Curriculum Vitae for Margareta Ihse

1. Personals

Name: Inger Margareta Ihse

Date of birth: 16 August 1943

Nationality: Swedish

Civil status: Married to Christer Ihse, two children born 1975, 1977; one grandchildren born 2010

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2. Education

1966 B.Sc. in Zoology, Botany, Chemistry and Pedagogy, Lund University.

1973 M.Sc. in Physical Geography, Environmental Conservation and Physics, Stockholm University. Thesis "Vegetation mapping of mountain vegetation by air photo interpretation – a pilot study"

1979 Ph.D. in Physical Geography, Stockholm University. Thesis "Interpretation of vegetation on aerial photos. Methodological studies for medium scale vegetation mapping"

1985 Assistant professor ("docent") in Physical Geography, Stockholm University.

Assistant professor ("docent") in Remote Sensing for Nature Conservation, the Swedish Environmental Protection Agency and Stockholm University.

1985 Professor's competence in Environment and Natural Resource Information, the Royal Institute of Technology, Stockholm.

1991 Professor's competence in Environmental Ecology, Swedish Agricultural University, Uppsala.

1996 Professor's competence in Natural Resource Management, Stockholm University

1997 Professor in Ecological Geography, Stockholm University

2008- Professor emerita

3. Employment

1967–1973 Lecturer in Secondary School, Karlshamn and Stockholm.

1973–1985 Research Assistant, Stockholm University.

1979-1990 Invited lecturing in Remote Sensing, Vegetation Mapping, Landscape Analysis, Ecology, Physical and

Ecological Planning and Resource Management at the Universities of Stockholm, Gothenburg, Kalmar,

Växjö, Karlstad. and Umeå

1981 Senior Lecturer in Ecology and Nature Resource Planning, Kalmar High School.

| 1985–1986 | First Researcher, Defence Research Institute, Stockholm. |
|-----------|---|
| 1986–1992 | Associate Professor, Swedish Environmental Protection Agency. |
| 1990–1992 | Senior Lecturer in Environmental Sciences, Stockholm University. (On leave for research projects until 1997.) |
| 1992–1997 | Senior Lecturer for Research in Remote Sensing and Nature Conservation, Department of Physical Geography, Stockholm University. |
| 1997-2008 | Professor in Ecological Geography, Stockholm University |
| 2008 | Professor emerita |

4. Awards

| 1998 | Elected fellow of the Royal Swedish Academy of Forestry and Agriculture |
|------|--|
| 2007 | The Gold Medal of the Royal Swedish Academy of Forestry and Agriculture |
| 2010 | The Nature Conservation Price of 2010, from the Swedish Agricultural University, Species inf. Centre |
| 2012 | The King's Medal, 8 th size with the ribbon of the Order of the Seraphim |
| 2012 | Honourable member of The Swedish Association for Nature Conservation |

5. Linguistic ability

| Language | Speaking | Reading | Writing |
|-------------------------|-----------|-----------|-----------|
| Swedish (mother tongue) | excellent | excellent | excellent |
| English | fluent | very good | very good |
| German | fair | good | slight |
| French | slight | slight | slight |

6. Publications

My publication list contains over 300 works. Most of them are scientific, in English and in Swedish, but there are also popular reports, pedagogic works, and discussion and debates. See separate list.

7. Specialisation and research interests

My research interest is in ecological geographical studies of the landscape. Main focus is development of geographical methods, based on remote sensing and cartography, to analyse the landscape and its changes in time-space-related studies, especially biotopes and the vegetation parts of the ecosystem during modern time and the last 200 years, and to study the effects of biodiversity from these changes. My research interest also include the human influences in the

cultural landscape. My study areas has been the Nordic landscapes, especially the Swedish, but I have also performed studies in Norway, Finland, Iceland and the Faroe Islands. In Sweden I have studied the main biotopes and vegetation of the ecosystems in the cultural landscape, the hemiboreal and boreal forests, as well as the mire and he mountain vegetation. Studies of biotopes in urban environments, urban ecology are also included.

My research has been directed towards applications in nature conservation biology and spatial environmental planning.

My research can be grouped in the following areas:

- Landscape analysis for monitoring and evaluation of biodiversity in ecosystem and landscape
- Vegetation and biotope changes in ecosystems as indicators of environmental threats.
- Method development in air photo interpretation, remote sensing and GIS for data collection, analysis and presentation in
 environmental planning, nature resource planning, landscape monitoring, planning for nature conservation monitoring
 and inventories
- Landscape and biotope changes and human influence in agricultural, forestry, mire and mountains and in urban areas, through multidisciplinary work.
- Quantitative vegetation estimations by spectral measurements of biomass.

This include work in: Vegetation and biotope mapping, development of classification systems, development of methods for change detection studies of the characteristic nature types in Sweden (mountains, mires and wetlands, grasslands, deciduous and coniferous forests) by use of colour infrared aerial photos and historical black and white photos, historical maps) and Cartographic work for visualisation of changes. Biomass estimations by spectral radiometry of wetland vegetation and dry grassland vegetation.

My research can be summarised in following keywords: geography, landscape ecology, holistic landscape analysis of natural and cultural values, biodiversity, remote sensing, air photo interpretation, landscape changes, biotope classification, vegetation mapping, landscape monitoring, and environmental planning.

8 a. Memberships of boards and committees/Assignments

8 a 1. International/national Evaluation committees for research programmes

| 2007 | The Swedish Agricultural University, Department of Forestry, Alnarp; Research program on "Broad leaved deciduous forests" |
|------|--|
| 2006 | IIASA (International Institute for Applied Sciences; Research programmes in "Environment and Natural Resources", Laxemburg, Austria, member of the evaluation Committee |
| 2006 | European Council, Research and applied program of the "Cost Action E 27Profor, Protected forest areas in Europe -analysis and harmonisation", member of the evaluation Committee |
| 1996 | Research Program of Cultural Landscapes, Norwegian Research Council; Member of the Nordic Evaluation Expert Group |
| 1995 | Geo-science Program of Education Lund University, member of the Evaluation Expert committee. |

8 a 2. International/Nordic research grants committees

| 2006 2008 | Finnish Research Council (expert panel for evaluation of remote sensing and development research programs) |
|------------|---|
| 2002 -2015 | Norwegian Research Council (advisory expert for evaluation) of research applications |
| 2001 | EU Research Committee for Environment Program, Key Action on "Global change, climate and biodiversity, 2.3.3. Fighting land degradation and desertification |

1995–1999 Member of the EU Research Committee for Training and Mobility Network, Brussels, Belgium (vice chairman 1999).

The Academy of Finland research program in biodiversity (advisory expert for evaluation)

8a 3. National research councils and other academic committees

| 2014- onward | The Scientific Council for Biodiversity at the Swedish Environmental Agency |
|--------------|--|
| 2007 - 2012 | The Swedish Government Scientific Council for Biodiversity (Government appointed) |
| 2007 onward | The King Carl Gustafs 50-years foundation for Environment, board member (appointed by the King, the chairman) |
| 2006-2010 | Member of the election committee for the Royal Swedish Academy of Agriculture and Forestry. |
| 2004- 2007 | The Swedish IIASA Committee (International Institute for Applied Systems Analysis), Austria |
| 2002- 2006 | The Bank of Sweden Tercentenary Foundation (Riksbankens Jubileumsfond), deputy board member; member of research, committee for geography and economy, and research committee for cultural heritage and transdisciplinary research (Government appointed) |
| 2002-2005 | Formas (The Swedish Research Council for Environment, Agricultural Sciences and Spatial Planning), evaluation committee for research schools; evaluation committee for transdisciplinary environmental research |
| 2003- 2007 | Committee for evaluation for the King Karl Gustaf's professorship in environmental sciences, for the Royal Swedish Academy of Agriculture and Forestry |
| 2000- 2007 | Committee for evaluation for the King Karl Gustaf's grants in environmental sciences, at the Royal Swedish Academy of Agriculture and Forestry (chairman) |
| 2000-2006 | Committee for Environment and Nature Resources, Royal Swedish Academy of Agriculture and Forestry (Chairman) |
| 1999-2007 | Nordic Council of Ministers, member of Nomination committee for Environmental prize (deputy member 1999-2002 for Minister of Environment and Parliament chairman Birgitta Dahl, since 2003 chair of the Swedish committee (government appointed)Infor |
| 2000 Expert | group for infrastructure and sustainable development, Research council for Buildings and Social structure (Byggforskningsrådet) |
| 2001 Swed | lish Royal Academy of Science, Committee for Environment |
| 1997-2000 | Evaluation committee for ass. Professors in the Faculty of bio-geo-science "Docentberedningen", Stockholms Universitet (deputy member) |
| 1997-2000 | Bendix and Liljevalchs research foundations, Stockholms Universitet (Deputy member) |
| 1997-2000 | Swedish Environmental Protection Board research program "Biodiversity indicators in forests (Member of the board of the program committee) |
| 1995-1998 | WWF Research Committee for Nature Conservation, World Wide Fund for nature, (Chairman) |
| 1995–1999 | Swedish Council for Planning and Coordination of Research, FRN, Member of the Research Committee for Environment, |

