

Report extract in English

# THE NATURE EXPERIENCE AND MENTAL HEALTH

- Report of the “Outdoor Life and Mental Health” Nordic project



NORWEGIAN MINISTRY OF  
THE ENVIRONMENT



norden

Nordic Council of Ministers

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It comprises translations of the original Table of Contents (annexed), Foreword, Introduction and the Summary of the  
Nature Experience and Mental Health, pages 1-27 of the report.

# Foreword

## Project premise

The scope of the project developed out of the Nordic Council of Ministers' "Environmental Action Plan 2005-2008", in which "The Environment and Health" is a recurrent theme. The Council of Ministers chose to focus on four main themes in 2005-2008. They are intended to ensure sector integration, cooperation between working groups and an understanding that the solution of environmental problems is contingent upon their being viewed as a whole. Main theme 1, "The environment and health" incorporates topic 1.3 "Public health and the nature experience", which includes the goal of *analysing the relationship between outdoor life and public health*. Main theme 3, "Nature, the cultural environment and outdoor life" incorporates topic 3.3 with the goal of *safeguarding the traditional Nordic outdoor life*.

In the summer of 2006 the "Nordic Action Plan for Better Health and Quality of Life Through Diet and Physical Activity" was put forth. It includes the observations that about half of the residents of the Nordic Region don't follow the recommendation of daily physical activity and that 40% of all adults and 15%-20% of all children now are overweight. The result is higher costs, both for individuals and for societies, so the governments of the Nordic countries are alarmed by the trend. Hence the plan calls for initiatives including improving provisions for physical activity and for expanding and upgrading knowledge, research and innovation. [The total recommended appropriations for the NordForsk (Nordic Research Board) programme amount to DKK 90 million (€12 million) over five years.] Priority will be given to measures for children and young people that urge them to make healthy choices and hinder their exposure to surroundings that lead to unhealthy choices. Arrangements shall be made for more and better physical activity to, from and in school and in neighbourhoods and for active use of nearby nature areas for promoting outdoor life.

## Environmental initiative in the 2006 Norwegian Presidency programme

The reference document is "The New Nordic Region: Innovation and Cooperation in Northern Europe - Programme for the Norwegian Presidency of the Nordic Council of Ministers 2006" (Section 4.7, page 38). In the environmental chapter, under "Local democracy and involvement in environmental and sustainability work", the action called for is: *A platform shall be established for the Nordic Countries' work in outdoor life and mental health care, among other things, by gathering Nordic experience.*

The measures also have been described in the brochure: "Programme for the Norwegian Presidency of the Nordic Council of Ministers 2006", published jointly by the Nordic Council of Ministers and the Norwegian Ministry of the Environment. Furthermore, the measures were accentuated in October 2005 at a meeting in Iceland by Helen Bjørnøy, then the Norwegian Minister of the Environment, in her presentation of the project.

With this starting point, the Nordic Council of Ministers' *Working Group for Nature, Outdoor Life and Cultural Environments* and the Norwegian Ministry of the Environment jointly have funded a project to investigate the impact of outdoor life on mental health. The total budget for 2006-2008 was about DKK 800,000 (€107,500), and the principal goal of the project was to put forth a reference document on the theme in 2008.

## Platform for further work

The concept of a "platform" entails the recognition that we of the Nordic Region have much in common: resources, values, qualities and experiences that positively can promote health in general. Researchers point to many of these aspects being linked to our natural and cultural bases. Examples of *positive, physical environmental conditions* that are conducive to liveliness and enable us to cope in everyday

life are aesthetics and quality of surroundings, cultural monuments and cultural environments, and contact with nature and outdoor life. Moreover, the concept of “platform” assumes that there are many *common features* of the public health challenges faced in the Nordic Region, such as cancer, cardiovascular disease, diabetes, skeletomuscular maladies and not least, various mental disorders.

Mental healthcare includes addressing particularly relevant problems associated with employment and sick leave, burnout, imbalance in the Nordic Region between material affluence and mental and spiritual poverty (“happiness research”), addiction and behavioural problems (including ADHD), loneliness and so on.

For these reasons, the development of expertise, the communication of experience and accurate methods should be particularly amenable to being brought forth and coordinated at the Nordic level. A coordinated effort is more efficient than parallel, competing developments of expertise and methods in each country. Moreover, a coordinated approach brings together specialists and volunteers of differing professions and traditions. The challenge then is to think across the borders between disciplines and countries in order to identify a common basis, develop a consensus and map out further work in the field.

Accordingly, the principal focus of this report is *not* on the place of outdoor life in psychiatry. The purpose has been to examine the connections and challenges associated with human encounters with nature and landscape and the resultant mental affects, in terms of both general prevention and therapy. The goal has not been to tailor a set of universal recommendations, but to build a *platform* for further skills upgrading, research, development and policy-making in organizations, institutions and public agencies in the Nordic Region.

Furthermore, it’s conceivable that the Nordic Region, perhaps in collaboration with the Netherlands and England (which also has recently focused on the relationships between nature and health) can offer WHO Europe and the EU a useful compendium. The theme also can advanta-

geously be linked to the Nordic follow-up of the WHO initiative in “Public Health and Environment (PHE)”, including declarations from the WHO Europe ministerial meetings every fifth year.

## Organization

A Nordic steering committee was formally set up in May 2007. The committee first met in Norway 18-19 September 2007 and since has maintained contact via E-Mail. The role of the committee is reflected in the expertise of the members acting as a *reference group*:

- Ida Sloth Bonnevie, Communications consultant, Danish Outdoor Council
- Lisa Bergström, Project Leader for Physical Activity by Prescription, Swedish Outdoor Life
- Annica Idestrom, Manager, Swedish Environmental Protection Agency (Withdrew 1 February 2009.)
- Gunnar Gunnarsson, Graduate student of outdoor life, Iceland.
- Elisabeth Sæthre, Adviser, Directorate for Nature Management, Norway
- Ingolf Mork, General Manager, Nordmøre and Romsdal County Outdoor Life Council, Norway.

Regrettably, despite several attempts, the project has not been able to contact the relevant professional communities in Finland. This has weakened the representativeness of the working group, at the conference and the access to relevant sources and documentation. We are certain that the relevant Finnish expertise is respectable in health, environment and agriculture. Hence, we hope that through a quality assurance process, we may subsequently be able to supplement the policy statement with relevant Finnish expertise.

In the winter of 2007, a project team was set up at the NaKuHel Centre in Asker, Norway [NaKuHel is the Norwegian acronym equivalent to NaCuHeal, the English acronym for Nature, Culture, Health]. In the autumn of 2005, the Centre played a pivotal role in developing and incepting the project [see “Outdoor Life and Mental Health, a Report on the Development Work in the Outdoor Life Year – 05 (in Norwegian)]. The Centre has competence in mental health and

“What is man? What are his needs? You and I are jungle animals on asphalt, but we are programmed for the verdure of chlorophyll; of moss and leaf and forest aisle. . . .Is man black, or white or yellow or red? NO! The deep inner man says color me green!”

