Project no. 018340

**Project acronym: EDIT**

**Project title: Toward the European Distributed Institute of Taxonomy**

Instrument: Network of Excellence

Thematic Priority: Sub-Priority 1.1.6.3: "Global Change and Ecosystems"

Start date of project: 01/03/2006 Duration: 5 years

---

# C3.2.5 Citizens Monitoring Biodiversity

Due date of component: Month 31
Actual submission date: Month 31

Organisation name of lead contractor for this component:

Partner number 5 – UvA

Proposal final version

| Project co-funded by the European Commission within the Sixth Framework Programme (2002-2006) | | |
|---|---|---|
| Dissemination Level | | |
| **PU** | Public | X |
| **PP** | Restricted to other programme participants (including the Commission Services) | |
| **RE** | Restricted to a group specified by the consortium (including the Commission Services) | |
| **CO** | Confidential, only for members of the consortium (including the Commission Services) | |

# ESF - Programme - Application Overview

## APPLICATION

| Ref. Number | 3 810 | Submission date | 23/10/2008 |
|---|---|---|---|

## PROPOSAL DETAILS

| Domain | LESC | Additional Domain(s) | |
|---|---|---|---|
| Proposal Title | Citizens Monitoring Biodiversity | | |
| Acronym | CMB | Duration (months) | 60 |
| Budget Req. | 425000 € | | |
| Keywords | Biodiversity; Monitoring; Taxonomy; Citizen science; Land use | | |

**Abstract**

Changes in land use and climatic conditions cause drastic changes in species distributions, and a generally rapid decrease in biodiversity. The increased human mobility and trade enhances the spread of invasive species and disease agents over the globe. Such changes are monitored and modelled by various research groups in mo st European countries.
The cooperation with citizens in biodiversity monitoring is a crucial aspect of this endeavour, as it allows the collection of observations of many plants, fungi and animals over a very large geographical area, a prolonged period and at many times during the day and the year.
On the other hand, nature observation as a form of citizen science is becoming more and more professionalised due to the development of sophisticated web-based tools and increased availability of scientific information over the internet.
The citizens' contribution to biodiversity monitoring can be greatly enhanced by standardisation in the use of taxonomic names and monitoring procedures. The present programme organises a series of meetings and workshops that will lead to more interoperable and more reliable databases.
Important preliminary work on standardisation of data and metadata formats between different nature observation communities has been done at the national level, e.g. in the Netherlands. The European FP6 project Eumon inventoried nature monitoring programs all over Europe and identified the taxonomic groups and habitat monitoring schemes that have high potential for integration.
The current FP7 project PESI prepares the taxonomic standards that will serve as the backbone to which all biodiversity-related data in Europe are connected. PESI is an initiative of the European Distributed Institute of Taxonomy (EDIT), which guarantees the strong scientific basis of this collaboration.

The improved coordination of the work of voluntary biodiversity observers will be a major contribution to the new large knowledge infrastructures such as the European initiative LifeWatch.

**Information on previous applications to the ESF**

RACE: Risk Assessment of Chytridiomycosis to European amphibian biodiversity
BIODIVERSA - Pan-European call for international research projects on biodiversity linking scientific advancement to policy and practice

## CONTACT PERSON

Dr. Yde de Jong
Faculty of Science
University of Amsterdam
Biodiversity Informatics
NL - 1090 GT Amsterdam , NL
Tel: +31-20-525 7191
Email: yjong@uva.nl

## PRINCIPAL APPLICANT(s)

Dr. Klaus Henle
Department of Conservation Biology
Helmholtz Centre for Environmental Research - UFZ
04318 Leipzig , DE
Tel: +49 341 235-2519
Fax: +49 341 235-3191
Email: klaus.henle@ufz.de

Dr. Romain Julliard
Département Ecologie et Gestion de la Biodiversité
Muséum national d'Histoire naturelle
75005 Paris , FR
Tel: +33 1 40 79 30 81
Fax: +33 1 40 79 38 35
Email: julliard@mnhn.fr

**Proposal for an ESF Research Networking Programme – Call 2008**

***Section I:*** *(1 A4 single page)*

**Programme title:**

Citizens Monitoring Biodiversity

**Programme acronym:**

CMB

**Name and full coordinates of principal applicant(s)** (*up to three including the contact person*):

Dr. Yde de Jong – CONTACT PERSON
Biodiversity Informatics - Zoological Museum Amsterdam
Faculty of Science - University of Amsterdam
P.O. Box 94766
NL - 1090 GT Amsterdam
The Netherlands
Tel. +31-20-525 7191
yjong@uva.nl