| 1994–1995 | Swedish Agency for Research Cooperation with Developing Countries, SAREC,.Member of the Advisory Group for Research in Rural Areas and Environment, |
|------------------|---|
| 1989–1993 | Swedish Environmental Protection Agency, SNV, the Committee for Terrestrial Research (Vice Chairman) |
| 1990–1992 | Swedish Society for Nature Conservation (SNF) Research Fond of E. and W. Gustavsson. (Chairman) |
| 8 a 4. Other int | ernational committees/Appointed assignments |
| 2005 | IUCN Commission for Ecosystem Management |
| 1999-2005 | IALE (International Association for Landscape Ecology), Vice president |
| 1998 | IUCN Commission for Species Survival |
| 1996 | IUCN-ESUSG (International Union for Nature Conservation, European Sustainable Development Specialist Group) |
| 1995 | ISOMAL, International Study-group on Multiple Use of Land, Wagening, The Netherlands. |
| 1993–1994 | EU Commission work for the pan-European state of the environment report of the European Ministers of Environment report "Europe's Environment: The Dobris Assessment" in the chapter of Landscape, for The European Environment Agency.(invited expert) |
| 1993–1994 | UNEP-HEM's working group on "Global vegetation mapping for climate change studies". |
| 1992 | Member of the Swedish delegation and expert panel in preparatory negotiations for the International Convention of Biological Diversity, Nairobi, Kenya (invited expert). |
| 1992 | Swedish non-governmental delegation to the United Nations Conference on Environment and Development (UNCED), Rio de Janeiro, Brazil. |
| 1984–1991 | Regional representative for IALE in Sweden. |
| 1984–1998 | IUCN Commission VII (International Union for Nature Conservation, Commission for Sustainable |

8 a 5. Other National boards

| 2006- ungoing | WWF Council of Sweden, personal elected member (with the King as chairman) |
|---------------|--|
| 2000-2004 | Royal Swedish Academy of Agriculture and Forestry (Vice president "vice preses") |
| 2000-2005 | National Forestry Board (Government appointed board member) |
| 2000-2007 | The Swedish Species Information Centre (board member) |
| 1999-2000 | Forestry and Agricultural Research (SJFR) Vice chairman |
| 1998-2009 | Svenska IALE/IALE Sweden - (chairman) |
| 1996-2007 | Centre for Research in Environmental and Nature Resources, CNM, Later Stockholm Resilience Centre , Stockholm University (board member and representative for the faculty of natural sciences) |
| 1993–2006 | World Wide Fund for nature, WWF in Sweden (board member). |

Development, former Environmental Planning).

| 1993–1995 | Swedish Agency for Research Cooperation with Developing Countries (SAREC)(Government appointed board member). |
|------------------|---|
| 1993–2000 | Department of Physical Geography, Stockholm University (deputy board member). |
| 1991–1996 | Centre for Research in Environmental and Nature Resources (CNM), Stockholm University (deputy board member). |
| 1991-2010 | Advisory Board for Environment and Aesthetics to the director-general of the Swedish Governmental National Road Agency |
| 1991–1993 | Swedish Society for Nature Conservation (SNF). 1 st Vice President |
| 1987–1993 | Swedish Society for Nature Conservation (SNF, Member of the Board). |
| 8 a 6. Organisat | ion/chairing of conferences/seminars |
| 2018 | IBPES- Intergovernmental Panel for Biodiversity and Ecosystem Services – biologisk mångfald och samhällsutveckling- vägar framåt (organising committee, introduction talk). |
| 2018 | Landskapsforum 2018 Vattnet i det brukade landskapet. The Swedish Royal Academy of Forestry and Agriculture, Stockholm (organising committee, introduction talk) |
| 2017 | IBPES- Hoten mot världens ekosystem- hur kan vi vända den negativa trenden? (organising comittee) |
| 2017 | Landskapsforum 2017 National conference Landskapsperspektiv i fysisk planering (Landscape perspectives in physical planning) The Swedish Royal Academy of Forestry and Agriculture, Stockholm (organising committee) |
| 2017 | Nordic seminar Multifunktionella landskap. Nordiska golfanläggningars möjligheter och utmaningar (Multifunctional landscapes, the potential and challenges for golf courses) , The Swedish Royal Academy of Forestry and Agriculture, Stockholm and STERF, (organising committee) |
| 2016 | Landskapsforum 2016 National conference Samarbetsnätverk I landskapet- möjligheter och utmaningar (Public participatory network in the landscape- changes and challenges) The Swedish Royal Academy of Forestry and Agriculture, Stockholm (organising committee) |
| 2016 | National seminar on Meadows is a key for sustainable future- but who pays? (Without money- no meadows and pastures – Utan pengar- inga hagar och ängar - levande ängar är en nyckel till hållbar framtid), The Swedish Royal Academy of Forestry and Agriculture, Stockholm (organising committee) |
| 2015 | International Symposium: European Remote sensing: Progress, Challenges and Opportunities, The 35 th EARSeL symposium; at KTH University (chairing session) |
| 2015 | National biodiversity conference 2015 A living city (Liv i staden. Möjligheter och metoder för biologisk mångfald i urbana miljöer) Cemter for Biodiversity, Swedish Agricultural University, Uppsala (Organizing committee and key note speaker) |
| 2015 | National seminar on the importance of Ecosystems services to feed a world without destroying it (Bruka utan att förbruka- om ekosystemtjänsternas betydelse för att föda en värld utan att förstöra den) The Swedish Royal Academy of Forestry and Agriculture first environmental seminar, Stockholm (moderator and organising committee) |
| 2015 | National seminar Agriculture and landscapes. The Swedish Royal Academy of Forestry and Agriculture, Stockholm (organising committee) |

| 2015 | International Conference "Large Parks in large cities. To the celebration of 20 years of Sweden's National City Park), WWF (World Wildlife Fund, Academies and Universities (Organising committee, chairing session) |
|------|--|
| 2012 | National seminar Facing the future; biodiversity, ecology and economy- three pillars in future agriculture and forest practice? (organising committee) |
| 2012 | International Conference on Environment and sustainability "Faith in the Future- how science can help in meeting environmental challenges- the Royal Professors Symposium on Global Sustainability, The Royal Castle, Stockholm (organising committee) |
| 2012 | National seminar on landscape "The European Landscape Convention" duty or possibility?" (Landskapskonventionen- pålaga eller möjlighet) The Swedish Royal Academy of Forestry and Agriculture, Stockholm (organising committee, moderator) |
| 2011 | National Conference on landscape "The landscape perspective- what is the difference?" ((Landskapsperspektivet - hur gör det skillnad), The Swedish Royal Academy of Forestry and Agriculture, Stockholm (organising committee) |
| 2010 | National Conference of IALE Sweden "The Swedish "Hagmarker" – a gem in the European landscape" |
| 2010 | National conference about vegetation mapping "Vegetation data for a better future, Stockholm, Swedish Land Survey (organising committee) |
| 2009 | Nordic Conference of biodiversity "Nordic biodiversity beyond 2010 - challenges and experiences in a global perspective", Trondheim, Norway (organising committe) |
| 2009 | Nordic Conference "Mapping and Monitoring of Nordic Vegetation and Landscapes", Reykjavik, Iceland (organising committee) |
| 2009 | National Conference about windmills and landscape "Windmills- of course, but not everywhere and not always", The Swedish Royal Academy of Forestry and Agriculture, Stockholm (chairman) |
| 2009 | National Conference of IALE Sweden "Green areas in urban landscape, history, values, planning, management and restoration", Stockholm (chairman), |
| 2008 | National Conference of IALE Sweden "Valuable wetlands- how to value and manage", Kristianstad (chairman) |
| 2007 | National Conference of IALE Sweden "The Landscape and it's outlying lands ("Landskapets utmarker, – hur värdera och sköta? , Historisk kunskap och överblick, Natur och kulturvärden, Skötsel och förvaltning"), Siljansnäs, Dalarna (chairman) |
| 2006 | National Conference of IALE Sweden on the Cultural landscape, its values and managements, Norrtälje (chairman) |
| 2006 | National Conference on Vegetation and Biotope Mapping for sustainable development and planning – Stockholm (chairman of organizing committee) |
| 2005 | National meeting of Swedish Cartographic Society and Remote sensing Society (Kartdagar); "Vegetationskartor och IRF-flygbilder-framtidens produkt eller gammal skåpmat?"- (organizer and chairman for vegetation mapping session", Jönköping |
| 2004 | Nordic meeting on vegetation classification systems in a European context within the Biohab EU-project, Stockholm (coorganiser Helle Skånes) |
| 2003 | IALE World Conference, Darwin, Australia session Landscape conservation (chair) |