(Folkins.)

use of nature and outdoor life, a strong Nordic network and experience in conducting similar projects and arrangements. The project team comprised:

- Espen Koksvik, Senior Adviser, Ministry of the Environment, Norway, Project manager.
- Øyvind Sørbrøden, Consultant and Manager, Centre for Self-Development, Project member.
- Kristin Bredal Berge, Manager, NaKuHel Centre, Project member.
- Elin Valla, Graduate Student, Norwegian School of Sport Sciences, Project member.

Moreover, Martin Vånar (IT specialist, retired) has been involved as a consultant in setting up and operating the project website, and Gunnar Gunnarsson (graduate student, Norwegian School of Sport Sciences) has, in addition to being a member of the steering committee, compiled a report on the use of outdoor life in preventative and rehabilitative health care in Iceland. (See Attachment 2, Publications.)

## Actions and products

On its way, the project has had various phases and milestones. Further details and plans for continued follow-up of secondary goals are given on the website at [www.friskinaturen.org](http://www.friskinaturen.org) (Nordic, with pages in English)

The platform comprises five main elements:

1. Network (established at the Nordic level and nationally in Norway).
2. Research cooperation (Established network and processes acting to realize a joint Nordic research programme).
3. Nordic, thematic website (See above.)
4. a) Nordic conference held September 2007 in Asker, Norway. (125 participants from four Nordic countries.)

b) Report from the conference published and sent to all participants and speakers (June 2008).

5. Nordic report on the relationships between mental health and the nature experience. (Complete report, no. T-1474, Oslo, 2009, ISBN 978-82-457-0431-0)

The project has not intended to generate new scientific data but rather to collect available knowledge into a Nordic policy statement for further development of relevant policy. How this is to be realized in practice must be discussed in other more suitable forums, hopefully from the multidisciplinary perspective.

On behalf of the project team, I thank the Working Group for Nature, Outdoor Life and the Cultural Environment of the Nordic Council of Ministers for initiating the exciting professional challenge and for having provided a considerable part of the funding for the project. Likewise, I thank the Ministry of the Environment for permitting me to delve into the subject and for having provided the main part of the total funding. Furthermore, I thank the members of the steering committee and the project team for their interest, valuable views and professional contributions. Last but not least, I wish to thank all who have produced and communicated the valuable primary material comprising the research, know-how and experience on which we of the project have gratefully built.

15 April 2010

Espen Koksvik, Project Manager



“The human need for nature is linked not just to the material exploitation of the environment but also to the influence of the natural world on our emotional, cognitive, aesthetic and even spiritual development.”

(Kellert 1993).

# Introduction

## Sources

This policy statement is included as one of the five main elements of what we call “a platform for the Nordic Countries’ work in outdoor life and mental health care”. (See the Foreword.) The policy statement builds principally on published research work and other documentation by Nordic authors in the Nordic languages. The authors have a wide variety of aspects on the theme, reflecting their variety of positions as researchers, specialists or selected key individuals and users of mental health services and offerings, all reflecting valuable expertise in their fields, “green” or “white”.

The primary material has come from Nordic projects as well as from translated and adapted documentation produced elsewhere, principally in the Netherlands, England, the USA, Canada and Australia. The goal of the project has been to go into available Nordic material, select and adapt relevant documentation and present it for a broader target group. It’s essential to emphasize that this effort must not be regarded to be a scientific work, but rather an eclectic collocation of knowledge in an effort to elicit relationships and identify challenges.

Likewise, the text references to sources are simple and the bibliography is not detailed. References have been chosen for mention on the bases of their content and language as well as on whether they comprise or build upon work published in several sources. In turn, each of these publications will have a reference list which can be consulted for in-depth study or scientific citation. As principal Swedish researcher, Ingemar Norling of the Sahlgrenska University Hospital puts it, “research in the Nordic Region is wanting and there’s only weakly scattered interest in the dominant research of countries elsewhere”. On the other hand, he observes that “there have been well-funded practical projects that provide anecdotal evidence and tend to expire as soon as funding ceases”. Statements of what people see and feel

and reports from projects, initiatives and the like may not be of scientific calibre, but nonetheless may be of interest politically and not least practically for the voluntary sector.

The project has not had the capacity to look through all relevant material and accordingly has relied mostly on Norwegian sources. We are aware of parallel, interesting and relevant projects, including those conducted by the EU, such as “COST E39, Urban Forestry for Human Health and Wellbeing”, a project conducted by the European Cooperation in Science and Technology (COST), with extensive coverage of:

- Physical and Mental Health and Well being
- Forest Environment and Human Health
- Therapeutic Aspects
- Physical activity, Well-being and Prevention of Illness.

The COST E39 project has published a couple of reports from recent professional conferences, one of which is included in the bibliography of the complete report. Moreover, the COST E39 project concluded in August 2008 with a major conference held at Hamar, Norway.

Aside from research material, recently there have been useful, relevant publications by organizations and agencies. At the risk of some omissions, we’ve drawn up the following chronological list of worthy works:

- “Outdoor life in the treatment of challenged groups” (in Norwegian) by M. Sjong, Directorate for Nature Management report 1992-8, Trondheim, 1992.
- “Recreation and mental health” (in Swedish) by I. Norling, Sahlgrenska University Hospital, Gothenburg, 2001.

- “Outdoor life imparts health - 26 good reasons to go out and move about” (in Danish), Danish Outdoor Council, Copenhagen, 2003.
- “Nature and Green Spaces Prevent Stress” in “Woods and Landscape” (in Danish) by K. Hansen and T. Nielsen, Copenhagen, 2005.
- “Vital – The Green Way to Health” (in Swedish), Swedish Society for Nature Conservation (SSNC), Stockholm, 2006.
- “Effects of Green Spaces on Human Health and Well-being – a survey of the literature” (in Norwegian), by G. Waaseth, Norwegian Institute for Agricultural and Environmental Research, Ås, 2006.
- “Nature as a Source of Vitality – and Why and How Nature Influences Health” (in Swedish), by M. Ottosson and Å. Ottosson, Swedish Environmental Protection Agency, Stockholm, 2006.
- “Outdoor Life and Health – a Review of Know-how” (in Norwegian), by A. Bischoff, J. Marcussen and T. Reiten, Report Bø-08, Telemark University College, 2008.

In addition, the project has acquired material via E-Mail, personal contacts, websites, several meetings, two study trips to Denmark and two to Sweden, several seminars (of which one was in Iceland and one in Sweden) and a Nordic conference at Sem, Norway during the project period.

We have chosen to spice the professional texts with selected quotes, some of the remarks of famous authors, philosophers and the like, but principally the opinions of people who in one way or another have been involved in relevant projects or activities. The goal has been both to bring forth soft values, the qualitative and the phenomenological (cf. Bischoff and Tordsson) and in a direct, plain way express what many active outdoor life people in the Nordic Region have experienced. As mentioned, the user perspective has been essential to the project. So the quotes are intended to reflect the experiences and expertise of the members of this valuable resource group. Or as Public Health Adviser Annette Myrvang, MSc in Public Health (with a dissertation on the nature experience and mental health) puts it: “Amid all the scientific, we mustn’t forget what people see and feel.”

