**Participation in SMARTER**

Refer to the example of Heinz Müller-Schärer below.

Current date (yyyy-mm-dd):

|  |
| --- |
| **Contact details**  *Name*:  *Positio*n1:  *Institution*:  *Address*:  Country:  *Email*: |
| **PhD**  PhD obtained? Yes / no  If PhD obtained in 2006 or later, give date of PhD: |
| **Expertise (general)**  *Areas of research expertise*:  *Other expertise relevant to SMARTER2*: |
| **Work on *Ambrosia***  *Past work on Ambrosia*:  *Ongoing work on Ambrosia*: |
| **Role in SMARTER**  *Anticipated role in SMARTER3*:  *Working Group most related to: WG 1 / 2 / 3 / 4* |
| **Max. five publications relevant to SMARTER**4  1)  2)  3)  4)  5) |
| **Scientific collaborations relevant to SMARTER**  *National*:  *European*:  *Outside Europe*: |

1 indicate also if fixed or limited until when

2 including policy development at the European or at the national level, communication with stakeholders or the general public, etc.

3 MC, WG leader, WG member etc.; for specific topics see next page

4 please add pdfs of your publication

5 give names and institutions or research programs, and keywords for collaborations

|  |  |  |
| --- | --- | --- |
| **Contribution to SMARTER**  **(tick the fields you want to contribute to)** | |  |
|  |  |  |
|  |  |  |
| WG 1 Biological control | Task 1 Biological Control | 🞎 Pathogens |
|  |  | 🞎 Insects |
|  |  | 🞎 Classical |
|  |  | 🞎 Inundative |
|  |  | 🞎 Augmentative |
|  |  |  |
| WG 2 Vegetation Management | Task 2 Vegetation Management | 🞎 Weed biology |
|  |  | 🞎 Weed abundance and distribution |
|  |  | 🞎 Soil seed bank |
|  |  | 🞎 Plant population dynamics/Modelling |
|  |  | 🞎 Plant competition/Allelopathy |
|  |  | 🞎 Vegetation management |
|  |  |  |
| WG 3 Integration of Management Options | Task 3 Integration of Management Options | 🞎 Chemical |
|  |  | 🞎 Mechanical |
|  |  | 🞎 Integration |
|  |  |  |
| WG 4 Management Evaluation | Task 4 Management Evaluation | 🞎 Aerobiology |
|  |  | 🞎 Allergology |
|  |  | 🞎 Air quality modelling |
|  |  | 🞎 Ecological impact assessment |
|  |  | 🞎 Economic & social impact assessment |
|  |  |  |
|  | Task 5 Training and KTT | 🞎 Website |
|  |  | 🞎 Workshops: Plant invasions & management |
|  |  | 🞎 Workshop: Modelling impact & evaluation |
|  |  |  |
|  | Task 6 Policy Support | 🞎 Biological Control |
|  |  | 🞎 Invasive alien species |
|  |  |  |

NOTE:

Include a CV containing a passport-photo and summarizing your research activities. **Maximum 2-pages.** See the example of Heinz Müller-Schärer below.

Send joined document to your MC members and CC to SMARTER@unifr.ch.