Dr. Klaus Henle
Helmholtz Centre for Environmental Research - UFZ
Department of Conservation Biology
Permoserstraße 15
04318 Leipzig, Germany
Tel. +49 341 235-2519
Fax +49 341 235-3191
klaus.henle@ufz.de

Dr Romain Julliard
Muséum national d'Histoire naturelle
Département Ecologie et Gestion de la Biodiversité
UMR 5173 MNHN-CNRS
Centre de Recherches sur la Biologie des Populations d'Oiseaux
Case postale 51
55 rue Buffon, 75005 Paris
Tel. +33 1 40 79 30 81
Fax +33 1 40 79 38 35
julliard@mnhn.fr

**Indication of which of the principal applicants is the contact person**:

Dr. Yde de Jong

**Keywords** relating to the topic of the proposal (*up to five; one "keyword" can be a string of not more than three words*):

Biodiversity
Monitoring
Taxonomy
Citizen science
Land use

**Abstract** of the proposal (*max. 300 words*):

Changes in land use and climatic conditions cause drastic changes in species distributions, and a generally rapid decrease in biodiversity. The increased human mobility and trade enhances the spread of invasive species and disease agents over the globe. Such changes are monitored and modelled by various research groups in most European countries.

The cooperation with citizens in biodiversity monitoring is a crucial aspect of this endeavour, as it allows the collection of observations of many plants, fungi and animals over a very large geographical area, a prolonged period and at many times during the day and the year.

On the other hand, nature observation as a form of citizen science is becoming more and more professionalised due to the development of sophisticated web-based tools and increased availability of scientific information over the internet.

The citizens' contribution to biodiversity monitoring can be greatly enhanced by standardisation in the use of taxonomic names and monitoring procedures. The present programme organises a series of meetings and workshops that will lead to more interoperable and more reliable databases.

Important preliminary work on standardisation of data and metadata formats between different nature observation communities has been done at the national level, e.g. in the Netherlands. The European FP6 project Eumon inventoried nature monitoring programs all over Europe and identified the taxonomic groups and habitat monitoring schemes that have high potential for integration.
The current FP7 project PESI prepares the taxonomic standards that will serve as the backbone to which all biodiversity-related data in Europe are connected. PESI is an initiative of the European Distributed Institute of Taxonomy (EDIT), which guarantees the strong scientific basis of this collaboration.

The improved coordination of the work of voluntary biodiversity observers will be a major contribution to the new large knowledge infrastructures such as the European initiative LifeWatch.

**Previous or concurrent applications to the ESF** for any of the ESF instruments:

UFZ (K. Henle):
RACE: Risk Assessment of Chytridiomycosis to European amphibian biodiversity
Program: BIODIVERSA - Pan-European call for international research projects on biodiversity linking scientific advancement to policy and practice

## ***Section II:*** *(not more than 8 A4 single pages / max. length 3000 words)*

**Status of the relevant research field; scientific context, objectives and envisaged achievements of the proposed Programme:**

*Context*

Over the past centuries Europe experienced major changes in land use as a result of population growth and industrialisation, increased mobility and the modernisation of agricultural practice. These developments led to a dramatic loss of the diversity of natural habitats and life forms, a process that is still ongoing. The present and expected climate change adds further concern to the future of biological diversity.

In response to this unwanted development, national, European and international policy makers adopted a variety of measures to protect or restore biodiversity, such as the global Convention on Biological Diversity of 1992 and the European Commission's Birds and Habitats Directives, and the 2006 EC Communication on "Halting the loss of biodiversity by 2010 – and beyond". All these documents stress the importance of research to monitor and understand the changes in biodiversity.

Monitoring is not only necessary to detect trends in biodiversity and the drivers of these changes, such as climate or land use change, it is also essential to understand the effectiveness of of conservation policies and of nature protection measures, such as protected sites and environmental impact mitigation.

In addition to the concern for biodiversity, there are several other scientific and societal reasons to monitor the distribution of organisms in space and time, such as, inter alia, the spread of human and animal disease agents, agricultural pests and invasive species that cause harm for other human interests, as well as research on short-term evolution and adaptation to climate change. Moreover, concern about environmental impacts of genetically modified organisms (GMO) and legal regulations require a carefully designed monitoring program for the use of GMOs in agriculture and other land use systems.