While research literature provides the best documentation of the physical and measurable aspects of the relationships between people and nature, fiction arguably is more suited to describing relationships that are more emotional or psychological.

## Human ecological perspective

Broadly speaking, we can assume a psychological or a human ecological (evolution theoretical) perspective in discussing the human need for contact with nature (see Chapter 4). The human-ecological builds on the fact that humans arose and evolved in nature. We are the product of several million years of selection and adaptation. People such as we have lived on the Earth for at least 50,000 years. The human body, sensory apparatus and brain most likely have changed little in those 500 centuries. Cro-Magnon people lived in southern and central Europe during the last ice age in the Nordic Region. Genetically and physically they were practically identical with the people of today, and they had equally large brains. The similarity of DNA between chimpanzees, our closest “relatives”, and we humans is about 95%.

Computations indicate that the genetic makeup of humans has changed no more than 0.003% (three thousandths of a percentage point) since the ice receded and our first ancestors went on land in southern Scandinavia (Sibley et al. 1990). The people of today actually are adapted and suited to a completely different world than that of our modern societies. While our biological heritage has been more or less constant since the Stone Age, in a very short period, we have gone through a rapid technological and cultural revolution. Thanks to our amazing ability to learn and adapt, we have managed to hang on as the world changed around us.

Nonetheless, there are many indications that we have not detached ourselves completely from nature. Strikingly many conclusions in psychology concern our relationship to nature fall into place when we consider our evolutionary history. Nature apparently appeals to something basic in us. It gives us the joy of life and helps us to re-establish mental balance whenever the modern way of life becomes unbearable.



able. (Støen and Hågvar, Åstrand, Dustman and Diamond). Professor Wilson believes that we have a congenital fascination for other forms of life and that life without contact with nature is unhealthy.

## Valuation of the diversity of nature

Nature has always provided people with abundant goods and services. Today, the concept of “ecosystem services” is increasingly used to describe the role of nature in purification of air and water, stabilization of climate, abatement of noise, and the like. Recently, there again has been increased focus on the possibilities nature offers for recreation and health.

Modern nature conservation entails a particular attitude toward the use of nature and its resources. That attitude is based on both ethical-ideal and utilitarian grounds. People live by nature and themselves are part of it. At the same time, we are guilty of managing it in a way that diminishes its productivity and quality that comprise the basis for all life.

Nature spans a broad spectrum of values. Assessing nature in terms of human needs is called the anthropocentric (human-centred) viewpoint. The opposite viewpoint is called biocentric, or the holistic approach that focuses on nature’s intrinsic value (autotelic value) in which humans are regarded to be part of nature, and the various species are assessed equally, regardless of their value for humans.

There’s a smooth transition between these two approaches. The perception of nature as being so original, diverse and beautiful that it must be preserved can be substantiated both by its value for our *experience* and by regarding nature to have *value in itself*.

If we view nature in terms of *human needs*, it may be seen to offer many benefits, such as *service value* or *perceived value*. Awareness of the utilitarian value of nature for humans is deeply rooted in history. The entire evolutionary history of humans has taken place in nature. Our bodies, our sensory apparatus and our intelligence are adapted to a life in close interaction with nature. For more than 90% of our history, we have existed as hunters and gatherers, totally

dependent on what nature could offer from day to day, from season to season. Abundant game, fish and other natural resources were the basic prerequisites for the first settlements in the Nordic Region about ten thousand years ago.

As seen by people, nature has appreciable value as a source of experience, belonging, learning, quality of life and health. It contributes to satisfying our more emotional needs as well as our needs for subsistence. The value of nature for general health has a material aspect associated with our physical health and its dependence on resources such as food, water, oxygen, sunlight and medicinal herbs. It also offers immaterial resources, including beautiful landscapes, peace and quiet, wholeness, harmony, sensory appeals, and the like that in many ways have been seen as less important in societies and accordingly have been less subject to research, management and political prioritization. That said, recently the value of nature in recreation has been increasingly in focus. There now is increasing awareness of the association with nature that has characterized life in the Nordic Region is deeply ingrained in our psyche.

In the last 20 to 30 years, research abroad and in parts of the Nordic Region has provided new and clearer pictures of how people are affected by being in nature. The historical know-how that has existed for thousands of years and the everyday experiences that many people have of the potential of nature in prevention and management of stress, relief of pain, crisis-coping and mental revitalization now have been supported by scientific fact.

The increasing awareness of the public should result in ever more people enjoying the cost-free, side effect-free and easily accessible means that nature (in the Nordic Region) offers, as a way to mobilizing new energy for everyday life and for coping in crises. Moreover, greater awareness at the level of societies should contribute to a broad view of the benefit of nature for people and thereby to a more nuanced view of why, where and how nature should be preserved. (Ottosson and Ottosson, Swedish Environmental Protection Agency.)



# The Nature Experience and Mental Health - Summary

The scope of the project developed out of the Nordic Council of Ministers “Environmental Action Plan 2005-2008”. Its principal focus is on the environment and health, and the goal includes closer examination of how public health and the nature experience are related. During its presidency in 2006, Norway launched the “Outdoor life and mental health” project. Its purpose was to establish a platform for the Nordic Countries’ work in outdoor life and mental health care, among other things, by gathering Nordic experience.

The purpose of the project has been to examine the connections and challenges associated with human activities in and encounters with nature and landscape and the resultant mental affects, in terms of both general prevention and therapy. The principal focus of this report is not on the place of outdoor life in psychiatry.

A human ecological view holds that as we humans originated in and evolved in nature, we still need contact with it. We are the product of several million years of selection and adaptation. People such as we have lived on the Earth for at least 50,000 years. The human body, sensory apparatus and brain most likely have changed little in those 500 centuries. Computations indicate that the genetic makeup of humans has changed no more than 0.003% (three thousandths of a percentage point) since the ice receded and our first ancestors went on land in southern Scandinavia. The people of today actually are adapted and suited to a completely different world than that of our modern societies. While our biological heritage has been more or less constant since the Stone Age, in a very short period, we have gone through a rapid technological and cultural revolution. Thanks to our amazing ability to learn and adapt, we have managed to hang on as the world changed around us.

Nonetheless, there are many indications that we have not detached ourselves completely from nature. Many conclusions in psychology concerning our relationship to nature fall into place when we consider our evolutionary history. Nature apparently appeals to something basic in us. It gives us the joy of life and helps us to re-establish mental balance whenever the modern way of life becomes unbearable. Experts maintain that life without contact with nature is unhealthy.

## Outdoor life in the Nordic Region

The outdoor life practices and policies of the Nordic countries have much in common. The furtherance of outdoor life is linked to Nordic cooperation in sustainable development, preservation of biological diversity, landscape and cultural environments and to ensuring the public right of access to nature. In 1983, outdoor life was taken up as a dedicated topic in the Nordic environmental cooperation, and health and well-being also were gradually included in the agenda, particularly in efforts to preserve urban and community recreation areas. In the late 1990s, the relationships between outdoor life and public health came in focus in connection with the general Nordic prioritization of environment and health. Today it might be said that outdoor life policy is based on two equal considerations, the environment and public health. These considerations can be combined into the concept of a *better quality of life*.