**Participation in SMARTER**

Date: 2013-01-01

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| **Contact details**  *Name*: Heinz Müller-Schärer  *Positio*n1: Univ.prof, permanent  *Institution*: University of Fribourg  *Address*: Chemin du Musée 10, CH-1700 Fribourg, SWITZERLAND  *Email*: Heinz.mueller@unifr.ch |
| **PhD**  PhD obtained? Yes  If PhD obtained in 2006 or later, give date of PhD: |
| **Expertise (general)**  *Areas of research expertise*:  My main research interests are ecological and evolutionary aspects of plant antagonist interactions, especially in the context of plant invasion and biocontrol  *Other expertise relevant to SMARTER2*:  Co-ordination of larger research networks at the national (National Centre of Competence (Plant Survival), National Research Progam (Alps)) and international research programs (EU-T-Links, COST Weed Biocontrol). |
| **Work on *Ambrosia***  *Past work on Ambrosia*:  Review of biological control efforts against *Ambrosia* worldwide;  Co-organization of a workshop on ‘Sustainable management of *Ambrosia* in Europe’ (Delémont, 2009). Extended research in Georgia on mechanical and chemical control of ragweed in pipeline corridors (for BP), collaboration with China (CAS Wuhan) on biological control  *Ongoing work on Ambrosia*:  Continued work in Georgia, extended field survey of ragweed (and other exotic plants) across the country, continued work in China on biocontrol of ragweed |
| **Role in SMARTER**  *Anticipated role in SMARTER3*: Chair of the Action  *Planned contribution to/participation in WPs and Tasks*:  WP1: Biological control of *Ambrosia, collaboration with China, survey in South America (Argentina and Brazil).*  WP3: mainly combining biocontrol with competitive vegetation management  WP4: working on overall synthesis of management evaluation  Task 5: co-organizer of a summer school  Task 6: co-organizer of stakeholder meetings, working on European-wide guidelines and regulations on IAS management and biocontrol measures.  *Working Group most related to:* WG1 |
| **Max. five publications relevant to SMARTER**4  1) Gerber E, Schaffner U, Gassmann, A, Hinz HL, Seier M and Müller-Schärer H. 2011. Prospects for biological control of *Ambrosia artemisiifolia* in Europe: learning from the past. Weed Research 51: 559-573.  2) Müller-Schärer H, Schaffner U., 2008. Classical biological control: exploiting enemy escape to manage plant invasions. Biological Invasions 10:859-874.  3)Müller-Schärer H & Kikodze D. 2009-2012. Control of invasive common ragweed *Ambrosia artemisiifolia* and survey of alien/invasive species along the BTC/SCP row. Internal Reports for British Petroleum, 50pp.  4) Frantzen J. and Müller-Schärer H. 2006. Modeling the impact of a biocontrol agent, *Puccinia lagenophorae*, on interactions between a crop, *Daucus carota*, and a weed. Biological Control 37, 301-306.  5) Müller-Schärer H, Scheepens PC and Greaves MP. 2000. Biological control of weeds in European crops: recent achievements and future work. Weed Research 40, 83-98. |
| **Scientific collaborations relevant to SMARTER**  National: Urs Schaffner (CABI), Antoine Guisan (Uni Lausanne), Bernard Clot (MeteoSwiss), Christian Bohren (Agroscope Changin)  European: Dato Kikodze, Tbilisi, Georgia; Gerhard Karrer, Vienna, Austria  Outside Europe: Jianqing Ding, CAS Wuhan, China, Reza Ghorbani, Mashhad, Iran. |

1 indicate also if fixed or limited until when

2 including policy development at the European or at the national level, communication with stakeholders or the general public, etc.

3 MC, WG leader, WG member etc.; for specific topics see next page

4 please add pdfs of your publication

5 give names and institutions or research programs, and keywords for collaborations

|  |  |  |
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| **Contribution to SMARTER** | |  |
|  |  |  |
|  |  |  |
| WG 1 Biological control | Task 1 Biological Control | 🞎 Pathogens |
|  |  | x Insects |
|  |  | x Classical |
|  |  | 🞎 Inundative |
|  |  | x Augmentative |
|  |  |  |
| WG 2 Vegetation Management | Task 2 Vegetation Management | x Weed biology |
|  |  | x Weed abundance and distribution |
|  |  | 🞎 Soil seed bank |
|  |  | x Plant population dynamics/Modelling |
|  |  | x Plant competition/Allelopathy |
|  |  | x Vegetation management |
|  |  |  |
| WG 3 Integration of Management Options | Task 3 Integration of Management Options | 🞎 Chemical |
|  |  | 🞎 Mechanical |
|  |  | x Integration |
|  |  |  |
| WG 4 Management Evaluation | Task 4 Management Evaluation | 🞎 Aerobiology |
|  |  | 🞎 Allergology |
|  |  | 🞎 Air quality modelling |
|  |  | x Ecological impact assessment |
|  |  | x Economic & social impact assessment |
|  |  |  |
|  | Task 5 Training and KTT | 🞎 Website |
|  |  | x Workshops: Plant invasions & management |
|  |  | 🞎 Workshop: Modelling impact & evaluation |
|  |  |  |
|  | Task 6 Policy Support | x Biological Control |
|  |  | x Invasive alien species |
|  |  |  |

