

Den Sociala Skogen: tätortsnära skog och kulturella ekosystemtjänster i ett internationellt perspektiv

Cecil Konijnendijk van den Bosch

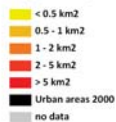
Institutionen för landskapsarkitektur, planering och förvaltning, SLU

Min presentation

- ☐ Kulturella ekosystemtjänster
- ☐ Tätortsnära skog – den sociala skogen
- ☐ Vad säger forskningen?
- ☐ Perspektiv

Urbanisation in Europe 2000 - 2006

Change from natural to artificial surface
 area per 100 km² (10x10 km cells)



Source:
 EEA Corine land cover 2000 / 2006, Version 14
 (UK is included from version 15)



Christian Fertner
 University of Copenhagen
 chfe@life.ku.dk
 July 2011

We are all connected.



From the smallest ant to the tallest tree,
FROM THE BIRDS ROAMING THE SKIES TO THE FISH SWIMMING IN THE SEA,
Each and every creature is part of the biodiversity family.
LET'S PROTECT OUR FAMILY.
Conserve biodiversity now.
 FOR MORE INFORMATION ON BIODIVERSITY CONSERVATION, LOG ON TO
www.aseanbiodiversity.org or chm.aseanbiodiversity.org





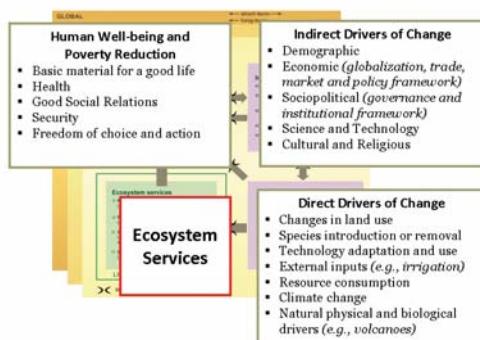
**Ecosystem services
=
benefits people obtain
from ecosystems**



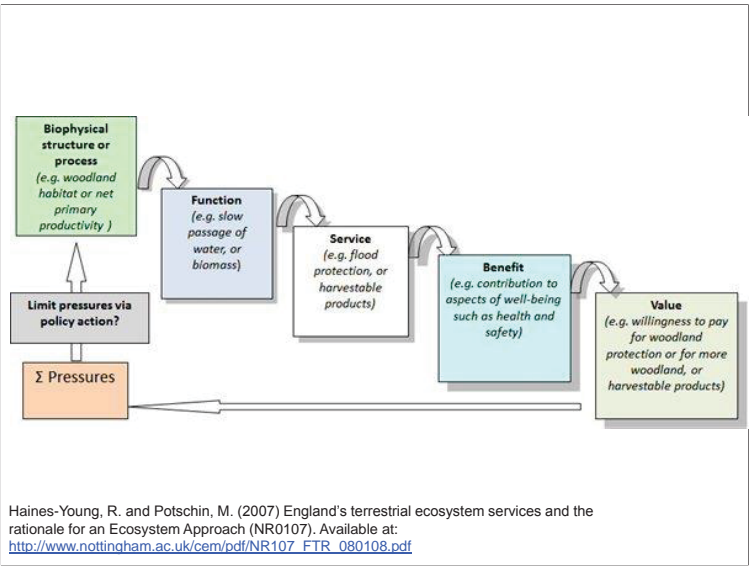
<http://www.millenniumassessment.org>



MA Framework



Millennium Ecosystem Assessment (2005)



articles

The value of the world's ecosystem services and natural capital

Robert Costanza¹, Ralph d'Arge², Rudolf de Groot³, Stephen Farber⁴, Monica Grossi⁵, Bruce Hansen⁶, Karin Limburg⁷, Robert Naeem⁸, Robert V. O'Neill⁹, Jesse Persson¹⁰, Robert G. Radwin¹¹, Paul Sutton¹², & Marjan van den Belt¹³

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The services of ecological systems and the natural capital stocks that produce them are critical to the functioning of the Earth's life support systems. These contribute to human welfare, both directly and indirectly, and therefore represent part of the total economic value of the planet. We have estimated the current economic value of 17 ecosystem services for 18 countries, based on published studies and a new original calculation. For the entire world, the economic value of goods is estimated to be around \$16.6 trillion (1997) per year, with an average of \$16.6 billion per year. Because of the nature of the ecosystem services, this would be considered a minimum estimate. Global gross domestic product would be around \$16.6 trillion per year.