A better quality of life, or the search for the good life, is the main reason why people in the Nordic Region seek out nature, landscapes and cultural environments, as confirmed by 80% to 90% of the respondents in surveys conducted in Denmark, Norway and Sweden. The stated reasons include experiencing nature, enjoying peace and quiet, relax-

ing, escaping noise and pollution, coming across traces of our ancestors, being together with family and friends, and exercising. The studies showed that gathering edibles and studying nature are lesser reasons.

## Mental health in the Nordic Region

Half of us will suffer psychological problems during our lives. The problems may range from mild depression and unease to serious psychoses. WHO has conducted a study of the future development of the global disease burden. The principal finding is a change to non-communicable diseases. By 2020, mental maladies and depression will be the next most prevalent public health challenge worldwide. Psychologist Mihaly Csikszentmihalyi (1994) contends that western culture is marked by its materialism and the endless pursuit of higher income. In turn, that spawns disgruntlement and negativism among people. These trends are strikingly similar to the symptoms of depression.

All the Nordic countries ranked in the top ten in a recent international study of the extent of happiness (Inglehart 2008). Nonetheless, Norwegian studies (Norsk Monitor, Hellevik) have shown that an increase in affluence does not lead to a similar increase in happiness. Hence, one may ask if there is a *health and well-being critical level* in the western lifestyle that may be compared with the environmental critical level.

The future will bring new health problems in the borderland between body and soul and between people and societies. These new maladies will be difficult to treat with the healthcare offerings of today, but will be amenable to comprehensive medicine. Consequently, there must be considerably greater focus on prevention, both for individuals and for societies.

Depression and physical inactivity must be viewed as two main challenges to health. Each year in the Nordic Region, mental disorders alone incur healthcare costs of several hundred billion crowns (tens of billion Euros). A Swedish study (Lindgren and Bolin 2006) concludes that the overall annual cost of physical inactivity in Sweden amounts to

SEK 6 billion (€ 615 million). Compared to the population at large, people with serious mental disorders have a higher risk of cardiovascular disease and are more likely to suffer known lifestyle illnesses. Depression worsens health more than chronic illnesses such as angina, arthritis, asthma and diabetes, while physical inactivity is among the many causes of the post-modern society's illnesses.

## Physical activity and mental health

Regular physical activity has positive effects in the prevention and treatment of many lifestyle illnesses. No other single measure has a greater effect on our overall standard of health than physical activity. Yet the curative effects of physical activity have thus far been little used in the treatment of mental disorders, despite documentation indicating that physical activity obviously should be part of treatment. However, professionals maintain that the relationship has been stifled in the debate on overweight and obesity. Over the last decade, several studies in other countries have shown that physical activity can help people overcome angst and depression.

Professor Martinsen (2004) sums up the general psychological effects by remarking that physical activity gives fullness of life, enhances play and joy, improves well-being after activity, provides surplus energy, leads to better sleep, reduces consumption of sedatives and sleeping pills, improves creative thought, betters self-respect, improves the sense of own body and imparts the ability to cope. The 2008 report of the Swedish "Physical Activity in the Prevention and Treatment of Disease" (FYSS), goes into these connections and consequently is a valuable aid for all who seek to further the preventive and curative effects of physical activity in the Nordic Region. In the report, the following connections are *well documented*: physical activity and depression; *documented*: physical activity and senile dementia, anxiety, eating disorders, chronic fatigue syndrome and fibromyalgia; and *little documented*: schizophrenia, pain management, alcohol abuse and dependence and cancer survival. Research has been conducted on the relationship to stress and burnout, but the status of it is unknown.



“I can only meditate when I am walking. When I stop, I cease to think; my mind works only with my legs.”

(Jean Jacques Rousseau)

Professor Martinsen has looked more closely at how physical activity affects our health and discusses various hypotheses of the *working mechanisms*. As of today, understanding is incomplete, and the hypotheses range from anthropology and phenomenology via cognition and psychology to neurobiology. He raises the question as to whether someday we will be able to single out one mechanism as most important, though he doubts that will be possible. He believes that psychological changes as a result of physical activity can best be explained as an *interaction* between biological and psychological mechanisms.

Singular effects of efforts, such as improved frame of mind or reduced angst are often described as links in a *chain of effects*. Mental, social, physiological, physical and economic effects comprise chains of causes and effects in one and the same process. The synthesized concept *quality of life* is the ultimate goal or last link in an effect chain; that is supported by broad research consensus and is endorsed by the WHO.

It's also important to understand causalities, such as how an improved frame of mind can lead to several physiological changes, to better fellowship and integration and to lessened needs for care and thereby lower healthcare costs. The assessment of the benefit of an intervention or measure may vary according to profession and role. In an initiated effect chain, the sequence of factors can vary according to the “glasses” used by the observer. Moreover, chains will contain feedback and loops. These types of explanatory models eradicate the constructed demarcation between body and soul and lead to potential cooperation between differing professions.

The potential of physical activity to counteract body deterioration and protect against cardiovascular disease and diabetes is gradually becoming more widely known. Now it has been shown that physical training also helps protect the brain against early ageing and degenerative brain diseases such as Alzheimer's and Parkinson's. Physical activity also enhances the capacity of the healthy brain, and its side effects are few.

In all, lifestyles and environmental factors comprise 70% of the factors that the WHO has identified as decisive for standards of human health. Various studies of the same sort in Sweden and other countries indicate that among the factors, the quality of and arrangements for *recreation* have a great effect on the quality of life and mental health of people, far more so than *work* or material factors such as *housing* and *economy*. At the International Conference on Leisure, Therapeutic Recreation and Mental Health held in 1992 at the University of Utah, it was universally agreed that there are strong connections between leisure, therapeutic recreation and mental health.

Concerning prevention, Norling's studies have shown that individual lifestyles have a far greater affect on mental health than do genetic factors and/or healthcare efforts, individually or collectively. Moreover, *leisure* is two or three times as important as *work* for the mental health of an individual. The freedom to choose and control is more important in recreation than in employment. Recreational activities and environments such as outdoor life, gardening, contact with animals, social contacts, culture, hobbies, fishing and hunting, swimming and boating and music comprise an essential part of lifestyles and milieus that together comprise more

than 70% of the aspects contributing to mental health. The conclusion is clearly that *nature-based* outdoor activities unquestionably have the greatest all-round positive effects on mental health.

Concerning therapy, Norling maintains that in the Nordic Region there are few examples of systematic “green therapy” initiatives. On the other hand, the USA and Canada have established traditions in the field of therapeutic recreation. The effects are prominent and lasting and seem to function markedly better than work therapy and other forms of activity therapy. For various reasons, many who suffer mental disorders have negative views of exercise and sport, though their views of nature-based activities are noticeably more positive. The reason may be that in nature they experience greater competence, internal control and purpose.

The notion of “flow” has become an international expression of the stimulating and recreational effects of activities. According to Csikszentmihaly, when they are practiced, hobbies and sports entail flows of up to 50%, nature-based activities entail *still higher* flows, while watching TV entails a flow of only 3%.

