between the LifeWatch ERIC and the community of users is also organised). LW DPP promotes the biodiversity data flow to the LW system and enhances bottom-up approach in building data sharing community. LW DPP is based on trust among partners and interest to “share-ownership”. The platform also contributes to setting standards, designing IT tools, providing QA/QC, and sharing best practice.

The second meeting of LW DPP was held in Zandvoort, the Netherlands, 9-10 Nov 2009. On behalf of ALTER-Net and LTER-Europe, Mark Frenzel (UFZ) and Miklós Kertész (IEB HAS) participated at the meeting. Beside organizational and procedural issues, they chose that the open access of data would be the long-term aim of data provision for LW.

They decided that in the LW DPP Steering Committee (7-9 persons) one member would be selected from ALTER-Net. So far, this person has not been named. Until the formal selection, Mark Frenzel, Miklós Kertész and Johannes Peterseil (UBA) will be on the Steering Committee mailing list.

They also decided that they would apply for the next appropriate EU FW 7 Infrastructure call with a consortium which is based on the Network of Excellence MarBEF (marine biodiversity) and ALTER-Net and LTER-Europe will also be involved in the consortium.

Demonstration project “Sharing data collected at LTER-Europe”

Duration: 1 Dec 2009 – 30 June 2010

Support: 5000 EUR

Outline of the project: The general aim of the project is to strengthen the link between LTER-Europe and LifeWatch in a proactive way, by means of real data sharing methodology to help LifeWatch develop informatics tools. ALTER-Net will demonstrate how data from LTER sites can be used to respond to scientific and policy questions.

The aim is to analyse the potential to share data from different sources, involving minimum 5-7 data providers. During the project the following questions will be clarified:

- Which bodies have the Intellectual Property Right (IPR) for sharing the data?
- What are the legal instruments to make the data accessible and to which communities?
- What is the advantage of data sharing for the collectors/managers and IPR holders of the data?

Phases of the pilot project:

1. Using LTER-Europe InfoBase and choosing an appropriate data set which is collected in numerous LTER sites (e.g. plant biodiversity data, primary production estimate).
2. Proposing an appropriate research topic/question and methodology that can be addressed/applied having the multi-site data set available together with NERI and ILESAS
3. Contact the data collectors/managers
4. Clarifying the IPR holders of the data
5. Negotiating on the legal instruments for making data accessible and available for use
6. Defining and sharing the final research question and methodology together with NERI and ILESAS.
7. Demonstrating the usefulness of the pilot project as a learning process
8. Reporting the process and results described above to ALTER-Net Council
9. Providing a manuscript ready for peer-review with the process and results described above

The aim is the data collection with not only the use of collected data for obtaining any cross-site result, but making them accessible for the LTER community, and, if possible, beyond.

Progress: The Hungarian team working on the project consists of Miklós Kertész of IEB HAS and Réka Aszalós of Eötvös University of Budapest. Both have worked together in a Work package of ALTER-Net1. We contacted Robert Kanka of ILESAS and Johannes Peterseil and Herbert Schentz of UBA. Apart from e-correspondence, Robert Kanka has consulted with the Hungarian team in Budapest, and Réka Aszalós has consulted with the UBA team in Vienna.

So far, they have completed phases 1 and 2 of the above-mentioned list. The phases 3, 4, and 6 are in progress. The project is not anticipated to be finished by the planned 30 June 2010 term.

The LTER-Europe InfoBase was used for getting information on parameters and methods used in LTER-Europe for measuring aboveground production. It was decided upon to collect data on forest production, for the following reasons:

- Data which stand for production are measured at most LTER-Europe sites.
- Data on species compositions is also very widespread, but much difficult to handle, and an Alter-net project on the species incidence/abundance data is in progress.
- Most of the production data are measured in forest ecosystems, while measurements from other ecosystems are rather rare in LTER-Europe and they are very different from each other.

The aims of the project is so intimately connected with the ALTER-Net activity on Data Sharing Policy that the collaboration between Robert Kanka and the Hungarian team started already in the planning phase of the project. For reaching the potential data holders

they have decided to use an appropriately updated version of Robert Kanka's questionnaire on which they work together.

For gathering contact information (names and e-mail addresses) they use the LTER-Europe contact list besides LTER-Europe InfoBase. This latter source is much less specific than the previous one, but we need it because of the limitations of the applicability of InfoBase queries (see below).

Preliminary results:

InfoBase interface

A crucial part of the project is using InfoBase. The aim of the use is not only to collect metadata but also providing users' feedback for its maintenance and further development.

The result of queries:

- potential forest sites with production data, and meteorological data
- potential forest sites with production data, and meteorological data from nearby station
- personal contact data from InfoBase
- personal contact data only from the LTER-Europe contact list

Questionnaire query

Following the decision to send out a joint questionnaire in the next phase, together with Robert Kanka's work on Data Sharing Policyin, different versions of cover letters and added questions on specifically about forest production metadata have been outlined.

12 InterDisciplinary Research

During the past year, Interdisciplinary Research within ALTER-Net was managed by SYKE together with INBO and NINA. Eeva Furman, with Odd Terje Sandlund (NINA) and Francis Turkelboom took part in the management board meetings and had a bilateral tele-meeting on the topic while all the three met during a task force meeting of the project Ecosystem Services and Governance, funded by ALTER-Net.

During the first year, three activities of interdisciplinary research within ALTER-Net have taken place.

1) Ecosystem services and Governance.

The goal of the project is to identify and prioritize interdisciplinary research needs linked with ecosystem services. The main aim is to support the formation of active research teams by bringing together researchers with different disciplines within and between ALTER-Net partner institutes, and stakeholders from policy making, management, livelihoods, civil society and science donors. The research teams are supported in their efforts to develop research plans and funding applications.