| 2002 | National seminar of Svenska IALE/IALE Sweden, Dynamiska landskap - svensk landskapsekologisk forskning och tillämpning, Tyresta, (Stockholm), chairman |
|------|---|
| 2001 | European IALE conference (International Association for Landscape Ecology) "Dynamics of European Landscape Stockholm/Tartu (chairman, organising committee) |
| 1998 | Royal Academy of Science, Environmental committee, "Miljökonsekvensbeskrivningar (MKB) inom fysisk regional och riksplanering. Kan MKB skydda miljön? (coorg. Henning Rodhe) |
| 1998 | European workshop on Sustainable landscapes and vegetation changesthe role of Remote sensing in research and application, (chairman organising committee), Stockholm University, Stockholm |
| 1996 | Int. IALE- symposium, Tartu, Estonia (member of program committee) |
| 1995 | European IALE seminar of Landscape Changes and its Ecological Consequences, Tilburg, The Netherlands (chairman organising committee) |
| 1995 | International Cartographic Conference in Stockholm 1997 (member of organising committee). |
| 1993 | National Conferences on Vegetation Mapping, in Gävle (chairman). |
| 1991 | Session of Spatial Pattern at the IALE World Conference, Ottowa, Canada (chairman). |
| 1984 | Session of Remote Sensing at the First International IALE Seminar, Roskilde, Denmark (chairman). |
| 1991 | National Conferences on The Use of Infrared Aerial Photos in Planning and Mapping, The Swedish Land Survey, Stockholm University and Stockholm University, in Gävle (organiser and chairman). |

8 a 7. Other national committees/Assignments

| 1997-2000 | Advisory Board for Protection of the Beauty of Stockholm (Stockholms Stads Råd till skydd för Stockholms Skönhet) |
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| 1996 | Swedish Environmental Protection Board, Advisory group for the new "Råd och anvisningar vid inventering i natur- och kulturlandskapet" |
| 1996 | Stockholm Regional Environmental Advisory Board (Stockholms läns landstings regionala miljövårdsråd REM) Member and deputy member |
| 1996-2008 | Swedish National Committee for IUCN (Vice chairman 1996-2000) |
| 1993–1995 | the Research Council of Building and Planning, Research Committee for Future Research Program in Infrastructure Issues (BFR) |
| 1991–1993 | Research Committee for Forestry Research at the Swedish Agricultural University (SLU). |
| 1990–1992 | The Swedish national Committee (FN -92kommitten för miljö och utveckling), the Governments Committee for the UNCED Conference in Rio (Government appointed). |
| 1990–2010 | Swedish National Road Board (Vägverket) Member of National Environment Advisory Group to director general). |
| 1989 | Agriculture and Environment ("official report") from the Environmental and Energy Department. (Governmental Expert) |
| 1987-1988 | Council for Environment, the Swedish Government |

8 a 8. Expert for evaluation of academic positions (sakkunnig)

Uppsala University, (Human Geography)(Senior lecture)

The Royal Technical Institute, KTH, Spatial and Environmental System Analysis (docent)

Linné University, Sweden, (Professor)

Kiel University, Germany (Geography and Landscape Ecology), (Professor)

Helsinki University, Finland (in Geoinformatic in geographical research in geographical information system, especially monitoring of environment), (Professor)

Joensuu, University, Finland (in Geography, special Physical Geography), (Professor)

Lund University, Sweden (Physical Geography), (Professor)

Tartu University, Estonia (in Cartography), (Professor)

Bergen University (Geography and Landscape ecology), (docent, ass.professors/post doc)

Ben Gurion University, Israel (Geography and Environmental Development), (docent, ass.professors/post doc)

Iceland University, Reykjavik (in Geography) ,(docent, ass.professors/post doc)

Stockholm University, Sweden, several (appointments Department of Systematic Ecology, Physical Geography, several), (docent, ass.professors/post doc)

Swedish Agricultural University, Ultuna, Sweden, several, (docent, ass.professors/post doc)

Lund University (Physical Geography) several positions (senior lecturer)

Stockholm University (senior lecturer)

Swedish Agricultural University, several positions (senior lecturer)

Roskilde University, Denmark (senior lecturer)

8b Membership of professional associations

The Swedish Royal Academy for Forestry and Agriculture, The Environmental Committee of the Royal Swedish Scientific Academy, International Association for Landscape Ecology (IALE), International Union for Nature Conservation (IUCN), Commission of Species survival, Commission for Ecosystem Management, International Cartographic Association, (ICA), Nordic Association for Cultural Landscape, Swedish Cartographic Society, Swedish Society for Anthropology and Geography (SSAG), World Wild Fund for Nature, WWF, The Swedish Association for Nature Conservation, The Swedish Botanical Society, The Swedish Geographical Society, Society for distinguished Women (Nya Idun)

9. Referee, opponents examination committees and supervision

9a Reviewer for International Journals

I have been a reviewer for: Ambio (several articles), Geoecology, Geografiska Annaler, Journal of Remote Sensing, Journal of Ecology, Rangifer, Journal of Biogeography, Norwegian Journal of Agriculture, Scandinavian Journal of Forest Research (several articles), Agriculture, Ecosystem and Environment (several articles), Landscape Ecology (several articles), Landscape and Urban Planning (several articles), Ecography, Biodiversity and Conservation, European Science Foundation, Landscape Research, Landscape online.

9b Editing Board

Editing board of Landscape online- the IALE-D journal,

9c Opponent for PhD thesis/fil.lic

- 2014 KTH University (Royal Institute of Technology), Stockholm, Department of Environment and Planning, in Geoinformatics. "Satellite Monitoring of Urban Growth and Indicator based Assessment of Environmental Impact" (Dorothy Furberg)
- 2009 Bergen University, Department of Geography. "Vegetation mapping and landscape analysis. GIS-modelling and analysis of vegetation transitions, forest limits and expected future forest expansion" (Anders Bryn).
- 2006 Bergen University, Department of Botany "Field margins in central Norway creation, management and flora (Hege Hovd)
- 2005 Swedish Agricultural University, Department of Landscape planning, Alnarp 2005 (lic thesis): *The Acceptance Process in Road Planning* (Kajsa Hylmö).
- 2004 Trondheim University, NTNU- Vitenskapsmuseet, Seksjon for biologi, Norge, June 2004: "Coastal Heath Vegetation in Central Norway; recent past, present state and future possibilities" (Liv Sigrid Nilsen)
- 1999 Tartu University, Department of Geography, Estonia, December 1999: "Methods for landscape monitoring in Estonia" (Kalev Sepp).
- 1997 Basel University, Department of Geography, Unit for Remote sensing and Climatology, December 1997 "Remote sensing, biomass estimations and climatology" (Co-examiner)