Monitoring currently takes place mainly at the national and subnational level. The few supranational programs primarily monitor birds, and to lesser limited extent, butterflies. Volunteers organised in nature observation communities, such as botanist and ornithological societies, contribute significantly to the data on the occurrence of plants, animals and macrofungi. Europe has a large number of naturalist societies and individuals who represent a wealth of specialised knowledge and information, covering a wide geographical range and, in some cases, a considerable time span. In September 2007, the EuMon project has documented 395 monitoring schemes for species, which represents a total annual cost of about € 4 million, involve more than 46,000 persons devoting over 148,000 person days per year to biodiversity monitoring activities and this figures are continuously growing. Much fewer volunteers are involved in habitat monitoring.

The current ESF proposal wants to strengthen the cooperation between naturalist societies and individuals with the practical aim of mobilising existing data and enhancing the exchange of future observation data. Improved cooperation will benefit the research into the development of biodiversity in Europe. Better research will in turn enable better policy measures for halting the loss of biodiversity.

The time is now ripe to make huge advancement in this area due to a number of recent developments:

- the increased awareness of the loss of biodiversity among scientists, policy makers and the general public

- the current and planned establishment of large virtual knowledge infrastructures in the field of taxonomy and biodiversity observation and monitoring (LifeWatch), including the establishment of pan-European tools and standards on taxonomic metadata (PESI) and data monitoring (EDIT)
- the highly improved communication among nature observers both within and outside formal organisations due to development of internet
- the improved coordination and cooperation among nature observation societies at the national and international level, which already led to a higher quality of data management
- the availability of a large metadata base on monitoring schemes that cover the addresses of several hundred monitoring organisations in Europe together with characteristics of their monitoring schemes (eumon.ckff.si).

In the past decades major advances have been realised in the organisation of the taxonomic work force and standardisation of taxonomic reference. The European Commission Sixth Framework program (FP6) funded the European Distributed Institute of Taxonomy (EDIT) as a Network of Excellence on taxonomy to further progress the collective investigations on taxonomy for biodiversity and ecosystem research, starting at March 2006 and lasting five years. In addition to the network's principal scientific and societal capacities, EDIT offers an established Internet Platform for Cybertaxonomy for practical use on taxonomic biodiversity inventories and monitoring of taxa, for involving non-professional taxonomists, taxonomic societies and networks, and for synergy with the so-called All Taxa Biodiversity Inventories and Monitoring program.

As an EDIT spin-off, the Pan-European species Directories Infrastructure (PESI) started in May 2008 as a three-year project, which will harmonise taxonomic reference in the existing European and national checklists. The largest European authoritative species name registers so far are the European Register of Marine Species for the marine life, and Euro+Med PlantBase and Fauna Europaea for terrestrial and fresh water animals and plants. These infrastructure components, together with smaller ones for specific taxonomic groups, will be validated against each other and against national checklists that are maintained by various institutions, e.g. natural history museums.

It is foreseen that within a few years, a pan-European consensus taxonomy will be reached that will be used for studies and applications covering all or most of Europe. The consensus taxonomy may coexist with slightly divergent national species lists in cases where taxonomic questions are as yet unresolved. For instance a national or regional list may include local endemic species that are not unanimously recognised. The logical next step is to communicate these standards to citizens and private organisations that use these names to document their observations in the field. Insufficient standards for taxonomy are among of the reasons why the Natura2000 network does not cover all species listed on Annex II of the Habitats Directive despite this being a legal requirement.

The taxonomic reference system that is being developed is not a static infrastructure, but will need continuous effort for maintenance and updating in response to technological and scientific progress. This requires a good organisation of the information flow at all levels.

The European FP6 project EuMon resulted in an inventory of nature monitoring programs all over Europe and identification of the taxonomic groups and habitat monitoring schemes that have high potential for integration. Currently, over 600 schemes are covered. For each scheme descriptive data are compiled in the database. This includes the addresses of the coordinators, the taxonomic, geographic and temporal coverage and information about the involvement of volunteers, monitoring design and analysis characteristics. This resource provides a unique opportunity to draw together relevant volunteers and monitoring organisations in workshop to discuss

and design integrated supranational monitoring programs based on the existing activities.

*Objectives*

The objective of this networking activity is to standardise the data format and data flow between research groups and observation communities in ESF member countries. This concerns species names (and other taxon names), metadata of observations and monitoring formats. It further aims at improving the compilation and reporting format for metadata on existing European monitoring programs, and at the development and testing of a concept to integrate existing schemes into supranational schemes. This will be concerted with EDIT efforts on assessing biodiversity inventory and monitoring needs, and developed standards, protocols, and tools for conducting its ATBI+M programme. Finally, it aims at improving the communication structure and usability of monitoring information systems, such as the EuMon database and website, and expanding the involvement of volunteers in biodiversity monitoring.