Progress on deliverables and milestones

A task force was formed from suggestions by partners:

- Philip Roche (Cemagref)
- Leonard Sandin (SLU)
- Odd Terje Sandlund (NINA)
- Francis Turkelboom (INBO)
- Janne Rinne (SYKE)
- Taru Peltola (SYKE), lead

The project had its task force meeting in 21 January 2010? in SYKE, Helsinki. The project plan was revised and developed into concrete actions. It was decided that national works will not be organized. Instead, the discussion will be opened in partner institutions and on other national forums. The concept of the international workshop will be ready by the end of May 2010. Each institute is expected to provide their contact person and more than 10 have done so. Their role to deliver description of ecosystem service related work in their own institutes. The contact persons will also help to identify good participants and stakeholders with strong interest and required skills.

Key meetings, workshops and other activities being planned

- The project will organize a central-Europe based workshop in December 2010: alternatives for the location are for the time being: Brussels, Paris, Leipzig. (approx. 50 participants including ALTER-Net researchers and stakeholders, external facilitator, introductory talk)
- Follow-up meetings after the workshop on key ideas.

Major achievements for news items on the website see www.environment.fi/syke/ess

Ecosystem services in Europe: spatial analysis for policy assessment

This is a project lead by the PEER institutes (www.peer.org). ALTER-Net has been invited to contribute to the study and the management board was keen to step on board. The project develops methodology and does case studies of mapping ecosystem services spatially on the European scale. In addition, the study analyses the tradeoffs between various ecosystem services by analysing synergies and conflicts between policies driving the use of the ecosystem services. The project has initiated in March 2010 and it will last to the end of the year. One of the aims of the project is to develop a successful proposal for the EC research framework programme. Apart from internal project meetings there will be a stakeholder workshop in Brussels in May 2010 which discusses policy tradeoffs and a workshop at the end of the project to discuss the outcomes within the project and with stakeholders. The project aims to support the EC in negotiations of the CBD in Nagoya, October 2010.

13 Multi-Site Experiment II

The first Multi-Site Experiment (MSE) was set up within ALTER-Net to explore the feasibility of using the LTER network of sites for such an experiment, bringing together 16 partners and 40 sites. The MSE was a pan-European experiment on the resilience of ecosystems to trampling pressure.

A second MSE has been initiated with both institutes within ALTER-Net and external partners; INBO, SYKE, CEH, Cemegref, IEB-HAS (Hungarian Academy of Science), ILE-SAS (Slovakian), University of Bucarest, Macaulay, UFZ, CNR-ISAFOM, Raumberg-Gumpenstein, UBA, SLU, NINA, WUR, SAVBA SK.

For the MSE II, several topics (i.e. increased rainfall or temperature, drought, P or N addition, browsing, fire, decomposition/litter) have been discussed. In general, the feasibility of the respective topics in term of cost and labour intensity was discussed. The overall view was that almost all experiments need either a high financial input or are risky or impossible to conduct (e.g. transplant experiment or fire wouldn't be allowed in LTER nature conservation sites. Existing literature was seriously searched for all suggested experiments. It was found that a decomposition experiment was strongly recommended not only by the group present but also by partners who replied to an e-mail sent to them during the workshop and explaining the issue. Following is the first outline of the idea of a decomposition experiment.

Decomposition experiment:

A Pan-European gradient as a proxy for expected climate change

Aims of the study:

- An increase in decomposition rate may turn carbon sinks into carbon sources.
- The soil organic matter may be affected by this change in decomposition rate.
- Climate change is supposed to increase plant available nutrients.
- What will happen with decomposition rate under a possible future scenario with increased temperature and increased fertilization?

Why is a harmonized Pan-European investigation of decomposition important?

- The biogeographic gradient covers a variety of biomes and allows to draw general conclusions on ecosystem functioning
- Decomposition is an important ecosystem service and is a surrogate measure for several ecosystem functions
- It is related to carbon sequestration
- It is influenced by global change

Which hypotheses can be tested with this experiment?

- Decomposition rate shows a humped-shaped distribution along the gradient: in boreal as well as Mediterranean ecosystem decomposition will be lower than in Middle Europe due to climatic constraints
- Increase in nutrient availability in general will increase decomposition rate along the biogeographic gradient in a non-linear way.
- There is a positive relationship between C/N ratio of substrate and decomposition rate
- The contrast between fast decomposed and slow decomposed species will be lower in constrained environments

14 Acknowledgements

ALTER-Net thanks The Research Council of Norway and the Norwegian Directorate for Nature Management who financially supported the continuation of our Network of Excellence. ALTER-Net is also grateful to NINA for their extra financial contribution and for their daily support from the administration and financial department to the secretariat.

Appendices

Appendix 1: Memorandum of Understanding

MEMORANDUM OF UNDERSTANDING GOVERNING THE CONTINUATION OF ALTER-Net FROM APRIL 2009

ALTER-Net: A CONSORTIUM OF EXCELLENCE IN BIODIVERSITY, ECOSYSTEM AND AWARENESS RESEARCH

Overview

1. This Memorandum of Understanding (MoU) provides an operational framework for use in maintaining and further developing a consortium with a leading role in European research on biodiversity¹ and ecosystems. It is a continuation of the ALTER-Net partnership developed through a “Network of Excellence” as part of the European Commission’s VIth Framework Programme.
2. The ALTER-Net consortium has a unique capacity to undertake long-term, European-scale, inter-disciplinary research on biodiversity and ecosystems through the application of its combined expertise in ecology, social sciences, economics, information management and knowledge transfer. The consortium also has access to pan-European research infrastructures, including Long-term Ecosystem Research (LTER) sites and socio-ecological research platforms (LTSER).

Mission

3. The mission of the Consortium is to improve the sustainable use, management and conservation of biodiversity and ecosystems through the integration of European interdisciplinary research capacity and knowledge.

Goals

4. ALTER-Net’s overarching goal is to work in partnership with its main European stakeholders in scientific, policy and public sectors to:
 - a) provide significant contributions to the definition of European and global biodiversity research objectives;
 - b) be recognized as a consortium of excellence in biodiversity and ecosystem research;
 - c) have a leading role in interdisciplinary research on biodiversity and ecosystem issues;

¹ Throughout this document the term “biodiversity” should be taken as meaning all levels of biological and ecological diversity, including genes, species, taxa, populations, communities, ecosystems and biomes.