Member in the examination committee for PhD dissertations/fil.lic. *

- 2016 Lund University, Department of Physical Geography and Ecosystem: " *Monitoring biodiversity in cultural landscapes: development of remote sensing-and GIS-based methods*" (Jonas Dalmayne)
- 2016 KTH University, Stockholm, Schools for Architecture and Planning. "Remote Sensing of Urbanization and Environmental Impacts" (Jan Haas).
- Uppsala University, Department of Human Geography, "Population and land-use change in Noarootsi Parish (Nuckö) in North-West Estonia during the transition from feudal society to capitalism (1590-1940) " (Hele Kimann)
- 2014 Swedish Agricultural University, Department of Urban and Rural Development, Uppsala "Integrating food production and biodiversity" (Kristina Belfrage)
- 2009 Swedish Agricultural University, Department of Soil and environment, Skara "Improved farm soil mapping using near infrared reflection spectroscopy" (Johanna Wetterlind)
- 2008 Swedish University of Agricultural Sciences, Faculty of Natural Resources and Agricultural Sciences,
 Department of Economy, December 2008: "Det agrara landskapet på vinst och förlust- resursåtgång vi
 dproduktion av biologiska och historiska värden" (Eva-Lotta Påiviö)
- 2007 Stockholm University, Department of System Ecology, september 2007: "Managing the urban greens. Maintaining ecological functions in human dominated landscapes" (Erik Andersson)

- 2007 Gothenburg University; Department of Plant Ecology, January 2007: "Tundra landscape ecology: diversity across scales" (Karin Lindblad)
- 2005 Uppsala University, Department for Geoscience, June 2005 "Risk analysis for environmental assessment. Examples from the road Kiruna Narvik" (Markus Lundkvist)
- 2005 Royal Technical University (KTH), Department of Infrastructure, division of urban studies, January 2005: "Communicating professional Perspectives. Local Government and Spatial Planning for Sustainability" (Sylvia Dovlén)
- 2004 Royal Technical University (KTH), Department of Planning and economy, May 2004: "Landscape ecological analysis and assessment in an urbanising environment-forest birds as biodiversity indicators" (Ulla Mörtberg)
- 2002 Swedish University of Agricultural Sciences, Department of Ecology and Environmental Sciences especially agricultural ecology, December 2002: "Landscape and farm management influence generalist predators. Effects on condition, abundance and biological control" (Örjan Östman)
- 2002 Stockholm University, Department of System Ecology, Natural Resource Management, May 2002: "Quantifying Ecosystem Services from Regional to Local Scales- Examples from the Baltic Sea Drainage Basin", (Åsa Jansson).
- 2001 Swedish University of Agricultural Sciences, Department of Vegetation Ecology, Umeå, May 2001: "Forest landscape change in boreal Sweden 1850-2000 a multiscale approach" (Anna-Lena Axelsson)
- 2001 Stockholm University, The Beijer Institute, Royal Swedish Academy of Science and Department of System Ecology, April 2001: *Local institutions, taboo and biodiversity?*. (Johan Colding)
- 2001 Copenhagen University, Department of Geography, March 2001: "Implementing landscape ecological methods to GIS based procedures for land use analysis and decision support in rural areas" (Ole Hjort Caspersen)
- 1999 Swedish University of Agricultural Sciences, Alnarp, Department of Landscape Planning, December 1999:"*Edge habitats in the agricultural landscape* (deputy member) (Ingrid Sarlöv Herlin)
- 1999 Gothenburg University Department of Physical Geography, September 1999: "Influences of parks on local climate" (Hillevi Upmani)
- 1999 Stockholm University, Department of Physical Geography, May 1999: "Bush encroachment and the role of Browse in cattle production an ecological perspective from a bush encroached grazing system, Olifants Drift, Kgatleng District, Southeast Botswana." (Nkobi Moleele)
- Karlstad High School/Gothenburg University: "Geographical analysis of the cultural landscape and use of nature resources" (Gabriel Bladh)
- Stockholm University, Department of Physical Geography: "GIS and remote sensing for studies of thermal patterns in forestry planning" (Maj-Liz Nordberg)
- Stockholm University, Department of Physical Geography: "Remote sensing for vegetation mapping in Sweden" (Laine Boresjö)
- Linköping University Tema Vatten: "Landscape changes and hydrology" (Lotta Andersson)
- Lund University: "Remote sensing and land use in Sahel area" (Katarina
- Stockholm University, Department of Physical Geography: "Land use and participatory nature conservation, Namibia" (Neil Powell)
- Stockholm University, Department of Physical Geography: The geography of plants (Sara Cousins)
- Stockholm University, Remote sensing and GIS for geographical landscape and climate studies for reforestation on clear cuts (Maj-Liz Nordberg).

10 Teaching

10a Supervision for PhD/fil.lic*

- I have been leader and supervisor in the research group in Ecological Geography; consisting of another two senior researchers, six PhD students and three projects research assistants. I have been supervisor for following PhD students
- 2007 **Bo Eknert** * Landscape changes and its effects on bird flora with criteria for nature conservation values, December 2007 (main supervisor)
- 2006 **Swantje Oostra**: Bidrag till kännedom om lunden som begrepp och företeelse (April 2006 (vice supervisor), Swedish Agricultural University, Department of Landscape Planning, Alnarp
- Maria Bergström*: Gryts socken landskap och lokalsamhälle i ekosystemperspektiv, Stockholm University,
 January 2004 in thesis of Human nature resources and the use during historic time changes (main supervisor)
- Anna Allard: Vegetation changes in mountainous areas- a methodology for surveillance and monitoring. April 2003 (main supervisor)
- 2002 **Katarina Löfvenhaft**: "Spatial and temporal perspectives on biodiversity for physical planning. Examples from urban Stockholm, Sweden. December 2002 Stockholm University (main supervisor)
- 2002 **Anna Broström**: "Estimating source area of pollen and pollen productivity in the cultural landscapes of southern Sweden developing a palynological tool for quantifying past plant cover -, October 2002, Lund University, Quaternary Geology (deputy supervisor)
- 2002 **Helena Persson**: "The spatial structure of genetic and morphometric variation in *Coryllus avellana* (Betulaceae) pattern and scale", December 2002, Lund University, Department of Ecology and Systematic Botany (deputy supervisor)
- 1998 **Gudrun Gisladottir**:" Geographical analysis of natural and cultural landscapes on Iceland with the human use of nature resources" April 1998, Stockholm University (main supervisor)
- 1998 **Mats Leine***: "Small scaled vegetation changes in mires studied by digital photogrammetry" in program of Digital photogrammetry to detect minor vegetation changes (main supervisor)
- 1996 **Helle Skånes**: "Air photo based remote sensing for studies of historical and recent landscape changes of flora and vegetation as base for integrated planning in the cultural landscape". december 1996, Stockholm University (main supervisor)
 - o interrupted Merit Kindström (Landscape ecology, key biotopes and patterns in forest ecosystems ()

10b Supervisor for Master Thesis/others

of six students at Stockholm University, Department of Physical Geography (Gabriel Blad "Kulturlandskapet I Värmland förändring och värde I svedjefinnarnas område", Siv Runborg Landskapsförändringar i Tomteby Öland, en oskftad by), Helle Skånes Metodstudier för kartering av lövskog i Halland med IRF-flygbilder), Tommy Löfgren utbredning och förändring av lövskog I barrskogslandskapet, en landskapsekologisk studie från Hjälmaren till Berslagen), Merit Kindström (Metodstudier för flygbildstolkning av nyckelbiotoper i skog), Mikaela Löfgren (studier av Eu-bidragens påberkan på gräsmarker på Gotland)) and four students in other departments (Spektralmätning av alvarvegetation för bestämning av biomassa", Department of Botany, Stockholm University, Landskapsförändringar och effekter av dikning/dränering inom Emåns källområden, Royal Institute of Technology, Department for Land Survey, Stockholm.

Supervisor for an American student from Harvard, (Fulbright stipend (6 month in 1991)

Host for a Chinese guest researcher (2 years in 1990-1992), with grants from the Swedish Institute

10c Other teaching

I have large experience in teaching, with more than 2000 hours lecturing. I have experience in development of courses, writing and development of teaching material, like handbooks and stereogram. I have also large experience of field courses and excursions.