Species names

The networking programme prepares the use of species names according to validated checklists as established by the PESI programme. The systems that record citizens' observations – often on-line tools – should apply either national or pan-European checklists. An efficient organisation should ensure future updates will be synchronised for all relevant partners.

Metadata

Metadata include data on the observation event (was an animal seen, heard, captured, found dead, etcetera) and the observed entity (number of individuals, life stage, sex, etcetera). Research communities and observation communities need to gradually standardise the observation metadata insofar as this is necessary for the use of data from heterogeneous sources in Europe-wide research.

Monitoring schemes

Standardised monitoring schemes, e,g, observing butterflies or fungi along a transect at fixed intervals during the year, are most useful for identifying statistical trends. Monitoring schemes are often standardised at the national, but not at the European or international level. Further standardisation increases the comparability of data from different monitoring programmes and allows for analysis at a larger scale. However, it may be difficult – and not always necessary – for existing monitoring programs to change their methods. Recent developments in the integration of trend data resulting from various monitoring schemes via meta-analysis or weighted Generalized Linear Models can further contribute to an integration of monitoring programs. However, standards and wider accessibility for such approaches still need to be developed.

Data flow

How and under what conditions can observation data be shared among different (national) observation communities and researchers? European and global research infrastructures, like LifeWatch, GBIF, EDIT and the EuMon internet-based databases and monitoring support tools can play a role in this. The present networking program will study the concepts and tools that facilitate the integration of monitoring schemes, including internet-based guidance to the self-organisation of existing groups. This discussion includes technical, ethical, and financial aspects.

*Expected achievements*

1) Strengthening of the social network of professional scientists and citizen science communities dedicated to the study of biodiversity in Europe, and exchange of best practices in data management.

2) Agreements on the implementation of validated national or European taxonomic reference systems in the data management of the most important biodiversity observation communities, including updating procedures.

3) Agreements on an increased level of standardisation of metadata and monitoring schemes.

4) Inventory of the possibilities and conditions for data delivery from the observation communities to research communities.

5) Tested concept for the integration of existing monitoring schemes, including an internet-based guideline for the self-organisation of other existing groups.

---

**Facilities and expertise which would be accessible by the Programme:**

As the principal consortium of leading European taxonomic institutions, EDIT will provide as the scientific basis of this networking programme. Besides its scientific and societal networking capacities, EDIT offers its *Internet Platform for Cybertaxonomy* and *All Taxa Biodiversity Inventories and Monitoring* (ATBI+M) working programs.

Within a few years, the PESI project will offer a web portal with integrated access to the most authoritative taxonomic reference systems in place, notably Euro+Med PlantBase, Fauna Europaea, ERMS. This European authoritative taxonomic reference service (EU-nomen) will be cross-referenced with a global taxon names resolution service, called the Global Names Archtecture, in which PESI facilitates the participation of the European nomenclators like AlgaeBase, IPNI, ZooBank and Index Fungorum. PESI works jointly with Species2000 Europe on the preparation and dissemination of taxonomic and methodological standards to biodiversity communities.

Behind this infrastructure is a network of the most authoritative scientists in the field.

PESI will also result in the validation of most national species checklists against the European resources, so that up-to-date national checklists will be available in most countries.

Results of the EuMon project on biodiversity monitoring schemes in Europe (eumon.ckff.si and unpublished results) include a large list of monitoring coordinators and a starting-base for the standardisation of metadata on monitoring schemes.

The EuMon website and database will be available as e-infrastructure support. This support will extend beyond the lifetime of EuMon and will be further supported by current EU-projects with biodiversity monitoring relevance, such as EBONE (European Biodiversity Observation Network: Design of a plan for an integrated biodiversity observing system in space and time) and SCALES (Securing the Conservation of biodiversity across Administrative Levels and spatial, temporal, and Ecological Scales)

---

**Expected benefit from European collaboration in this area:**

As a result of the standardisation efforts, it will become possible to perform analyses of trends in the development of biodiversity at a much larger scale, with a higher degree of automation and with higher accuracy. The better networking should lead to improved workflow and exchange of data among all participants.

The proposed networking programme will spread scientific knowledge and methods to a wide public of volunteers contribution to biodiversity research.
These improvements support research in itself, but in the long run also lead to improved applications in the sphere of biodiversity conservation, human and veterinary health, and agriculture.

---

**European context**
(list of relevant R&D networking activities at the European level directly related to the proposal, and already existing or envisaged collaboration activities, in particular, networks or activities under the EC Framework Programme, COST or under any other international programmes or organisations. State how the Programme would complement these and any applications on this or a similar topic to these organisations):

FP6 EDIT (European Distributed Institute of Taxonomy), European network of excellence on taxonomy consisting of 28 leading European taxonomic institutes.