Because ecosystem services are not fully captured in conventional measures or adequately quantified in terms comparable with economic services and manufactured capital, they are often given too little weight in policy decisions. This neglect may ultimately compromise the sustainability of human life on the planet. The economic value of the Earth would grow to a half without the services of ecological life support systems, or to one-eighth without the value of the ecosystem services.

Ecosystem functions and ecosystem services
 Ecosystem functions refer to natural processes that maintain the physical, chemical, and biological structure of ecosystems. Ecosystem goods (such as food and services such as water) are considered to be the products of ecosystem functions. For simplicity, we will refer to ecosystem goods and services together as ecosystem services. A large number of functions and services can be identified¹. Following² provides a review, detailed descriptions of functions, measuring and valuing ecosystem services for the purposes of this analysis we grouped ecosystem services into 17 major categories. These groups are listed in Table 1. We included only renewable ecosystem services, excluding non-renewable fossil fuels and minerals and the atmosphere. Note that ecosystem services and functions do not necessarily flow across the same boundaries. In some cases a single ecosystem service is the product of more than one ecosystem function whereas in other cases a single ecosystem function contributes to two or more ecosystem services. It is also important to emphasize the mutually dependent nature of many ecosystem services. For example, some of the most primary products in an ecosystem end up as food, the consumption of which generates ecosystem products necessary for primary production. Even though these functions and services are interdependent, in many cases they can be added because they represent 'joint products' of the ecosystem which support business.

Table 2
 Country clusters reflecting outdoor recreation in the forest policy and legislation of 18 European countries (2006–2007).

Country	Priority cluster (importance) 1 – high 2 – medium 3 – low	Strategy cluster 1 – NFP, forest and other laws 2 – NFP and other laws 3 – NFP and/or forest laws
Austria	2	3
Belgium	2	1
Croatia	1	1
Cyprus	2	3
Denmark	1	1
Finland	1	2
France	1	1
Germany	1	1
Greece	3	3
Iceland	3	2
Ireland	2	2
Latvia	2	1
Lithuania	2	1
Norway	2	1
Slovakia	2	1
Sweden	3	3
Switzerland	2	3
UK	2	2

C. Mann et al. / Urban Forestry & Urban Greening 9 (2010) 303–312

Cultural ecosystem services

The diagram shows 'ECOSYSTEM SERVICES' on the left, categorized into 'Supporting' (e.g., soil formation, nutrient cycling), 'Provisioning' (e.g., food, fiber, fuel), and 'Regulating' (e.g., climate regulation, disease control). A central red circle labeled 'Cultural' is connected to 'Provisioning' and 'Regulating'. To the right, 'CONSTITUENTS OF WELL-BEING' are listed: 'Security' (e.g., food security, disaster risk reduction), 'Basic material for good life' (e.g., food, shelter, clothing), 'Health' (e.g., mental health, physical health), and 'Good social relations' (e.g., social cohesion, community). A legend at the bottom indicates 'LIFE ON EARTH' (green) and 'WELL-BEING' (blue) with a color scale from Low to High.

“The nonmaterial benefits people obtain from ecosystems through spiritual enrichment, cognitive development, reflection, recreation, and aesthetic experiences”

Millennium Ecosystem Assessment (2005)

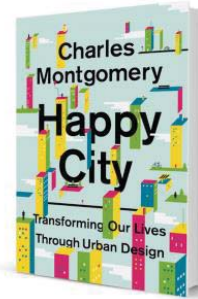
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Latvia	2	1
Lithuania	2	1
Norway	2	1
Slovakia	2	1
Sweden	3	3
Switzerland	2	3
UK	2	2