The teaching has been in

base level courses:

- nature resources planning, plant ecology, nature conservation, ecological air photo interpretation, geological air photo interpretation, remote sensing at Kalmar University ("Högskola")
- physical geography, geosciences and bio-geography (air photo interpretation, vegetation mapping, climatology, meteorology, oceanography, remote sensing and environmental planning at Stockholm University

advanced level courses in

- air photo interpretation with vegetation mapping, nature resource planning, environmental protection and landscape changes at Stockholm University, Department of Physical Geography
- air photo interpretation with vegetation mapping and environmental protection at Göteborg University, Department of Physical Geography
- landscape changes and remote sensing at Lund University, Department of Physical Geography
- landscape changes and remote sensing at Karlstad University ("Högskola")
- air photo interpretation, nature resource information and landscape changes at Royal Institute of Technology, Department of Photogrammetry, Stockholm
- mapping and interpretation technique, at Skinnskattebergs Forestry School
- Remote sensing for environment at Umeå University ("Hälso -och miljövårdsutbildningen)
- Remote sensing for environment at Kalmar University (Högskola) ("Hälso -och miljövårdsutbildningen)

PhD course in

• air photo interpretation at Stockholm University, Department of Physical Geography.

External courses for

- planners in local and regional planning in Västerås kommun, in air photo interpretation
- regional and local planners in practical environmental knowledge, Stockholm University

- the Ministry of Environment ("Miljödepartementet") in environmental knowledge and remote sensing technique
- the Swedish Environmental Protection Agency ("Naturvårdsverket"), planners from all County administration in environment in air photo interpretation of valuable meadows and pastures for national inventories
- the Swedish Environmental Protection Agency, in air photo interpretation in the first application of landscape monitoring, the LiM-project
- the Swedish Forest Board ("Skogsstyrelsen"), for planners from all County administration ("skogsvårdsstyrelserna) in air photo interpretation of high valuable biotopes in forest key biotopes ("nyckelbiotoper") in three regionally adapted courses
- for planners in STORA Skog in landscape ecological planning and air photo interpretation

9. Presentations on conferences/ symposia/invited Guest lectures

Stockholm

2006

| 9. Presentations on conferences/ symposia/invited Guest lectures | | | | |
|--|--|--|--|--|
| 2018 | Mårten Sjöbeck och naturvården- seminarium om "Mårten Sjöbeck, grundaren av den svenska markhistorien- KSLA sept 2018. | | | |
| 2017 | Att förstå landskapet. Seminarium om Landskap och kulturmiljö - Domstolsakademins teknikerdagar om PBL | | | |
| 2012 | Landskapets helhet - utgångspunkt och strategi för kunskapsuppbyggnad och analys av landskapets värden- "Verdier og utveiklingstrekk i kulturlandskapet, Biofors-Midt Norge, Trondheim, april 2012 | | | |
| 2011 | How to analyse a landscape; National seminar on "Landscape perspective" seminar of the European landscape convention and its accomplishment in Sweden (Landskapsperspektivet- hur gör det skillnad-), Stockholm 2011-05-10, KSLA, RAÄ and Vitterhetsakademin | | | |
| 2010 | Biodiversity in urban planning on landscape ecological basis- history and future –European Green Capital seminar What about Urban Nature- Biodiversity and Ecosystem Services, Stockholm, October 14-15, 2010 | | | |
| 2010 | Is it too far for the bumblebee to fly? Thoughts about isolation and ecological networks in hagmarkslandscape"- National Conference of IALE Sweden "The Swedish "Hagmarker" – a gem in the European landscape" | | | |
| 2009 | Swedish Land Survey national symposium on Vegetation mapping "Historisk bakgrund och framtidens visioner", (key speaker), Stockholm | | | |
| 2008 | IALE US yearly conference Symposium on Landscape Patterns and Ecosystem Processes: The role of human societies "Landscape patterns of grassland reflects historic land-use organisation and management- examples from Sweden.", Madison, USA | | | |
| 2007- | IALE World Conference, Symposium on Mountain landscapes- "Values and threats in Swedish mountain landscapes, Wageningen, Netherlands | | | |
| 2007 | MistraProgram INCLUDE: "Hållbar utveckling från ett landskapsperspektiv"- invited key note speaker, | | | |

Norsk institutt for landskap og skog, Oslo, Norge Workshop för Norges Nasjonal program for kartlegging

og overvåking – kulturlandskap" "Övervakning av biologiska värden i kulturlandskapet i Sverige"

| 2006 | Svenska IALEs nationella konferens om Odlingslandskapet, 4-5 oktober, Campus Roslagen, Norrtälje "Hur har gräsmarkerna förändrats under de senaste 250 år i ett landskapsperspektiv?"- |
|------|---|
| 2006 | Nationell konferens om vegetations- och biotopkartering för en ekologiskt hållbar samhällsplanering, Stockholms Universitet "Vegetationskartering i Sverige- en historisk tillbakablick och en framtida vision". |
| 2006 | IALE-Deutschland, yearly conference, "Changes in agricultural landscapes during 1991- 2001- effects on biodiversity and ecosystems", Kiel, Germany |
| 2005 | Kartdagar 2005 "Vegetationskartor och IRF-flygbilder - framtidens produkt eller gammal skåpmat?, Jönköping |
| 2005 | Centre for transdiciplin environmental reserach, CTM, Stockholm University: "Odlingslandskap i förändring- om hotade natur- och kulturvärden i odlingslandskapet. Hur se och förstå?", 5 October, Stockholm |
| 2005 | Naturvårdsdirektoratet, Trondheim, Norge, Seminarium om Bruk av fjernmålsteknikker til overvåking av biologisk mangfold "Erfarenheter från Sverige av övervakning av landskapsförändringar och biologisk mångfald med hjälp av fjärranalys, främst IRF-flygfoto.", 14 October, Trondheim. |
| 2005 | WWF's conference "Ekoparken -10 år som Nationalstadspark, Stockholm "Livsrum och vägar för växter och djur i Nationalstadparken" |
| 2005 | IALE-European conference " Historical knowledge and holistic integration in European cultural landscapes", Faro, Portugal |
| 2005 | INTECOL-ESA (International Ecological Congress- Ecological Society of America), Montreal, Canada; "Landscape and vegetation changes in multiple scale- studied in Swedish Mountains" |
| 2004 | Biohab- biological mapping of habitats in Europe, "Succession changes monitored by interpretation in colour infra-red aerial photographs - examples from Swedish ecosystems", Prague, Czech republic. |
| 2004 | Swedish Royal Academy of Forestry and Agriculture Vår nya fauna- "Klimat och landskapsförändringar av betydelse för faunan" |
| 2004 | Iceland Natural Historic Institute: "Vegetation mapping in Sweden" |
| 2004 | Formas, KVA, KSLA's nationella konferens, Stockholm, om Städernas grönstruktur. Vad kan vi lära av nationalstadsparker i Sverige och Finland? |
| 2004 | Biohab Eu workshop, Prague, Czech Republic: "Succession changes monitored by interpretation in colour infra-red aerial photographs- examples from Swedish ecosystems" |
| 2003 | IALE World Conference, Darwin, Australia:" Indicators from colour infrared aerial photographs –models and methods for identification and monitoring of landscape, vegetation and biotopes" |
| 2003 | IALE International summer school for PhD students: The cultural landscape- integrated values, methods and analysis" |
| 2002 | IALE Portugal (APEP) International Workshop, Guarda, Portugal: Landscape ecology and Management of the Swedish Mountain Landscapes" |
| 2002 | Royal Academy of Letters, History and Antiquities, Stockholm: Det biologiska kulturarvet- landskapets minne. |
| 2002 | 2nd Freiburger Geobotanischen Kolloquim, Freiburg University, Germany: "Persistence and changes in landscape in Sweden with a historical background" |