FP6 EuMON (EU-wide monitoring methods and systems of surveillance for species and habitats of Community interest) provides an inventory of biodiversity monitoring schemes, identification of areas that have high potential of improvement from closer coordination and standardisation

FP7 PESI (Pan-European species Directories Infrastructure) provides standardised and authoritative taxonomic information by integrating and securing Europe's taxonomically authoritative species name registers and nomenclators (name databases) and associated expert networks that underpin the management of biodiversity in Europe.

FP5 Euro+Med PlantBase, an on-line database and information system for the vascular plants of Europe and the Mediterranean region.

FP6 MArBEF (Marine Biodiversity and Ecosystem Functioning) is a network of excellence consisting of 94 European marine institutes, is a platform to integrate and disseminate knowledge and expertise on marine biodiversity.

FP5 Fauna Europaea, the database of the scientific names and distribution of all living multicellular European land and fresh-water animals.

FP7 EBONE (European Biodiversity Observation Network: Design of a plan for an integrated biodiversity observing system in space and time) develops standards for the standardisation and integration of habitat monitoring schemes as a contribution to the LifeWatch initiative and the European participation in GEO-BON.

SCALES (Securing the Conservation of biodiversity across Administrative Levels and spatial, temporal, and Ecological Scales) is a forth-coming large-integrated FP 7 research project to start in 2009 and to run for 5 years. It will develop and test new methods for the involvement of volunteers in monitoring activities and the analyses of data that derive from such activities.

**Proposed activities, key targets and milestones:**

*Meetings*
Four yearly meetings will be organised with representatives from research institutes dealing with biodiversity research and monitoring and representatives of observation communities, notably volunteer-based monitoring organisations.

The meetings will include presentations on the following topics:
- experiences and best practices of observation organisations
- earlier cooperation projects between scientists and citizen science groups.
- data management
- taxonomic infrastructures
    - demonstrations of new applications
    - improvement of metadata on monitoring schemes

Workshops
Workshops dedicated to specific issues: geographical referencing, monitoring schemes, observation metadata, database management, concept development and guideline for the self-organisation of other existing groups

Pilot project
Set-up of a pilot project included a limited list of prioritised taxa, notably those mentioned in European legislative texts such as the Habitats Directive. The results can be hosted at the existing database facilities of the participants.

Website
A website will be set up for the purpose of communication and documentation.

**Duration:**

60 months

**Budget estimate (in €) by type of activities and per year of the Programme**

| | |
|---|---|
| Meeting 2010 – two days, approx. 60 participants: | 40.000 |
| Workshops in 2010 – one day, approx 30 participants | 25.000 |
| Meeting 2011 – two days, approx. 60 participants: | 40.000 |
| Workshops in 2011 – one day, approx 30 participants | 25.000 |
| Meeting 2012 – two days, approx. 60 participants: | 40.000 |
| Workshops in 2012 – one day, approx 30 participants | 25.000 |
| Meeting 2013 – two days, approx. 60 participants: | 40.000 |
| Part-time coordinator post-doc level four years | 150.000 |
| Website | 10.000 |
| Additions to EuMon database | 10.000 |
| Brochures, reports, manuals | 15.000 |
| **Total over 4 years** | **425.00** |

The scheduled costs of the annual plenary meetings include those for the Programme Steering Committee.

The costs of the External Programme Coordinator are based on the staff costs of a half-time staff member at postdoctoral level. The costs of a fulltime position at one of the institutes of the three principal applicants in the period 2010-2013 is estimated at around € 5000 per month (thus, 60 * 0,5 * 5.000 = 150.000).

***Section III:*** *(not more than 3 A4 single pages+ 1 single page for global dimension if applicable)*

**List of envisaged Steering Committee members listed by country**

BELGIUM
Dr Hendrik Segers
Belgian Biodiversity Platform
Freshwater Laboratory, Royal Belgian Institute of natural Sciences
Vautierstraat 29, B - 1000 Brussels Belgium
Tel. +32 26274310
hendrik.segers@naturalsciences.be

DENMARK
Dr. Henrik Enghof
Natural History Museum of Denmark, Copenhagen
Universitetsparken 15
DK - 2100 Copenhagen
Tel. +45-35321067
HEnghoff@snm.ku.dk