- d) be recognized as a major European scientific body by communicating with the public and policymakers on biodiversity research issues; and
- e) offer the highest level of cost effective applied research to its users in policy and resource management.

Instruments

5. The Consortium will achieve its goals by means of:

- a) regularly updated common research and communication strategies;
- b) institutional agreements on common standards to enable sharing of data, information and knowledge;
- c) schemes for the sharing of personnel and laboratory facilities;
- d) support for the establishment of research infrastructures to address pan-European biodiversity issues;
- e) support for a formal European network of LTER and LTSE field sites (which are at least partly dedicated to biodiversity research and monitoring) through co-ordination, synthesis and harmonisation activities. This support is limited to funds specifically allocated to the support of LTER by individual partners;
- f) joint training and development schemes;
- g) the creation of opportunities for social scientists, economists and ecologists to work together;
- h) joint proposals to EU Framework programmes and other funding sources;
- i) joint mechanisms to communicate with scientific and non-scientific communities as well as with specific stakeholders;
- j) mechanisms for identifying priority and emerging research issues in collaboration with major European institutions such as the European Commission and the European Environment Agency.

Participation

6. Participation in the Consortium is open to founding parties of the ALTER-Net Network of Excellence funded through the European Commission's VIth Framework Programme. Other institutions may join ALTER-Net if a proposal is made to the Council by a Consortium Partner and accepted by a 2/3 majority vote of the Council. A new member must bring significant new expertise and/or capacity in strategic biodiversity research.

7. A Partner that does not meet its agreed commitments (see Article 14) to the Consortium may be dismissed by a 2/3 majority of Council members present and voting. A Partner may withdraw from ALTER-Net after written notice to the Chair of the Council.

8. All Partners will be encouraged to engage in collaborative projects, but ALTER-Net will not enter contractual arrangements directly. Whenever appropriate, a leader will be identified by the Council and Partners will be invited to participate in the collaboration on whatever financial and other terms they find mutually acceptable. All other Partners will be kept informed of progress of collaborative projects, subject only to any over-riding considerations of intellectual property rights or commercial considerations.

Governance

9. The decision-making body will be the directors of the Partner institutions or their nominated representatives gathered in a Council meeting at least once a year. Each Partner will have only one vote in the Council. A simple majority of all Partners present and voting is required for Council decisions (except for Articles 6, 7 and 19).

10. The responsibilities of the Council are to:

- a) make strategic decision related to the consortium;
- b) approve a common research strategy;
- c) approve a common communication strategy;
- d) approve a 'long term' strategic plan on a five yearly basis;
- e) approve an annual work plan and deliverables;
- f) approve the annual budget, including the financial and "in-kind" contributions from partners as agreed by Council;
- g) appoint members to the Management Board and its Chair;
- h) approve reports, including an annual report of the activities undertaken and the corresponding budget expenditure;
- i) formulate proposals for research priorities and programmes;
- j) approve new members; and
- k) promote ALTER-Net within their institution and with other stakeholders.

11. The Council will by a majority vote elect its Chair and a Vice-Chair from among its members, who will serve for a two-year period. The Vice-Chair will replace the Chair in all functions in the absence of, or during a period of incapacity, of the Chair.

12. The Management Board will be appointed by the Council and will:

- a) implement the decisions of the Council;
- b) prepare necessary documents for the Council meetings;
- c) identify and follow-up on joint project initiatives;
- d) oversee important continuous network functions as defined in the annual work plan (see Article 10e and 13);
- e) develop the research and communication strategies; and
- f) establish a Secretariat as required by the Council to manage the processes described in this MoU and co-ordinate ALTER-Net's annual work plan.

13. The annual work plan will be based on a set of Annexes (listed in Appendix 1 to this MoU), agreed by the Council, which describe the main activities of the Consortium. These Annexes are working documents and may be amended, added or removed through a decision of the Council. They will not affect the minimum level of Partner commitment defined in Article 14 or any of the conditions related to any other Article in this MoU.

Funding

14. Each Partner commits to:

- a) funding its own participation in the ALTER-Net Council and Management Board meetings;
- b) responding appropriately to communications from Council or its agents, including the Management Board and the Secretariat; and
- c) defining its contributions to the running of the ALTER-Net Secretariat and/or its annual work plan. These contributions may be in cash or in-kind and should be specified quantitatively (in terms of cash value or staff time) in a covering letter attached to this MoU. Contributions should be clearly related to specific functions, tasks or deliverables listed in this MoU or its associated Annexes.

15. Activities supported or funded by ALTER-Net will be determined and reviewed annually by the Council according to priorities set by the Council and the funding available from partners or external sources.

16. ALTER-Net will operate on a five-year funding cycle with a review after 3 years. Partners should in principle commit to provide funding or agreed support for 5 years, subject to review.

17. This MoU will be reviewed in 2014.

Language

18. ALTER-Net business will be conducted in English and any papers produced will also be in English. Papers may however be exchanged in any European language as long as there is an English version for formal ALTER-Net records.

Amendments

19. This MoU may be amended by the Council by a 2/3 majority of those members of the Council present and voting. The text of any proposed amendment shall be received by members of the Council at least two weeks in advance of the meeting at which it is to be considered.

The undersigned partner organisation agrees to abide by the principles and content of this MoU and will participate as a formal partner in the ALTER-Net Consortium:

Partner Organisation:

Signature:

Name and Position:

Date:

Appendix I to the ALTER-Net MoU

List of annexes to the MoU

These annexes are not a formal part of this MoU but describe areas of work that may be covered by ALTER-Net in its annual work plans subject to the availability of funding. Each Annex describes the activities in the subject area and the benefits that will be derived by partners.