| 2002 | Ölandssymposiet, Uppsala Universitets Ekologiska forskningsstations symposium om Bondeekonomi och ekologi, Skogsby, Öland: "Att läsa historien i landskapet- metoder att se och förstå biodiversitet" |
|------|---|
| 2002 | Kartdagarna, Jönköping "IR-färgbilder – ovärderliga landskapsdokument och miljöreferenser" |
| 2000 | UK-IALE Yerly meeting on Quantitative approaches to landscape ecology, University of Wales, Bangor, Wales," Analysis of temporal changes at a landscape scale" |
| 2000 | Royal Swedish Academy of Agriculture and Forestry, Stockholm "Storskaliga landskapsförändringar som problem", "Hur kan vi se och förstå landskapsförändringar. National conference on landscape changes |
| 2000 | Swedish Environmental Protection Agency, seminar about the Archepelago, Stockholm."Metodstudier i IRF-flygbilder för översiktlig kartering av höga naturvärden i terrestra naturtyper i skärgården", Stockholm |
| 2000 | Royal Academy of Science, Stockholm: "Kan biodiversiteten i Nationalstadsparken bevaras?" |
| 2000 | Royal Swedish Academy of Agriculture and Forestry, Stockholm: "Hur förändringar i odlings- och jordbrukssystemen under 1900-talet har påverkat landskapets utseende och innehåll". National seminar on agriculture and sustainability |
| 1999 | NorLam, Nordic Workshop on Landscape, Environment and Biodiveristy Monitoring, Fuglsö, Denmark (Norfa), "Strategic selected landscape regions and landscape elements- a Swedish approach for regional landscape monitoring" |
| 1999 | Flora och faunavårdskonferensen, Swedish Agricultural University, Ultuna: Hur värderar och bevarar vi odlingslandskapets naturmiljö och biodiversitet?" |
| 1998 | Department of Human Geography, Stockholm University: "Historic and geographic analytic analysis of the biodiversity of grasslands on landscape and species level. |
| 1996 | Kartdagarna, Norrköping, "Behovet av landskapsinformation för natur-och miljövård. |
| 1996 | Linnesymposiet, Växjö, "Vårt förändrade landskap" |
| 1996 | Finish Forest and Park Service, Helsingfors, Finland: "Possibilities and difficulties of CIR biotope interpretation. Methods and experiences from Sweden." |
| 1995 | College of Sogn og Fjordarne, Department of Landscape Ecology, Norway: "Flygbildsteknikens möjligheter och begränsningar vid kulturlandskapsstudier" |
| 1995 | College of Sogn og Fjordarne, Department of Landscape Ecology, Sogn, Norway: "Metoder för geografisk analys i ett kulturlandskap" |
| 1995 | IUFRO World Conference, Tampere, Finland: "Environmental Planning with CIR Air Photo Based Information in a GIS Decision Support System" |
| 1994 | Lund University, Department of Systematic Botany: "Grassland Changes in the Agricultural Landscape" |
| 1994 | Swiss Biodiversity Conference, Department of Geography, Basel, Switzerland: "Landscape Approach to Biodiversity Studies in Sweden". Invited key-note speaker. |
| 1994 | Open lectures at Stockholm University: "Europas Landskap – förutsättningar och hot" |
| 1993 | Harvard Forests, Cambridge, USA: "Vegetation Changes, Patterns and Key Biotopes in Agricultural and Forested Landscapes in Sweden" |

| 1993 | Royal Academy for Forestry and Agriculture, seminar on Bild- och fjärranalys i lantbrukets tjänst, "Landskapsövervakning och effecter av förändrad jordbrukspolitik" |
|------|---|
| 1993 | Lund University, Department of Physical Geography: "Fjärranalys för landskapsförändring" |
| 1993 | Helsingfors University, Department of Botany: "Structure and Distribution of Fragmented Deciduous Forests in Boreal Landscape" |
| 1993 | Roskilde University and IALE-Denmark yearly meeting: "Hur bestämmes naturtyper i det öppna landet från flygbilder" |
| 1993 | Swedish Council for Forestry and Agricultural research (Skogs- och jordbrukets forskningsråd) seminarium om Kulturvetenskapliga aspekter på livsmedelssystemet "Ekologiska och miljö aspekter på livsmedelsproduktion", Stockholm |
| 1993 | Stockholms Universitet, Kulturgeografiska institutionens temadag om Natur och Kultur "Landskapet i ett ekologiskt perspektiv- struktur och dynamik" (inledningstalare) |
| 1992 | Norska Direktoratet for Naturforvaltning kurs i Nasjonal registrering av verdifulle kulturlandskap, Åsane, Norge, "Bruk av flygfoto vid registrering av värdefulla kulturlandskap" |
| 1992 | Karlstad College, course in Miljöinformation, "Landet som försvinner", Karlstad |
| 1991 | IR-91, nationell konferens- om IRF-flygbilder, anordnad av Lantmäteriverket, Statens Naturvårdsverk och Stockholms Universitet, Gävle "Inledningsanförande |
| 1991 | Nordic Association for Cultural landscape (Nordiska förbundet för kulturlandskap) yearly meeting, Kuusamo, Finland "Biomassaproduktion och markanvändning på rikkärr och dammäng i Kuusamo" |
| 1991 | Stockholm University Open lectures in the serie Miljön i fokus: "Landskapets utarmning under 1900-talet" |
| 1991 | Seminar "Det stängda landskapet - about The new agricultural policy and its effect" organized by the farmers regional organisation, Kalmar, "Landskapets omvandling, effecter av en förändrad jordbrukspolitik" |
| 1991 | Växjö College, lectures in the seminar serie Miljöforskning över ämnesgränserna "Naturgeografi och Landskapsekologi" |
| 1990 | Kalmar College, invited lectures in the course of Nature resource management in theory and practice, example Emån drainage area "Jordbrukslandskapets utveckling" |
| 1990 | Seminar at the Central Board for Antiquities, Stockholm "Samordnad landskapsanalys ur ett geografiskt perspektiv" (med Ulf Sporrong och Clas Tollin) |
| 1990 | The farmers organization (LRF), seminar about The ,arable land in a hundred year perspective, Stockholm "Åker och äng i odlingslandskapet. En belysning av utvecklingen och effekterna I fysiska termer", Stockholm |
| 1989 | County Administration and the Association of Local Authorities, Kronobergs län, Värnamo, Conference on The agricultural landscape and the agricultural policy, "Odlingslandskapets historia" |
| 1988 | Council for Development of landscape information, ULI, yearly seminar, Gävle "Kommunal hushållning med naturresurser genom datoriserat beslutsunderlag" (tillsammans med W. Arnberg och G. Wallenberg) |
| 1988 | Linköping University, lectures in the course of environmental science "Landscape analysis with help of air photos", Linköping |

| 1988 | Bergen University, Department of Botany: "Application of False-colour Film on Air Photos for Vegetation Mapping in Swedish Mountains" |
|------|---|
| 1988 | Bergen University, Department of Botany: "Application of Remote Sensing for Vegetation Mapping and Resourse Management in Norden and Sahel" |
| 1987 | Helsingfors University, Department of Botany : "Flygbilder som hjälpmedel för monitoring av landskapsförändringar" |
| 1987 | Nationella folkrörelsekommitten's conference for a Living countrysida and nature "Kulturlandskapets förändring I det långa perpektivet. Pågående och förväntade förändringar", Södertälje |
| 1987 | The Association of Geography teachers (Geografilärarnas riksförening och LRF) "Kulturlandskapets förändring", Stockholm |
| 1987 | The Swedish Environmental Protection Agency, yearly conference for County administration, Kalmar 'Förändringar i jordbrukslandskapet och restbiotopers betydelse' |
| 1986 | Lund University seminar for Riksbankens Jubileumsfond on the project" The cultural landscape during 6000 years", |
| 1986 | Military High School, Lectures in Aerial Photo Interpretation of vegetation and soil |

| 1986 | Military High School, Lectures in Aerial Photo Interpretation of vegetation and soil | | | | | |
|------------------|--|--|--|--|--|--|
| 10. Participance | e in symposia/conferences/seminars | | | | | |
| 10 a Internation | al symposia/conferences/workshops | | | | | |
| 2010 | European Green Capital seminar What about Urban Nature- Biodiversity and Ecosystem Services, Stockholm, October 14-15, 2010 | | | | | |
| 2010 | Expert workshops in preparation of SBSTTA-14 (Subsidiary Body on Scientific, Technical and Technological Advice at the Convention on Biodiversity (CBD), organized by the German Federal Agency for Nature Conservation at the International Academy for Nature Conservation, Vilm, Germany, 15-17 March | | | | | |
| 2009 | Nordic symposium "Nordic biodiversity beyond 2010 - challenges and experiences in a global perspective. a Nordic symposium with the outlook to the world, 26-27 October 2009, Trondheim, Norway | | | | | |
| 2009 | International workshop of "Biodiversity, ecosystem services and governance, Tjärnö, Sweden 4- 6 September, organized by Swedish Governmental Scientific Council for Biodiversity. | | | | | |
| 2008 | IALE-US Yearly conference, 2008, Madison, USA | | | | | |
| 2007 | IALE 7 th World Conference, Wageningen, Netherlands | | | | | |
| 2007 | ISO (International Standardisation Organisation ISO/TC 211 24 Plenary and working group meeting in Roma, Italy 26 May – 1 June (for geografic information), member of Swedish delegation | | | | | |
| 2006 | IALE Deutchland Yearly Conference, Kiel, Germany | | | | | |
| 2006 | Earsel Conference (European Remote Sensing Laboratories) Symposium, Warsaw, Polen | | | | | |
| 2005 | IALE European Conference, Faro, Portugal | | | | | |
| 2005 | INTECOL-ESA (International Ecological Congress- Ecological Society of America), Montreal, Canada; "Ecology at multiple scales" | | | | | |
| 2004 | IUCN 3 rd World Conference, Bangkok, Thailand "People and nature- only one world" | | | | | |
| 2004 | Biohab International workshop, Prague Czech republic | | | | | |