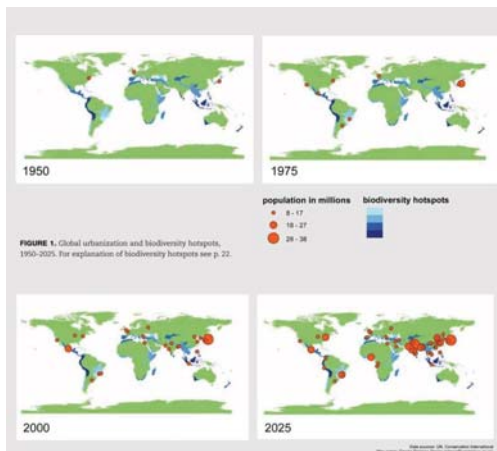
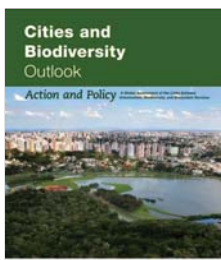
C. Mann et al. / Urban Forestry & Urban Greening 9 (2010) 303–312



David Shankbone, Wikimedia



- “Retrofitting our cities for happiness”
- Urban Design i fokus
- Soft traffic, shared space
- 'Savannah trap'
- Biologisk mångfald är viktig



Slide: Anders B. Nielsen, SLU





Paulus Constantijn la Farge 1729-1782



Haagsche Bosch, Haag,
Nederländerna
Bilder: Haag Stads historiskt arkiv

‘Stadsskog’

Stadsbos, Stadtwald, Kaupunkimetsä, byskov, ...

Schama (1995)



© Menno Huizinga / nfa_coll. Nederlands fotomuseum



Bild: A. Savin

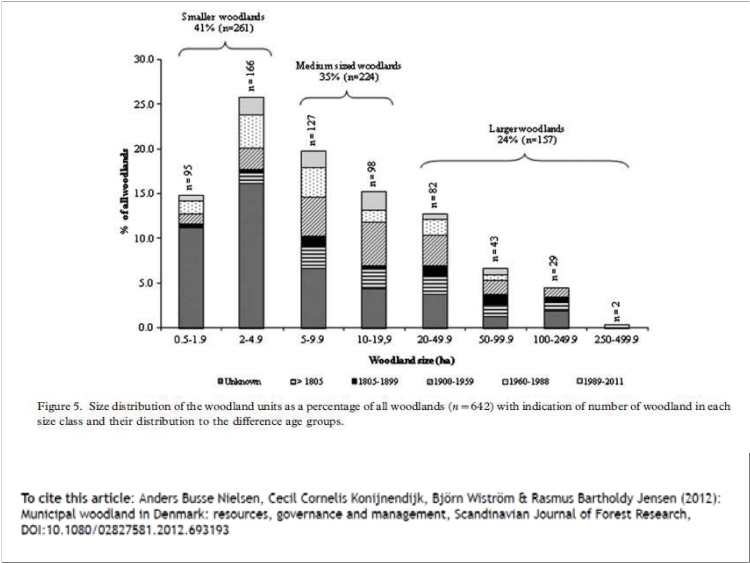


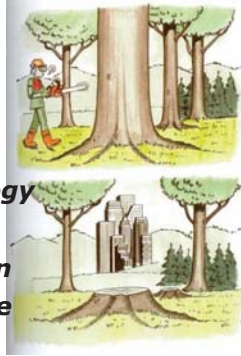
Figure 5. Size distribution of the woodland units as a percentage of all woodlands ($n = 642$) with indication of number of woodland in each size class and their distribution to the difference age groups.

To cite this article: Anders Busse Nielsen, Cecil Cornelis Konijnendijk, Björn Wiström & Rasmus Bartholdy Jensen (2012): Municipal woodland in Denmark: resources, governance and management, Scandinavian Journal of Forest Research, DOI:10.1080/02827581.2012.693193

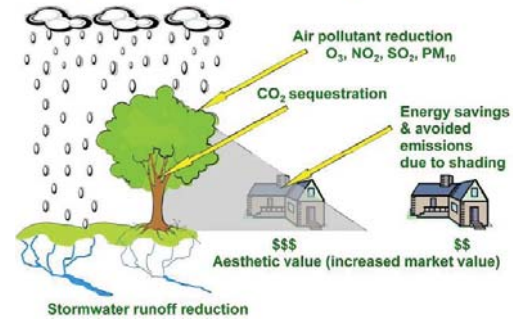
Urban forestry

The art, science, and technology of managing trees and forest resources in and around urban community ecosystems for the physiological, sociological, economic, and aesthetic benefits trees provide society