Curriculum Vitae of Heinz Müller-Schärer (January 2013)

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| Département de Biologie / Ecologie et Evolution  Université de Fribourg, Pérolles; CH-1700 Fribourg, Switzerland  Tel: ++41 (0)26 300 88 35/50 (direct/secretary)  e-mail: [heinz.mueller@unifr.ch](mailto:heinz.mueller@UNIFR.CH)  http://www.unifr.ch/biol/ecology/muellerschaerer/group/mueller/  Born Thun/BE, Switzerland; Sept. 5, 1954  Nationality Swiss, Georgian | Heinz passport photo |  |

PROFESSIONAL PREPARATION

1991 Habilitation in Herbivore Biology, University of Basel (Hugh Rowell & Steve Stearns)

1984 PhD in Biology, University of Bern and CABI Europe-Switzerland at Delémont, CH

1980 MSc in Biology, University of Bern, CH

RESEARCH INTERESTS

My main research interests are ecological and evolutionary aspects of plant-antagonist interactions, especially in the context of plant invasion and biological control.

APPOINTMENTS

1995-present Professor in Ecology & Evolution, Dep. of Biology, University of Fribourg, Switzerland

2008-2009 Visiting Professor at Institute of Chinese Academy of Sciences and University of Wuhan, China (Jianqing Ding) and University of Marburg, Germany (D. Matthies)

2002-2003 Visiting Professor at University of Marburg, Germany (D. Matthies), Oregon State University, USA (P. McEvoy), and University of Montana (R. Callaway)

1990-1995 Plant ecologist/group leader at the Swiss Federal Research Station, Wädenswil, CH

1986-1990 Assistant professor, Zoological Institute, University of Basel, CH

1985-1986 Research associate (Swiss NSF PostDoc), University of California, Riverside, USA

1979-1984 Project Scientist, CABI Europe-Switzerland at Delémont, CH

1977-1978 Technical assistant in agricultural (Paraguay) and forestry projects (Perú) of the "Swiss Co-operation for Technical and Humanitarian Aid" (now SDA).

PUBLICATIONS,

125 publications in internationally refereed journals with 2609 citations (up to December 2012) cf. <http://www.unifr.ch/biol/ecology/muellerschaerer/group/mueller/webpage/>; H-index: 28 (21 since 2008)

CONFERENCES Invited keynote lectures at international conferences / seminars (since 2007):

Batumi and Tbilisi (Georgia), Taschkent (UZ)), Osijek (HR), Prague (CZ), Wuhan (China), Shanghai (China), Marburg (D), Taho City, CA (USA), Rennes (F), Tbilisi (Georgia), Pisa (I), Mashhad (Iran), Naples (I), Prague, (CZ), Kaposvar (H), Delémont (CH), Shiraz (Iran), Hawai’I (USA), Ascona, Monte Verita (CH), Amsterdam (NL), Lyon (F), Hangzhou, China, Tbilisi (Georgia), Pontevedra (SP).

SYNERGISTIC ACTIVITIES (only selected ones since 2002)

University of Fribourg

2011-present President of the Department of Biology

2010-present Member of the local research commission of the Swiss National Science Foundation

2002-2007 President and coordinator of Studies in Environmental Sciences (Universities FR & BE)

National

Member of the Steering committee of the Forum Biodiversity, Swiss Academy of Science (2001-2011)

Member of the “Advisory Board of the Federal Office for the Environment “ (2001-present)

Elected annual president 2003 of the Swiss Academy of Science

Member of the commission on Scientific Integrity of the Swiss Academies of Sciences (2006-2012)

Member of the Advisory Board CCES (Comp. Centre Env. & Sustainab.) ETH-Z (2010-present).