### **Nature as a source of vitality**

According to Waaseth (2006), several studies indicate that natural elements positively affect people, physically, psychologically or socially. Several researchers attach importance to the human dependence on nature in various contexts – evolutionary, historical, religious or cultural. The theories on how people are influenced by nature elements in their surroundings sort into three main groups: culture and learning theories, evolutionary theories and general theories on stress and stress reduction.

Research in the last few years has been dominated by evolutionary theories asserting that human responses to nature are inherited, not learned. Wilson’s *biophilia* hypothesis is an example of an evolutionary theory. Kaplan and Ulrich expanded evolutionary theory to include inorganic nature elements, such as stones and water. Ottosson refers to

Searles, one of the researchers who has studied the inter-relationships between humans and nature. Searles asserted, against the prevailing opinion of the time, that surroundings strongly influence human mental health. He maintained that people in crises depended completely upon stable surroundings to feel well. To return to a functional life, a person must follow a progression starting with being comfortable with lifeless objects in nature and then go on to plants and then animals before being able to cope with human relationships. In other words, one must learn to manage simple relationships before preparing to function normally again, as Ottosson personally experienced (2007).

Wilson believes that we have a congenital fascination for other forms of life and that life without contact with nature is unhealthy. He coined a new term for that view: *Biophilia* (love of life). We haven’t been suddenly placed on the globe; throughout more than 90% of our history, we have lived as hunters and gatherers. That historical ballast cannot be ignored, and unsurprisingly it has deeply marked our emotional make-up.

Kaplan and Kaplan’s environmental psychological theory on the affect of nature on health concerns the significance of nature in reducing stress and promoting rehabilitation. Its starting point is that attention is of two types, direct attention and involuntary attention.

The wealth of information in modern societies demands considerable direct attention that can be mentally exhausting, as we have fewer and fewer opportunities for rest and recuperation. *Direct attention processes*, sorts and rejects disturbances, such as noise. Its capacity is limited; the system can be rapidly worn-out. *Involuntary attention* is the antithesis in that it requires neither effort nor energy. Instead, it promotes recreation and relaxation. We use it whenever we’re outside, in nature.

Another vital viewpoint is environmental psychologist Roger Ulrich’s theory on the inherited human ability to reflexively perceive a situation as threatening or safe.





According to Ulrich, many situations in modern society trigger fight or flight reactions that put the body in a state of alert. That's useful in acute situations, but constant, prolonged stress damages the system.

Ulrich also was one of the first to document the health-promoting effects of green spaces. In 1984, he studied numerous hospital case records over a nine-year period to find that gallstone patients who had green views through their windows were discharged earlier than patients without them. The "nature group" also had fewer complications and needed fewer injections of strong analgesics. Moreover, that group voiced fewer personal complaints during their stays in hospital.

Professor Patrik Grahn, a biologist and landscape architect at the Swedish University of Agricultural Sciences (SLU), has studied the effect of therapy gardens since the mid 1980s. The underlying hypothesis is that contact with nature provides a rich, undemanding nature experience that stimulates creative processes and rest. A greater part of the therapy aims to initiate beneficial processes in individuals instead of the fight or flight reactions. Grahn's great idea has been to unite the dissimilar American schools of therapeutic gardening and health-promoting gardens that otherwise have not communicated with each other.

Landscape architect Ulrika Stigsdotter has followed this up and has shown that stays in green spaces are perceived to reduce stress and irritation and to increase powers of concentration and energy. Working with Grahn, she asked nearly 1000 Swedes what they would suggest that a good friend do when he or she felt stressed and restless. The most frequent answer was: "*Go for a walk in the woods.*" The second most frequent was: "*Listen to soothing music*", and the third was "*Get a decent rest in a quiet park.*" In tenth place was the suggestion "*Take sedatives.*" The findings are corroborated by previous American studies. When asked to describe where they had gone to recover when they felt particularly stressed or downcast, about two-thirds of the respondents replied "*a place in nature*".

Einar Strumse (1996) and Karin Laumann (2004) both wrote

doctoral dissertation on studies that included the work of Kaplan. According to them, the human visual preferences in landscapes are predominately natural ones in which human interventions have been in harmony with natural surroundings. The preferences decline in step with increasing human intervention, and the least liked categories are those representing total human intervention in nature.

Strumse's studies confirm Kaplan's theories. Nature is a type of stimulus that requires little or no mental effort and consequently is recuperative. Researchers have attempted to find which perceptions of nature have the greatest recuperative effects. They have concluded that there are four principal perceptions: getting away, the feeling of totality or the whole, fascination and personal compatibility with a milieu.

Hågvar (1996) extends this reasoning and lists the positive experiences that are generated when people encounter nature. It has become increasingly clear that there's value in knowing that nature is available to an extent and is accessible if one wishes or feels the need for it. As Hågvar points out, internationally this is called the existence value of nature.

Other research conducted in the USA has shown that animals stimulate people to be more social. Animals are alive and acceptant. When people observe animals with which they feel safe, their blood pressure and pulse go down. Direct physical contact with animals lowers blood pressure and pulse to levels that otherwise are attained only after several weeks of relaxation exercise. At the same time, a person feels safer and happier. Norling further points out that animal-assisted therapy, such as horseback riding, has been beneficial outside the Nordic Region. The Nordic project report on circumstances on Iceland (Gunnarsson 2007) describes the frequent use of horses in recreation and as therapy in mental healthcare. In general, there's been considerable research on relationships with pets that now has been supplemented with research on domestic animals conducted by Nordic agricultural researchers.

Fugelli and Ingstad (2001) studied how Norwegians

perceive good health and the ways it can be attained. Norwegians freely seek nature and familiar places to maintain and improve health as well as to attain feelings of well-being and identity. By in large, people define good health in positive terms (less than 20% replied “not ill”). One of the more surprising findings of the study was the great importance *nature* has in people’s perceptions of their own bodies and their health. The health perceptions of many of the respondents included the feeling of belong to nature, of being in nature and of being an offspring of nature.

They hypothesize that we all have an inner landscape, a snapshot of a bit of nature that we for some reason feel attached to. It concerns the recognition of something that imparts meaning and identity, either through one’s own story or the story of the people to whom one belongs (Cf. Basso). The perception of “good health” in connection with nature apparently depends on a sort of agreement between the inner and outer landscapes. This alone can justify providing children with positive nature experiences at an early age.

In his time, Bateson tried to break down the distinction between consciousness and nature by considering what he called *the ecology of mind*. He regarded consciousness not as something confined in the body in contrast to natural surroundings, but rather something inherent in the entire system of body and its surroundings in nature as a whole. Ingold extended this thought further by maintaining that people are not just *a part of nature* but are an active element in a greater environmental interaction.

Tordsson (2007) is critical of traditional biological theory that oversimplified maintains that unwellness arises whenever people are forced to live in the unnaturalness of culture and that health is brought about when people identify themselves as creatures of nature.