(Helms 1998, based on Miller 1997)



Ecosystem services provided by urban trees



<http://theriverwhisperer.blogspot.se/2012/01/ecosystem-services-provided-by-urban.html>



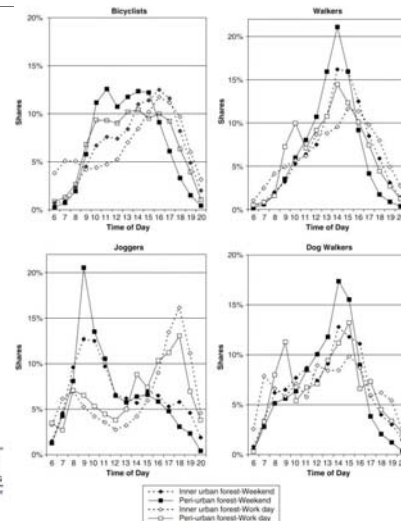
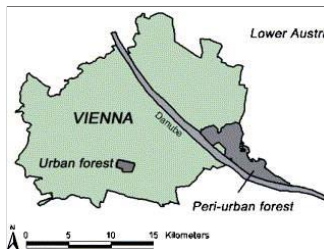
Forskning med fokus på sociala aspekter

P. Bentsen et al. / Urban Forestry & Urban Greening 9 (2010) 273–280

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Table 3
Type of green space addressed by the 159 UFUG contributions, Volumes 1–8.

Research theme	Examples of topics studied	Number of articles	Percentage
The management of urban green space	Tools to support management, tree establishment, arboriculture, green space planning	47	29.6
The physicality of urban green space	Green space assessment, tree inventory, microclimatic effects, growing conditions, pests and diseases	45	28.3
The experience of urban green space	Public perceptions and preferences, recreational use, educational aspects	36	22.6
The governance of urban green space	Public involvement, public organisation, power relationships, conflict management	15	9.4
The valuation of urban green space	Methods for quantifying and valuing ecosystem services, monetary valuation, ecosystem service approaches	12	7.5
Other	Research reviews, urban greening programmes	4	2.5
Total		159	100.0



Recreation use of urban forests: An inter-area comparison
Arne Amberger*

Social mapping can provide crucial information about user experiences.

	Green area number, where the quality is found	Cannot find within my housing area	Cannot say
'BEAUTIFUL LANDSCAPE' Places or areas that you find beautiful and attractive (beautiful scenes etc.)		<input type="checkbox"/>	<input type="checkbox"/>
'VALUABLE NATURE SITE' Valuable nature area or place with a special feeling of nature (e.g. natural vegetation, fauna, fascinating rocks, bedrocks, shorelines).		<input type="checkbox"/>	<input type="checkbox"/>
'FOREST FEELING' Area or place that feels like a "real" forest.		<input type="checkbox"/>	<input type="checkbox"/>
'SPACE AND FREEDOM' Area or place where you can enjoy space and freedom.		<input type="checkbox"/>	<input type="checkbox"/>
'ATTRACTIVE PARK' Constructed park that is exceptionally beautiful (flower beds, constructions, valuable trees, tree lines, places to stay).		<input type="checkbox"/>	<input type="checkbox"/>
'PEACE AND TRANQUILITY' Area or place that is peaceful and quiet.		<input type="checkbox"/>	<input type="checkbox"/>

Tyrväinen et al. (2007)