FRANCE
Dr Romain Julliard
Muséum national d'Histoire naturelle
Centre de Recherches sur la Biologie des Populations d'Oiseaux
Case postale 51, 55 rue Buffon, 75005 Paris
Tel. +33 1 40 79 30 81
julliard@mnhn.fr

GERMANY
Dr. Klaus Henle
Helmholtz Centre for
Environmental Research - UFZ
Department of Conservation Biology
Permoserstraße 15
04318 Leipzig
Tel. +49 341 235-2519
klaus.henle@ufz.de

GREECE
Dr. Christos Arvanitidis
Hellenic Centre for Marine Research
Institute of Marine Biology and Genetics.
Former US Base of Gournes
P.O. Box 2214 GR-71003 Heraklion
Tel. +30-2810-337748
arvanitidis@imbc.gr

HUNGARY
Dr. Andras Gubanyi
Hungarian Natural History Museum
H-1088, Budapest Baross 13.
phone: 36 - 20-4135123
gubanyi@nhmus.hu, gubanyi@zoo.zoo.nhmus.hu

NETHERLANDS
Dr. Sandrine Ulenberg
University of Amsterdam, Zoologisch Museum Amsterdam
Mauritskade 61
1018 TW Amsterdam

Tel. +31-20-5256243
S.A.Ulenberg@uva.nl

SLOVAK REPUBLIC
Dr. Karol Marhold
Institute of Botany, Slovak Academy of Sciences
Dúbravská cesta 14
SK-842 23 Bratislava
Tel. +421 (0) 2 5942 6128
marhold@savba.sk

SLOVENIA
Dan Podjed. MSc.
University of Ljubljana
Faculty of Arts, Department of Ethnology and Cultural Anthropology
Aškerčeva 2
1000 Ljubljana
Tel. +386 (0)1 241 15 31
dan.podjed@volja.net

SPAIN
Dr. Alonso Zarazaga, Miguel Angel
Consejo Superior de Investigaciones Científicas, Museo Nacional de Ciencias Naturales, Biodiversidad y Biología Evolutiva
Jose Gutierrez Abascal, 2
E-28006 Madrid
Tel. +34-914.111.328 ext. 1110
zarazaga@mncn.csic.es

UNITED KINGDOM
Dr. Charles Hussey
Natural History Museum
Cromwell Road, UK- SW7 5BD,London
c.hussey@nhm.ac.uk
Tel +44-207-942-5213

---

**Programme Collaborations:**

BELGIUM
Dr Hendrik Segers
Belgian Biodiversity Platform
Dr. Patrick Grootaert; Dr. Thierry Backeljau
Royal Belgian Institute of Natural Sciences, Brussels
Dr. Michel Louette
Head of Department African Zoology, Royal Museum for Central Africa, Tervuren

BULGARIA
Dr. Pavel Stoev
National Museum of Natural History, Sofia

DENMARK
Dr. Henrik Enghof; Dr. Thomas Pape
Natural History Museum of Denmark, Copenhagen

GERMANY
Dr. Klaus Henle
Umwelt Forschungs Zentrum (UFZ) – Helmholtz Centre for Environmental Research
Department of Conservation Biology, Leipzig

GREECE
Dr. Christos Arvanitidis

Hellenic Centre for Marine Research, Institute of Marine Biology and Genetics
Dr. Anastasios Legakis
Zoological Museum, Dept. of Biology, Univ. of Athens

HUNGARY
Dr. Andras Gubanyi
Hungarian Natural History Museum, Budapest

NETHERLANDS
Dr. Sandrine Ulenberg, Dr. Yde de Jong, Dr. Louis Boumans
University of Amsterdam, Zoological Museum – BioInformatics
Prof. Dr. Willem Bouten, Dr. Emiel van Loon, Joana Xavier Msc.
University of Amsterdam, Institute for Biodiversity and Ecosystem Dynamics
Dr. Leo Kriegsman; Dr. Jeroen Goud
National Museum of Natural History Naturalis

POLAND
Dr. Piotr Wegrzynowicz,
Museum and Institute of Zoology, Polish Academy of Sciences in Warsaw

SLOVAK REPUBLIC
Dr. Karol Marhold
Institute of Botany, Slovak Academy of Sciences
SK-842 23 Bratislava

SLOVENIA
Dan Podjed, MSc.
University of Ljubljana
Faculty of Arts, Department of Ethnology and Cultural Anthropology

SPAIN
Dr. Alonso Zarazaga, Miguel Angel; Dr. Mario García-Paris
Consejo Superior de Investigaciones Científicas, Museo Nacional de Ciencias Naturales &
Jardín Botánico Naturales, Biodiversidad y Biología Evolutiva