This initial list of Annexes was reviewed by the ALTER-Net Council in April 2008 and is subject to future revision. The Annexes cover activities related to the following areas:

- (i) Common Research Strategy
- (ii) Communication and Knowledge Transfer
- (iii) Common Training Programme
- (iv) Data Sharing Policy
- (v) LTER-Europe
- (vi) LifeWatch
- (vii) Interdisciplinary Research

ALTER-Net Annex 1 Common Research Strategy Revised – 30th September 2008

1. Summary:

ALTER-Net will agree and regularly update a Common Research Strategy, providing a strategic overview of its research priorities.

2. Technical description:

ALTER-Net's current Common Research Strategy is found at www.alter-net.info.

The Common Research Strategy will be dynamic in nature, regularly updated to reflect changing priorities, either in response to the partners' assessment of emerging research needs or in response to changes in policies or international initiatives, including major funding initiatives. The strategy is based on strong areas of disciplinary science in the areas of natural, social, and human sciences and the integration of these to address interdisciplinary research issues.

Revisions of the Strategy will be based on:

- research recommendations derived from ALTER-Net and from projects where ALTER-Net partners are active;
- institutional research strategies developed by the partners, alone or in conjunction with other partners;
- national policies, including research strategies produced by national biodiversity platforms;
- European policies and Directives relevant to biodiversity, for instance the Water Framework Directive and the Communication from the Commission: *"Halting the loss of Biodiversity by 2010 - and beyond. Sustaining ecosystem services for human well-being"*;
- European Research Area initiatives such as Biodiversa;
- research recommendations produced by the European Platform for Biodiversity Research Strategy (EPBRS);

- international strategies, particularly DIVERSITAS strategies;
- conventions, particularly the Convention on Biological Diversity (CBD) and its thematic programmes and cross-cutting issues; and
- international initiatives relevant to biodiversity, including the Millennium Ecosystem Assessment and the European Ecosystem Assessment (EURECA), and the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES).

3. Benefits to partners and their evaluation:

The partners will benefit by:

- more effective coordination of research;
- awareness of trends in the policy framework for research, particularly new initiatives that may affect research needs;
- more effective response to funding opportunities;
- increased ability to influence research policy.

Criteria for success:

- an increase in research clearly related to the Common Research Strategy;
- convergence of partner research programmes¹;
- increasing number of publications co-authored by two or more partners;
- increasing influence of publications and other outputs to the research community (citation rate), policy makers and other stakeholders.
- Increasing influence on research and environmental policy.

4. Obligations of Partners:

All partners will participate in regular assessments and revisions of the Common Research Strategy and will include the Strategy in setting their own research priorities. As far as possible, the partners will participate in initiatives² that will influence the Common Research Strategy, such as national biodiversity platforms.

Partners will use the CRS to develop their own priorities in biodiversity and ecosystem research and to identify areas of collaboration in European projects

5. Agreed Partner Commitments:

None.

6. Future co-ordination and management requirements

The ALTER-Net Secretariat will coordinate the regular revision of the Common Research Strategy, which will be formally approved by the Council.

Co-ordination and participation in the assessment and revision of the Common Research Strategy will require input from all of the partners. The degree to which the Common Research Strategy is implemented will depend on decisions made by Council and any additional management requirements will therefore be determined by them.

¹ E.g. by PEER (Partnership for European Environmental Research).

² E.g. *Research Needs for UK Biodiversity A summary of the important knowledge gaps, identified by the UK Biodiversity Research Advisory Group, 2003-2006*. Edited by Richard Ferris. UK Department for Environment, Food and Rural Affairs. 2007.

ALTER-Net Annex 2
Communication and Knowledge Transfer
Revised 2 October 2008
Part 1- External Communication and Knowledge Transfer

1. Summary

ALTER-Net will manage and further develop an integrated system for knowledge management to disseminate information from biodiversity research to a range of users. This system will provide access to partner information on expertise, facilities, data, publications, information and knowledge on biodiversity. It will also make research knowledge accessible to outside users in scientific, policy and public domains.

2. Description

Dissemination of knowledge from biodiversity research is now recognised as one of the key processes in addressing biodiversity issues. ALTER-Net will maintain and develop new approaches to communication and knowledge transfer including:

- i. the International Press Centre for Biodiversity (IPCB);
- ii. the Greenlink expert database;
- iii. a science-policy journal;
- iv. a stakeholder advisory group developed from the original Network Advisory Committee;
- v. a partnership with Science Visitor Centres.

The IPCB is a web-based system for distributing press and news releases to global media to deliver raised media, public and policy awareness. The most recent version of the IPCB delivers targeted output so that press releases can be sent to media based on language, nationality and topic. The IPCB will be linked to the Greenlink expert database which will enable journalists and policy makers to find experts via a detailed search mechanism.

As an incentives for researchers to identify and explain the policy relevance of their research, a new Science-policy journal will be launched, with the objective of publishing research articles in formats more accessible to policy audiences.

ALTER-Net will maintain an advisory group of stakeholders to help develop new methods for effective science- policy interactions.

ALTER-Net has a common communication strategy that will be reviewed regularly.

ALTER-Net will maintain a partnership with science communicators, particularly those based in science visitor centres (including museums, botanical gardens, zoos, aquaria and visitor centres in protected areas or at LT(S)ER sites). The aim is to team scientific knowledge with expertise in direct public communication. This partnership will: foster better connections between research organisations and visitor centres, and will develop new approaches to public communication on biodiversity; and promote capacity-building to help strengthen biodiversity communication across Europe.

All these activities will be linked to a shared website (www.alter-net.info) serving the ALTER-Net partnership and the wider community involved in European biodiversity research & communication (see Annex 2, Part 2).

3. Benefits to partners:

- i) raised awareness of the role of ALTER-Net partners in biodiversity research and policy;

- ii) increased policy and public engagement in biodiversity and ecosystem science leading to more funding opportunities for research;
- iii) improved dialogue between research and policy communities;
- iv) increased relevance of ALTER-Net research to policy;
- v) increased opportunities and approaches to facilitate two-way communication with the public;
- vi) increased opportunities for international communication bringing results and knowledge from the European level into national levels;
- vii) staff training in public communication and knowledge transfer.