L. Tyrväinen et al. / Landscape and Urban Planning 79 (2007) 5–19

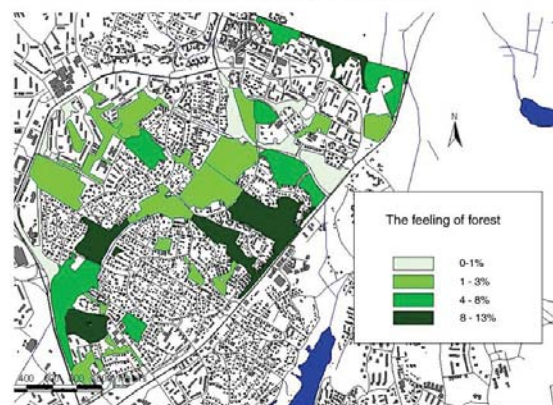
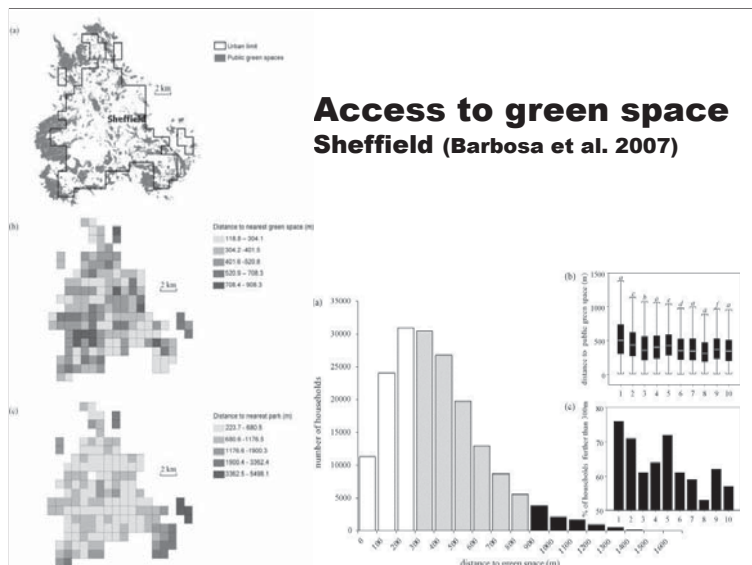


Fig. 6. Areas in which the respondents experience the sense of being in a forest (share (%) of all scores).



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GREENING

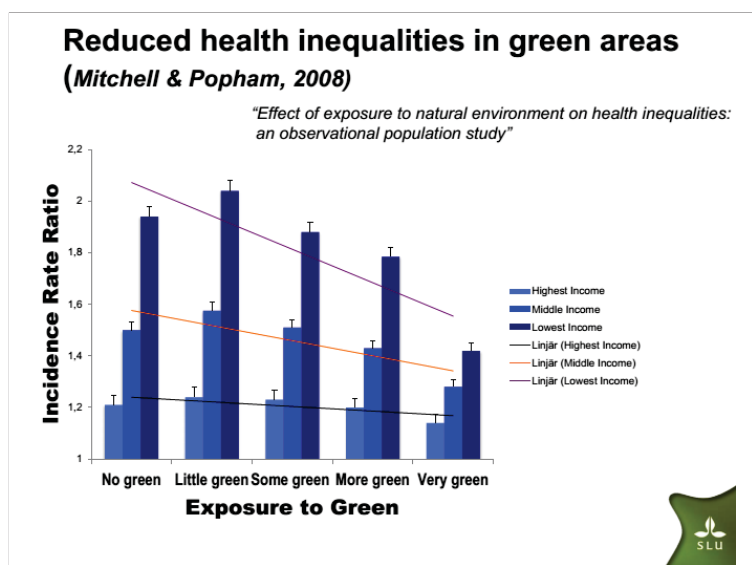
Landscape planning and stress

Patrik Grahn and Ulrika A. Stigsdotter

Department of Landscape Planning, Health & Recreation, Swedish University of Agricultural Sciences, Alnarp, Sweden