According to his views, we should rather understand the character of the nature experience from phenomenological and existential philosophical perspectives, which incidentally influence newer thinking in the health sciences, not least the discussion of their ethical bases. Contrary to the

view that human nature is predetermined, phenomenology and existentialism contend that humans are fundamentally free and create themselves through their choices and their actions. We then encounter ways of being human that impart internal control, freedom and the experience of ability and competence. This is in counterposition to the view that people are subject to circumstances and contingencies beyond their control. We should seek the distinctive features in natural environments that differ from those of modern urban existence. Nature offers calmness, a wealth of symbols and experiences that comprise a whole. So to speak, *regardless of performance level*, in nature we can be on a level with the challenges we seek, Tordsson maintains.

In contrast to the view that emphasizes the consciousness of the human being, M. Merleau-Ponty emphasizes the human *body-subject* as fundamental to the experience of domiciation in existence, Tordsson points out. The body is what we *are* rather than that we *have*. Moreover, the body is far from *separate*. To be a body is to exist in the world.

Nature has equipped us with built-in intoxicants that are liberated and active when triggered by particular activities and impressions. They initiate activities in the brain’s pleasure centre. Intoxication, from excitement to ecstasy, can be a delight over time or just in intense moments. Norling refers to recreational activities such as exercise, enjoyable activities and music that give a range of subject effects including improved frame of mind and lessened depression, but also parallel or subsequent effects including changes in levels of ACHT, B-endorphin, hydrocortisone and growth hormones.

## Outdoor life and mental health

Outdoor life is more than just physical activity. Exercise alone is an inadequate explanation of the health effects of nature. A more complete explanation includes relaxation and reduced stress, multiple sensory appeals, natural light and fresh air, and so on, that cannot be replaced by hours of indoor exercise. Martinsen maintains that one scarcely scientifically clarified aspect is the significance of the environmental setting around physical activity, such as *experiencing nature*. For many, the joy of encountering nature

“Prescription for a long life: Good diet, rest, balance of feelings and physical exercise.”

(Chinese medical textbook, ca. 3000 BC)

and the nature experience are key motivations for outdoor rambling. Besides, they may contribute to greater health benefits. Moreover, he points out that dissimilar forms of physical activity have similar psychological effects, but that far fewer drop out of hiking than out of jogging one year after starting training while being in hospital.

Sjong (1992) singles out three relevant factors that positively affect us when we take part in outdoor life: the physical activity, the environmental change and the experience of nature. Human anatomy has evolved over millions of years in the bosom of nature. The traces of that evolution cannot be wiped out in the course of a couple of generations. Hence, many researchers maintain that the positive effects of outdoor life on human mental and physical health may be ascribed to it taking us closer to our original way of life. Sjong divides the health-related effects into four categories: psychological effects, social effects, learning effects and physical effects. Combinations of these often have positive health effects. Effects often are compounds, just as are causes. The physical and the mental benefits of outdoor life are closely linked.

Andersson and Arnlund (2008) maintain that the effects of outdoor life should be regarded as a whole rather than the sum of the factors of *physical activity* and *nature experience*. Furthermore, they point to two key attributes of outdoor life as a tool: 1) The combination of physical activity and the nature experience offers a unique activity that is uncompetitive and undemanding. 2) Outdoor life's intrinsic value has no focus on effects, but at the same time activities have many health-promoting qualities. Moreover, the authors point out that outdoor life can be adapted for many

phases of life, can be used in prevention, rehabilitation and care in treating mental health problems. Health is promoted through active interaction with nature. Consequently, outdoor life to a great degree should be seen as a suitable tool in work therapy that builds on the key components of *activities and milieu*, in which people are influenced by and interact with their surroundings.

According to Myrvang's study (2003), a group that was generally physically active reported a positive mental effect of about 30%, yet the positive mental effect reported by those with an active outdoor life was twice as large (60%). Moreover, the positive effects of outdoor life are less gender specific than those of other physical activity. Several rehabilitation centres in the Nordic Region actively include nature in their therapies and many of them report excellent results. The Rauland Rehabilitation Centre in Norway reports that 70% of its patients return to work or an occupational initiative 12 months after a stay at the Centre. Bjørnås' study (2005) at the Centre show that outdoor activities are practiced because they are well suited to teaching patients *to assume more responsibility for their lives and to experience safety and meaningfulness*. Coping also came forth as a key factor, both generally and specifically, in dealing with angst and depression.

Many who suffer ADHD seek help in dealing with angst and depression. According to Falkum, today there's little research and little literature on the benefit of physical activity in dealing with ADHD. Outdoor activities in nature have proven to reduce ADHD symptoms in children more than equivalent activities indoors. Consequently, a “dose of green” apparently can supplement the use of medicines.



The symptoms were reported to be reduced most in the greenest surroundings. This also was true in comparisons of the same activities in differing surroundings. The finds were significant and consistent.

## Cultural monuments and mental health

The expression “recharging” is often used to describe the effects of outdoor life. What makes outdoor life, such as a walk in the woods, so successful as a leisure activity? The answer most likely is that many benefits can be attained at the same time. On a walk or hike, we need not choose or distinguish between experiences of nature, culture or being together as most important. We just go along and feel that it’s good, with all our body and senses, maintains Grimstad Klepp (1998). We can exercise at a fitness centre, enjoy our families around a coffee table or experience nature on TV. But only out on a tour can we experience an interplay that involves the whole person. Being physically tired doesn’t make one less receptive for the nature experience. On the contrary, as many people report greater awareness with increasing pulse. Often there’s *interplay between the qualities of nature and cultural monuments* in an area that becomes the basis for the experience of outdoor life and thereby its health-promoting effects. Cultural landscape also contributes much to feelings of identity and of attachment to an area. Cultural monuments are not only material. Nature around us abounds with immaterial cultural monuments in the form of legends, fairy tales, traditions and the like, that reflect much of our ancestors’ relationships with nature.

Numerous concepts are used in describing the importance of cultural monuments and cultural environments in the societies of today. The same concepts are also used in speaking of architecture, aesthetics and beautiful, well functioning physical surroundings: *belonging to or deeply rooted in, identity, self-awareness and security.*

Beautiful, stimulating and identity-creating surroundings, easily available, with access to social meeting places, possibilities for recreation in predominately natural areas with buildings reflecting tradition interacting well with renewal comprise environmental benefits that promote health. Not

only nature, but also past cultures prompt contemplation of the negative aspects of our times. Might we wish to travel to the past to see if we have gained anything, or is the price paid for modern life too high? The dream of a life in nature and the harmony of the past can easily be criticized as romantic escape and nostalgia. But it also permits viewing the present with critical detachment.

Outdoor life entails getting *away*, in addition to going to *something*. Nature and cultural monuments elicit new sensory appeals and thoughts. Paths create and maintain social contacts. Paths bind together people from different places, in space as well as in time. Walking the same paths that were walked by others in years past allows the walkers of today to share spaces across the years. The understanding of places becomes a story into which space is woven. Ramblers can then share a richer experience by being in the same places, as Grimstad Klepp points out.