Criteria for success:

- i) improved uptake of research results into policy making and resource management;
- ii) number of references to ALTER-Net research output in EU policy documents and discussion papers;
- iii) increased influence of ALTER-Net research on European level research priorities;
- iv) number of public communication activities that take place as a result of new partnerships (and the associated evaluation of their success);
- v) Number of people engaged in exchange visits and training courses, etc.

Review process:

Activities will be reviewed annually by the ALTER-Net Management Group.

4. Obligations of Partners:

Partners will:

- i) Adopt and work within the agreed ALTER-Net communication strategy;
- ii) encourage staff to produce research outputs in forms suitable for communication with the media and public and policy audiences;
- iii) identify key staff who should be involved in public communication activities and encourage them to develop new tools and approaches for public and policy communication;
- iv) recognise the value of science communication and knowledge transfer specialists by providing suitable career incentives for staff who are successful in these areas;
- v) assist in the integration and long-term use of results of major relevant research projects through the active involvement of key scientists and coordinators of such projects.

5. Agreed Partner Commitments:

- i. The Flemish Government guarantees the further development of the IPCB, including Greenlink, for a period of 10 years after the project period. INBO will continue to host and manage the IPCB.

6. Additional Co-ordination and Management Requirements

The following requirements can be identified at this stage:

- i) Coordinator for the science policy link to cover operating costs;
- ii) Co-ordinator and small budget for public communication activities to manage the activities of the partnership, organise meetings, promote its achievements, recruit new members, etc.

Annex 2

Part 2 - Internal Communications and the ALTER-Net website (www.alter-net.info)

Revised – 29/2/08

1. Summary:

An ALTER-Net website will be managed to serve the ALTER-Net community and a wider community of people involved in European biodiversity research and communication. It will provide information and tools for online communication and collaboration.

2. Technical description:

The ALTER-Net website will be based on a Content Management System (CMS) using open-source software. The site will have public areas and a members-only area, providing tools for communicating and file sharing. It should be possible to include functions such as email news bulletins, e-conference hosting, RSS news feeds, online polls and surveys. Overall management of the site is best done by a single partner, but the CMS should allow for various models, such as a distributed network of content editors. It may allow for content to be available in different languages (provided someone manages the translation).

3. Benefits to partners and their evaluation:

The website will benefit partners by:

- i) providing a single web presence for the network, easing the burden of publicising ALTER-Net, new outputs, etc;
- ii) strengthening and maintaining the ALTER-Net brand and partner contributions;
- iii) providing an online focal point for integrated European biodiversity research: a core around which to build an active network of people;
- iv) enabling online communication and sharing of information, to complement the use of e-mail (all common information for partners – contact details, documents, images, templates, news, events, etc. - can be stored in a single place);
- v) providing tools for hosting e-conferences.

Evaluation and review:

- i) Standard website usage statistics, such as: number of visits, most visited pages, common search terms, number of times registered users log in, etc.
- ii) Use, management and development of the web-site will be assessed annually by the Management Board.

3. Obligations of Partners:

ALTER-Net partners will:

- i) contribute to any consultations about the purpose, structure and functions of the website;
- ii) help maintain certain content on the website, e.g. content details, partner profile descriptions, by encouraging relevant staff to use and contribute to the web-site;
- iii) use the website for sharing information with other ALTER-Net partners;
- iv) promote the website wherever possible, e.g. by including a link on their own web-site and on any relevant printed or electronic material.

4. Agreed Partner Commitments:

CEH will oversee the redevelopment of the current site, and will host and manage the new website.

5. Additional co-ordination and management requirements

No additional resources are required

ALTER-Net Annex 3 Common Training Programme Revised 4th April 2008

1. Summary

A dynamic training programme for researchers, focussing on and interdisciplinary approaches in biodiversity and ecosystem research. One major pillar is an annual Summer School with young scientists and PhD students as main target groups

2. Technical description

The Common Training Programme shall be an important tool to make the network and its partners more capable to address Pan- European and interdisciplinary issues in biodiversity and ecosystem research. The major parts of lecturers will be senior scientists from partners.

The programme is composed of modules or courses which will be arranged according to requirements determined by the network Management Board. Major issues to be covered represent network priority areas:

- Communication and knowledge transfer, including the science- policy interface
- LTER/LTSER site network; standard observation methods, data information access and multi- site experiments
- Interdisciplinary research; including tools for evaluating policy and management options and for assessing public attitudes, socio-economic drivers and interdisciplinary modelling based on DPSIR

The Common Training Programme will be dynamic, and modules will change according to network requirements.

The Summer School is arranged with 30-35 students, mainly from network partners. Ca 20 experts give lectures on selected themes. A considerable part of work is done in working groups, each under supervision of a tutor.

3. Benefits to partners

The Training Programme shall contribute to the development of excellence within and co-operation between partner institutions, by

- making scientists from network partners meet to develop excellence in key research areas
- making students and scientists from the network meet, get to know each other, exchange ideas, thus promoting future exchange, mobility and cooperation
- giving the possibility to go into depth on central issues in biodiversity and ecosystem research
- promoting a true European perspective in biodiversity and ecosystem research
- promoting interdisciplinary approaches
- the Summer School acting as a "flagship" for ALTER-Net beyond 2009

4. Obligations of Partners:

In order to establish a common training programme for beyond 2009, the partners are obliged to:

- include the Training Programme, including the Summer School, as part of development plan for staff and students in their organisation;
- host courses/modules of the Training Programme when appropriate;
- advertise and promote the Training Programme within their organisation;
- provide training funds to enable staff to attend;

- provide lecturers when appropriate.

5. Evaluation

Major success indicators are:

- the number of persons participating in courses/Summer School;
- the student's evaluation of individual courses;
- number of cooperation initiatives resulting from courses;
- partner's use of and contributions to the Training Programme;
- the standing of the Programme in the biodiversity/ecosystem science community.

The training programme will be evaluated as a whole by the end of 2011.

6. Agreed Partner Commitments:

CEH has agreed to provide convener for future Summer Schools.