Abstract: Stress and stress-related illnesses, as reflected in medical records, have increased dramatically among adults and children in Western societies. A growing part of the budget for medical service in Sweden is used for individuals suffering from different stress-related illnesses such as burnout syndrome, insomnia and fatigue, depression, feelings of panic, etc. In this paper, we present results from a study in which 953 randomly selected individuals in nine Swedish cities answered a questionnaire about their health and their use of different urban open green spaces in and close to the city. The results indicate that city landscape planning may affect the health of town-dwellers. Statistically significant relationships were found between the use of urban open green spaces and self-reported experiences of stress – regardless of the informant's age, sex and socio-economic status. The results suggest that the more often a person visits urban open green spaces, the less often he or she will report stress-related illnesses. The same pattern is shown when time spent per week in urban open green spaces is measured. The distance to public urban open green spaces seems to be of decisive importance, as is access to a garden, in the form of a private garden or a green yard immediately adjacent to, for instance, an apartment building. People do not usually compensate for lack of green environments in their own residential area with more visits to public parks or urban forests. According to our results, laying out more green areas close to apartment houses, and making these areas more accessible, could make for more restorative environments. Outdoor areas that provide environments free from demands and stress, and that are available as part of everyday life, could have significant positive effects on the health of town-dwellers in Sweden. This may also apply to other Western societies.

Key words: landscape planning, stress, restorative environments, urban open green spaces



SLU

Contents lists available at ScienceDirect
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Inducing physiological stress recovery with sounds of nature in a virtual reality forest – Results from a pilot study

Marika Annerstedt^{a,*}, Peter Jonsson^a, Mattias Wadellgard^b, Görd Johansson^c, Björn Karlson^{a,d}, Patrik Grahn^a, Åsa-Marie Hansson^a, Peter Wåhberg^a

^a Department of Landscape Planning, Division of Work Science, Research Environment and Environmental Psychology, Swedish University of Agricultural Sciences, 200 70 Alnarp, Sweden
^b Department of Psychology, Division of Experimental and Environmental Psychology, Division of Environmental Psychology, Department of Psychology, Box 200, Lund University, 220 07 Lund, Sweden
^c Department of Psychology, Lund University, Box 118, SE-221 00 Lund, Sweden
^d Department of Psychology, Lund University, Box 118, SE-221 00 Lund, Sweden

ABSTRACT

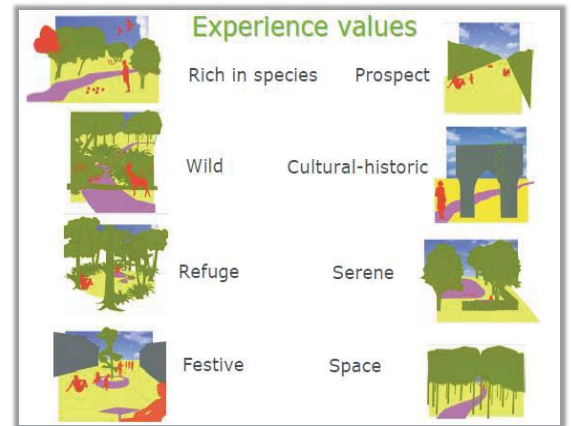
Experimental research on stress recovery in natural environments is limited, as it is difficult to control the exposure to natural environments. In this study, we used a virtual reality forest to induce physiological stress recovery in a controlled environment. The results show that exposure to a virtual reality forest can induce physiological stress recovery in a controlled environment. The results also show that exposure to a virtual reality forest can induce physiological stress recovery in a controlled environment. The results also show that exposure to a virtual reality forest can induce physiological stress recovery in a controlled environment.

ARTICLE INFO

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Recovery
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Forest
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Randrup et al. (2008)

Journal of Environmental Psychology 31 (2011) 261–272

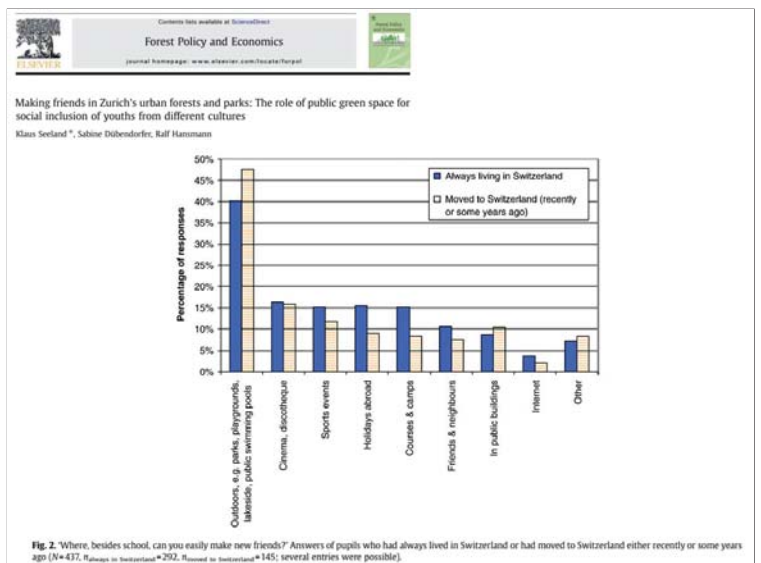
Fear versus fascination: An exploration of emotional responses to natural threats