SWEDEN
Dr. Johann Nilsson
ArtDatabanken

UNITED KINGDOM
Dr. Lawrence Way
Joint Nature Conservation Committee
Dr. Charles Hussey
Natural History Museum
Dr. Nova Mieszkowska, Daniel Lear, BSc, MSc
Marine Biological Association, Plymouth
Prof. F.A. Bisby
Species 2000 Secretariat, University of Reading
Dr Richard Smith; Dr Paul M. Kirk
BioNet-Iinternational, CABI, CABI Europe UK, Egham

*Interested participants from non-ESF member countries*

LATVIA
Dr. Voldemars Spungis
Department of Zoology and Animal Ecology, Faculty of Biology, University of Latvia

IRAN
Dr. Mansour Aliabadian
Department of Biology, Faculty of Sciences, Ferdowsi University of Mashhad

***Section IV:*** *(not more than 3 A4 single pages in total)*

# Curriculum Vitae – Yde de Jong

Biodiversity Informatics - Zoological Museum Amsterdam

Faculty of Science - University of Amsterdam

P.O. Box 94766

NL - 1090 GT Amsterdam

The Netherlands

Dr. Yde de Jong, head of the department Biodiversity Informatics of the Zoological Museum Amsterdam, coordinator of PESI and involved in the European Network of Excellence on Taxonomy (EDIT) as leader of the taskforce on integrating Europe's taxonomic information infrastructures. Beside he is the executive manager of the Fauna Europaea project and involved in the Species2000 Europe effort on establishing the "Euro-Hub". He's chair of the GBIF subcommittee for "Electronic Catalogue of Names of Known Organisms" (ECAT), is member of the ICZN ZooBank commission and participates in several TDWG task groups. He has a taxonomic background as marine botanist.

## 5 publications

Jong, Y.S.D.M. de (ed.) (2007) Fauna Europaea version 1.3 (http://www.faunaeur.org).

Jong, Y.S.D.M. de, A.W.G. van der Wurff, W.T. Stam & J.L. Olsen (1998) Studies on Dasyaceae 3. Towards a phylogeny of the Dasyaceae (Ceramiales, Rhodophyta) based on comparative *rbc*L sequences and morphology. *European Journal of Phycology*, 33 (3): 187-201.

Jong, Y.S.D.M. de, C.H. Hitipeuw & W.F. Prud'homme van Reine (1999) A taxonomic, phylogenetic and biogeographic study of the genus *Acanthophora* (Rhodomelaceae, Rhodophyta). *Blumea*, 44 (1): 217-249.

Jong, Y.S.D.M. de , G.M. Lokhorst & J.D. Kruijer (2000) Geneology in *Microspora* Thuret (Chlorophyceae). *Blumea*, 45 (2): 477-484.

Jong, Y.S.D.M. de, (1998) *Systematic, Phylogenetic and Biogeographic Studies of Atlantic Seaweeds*. University of Leiden, Leiden. 206 pp. ISBN 90-71236-37-4.

# Curriculum Vitae – Klaus Henle

Helmholtz Centre for Environmental Research - UFZ
Department of Conservation Biology
Permoserstraße 15
04318 Leipzig, Germany
Phone: +49 341 235-2519
Fax: +49 341 235-3191
klaus.henle@ufz.de

PhD in Zoology, Australian National University, Canberra, now head of the Dept-Conservation Biology. His research focuses on biodiversity conservation, with particular emphasis on fragmentation & connectivity, population viability, reserve networks, and monitoring, with a broad experience in science-policy dialogues. He has very broad experience in the coordination of national and international research projects, e.g. the EU-project EuMon (EU-wide monitoring and systems of surveillance of species and habitats of Community interest) and Brazilian-German cooperation program Fragmentation of the Atlantic Rainforests in Brazil.

**5 most relevant publications**

Henle, K., D. Alard, J. Clitherow, P. Cobb, L. Firbank, T. Kull, D. McCracken, R.F.A. Moritz, J. Niemelä, M. Rebane, D. Wascher, A. Watt & J. Young (2008): Identifying and managing the conflicts between agriculture and biodiversity conservation in Europe – a review. Agric. Ecosyst. Environm. 124: 60-71.

Henle, K., D.B. Lindenmayer, C.R. Margules, D.A. Saunders & C. Wissel (2004): Species survival in fragmented landscapes: where are we now?. In: Henle, K., D.B. Lindenmayer, C.R. Margules, D.A. Saunders & C. Wissel: Species Survival in Fragmented Landscapes: Where to from now? Special Issue Biodivers. Conserv. 13: 1-8.