IALE 6th World Conference, Darwin, Australia 2004 2003 Biohab European Workshop- habitat review and definition, Roskilde Danmark 2003 Biohab Internat. Workshop, Vienna, Austria 2003 Royal Academy of Forestry and Agriculture international conference: Ecosystem services in European agriculture in theory and practice.-, Falkenberg, Sweden 2002 IALE Portugal (APEP) International Workshop, Guarda, Portugal: Landscape ecology and Management of the Atlantic Mountain Landscapes" 2002 2:e Geobotanische Colloquium in Freiburg, Freiburg University, Freiburg, Germany, 2001 IALE European Conference "Development of Europe's landscape, Stockholm/Tartu, Sweden/Estonia ISOMUL 3rd International Workshop on Sustainable Land Use Planning "Fragmentation and Land use planning" 2000 2000 IALE-UK, Annual meeting, Bangor, Wales 1999 SAI-SNSB workshop, European Space Research Centre, Ispra, Italy IALE 5th World Congress, Snowmass Village, Colorado, USA 1999 1998 European Science Foundation, ALPNET workshop on biodiversity in European Mountains, Monte Bondone, Italy 1998 INTECOL, International Ecological Conference, Florence, Italy 1998 27th Remote Sensing Conference of Environment, Tromsö, Norway 1998 Permanent Rural Conference for Studies of Cultural Landscape, Tronheim/Röros, Norway 1997 Swedish Royal Scientific Academy, "Research for Mountain Development in Europe", Abisko, Sweden 1996 IUFRO World Conference, Tampere, Finland 1996 IUCN (International Union for Nature Conservation) World Conference, Montreal, Canada 1995 European IALE Seminar: "Land Use Changes and its Ecological and Landscape Consequences", Tilburg, The Netherlands. 1995 IALE 2nd European Conference: "The Future of Our Landscape", Toulouse, France. 1994 ISPRA/Catholic University of Leuven International Workshop: "Remote Sensing and Landscape Ecology", Leuven, Belgium. 1994 IALE-UK The 3rd Annual Conference: "Fragmentation in Agricultural Landscapes", Myerscough College, Preston, England. 1994 Swiss National Conference on Biodiversity, Basel, Switzerland. 1993 UNEP-HEM (United Nations Environmental Program – Harmonization of Environmental Monitoring), Conference and Workshop: "Towards a Better Vegetation Classification for Global Mapping and Monitoring", Charlotteville, Virginia, USA. 1993 IALE 4th International Conference: "Agricultural Landscapes in Europe", Rennes, France. 1992 UNCED (United Nations Conference on Environment and Development), Rio de Janeiro, Brazil

1991 IALE 2nd World Congress of Landscape Ecology, Ottowa, Canada. International Symposium on Mires: "Peatland Ecosystems and Man - An Impact Assessment", Dundee, Scotland. 1989 1988 International Workshop: "Ecological Approach to Peatland Processes", Abisko, Sweden. 1988 International Symposium at Institute for Terrestrial Ecology, Merlewood: "Dispersal of Species in Agricultural Landscape", Grange-over-Sand, England. 1988 IUCN XVII General Assembly: "Conservation - Our Shared Responsibility", Workshops and technical meetings, San José, Costa Rica. 1987 2nd IALE International Seminar: "Connectivity in Landscape Ecology", Münster, Germany. 1986 Bergen University "The Cultural Landscape - Past, present and future". International Symposium and Excursion, Bergen, Norway. 1985 3rd International Colloquium on Spectral Signatures of Objects in Remote Sensing, Les Arcs, France. 1984 IALE (International Association for Landscape Ecology) International Seminar, Roskilde, Denmark. 1984 IUCN/UNU (International Union for Conservation of Nature/United Nations University) International Workshop: "Environmental Planning and Management for Sustainable Development", Montreal, Canada. 1983 44. Deutschen Geographentagen: "Geografi för framtidsplanering", Münster, Germany. 1980 6th Canadian Remote Sensing Symposium, Halifax, Canada. 1978 International Symposium on Remote Sensing for Observatory and Inventory of Earth Resources, Freiburg, Germany.

11. Other research information and environmental debate

Radio program, national

Naturmorgon, april 2017
Vetenskapsradion, maj 2008
Studio 1, april 1995
Efter tre, april 1995
Lantbruksnytt, april 1992
Klarspråk, maj 1990
Kanalen, april 1990
Lantbruksnytt, januari 1990
Naturmorgon, december 1989
Radio Sverige, oktober 1989
Dagens eko, november 1987
Dagens eko, mars 1986
Vetandets värld, 1983

Radio program, regional

Samenytt, februari 1995 Radio Östersund, oktober 1994 Radio Kalmar, april 1992 Samenytt, september 1989 Radio Halland, september 1988 Radio Malmö, februari 1987 Radio Kristianstad, maj 1988

TV-program

TV2 Rapport, juli 1995 UR:s Växter, svampar, djur, november 1989 Vetenskapens värld, november 1988 Livsviktigt, februari 1987

newspaper/debate/interwiu

Dagens Nyheter, april 2017

Nerikes Allhanda, juli 2011

Samefolket, september, oktober 1995

Länstidningen, Östersund, juli 1995

Dagens Nyheter, juli 1995

Vägskäl (Vägverket), april 1995

Miljöaktuellt, december 1994

TT, november 1994

Miljöaktuellt, november 1994

Nya Vermlandstidningen, oktober 1991

Vetlandaposten, augusti 1991

Östgötakorrespondenten, september 1991

Östgötakorrespondenten, juni 1991

Barometern, mars 1991

Dagens Nyheter, 1990

AT Gävleborgs tidning

Dagens Nyheter, juni 1988

Ystads Allehanda, juli 1988

Dagens Nyheter, maj 1988

Svenska Dagbladet, 1987

Röster i Radio/TV, februari 1987

Nordvästra Skånes Tidningar, april 1986

Miljöaktuellt, mars 1986

12. Scientific Excursions

four days

| 2008 | Excursion to the Praire area, Madison |
|------|--|
| 2006 | Excursions to the Kiel area, in connection with the German yearly conference |
| 2005 | Excursions to Romania, Transylvanian Mountains, with the Royal Academy of Agriculture and Forestry, Environmental Committee |
| 2005 | Excursions to Algarve area, Portugal, in connection with European IALE Conference in Faro |
| 2003 | Excursions to Kakadua National Park, Darwin, Australia, concerning environmental and cultural influences- in connection with IALE World Conference |
| 2003 | Poland, with the Academy of Forestry and Agriculture, to study production and environmental problems in agriculture and forestry, one week. |
| 2002 | Portugal, Atlantic mountains and natural and cultural influences, one day excursion in connection with IALE Portugal international workshop. |
| 2002 | Italy, with the Academy of Forestry and Agriculture, to study production and environmental problems in forestry, |