7. Additional Co-ordination and Management Requirements

The following resources are required to enable the Common Training Programme, including the Summer School, to be implemented beyond 2009:

- staff time for co-ordination and administration;
- staff time to run a programme committee;
- subscription or "buy- in" willingness among partners.

Part of the costs will be covered by general partner contributions, the rest by using a "pay-per- student" principle

ALTER-Net Annex 4 v2 Data Sharing Policy Revised 4th April 2008

1. Summary

The common data sharing policy secures data free of charge and supports easy access to data from the networks of LTER sites and LTSEER areas for the research community.

2. Technical description

Data are located in distributed databases at the ALTER-Net institutes. To create awareness in the research community and facilitate information about available data a set of standardised metadata is established and applied in ALTER-Net using the LTER InfoBase. The set of meta information will be maintained and further developed. Beside the meta information, a common description of the data contents will also be provided.

Specific data from a LTER site or a LTSEER area are made available free of charge to the research community by the institution hosting the specific site. A short description is developed of the interface and relevant software applications etc. to relevant databases in the ALTER-Net institutes. Further, short guidance in English on how to download the data are developed. Links from LTER and LTSEER web-sites connect to the databases in the ALTER-Net institutes. Access to data/databases via their interface and related applications is obtained either by a login with a password or directly by download of available files with data.

3. Benefits to partners

The common data sharing policy significantly:

- increases the research capacity of the involved research institutions;
- increases the capacity for interdisciplinary research ;

- increases the rate of success in future research programmes;
- helps compliance with the EC's INSPIRE Directive and the future initiative for a European Shared Environmental Information System (SEIS).

Indicators of success

- Number of partners with accessible updated databases (biodiversity, socio-economic data)
- Number of research projects based on two or more databases from different institutions.

4. Obligations of Partners:

- Provide and maintain metadata information in the agreed standardised format including information of the quality status of the accessible data
- Provide internet links to databases and guidance
- Establish possibility for ALTER-Net institute employees to get access to databases, free of charge
- Description of the interfaces to databases
- Short English guidance on how to download data from databases/how to use web-interfaces and related applications
- If necessary make some minor adjustments in interface and database (English parameters and menus).

5. Agreed partner commitments

ALTER-Net partners commit their institutions to adopt the common data sharing policy (which will be developed by March 2009).

6. Future co-ordination and management requirements

Co-ordination work, including development of an implementation plan, will be done by the secretariat, taking into account developments with Infobase (Annex 5) and LifeWatch (Annex 6),

ALTER-Net Annex 5 LTER-Europe Revised – 4th April 2008

1. Summary

The European Long-term Ecosystem Research Network (LTER-Europe) is a formally constituted network of scientists and their stakeholders engaged in long-term, site-based ecological, social and economic research. LTER-Europe is a regional network of the International Long Term Ecological Research Network (ILTER). LTER-Europe was established during the ALTER-Net programme as an independent organisation with its own bye-laws and governance structure.

LTER-Europe includes partners from inside and outside of the ALTER-Net partnership. This Annex outlines the basis of the future partnership between LTER-Europe and ALTER-Net.

2. Description

The mission of LTER-Europe is to deliver to the scientific community, policy makers, and society in general, sound scientific information and predictive understanding of ecological and socio-economic processes and to inform solutions to current and future environmental problems at local, national, European and global scales. Its goals are:

- to foster collaboration and coordination among long-term ecosystem researchers and research networks;
- to improve comparability of long-term ecological, social and economic data from sites and facilitate exchange and preservation of these data;
- to deliver scientific information to scientists, policymakers and the public to meet the needs of decision makers at multiple scales; and
- to facilitate education of the next generation of long-term scientists.

LTER- undertakes observations and research for understanding and managing complex ecological phenomena (LTER sites) and socio-ecological interactions (LTSER regions). LTER-Europe is made up of national networks (16 in 2007). Its sites often have data going back many decades and support active communities of research scientists. In the area of biodiversity and ecosystem research LTER-Europe is working with ALTER-Net towards:

- creation of a distributed European observation and research infrastructure for long-term ecosystem research;
- a common research agenda for LTER;
- standard observation methods for LTER sites as a framework for research projects and to provide information about the state and trends of biodiversity European level;
- a framework and access system for LTER meta-data (INFOBASE) to provide information about LTER sites including: site location, site description, management information; projects, measured variables and facilities.
- improved description of required data structures for inter-operability and sharing of ecological data from LTER sites based on the development of ontologies for the standardization and harmonization of site data (e.g. INFOBASE and MORIS 2.X);
- establishment Multi-site Experiments (MSE) or observation programmes taking advantage of the distribution of LTER-Europe sites across a wide range of environmental gradients e.g. climate, land management, soils and pollution.

3. Benefits to partners and their evaluation:

By working directly with LTER-Europe ALTER-Net partners will:

- i) be an acknowledged part of a unique distributed infrastructure for long-term research on ecological and socio-ecological processes at national and European levels;
- ii) gain facilitated access to sites and data from the European network for comparative studies e.g. as part of EC FP projects;
- iii) have web access to the meta information of the network and their sites;
- iv) have a mechanism to link institutional and European level research agendas relating to LTER;
- v) have a framework and common structures for eventual data integration and sharing based on the use of agreed approaches and tools for data management (e.g. ontologies);
- vi) have improved chances for funding for research based on LTER sites/LTSER platforms
- vii) have access to examples of best practice and use of material, methods and documents of other national networks and/or sites;
- viii) benefit from agreement on harmonized set of parameters and indicators for measurements in LTER sites;
- ix) have access to training for scientific, technical and information management staff responsible for LTER and LTSER observation and research.

Criteria for success:

- i) acceptance of LTER-Europe and its component sites as an integral part of the European observation and research infrastructure;
- ii) number of projects based on the sharing of LTER and LTSEr sites or their data;
- iii) publications making use of LTER sites and data;
- iv) number of formal LTER sites, LTSEr platforms and national LTER networks involved in LTER-Europe documented in the LTER-Europe INFOBASE;
- v) extent to which LTER-Europe sites are used for socio-ecological research projects;
- vi) number of Site(s) and platform(s) documented in the LTER database, accessible through the LTER-Europe web site enabling search and selection of sites for research projects;
- vii) progress towards data sharing and inter-operability of data e.g. through the Life-Watch infrastructure.