Henry, P.-Y., S. Lengyel, P. Nowicki, R. Julliard, J. Clobert, T. Celik, B. Gruber, D.S. Schmeller, V. Babij & K. Henle: Integrating ongoing biodiversity monitoring: potential benefits and methods. Biodiversity and Conservation: 10.1007/S10531-008-9417-1.

Kull, T., M. Sammul, K. Kull, K. Lanno, K. Tali, B. Gruber, D. Schmeller & K. Henle: Necessity and reality of monitoring threatened European vascular plants. Biodiversity and Conservation: 10.1007/s10531-008-9432-2.

Lengyel, S., A. Kobler, L. Kutnar, E. Framstad, P.-Y. Henry, V. Babij, B. Gruber, D. Schmeller & K. Henle: A review and a framework for the integration of biodiversity monitoring at the habitat level. Biodiversity and Conservation: 10.1007/s10531-008-9359-7.

Schmeller, D.S. & K. Henle: Cultivation of genetically modified organisms: resource needs for monitoring adverse effects on biodiversity. Biodiversity and Conservation: 10.1007/s10531-008-9404-6.

Schmeller, D.S., B. Bauch, B. Gruber, R. Juskaitis, E. Budrys, V. Babij, K. Lanno, M. Sammul, Z. Varga & K. Henle: Determination of conservation priorities in regions with multiple political jurisdictions. Biodiversity and Conservation: 10.1007/s10531-008-9446-9.

# Curriculum Vitae – Romain Juliard

Dr Romain Julliard
Muséum national d'Histoire naturelle
Département Ecologie et Gestion de la Biodiversité
UMR 5173 MNHN-CNRS
Centre de Recherches sur la Biologie des Populations d'Oiseaux
Case postale 51
55 rue Buffon, 75005 Paris
julliard@mnhn.fr

Romain Julliard did his PhD (1996, University of Montpellier, France) on the evolution of dispersal through the study of the life history of locally born and immigrant tits (Parus sp) and ESS modelling followed by a post-doc under the supervision of Prof. Stenseth (Oslo, Norway) on population dynamic of rodents (regulation through density-dependent survival) and exploited fish (separating natural and fishing mortality). He is now associate professor at the Muséum national d'Histoire naturelle in Paris. Specialised in Conservation Biology, he develops and runs Biodiversity Observatories at the French scale (Vigie Nature project), based on common birds and common butterflies, and the involvement of voluntary observers (citizen scientists). His research concerns the functional homogenisation of biodiversity, its mechanisms (reorganisation of communities under the influence of global changes) and its applications, notably the development of biodiversity indicators.

**Selected assignments**

Contribution to the identification of biodiversity indicator for France; Contribution to the development of the Farmland Bird Indicator in a specific working group; - Scientific coordinator of the French national biodiversity monitoring network (Vigie Nature). Four schemes are currently running :

i) common bird since 1989, one of the two coordinator since 1999, ca., 1000 participants collecting 150,000 data a year
ii) Butterfly since 2006, 100 sites
iii) Garden butterfly (citizen science) since 2006, 4,000 participants per year. Responsible for the Museum
iv) Bat monitoring since 2006, 100 participants.

Work package leader in the EUMON project (2004-2008): European Monitoring of species and habitats
Regular contribution to public media, aiming at popularizing biodiversity conservation
Scientific project leader on the evaluation of the ecological network in urban environment

**5 most relevant publications**

Devictor, V, Julliard, R., Couvet, D., Jiguet, F. (2008) Birds are tracking climate warming, but not fast enough. Proceeding of the Royal Society

Julliard, R. Clavel, J. Devictor, V. Jiguet, F. Couvet, D. (2006). Spatial segregation of specialists and generalists in bird communities. Ecology Letters. 9: 1237-1244.

Filippi-Codaccioni, O., Clobert, J., Julliard, R. 2008 Effects of organic and soil conservation management on specialist bird species. Agriculture, Ecosystems & Environment.

Couvet, D., Jiguet, F., Julliard., R. Levrel, H., Teyssedre, A. 2008. Enhancing citizen contributions to biodiversity science and public policy. Interdisciplinary Science Reviews, 33:95-102.

Schmeller D.S., Henry P.-Y., Julliard R., Clobert J., Gruber B., Dziock F., Lengyel S., Nowicki P., Dari E., Budrys E., Kull T., Tali K., Bauch B., Settele J., van Swaay C., Kobler A., Babij V., Papastergiadou E., Henle K. (2008). Advantages of volunteer-based biodiversity monitoring in Europe, Conservation Biology.