Vice-Director of the SNSF National Centre of Competence in Research (NCCR) ‘Plant survival in natural and agricultural ecosystems’ (2001-2013)

International

External expert of PhD theses (Montpellier F, Lancaster UK, Salamanca E, and Bern, Zürich, ETH-Z, Neuchâtel, U Zürich, Dijon F); of habilitation (HDR) (Angers, F); of full professorship (SUNY, NY, USA; ETHZ)

Invited expert for Swiss Ministry of Environment, and for EU agencies (Technical Committee of COST)

Review panel USDA for all overseas stations in Biological Control, USA (2005)

Member of the Steering committee of the Global Invasions Research Coordination Network (financed by the US National Science Foundation, http://www.invasionsrcn.org/portal) (2006-2013)

Review panel of the German National Science Foundation (DFG) for a large-scale multi-year research program “Biodiversity Exploratories” (2005-present).

Chairman und national delegate of the EU- COST-FA1203 "Sustainable Management of *Ambrosia artemisiifolia* in Europe (SMARTER), with over 30 countries participating (2012-present)

COLLABORATORS & OTHER AFFILITATIONS

Supervision of students and research associates

34 MSc and 17 PhD students so far; 15 Post-Doc fellows stayed in my research group at the University of Fribourg, most of them financed through my grants (1995-2011)

National and International collaborative projects (recent and presently running)

SCOPES (through the Swiss NSF), with Georgia on Plant Invasions (David Kikodze) (2002-2009)

North-South Institute, ETH-Zürich, with Kenia on “*Prosopis* invasions” (Walter O. Ogutu) (2005-2008).

SNSF-NCCR project on “Evolution and spread of invasive plants” (http://www2.unine.ch/nccr )

with Jorge Vivanco (Colorado State Univ.) on gene expression studies of 2x and 4x taxa

with Ray Callaway/John Maron on the population dynamics of *Centaurea* stoebe in Europe and the US in the presence and absence of antagonists,

with Siegbert Melzer (U Leuven, Belgium) on functional genomics and the evolution of perenniality

with Nuria Garcia-Jacas and Alfonso Susanna (Bot. Inst. Barcelona) on phylogenetic relationships

FUNDING (since 2001, and only grants > € 10’000 are listed)

- Swiss National Science Foundation, research grant (2001-2004) € 225’000

- National Centre of Competence in Research on Plant Survival, SNSF, (2001-2005) € 750’000

- EU-Tlinks, EU funded research programme, BBW, (2001-20005) € 320’000

- National Research Programme on Alps (NFP-48), SNSF research grant (2002-2005) € 215’000

- Research grant with Eastern Europe, (Georgia) SNSF SCOPES (2001-2004) € 40’000

- National Centre of Competence in Research on Plant Survival, SNSF, (2005-2009) € 210’000

- Research grant with Eastern Europe, (Georgia) SNSF SCOPES (2006-2009) on “Checklist of alien and invasive plants of Georgia” € 55’000

- British Petroleum Georgia (2008-2010) *on Ragweed*: its distribution and management € 10’000

- National Centre of Competence in Research on Plant Survival, SNSF, (2009-2013) € 150’000

- Federal Office for the Environment on invasive plants (2009-2010) € 10’000

- Swiss National Science Foundation, research grant (2009-2012) € 375’000

- CTI on biological control of *Rumex* spp. (co-applicant) (2010-2013) SFr. 650’000

- COST FA 1203 SMARTER (PI and Action Chair) (2013-2017) € 7200’000.

TEACHING

Regular lectures, practical courses and excursions in: general ecology, plant ecology, plant population, biology, ecology and evolution of plant-antagonist interactions, systematics of flowering plants, biological weed control, biological invasions, experimental design and statistics.

Invited MSc course in Naples, Italy (2006, 2009), Tbilisi, Georgia (2005-2008) and Wuhan, China (2008) on “Plant Invasions and Biological Control”

Invited Doctoral school course in New Delhi, India (2006) and Rennes, France (2009), Iran (2009) on Biological Invasions, and in Taschkent, Usbekistan (2008) on “Experimental Design and Analyses”.