Review process:

ALTER-Net will support the secretariat for LTER Europe for 5 years, subject to satisfactory annual review by the ALTER-Net Management

4. Obligations of ALTER-Net Partners

ALTER-Net is committed to supporting the long-term objectives of LTER-Europe. It recognises the value of the long-term ecosystem research and observations provided by LTER-Europe and the importance of continuity of funding for the successful establishment and delivery of large-scale networks. ALTER-Net will support LTER-Europe by:

- i) encouraging its members to support the development of LTER sites and LTSEr platforms and national networks in their own countries;
- ii) contributing to the operational and scientific activities of LTER-Europe by encouraging its staff to attend meetings, participate in its committees working groups;
- iii) active contributions to, and lobbying for, LTER at national and European levels;
- iv) contributing site meta data to the agreed information system for LTER-Europe (INFOBASE). This includes responsibilities for up-dating of information.
- v) entering data sharing agreements as described in Annex 4;
- vi) participation in efforts to harmonise and standardize parameters and measurements to establish a minimum set of observations and enhance inter-comparability of long-term data from LTER.

5. Agreed Partner Commitments:

- i) UBA will provide web access to INFOBASE (the LTER-site database) and its contents;
- ii) UBA will support the activities of the current chair of LTER-Europe until
- iii) CEH will continue to host the LTER-Europe web-site;
- iv) The following ALTER-Net partners will continue to support formal LTER and LTSEr sites activities in their own countries, including engagement with LTER-Europe;
- v) The following partners are committed to the establishment of LTER sites and networks in their own countries;
- vi) UBA will work with other partners to secure funding for the continued development of the LTER-Europe information management system.

6. Additional. Co-ordination and Management Requirements

ALTER-Net recognises that in order to realise benefits from the LTER-Europe Network help will be required to provide a basic level of support for co-ordination and information collection, maintenance of information systems on sites and dissemination of information. To achieve this ALTER-Net will provide secretarial support to LTER-Europe. The support may take the form of either direct funding or additional in-kind support from partners.

The ALTER-Net support will contribute to the following general activities:

- i) a coordinator, to work with the Chair of LTER-Europe to manage the LTER-Europe activities;
- ii) financial support for co-ordination visits and meetings;
- iii) maintenance and updating of the LTER-Europe site database (INFOBASE).

ALTER-Net Annex 6
LifeWatch
Revised 30th September 2008

1. Summary:

LifeWatch is a programme to develop an “E-science and Technology Infrastructure for Biodiversity Data and Observatories”.

2. Technical description:

LifeWatch was developed by European FP6 Networks of Excellence to link ecological monitoring and survey data from marine and terrestrial environments with the vast amount of data in physical collections. The new infrastructure will open up new areas of research and services by providing access to the large data sets from different (genetic, population, species and ecosystem) levels of biodiversity together with analytical and modelling tools.

LifeWatch will construct and bring into operation the facilities, software and governance structures for research on the protection, management and sustainable use of biodiversity. It will consist of facilities for data generation and processing, a network of observatories, facilities for data integration and interoperability, virtual laboratories offering a range of analytical and modelling tools and a service centre for scientific and policy users, including training and research opportunities for young scientists.

3. Benefits to partners and their evaluation:

LifeWatch is an initiative under the new EU policy for a coordinated approach in the field of research infrastructures: the European Strategic Forum on Research Infrastructures (ESFRI). The EC has funded a 3-year preparatory phase (beginning Feb 2008) which will provide the basis for a construction phase. If it continues to be successful, LifeWatch will provide a framework and the scientific and policy level support to drive the funding and development of biodiversity and ecosystem observatories and databases at national and European levels for the next decade. LifeWatch should develop in a way that supports national biodiversity research requirements and partners will benefit from being closely involved in its development because they should be able to use it to leverage funding at national and European levels.

Indicators of success:

- (i) Number of countries and partners involved in the LifeWatch preparatory phase.
- (ii) Number of countries and partners signed up to the LifeWatch construction phase.
- (iii) Annual funding at country level for LifeWatch related initiatives
- (iv) Annual funding at EC level for LifeWatch related projects and programmes.

ALTER-Net engagement in LifeWatch should be reviewed at the end of the preparatory phase in January 2011.

4. Obligations of Partners:

- (i) Partners should identify and promote components of the LifeWatch infrastructure that are most relevant to their institutional, national and European biodiversity research requirements.
- (ii) Partners should promote, support and develop LifeWatch activities at national level and should, wherever possible, lead formal LifeWatch-national level programmes in their own countries.
- (iii) Partners should engage in activities designed to ensure comparability of observational and data management approaches across different institutes and countries.
- (iv) Partners should help develop and implement common data sharing and data licensing procedures that will underpin the successful implementation of LifeWatch.

5. Agreed Partner Commitments:

The following partners are already formally involved in the LifeWatch preparatory phase which continues until 2011: NINA, CSIC, CEH, INBO, SYKE, UNIBUC, ILE-SAS, IEB-HAS, SLU and the University of Aarhus (NERI).

NINA, SYKE, IEB- HAS and the University of Aarhus (NERI) are conducting case studies to support the development of LifeWatch at national levels.

6. Future co-ordination and management requirements

The construction of the LifeWatch infrastructure will be mainly based on national level contributions and its governance structure will be based on national representatives. ALTER-Net partners will ensure that they adopt consistent approaches and policies towards LifeWatch. This will be co-ordinated through the ALTER-Net Secretariat. During the later construction phase (2011 onwards), the ALTER-Net partnership may wish to share responsibility and ownership of some parts of the LifeWatch Infrastructure.

ALTER-Net Annex 7 Interdisciplinary Research Revised – 4th April 2008

1. Summary:

Interdisciplinary research will be promoted by establishing and maintaining a network of LTSEr-areas, by common working mechanisms and by interdisciplinary training programmes.