Agnes E. van den Berg^{a,*}, Marlien ter Heijne^b

^a Wageningen University and Research Centre, PO Box 47, 6700 AA Wageningen, The Netherlands
^b University of Nijmegen, The Netherlands

This article describes two studies that examined people's emotional responses to threatening encounters with nature. In Study 1, participants from The Netherlands were asked to describe a fearful experience with nature in their home country. We identified four broad categories of fear-relevant situations, named Close Encounters, Forceful Situations, Overwhelming Situations, and Disorienting Situations. Each of these situations evoked negative as well as positive emotions. Study 2 investigated the role of sensation seeking and gender in emotional responses to standardized descriptions of threatening encounters with nature. High sensation seekers and men, as compared to low sensation seekers and women, responded less often with negative emotion and avoidance tendencies, and more often with positive emotion and approach tendencies.

Turism
Fruktan/fascination
'Social cohesion'
'Place identity'
Arbetsmiljö
Lärande



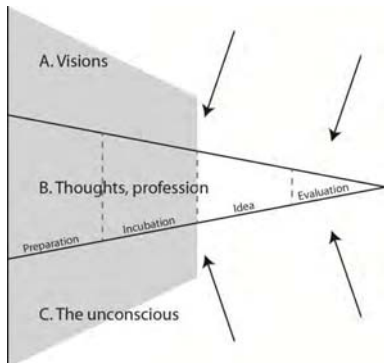


2. SKOVFØLELSE (SPACE)

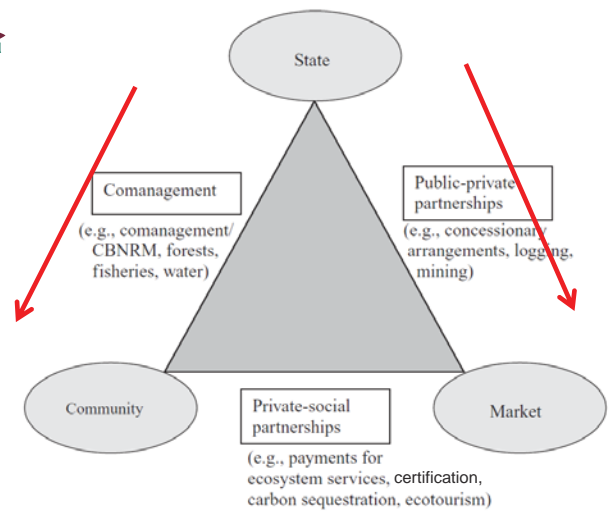
En oplevelse af »at træde ind i en anden verden«, en verden hvor områdets egne lyde, lys og dufte dominerer, og hvor man kan opleve fred og ro. Det kan for eksempel være i en skov. Området opleves som en helhed. Oplevelsen er følsom overfor forstyrrelser og støj.



Naturen och den kreative proces



Plambech (2012). Adapted from Mikkelsen (2009)



Slide courtesy of Bas Arts, Wageningen Universitet

Forskning om 'governance'

- Framework for analysing urban forest governance (Lawrence et al., 2013)
- Urban forest governance – discourses, the case of Zagreb (Krajter, 2013)
- Forest conflicts – with urban forest cases (various)
- Public involvement in urban forestry, from policy to maintenance (various)
- Green space branding (Gulsturd & Konijnendijk van den Bosch, 2014)



www.greensurge.eu



'Biocultural Diversity'

"(...) the diversity of life in all of its manifestations: biological, cultural, and linguistic, which are interrelated (and likely coevolved) within a complex socio-ecological adaptive system" (Maffi & Woodley, 2010)

- Human valuations and uses of nature
- Biocultural expressions – focus on concepts, physical elements
- Public ecology, transdisciplinary inquiry – social learning, connecting professionals, people and places

Tree Diversity Conference 2014



Our urban forests are under siege from disease, aging canopy, budget constraints and more. Leading experts on creating a vibrant urban canopy from across America will launch this first event of its kind in Colorado.