## Health-promoting environmental factors

In the Nordic discussion of the challenges of preventive efforts, we admit that healthcare no longer is synonymous with a battle against life-threatening disease, but rather a struggle against the adverse aspects of social development. A 1986 WHO report clearly states that with few exceptions, disease in principle can be prevented by changing conditions such as lifestyle and environment.

A prerequisite for good health is an environment that promotes it. A *negative environmental aspect* threatens health, while a positive environmental aspects impart surplus energy to cope with everyday life. Examples of positive environmental aspects include aesthetics and safety in our surroundings, preservation of cultural monuments and cultural environments (“location quality”), contact with nature and not least, outdoor life.

We should be more aware of what’s healthy in individuals, of what contributes to liveliness and coping with everyday challenges, of what possibilities lie in the natural, inherent vitality of people, individually and collectively. This approach is called salutogenesis, a neologism from the Latin *salus*,

meaning “health” and the Greek *genesis*, meaning “origin” and designates focus on factors contributing to health and well-being rather on those causing disease. Fugelli hopes to put *nature’s salutogenesis* on the agenda, as a counter-balance to *urban pathogenesis* (2007).

Experts in general medicine recommend that for a good life, you should *take a daily walk or be physically active, know your roots and seek good experiences*. The Swedish Environmental Protection Agency recommends that people should have the opportunity to relate to nature from childhood onward, that adequate, quality nature areas be made available in urban and rural areas and that in the future the health service should be able to issue prescriptions for contact with nature (2006).

*Positive psychology* focuses on charting and understanding the positive forces in people and the influence they have on life and health. There are many indications that human fortitude and optimism can be learned. Positive feelings such as optimism, hope, honesty and presence can make life meaningful at a particular moment, but apparently also help guard against mental problems, counteract negative feelings and build up the ability to cope with trying situations. In turn, this can build resistance to physical illness. Research in *positive psychology* (Csikszentmihalyi et.al.) indicates that people who are optimistic or pleased with their lives perform better at work, in school and in sports. They are less frequently depressed, have fewer physical problems and develop better relationships with their fellow beings.

## **Motivation, stimulation and involvement**

Myrvang emphasizes challenge by shifting the focus from thinking of *target groups* to thinking of *fellow players* and from *segregated groups* to thinking of the *meetings between groups and between generations*. She further shows that prevention and health promotion can include all and that partnership releases resources and opens up for new possibilities. This type of discussion *must have a user perspective*, and cooperation is its key consideration.

Sørbrøden and Norling define target groups differently, but agree that health promotion and prevention must be directed toward all. Such offerings can be developed and implemented by private organizations and public bodies at various levels. Moreover, there should be an offering tailored to the fourth of the population that has the poorest mental health. This can advantageously be done in a cooperative effort between various professions and disciplines.

Bischoff points out that the educational challenge in working with people in this field lies in contributing to the release of the potential inherent in encounters with nature. Both she and Bjørnå want to de-emphasize the performance and competitive aspects of activities and encourage realistic goals and expectations, simple equipment and cooperation. *Utilitarian and moral motives must give way for liking, joy and inner motivation*.

Aker (Norwegian Directorate of Health), Norling, Moe and Martinsen all present criteria for success in this field and among other things, point out that the value of physical activity can be as an *available recreational activity* but also as a *recognized therapy* administered by competent personnel in suitable surroundings. Various studies indicate that nature-based recreational activities are more effective than protracted therapeutic exercise regimes. Norling emphasizes the modern activity theory and Andersen and Arnlund point out that as outdoor life is well suited to occupational therapeutic rehabilitation, there should be greater focus on it.

Otherwise, the chapter describes various models and projects in the Nordic Region as well as one from Great Britain. Finally, there’s a list of the main points of the relevant sessions of The Nordic Congress on Outdoor Life and Mental Health (Asker, Norway, September 2007).

## **Children and youth**

The Swedish Environmental Protection Agency refers to the hypothesis that the outdoor life of children can lead to increased environmental awareness and a *sustainable lifestyle* later in life. According to the Agency’s evaluation,

“Opposite to exercise is idleness (the badge of gentry) or want of exercise, the bane of body and mind, the nurse of naughtiness, stepmother of discipline, the chief author of all mischief, one of the seven deadly sins, and a sole cause of this and many other maladies.”

(Robert Burton, 1850, in *Anatomy of Melancholy*).

there are parallel rewards on tap for the future health of individuals, and most likely, those who have related to nature from childhood on will resort to it as a fitness and wellness resource. Theglander reminds us that children have a natural need to be physically active, but the way of life of today seems devised to exclude them from nature and to cushion and quiet them. Development and learning in childhood is closely linked to bodily experience and physical coping. This is confirmed by Bech who maintains that to a great degree, children learn with their bodies.

The radius of action of a child is limited up to about age 16. This requires much of the quality of their daily outdoor surroundings. Norling confirms that the theory of play is central in matters relating to the health of children. Early interests and lifestyles in nature-based areas often are lasting. Studies conducted in the Nordic Countries show that compared to their peers, children who play outdoors in nature are *less often ill, develop better motoric skills, are better at resolving conflicts, have greater powers of concentration, and are more skilled in reading and writing.*

The Nordic Congress on Outdoor Life and Mental Health (Asker, Norway, September 2007) included a call for suitable nature areas, both in quality and quantity, for children in school and for leisure. Implementation of such areas must be followed up politically, legally and financially.

## Health-promoting spaces

In the Nordic Region, about three-quarters of the population lives in cities, towns and villages. Consequently, the greater part of all physical activity, including outdoor life, takes place in or near built-up areas. From the health viewpoint, this requires reassessment of parks and neighbourhood nature areas. The Swedish Environmental Protection Agency emphasizes the value of neighbourhood nature areas for biological diversity, social contact and public health. In a health perspective, the need for everyday nature near built-up areas as well as the need for nature that imparts images of the powerful and unspoiled, are decisive if nature is to be preserved and used in the future as a source of vitality.

In addition to the aspects of nature, *cultural qualities* are vital in creating health-promoting meeting places. The quality of surroundings, as broadly understood, is a key political goal in this work and is included in considerations of cultural environments and aesthetics. A high quality of surroundings is an important contribution to a high quality of life, and traces of our ancestors' lives and occupations reflect past societies and ideals as well as impart feelings of identity and belonging.

The greater part of human existence has been outside, in nature, and our senses and brains are ill suited for the abundance of signals and disturbing impulses of modern societies. Grahn and Skov and Landskab (Royal Veterinary and Agricultural University of Denmark) have shown





“For recreation I turn to three things, and a wonderful recreation they provide!  
My Schopenhauer, Schumann’s music, and finally, solitary walks.”

(Friedrich Nietzsche, letter to Freiherr Karl von Gersdorff, April 1866).

a clear connection between people’s access to nature and their well-being. The more people are in green areas, the less stressed they feel, and people who live near green areas, spend more time in them than people who live farther away. The experiential quality of green areas is significant. Grahn has identified eight basic qualities that people seek in nature. Areas that offer all eight are highly valued and are believed to meet human needs, regardless of state of mind.