2. Technical description:

Interdisciplinary research combines natural, human and social sciences when studying biodiversity related issues. Often stakeholders are part of the research process.

ALTER-Net brings together researchers from different countries and disciplinary specialisations and has jointly developed and tested methodological approaches that are applicable across Europe. It will continue to support inter-disciplinary research on the ecosystem approach and the sustainable use of biodiversity. Approaches include research on attitudes and values, on knowledge production and collaborative management and on models of socio-ecological linkages. ALTER-Net's strengths in these areas include:

- the use of a European network of LTSEr-platforms from which regularly updated relevant and standardized socio-economic data are made available to the research community for interdisciplinary research;

- common approaches to facilitate interdisciplinary research across Europe including a common framework for analyses and modelling based on, for example, the DPSIR framework;
- common methods for improving our understanding of public attitudes towards biodiversity;
- training programmes for young scientists in interdisciplinary research related to biodiversity using prominent teachers from the involved research institutes.

3. Benefits to partners and their evaluation:

The demand for interdisciplinary research is increasing in search for answers to policy relevant questions on biodiversity. Questions on impacts of non-biodiversity focused policies on biodiversity, on costs and benefits of a given measures, on different options for meeting the demands of the Habitat Directive or the consequences for biodiversity of climate change and mitigation measures can only be answered in a meaningful way by using interdisciplinary approaches.

The LTSERs, the common approaches and the training programmes will make it possible for partners to increase their competences in interdisciplinary biodiversity research and improve their competitiveness on a European scale.

Criteria for success:

- Number of LTSER-areas and platforms;
- Number of projects using LTSER-area data;
- Number of refereed publications using LTSER-area data;
- Further development of common modelling framework based on DPSIR;
- Number of studies that combine natural science and social science research on biodiversity issues;
- Number of scientists who have participated in ALTER-Net training courses;
- The use of inter-disciplinary research processes in policy development.

4. Obligations of Partners:

Partners recognise the importance of interdisciplinary research on biodiversity and will provide resources to allow participation in meetings, training, proposal writing and paper publication.

5. Agreed Partner Commitments:

- The lead of IDR activities will circulate among partners on a two year basis. Partner SYKE will take the responsibility of overlooking the transformation of ALTER-Net project phase activities towards activities described in this annex.
- NERI will take the lead to further develop the ALTER-Net modelling framework
- UBA, NERI, NINA, UNIBUC, IEB-HAS and Alterra will establish, maintain and support LTSER platforms, see also Annex 5.
- The following ALTER-Net partners will work together to standardize socio-economic data related to biodiversity: NERI, CEH, CEMAGREF, NINA etc.)
- Other commitments regarding interdisciplinary research are also included in Annex 3 (training) and Annex 5 (LTER Europe).

6. Additional Co-ordination and Management Requirements:

Additional resources will be needed for secretariat support of the IDR activities.

Appendix 2: Draft pledge to the MoU

Dr. Jiska van Dijk, ALTER-Net coordinator
Department Terrestrial Ecology
Norwegian institute for nature research
Tungasletta 2
7485 Trondheim
Norway

Date, Place

Dear Jiska van Dijk,

On behalf of I am pleased to return a signed copy of ALTER-Net's Memorandum of Understanding. In compliance with Article 14 of the MoU I can confirm that will fund its own participation in ALTER-Net Council and Management Board meetings and will work with the Council, Management Board, Secretariat and other Partners toward ALTER-Net's common goals.

In addition we will provide:

- An annual cash contribution of Euros toward the running of the ALTER-Net Secretariat and associated tasks as stated in a budget and work programme to be approved annually by the ALTER-Net Council. This contribution is subject to satisfactory annual reviews of progress,
- An in-kind contribution of person days to
- An in-kind contribution of person days to
- Etc.

We will review these contributions in March 2012.

Sincerely yours,

Director or Deputy Director of the Institute

Appendix 3: Policy new members

Updated: 01.04.2010

During the council meeting in Cestas, France, October 2009 ALTER-Net council decided that the network can be extended with new partners. Each potential new partner will however be decided upon case by case and each council member will be asked for his/her final approval. The council recognizes that the current working mode of the council with one representative of each partner institute is limited and the network cannot just accept an unlimited number of new partners. Procedures in this respect will have to be discussed and decided upon during council meeting.

Furthermore the council has decided for the moment that:

- a potential new partner institute will be asked to agree to a contribution of minimum 3000 € per year
- a new partner institute will be asked to send the following to the ALTER-Net secretariat:
 - information from the new partner institute explaining the expertise and/or capacity in strategic biodiversity research of the institute
 - an invitation letter from an existing consortium partner who acknowledges the candidacy
 - a draft letter of agreement (pledge) to the Memorandum of Understanding to the ALTER-Net secretariat.

The draft letter of agreement should clarify the intention of the institute to contribute with cash (minimum 3000 € per year) and how much the institute intends to contribute with person days (in-kind contribution) to the seven core activities of ALTER-Net (i.e. Common Research Strategy, Communication and Knowledge Transfer, Common Training programme, Data Sharing Policy, LTER-Europe, LifeWatch and Inter-Disciplinary Research). The new institute may allocate in-kind contributions to certain activities only, but it is desirable that the new institute is involved in all activities. The ALTER-Net consortium will be reluctant to agree to proposals indicating involvement to only one activity (in-kind contribution allocated to only LTER-Europe for example)

- the draft letter of agreement should be signed by the director or deputy director of the institute indicating that joining the ALTER-Net consortium is fully supported by the institute.
- The ALTER-Net secretariat will distribute the information explaining the expertise/capacity, the invitation letter from an existing partner, and the draft letter of agreement to the council members. The secretariat will also provide a recommendation to council.

Council members can respond to the distributed information within 10 days after receiving it. If council members do not answer to the secretariat it will be assumed that the application is accepted.

NINA Report 569

ISSN: 1504-3312

ISBN: 978-82-426-2146-7



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