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Certification with International Society of Arboriculture (ISA)

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Sturm Hall, University of Denver

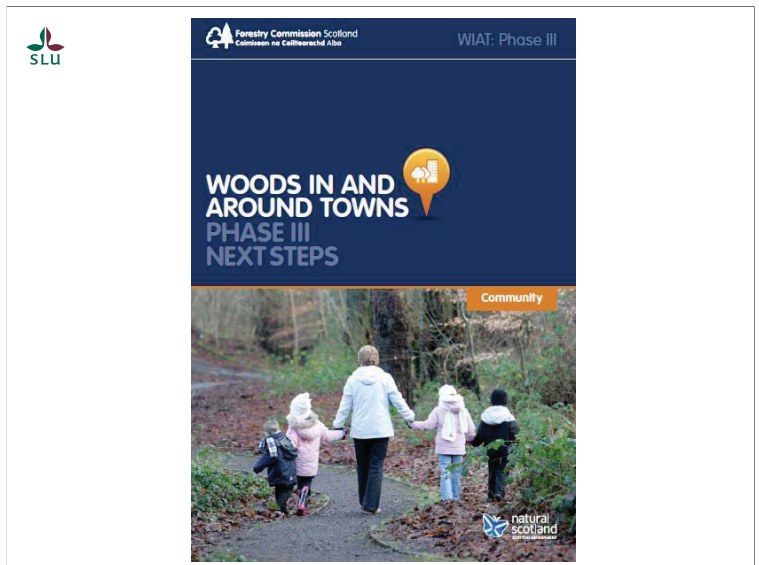
Map and directions to the Lindsay Auditorium and
Parking options on campus will be provided to all registrants.

Attendance \$60 per person. \$35 for registered students.
Includes: Plenary luncheon. Prompt payments made by credit or debit card by logging on to www.annualmeeting.com and clicking on the "Send Someone Money" button. Specify that the payment be made to 2014TreeDiversityConference.
Check-in: 8:00am on the day of the event. "Tree Names": Plenary includes the names of all the people you are registering in the comments box on the Plenary form. This charge will show up on your credit card statement as 2014TreeDiversityConference. *Refunds of fees will not be available after 2/28. Contact Sonia John (sjohn@denverpost.com) for details.

Presented by
The University of Denver Chester M Alter Arboretum & Denver Botanic Gardens

Committee: Rob Davis, Denver City Forester; Sonia John; Francesa Katsidis, Denver Botanic Gardens; Martin Quigley, D.U.

Friday, March 7, 2014
Time: 9AM-4:30PM



Woods In and Around Towns (WIAT) is one of the most significant initiatives ever undertaken by Forestry Commission Scotland (FCS). In summary it aims to improve the quality of life of people living and working in Scotland's towns and cities. Since the launch of WIAT in 2005, FCS has made a major investment of over £50 million in this programme. For this – the third phase (2011–2014) – FCS will continue to treat WIAT as a priority initiative.

The new programme has evolved to include a stronger emphasis on the role of urban woods in delivering environmental and economic benefits.

For example, this includes helping to adapt and mitigate the impacts of climate change and create better places for business to locate, and people to live.

At its core, the programme retains the following objectives:

- Bringing neglected woodland into management;
- Creating new woodlands; and
- Supporting people to use and enjoy their woods.





<http://www.8-80cities.org>



Perspektiv

- Den sociala skogen i fokus – tätortsnära skogar måste få ta plats!
- Integrering och operationalisering av kulturella ekosystemtjänster
- Vad kan vi lära oss från 'urban forestry'?
- Från 'skogen i staden' till 'staden i skogen'?