- Hungary, with the Academy of Forestry and Agriculture, to study production and environmental problems in agriculture, one week
- 1994-2000 Lake District and Wales, England, several times of one day excursions in connection with IALE UK meetings
- 1996 Canada, Montreal area. National parks of virgin forests- in connection with the IUCN World conference- one day
- The Netherlands with nature conservation in the cultural landscape. One day's excursion in
- Remote sensing institutes in Europe, specialized in environmental problems (ITE at Monks Wood in England, RTMV at Amsterdam in the Netherlands and EU Joint Research Center at Ispra in Italy). One week's educational visit
- 1994 Belgium with landscape ecological problems of urban sprawl in the cultural landscape. One day's excursion.
- 1994 Teneriffe with landscape development and vulcanism, Stockholm and Teneriffe Universities. One week's excursion
- 1993 Estonia, Department of Geography, Tartuu University, on landscape ecological problems to study wetland vegetation and its importance for nitrogen retention. Three days' educational visit and excursion in Estonia with prof. Mander,
- 1992 Kenya, Masai Maara and Aberdeer National parks in Kenya, studying wild life, vegetation damage and problems of ecotourism, in connection with the UNEP negotiations in Nairobi. Three days' excursion
- Niagara Escarpment, Canada, in connection with the IALE conference, with prof. Moss, to study geographical problems and planning for geomorphological important objects. Three days' excursion
- 1990 Iceland, field work at Reykjanäs, with Ph.D. student, lecturer Gudrun Gísladóttir, at the Department of Geography, Reykjavik University with studies of natural and cultural landscape. One week
- Mires in southern Sweden, studying development and changes, with prof. Malmer. One week's international excursion
- 1990 Middle England. Educational visit and excursion in agricultural landscape in, with practical nature conservation and biotop management. One week
- 1988 Costa Rica to study different types of tropical rain forests, and nature conservation and management problems. The excursion was organised in connection to in the IUCN conference in San José. One week's excursion
- 1987 Faroe Islands, educational visit and field tour on, on an invitation from the Museum of Natural History to work out a method and a classification system for vegetation mapping from CIR air photos, to be used for nature conservancy planning purposes. One week
- India, New Dehli, Dehra Dun, Ahmedabad, Hydrabad and other cities in India. Educational visit at remote sensing institutes and planning authorities, on an invitation from the India Environmental Government. I also gave lectures at most of the visited places, about Swedish remote sensing and physical planning and nature resource management. Three weeks.
- Lake District, England Educational visit to to study vegetation and landscape classification.
- 1983 Germany, Rheinischer Niederbucht and the Ruhr area. Excursion in connection with the Deutscher Geographentagen, to study planning and environmental problems of brown coal mining. Three days
- 1980 Iceland, Excursion with prof. Hoppe, two weeks.
- 1980 USA och Canada, in connection to the 6th Canadian Remote Sensing Symposium i Halifax. The visits included about ten institutes with remote sensing, vegetation mapping and physical planning. Two weeks' educational visit.

- 1979 Sweden Norrbotten, Excursion to with prof. Hoppe and prof. Schytt. Two weeks
- 1978 Germany. Excursion to Schwarzwald and Kaiserstuhl, in connection with the international remote sensing symposium, two days.
- 1974 Poland. Excursion in geomorphology, with prof. Hoppe, one week.

13. Received Grants (from 1994 onwards-)

| Reciever of grants | f | Project | Sum | Year |
|--------------------|-----------------------------------|--|-----------|---------|
| Ihse | Länsstyr. M-län | Method development for regional environmental monitoring; CIR-air photo interpretation of strategic landscape element, important for biodiversity | 120 000 | 1994/96 |
| Ihse/Alm | Länsstyr.R-län | Method development for regional environmental monitoring; Temporal digital photogrammetry for vegetation changes on raised bogs. | 316 812 | 1995/96 |
| Ihse | Stora Skog | Method development and course in advanced air-photo interpretation for key biotopes in forest | 100 000 | 1995 |
| Ihse | Skogs-styrelsen | Method development and course in advanced air-photo interpretation for key biotopes in forest | 245 000 | 1995 |
| Ihse | SNV | Remote sensing and GIS for landscape ecological studies -monitoring and evaluation of landscape and biotope changes | 217 000 | 1994/95 |
| Ihse | SNV | Remote sensing and GIS for landscape ecological studies -monitoring and evaluation of landscape and biotope changes | 335 000 | 1995/97 |
| Ihse | SNV | IALE-UK Conference, England 5-14 sep | 18.000 | 1994 |
| Ihse | WWF | Vegetation analysis and changes in reindeer grazed mountains | 745.000 | 1995-98 |
| Ihse/Löfven-haft | Miljövårds- fond, Stockholm | Method development for biotope mapping in urban areas | 300 000 | 1995 |
| Ihse/Löfven-haft | Miljövårds- fond, Stockholm | Method development for biotop mapping in urban areas | 340 000 | 1996/97 |
| Ihse | SNV | Landscape monitoring by CIR-aerial photo interpretation in agricultural landscape, LiM-project | 541.000 | 1992/93 |
| Ihse | SNV | Landscape monitoring by CIR-aerial photo interpretation in agricultural landscape, LiM-project | 440.000 | 1996/97 |
| Ihse | SNV | Senior lecture in environmental sciences | 614.000:- | 1996/97 |

| Wastenson/Ihse | FRN | Expensive scientific equipment Remote sensing and geographic information for change detection in environmental research | 2.725.000 | 1995/96 |
|----------------|--|---|-------------|-----------|
| Nordberg/Ihse | Rymdstyrelse (RS) | Vegetation changes in mountains, studied by Landsat TM | 187 000 | 1995/96 |
| Nordberg/Ihse | RS | Vegetation changes in mountains, studied by Landsat TM | 263.000 | 1996/97 |
| Nordberg/Ihse | RS | Vegetation changes in mountains, studied by Landsat TM | 372.400 | 1997/98 |
| Nordberg/Ihse | RS | Sustainable mountain landscape- applied regional approach | 123.600:- | |
| Ihse | SJFR | Professorship in ecological geography | 443.300:- | 1997/98 |
| Ihse | Government of Finances | Professorship in ecological geography | 557 000:- | 1997/98 |
| Ihse/Wastenson | MISTRA | Rese Vegetation change | 4.524.000:- | 1997/99 |
| Sporrong/Ihse | FRN | Permanent Nordiskt seminarium för landskapsforskning | 150.000 | 1998/99 |
| Ihse | County of Uppsala | Landscape classification and monitoring in agricultural landscape | 524.000:- | 1998-2001 |
| Ihse | SEPA (Swedish Environme ntal protection Agency | Method development for mapping of nature conservation values in archipelago | 400.400:- | 1998/99 |
| Ihse/natgeo | Forest company Stora skog | PhDstudent Remote sensing methods for studies of fragmented forest and high biodiversity values | 1.218.488:- | 1998-2001 |
| Wastenson/Ihse | Wallenberg- stiftelsen | Remote sensing equipment | 2.174.000:- | 1999 |
| Ihse | SEPA | Development of classificationsystem and nomenclatur for landscape monitoring | 504.000:- | 2000-2001 |
| Ihse/Wastenson | Mistra | Vegetation and biotope monitoring | 3.850.000:- | 2000-2002 |
| Ihse | Formas | Changes in vegetation and erosion from reindeer grazing/ Härjedalen | 50.000 | 2001 |
| Ihse | Formas | European IALE (Internat. Ass. for Landscape Ecology) Conference | 70.000:- | 2001 |
| Ihse | SEPA | European IALE (Internat. Ass. for Landscape Ecology) Conference | 50.000:- | 2001 |
| Ihse | Stockholm University Granholms stiftelse | European IALE (Internat. Ass. for Landscape Ecology) Conference | 4.800:- | 2001 |

| Ihse | KSLA | European IALE (Internat. Ass. for Landscape Ecology) Conference | 20.000:- | 2001 |
|---------------|---|---|------------------|-------------|
| Ihse | SEPA | Landscape Inventory and monitoring (the LiM-project) | 1.826.900:- | 2001-2002 |
| Ihse | SEPA | Vegetation mapping of Tyresta national park and development of cartography | 149.900 + 150.00 | 0 2001-2002 |
| Ihse/Bang | RS | Envisat AO-project- Synergi of Envisat ASAR & Meris data for Landscape classification | 135.000:- | 2002 |
| Ihse | EU/SLU | EU-proj Aembac | 22.166:- | 2002 |
| Ihse | EU | Expert and Evaluator for global change applications | 35.000:- | 2002 |
| Ihse | Stockholm regional and planning office for environme nt | Survey and mapping of old forest for recreation purposes | 350.000:- | 2002-2004 |
| Ihse/Stenseke | SEPA | Drivkrafter och orsaker till förändringar I landskapet, registerade vid LiMprojektet | 250.000 | 2004-2005 |
| Ihse | SEPA | Natura 2000, Test of methods for air photo interpretation | 200.000 | 2005 |
| Ihse | SEPA | Tyresta national park development of methods for management plans | 25.000 | 2006 |
| Ihse | Letterstedtska | Travel grants for research of nature resource use in medieval landscape in Iceland | 3.000 | 2006 |
| Ihse | | teview of landscape ecological nnings experiments | 250.000 | 2007 |