Recent American studies (Kuo 2006) confirm the effect of parks and gardens on human social and mental conditions. People who live near to and frequent green breathing spaces in cities, towns and villages are reported *to have greater spirits of cohesion, cope more readily with every stress and disappointments, are less aggressive and violent and concentrate better whenever the need arises*. They feel safer because open surroundings with cultivated vegetation had considerably less crime than areas with no strains of green. Moreover, studies in the Netherlands and Japan of densely populated cities with ready access to green areas document markedly *better health and lower mortalities* than areas without such access. Even relatively passive contact with nature measurably *lowers blood pressure and dampens angst*. Today in the Nordic Region, town planning includes the goals of structures and environments that stimulate health-promoting lifestyles and ensure natural and cultural milieus. At once, these goals are essential in the strategies for better physical and mental health in the Nordic Region. In the mid 1980s, a working group put forth recommendations to the Nordic Council of Ministers for the protection of neighbourhood recreation areas in cities, towns and villages. The recommendations still are highly topical.

The development of therapeutic gardens, principally in Sweden but also in Denmark, has attracted considerable attention. Scientific inquiry in the field has made remarkable progress and significant results in the form of improved user health have been documented. The concept should have direct transfer value for other countries in the Nordic Region as well as elsewhere in Europe. At the same time, the work may be said to have indirect value, because its professional material can become the basis of a general debate on the health benefits of nature.

Finally, in this chapter there’s a list of the main points of the relevant sessions of The Nordic Congress on Outdoor Life and Mental Health (Asker, Norway, September 2007). The measures recommended included a call for the public sector to assume responsibility for the physical implementation of health-promoting milieus, that private organizations be brought in for operation and promotion, and that networks and partnerships in the field be set up in the Nordic Region.

### Transfer of expertise

Norling remarks that recent knowledge gained in the field is little known among healthcare personnel in Sweden and laments the lack of training in the *methods and effects of the recreational sector*. There are many indications that this also is true for the other Nordic countries. On the other hand, in the USA there are extensive educational offerings in therapeutic recreation (TR). Vik and Aaby suggest that institutions educating welfare workers become involved in research and education in the field. Recently, the agricultural universities in the Nordic Region have focused on green re-

“Walking is the experience by which we understand our body in relationship to the world... The body is our experience of what is always here, and the body in motion experiences the unity of all its parts as the continuous ‘here’ that moves toward and through the various ‘theres.’”

(Edmund Husserl, 1931)

habilitation and public health, and relevant new curricula and new research are being developed. Some colleges with programmes in public health and sports now offer curricula on physical activity integrated in mental healthcare.

Moe (2007) contends that there’s a *general need to increase knowledge of healthcare workers of the importance of physical activity in mental health*. She has developed a further education offering for training advisers and healthcare professionals with a focus on physical activity in Norway. Nonetheless, Moe underscores a need for broader and more multidisciplinary educational offerings in the field suitable for nurses, social educators, occupational therapists, physiotherapists, social workers, support persons, relief workers, volunteers, training contracts, sports educators and others. Moreover, special educators, environmental therapists, doctors, psychiatrists, psychologists, outdoor life educators, activators, welfare workers, leisure time leaders and various types of public health advisers have needs for basic or further education in physical activity, recreation and contact with nature. Hospital learning and coping centres can advantageously be involved in communicating information, advising and teaching physical activity in nature. As in Denmark, there also should be training courses for users so they may qualify for various relevant tasks, such as advisers and assistants.

Finally, in this chapter there’s a list of the main points of the relevant sessions of The Nordic Congress on Outdoor

Life and Mental Health (Asker, Norway, September 2007). The recommended necessary measures include initiating cooperation between professions and developing basic and further education tailored for various professions acting in mental healthcare in the Nordic Region. Moreover, recommendations were made to contemplate the need for skills in both therapy and leisure offerings, to examine the division of roles between professionals and volunteers, and that users should be involved both in developing new educational offerings and in concrete measures in the field.

## Research needs

In recent years, the importance of nature in supporting recreation has been increasingly in focus. In the last 20 to 30 years, research abroad and in Sweden has provided new and clearer pictures of how people are affected by nature. Gradually, scientific fact has come to support the historical knowledge of centuries as well as the everyday experiences of many individuals that nature can constructively aid the management of various psychological and social crises. However, Norling points out that research in the Nordic Region is wanting and there’s only weekly scattered interest in the dominant research of countries elsewhere. Furthermore, he critically observes that in the Nordic Region, there’s greater interest in practical projects that provide anecdotal evidence that is neither documented nor followed up systematically and scientifically.



“The human need for nature is linked not just to the material exploitation of the environment but also to the influence of the natural world on our emotional, cognitive, aesthetic and even spiritual development.”

(Kellert 1993)

Sørensen (2005) cites Norling’s focus on effect chains and supports his arguments for turning research away from static biomedicine toward more educational and psychological aspects. She calls for more research in the strengths of outdoor life and on how it brings forth positive chains, and on how we can communicate values of the nature experience and motivate the general public to be active outdoors.

The Nordic Congress on Outdoor Life and Mental Health (Asker, Norway, September 2007) included a session on the need for research in the field. It accentuated the *necessity of documenting effects independent of disease or diagnoses, of the need for research to be multidisciplinary and comprehensive, for there being an overview of relevant terminology, theoretical foundations and instruments, and for focus being on both the health promoting and the rehabilitative.*

The project has channelled a dedicated research network in which a group comprising professionals of various disciplines and countries will further the effort by investigating the possibilities of designing and financing a joint Nordic research programme on the nature experience and public health, with the possible support of the Nordic Research Board.

## Conclusion

The goal of this project has not been to put forth a set of commonly accepted recommendations, but to build a *platform* for further debate, skills upgrading, research, development and policy making in organizations, institutions and public agencies concerned with the subject in the Nordic Countries. Likewise, the purpose has not been to generate new scientific data, but rather to collect available know-

ledge to form a basis for policy making in the field. How this may be realized in practice must be discussed in other, more suitable public and non-profit forums, from a multidisciplinary perspective and including user interests.

For those who may wish to go farther with the relevant recommendations, the following parts of the report are recommended reading:

### *General recommendations*

- Cf. FYSS 2008 report, “Physical Activity in the Prevention and Treatment of Disease” (in Swedish), Chapter 3.
- Cf. “Possibilities and conditions”, “Coping and selected recommendations” and “Factors for recommendations” in Chapter 7
- Cf. “Ten recommendations from “Ecotherapy, the green agenda for mental health”, report from MIND, the National Association for Mental Health (UK), 2007, in Chapter 8.

### *Specific recommendations*

- On the topic of “motivation and models” – cf. Chapter 8
- On the topic of “children and youth” – cf. Chapter 9
- On the topic of “health-promoting spaces” – cf. Chapter 10
- On the topic “transfer of expertise” – cf. Chapter 11
- On the topic “research needs” – cf. Chapter 12

In addition, reference is made to the discussions of the thematic sessions of The Nordic Congress on Outdoor Life and Mental Health (Asker, Norway, 17-18 September 2007), report published May 2008 (in Norwegian). The central themes of the report are covered in Chapters 7-12 of this project report.



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